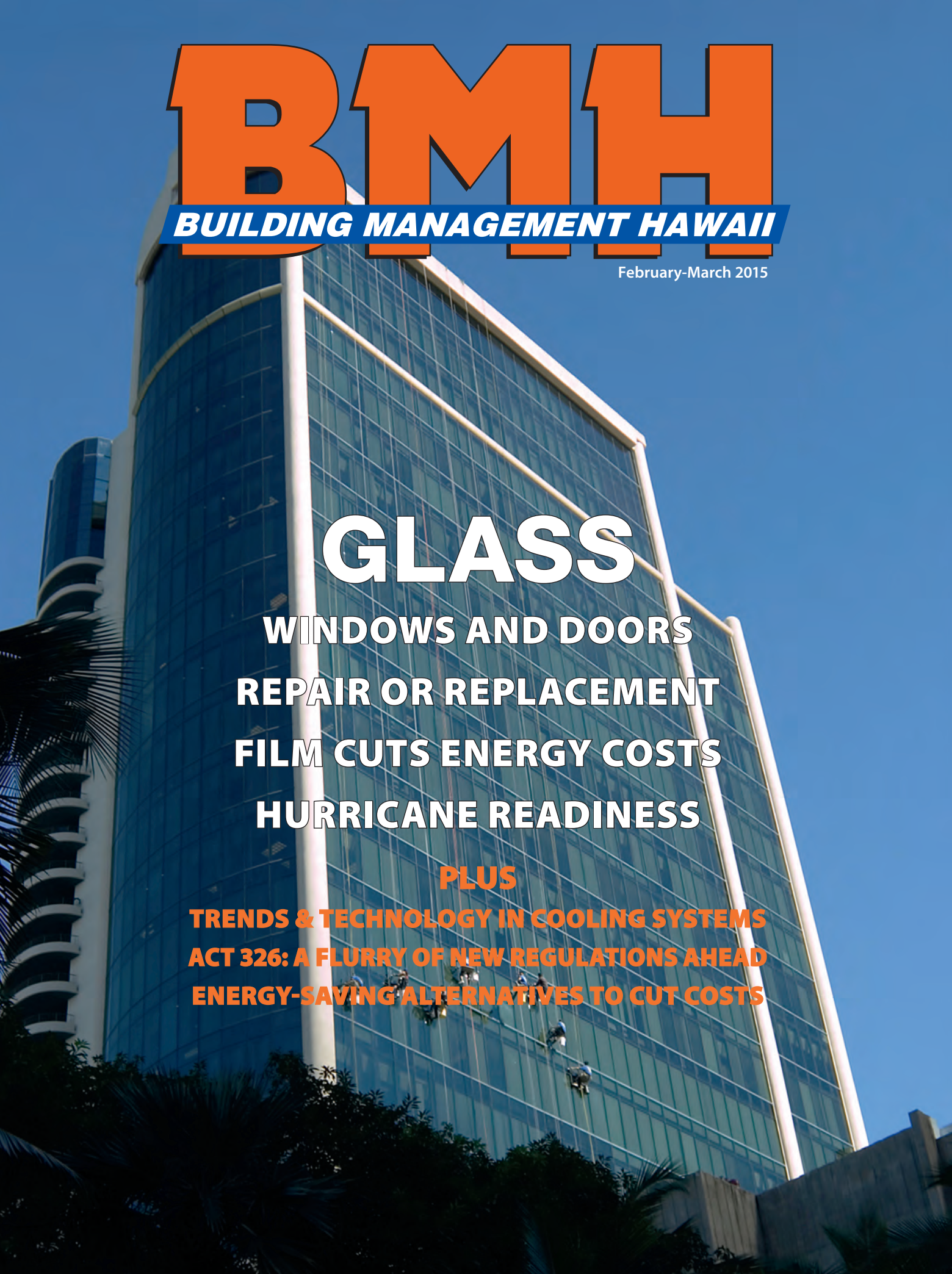




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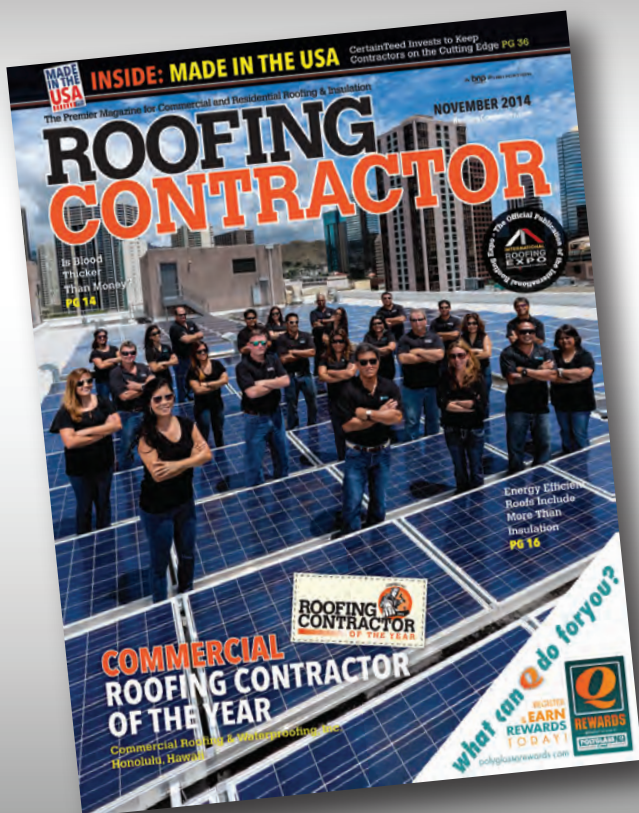
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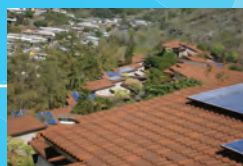
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Choosing the right air conditioning system is crucial. And in Hawaii, many buildings are getting older and looking to upgrade their chiller plants. Read our reports on how to make the best decisions on which systems are the right fit for your building.

In our Windows & Doors section, we take a look at what you need to do to make your property safe during a hurricane as well as ways you cut the glare from the sun while keeping the indoors cooler.

In this issue we also feature a local business that can re-polish scratched glass, and we take a look at what roofing materials are well-suited to Hawaii's climate.

Back in the news is Act 326-Transient Accommodations, a 2012 measure to regulate vacation rentals. In this issue you'll get an explanation of Act 326 and why it's being enforced.

Got something you'd like to share with BMH and our readers? Let us know!

Aloha,

*David Putnam*

david@  
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*"In no other country in the world is the love of property keener or more alert than in the United States, and nowhere else does the majority display less inclination toward doctrines which in any way threaten the way property is owned."*

*—Alexis de Tocqueville*

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# Hawaiiana Management Promotes Ed Kaya and Charla Trevenen to Executive Vice President

## Five Decades of Combined Local Community Association Management



**Ed Kaya**



**Charla Trevenen**

**H**awaiiana Management Company recently promoted Ed Kaya and Charla Trevenen to Executive Vice President positions.

Kaya joined Hawaiiana as Controller 19 years ago after serving as Director of Financial Planning and Analysis for C. Brewer and Company. Under Kaya's leadership, Hawaiiana's financial reporting has become the "gold standard" in the industry and today he and his department of 60 dedicated Hawaii-based accounting professionals oversee client operating and reserve accounts representing more than \$327 million. "Hawaiiana is always looking for new ways to provide the best services to our client associations and their members," says

Kaya. "Hawaiiana's flexibility and technology can provide specialized financial reports to Boards either on the accrual, cash or modified accrual basis. Members can view billing statements online, automate their payments, or make payments on line using checks or credit or debit cards, making it easy to manage their accounts."

Charla Trevenen joined Hawaiiana in 1981, and oversees a staff of 35 administrative assistants on four islands. Trevenen, along with four of her staff members, have the distinction of being with the company for more than three decades.

During her tenure, Trevenen has been responsible for the successful meeting administration and election of directors at thousands of owners meetings. Trevenen has also successfully handled all aspects of new account administration, including the transfer of more than 400 new client accounts representing 60,000 new residential units -- including two of Hawaii's largest associations, the 8,000 unit Ewa by Gentry and the 2,900 unit Waikele Community Association.

"During my 34 years at Hawaiiana, I can honestly say that our larger company is so much better for clients and employees. In the early days when we were smaller, when clients needed help we often had to re-invent the wheel each time a question came up. We had to drop everything and fit troubleshooting



**Ed Kaya, left, and Charla Trevenen, right, were each promoted to Executive Vice President of Hawaiiana Management Company. Shown with Hawaiiana President Mike Hartley, center.**

in between tasks like stuffing envelopes and filling in for the receptionist. Now we can get answers quickly to most any problem through our in-house network of our 200 employees. Our larger company has the depth and resources to make the client the #1 focus."

Hawaiiana President Mike Hartley said, "Ed and Charla work quietly behind the scenes, but touch the lives of every one of our 90,000 unit owners, site managers and industry vendors. From the maintenance fee bills sent to the owners, the payment checks which vendors receive, the petty cash reimbursements paid to the site managers and the annual community association meetings, Accounting and Administration are truly the backbone of our business."



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Joe Greenblatt, Katie Hollerbaca, Myung Sook, Stephen Reichard

# IREM *Gala*

Nearly 150 members of Hawaii's Institute of Real Estate Management chapter turned out for their November installation and awards ceremony at Waialae Country Club. (See Page 53.) Joe Greenblatt of San Diego, the organization's national president in 2014, was the keynote speaker, and three new accredited residential managers—Greg Takemura, Paris Cousin and Connie Yu-Pampalone—were installed.



Chris Herndon, William Sanaritano, Richard Ekimoto, Lois Ekimoto, Joshua Figueira



Lois Ekimoto, Daisy Yamada, Michelle Wong, Phyllis Katcher, Paula Orr



Duane Komine, Leona Komine, Gaisoa Liva, Tiare Liva



Vanessa Ahsam, Melody Pai, Toni Hoy



Kalama Heine, Elliot Okamura, Paris Cousin



Il Kim, Mike Baker, Sheryl Baker, Lenny Zimmerman, Gary Okabayashi, Kim Hadden



Blair Cole, Terri Lo, Jacob Roller, Reggie Eubanks



Lily Irizarry, Rick Edds, Norma Parker, Edmond Grantham, James Trent, Al Lopez, Jason Wilkerson



Laddie Roy, Josh German, Bob Toguchi



Phyllis Katcher, Lois Ekimoto, Nate Steele, Heather Steele



Kevin Cole, Francine Komine, Russel Kalinski, Ryan Benavente



Kawika Keala, Ray Romero, Toshiko Romero, Enrico Monteleone, Liane Lazo



Daniel Kealoha, Yvette Rogers, Kevin Whalen, Ron Komine, Charlie Knight, Joshua Jay, Terra Garrigus



Tom Yachika, Nini Arnold, Bill Koechlin, Mary Beth Koechlin



Cynthia Minn, Nicole Patterson, Brendon Sarisky



Cody Assenmacher, Michael Blunkett, Mike Nagao, Blair Cole

*Replacement of a single glass pane in buildings such as this one in Honolulu's downtown district can cost upwards of \$5,000 plus installation costs. Damage usually requires the property manager to track down the source of the problem.*



# Dealing with Graffiti and Glass Damage

## Affordable window repair offered as an alternative to replacement

BY PRISCILLA PÉREZ BILLIG

Any building with an exterior skin of windows sits vulnerable to damage. Accidents happen, but for a property owner or manager with a curtain wall marred by 15 panels of scratched glass on a high-rise, it can be an expensive headache.

Replacement of a single glass pane in such buildings as ONE Ala Moana, Aulani or Allure Waikiki can cost upwards of \$5,000, plus installation costs. Any damage—from handling, fabrication, installation or cleaning—requires the property manager to track down the source of the problem.

While on-site glass repair and resurfacing has evolved, businesses once were hesitant to use them because bids were usually based on the varied extent of damage and, therefore, not seen as a cost-effective fix. But local airline pilot Andrew

Corrie came up with a better solution and called it Glass Renew.

Rather than costing a job based on the severity of the scratch graffiti damage, Corrie charges by the square foot on any type of glass. He limits his billing to a maximum of 40 percent of the glass replacement costs.

"I realized how much it takes to replace a storefront window like Macy's, a \$10,000 piece of glass," Corrie says. "So now there's a lot more value in removing the graffiti instead of replacing the glass."

Corrie says he worked as a volunteer a few years ago with a local community group called Totally Against Graffiti, or TAG, removing painted graffiti and then scratch graffiti from building walls and windows "tagged" with words and symbols. "Anywhere kids hang out,



Hard water damage on glass, before and after treatment

PHOTOS COURTESY GLASS RENEW

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Before



After



*Scratch graffiti on a home's picture window, before and after treatment*

you'll find scratch graffiti," he says.

As he gained experience on deep scratch graffiti repair and glass restoration, he developed a pricing system which began to open doors to bigger jobs. The experience led to better and faster techniques, which brought in jobs on multi-story

buildings, he adds.

"General contractors are usually so relieved that someone can do this because we end up saving them a bunch of money and time," Corrie says. "We come in for a few hundred dollars and resurface the glass, saving them money on the

replacement costs."

With 90 percent of Glass Renew's work in new development and remodeling construction, clients include general contractors, homebuilders and property managers for work on all types of glass. The only exception to repair and



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restoration is coated glass that would require removal of the coating.

Corrie has expanded his services to include hard-water spot removal. He cites the example of the Diagnostic Laboratory Services in Halawa, which took over a building with 15 to 20 years of window corrosion due to the grounds' sprinkler system.

"We had about 60 panes where hard water had welded onto the glass," Corrie says. "Once we removed the hard-water stains there was corrosion underneath, a dimpled effect like a person who might have had really bad acne as a child. We resurfaced the glass and removed the corrosion to make the glass look brand new."

Corrie's team of pilots can remove 12 to 25 square feet of scratch graffiti or 100 to 250 square feet of water stains per day. For exterior work on buildings less than 40 feet, they use a cherry picker; on high-rises they use the same equipment window washers employ, using ropes and a boatswain's chair.

Using a method Corrie describes as "quite simple, but skillful," his workers buff out a damaged area by hand using a polisher to grind off the surface of the glass. They use varying grades of abrasive to bring the glass up to a fine haze then employ an optical polishing compound to bring back the luster. "You can't tell it's been worked on and it's distortion free," he says.

Glass Renew's client list includes ONE Ala Moana, on which 37 panels were restored. Other clients are the Hilton Ko Olina, Allure Waikiki, Waikaloa Grand Hilton, Halekulani Hotel, Honolulu Air Traffic Control Tower, St. Francis Medical Center, Louis Vuitton, Prada, Bulgari DFS and the University of Hawaii at Manoa.



Andrew Corrie

"It's a very feast-or-famine business," Corrie says. "There's not an Aulani or ONE Ala Moana that goes up every month. I use a lot of pilot friends to do the work,

make a little extra money. Pilots are ideal employees because they're responsible, polite and on time." 🏠



Scratch graffiti on a restaurant window, before and after treatment

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# Installing New and Improved Windows

Quality glass enhances comfort and safety while cutting costs

BY SHAWN MOSELEY

The price of gas on Oahu is averaging \$3.39, which has held through the holidays and now into the new year. The electric bill, however, has not seen the same reduced rate, which leaves many scratching their head with energy usage going down and their bill going up.

When planning and executing a budget of operating expenses for 2015 consider what will be done if this trend continues in a state where electricity usage ranks among the highest in the nation. How will we prepare for the summer months when the weather no longer dips into 60-degree range and soars into the 80s and 90s again?

Here's where Mother Nature steps in and helps "lucky" Hawaii residents with passive cooling. If you are one of the lucky ones in a high-

---

***The local building codes have and continue to make jalousie windows exempt in critical locations where all other window types are required to have safety glass.***

---

rise built prior to 1994 you might have windows that actually open and do their intended job. Of course, saying you are lucky to have an "old" high-

rise with "old" windows is a loaded compliment that may seem more like an insult when you consider the cost to fix those windows, not to mention the question of who owns them, which always leads to who is going to pay the bill?

Here are some tips to consider that can help you along the way and hopefully bring the building up to current building code requirements and also keep it on good standing with your insurance carrier.

## Safety Glass

Many windows in our condominiums use float glass. When broken, float glass breaks into large shards dangerous to people and property. Safety glass comes in two forms: laminated and tempered. Laminated glass when

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*Jalousie windows are a major user of float glass.*

broken stays glued together, like the windshield of a car. Tempered glass (sometimes called toughened) when broken will break into hundreds of tiny square pieces like the side windows of a car.

Among the major users of float glass in elevated locations is jalousie windows. Due to years of not having a safety glass option for these windows—but not wanting to limit their usage due to effective “passive cooling” design—the local building codes have and continue to make jalousie windows exempt in critical locations where all other window types are required to have safety glass. These locations include bathroom showers and tubs, stairs, next to doors and near the floor—all locations deemed historically necessary for safety glass since they are locations where typically people are injured, sometimes fatally due to glass.

Upgrading windows in areas where safety glass is normally required will not only protect your building occupants but also your property and building insurance as building codes become more restrictive.

## Improved Glass Strength

Tempered glass is typically five times stronger than float glass, which allows for new and improved safety features. Some of these features use drilling through the glass prior to tempering and then securing pieces to the window frames so that they cannot be removed without breaking the glass.

In high-rises this means that no glass can come falling down accidentally or due to window failure on the property or people below. It also means that it takes five times more force to damage the glass, making it useful in railings and lower window locations.

## Maximum Ventilation

Passive cooling is only as good as the amount of air flow the room gets. Consider the window types and their benefits and drawbacks. Quite often before building occupant comfort is considered, price is. Initially this means that a cheap sliding window comes into play as a replacement option since the original jalousies keep falling out.

The issue with this choice is that a change in the window style not only

means going through a full permit review process, per unit/owner, but it also means that the current window that offers 100 percent ventilation will be changed to one that only offers 50 percent ventilation and cannot be left open in the rain. In addition there's no safe way to retrofit an AC unit if you must and probably will because your apartment just got 50 percent hotter.

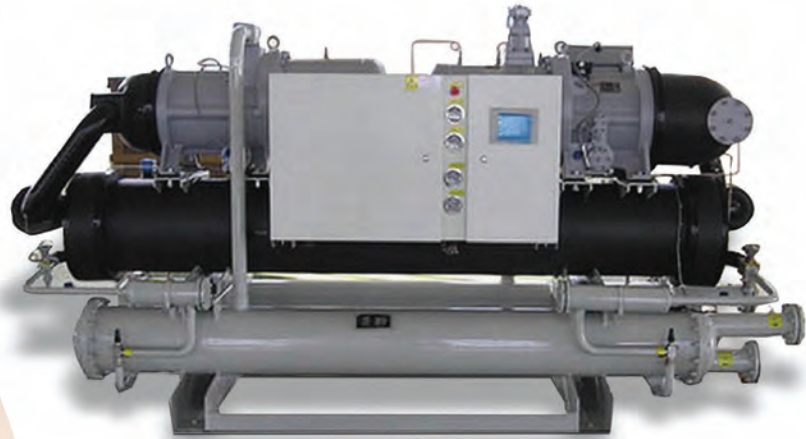
With the improvement in glass options locally and the strong trade winds, it's a good idea to consider the comfort and safety aspects of the windows you and your residents select for the next renovation to keep the electricity bills down and the air flowing, rain or shine. 📖



*Shawn Moseley is the territory manager for Breezway North America, which locally manufactures its products at its factory in Halarwa. He has more than 20 years of experience in commercial*

*and residential consulting, design and sales in windows, doors and hurricane products. Visit the Breezway North America website at [breezway.com/hawaii](http://breezway.com/hawaii) or call 808-484-5999.*

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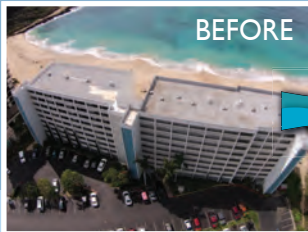


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# Window Film Cuts Glare, Energy Bills

## 5 facts to consider before investing in window tinting

BY DAVID LEANDRO

Property owners and managers looking to improve their buildings' energy efficiency are exploring such options as window film installation. Investing in window films not only helps reduce the sun's heat, it also is an effective and natural daytime lighting strategy.

Here are some tips on selecting the best window film for your property:

### Window Film

Now that you have decided to include window film as part of your energy conservation program, the obvious questions arise. Which window film type should I consider? What type of film will work best for my property? How will window film affect the aesthetics of my property? Most importantly, how long will the film last, and am I getting the best value from my investment in window film?

When considering window films, know that this is a long-term investment, as window films are warranted for up to 15 years, and films from a reputable manufacturer have been shown to last well over 20 years on a property. It is highly recommended to work with a manufacturer that you trust, has a history in the window film business and has the financial standing to honor its warranty, as there are low quality films in the marketplace that give window films a bad name.

### Hawaii's Environment

All window films are not the same. Window films were invented in 1965, and numerous advancements have occurred over the years, but none so relevant to Hawaii as the introduction of metal free infrared blocking window film. Moving away from the tradition of "darker is better," the latest trend in window film is quite the opposite. New technology, known as multi-layer optical films, have allowed for lighter



*All window films are not the same*

films that now outperform their darker predecessors.

Most of us have seen what Hawaii's coastal environment can do to our cars—rust. The same thing happens to most, if not all, of the traditional window films we see around the islands. In 2006 a film was introduced that contains absolutely no metals. Corrosion is not an issue, and this film type requires no special installation or edge sealing. This type of non-metal film is well-suited for our salty Hawaiian air.

### Out with the Old Stuff

How a film works is as important as how a film looks. Many window films are reflective of the metals they contain. Some films even can change the look and feel of a building by the colors they reflect. These new multi-layer optical films are color neutral, and are invisible once installed. They have been used on numerous historically registered buildings in the U.S., where no aesthetic change to the building would be acceptable. This is helpful in maintaining a building's identity, or for retail environments where it is important that two-way visibility be maintained.

### Which Film to Choose

When thinking about the value of investing in window film, here are some things to take into consideration: energy savings, day lighting, occupant comfort and tenant retention. Being "green" is top of mind these days, and window film is often overlooked in achieving this goal. According to a recent study completed by the U.S. Department of Education, window films typically payback in less than three years, and some utility companies provide rebates for you to install the product.

A lighter shade of window film will complement a day-lighting strategy by allowing more natural light through a window. Occupant complaints go down and productivity has been shown to improve. Tenants are more likely to remain in a space where they are comfortable.

### Getting It Right

Here are some steps to take before you make your purchase decision. Find a reputable dealer. Ask around, especially ask people who have had their windows treated recently. Research window film brands. There are plenty to choose from. Always ask about warranties, and read the fine print as all warranties are not the same. Request a full window sample of all films you are considering. You wouldn't buy a car without a test drive; the same goes for window film.

A full window sample is the only way to truly see what you will be committing to for your property. 🏠



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# An Insider's Tips for Selecting a Security Firm for Your Property

BY SANDY GLOVER

You'll sleep like a baby with a top-notch security company protecting your property.

A lot can go wrong when the wrong private security company is on the job. Just ask the New York Port Authority and the company hired to watch over the new 1 World Trade Center building in Manhattan. In March of 2014, they found themselves at the center of a controversy after a teenager snuck by guards into the tallest building in New York, climbed to the top, and broadcast his stunt to the world.

In the end, no one was hurt, and **the boy was convicted and sentenced to community service, time already served.** So, no harm, no foul, right? Actually, no, far from it: safety and security were compromised at a site where such breaches, given what happened in 2001, should be unthinkable. Had more research been done to choose the right private security company and review its staff and standard operating procedures (SOPs), this embarrassing — and potentially lethal — incident could have been avoided.

As an owner of a background check and screening company, **Gold Shield**, and as a former law enforcement officer and private investigator, I've seen security breaches like this one too many times. With some basic research and foresight, you can hire the right private security company and rest easily at night knowing that your domain is safe.

## How to narrow your options

So now you've decided to hire a private security company to monitor and protect your property. The first question is, "How do I find the right one?" Because the team you hire will be responsible for the safety of your residents, community, and physical



property, selecting a private security company is one of the most critical decisions you'll ever make as a property manager.

When you start your search, begin by considering this point: Many small security firms source their guards from employment pools. These smaller companies usually can't afford to provide training and equipment or pay as well as the larger ones do, which means their guards may not be up to snuff, so it's a good idea to begin by looking at larger firms.

Large or small, do your homework

before signing a contract; as with most professional services, word-of-mouth referrals are best. Ask other property managers in your area which firm they use or if they can recommend one. Most people in the business will be more than happy to help.

If you don't know any property managers, Google "property managers" in your local area and give a few of them a quick call. Once you gather a few recommendations, validate them by getting in touch with the Better Business Bureau or your

**SECURITY** continued on Pg. 50



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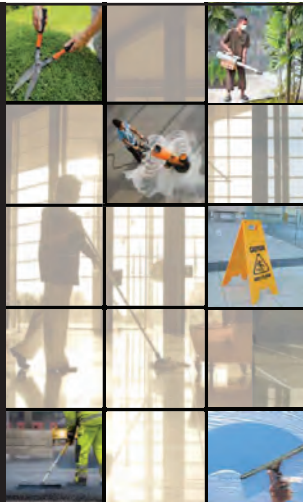
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# Reassessing Hurricane Preparedness

## Study shows failure of windows, doors increases risks

BY ANDREW KEENAN

Last year's storms are a clear indication that we need to take hurricane preparedness more seriously. We only need to go back to 1992, when Hurricane Iniki hit Kauai with sustained winds of 145 mph. Let's examine what can be done with windows and doors to prevent hurricane damage to your home.

A study by the University of Colorado in the mid-1990s looked at hurricane damage to residential structures and risk mitigation. Specifically it looked at the damage caused by hurricanes Iniki and Andrew.

Modern homes are constructed with more and larger openings than older homes. Entry doors are often double, sliding glass doors that replace regular doors, and attached garages often have double-width doors to hold two cars. The greater number and size of openings place homes at increased risk from hurricane forces.

For example, according to the University of Colorado report, nearly every residential house or apartment in south Florida has at least one sliding glass door and frequently more, sometimes placed in adjacent walls. Sliding glass doors are at least 6 feet wide. Typical single family homes have attached garages many with double wide garage doors. Storm shutters for glass openings and doors are very uncommon.

Failure of windows and doors exposes the entire structure to increased force and loads. It has been estimated that an opening of only 5 percent in the windward side of a building will allow full pressurization of the interior, exerting uplift pressure on the roof and horizontal pressure against the interior walls. Because storm shutters for glass openings and doors are uncommon, thousands of houses affected during Hurricane Andrew in south Florida required interiors and furnishings to be completely removed and replaced because just one sliding glass door failed.

The University of Colorado's report concludes that "wind-borne debris must be recognized as a significant factor in home damage, and even structural failure. Once the envelope of a home is punctured by debris, the interior of the home is exposed to the same forces of wind and water as the exterior. On the one hand, steps should be taken to reduce or control potential sources of debris. At the same time, homes should be constructed or retrofitted to strengthen doors and protect windows against debris penetration."

For new construction, new building codes are addressing the structural connections in the home, specifically the roof

to wall and the wall to foundations connections. But as the studies show, even if your home survives structurally intact but has one window that is blown out, the interior of your home will suffer water damage and all the unfortunate things that go with it, such as the possibility of mold.

Also, if your home is older or was built in an area where they have not been following a modern high-wind building code, you may not have hurricane clips or straps holding your roof structure to your walls. If that is the case, window and door protection may make the critical difference between losing your roof and keeping it on. If a large window or door is broken open on the wall facing into the wind, the overall uplift forces that are trying to lift the roof off your house may be doubled.

Research has shown that protecting the windows and doors can raise the wind speed required to lift your roof off your house by one to two hurricane intensity categories. In other words, if it is likely that the roof of your home would lift off during a Category 2 hurricane if a large window broke open on the windward side of your house, it might take a Category 3 or possibly even a Category 4 storm to lift the roof off if all of the windows and doors are protected.

Part of the solution to protecting your home and family is to get hurricane-rated windows and doors. Windows and doors can be rated to Category 5 winds and be rated for water infiltration with large and small missile-impact rating. With advances in materials and production processes, you can now purchase attractive windows and doors that are look identical to typical windows and doors and can



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be constructed from vinyl, wood, aluminum, wood clad aluminum, etc.

In addition to the safety provided by hurricane glazing, it also blocks 99 percent of the ultra violet light. The UV light is what causes most of the damage and fading from the sun in most American homes.

In Hawaii there is a trend to have larger openings and people love the no threshold, or barefoot friendly, door systems that allow connection with the inside to the outside in a seamless way. It is now possible to have these large systems be hurricane rated as well.

A product is available that was recently tested to 197 mph wind, large and small missile impact and water

## Failure of windows and doors exposes the entire structure to increased force and loads.

infiltration tests. The door was 12-feet tall and up to any length (lengths are limited by the structural engineering of the house). These doors function and look like any other door in their class, including having no threshold.

Take the time and effort to go and see, touch and operate many different windows and doors in a variety of different styles, materials and configurations. You can find what you need, whether you are interested in a state-of-the art 40-foot long, 15-foot high pocketing door system, or want to replace your existing jalousies windows.

These products installed correctly can make your home safe during a hurricane, but remember that there is no guarantee that your home won't be damaged or even destroyed in a powerful storm. If you are told by authorities to evacuate, do so immediately. 



Andrew Keenan is president of Maui Windows and Doors and can be reached for more information at 808-877-3667.



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# What to Know About Chiller Plants

## Many buildings lack the certification required by code

BY JOHN ARIZUMI

Many buildings in Hawaii have reached more than 25 years in age and many are renovating and upgrading their air conditioning chiller plants. With many “energy warriors” offering expertise and products, building owners and engineers should be knowledgeable of what they are getting. This article will shed some light on making better decisions.

There are lots of discussions about variable speed chillers as it provides improved energy efficiencies. And there is talk about magnetic-bearing chillers, which adds to the confusion on improving energy efficiency. No way—magnetic bearings only eliminate the use of lubricant oil, but be aware mag-bearing chillers have maintenance costs for its bearing capacitors that need periodic



*The right chiller plant can improve energy efficiency*

HVAC

***Think of the control system as the conductor of a symphony. You can have the best violinists, cellists, bassists, brass section, percussion, etc., but without a great conductor it is hard to make great music.***

replacement in lieu of oil changes. In addition, most mag-bearing chillers do not have seismic certification required by many building codes.

Many consider variable frequency drives (VFDs) are the panacea to energy savings. We should be aware of range of speed reduction when comparing a centrifugal chiller and a screw chiller. A centrifugal compressor behaves by the same

laws as for centrifugal fans (h.p. proportional to cube of rpm, pressure proportional to square of rpm, and flow rate proportional to rpm). Unlike positive displacement compressors such as screw or reciprocating compressors, centrifugals use pressure “lift” to create the pressure differential. Therefore, VFD centrifugals can only reduce compressor speeds by 35 percent by virtue of design and the rest of the load reduction is accomplished by the time-proven inlet guide vanes.

In addition, because centrifugal compressor speeds determine the head pressure (lift) to transfer heat, in Hawaii variable speed reduction for centrifugals is not as significant as in cooler climates. With variable-speed screw chillers, the speed turndown is 75 percent and is not dependent on the weather but is proportional to the load, so it offers better energy savings because of the range of speed reduction depending on the load, not the weather.

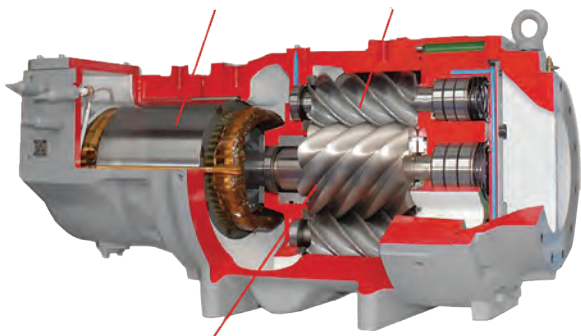
Another interesting point is screw

chillers have quick response and can drop from 100 percent to 25 percent in less than a minute. Centrifugals will take seven to 10 times longer, which most likely means nuisance safety shutdowns and alarm codes during fast-changing conditions, such as tower fan failure or low water temperature.

Integrated part-load value (IPLV) is value established by AHRI 550/590, so one can easily compare part-load efficiencies for different chillers of the same capacities. Chillers rarely run at full load. Keep in mind the weather data of AHRI 550/590 originally was compiled in Atlanta, whose weather is very different from Hawaii. Even with the present use of 29 cities averaged, it is far different. For example, in Atlanta 55 percent of the annual hours have entering condensing water temperatures less than 70F; in Hawaii it is less than 2.5 percent. In addition, IPLV is based on single chiller plant operation at AHRI 550/590 conditions. Today, most plants have multiple chillers and IPLV is an inaccurate way

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Tri-Rotor design reduces bearing loads.



Shorter rotor length increases compression efficiency

to determine energy efficiency of the multiple chiller plant.

The most accurate methodology to compare energy consumption of a proposed chiller plant is to establish a system part-load value (SPLV). This entails computing the energy consumption of all energy-using components of the plant—chillers, chilled water pumps, condenser water pumps, cooling tower fans, secondary pumps (VFD or constant flow)—using actual local weather data and building occupancy schedule of the design.

This analysis will provide the most accurate energy consumption comparison as well as the life-cycle cost.

You will easily see the big difference from just judging efficiencies on IPLVs for a single chiller.

Most important are the chiller plant controls. You can have the most efficient chillers and components of the mechanical plant, but if the controls are not designed and commissioned properly, your plant will not perform to the optimum design efficiency. It is so important the DDC controls are integrated to operate as the system was designed.

Think of the control system as the conductor of a symphony. You can have the best violinists, cellists, bassists, brass section, percussion, etc., but without a great conductor it is hard to make great music. Make sure the DDC controls integrate to the exact requirements of the chiller controls as this is the command center of the plant and the biggest consumer of energy.

Work with reputable chiller suppliers when designing or upgrading a plant. Owners should get the chiller suppliers involved early during preliminary discussions, not just during the bid, to remain abreast of the latest technology. And have potential suppliers do presentations for their proposed plant.

With so many innovations on the market, it is difficult to make clear, strategic decisions. Remember to look at the big picture, not just the chillers. Remember the old adage: You get what you pay for. Use a trusted equipment supplier with a solid reputation of understanding chiller plant systems and controls to provide good pre- and post-sale support, strong engineering support, field technical assistance,

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local inventory of equipment and replacement parts to reduce downtimes and ongoing service training to support your staff. This large investment can benefit or plague your business for years.

Once the decision is made and the plant is installed remember it is between the building owner and the chiller supplier for the life of the plant. The developer, designers and

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**You can have the most efficient chillers and components of the mechanical plant, but if the controls are not designed and commissioned properly, your plant will not perform to the optimum design efficiency.**

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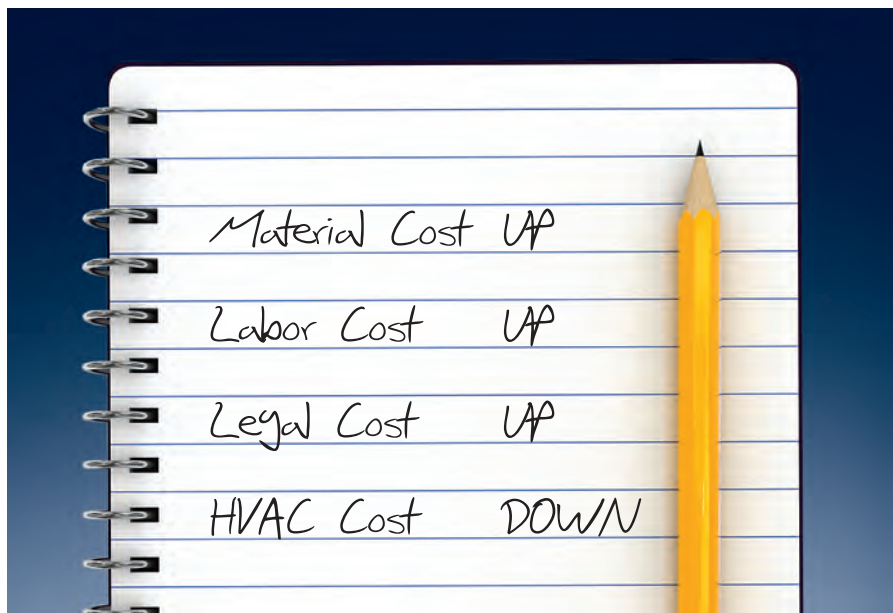
contractors are pretty much out of the picture once installed. It comes down to just you and your supplier, and how well your supplier supports you will determine how reliable your plant operates for its useful life. And make sure your supplier will be around for the long haul.

Choose wisely. Many systems never match up to their promises. 📦



*John Arizumi is the president of Carrier Hawaii, distributor for Carrier Air Conditioning equipment. A registered mechanical engineer, he has been with Carrier Corporation of Syracuse, N.Y. since 1975 and*

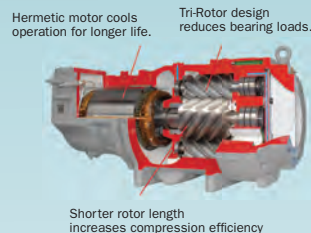
*is a member of Carrier Corp.'s Commercial Distributor Advisory Council. He holds a bachelors and masters degrees in mechanical engineering. He lectured at the University of Hawaii at Manoa for 18 years on air conditioning fundamentals and is a chartered member of the Board of Advisors for the College of Engineering at UH-Manoa and a chartered member (Hawaii Section) of Pi Tau Sigma, honorary mechanical engineering fraternity.*



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# New Trends Emerge in HVAC Systems

## Variable refrigerant flow, smart thermostats lauded

BY DREW SANTOS

Technology and efficiency are key factors in the quickly changing HVAC market. Leading trends in air conditioning for 2015 include variable refrigerant flow (VRF) and multi-zone systems along with smart thermostats and advanced duct systems that eliminate fiberglass wrap or liner from the building envelope.

While we will see a change in the national minimum Seasonal Energy Efficiency Ratio rating go from 13 to 14 SEER, there are many systems that deliver 20 to 30 SEER. VRF and split system technology saves energy and money.

Fujitsu's VRF systems are designed for commercial buildings and allow the building owner to "zone" the air conditioning load so that only rooms that are occupied or require cooling are being cooled. By utilizing smaller indoor air handlers each room is individually computer controlled to minimize operating time and maximize savings. This is in direct contrast to a large chiller or package unit air conditioning system that comes on all at once and cools all spaces no matter if the rooms are occupied or not.

VRF technology brings precise temperature control to each zone and can be controlled from a central



Fujitsu's AIRSTAGE V-II-SERIES DC Twin Rotary Inverter VRF System.

remote control or by a remote computer system. For noncommercial buildings, Fujitsu has multi-zone systems called HFI (Hybrid Flex Inverter). The HFI system is less expensive than a VRF system and allows you to cool up to eight zones from a single compact and quiet outdoor unit. The HFI system is ideal for single-family homes, condominiums and light commercial applications where three-phase power is not available.

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***Innovations in equipment design and thermostats are only the beginning. We are also seeing a revolution in the way building owners duct cool air throughout a building envelope.***

---

Both the VRF and HFI systems utilize Inverter compressor technology. Inverters are a big reason why we are seeing a rapid increase in SEER ratings. Inverter compressors do not come on at full speed and run 100 percent like traditional compressors.

An inverter compressor ramps up and down slowly, depending on the cooling load. This allows for a "soft" start at minimum amperage draw. As the cooling load increases so does the speed of the compressor. The beauty of an inverter is that if the compressor only needs to run at



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one-quarter speed to meet the cooling load it automatically ramps down and uses less energy.

Another inverter product is the Maytag IQ Drive Air Conditioning System. With SEER ratings upwards of 24, these are the most energy-efficient ducted systems on the market. The Maytag IQ Drive System incorporates inverter compressor technology with advanced motors and computer control. Local homebuilder Gentry Homes utilizes the Maytag IQ Drive System in several of its single-family home projects on Oahu.

Another top HVAC product is the NEST thermostat. The NEST doesn't need to be programmed. It remembers the temperature you set and builds a

## Easily transported

### Light weight

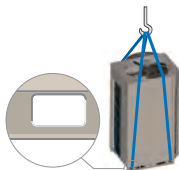


**20%**  
weight reduction  
(Than Previous model)

Note: In the case of 14HP

### Easily craned using lifting belt hooks

Design of outdoor unit allows for lifting straps to be used

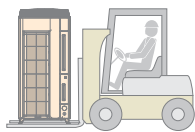


### Can be transported in a small elevator



### Transporting by forklift

Transport with forklift is possible.



personalized schedule. NEST turns itself down when you are away to help save energy and you can change the temperature from anywhere using your smartphone, tablet or laptop.

Innovations in equipment design and thermostats are only the beginning. We are also seeing a revolution in the way building owners duct cool air throughout a building envelope. The Knauf KoolDuct System, for example, is a high performance, preinsulated air ducting system specifically designed

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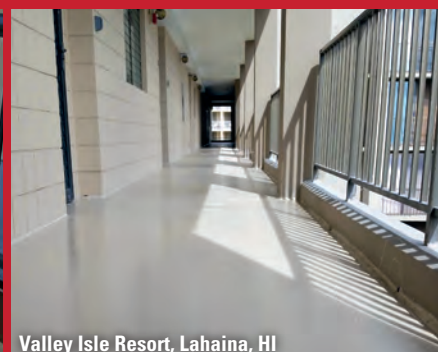
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# Energy-saving technology that boosted operation efficiency



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\*1. CFD = Computational Fluid Dynamics



## DC fan motor

Power consumption has been reduced by 25% compared to previous models by using a compact and high performance DC fan motor.



## Subcool heat exchanger

High Heat Exchange efficiency is achieved by using an internal projection shape double pipe construction.



## Sine-wave DC inverter control

High efficiency operation is realized by using a sine wave DC inverter control.



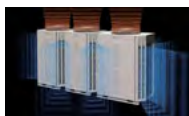
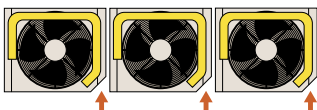
## DC twin rotary compressor

Significantly greater efficiency is realized by use of a large capacity DC twin rotary compressor with substantially increased refrigerant intake and compression efficiency.



## 4-face heat exchanger

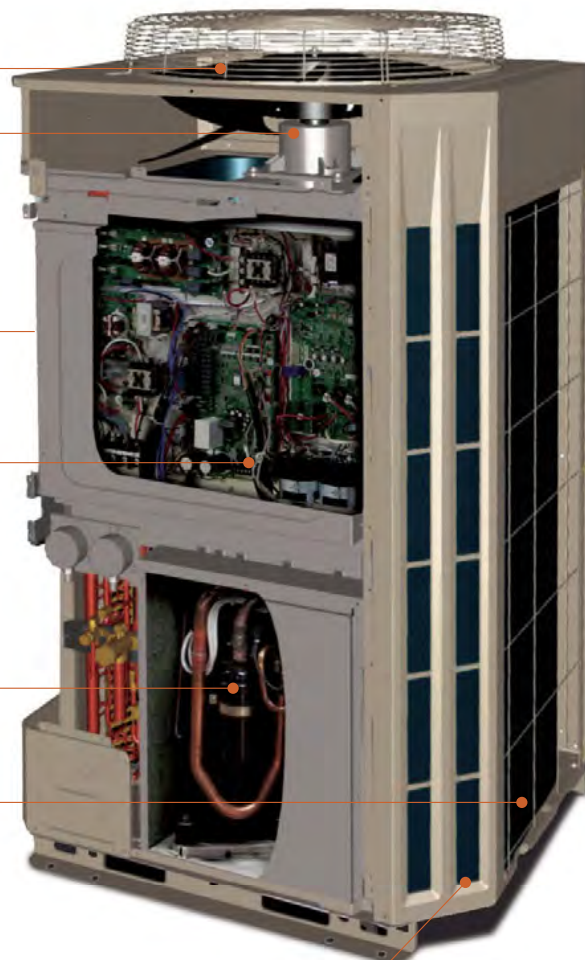
Heat exchange efficiency is significantly improved by the introduction of a new 4-face heat exchanger that increases effective surface area.



## Front intake port

(corner cut air inhaling structure)

In multiple outdoor unit installations, the unique front intake design improves airflow into the Heat Exchanger.



for the demanding requirements of the residential and commercial markets. It offers many competitive advantages over conventional sheet metal duct systems.

The major advantage is that the KoolDuct system eliminates fiberglass from the air stream. There is no fiberglass wrap or liner with the KoolDuct system. With an R Value of 6, it is also 40 percent more efficient than standard wrapped or lined ducts.

The KoolDuct system is constructed with CFC Free phenolic foam board and patented aluminum flanges. Both sides of the KoolDuct are sealed so that

air only flows on aluminum, making it ideally suited for high specification applications. The product is ultra-

## VRF and split system technology saves energy and money.

lightweight yet strong enough to handle abuse and even the weight of several large adults.

All of the products mentioned

here are available to see at the Admor HVAC showroom on Sand Island. Operating VRF, HFI, Maytag IQ Drive, NEST Thermostat and KoolDuct System are on display and available to see during normal business hours. 🏠



*Drew Santos is president of Admor HVAC Products, which is an employee-owned Hawaii small business with a showroom located on Sand Island. He can be reached at 808)-841-7400 or 800-320-3222 on the Neighbor Islands.*

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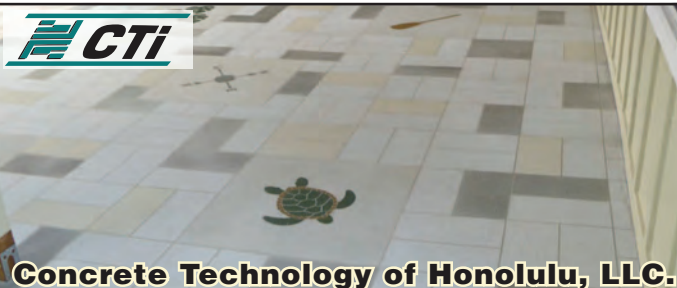
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# An ESA Can Deliver Peace of Mind

## Consider budget-friendly options while creating energy savings

BY DUANE ASHIMINE

Businesses and property owners looking to deploy energy-efficient equipment to improve their system reliability and lower operating costs are often deterred by upfront costs. Following the emergence and success of third-party financing for solar photovoltaic systems, energy-efficiency financing is now firmly established and prevalent in the marketplace and facilitating the implementation of projects.

One of the leading financing options is the Energy Savings Agreement (ESA). The ESA is a unique program that provides new, reliable and energy-efficient equipment with no upfront capital outlay and the energy savings generated are used to pay for the cost of the measures.

The flexible nature of the financing program allows for a wide range of efficiency retrofits to be incorporated, including large HVAC systems, chillers, boilers, lighting, motors and more. Furthermore, additional upgrades can be added to the existing program throughout the term of the agreement.

Under the ESA, the system will be owned, operated and managed by a third party for the entire course of the agreement, removing the need for the client to plan for maintenance and equipment replacement, essentially providing energy efficiency as an outsourced service to the client.

This performance contract type program has been used in



Financing agreements allow a property to install new equipment with minimal upfront costs

the public sector (government buildings, schools, etc.) for many years but recent advancements in measurement and verification, along with insurance underwriting of the energy savings now provides this same access to the private sector. The ESA is ideal for clients with central plant operations seeking to generate additional cash flow through energy savings.

In September 2014, Kuakini Medical Center installed a \$5.8 million energy-efficiency system with no upfront cost while reducing its total utility cost. Employing an ESA, the entire system cost was financed by a third party and a portion of the energy savings from the measures are used to repay the cost of the installation over the next 10 years. Some of the savings will be retained by Kuakini for use in its operations.

Similar to many other Hawaii facilities, there was deferred maintenance on Kuakini's central plant and lighting systems, as its capital was focused on core operational services for the patients. While there was always interest in making capital improvements to its central plant and lighting systems, budgetary restrictions made this a challenge, with upgrades made only as capital



availability allowed for it. The ESA enabled Kuakini to make all of the upgrades today, outside of its capital improvement planning process and at no upfront cost.

Under the ESA, the energy-efficiency measures installed over a nine-month period at its facilities include:

- Two new 450-ton chillers with magnetic-bearing compressors,
- Lighting upgrades throughout the common areas and patient rooms,
- Installation of an emergency management system for plant optimization,
- Two new steam boilers,
- Air handling units with variable frequency drives,
- Booster pumps,
- Fire pump.

---

***The ESA is a unique program that provides new, reliable and energy-efficient equipment with no upfront capital outlay and the energy savings generated are used to pay for the cost of the measures.***

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Annually, the efficiency measures will reduce the amount of electricity consumed by more than 3.5 million kilowatt hours and save 10,800 therms of natural gas. This represents more than \$1.1 million of utility savings each year. As an example, the chillers alone now use less than 55 percent of the electricity that was used prior to their replacement.

The design, engineering and savings calculations were reviewed, approved and insured by Energi, an independent energy insurance company. Energi has underwritten an energy savings warranty for the project

insuring the performance of the project for the entire term of the agreement.

In addition to the significant energy savings, the ESA also covers the maintenance and service of the measures over the term of the agreement.

An ESA provides new, reliable and best-in-class energy-efficient measures while allowing for the client to fully focus its capital on core business efforts with the peace of mind that its central plant operations are fully accounted. 



*Duane Ashimine, president and COO of Energy Industries Corporation, began in the energy industry in 1989 as an energy engineer at Pearl Harbor working on nuclear submarines. He later transitioned*

*to the nation's 15th largest mechanical contractor owned by Japan's Taisei and then worked at Hawaiian Electric's Power Corp. as an energy engineer before joined Energy Industries in 1998. For additional information, he can be reached at [duane.ashimine@energy.industries](mailto:duane.ashimine@energy.industries).*

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# Checking a Building's Energy Score

Standardized metrics helpful in revealing waste

BY STEVE CHANG

Hawaii's high energy prices are a powerful motivator for building owners and operators to learn more about their building's energy usage and what can be done to lower consumption. Benchmarking may be a good start. Benchmarking is a valuable tool to evaluate a building's energy performance and determine if there are opportunities for improvement.

In the automotive industry, fuel efficiency can be measured in terms of miles-per-gallon. In the building industry, benchmarking uses an energy use intensity (EUI) in KBtu/SF and other standardized metrics to measure and compare energy efficiency performance between similar buildings in terms of size and scope. For instance, a hospital that operates every day for 24 hours will have a much different energy intensity profile compared to a commercial office building that is primarily occupied on weekdays during business hours.

Successful benchmarking programs are tailored to the structure and culture of each specific organization. Although a single approach will not address the needs of every market segment, all can benefit by implementing a benchmarking process.

## The Benefits

There are several benefits for Hawaii building owners and operators across various industries that conduct benchmarking. They include the following:

- Informs organizations about how they use energy, where they use it and what drives their energy usage.
- Identifies maintenance and control problems.
- Determines key metrics for assessing performance and establishes baselines and goals.
- Prioritizes efforts. Identifies the

drivers of energy use and provides an important diagnostic to improve performance.

- Provides detailed information about annual energy usage and expected costs for those interested in leasing or purchasing a building.
- Uncovers savings potential. Helps to develop a comprehensive energy management action plan to make informed decisions about the best measures for reducing energy costs.
- Educates and inspires.

## Benchmarking Initiative

Under the direction of the Hawaii Public Utilities Commission (PUC), Hawaii Energy—the ratepayer-funded energy conservation and

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***Benchmarking is  
a valuable tool to  
evaluate a building's  
energy performance  
and determine if there  
are opportunities for  
improvement.***

---

efficiency program for Hawaii, Honolulu and Maui counties—launched a benchmarking initiative available until June 30, 2015 or while funding is available. This initiative was developed to assist qualifying building owners and operators to better understand their EUI and discover opportunities to improve performance.

To qualify for this initiative the building owner must be an electric utility ratepayer in Hawaii, Honolulu or Maui counties.

## Eligible Buildings

Hawaii Energy contracted with a local architectural engineering firm (Allana Buick & Bers, Inc.) with expertise in conducting benchmarking. Several types of buildings are eligible for the benchmarking initiative, including commercial buildings (i.e., hotels, office buildings, high rise condominiums) and privately owned water and wastewater facilities in the counties of Hawaii, Honolulu and Maui. These buildings must be single facilities (one building) of 5,000 square feet or more or a portfolio of facilities that total 10,000 square feet or more, which have not been issued an ENERGY STAR Portfolio Manager® benchmarking score within the past two years. Government facilities are not eligible for this program. However, the Department of Business, Economic Development and Tourism (DBEDT) is undertaking a similar program that targets these facilities.

By participating in the Hawaii Energy initiative, organizations will have the opportunity to compare energy usage against their peers, reduce overhead costs, improve environmental performance and gain recognition for their energy efficiency accomplishments.

## The Process

Conducting a benchmark involves uncovering the key drivers of energy use and adjusting or normalizing the metrics used to compare energy use. Data is normalized for relative size, weather, occupancy, number of employees and production levels. This allows for a pineapple-to-pineapple comparison.

- First, decide on the goals, scope and metrics that will support energy management activities and objectives.
- Next, utility data is gathered (electric, gas and water).



Benchmarking graphic with building energy scores.

- That data is then transferred into the ENERGY STAR Portfolio Manager, an online benchmarking tool for measuring EUI, which can provide a score for eligible building types.
- The ENERGY STAR® performance score ranges from 1 through 100, using the normalization criteria above. The higher the score the

more energy-efficient the building. For example, buildings with a score of 75 or more are considered top performers among their peer group and eligible to receive an ENERGY STAR certification to recognize their energy efficiency efforts. If a building has a lower score such as 30, it indicates that it is only more energy-efficient than

30 percent of comparable facilities (in terms of size and function). Therefore, several opportunities exist for these buildings to increase energy performance.

Depending on how a building scores, Hawaii Energy may provide targeted financial incentives that can include energy audits, studies, increased incentives for energy conservation and efficiency measures, whole building assistance, decision-maker metering and ENERGY STAR certification assistance. 



*Steve Chang is an energy engineer at Hawaii Energy and has more than 20 years of both technical and management experience workings for various utilities and energy service companies in California and Hawaii, including Sempra Utilities, PG&E Energy Services, Hawaii Gas, Hawaiian Electric Company and Johnson Controls. To find out if your building is eligible for benchmarking, please contact Chang at 808-848-8583 or [Steve.T.Chang@leidos.com](mailto:Steve.T.Chang@leidos.com).*

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# Managing PV Energy Consumption

## Maintenance and inspections are critical to efficiency

BY FRED BROOKS

Photovoltaics once was an off-the-beaten-path term in Hawaii but is now a mainstream term in daily conversation. One topic of conversation that has not been as mainstream has been the maintenance issues on the systems after they have been installed.

From a standpoint of energy management and cost analysis this is the easiest thing that can be done to keep the system performing at its peak efficiency and knowing if a problem is going to arise, and if a problem does arise the downtime of that system is kept at a minimum. Downtime of a photovoltaic system is a direct correlation to lost energy and lost money.

One of the approaches that should be taken toward an installed photovoltaic system is that it is an extension of the equipment on the property and as with all equipment there should be a maintenance schedule set. The main pieces of equipment on the system, the panels and the inverters all come with an installation guide, and inside that guide there is always a maintenance section.

One piece of equipment that can be of the most vital is the monitoring system and the understanding of how

the monitoring system works. Most monitoring systems come with a comparison marker formula and a tracking system so you can follow the systems performance and ensure it is operating where it needs to be. These pieces of equipment like all equipment on a property should be scheduled for routine servicing and inspection, and at the minimum should be followed what is stated in the installation guides.

Inverters should have the intake and exhaust screens cleaned and inspected on a regular basis. If the inverter does not get to cool down to its best temperature with proper airflow, you can be losing efficiency due to heat issues and as a result losing energy that could be

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***Doing regular walk-through inspections and a minimum of annual cleaning of the system is the best thing that can be done to keep your system up and operational at its peak performance.***

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harnessed. To keep a piece of equipment operating and performing well is easy to do as long as there is a routine check on the system.

The slow degradation of a system will occur because, just as with any kind of systems, they do not just shut down but have a slow progression of loss of efficiency which is not immediately perceived unless it is really tracked and understood what is happening. With a maintenance schedule and a knowledgeable person tracking the system these items can be avoided. With the tracking of the system performance and keeping it on a maintenance schedule this can be the easiest way to get the most out of your system for the 20-plus years it should be operating.

Routine maintenance can be as simple as having someone do a walk-through on the system on a regular basis to see if there is dirt build-up, birds nesting or any other animal issues that can occur on the panels. When doing the walk-through you should check the piping runs as these hold the wires that are carrying the electricity that your system is producing. Without these wires and path you do not get to utilize the energy that is being produced.

The visual inspections include checking the system for

such issues as cracking, staining or damage to any part of the system. You also should check the disconnects on the system and the location around the inverters. The same type of visual inspection is good as this will find any issues before they can become a problem.

On doing the inverter inspection checks it is good to have the basic understanding of the particular unit as there are a variety of inverters and each is slightly different. The main component to them all is a light indicator showing operation. This is shown in the installation guide.

And it is a good idea to keep an installation guide in a protected area near the inverter. This guide will have all the basic steps that are needed in case of a problem, along with the manufacturer's contact information if an issue requires technical support or to schedule a technician to fix the problem.

If issues are found during the walk-through it is usually an easy fix that can be handled inexpensively. Doing regular walk-through inspections and a minimum of annual cleaning of the system is the best thing that can be done to keep your system up and operational at its peak performance.

Monitoring the system is often overlooked. A problem in the system sometimes doesn't get noticed until the accounting department sees a spike in the electric bill. Having someone knowledgeable of the system is a key factor in the maintenance area of your installed photovoltaic system.

These are easy but important steps to follow in photovoltaic system energy management to help ensure a long life of the equipment and to minimize downtime of the system. 🏠



*Fred Brooks, owner of Pacific Panel Cleaners LLC, has been in the photovoltaic field since 2006. A certified energy manager (CEM) and certified energy auditor (CEA), he spent more than eight years in the U.S. Navy where he*

*worked in the engineering departments on two ships out of Pearl Harbor.*



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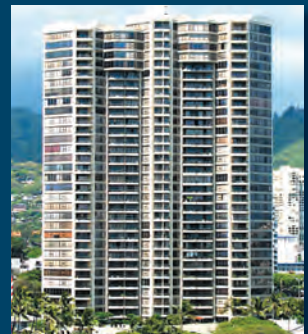


Punahou Vista (before)



Punahou Vista (after)

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# The Ultimate Energy-Efficient Building

Property managers have options to streamline energy systems.

BY BRUCE EKIMURA

Now is an exciting time for owners and managers who want to modernize their building's energy profile. There have never been more options for going green, saving money, monitoring usage and streamlining energy systems.

As Hawaii's energy options have grown, we've seen a crucial need for all the elements to work seamlessly

together—from solar photovoltaic, water heating and electric vehicle charging, to heating and air conditioning, to electrical design and engineering.

Ladd Tsuda, a senior project manager and certified electrical contractor with more than 30 years of experience, shares his thoughts on energy management trends he's seeing

with building managers, as well as a few tips and recent case studies.

## Adding Air Conditioning

"A lot of small to mid-size property managers are considering air conditioning for their buildings," Tsuda says. "But they need to be careful not to overload their electrical system."

Most air conditioning contractors are owner-operators who will subcontract their electrical work. It's important to choose licensed in-house electricians and engineers who write guidelines for a property and ensure all design criteria are met, including aesthetics. They should be knowledgeable of HOA priorities and review your property's existing load and design a system that won't overload your electrical capabilities.

And if you're going to invest in air conditioning, go with a trusted manufacturer. The Mitsubishi heating/cooling systems have among the industry's highest SEER efficiency ratings, as well as new ductless technology and inverter-driven compressors which can instantly and automatically adjust to changing room environment conditions. Not only does the new technology from a trusted brand save you money, but you have the peace of mind that the company will be around to honor its warranties for decades to come.

## Sleuth Out Energy Hogs

Today's technology can allow you to track electrical usage via the Internet, monitoring individual tenants' usage in real time and even breaking down reports to specific areas like air conditioning or hot water heating. You can also monitor photovoltaic production. A user-friendly energy monitoring system is eGauge which puts an incredible amount of data at your fingertips in an easy-to-understand format.



You'll be able to identify undue usage and correct it immediately (rather than learning about it in a utility bill 30 to 45 days later), determine where to invest in efficiency upgrades, and guard against billing errors by comparing bills to actual usage.

## The EV Wave

Electric vehicles are here to stay. The state's green energy initiatives mean more and more buildings will be mandated to provide EV charging stations. Why not recoup the cost of that energy?

Tsuda encourages managers to consider "Smart Charging" stations that allow facilities to charge per kilowatt hour, according to their own fee structure. A station such as ChargePoint contractor have retractable cables and single, dual or quadruple access points. They also offer programmable screens for advertising or other messaging, and they utilize cell phone or credit card payment options for ultimate convenience.

## Get Back to Basics

HECO may have put your photovoltaic investment on hold, but you can still benefit from solar in two important ways: solar water heating and solar attic fans.

A truly energyefficient facility or residence starts with solar water heating, since hot water heating can account for 40 percent of a family's electricity bill. A SWH system will integrate seamlessly with your overall energy plan. And solar attic fans are a time-honored tool for removing hot air from a structure. "Why pay to cool air that you can release naturally?" says Tsuda. "I always tell managers, before you invest in photovoltaic or air-conditioning, we highly recommend solar water heating and solar attic fans. Installing them can greatly reduce the amount of electricity you need."



Alternate Energy design engineer team members

## One Facility's Experience

The Hawaiian Mission Academy, a private independent school in Honolulu, had several concerns. Most urgent was an overhead electrical cable that was infested with termites and posed a major safety hazard for students.

"We conducted a review of their system and not only were we able to provide them with a new underground cabling system, but we did an overall service upgrade, installed a photovoltaic system and switched over to LED lighting to save

the school thousands in electrical expenses," says Tsuda. "Because of our integrated approach and expertise in multiple areas of electrical, solar and contracting services, we were able to tackle the whole job efficiently with one point of contact." 

*More than 30 years ago, Bruce Ekimura became an early specialist in solar and in 1993 Alternate Energy, Inc. was officially incorporated. Today, AEI is a full-service energy efficiency contractor offering PV, HVAC, licensed electrical contracting, solar attic fans, solar water heating and EV charging. For more information, visit [www.alternateenergyhawaii.com](http://www.alternateenergyhawaii.com).*



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# Walk-throughs Vital to Engineers

Knowing your property well pays off in the long term

BY JAMES DORAL

ENGINEERS

Engineers and facility managers should become as familiar with their building or community as possible, and the best way to do that would be to walk around the property.

Having a thorough knowledge of your property is paramount. It can bring a little peace of mind to know you can instruct someone over the phone (on most occasions) when you receive those after-hour calls. Take the time to conduct a periodic walk-through of your property. Write detailed notes and make it a point to know where things are located, such as main shutoff valves or isolation valves, electrical panels and circuit breakers as well as knowing the physical location and layout of certain critical pieces equipment and systems.

With the safety of tenants and employees being of utmost importance, a scheduled walk-

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***The information you gather can help you develop a maintenance program for daily operations, preventive maintenance schedules and for planning long-term goals and projects.***

---

through can also be a good way of recognizing or identifying any potential safety hazards or concerns before it actually becomes an issue. Checking and inspecting your fire alarm and safety equipment along with your emergency generator

should be done on a scheduled basis to ensure everything is working properly.

During a walk-through, you can also do assessments on your central plant (chillers and cooling towers), HVAC systems, lighting, plumbing, safety/security, elevators and all other major systems of your facility or property.

The information you gather can help you develop a maintenance program for daily operations, preventive maintenance schedules and for planning long-term goals and projects. Proper maintenance can extend the life of your major mechanical systems and avoid unplanned capital expenditures. It also helps with budget planning as you can make recommendations and offer timelines (life expectancy of equipment) and provide insight to the owners/corporate on what needs

upgrading or replacement in the upcoming years.

Equally important for building and facility managers is to stay current. Technology is always evolving and growing and facility managers need to adapt as well. Taking classes, reading, researching online and networking are all great resources. With the ever-growing trend toward energy savings we can bring these ideas to upper management or owners. Areas such as lighting, high efficiency chillers, pumps, energy-saving controls such as VFDs (variable frequency drives) and energy management systems can minimize energy consumption and reduce cost.

With all the responsibilities that facility managers are required to handle they can often find themselves stuck at their desks. But

take the time to walk around—you will find it to be beneficial. 🏢

*James Doral is the chief engineer at the Waikiki Parc Hotel.*



*A periodic walk-through of the building helps the staff become familiar with its systems*

## *Intimate Conversations*

“The dialogue between client and architect is about as intimate as any conversation you can have, because when you’re talking about building a house, you’re talking about dreams.”

--Robert A. M. Stern

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# Building and Management Expo Set

Popular show, seminars scheduled March 11-12

More than 300 product, service and equipment exhibits and 30 free educational seminars will be featured at the eighth annual Hawaii Buildings, Facilities & Property Management Expo on March 11-12 at the Blaisdell Center.

The exhibits will be open daily from 9 a.m. to 4 p.m., and the free seminars will be presented throughout the two-day event with doors opening for the seminars at 7:30 a.m. Admission to the exhibits is also free, and prizes will be awarded, including six trips for two to Las Vegas provided by Vacations Hawaii and eight roundtrip tickets for two to a Neighbor Island on Hawaiian Airlines from 808-Travel.

Among the free educational

seminars being offered is an update on the incidences of Legionnaire's Disease among commercial and residential buildings, hospitals and hotels on the mainland.

Other seminars address such issues as pest control methodology, condo association governance and reserves, service and comfort animals, fire and construction codes, swimming pool certification, solar PV financing, asphalt repair and parking lot safety, cyber theft, loans, telecommunications, roofing, windows and construction permits.

In 2014 the expo attracted 2,896 individuals with purchasing authority or influence for Hawaii's

buildings and facilities.

They represented Hawaii's architects, asset managers, attractions, colleges, commercial buildings, condominiums, contractors, country clubs, culture and arts facilities, developers, department stores, entertainment complexes, financial institutions, franchise operators, golf courses, government buildings, healthcare facilities, hospitals, industrial plants, interior designers, law enforcement centers, libraries, military structures and housing, office buildings, parks, prisons, property managers, public utilities, recreational and sports centers, real estate brokers, religious facilities, residential buildings, retirement homes,



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The 2014 Expo attracted nearly 3,000 attendees with the ability to influence buying decisions

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schools, shopping malls, supermarkets, transportation facilities and warehouses.

Exhibitors will be showcasing products, services and equipment for the maintenance, operations, renovations and sustainability needs of Hawaii's commercial, residential, retail, industrial, governmental, institutional, military, educational and healthcare buildings and facilities.

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The Hawaii Buildings, Facilities & Property Management Expo is produced by Douglas Trade Shows, Hawaii's oldest and largest trade show production and exposition management firm. 

# EXPO FACTS

## WHAT:

Hawaii Buildings, Facilities & Property Management Expo

## WHEN:

March 11-12

## WHERE:

Neal Blaisdell Center, 777 Ward Ave.

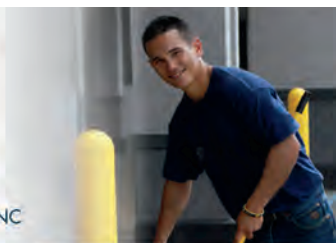
## EVENTS:

Seminars start at 8 a.m.; exhibits open from 9 a.m. to 4 p.m. each day

## CONTACT:

For further information and to reserve exhibit booth space or to register as an attendee contact Ken Kanter, exposition director, at 808-261-3400 (Oahu) or via email at [kanter@lava.net](mailto:kanter@lava.net).

You also can visit [douglastradeshows.com](http://douglastradeshows.com).



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*An Oceanview Roofing project before installation of a new roof.*

*Oceanview's project after installation of a Gaco silicone roof system.*

# Hawaii's High-tech Roofing Products

## Hundreds of new innovations are offered by local firms

BY BRETT ALEXANDER-ESTES

Since roofing repair and replacement costs are usually split 50/50 between the cost of materials and the cost of labor, you and your association are going to choose a roofing material with the longest possible warranty.

Hawaii's licensed and bonded roofers have nothing to gain from a failed roofing repair or installation, so they are on your side when it comes to choosing a durable roofing product.

However, your task can seem overwhelming due to the many roofing materials available in Hawaii. Even more confusing, many of these materials, which often contain energy-efficiency or other high-tech features, must be adaptable to the energy requirements or planned power upgrades for your particular roof.

A good rule of thumb is to survey current popular products

and to proceed from there. Hawaii roofers are putting their money on thermoplastic, elastomeric, modified bitumen, shingle and metal products that are available in a wide variety of high-tech formulations.

Island weather dictates that thermoplastic (TPO) and elastomeric products—which are often reflective, and expand and contract without cracking—are Hawaii roofers' overwhelming choice when roofing and weatherproofing flat, low-pitch and domed roofs. Another flat-surface option with reflective properties is torch-on capsheet.

In Hawaii, top-selling TPO and elastomeric products include Sika™ Sarnafil and Sikalastic, HydroStop, Carlisle TPO, Tropical Silicone and Gaco. All provide durable protection against UV rays, heat, high winds and ponding.

Bob Johnson, Pacific Industrial Coatings LLC (PIC) president, recommends Gaco Spray Polyurethane Foam and Silicone roof systems for flat and low-pitch roofs. "Spray polyurethane foam and silicone roof systems are seamless, self-flashing, best in class performance for wind uplift events such as hurricanes, (and provide) excellent insulation value and 100 percent adhesion to the roof deck," he says. Johnson notes that this product is especially suited to integrating photovoltaic (PV) supports on flat or low-pitch roofs. Since the coating is "spray applied and self-flashing," he says, "waterproofing each penetration is much more secure."

Peter Micheltmore, Oceanview Roofing owner, says GacoRoof silicone systems are "the best flat roof system I have ever seen." The systems offer



CRW installed CertainTeed shingles at this Hawaii Kai complex.

a 50-year warranty against ponding conditions, he says, and can be re-coated during solar upgrades, repairs, or add-ons.

Elastomeric products like Sika™Sarnafil and Sikalastic effectively seal flat, low-pitch and domed surfaces, and offer some product lines that duplicate the look of high-end custom metal roofing. Guy Akasaki,

Commercial Roofing & Waterproofing Hawaii Inc. (CRW) president and CEO, notes that the 2013 installation of a modified Sika™Sarnafil roof on the Harbor Court tower “looks like metal, but it doesn’t have the inherent characteristics of being able to corrode, or anchors and joints.”

If your property features residences with traditional high-

pitched roofs, shingles increasingly offer solar and reflective features, and standing seam aluminum roofs can offer lifetime warranties if installed to upgraded specifications.

Reflective shingles include Pabco Radiance and CertainTeed’s Landmark and Solaris lines. Inspire offers durable shake-roof and tile look-alikes made from composite materials.

## HAWAII ROOFTOP WINNERS

### ROOFERS’ TOP CHOICES THROUGH 2Q 2015

|                                          | BEACHSIDE ROOFING                                     | CRW HAWAII                                            | SURFACE SHIELD ROOFING CO.                                          | DAVID’S CUSTOM ROOFING & PAINTING, INC.                       | PACIFIC INDUSTRIAL COATINGS (PIC), LLC                     | KAWIKA’S PAINTING, INC.                                    | HONOLULU ROOFING COMPANY, INC.            | COOL ROOF HAWAII                            | OCEANVIEW ROOFING                             | ALOHA MARKETING MANUFACTURERS REPRESENTATIVES               |
|------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------|---------------------------------------------|-----------------------------------------------|-------------------------------------------------------------|
| MODIFIED BITUMEN                         |                                                       |                                                       |                                                                     | TORCH-ON CAPSHEET                                             |                                                            |                                                            |                                           |                                             |                                               |                                                             |
| SINGLE-PLY/ TPO/ ELASTOMERIC             | SARNAFIL CARLISLE TPO                                 | HYDROSTOP SARNAFIL<br><br>CERTAINTEED<br><br>MALARKEY | TROPICAL SILICONE<br>GACOROF SILICONE<br>CARLISLE 80 MIL SINGLE-PLY |                                                               | GACOWESTERN SPRAY POLYURETHANE FOAM & SILICONE ROOF SYSTEM | ACRY SHIELD<br>ACRY-CHEM<br>HYDROSTOP<br>TROPICAL SILICONE | SARNAFIL PVC<br>HYDROSTOP<br>PREMIUM COAT | TROPICAL SILICONE                           | GACOROF SILICONE                              | SIKALASTIC ROOFPRO                                          |
| SPECIALTY MEMBRANES/ COATINGS            | AMERICAN HYDROTECH<br>GRACE PREPRUFE<br>WATERPROOFING |                                                       |                                                                     |                                                               |                                                            |                                                            |                                           | TEXCOTE<br>REFLECT-TEC                      |                                               |                                                             |
| SHINGLE / SHAKE / STANDING SEAM ALUMINUM |                                                       |                                                       |                                                                     | PABCO RADIANCE<br>CERTAINTEED LANDMARK<br>CERTAINTEED SOLARIS |                                                            |                                                            | INSPIRE<br>SIMULATED<br>SHAKE<br>ROOFING  | CERTAINTEED LANDMARK<br>CERTAINTEED SOLARIS | STANDING SEAM ALUMINUM<br>CERTAINTEED SOLARIS | WESTERN RED CEDAR SHINGLES<br>• BLACK HAWK<br>• GREEN RIVER |

Paul Kane, Aloha Marketing owner, notes that Western Red Cedar Shingles also have a good track record. "I have a (red cedar) roof on Kauai that went through Hurricane Iniki in 1992 and is still performing to this day with minor repairs," he says.

Standing seam aluminum roofing panels with stainless steel fasteners are "the number one best roof for Hawaii's pitched roofs," says Michelmore. "Corrosion resistant, lifetime warranties are available, and with the right amount of stainless steel fasteners, (this roof) can withstand hurricane force winds. It doesn't wear out like traditional asphalt shingles."

Specialty membranes and coatings are now adapted for use on a building's roof to its foundation, and are installed to contain water intrusion at different levels.

"As high-rises begin construction, says Scott Ai, Beachside Roofing LLC vice president, "the waterproofing of choice to protect the deep foundation walls from water intrusion is Grace's

Preprufe, a unique membrane that is laid before the concrete, to which it forms a tenacious bond."

American Hydrotech, another specialty membrane, is made of hot rubberized asphalt and is designed for podium and green roofs that support foot traffic as well as plants. Ai says that Beachside is "installing American Hydrotech at the Japengo Restaurant at the Hyatt Waikiki and at the Aston Waikiki's podium/pool deck, and will be installing it throughout the Waikiki International Marketplace."

TexCote Reflect-Tec, another specialty coating available through Cool Roof Hawaii, is a water-based, field-applied cooling coating system for tile and metal roofing surfaces and metal wall surfaces.

Given the roofing products currently available in Hawaii, you and your association have a wide variety of roofing choices that can be precisely tailored to your building's requirements and can offer substantial savings on roofing and energy costs. 🏡

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local chamber of commerce.

Now that you have the names of a few private security firms, go to your state's website to find out about state licensing requirements and laws governing private security firms. Additionally, your county may have laws governing the industry, so make sure to visit your county's website.

Continue by going to the local department that oversees private security firms to determine if the agencies on your short list meet the legal requirements. Now log on to your county and circuit clerk of courts website to determine whether the candidates have ever been sued, and if so, for what. Clearly, a firm that has been sued for breach of contract is one to avoid. So far, so good.

### Vital questions to ask when interviewing security companies

Now make an appointment to meet with the sales agent or firm manager to discuss your needs and expectations. While you're there, take note of how the office is run: crisp organized, and professional, or chaotic? If guards are at the office, do they appear professional, or do their uniforms look like they just tumbled out of the dryer?

The selection of a private security company is very important, so don't hesitate to ask these questions:

1. Is the firm insured and bonded, and by whom? This is the most important question, and if the answer is "no," excuse yourself and leave.

2. Are applicants for guard positions required to pass a Fair Credit Reporting Act (FCRA) compliant nationwide criminal background check, including a sexual offender screening?
3. Is a pre-employment drug screening required? How about random drug screening after employment begins? A complete background and drug screening are vitally important to protecting your property and tenants.
4. Do the new guards receive training, and are they required to complete annual remedial training for a refresher? The last thing you need are poorly trained, overzealous police officer-wannabes.
5. What type of equipment does the agency provide? Every guard should be equipped with a professional uniform, photo ID visible to residents, watchman's clock, handheld radio, flashlights, foul weather clothes, and a book of agency SOPs.
6. Do the guards receive basic first aid and CPR training? This could be vital in a medical emergency.

When the firm's manager has answered all your all questions, lay all your expectations on the table. Your needs should be in the contract, and the details count. For example, consider these two reports from a guard following the SOP book:

***Walked around buildings 3, 5, 7, all secure. (Not good.)***

***Completed a one-hour foot patrol every other hour between 11:00 p.m. and 6:00 a.m., patrol pattern documented (such as: 00:00 to 01:00), patrolled buildings 3, 5, and 7. Found light left on and door unlocked to building 7 laundry room. Room secured. (Much, much better.)***

Your guards always should have a watchman's clock to document their actions. Driving around the property is good for securing parking lots and showing tenants and potential troublemakers that you're on the job, but guards who don't get out from behind the wheel can miss things, especially after dark. A foot patrol is always most effective.

Finally, when finalizing a contract, include the provision that your property management business is named as an *additional insured* and will be held blameless for any act of recklessness or neglect caused by the firm's guards while on your property. As with any contract, read it carefully. And last but not least, make sure your attorney reviews it before you sign on the dotted line. 📖



*Sandy Glover is the CEO/Founder of Florida's Gold Shield Agency. After 20 years of distinguished law enforcement in the Metro-Atlanta area she continues to stay current with laws and trends as they apply to rental screening. Email [sandy@goldshieldli.com](mailto:sandy@goldshieldli.com)*

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# Trapped in the Web of Act 326

## HOA proactivity urged amid flurry of new regulations

BY BRUCE HOWE

Recent media coverage of short-term rentals in residential areas renews the interest in Act 326-Transient Accommodations. The primary purpose of this law, which became effective on July 1, 2012, is to enforce the obligation of persons who use their apartments for transient vacation purposes to pay taxes to the state, but it also contains provisions requiring owners to report certain information to the association and for the association to report that information to the state Department of Taxation through the department's website.

The Community Associations Institute (CAI) opposed Act 326 because it forces associations, whether condominium, coop or community, to do the government's job and because its requirements are largely redundant since operators were already required to report the same information to the tax department.

The act not only addresses the obligation of operators of transient accommodations to provide information to the association, but it also requires operators of transient accommodations to do other things, such as to:

- 1) designate a local contact on the same island where the transient accommodation is located;
- 2) include the name and phone number of the local contact for the transient accommodation in any transient accommodation contract or written rental agreement; and
- 3) prominently post the name and phone number of the local contact in the transient accommodation. The act also provides that the "registration identification number shall be provided on a website or by online link and displayed in all advertisements and solicitations on websites regarding transient accommodations for which the registration number is issued."

If a unit is used for transient accommodations as defined in 326, the owner and/or the operator of the transient accommodation must provide certain information to the association, which, in turn, is required to provide information to the department by Dec. 31 of each year. The reporting requirements were delayed several times to allow the department to get its electronic reporting system up and operating, but all initial reports were to have been filed by April 30, 2014. Subsequently, if there is any change in the information provided, the

association must be notified of the change within 60 calendar days after the change and must report that change to the department within 60 days.

Act 326 provides that any person who willfully fails to supply the above information shall be subject to the penalties, other than imprisonment, provided under HRS, Section 231-35 (i.e., fines against individuals of up to \$25,000 and fines against corporations, including Associations, of up to \$100,000).

All associations should have made their initial reports in a timely manner prior to May 1, 2014. They



# New Regulations Being Prepared

While everyone's attention is on Tax Act 326, there are a number of updates to Hawaii's various building codes in the works, Tim Hui, chair of the Hawaii Building Codes Council (HBCC), told *Building Management Hawaii* magazine.

Tax Act 326 mirrors previous measures that are "just being revived," Hui says, to address unlicensed vacation rentals, such as a privately owned home being used as bed-and-breakfast in an area not legally zoned for a B&B. But, he adds, 326 has "energized the discussion" again among homeowners associations, property owners and managers and others.

The act required both operators of transient accommodations and associations of unit and apartment owners or planned community associations to report certain information. That information was to be reported to the Department of Taxation by April 30, 2014, and updated by Dec. 31 or within 60 days of a change, whichever is later, for subsequent years.

According to the state's website, associations can report their information online at [dotax.ehawaii.gov/resreport](http://dotax.ehawaii.gov/resreport).

Beyond 326, Hui says, the HBCC is preparing language on plumbing codes that would allow more gray-water use on a property while requiring super-high-efficiency urinals and toilets and prohibiting lead content in plumbing materials and products.

The electrical code changes, he says, will include updated language on PV systems while energy codes will see more regulations "pertaining to energy efficiency." Hawaii's fire code also will include updates that Hui notes will be "more about building maintenance."

The building codes are updated every three years. The last changes, including Tax Act 326, occurred in 2012 and most were implemented this past year. Of the codes and regulations being revised for 2015, Hui says the "impact will be both positive and negative for properties."

should also inquire of their owners whether they engage in transient rentals annually thereafter.

The annual maintenance fee letter can be used to make sure this burden is met, but other regular annual mailings such as the annual owners' meeting notice can also be used. The important thing is to make sure the inquiry is made and any changes reported in a timely manner to avoid a large potential liability for failure to inquire and report.

If you have any questions about Act 326, contact your association attorney for specific advice. 



*Bruce Howe serves as vice president, government affairs, for Hawaiiana Management Co., Ltd. He manages a portfolio of properties and has served on the Legislative*

*Action Committee of CAI for more than 15 years, lobbying for the interests of condos, coops and community associations statewide.*

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Fax: 696-8726  
86-120 FARRINGTON HWY.

**EWA BEACH**  
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Fax: 685-5533  
91-1061 Keaunui Dr.

## IREM Names 2014 Building, Member Winners

The Institute of Real Estate Management (IREM) Hawaii Chapter recently announced the winners of its 2014 Building of the Year and Member of the Year awards at the organization's meeting in November at Waialae Country Club. The winners:



### BUILDING OF THE YEAR

#### High Rise, 100-249 Units:

The Watermark, Michael Baker, resident manager, Hawaiiana Management Company

#### High Rise, 250-355 Units:

1350 Ala Moana, Ron Komine, resident manager, Touchstone Properties

#### High Rise, Over 356 Units:

Pearl Regency, Rick Edds, resident manager, Associa Hawaii

### ACCREDITED RESIDENTIAL MANAGER MEMBER OF THE YEAR

#### High Rise, 100-249 Units:

Hokua, Nicole Patterson, resident manager, Hawaiiana Management Company

#### High Rise, 250-450 Units:

Hawaiian Monarch, Nate Steele, resident manager, Hawaiiana Management Company

#### High Rise, Over 450 Units:

Discovery Bay, Chris Herndon, resident manager, Hawaiiana Management Company

#### Low Rise, Under 180 Units:

Waiau Garden Court, Stephen Reichard, resident manager, Associa Hawaii

#### Low Rise, 181-249 Units:

Cliffside Villages At Waipio Melody Pai, resident manager, Hawaiiana Management Company

#### Low Rise, Over 350 Units:

Hawaii Loa Ridge, William Koechlin, resident manager, Hawaiiana Management Company

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# Hawaii Energy Promotes Wirt, Hires 4 Others

Hawaii Energy has announced the promotion of **Shan Wirt** to director of communications and program risk manager and has hired four new members: **Jimmy Pastor**, **Aurora Winslade**, **Alan Hong** and **Jackie Lum**.



Shan Wirt

Wirt, a former attorney, oversees Energy's communications team and recently took on the role of program risk manager where she will work to identify and mitigate potential risks to maximize program efficiencies.



Jimmy Pastor

Pastor was hired as a business program specialist after nine years at Aloha Petroleum managing facility services, spearheading the implementation of both energy efficiency and solar power projects and vetting alternative fuels for retail operations. Prior to that he worked at Aloha Airlines.



Aurora Winslade

As transformational program manager Winslade oversees Hawaii Energy's programs that are designed to educate, provide system evaluation tools and develop behavioral changes that will lead to energy savings within five years of participation. She spent more than a decade at the University of Hawaii and the University of California, Santa Cruz.



Alan Hong

As an energy engineer, Hong assists with the development of the smart grid initiative as well as other emerging energy-efficient

technologies. Previously he facilitated the deployment of solar projects, provided technical assessments, analyzed renewable energy production modeling and calculated the energy savings for various projects in East Asia, Japan, Europe and California.

Also an energy engineer, Lum is assisting with the development and



Jackie Lum

launch of Hawaii Energy's demand response and electric vehicle offerings. She also supports various water/wastewater initiatives. She previously worked at the Honolulu Board of Water Supply.

## Hawaii First to Manage Marco Polo

Hawaii First, an Associa company, has been named as the managing agent for Marco Polo Condos in Kapiolani. Associa Hawaii will provide full management services, including financial, community management, communications, record-keeping and administrative services.

"We are excited to become a part of what has come to be known as a local landmark," says Richard Emery, Hawaii First President and CEO. "The homeowner's association board was impressed with our reputation for unsurpassed management services and we look forward to delivering

those services here at Marco Polo for years to come."

Marco Polo, a 572-unit tower, is adjacent the Ala Wai Field and Ala Wai Elementary School, Associa Hawaii began management of the community association on Jan. 1.

## Management Consultants Appoints Two

Management Consultants Hawaii, based on Maui, has appointed **Al Andrews** to customer development and community association manager and **Neil Thomas**, PCAM, community association manager.



Al Andrews

Andrews has more than 30 years experience in the industry and is a founding member of the Community Associations Institute (CAI) Hawaii.

He currently is a board member with Condominium Council of Maui and is its' immediate past President and Seminar Chair. He has served in most Officer Positions on several Condo Boards including Kuliouou Kai's for over 20 yrs.

Thomas has been involved in community association management for 21 years and a member of CAI since 1995. He was awarded the PCAM designation in May 2001 and is a member of Condominium Council of Maui.

## Joshua Akaka Joins CRW



Joshua Akaka

**Joshua Akaka** has joined Commercial Roofing & Waterproofing Hawaii Inc. (CRW) in its roof repairs and maintenance division. Previously

he was employed with Solar Wave and Haleakala Solar.

At CRW Akaka will be responsible for assisting in project managing and estimating along with the daily field operations of the division.

CRW currently has 12 field personnel performing a variety of services.

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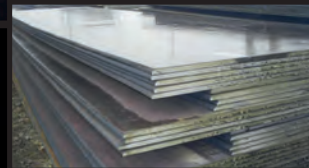
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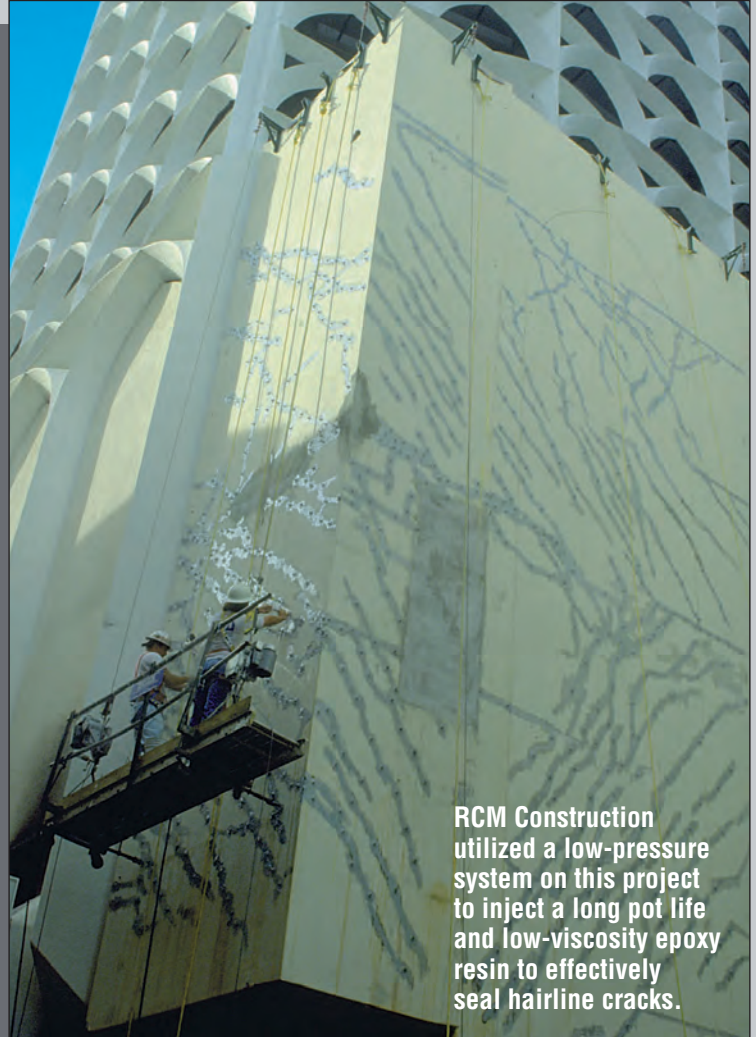
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