





ho doesn't like sun, sand and surf? Your roof

Heat affects the longevity of roofs, not to mention the comfort of the building's occupants, say the Islands roofers. "One thing that's become very popular over the last few years are cool roofs that reflect heat," Charlie Beeck Jr. of Tropical Roofing & Raingutters tells Building Industry Hawaii. "Most roofing manufacturers offer some sort of cool roof; they almost have to. They cost more, but are worth it."





Aerial shot of Koloa Landing, Kauai. PHOTO COURTESY OF KOKUA ROOFING

In this issue we report on the overall status of the state's roofing industry as well as taking a look at new materials and technology.

We also offer the results of our annual Hawaii's Top 10 Roofers survey. Once again, Beachside Roofing tops the list. Check out the complete rankings inside.

Due to major lobbying efforts by the BIA-Hawaii

and others, SB 611 has passed through both the House and Senate, and now sits on the governor's desk. The bill extends a law that blocks a mandate to require fire sprinkler systems in new homes, which could drive up housing prices by more than \$40,000.

Also in this issue, the new leadership at the American Institute of Architects-Honolulu Chapter talks about how great design and AIA Honolulu's programs support Hawaii's building industry in 2017.

On Guam, officials say they are looking to upgrade aging laws that govern the island's zoning and approval of development projects.

A hui hou,

david@tradepublishing.com

SETTING IT STRAIGHT

A picture was incorrectly included in our coverage on the concrete industry in the May issue. We regret the error.

Precast Stair Treads & Landings Palm Villas at Mauna Lani Here's one of our Red-Dirt-Killing-Colors: Caramel w/stain-resistant exposed aggregate Over 28,000 StairTreads past 27 yrs in Hawaii www.BuildingSystemsHawaii.com



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On the cover

Our annual Top Roofing Contractors issue.

Cover design by Ursula Silva

COMING IN JULY

Building Industry Hawaii will present its annual Hawaii's Top 25 Contractors feature, with company profiles and other interesting facts and figures. There also will be a look at High-Tech Building and Legislative Issues that affect the construction industry.



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JUNE 1, 29

Get the Job - Sessions 2, 3

Sessions 2 and 3 of Howard J. Wolff's four-part series is presented by the American Institute of Architects Honolulu Chapter (AIA Honolulu) and provides tools and strategies for getting more and better clients. Wolff, formerly WATG senior vice president and worldwide marketing director, shows how to craft an effective message, how to write a marketing plan and more. Various credits available.

Noon-1:30 p.m. AIA Honolulu Center for Architecture, 828 Fort Street Mall, Suite 100. For June 1 session, register online at aiahonolulu.org by May 31. For June 29 session, register online by June 28. For more info, contact Abby Mundell at abigail@aiahonolulu.org or 628-7244. Fee (4-part series): AIA members \$279; nonmembers \$337. (Per session): AIA members \$79; nonmembers \$97.

JUNE 1; JULY 6

ARE Prep Sessions

AIA Honolulu's ARE open study sessions offer individualized guidance on the path to licensure. June 1 and July 6 sessions both cover ARE 5.0 (Programming & Analysis), ARE 4.0 (Site Planning & Design/Programming, Planning & Practice) and the ARE 4.0 PPP vignette.

5:30-7 p.m. (both sessions). AIA Honolulu Center for Architecture, 828 Fort Street Mall, Suite 100. Online registration at aiahonolulu.org for June 1 and July 6 classes is available until June 1 and July 6. Contact Jason DeMarco at jddemarch@gmail. com for more information. Fee: AIA/ AIAS members \$10; nonmembers \$20. Substitutions available.

JUNE 3

Seminar: Building Your Home for Life

Residential design and construction firm Graham Builders guides homeowners on home additions and renovations from start to finish: where to begin, how to select a builder, potential problems as well as requirements for residential design, setting a budget, estimating, financing and scheduling, going green and more. Seminar is free and open to the public.

9-11 a.m. Honolulu Country Club, 1690 Puumalu St. Registration required. Limited seating. Call 593-2808 or go to grahambuilders.com.

JUNE 3, 10

Improving Productivity and Managing Project Costs (STP Unit 5)

The General Contractors Association of Hawaii (GCA of Hawaii) presents the Associated General Contractors of America's Supervisory Training Program (STP), designed and field-tested for contractors to help them effectively manage people, time, equipment and materials. Unit 5—Improving Productivity and Managing Project Costs (2015 Edition)—is the fifth in STP's sixcourse program. Instructor Glenn Nohara, Genba Hawaii Inc. president, covers construction estimates, managing project and labor costs, working with project partners and more. Includes manual and lunch. Certificate available after completion of course. Courses and units need not be taken in order.

8 a.m.-4 p.m. (daily). GCA Conference Room, 1065 Ahua St. Limited seating; first-come, firstserved. RSVP/register deadline was May 19. For more information, go to info@gcahawaii.org or gcahawaii. org, or call 833-1681. Fee: GCA of Hawaii members \$295; nonmembers \$395. No refunds after May 28. Replacements accepted.

JUNE 5-8

OSHA 511 — Occupational Safety and Health Standards for General Industry

Offered by the Building Industry Association of Hawaii (BIA-Hawaii) and UC-San Diego's OSHA Training Institute. Four-day OSH certificate course covers the 29 CFR 1910 standards, including general industry safety and health principles as they relate to real-world situations. Using OSHA standards as a guide, course focuses on areas that are the most hazardous. Topics include OSH Act, Safety and Health Management Systems, Personal Protective Equipment, Hazard Communication and Electrical. Various credits available. All materials provided on the first day of class.

8 a.m.-4:30 p.m. (daily). CTC Pacific,

JUNE 7

GCA Safety Awards Banquet

At its annual Safety Awards Banquet, the General Contractors Association of Hawaii (GCA of Hawaii) celebrates the companies that successfully achieve safe and healthy construction workplaces, and recognizes the winners of the 2017 AGC/GCA Safety Award Program.

5 p.m. (no host cocktails); 6 p.m. (dinner); 7 p.m. (award ceremony). Pomakai Ballrooms at Dole Cannery, 2nd Floor, 650 Iwilei Road. Limited seating; first come, first served. For more information and registration, go to gcahawaii.org or contact Gladys Hagemann at 833-1681, ext. 12.

94-487 Akoki St., Waipahu. Register at osha.ucsd.edu. For more info, go to biahawaii.org, call (800) 358-9206 or visit oshatraining@ucsd.edu. Fee: \$750. No refunds after May 22.

JUNE 7

General Membership Luncheon Meeting

BIA-Hawaii's general membership luncheon features an address by Avalon Development President and CEO Christine Camp. Hear her views on the industry, enjoy fine dining and network with your peers.

11 a.m.-1 p.m. BIA-Hawaii, 94-487 Akoki St., Waipahu. To register and for more information, contact Cathleen Main at clm@biahawaii.org.

JUNE 8

YAF Pau Hana

AIA Honolulu's Young Architects Forum (YAF) hosts a pau hana at Bethel Union. Hoist your glass, hear the latest buzz and kibbitz with your colleagues. YAF Honolulu welcomes professionals who are nearly licensed, newly licensed, and out to 10 years of licensure.

5:30-7 p.m. Bethel Union, 1115 Bethel St. Register in advance; online registration at aiahonolulu.org until June 8. For more info, contact Kris Powers via kris@masonarch.com or at 536-0556.

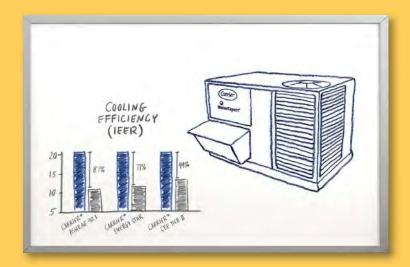
JUNE 10, 24; JULY 8

AIA Architectural Walking Tour

On every second and fourth Saturday of the month, AIA Honolulu walking tours are led by a Hawaii architect or architectural historian who relates the tales and building history of Honolulu's downtown district. Tour groups must be 4-12 people.

9-11:30 a.m. AIA Honolulu Center for Architecture, 828 Fort Street Mall, Suite 100. Register with payment at contact@aiahonolulu.org until June 9 (for June 10), June 23 (for June 24) and July 7 (for July 8). For more info call 628-7243 or go to aiahonolulu. org and contact@aiahonolulu.org. Fee: \$15 per person.

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JUNE 13-15

Construction Quality Management (CQM) Offered through BIA-Hawai.

This U.S. Army Corps of Engineers three-day class is for credentialed CQ managers and is limited to four attendees per company per course. After attending all classes, attendees will be issued a certificate, which is valid for five years after successful testing.

Noon-4 p.m. (daily). BIA-Hawaii, 94-487 Akoki St., Waipahu. Register at biahawaii.org. Contact Barbara Nishikawa at 629-7505 or BLN@ biahawaii.org for information and registration. Fee: BIA-Hawaii members \$95; nonmembers \$125. \$62.50 through available ETF funding.

JUNE 15

NAWIC General Membership Meeting/ Board Elections

The National Association of Women in Construction hosts its monthly dinner and membership meeting. Get to know other women in the industry, build partnerships and increase your knowledge. Board elections also will be held.

5:30 p.m. (networking); 6 p.m. (dinner and meeting). Honolulu Country Club, 1690 Ala Puumalu St. For more information, go to nawic114@yahoo.com or Honolulunawic.org. Dinner fee \$35.

JUNE 16

32nd Annual BIA Renaissance Building & Remodeling Awards: Final Deadline

BIA-Hawaii's 32nd annual Renaissance Awards celebrate excellence in new builds, renovations and industry collaborations. Final submission deadline is 4 p.m., Friday, June 16 at BIA-Hawaii's Waipahu office. Project Category Divisions include Details, Hawaii BuiltGreen, Kitchen & Bath, Historic, Residential, Commercial, Master Plan and more. The Renaissance Awards Gala will be held Oct. 6 at The Modern Honolulu.

Access more info, entry forms, fee information and instructions at biahawaii.org. For mailing submissions, send to P.O. Box 970967. For submission delivery, go to BIA-Hawaii, 94-487 Akoki St., Waipahu.

JUNE 14, 16

AIA Honolulu 2017 Design Awards - Final Deadlines

AIA Honolulu's final call for this year's outstanding architectural achievements comes on June 14 for student entries and June 16 for AIA member and associate entries. Categories include Residential, Commercial/Industrial, Institutional, Interior and Unbuilt. Winners will be celebrated on Sept. 16 at the AIA Design Awards gala in the IBM Building.

Go to aiahonolulu.org for online registration and more information. Fee: \$275 per entry.

JUNE 20

AIA/GCA Committee Meeting

AIA Honolulu sponsors this brownbag meeting of AIA and GCA of Hawaii members exploring current building industry trends. Open to all AIA and GCA members. Topic to be announced.

11:30 a.m.-1 p.m. Center for Architecture: Conference Room, 828 Fort Street Mall, Suite 100. Register/ RSVP online at aiahonolulu.org or contact Troy Miyasato, committee chair, at troy@ferrarochoi.com.

JUNE 21

NAHB CAPS I Marketing Strategies for Aging & Accessibility

BIA-Hawaii's one-day National Association of Homebuilders class identifies opportunities and skills that meet the needs of a 50-plus market. Also covered are best practices in communicating and interacting with this population, and how to take advantage of one of the fastest-growing market segments in remodeling and related industries. Counts for four (6) DCCA 2017-2018 biennium continuing education requirements. Course ID: C9475.

8 a.m.-5 p.m. CTC-Pacific, 94-487 Akoki St., Waipahu. For registration and information, go to biahawaii. org or contact Barbara Nishikawa at 629-7505 or BLN@biahawaii.org. Fee: BIA-Hawaii members \$300; nonmembers \$400; \$200 through available ETF funding.

JUNE 22

BIA Networking Night

At BIA-Hawaii's Networking Night hosted by Montage Décor Showroom, you'll enjoy pupus and drinks, get the latest industry buzz and network with peers.

5:30-7:30 p.m. Montage Décor LLC, 98-027 Hekaha St. #42, Aiea. For more information and to register online, go to biahawaii.org.

JUNE 23

NAHB CAPS II - Design/Build Solutions for Aging & Accessibility

BIA-Hawaii's one-day National Association of Home Builders class presents the safety and design standards required to adapt homes to an age 50+ market. Learn how to incorporate therapeutic and healthcare guidelines in a remodel or new build. Counts for four (6) DCCA 2017-2018 biennium continuing education requirements. Course ID: C9473.

8 a.m.-5 p.m. CTC-Pacific, 94-487 Akoki Street, Waipahu. For registration and information, go to biahawaii.org or contact Barbara Nishikawa at 629-7505 or BLN@biahawaii.org. Fee: BIA-Hawaii members \$300; nonmembers \$400; \$200 through available ETF funding.

JUNE 26-29

OSHA 5400 - Trainer Course in Occupational Safety and Health Standards for the Maritime Industry

Four-day class is offered by BIA-Hawaii and UC-San Diego's OSHA Training Institute. Learn how to teach the 10- and 30-hour Maritime Outreach Program as a Maritime Outreach Trainer. Instructor and Safety Professional /Trainer Russell Barringer, CSP, CSHM, emphasizes required Outreach topics with OSHA standards as a guide. Verification of Prerequisite form, proof of OSHA 5410 course completion, and other industry and academic credentials required. All materials provided on the first day of class. Various credits available.

8 a.m.-4 p.m. (daily). CTC-Pacific, 94-487 Akoki St., Waipahu. No online enrollment. To register, call 800-358-9206. For more information and Verification of Prerequisite form, go to biahawaii.org and osha.ucsd.edu. Fee: \$795. No refunds after June 12.

JULY 7, 14, 15, 21, 22

40-Hour Construction Safety Hazard Awareness Training for Contractors

Designed specifically for contractors, this GCA of Hawaii 40-hour training course provides the additional certification for a Site Safety & Health Officer (SSHO) as stated in the NAVFAC UFGS 1.6.1.1.1. Instructor Tristan Aldeguer also covers the major revisions to the EM385-1-1. Academic and/or industry prerequisites required. Certification provided after successful testing.

7:30 a.m.-4 p.m. (daily). GCA Conference Room, 1065 Ahua St. RSVP by June 30 at gcahawaii.org. Limited seating; first-come, first-served. Fee: GCA members \$500; nonmembers \$750. No refunds after July 1. Substitutions available.

JULY 15, 22

Planning and Scheduling (STP Unit 3)

GCA of Hawaii presents the Associated General Contractors of America's Supervisory Training Program (STP), designed and field-tested for contractors to help them effectively manage people, time, equipment and materials. Unit 3—Planning and Scheduling (2015 edition)—is the third in STP's six-course program. Instructor Clyde Wachi of Swinerton Builders covers plan preparation, creating a critical path, scheduling software and more. Includes lunch and manual. Certificate available after completion of course.

8 a.m.-4 p.m. (daily). GCA Conference Room, 1065 Ahua St. RSVP by June 23. Limited seating; first-come, first-served. To register and for more information, go to info@gcahawaii.org or gcahawaii.org, or call 833-1681. Fee: GCA of Hawaii members \$295; nonmembers \$395. No refund after June 23. Substitutions available.

JULY 24-27

OSHA 501 - Trainer Course in OS&H Standards for General Industry

Offered by BIA-Hawaii and UC-San Diego's OSHA Training Institute. Four-day OS&H trainer course prepares students to teach the 10- and 30-hour Outreach classes. Thorough knowledge of OSHA Construction Standards (CFR 1926) is required. Students become authorized 10- and

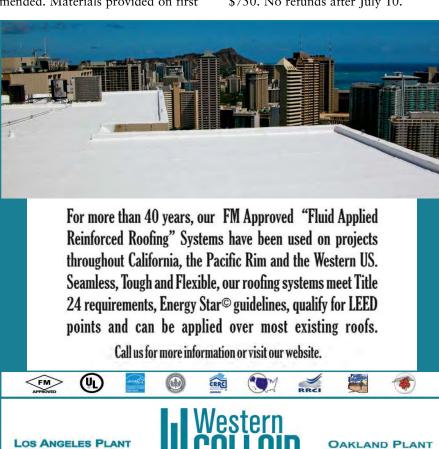


30-hour Outreach Programs trainers and receive other industry credits after successfully completing course. A Verification of Prerequisite Form, proof of OSHA 511 course completion and other industry or academic credentials required. Laptop recommended. Materials provided on first

(800) 464.8292

day of class.

8 a.m.-4 p.m. (daily). CTC Pacific, 94-487 Akoki St., Waipahu. No online class enrollment. To register, call (800) 358-9206. For more information and Verification of Prerequisite form, go to biahawaii.org and osha.ucsd.edu. Fee: \$750. No refunds after July 10.



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Earth-mover Don Macfarlane

Tips to keep your machines right side up

BY DON CHAPMAN

ou've heard the term, "flying by the seat of the pants?"
Heavy equipment operator
Don Macfarlane drives by the seat of his pants.

Literally.

"To run a big piece of equipment, you have to feel it in your butt," he says

supposed to be upside down. Fortunately, the guy was wearing his seatbelt, he was left hanging upside down."

While his title is best described as an operator, Macfarlane says his real job is this: "I shape the earth. I gave that title to myself, it's self-proclaimed, I shape the earth. The reality is, that's what we



Don Macfarlane says his job is to "shape the earth."

in all seriousness. "When you're on the machine, you feel if you're in danger or not, and your butt starts to hold on to this thing when you sense you're about to tip over. You know, we get into some crazy positions. You're on the side of a hill, your butt starts to tighten up. Your body feels it when you're in a dangerous position.

"Accidents do happen, but you can prevent them with experience. It's like there's a bubble in your butt that tells you that you're level (as in a carpenter's level). I've seen scrapers completely upside down with their wheels pointing at the sky. Never is a piece of machinery do. When I say I shape the earth, I cut it back, and build it and get it flat enough to build a house on—housing developments, malls, highways, underground water systems, whatever."

A native of Las Vegas, where his grandfather was an operating engineer during construction of Boulder (now Hoover) Dam, Macfarlane started working in construction at 16 and would become a mason. Moving to Hawaii 27 years ago, he hooked up with Armstrong Builders.

"Bob was small back then, just 25 guys on his crew, building homes in Kailua and



Kaneohe," Macfarlane recalls.

"When that project was done, I was out of work, and I said I'm not leaving Hawaii. So I called Operating Engineers Local 3. They said they needed a grade setter. I said, 'What's a grade setter?' They said, you know, the guy who runs around with the little eye level and checks the grade. Yeah, I can do that. I went and joined the union that same day, and I've been doing it ever since."

A grade setter is essentially "the layout man for all the heavy equipment. So I used to have bulldozers chasing me through the pineapple fields or whatever, where I would lay out how wide they gotta dig, how deep they gotta dig, with stakes in the ground with ribbons on them, and the ribbons have different meanings. ... I used to lay out 300 houses at a time. I was always about a month ahead of the bulldozers. I would get out there and lay it all out, and then here they come and in a matter of weeks it's in the shape they want it, and now they can put in the sewer lines, the water, the electrical, and at the same time they're grading the house pads."

He would help "start Mililani Mauka, and Waikele, there were no shopping centers or streets out there at that time, and Ocean Pointe—that's 1,100 acres of kiawe back in the day. And I started the rail."

Being a grade setter means tromping through kiawe tangles, tall grass, pineapple fields—often encountering Hawaii wildlife.

"I've been stung by bees so many times," he says. "I've seen deer. I was stalked by an owl one time at upcountry Maui, a huge project with Kiewit. I look up and about 15 feet above me is this owl, a pueo, hovering over me. I walk away, and it follows me. I started thinking, 'Am I dinner tonight?' He was actually going after the rats and mice I was chasing out of the field. I thought he was after me until he went down and got a mouse."

In time Macfarlane would graduate to ...continued on page 82

GCA's Top 'Build Hawaii' Honors Go to Layton/dck JV Partnership

Kapiolani Medical Center project takes 2017 Grand Award

Layton Construction/dck JV's work on the Kapiolani Medical Center for Women and Children's new Diamond Head Tower earned the Grand Award at the General Contractors Association's 2017 Build Hawaii Awards.

Rendering of the Kapiolani Medical Center for Women and Children

- Renovation/Remodeling (less than \$50 million): Unlimited Construction Services, Inc., JN Velocity.
- Renovation/Remodeling (more than \$50M): Swinerton Builders, Hilton Garden Inn Waikiki.
- Environmental Construction: Civil-Mechanical Contractor, Kailua Regional WWTP and Collection System Odor Control Improvements, Phase I.
- Design-Build/Design-Assist Construction (less than \$15M): Healy Tibbitts Builders Inc., Repair Wharf S369 Bulkhead, Ford Island.
- Design-Build/Design-Assist Construction (\$15M-\$20M): Hensel Phelps, Repair Building 26A to Relocate Central Security Forces.
- Design-Build/Design-Assist Construction (more than \$100M): Kiewit/Kobayashi JV, HART Maintenance and Storage Facility.
- Residential (less than \$25M): Unlimited Construction Services Inc., Villages of Moae Ku, Phase 3.
- Residential (more than \$25M): Nordic PCL Construction Inc., Symphony Honolulu.
- Municipal and Utilities Construction (less than \$10M): Goodfellow Bros. Inc., Makakilo Sewer Interceptor Replacement.
- Municipal and Utilities Construction (more than \$10M): Hawaii Harbors Constructors JV, Piers 12 & 15 Improvements, Honolulu Harbor.

The project, which entailed a 200,000-square-foot building consisting of five floors and a lower level for support services, won in the GCA's Building Construction (more than \$25M) category.



Layton Construction's Dale Keep PHOTO BY ANJI LEE

The GCA honored 19 other projects with Awards of Excellence on April 29 at its annual gala. Goodfellow Bros. Inc. led the awardwinners with three. Hawaiian Dredging Construction Co. Inc., Swinerton Builders, Healy Tibbitts Builders Inc. and Unlimited Construction Services Inc. all won two awards. Keiwit also won two awards, sharing one of them for its Kiewit/ Kobayashi joint venture.

The winners, by category, include:

- Specialty Construction (less than \$1M): Goodfellow Bros. Inc., Kuualii Fishpond Repair.
- Specialty Construction (\$1M-\$3M): Hawaiian Dredging Construction Co. Inc., Maalaea Small Boat Harbor Ferry Pier Improvements.
- Specialty Construction (\$3M-\$10M): Healy Tibbitts Builders Inc., Manele Small Boat Harbor Ferry System Improvements, Phase II.
- Specialty Construction (more than \$10M): Goodfellow Bros. Inc., Waianae Solar Farm.
- Subcontractor (more than \$1M): Dorvin D. Leis Inc., Kaanapali Alii Chiller Building.
- Highway Construction (\$1M-\$10M): Kaikor Construction Co. Inc., Paumalu Stream Bridge Emergency Repairs.
- Highway Construction (more than \$25M): Hawaiian Dredging Construction Co. Inc., Airport Access Road to Hana Highway.
- Building Construction (\$1-\$10M): Kiewit Building Group Inc., Hawaiian Humane Society Admissions and Veterinary Services Building.
- Building Construction (\$10M-\$25M): Swinerton Builders, Macy's Kapolei.
- Building Construction (more than \$25M): Layton Construction/dck JV, Kapiolani Medical Center Diamond Head Tower.

April Peaks ... and a Few Valleys

Construction contracts awarded by government agencies fell sharply during April, from a record \$184,998,989 last year to \$23,551,150. More than half of the awards—or \$13,370,251—are tied to projects for the state Department of Education.

Last April benefited from windfall awards of approximately \$125 million for Big Island projects, including the Kona Judiciary Complex and the Daniel K. Inouye College of Pharmacy at UH Hilo. After four months, agency awards totaled \$237,319,952, down 34 percent from \$360,036,113 during the same period last year.

Though government awards during the first quarter of 2017 rose by approximately \$38 million (22 percent over the first three months of 2016), the increase was dwarfed by private building authorizations that skyrocketed by 66 percent to \$362 million during the period—a pleasing offset likely to reoccur

during the second quarter.

April's largest agency award of \$4,792,600 went to Jas. W. Glover Ltd. for airfield drainage improvements at Hilo International Airport. F&H Construction won two awards totaling \$5,331,000, however, for heat abatement projects at Lihikai Elementary School and Lahaina Intermediate.

Abhe & Svoboda Inc. won the third-largest award of \$2,843,200 for structural improvements to the gymnasium at Waimanalo

District Park.

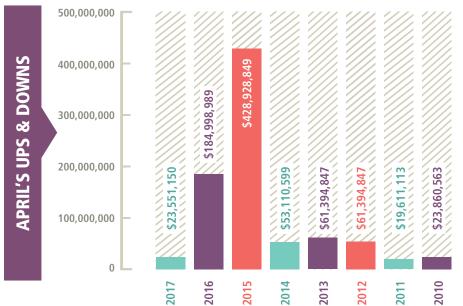
Hawaii's economy is expected to continue its positive growth in all sectors throughout 2017 and 2018. Though the upswing in Kakaako high-rise construction will slow down, new home building on Oahu is expected to shift west to single-family projects including the 11,750-home Hoopili community and Castle & Cooke's 3,500-home Koa Ridge project.

AWARDS BY AREA

Oahu	.\$8,783,164
Hawaii	7,884,284
Maui	6,698,665
Kauai	185,037
TOTAL	23,551,150

AWARDS BY AGENCY

AHARDS DI AGERCI
DOE\$13,370,251
DOT4,922,100
C&C3,422,599
BWS667,000
DAGS446,000
UH377,044
DPWHI346,150
TOTAL\$23,551,150



APRII

(Awards are rounded up to the nearest dollar.)

Oahu

Abhe & Svoboda Inc\$2,843,20)0
Waimanalo District Park, Structural Improvements to Gymnasiu	
Ralph S. Inouye Co. Ltd 1,399,60 Kapolei Middle School, Miscellaneous R&M FY2010-2011)0
Paul's Electrical Contracting LLC 1,038,70 Waipahu High School, Electrical Upgrade)0
Beylik Drilling & Pump Services Inc 667,00 Emergency Procurement for Wahiawa Wells II, Unit 2 Replacement)0
Triton Marine Construction Corp 579,39 Puowaina Drive Bridge Load Upgrade, Bridge No. 236	9
StarCom Builders Inc.	
MJ Construction Co 392,00)0

Nanakuli High School, Stadium Facilities Improvements

Site Engineering Inc	304.000
Kaahumanu Elementary School, Building	,

Moriyama Construction Inc.	281,340
Mokulele Elementary School Building E	Reroof

MEI Corporation	274,281
Ewa Beach Elementary School, Building C- Replace/ R	epair Stair

Peterson Bros. Construction Inc.129,500
Repair Payement at Pier 40. Honolulu Harbor

APRIL'S TOP 10 CONTRACTORS

1) F&H Construction (2	\$5,331,000
2) Jas. W. Glover Ltd. (2)	5,138,750
3) Abhe & Svoboda Inc. (1)	2,843,200
4) Ralph S. Inouye Co. Ltd. (1)	1,399,600
5) Paul's Electrical Contracting LLC (1)	1,038,700
6) Beylik Drilling & Pump Services Inc. (1)	667,000
7) BCP Construction of Hawaii Inc. (1)	590,189
8) Stan's Contracting Inc. (2)	580,800
9) Triton Marine Construction Corp. (1)	579,399
10) Arita Poulson General Contracting (1)	507.699

Information is summarized from the Contractors Awarded section of BIDService Weekly, compiled by Research Editor Alfonso R. Rivera.

Maui	
F&H Construction Lihikai Elementary School, Heat Abateme	
F&H Construction Lahaina Intermediate Heat Abatement, F	, ,
Arita Poulson General Contrac King Kekaulike High School, Miscellaneo	
Central Construction Inc. King Kekaulike High School, Miscellaneo	,
Island Construction & Demoli Maunaloa Elementary, Miscellaneous R&	,
Island Construction & Demoli Kualapuu Elementary School, P2229 Rep	,

Betsill Bros.	
Hawaii	
Jas. W. Glover Ltd4,792,600 Airfield Drainage Improvements at Hilo International Airport	
BCP Construction of Hawaii Inc. 590,189 Honokaa High and Intermediate School, Armory Replace Floor	
Summit Construction Inc	
Isemoto Contracting Co. Ltd412,700 Honokaa High and Intermediate School, Miscellaneous R&M FY14	
Stan's Contracting Inc	

Jas. W. Glover Ltd346,150
Kilau Stream Bridge Rehabilitation, Bridge No. 36-2, North Hilo
Certified Construction Inc. 277,708 Honokaa High and Intermediate School, Building L, Reroof and Regutter
Elcco Inc229,600
Hilo High School, Areas 01 and 03, Parking Light Repairs
Stan's Contracting Inc
Heartwood Pacific LLC170,649 Waiakea Intermediate School, Building L, Replace Kitchen Drain Lines
Kauai
Society Contracting LLC

LOW BIDS

The companies below submitted the low bids in April fo

Repairs

Beylik Drilling & Pump Services Inc	
Civil-Mechanical Contractorearl City Wells I Renovation	1,688,919
flocon Corp. Ionouliuli Wastewater Treatment Plant, Primar ox Repair	
Oceanic Companies Inc Vaipio Wastewater Pump Station Upgrade	2,557,863
Oceanic Companies Inc Vaikalua Wastewater Pump Station Upgrade	, ,
Kiewit Infrastructure West Co alawa Wastewater Pump Station, Force Main	Improvements
acobsen Constructionaaawa Fire Station, Communication Facility In ower Replacement	
Oceanic Companies Incahanahou Wastewater Pump Station Upgrade nprovements, Pump Station Upgrade	, ,
Prometheus Constructionapakolea Subdivision Sewer Improvements, Ai tabilization and Sewer Lines C and C-I Improv	uwaiolimu Slope rements
Aira Image Constructionapakolea Subdivision Sewer Improvements, Se , C, D and K3 Improvements	
Contech Engineering Inc Jauula Fire Station Replacement	5,827,861
Kiewit Infrastructure West Co Vaikapoki Wastewater Pump Station Upgrade	6,685,000
Parsons/RCI Inc Ionouliuli Influent Pump Station Odor Control	System
Oceanic Companies Incand Island Wastewater Treatment Plant, UV Dump Station Odor Control System	isinfection Effluent
lakasato Contracting wa and DH Terminal Reroofing and Roadway lonolulu International Airport	
Oahu	

MEI Corporation1,349,710 Windward Health Center Reroof, Phase 2	Hawaii Works Inc
Integrated Construction Inc1,287,700 Niumalu Loop and Kukii Street: 8-Inch Water Mains	Hawaii Works Inc
HSI Mechanical Inc	Aloha Aina Construction
Civil-Mechanical Contractor1,117,197 Waialae Iki Well Renovation	Jacob Electric LLC
Contech Engineering Inc1,089,100 8805 Renovate Courtyard at Honolulu Community College	Maui
All Court Inc	Kiewit Infrastructure West Co 1,044,890 Lanai WWRF Liner Replacement, Lanai City
Indefinite Quantity Contract Amethyst Builders LLC	F&H Construction183,000 Maui High School, Miscellaneous R&M FY14
Prometheus Construction	Kamalii Elementary School, Miscellaneous R&M FY08-11, Kihei HI Built LLC
Abatement, Phase 1A Civil-Mechanical Contractor	JS International Inc
Shobus Refrigeration & Air Conditioning264,527 Mauka Lani Elementary School, Various Buildings, Install AC Units	Isemoto Contracting Co. Ltd328,439 Radio Tower Upgrade, Central Fire Station, Kealakehe Police Station and Ohiaa Mill Communication Site, South Kona
awaii Works Inc	Rec and Roll LLC dba NyLawn
Integrated Construction Inc	Isemoto Contracting Co. Ltd
CC Engineering & Construction Inc113,800 Palolo Elementary School, 01 Covered Playcourt Structural	Kauai Beachside Roofing LLC1,016,595 Roof Repairs at the Lihue Civic Center

Roof Repairs at the Lihue Civic Center

HAWAII'S TOP 10 ROOFERS

A strong increase in 2016 contracts and projects produces 'happy roofers'

BY DAVID PUTNAM

awaii's Top 10 Roofers report revenue of more than \$123 million in 2016, an impressive 21 percent increase over the previous year's \$101 million.

The bulk of 2016's total—\$76 million—was brought in by the top three companies: Beachside Roofing LLC (\$40 million), Commercial Roofing &Waterproofing Hawaii Inc. (\$20.9 million) and Tory's Roofing & Waterproofing Inc. (\$15.1 million).

"There is nothing quite better than happy roofers. And right now, roofing contractors are happy because the phones are ringing and the contracts are being signed," says Tim Lyons, executive director of the Roofing Contractors Association of Hawaii (RCAH).

"We continue to see steady activity in the industry both in commercial and residential sectors. Unfortunately," he adds, "new condominium buildings can only have one roof instead of many but surrounding development, residential upgrades and new construction are filling most of the gaps."

The ratings were topped by the same three firms as last year, although in 2015 their combined revenue was \$63.7 million.

Beachside Roofing, with \$40 million in revenue in 2016, repeats as No. 1 among those firms who responded to *Building Industry Hawaii*'s annual survey. The rankings are based on revenue and other performance factors.

Surface Shield Roofing Co. made the biggest leap in the ratings, jumping five places to No. 4 this year with reported 2016 revenue of more than \$9.7 million. Surface Shield, which reported \$4.7 million in 2015, doubled its business last year due largely to "roughly 300 various residential and commercial projects in the private sector," says Shon Gregory, the company's president.

Also seeing a significant increase in business last year was Honolulu Roofing Co., which reported \$8.4 million in revenue—a 47 percent jump over 2015's \$5.7 million.

Absent from the Top 10 is Oceanview Roofing, which was No. 5 last year but opted not to participate in this year's survey.

Roofers generally agree that 2017 has already shaped up to be a solid year for the industry.

"The roofing industry will continue to be busy due to the considerable harsh weather we have been seeing over the past few years," says Davelyn Leong of David's Custom Roofing & Painting Inc. "The industry is also driven by the rush to install solar before the incentives run out and grids meet capacity."

Bob Johnson of Pacific Industrial Coatings agrees. "The future for roofing, waterproofing and insulation in Hawaii is bright," he says. "There hasn't been a slowdown yet and we hope it continues. The key is to adapt to the necessity of green/LEED-compliant roofing and storm-resistant roofing."

Lyons says that while roofers are optimistic, they also are wary of how quickly their business can wane.

"Knowing full well the cyclical nature of the industry, many of our

members are plowing ahead and trying to backlog inventory with the knowledge that this cannot last forever," Lyons says. "Some have speculated that since they saw the last upswing develop quickly, the downswing is likely to be a rapid one as well, so now is not the time to rest on success.

"The association is in the process of planning several different technical seminars and management learning opportunities to keep our members in the game and, we hope, in front of it. Things are generally upbeat and positive but a more cautious approach is in the wings."

Lorraine Cabanero contributed in gathering information for the annual Hawaii's Top 10 Roofers.







#1 BEACHSIDE ROOFING LLC

CEO/PRESIDENT: Scot Jimenez | **SPECIALTY:** Low slope, fluid applied, single ply, modified bitumen, steep slope, metal, tile, shingle, specialty waterproofing of all kinds | **HAWAII STATE LICENSE:** BC-22075

ince its founding 33 years ago
Beachside Roofing Inc. has
grown to become Hawaii's
largest commercial and residential
roofing company. The Kapolei-based
firm reports revenue of \$40 million for
2016—a 31 percent increase in business over the previous year's \$30.5
million.

And, for the seventh straight year, Beachside remains in the No. 1 position among Hawaii's Top 10 Roofers.

Scot limenez

Scot Jimenez, president of the company, credits the firm's success to "good people in Hawaii to work with at Beachside Roofing and good customers."

The roofing industry also

remains strong so far in 2017, he says, but "with new construction volume slowing down.

"The roofing industry is still

keeping pace with the rapid build-out of luxury condominiums in Kakaako and Ward Villages," Jimenez says. "As the Kakaako Development Plans become reality, we'll see a decrease in new construction in urban Honolulu. However, with the abundance of steeply-priced condominiums, investors are taking a serious look at offering more affordable units for millennials with a smaller budget and family."

Beachside reports doing 33 percent of its work in the public sector last year.

Projects completed in 2016 include The Collection, Waiea Tower, the International Market Place redevelopment, Symphony Honolulu for OliverMcMillian, the Hilton Waikiki Grand Islander, Kalakaua Gardens and the Four Seasons Manele Bay.

One of Beachside's challenging projects, Jimenez says, was at Park Lane. The work, he says, involved "several significant waterproofing and roofing scopes on a quick-moving,

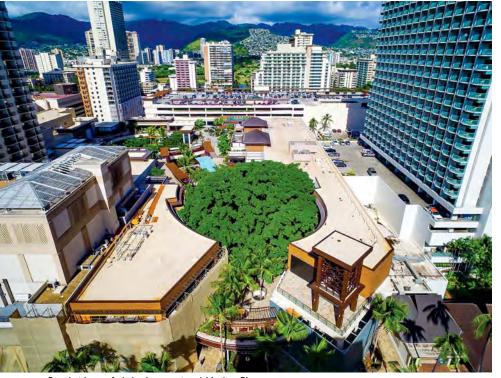


seven mid-rise buildings, ultra-luxury project built on the *makai* side of Ala Moana Shopping Center."

Beachside also began several major projects last year such as the Kahului Airport Consolidated Rental Car Facility, the Grand Hyatt Kauai's low-sloped roofs, Honolulu International Airport shuttle station terminal improvements and the Joint Traffic Management Center.

Jimenez expects more work though this year and next. "More renovations and upgrades are coming around for older condominiums in the *mauka* and Diamond Head sectors such as Makiki, Kapiolani and Kapahulu cities," he says.

"Construction on the Leeward side is moving fast. Townhomes and single-family dwellings are providing greater housing and employment opportunities, particularly in Kapolei and soon Phase 2 of Makani Kai Shopping Mall—both long-range developments centered on rail and the growing population of the West Side community."



Beachside roofed the International Market Place

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The Westin Nanea Ocean Villas, Ka'anapali

COMMERCIAL: ROOFING | WATERPROOFING | SERVICE DIVISION



License # BC-22075

Oahu 682.5803 | Maui 870.8932 | Kauai 245.7820 | Big Island 682.5803



#2 COMMERCIAL ROOFING & WATERPROOFING HAWAII

CEO/PRESIDENT: Guy Akasaki | **SPECIALTY:** Low slope, fluid applied, single ply, modified bitumen, steep slope, metal, tile, shingle, roof management and maintenance, gutters, EnergyStar cool roof applications, solar photovoltaics | **HAWAII STATE LICENSE:** BC-18179

ommercial Roofing & Waterproofing Hawaii Inc., which reports revenue of \$20.9 million for 2016, holds the No. 2 ranking among Hawaii's Top 10 Roofers for the seventh consecutive year.

CRW posted a 10 percent increase in business last year over its reported \$19 million in 2015.

"Business for 2016 was very robust to the degree, 'a bit too busy'—not by virtue of capability and knowledge,

but more limitation in qualified manpower," says Guy Akasaki, president and CEO of the 24-year-old Waipahu-based firm.



Guy Akasaki

CRW's work on the Pali Momi Medical Facility

earned a first-place award from the Roofing Contractors Association of Hawaii in the Low Slope Fluid Applied category.

Akasaki says the Pali Momi project included a complete tear off and installation of a new Tremco roof system over the middle auxiliary roof section.



"The project was done with live activity on-going 24/7, and at times had to be halted due to emergency surgeries scheduled in areas directly below the roof," he says.

CRW installed a single ply rubber roof over insulation covering a



CRW installed a Tremco roof system on the Pali Momi Medical Facility.

concrete deck. "The re-roofed section of this project was selected to accommodate high foot traffic," Akasaki says, "and to keep a good appearance over time as a high-profile roof deck with physicians' offices on one side and patients' rooms all overlooking the rooftop."

The Pali Momi job presented a number of challenges, he says.

"A challenging part of this project was being flexible to working on a live hospital, being aware that many areas—including drains—that had to be removed and new ones installed, waterproofed and cemented were, in fact, located over surgery rooms," he says. "Plastic containments had to be set up on the inside of the rooms when drains were being replaced. Rescheduling around emergency procedures was common on this project.

"Noise and smells were a large factor," he adds. "Solvent-free adhesives were used to minimize smell as well as charcoal filters installed on the mechanical equipment on the roof for fume protection. Cleanliness was of greatest concern."

Other projects CRW completed last year include AOAOs at Kuahelani,

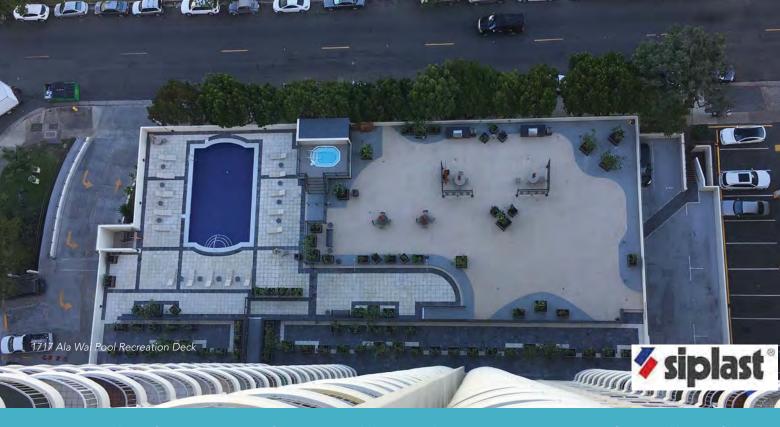
Puu Alii II and Cliffside Villages, the Waimanalo Health Center, Building 449 at Pearl Harbor and the First United Methodist Church.

Additionally CRW is working on jobs at Embassy Suites in Kapolei, the Moanalua Hillside Apartments, Harbor View Plaza and Bachman Hall at the University of Hawaii at Manoa.

CRW also continued its efforts to support the community in 2016. The company donated materials to repair a leaking roof at the Waikiki Health Next Steps Homeless Shelter in Kakaako in November. CRW "also had an opportunity to assemble and deliver more than 150 personal hygiene kits and food donations to help the residents there," Akasaki says.

Akasaki is optimistic about Hawaii's roofing industry.

"We are still bullish but realistic on the business market and fostering a watchful eye on the business environment as we grow, aware that more is not always better, concentrating on solidifying our foundation in knowledge and execution and developing and reinforcing market niches that grow with the ebb and flow of the economic cycles," he says.



"Commercial Roofing & Waterproofing executed the complete renovation, waterproofing, and beautiful design of our Pool and Recreation deck to our satisfaction, overcoming several challenges prior, during and after construction. CRW worked very closely with our resident manager to ensure the safety of our Owners and all involved. Important to any condominium association during a major construction project, communication was key and CRW exceeded our expectations."

- Shannon Noda-Carrol AOAO Board President 1717 Ala Wai Blvd.

ABOUT THE PROJECT

This project included a full pool and recreation deck demolition and restoration. CRW operated as the GC coordinating 9 subcontractors within a tight work and staging area. Unique aspects to this project included installing a two-color, 4,000 piece paver system across the pool deck, as well as a two-color Siplast PMMA waterproof coating over the recreation deck.

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- Koolani
- Fairmont Kea Lani
- Paradise Beverages
- Royal Hawaiian Shopping Ctr.
- Koloa Landing
- Moanalua Hillside Terrace Apts.
- Macy's, Kapolei

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- Warranties
- Completed projects, references
- A professional maintenance program



Waterproofing





& Downspouts



Maintenance Repairs



ON THE CUTTING EDGE

LIC # BC - 18179



#3 TORY'S ROOFING & WATERPROOFING

CEO/PRESIDENT: Louis Tory Jr. | **SPECIALTY:** Low slope, fluid applied, single ply, modified bitumen, steep slope, metal, tile, shingle | **HAWAII STATE LICENSE:** BC-8576

ory's Roofing & Waterproofing Inc. once again holds the No. 3 ranking among Hawaii's Top 10 Roofers following a profitable year in which the Pearl City-based company reports revenue of \$15.1 million.

"Business was great," says General Manager Sandra Tory. "We were consistently busy all year and didn't have any major issues or problems. We are very grateful for how 2016 turned out."

Tory's, founded in 1972 by President and CEO Louis Tory Jr., ranks No. 3 on the list for the sixth consecutive year. The company reports 50 percent of its jobs were done in the public sector in 2016. One of its public-sector projects, the state Capitol Building, was begun last year and has rolled into 2017, although the work was interrupted by the recent legislative session.

"We needed to schedule this project



The Tory family, from left, Brandon, Bryan, Sandra, Sandy, Louis and Michael.

in three phases around the legislative session. We completed the first phase, and had to secure the roof to be operable during legislative session and until Phase 2 begins," Tory says.

Other projects started in 2016 by the 45-year-old family-owned and operated firm include Baldwin and Kalaheo high schools, Haleiwa Elementary School and the AMC Terminal. Projects completed last year included Kauai Community College, the Honolulu Zoo and Campbell and Kapolei high schools.

"We had 16 DOE projects that all needed to be completed within the summer months," Tory says. "It was a challenge for us to complete all those jobs in conjunction with our other commercial and residential projects.

"We were able to complete all of them on schedule as well as juggle our residential, federal and other private commercial projects."

She foresees more demand for roofing systems using proven products.

"Coatings and single ply membrane systems are always a big hit with residential and commercial customers," Tory says. "Single ply membranes are long lasting and have energy saving benefits. While they aren't considered new, they are gaining in popularity both commercially and residentially."

Tory also is optimistic for growth in 2017.

"Business is shaping up to be just as great as 2016," she says. "We have 22 state projects lined up for this summer, and that's not including private commercial projects, or residential.

"Consistency and hard work are very important to us in this time."



Tory's Roofing crew works on a Makaha residence.





- One of Hawaii's largest roofing contractors.
- Locally owned family business.
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Since 1972, Tory's Roofing & Waterproofing, Inc. has established a solid reputation for being an honest and trustworthy contractor.

Tory's dedication to delivering cutting edge technology and flawless workmanship are the few reasons that contributed to our success for more than 45 years.



















#4 SURFACE SHIELD ROOFING CO.

CEO/PRESIDENT: Shon Gregory | **SPECIALTY:** Low slope, fluid applied, single ply, modified bitumen, steep slope, metal, tile, shingle | **HAWAII STATE LICENSE:** C-28235

urface Shield Roofing Co. rose to No. 4 among the Top 10 Roofers with reported 2016 revenue of more than \$9.7 million, more than doubling the \$4.7 million in 2015 when it ranked No. 9.

"2016 was a banner year for our firm, with growth in our commercial division doubling the previous



Shon Gregory

year," says Shon Gregory, president of the 10-yearold Honolulu company. "We completed a large amount of highprofile commercial and government projects while continuing to deliver

to and expand our residential division."

Surface Shield performed "roughly 300 various residential and commercial projects in the private sector," Gregory notes.

Public sector roofing jobs included the Tripler Ambulatory Services building and multiple Hawaii Department of Education campuses such as Campbell and Kaiser high schools and Kaimiloa, Kaimiloiki, Kaewai,



Surface Shield's 2016 projects included Kapolei Middle School.

Kalihi Waena, Lincoln, Mililani Uka, Nuuanu, Pauoa and Wilson elementary schools.

"Many of the school projects that started and continued into the 2017 year were part of packages from Opterra Energy Services," Gregory says. "These were particularly challenging projects due to the lockstep nature of installation with the PV contractors, the gravity of scope and the coordination with various entities.

"It has been a great experience for

us to contribute to the Department of Education's green movement. In addition to these challenges, safety was something that we really bolstered this year due to active construction work during the school hours."

Projects that Surface Shield began in 2017 involved a number of DOE buildings, ranging from Holomua Elementary School to August Ahrens Elementary School to Kapolei Middle School.

Gregory says his firm is seeing a growth in the popularity of emerging materials. "Energy-efficient membranes, shingles and coatings are still hot items," he says. "Rubber membranes or single ply TPO and PVC are also widely popular, not only in the commercial markets where they are regularly specified and used, but in the residential markets as well. They offer home and business owners strong warranties and typically come in a white reflective color to help cool down your home or building."

And looking ahead, Gregory is optimistic for Hawaii's roofing industry.

"We're running on all cylinders. We have been feverishly working on wrapping up a few key projects from 2016 and rapidly filling our calendar well into 2017," he says.



Surface Shield installed shingle roofing at Manoa Gardens



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#5 (tie) HONOLULU ROOFING

CEO/PRESIDENT: Dora Fong | **SPECIALTY:** Low slope, fluid applied, single ply, modified bitumen, steep slope, metal, tile, shingle, below grade waterproofing | **HAWAII STATE LICENSE:** C-23799

onolulu Roofing Co. Inc. had a stellar year in 2016 with \$8.4 million in revenue—an increase in business of 47 percent over 2015—and moved up into a tie for fifth place among Hawaii's Top 10 Roofers.

Honolulu Roofing shares the No. 5 ranking with Tropical Roofing & Raingutters. Last year, Waipahu-based Honolulu Roofing was No. 6.

"Last year was our third year of significant growth," says Dora Fong, president and CEO.

Additionally, Honolulu Roofing captured two awards for commercial roofing projects from the Roofing Contractors Association of Hawaii. The 16-year-old company did most of its work in the private sector, with only 5 percent of its jobs in the public sector.

"First quarter of 2017 was a little slow-going for us, but looks like we will finish the year strong," Fong says. "Customer retention is key in our industry as roofs installed decades ago near the end of their life cycles, and although we do not foresee a repeat



Honolulu Roofing's projects last year included Punahou School

of 2016 this year, our outlook on the future remains positive."

Projects Honolulu Roofing completed in 2016 include the Four

Seasons Ko Olina, Hilton Hawaiian Village Rainbow Tower, Hilton Garden Inn, 808Futsal, Leeward Liberty Dialysis, Punahou School Grade 2-5 Neighborhood Phase 1A and Sheraton Maui PH III.

Other projects continued from last year are the Timbers Kauai Ocean Club and Residences, UH Hale Wainani and Space Fence.

Fong notes that the crew faced unique challenges on the Punahou School Grade 2-5 Neighborhood (standing seam metal roofing) and Timbers Kauai Ocean Club and Residences (concrete tile and Neptune Coatings WetSuit).

New materials gaining popularity among the Islands' roofers, she says, include the Neptune Coatings WetSuit Water-Based Rubber Membrane which offers a Class A fire rating, 785 psf uplift pressure, an accelerated spray of 80 percent in three seconds, no VOCs, UV stable, self-flashing and can be used for roofing, below-grade and above-grade waterproofing and also as an air/vapor barrier.



Honolulu Roofing roofed the building for grades 2-5 at Punaho School.



"The Turtle Bay Resort Roof Renewal project was no small feat. Working with HRC and their team to identify rooftop solutions that would meet our end goals both financially and aesthetically was a very positive and professional experience. It was evident that the level of expertise was superior and I was impressed with their ability to get things done without interfering with the operations of our property while keeping both guests and employees safe and satisfied. Their level of customer service went above and beyond. I highly recommend Honolulu Roofing to other property owners for their roofing projects."

~ Turtle Bay/Replay Resorts, Inc., Scott McCormack, VP Real Estate

- AM Best A XV Surety
- AM Best A VIII Insurance
- Unionized Contractor

New / Re-roof / Roof Rehabilitation Coating / Waterproofing







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#5 (tie) TROPICAL ROOFING & RAINGUTTERS

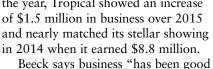
CEO/PRESIDENT: Charles Beeck Jr. | SPECIALTY: Low slope, fluid applied, single ply, modified bitumen, steep slope, metal, tile, shingle | HAWAII STATE LICENSE: C-21044

usiness was good," says Charlie Beeck Jr., president of Tropical Roofing & Raingutters Inc., which shares the

fifth spot among Hawaii's Top 10 Roofers this year.

Tropical reported earnings of \$8.4 million in 2016 to tie Honolulu Roofing for No. 5 in the rankings. For the year, Tropical showed an increase of \$1.5 million in business over 2015 in 2014 when it earned \$8.8 million.

and steady. The future looks bright."





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The Kalia was one of Tropical's jobs in 2016.

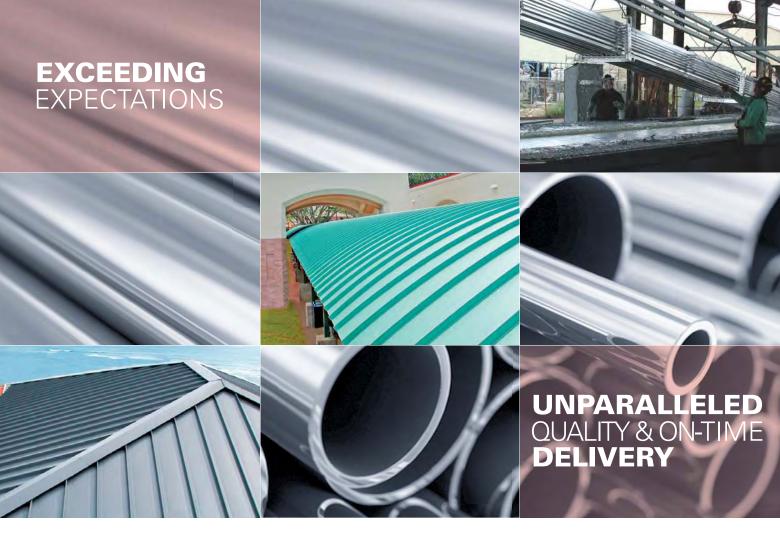
Waipahu-based Tropical, which has been doing business in Hawaii for 31 years, captured a pair of awards from the Roofing Contractors Association of Hawaii in 2016 for residential projects.

Projects the company completed in 2016 include Waialae Gardens Phase II. The Kalia, Kealani, Piikoi Atrium, The Barclay, Haleloa II, Holaniku Hale, Cathedral Point and Kuu Makana at Diamond Head.

Beeck points to the challenge of the Kuu Makana project that involved the "conversion from tile to Euroshield interlocking rubber shingles from Canada including all copper flashings and raingutters."

Beeck notes that some of Tropical's clients are looking at alternative roofing materials.

"The material isn't new," he says of aluminum shake roofing, "but it is becoming popular."



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#7 COOL ROOF HAWAII

OWNER: Kevin McCallum | **SPECIALTY:** Low slope, fluid applied, single ply, modified bitumen, steep slope, shingle | **HAWAII STATE LICENSE:** C-28824

ool Roof Hawaii had its best year in 2016, with reported revenue of \$6.5 million to land in the No. 7 spot among Hawaii's Top 10 Roofers.

"2016 was a record sales year for Cool Roof Hawaii," says Brenden



Brenden Clemente

Clemente, the company's director of sales. "We grew a lot in one year, and we were able to add some banner projects to our resume."

Cool Roof, founded nine years ago by

owner Kevin McCallum, completed numerous major projects last year.



Cool Roof's work on Pier 11 continues in 2017.

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Affordable, Reliable, Professional Lic# C-28824 808-282-0477 • www.coolroofhawaii.com They include the Hilton DoubleTree's Naniloa Hotel Hilo, more than two dozen private and DOE schools, the Mililani Missionary Church and the Royal Kahili condos in Kona. Jobs that have rolled over into 2017 for Cool Roof include the Pohai Nani Retirement Community and Pier 11 in Honolulu.

Clemente says that "business has not slowed down in 2017 for us. Cool Roof is continuing to bring in work at a strong pace."

He adds that "there are a lot of the same products going down in 2017 as there were in 2016, but I have seen a resurgence of polyurethane in the coating market recently and also metal shake and standing seam roofs are being specified more and more each year."

Cool Roof anticipates that 50 percent of its work in 2017 will be in the public sector.

Clemente says "those companies who value providing excellent customer service and quality workmanship should be successful in 2017's market."



#8 KOKUA ROOFING (PACIFIC CROSSING INC.)

CEO/PRESIDENT: Ron Lloyd | **SPECIALTY:** Low slope, single ply, modified bitumen, steep slope, metal, tile, asphalt shingle, slate, wood shingle, cedar shake, copper tile | **HAWAII STATE LICENSE:** CT-31641

okua Roofing jumped two places to No. 8 in this year's Hawaii's Top 10 Roofers with reported revenue of \$5.1 million in 2016, an increase of more than 27 percent above 2015's \$4 million.

"Business improved again, with the number of projects to bid, amount of work sold, and prices inching up," says Ron Lloyd, president of the



Kokua Roofing installed a copper shingle roof on a custom home in Kukio, Kailua-Kona.



Cedar shakes on a Kailua-Kona residence

company that is part of Utah-based Pacific Crossing Inc.

He adds that 2017 "is on pace with last year, if not even better. The amount of new residential work, commercial building and reroof activity looks promising for the current and long term outlook."

Projects completed in 2016 include the Kukio Resort and the Kohanaiki Resort on the Big Island, and multiple residential jobs and churches in Kealakekua and Waimea. The firm is currently working on housing projects on Kauai.

Lloyd says he has "seen a rise in the use of coatings, and synthetic shingles are once again being introduced to the Islands. And the use of synthetic thatch roofing is very popular at the resorts."

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#9 DAVID'S CUSTOM ROOFING & PAINTING

CEO/PRESIDENT: Davelyn Leong | **SPECIALTY:** Low slope, fluid applied, single ply, modified bitumen, steep slope, metal, tile, shingle | **HAWAII STATE LICENSE:** BC-19703

or David's Custom Roofing & Painting Inc., 2016 was a year of growth.

"We completed many residential and commercial projects," says Davelyn Leong, CEO and president of the



David's Custom Roofing & Painting installed a new roof on this Diamond Head residence.

37-year-old family business in Pearl City. "We expanded our customer base, and saw growth in the general contracting side of the business."

David's Custom Roofing reports revenue of \$5 million in 2016 to land the ninth spot among Hawaii's Top 10 Roofers. "Business was great in 2016," Leong says.

A major project for David's last year was the roof of the American Red Cross building. David's installed 115 squares of fluid applied coating in conjunction with a photovoltaic installation, and completed the job in less than three weeks, Leong says.

A project that began last year and that David's is "excited to complete" by midto late-2017 is a new copper shingle roof on a Diamond Head residence, she adds. The Diamond Head project also includes more than 100 squares of roofing

completed in less than three weeks, 60 squares of asphalt shingle and 40 squares of fluid applied coating.

Leong says "energy-efficient roofing systems are the way to go right now. Cool roof coatings, shingles, capsheets and single ply really are the best investment you can make when re-roofing. Considering how hot it gets here in the Islands, the energy-efficient roofing systems help to reduce the heat absorbed into the roofing system, which in turn will cool the house down."

And for David's, 2017 is off to an "amazing" start, Leong adds.

"Our painting division saw a large increase in projects. The roofing and general contracting side has also stayed consistently busy. We have been blessed with a lot of new and returning customers," she says.



#10 PACIFIC INDUSTRIAL COATINGS

CEO/PRESIDENT: Bob Johnson | **SPECIALTY:** Low slope, fluid applied | **HAWAII STATE LICENSE:** BC-30137

acific Industrial Coatings LLC rounds out the Top 10 Roofers with 2016 revenue of \$4.5 million, a decline of \$500,000 from the previous year when it shared seventh place.

Bob Johnson, president of PIC, which has been doing business in Hawaii for eight years, says 2016 "was good for us to the point of being hectic. Some operational changes in the last quarter of 2016 were difficult, but after a couple months, all our indicators are trending upward and we are doing much better."

Projects completed in 2016 included 400 Keawe and 440 Keawe, the Airport

Industrial Park and Hope Lodge. PIC also got started on a project at Pauahi Hale.

A major job was at the Ilikai Hotel, where PIC "applied roofing to three wings and Sarento's Restaurant on top of the 26-story historic building," Johnson says.

Also in 2016, PIC moved its headquarters to Puuwai Street to a "more centrally located office," Johnson says, "which allows for more productive operations management."

Looking ahead, Johnson notes "2017 continued where 2016 left off. We are busy on all fronts."



A PIC worker atop the American Cancer Society's Clarence T.C. Ching Hope Lodge.



OTHER LEADING ROOFERS

Here is a look at other leading Hawaii roofers who did significant business in 2016 and who responded to *Building Industry Hawaii*'s survey:

RAINBOW ROOF MAINTENANCE

CEO/PRESIDENT: Steven Maero | **SPECIALTY:** Low slope, fluid applied, modified bitumen, steep slope, metal, shingle | **HAWAII STATE LICENSE:** C-16132

ainbow Roof saw a 25 percent increase in business in 2016, as it reports revenue of \$2.5 million, up from \$2 million the previous year. Founded in 1978, Rainbow Roof's projects last year included the Hokuloa condos in Kaneohe, Waikalani Woodlands, Ewa Villa Estates, the Kaimala Marina AOAO, the Puu Alii condos in Kaneohe and Queen Emma Gardens.

BUCK ROOFING CO.

CEO/PRESIDENT: Hina Schipa | **SPECIALTY:** Low slope, fluid applied, single ply, modified bitumen, steep slope, metal, tile, shingle, waterproofing | **HAWAII STATE LICENSE:** C-15237

uck Roofing, which does 95 percent of its work in the public sector, reports revenue of \$2.4 million in 2016—a 71 percent increase in business from the \$1.4 million in 2015.

Projects that Buck Roofing completed last year include Waimea Middle School, Keaukaha Elementary School, Palolo Chinese Housing, Hilo Municipal Golf Course, PTA Infantry Platoon Battalion, Mauna Kea Recreation Park, Meheula Vista Phase 1, University of Hawaii at Hilo Hale Kehau Dining Hall, Waiakea Elementary School, Kamakoa Nui Phase 5 and the Kamehameha Park Swim Complex.

Other jobs it began in 2016 include Kukuihaele Park improvements, Kamehameha School Naeole Pool Facility and the Hokulia Golf Course Fitness Pavilion.



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OHANA CONSTRUCTION

CEO/PRESIDENT: Matt Barberi and James Murray | **SPECIALTY:** Low slope, fluid applied, single ply, modified bitumen, steep slope, metal, shingle, carpentry, framing, finishing work, painting | **HAWAII STATE LICENSE:** BC-30779

hana Construction offers a range of services from roofing to framing and finishing work and reports revenue of \$2 million in 2016.

The Honolulu company, which has been doing business in Hawaii for seven years, completed 85 projects last year.



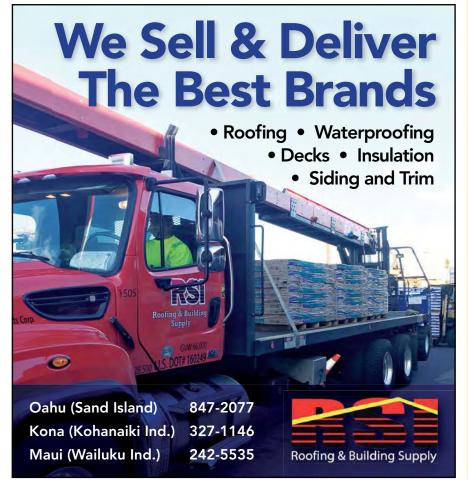
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R&C ROOFING CONTRACTORS

CEO/PRESIDENT: Chris Tamura | **SPECIALTY:** Low slope, fluid applied, single ply, modified bitumen, steep slope, metal, tile, shingle | **HAWAII STATE LICENSE:** C-33642

016 was a busy year of residential work for R&C Roofing, which reports \$1,671,000. The 10-year-old firm completed 130 single-family residences and apartments last year.

Other projects completed in 2016 include the Hilo Pantheon Gym, the Waipiolani AOAO, Liberty Christian Church and the Hilo Pantheon Gym.

"We resurfaced the entire ware-



R&C Roofing installed a steep roof on a residence.

house/gym in Hilo," says R&C's Chris Tamura. "Having to arrange the logistics for materials and equipment was very challenging."

R&C also donated funds and in-kind services to the Moiliili Community Center and various Lions Club projects.



Roofworks applied a topcoat on the Mellor residence in Kailua.

ROOFWORKS HAWAII INC.

CEO/PRESIDENT: Rick Samorano | **SPECIALTY:** Low slope, fluid applied, single ply, modified bitumen, steep slope, metal, tile, shingle | HAWAII STATE **LICENSE:** C-28052

oofworks Hawaii reports \$1.2 million in revenue in 2016, a year that saw the Kaneohe-based company capture two awards from the Roofing Contractors Association of Hawaii.

Roofworks won twice for its work on the Mellor residence in Kailua in

the RCAH's Low Slope Fluid Applied and the Low Slope Modified Bitumen categories.

Other projects for the 16-yearold firm include Taco Bell Kailua, the Diamond Head Beach Hotel, the Lynwyd AOAO and the Alii Manor Apartments.

ROOFING SOLUTIONS

CEO/PRESIDENT: Stephen Elijah DeLaGarza | **SPECIALTY:** Low slope, fluid applied, singly ply, modified bitumen, steep slope, metal, tile, shingle, stone-coated steel, wood shakes, slate, insurance restoration | HAWAII STATE LICENSE: C-34059

oofing Solutions, which is celebrating its 40th year of doing business in Hawaii in 2017, posted revenue of more than \$1.6 million in 2016.

The Kaneohe-based company started and completed numerous projects last year, including the Healani Gardens and the Word of Life Christian Center.



At the three-story Healani Gardens, Roofing Solutions removed two layers of existing shingle and installed 30-pound asphalt felt, all new aluminum flashing and Malarkey 40-year architectural shingle, according to Stephen Elijah DeLaGarza, the company manager.

On the Word of Life Christian Center, Roofing Solutions installed Gaco coating system, overstanding seam metal roofing and a built-in

gutter system.

DeLaGarza says the firm donates one percent of its proceeds to Feeding Hawaii Together and performed repairs for the nonprofit's building in Honolulu at no cost.





More torque. Reliability. Durability.

This is what contractors look for in pickup trucks, according to dealers. And when it comes to the construction world, several models appear to reign supreme.

"If you look at most industry fleets in Hawaii, they have a high percentage of Fords," says Bill Lindsey, a fleet manager at Cutter Ford. "It's all about the torque you need when you have to haul a load. Our F-250 has 925 lb-ft of torque."

Randy Bergsrud, sales and service representative for Ford in Hawaii, says that in 2016, 1,492 Fords were sold. The Ford F-150 model had 1,195 in sales and the Super Duty F-250s and up had an additional 297.

Chevy Silverado also does well. Casey Nishimura, communications manager for Servco, says 976 Silverados were purchased in 2016 in the Islands. The Toyota Tundra model was purchased by 455 buyers.

"For the everyday driver the most popular truck we have is the Toyota Tacoma, but for construction the Tundra and Silverado are sold the most," Nishimura says. "The hauling capacity, the horse power is what is needed.

"The Toyota Tundra is built for towing. It has a tow/ haul mode and the computer system intelligently holds lower gears longer. It also increases throttle response, pulling power and engine breaking and has an integrated trailer-breaker controller. If connected, it will allow the user to adjust the amount of trailer breaking based on the amount of weight on the trailer."

With an abundance of quality throughout, the new redesigned 2017 Nissan Titan is a likely contender to win a chunk of the truck market this year, according to Peter Hirsch, commercial vehicle manager at Tony Group.

Combining toughness and technology, the Titan offers a stunning upscale cabin, varying bed lengths, exciting new trim features, easier handling and a smooth ride, he says.

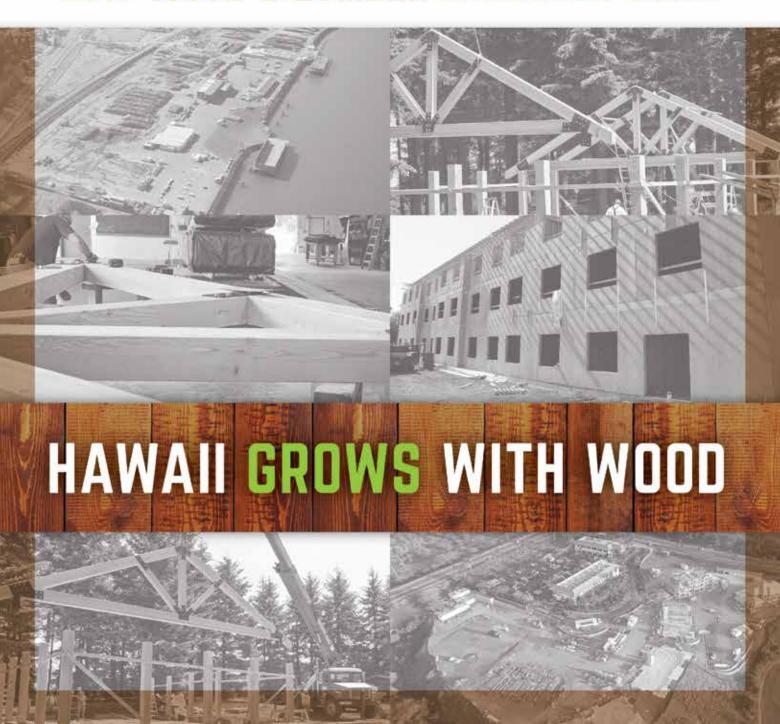
"Construction professionals seek vehicles that offer strength, performance, reliability and comfort," he adds. "And only the Titan offers all of this in addition to Nissan's unrivalled five-year/100,000-mile bumper-to-bumper warranty."

Despite the Titan's affordability and efficiency, many contractors are buying Nissan's highly regarded cargo vans with optional ceiling heights and attractive upfitting options.

Construction trucks typically start around \$30,000 at the low end, and the price increases significantly based on features.



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Transporting Lumber: Shipping Green

hipping companies play a major role in Hawaii's construction industry because a majority of building materials, like lumber, must be imported from the U.S. mainland. In nearly every industry, there's a major push toward providing consumers with quality goods and services that are more environmentally-conscious but still economical.

When it comes to building materials, there are distinct environmental benefits to shipping lumber as compared to steel. The carbon footprint of transporting steel is much higher because steel production is centered in the Midwest. Therefore, steel is transported cross-country via truck or train.

In a life cycle assessment study by the Treated Wood Council, on average galvanized steel framing expended almost four times more fossil fuel than borate-treated lumber in a life cycle—manufacturing, usage, transportation, recycling and disposition.

Proximity of shipping ports to the origin point of lumber mills is what makes transporting lumber more green and more cost-effective. Framing lumber comes from sustainable forests, where only 20 percent of new annual growth is harvested each year. Nearly half of these forests reside in the Pacific Coast region and the south with easy access to waterways and shipping ports, helping to minimize carbon output.

Advancements in shipping technology are also contributing to a greener journey for lumber products traveling to the islands. HLPA member Sause Bros. invested in making their last three barges--Kamakani, Columbia and Namakani--more fuel efficient than each of its predecessors. In fact, Namakani is one of the most energy efficient barges in the world.

Along with decreasing carbon output, preserving the ecological integrity of the waters they travel in is also an important goal for Sause Bros. and fellow HLPA member Matson. Both shipping companies have worked to create ballast tanks, compart-





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CUSTOM METAL ROOFING

*Photo courtesy of Sause Bros.

ments filled with water to provide stability, that don't discharge invasive species. Matson even partnered with Ecochlor, Inc. and the California State Commission to test an innovative ballast water treatment system using chlorine dioxide.

Sause Bros. utilizes an internal ballast system that does not discharge ballast water. The design allows the movement of water between tanks on the barge and therefore eliminating the potential discharge of invasive species.

Lumber products continue to be the most environmentally-friendly building material from its renewable roots to its transportation by shipping companies with green objectives. FROM YOUR FOUNDATION TO YOUR ROOF & EVERYTHING IN BETWEEN,

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*Photos courtesy of Armstrong Builders

HLPA MEMBER DEVELOPMENTS:

Armstrong Builders

Armstrong Builders is the lead contractor for Keala o Wailea in Wailea, Maui. The 70-unit luxury low-rise development, located near the Wailea Gateway Center, is well underway and scheduled to be completed at the end of the year. The multifamily resort boasts ocean views surrounded by world-class dining and shopping.









Building Honolulu's ADUS Future with ADUS



he demand for housing in Honolulu continues to outpace the supply and one solution to help alleviate that imbalance is accessory dwelling units (ADU). In 2015, Honolulu Mayor Kirk Caldwell signed a bill into law allowing homeowners to build and rent a second home on their property that's attached or detached from the main home and between 400 and 800 square feet. The following year, in 2016, the mayor signed an accompanying bill to waive a host of building permits and fees to save homeowners up to \$10,000, further incentivizing the nearly 20,000 lots zoned in Honolulu for ADUs.

Hale Li'i 400-Sq. Ft. | 1 Bedroom / 1 Bath





Ho'ona 500-Sq. Ft. | 1 Bedroom / 1 Bath





According to Jocelyn I.J. Hirota, Statewide Package Home Manager, Honsador Lumber and HLPA Founding Member, "The ADU program is a valuable and viable solution to Hawaii's Housing shortage issue. We (HLPA members) need to continue to move the program forward in hopes to one day eliminate the housing shortage in Hawaii."

ADUs have many potential benefits for not only homeowners, but also the local economy and broader community. For the homeowner, it can increase their income through renting and allow them to "age in place" if they need to downsize in the future due to a fixed income. On a larger scale, ADUs can help create construction jobs, minimize urban sprawl and promote sustainability.

When it comes to constructing an ADU, using lumber framing is the best choice for a variety of reasons. Many local building material suppliers offer ADU kit homes that utilize lumber framing because lumber is renewable, affordable and malleable. These homes are predesigned and prefabricated, which means less construction time and

lower costs.

HLPA member Honsador Lumber offers affordable ADU kit homes, and this past March, they donated an ADU that was featured on the Hawaii State Capitol lawn as part of Build-A-Thon. The annual event is presented by the Hawaii Habitat for Humanity and Hawaii Appleseed Center for Law and Economic Justice to promote ADUs and how they can effectively help with Honolulu's housing shortage.

Hardware Hawaii, another HLPA member, offers four kit home packages that meet the ADU requirements: Hale Li'i (400-square-foot one bedroom, one bath); Ho'ona (500-square-foot one bedroom, one bath); Kupono (600-square-foot one bedroom, one bathroom with den); and Kailua (792-square-foot two bedroom, one bath). These home kits include plans and all materials.

ADUs have the potential to make a real impact on Honolulu's housing shortage. Interested in learning more about ADUs? Visit HawaiiADU.org.

Kupono 600-Sq. Ft. | 1 Bedroom / 1 Bath / Den





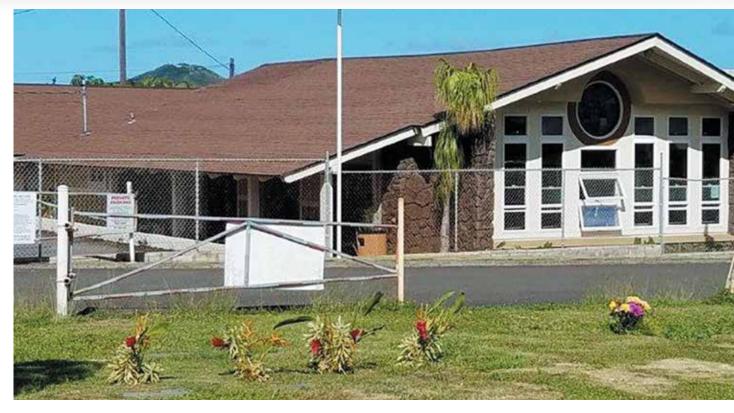
Kailua 792-Sq. Ft. | 2 Bedroom / 1 Bath

KITCHEN BATH BEDROOM 1 STOR LIVING / DINING BEDROOM 2

P Hardware

*Photos courtesy of Hardware Hawaii and Honsador Lumber

HAWAII GROWS WITH WOOD



*Photos courtesy of Plywood Hawaii

Restoring History With COD



he Kaneohe Congregational Church is the oldest Protestant church on the windward side of Oahu. The church, which has gone by a few other names over its long history, was established by Rev. Benjamin Wyman Parker, who arrived in Hawaii in 1833 from New England.

The church was granted seven acres of land in 1849 by King Kamehameha III as part of the land divisions under the Great Mahele. The initial structure was a "hale pili," or grass hut, that evolved into other wooden structures over time. The current wooden structure was completed in 1956 and required some much needed attention to restore it.

The churches deacon, Ralph



Kanoho, is leading the renovation as project manager. Renovations are nearly complete and were made possible with labor and donations from churchgoers and community partners like Plywood Hawaii.

Plywood Hawaii, Hawaii's largest and most complete inventory of plywood and structural panels, is supplying all the finished wood for the project. Sapele, also known as "African mahogany," was chosen for the project because of its rich, warm finish.

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MEET THE HLPA

Established in 2003, the Hawaii Lumber Products Association (HLPA) is committed to the education and promotion of lumber products as the best choice for construction in Hawaii. According to HLPA President, Scott Loomer, President of Truss Systems Hawaii, "Our members are professionals from building industries in Hawaii, including building material producers, shippers, suppliers, retailers, builders, and treatment companies across the mainland and Hawaii." Membership continues to build, year after year, while promoting the key message *Wood is the Best building material choice for Hawaii!*

Benefits of membership are reflected in HLPA'S ongoing educational and promotional efforts. In addition to the HawaiiLumber.com website, outreach includes TV, radio and print campaigns, editorials, PSAs, trade show exhibits, seminars/workshops, online newsletter, social media networking and much more.

To find out more about membership, please visit HawaiiLumber.com or call our office at 541-WOOD (9663).



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DPP:

Low-Impact Development Rules Start in **August**

City says private sector developers must get up to speed

BY BRETT ALEXANDER-ESTES



ussell Leong, civil engineer with the City and County of Honolulu's Department of Facility Maintenance - Storm Water

Quality Branch, says that as of Aug. 16, the city will "implement Low-Impact Development (LID) for a greater number of new and redevelopment projects being constructed by private owners and developers."

LID attempts to capture a portion of new development stormwater and its associated pollutants onsite. LID is mandated by the Department of



Health's stormwater permit issued to the city.

The new Department of Planning and Permitting (DPP) Water Quality Rules are mandated for owners and developers of large residential developments and commercial properties, and includes new development and re-development projects.

The rules target runoff from all impervious surfaces: "concrete, asphalt, parking lots, roads, sidewalks," says Leong, and also apply to "(parking structures) with roofs those count as impervious surfaces because they receive rain and don't absorb it."

The new rules update the city's 2012 stormwater drainage standards, and include:

- a revised list of Priority Projects (A, B1, B2);
- LID implementation for priority projects and other criteria;
- revised stormwater quality reports and operations and maintenance requirements;
- 1.5 times the water quality volume and flow rate to "Treat and Release" Best Management Practices; and
- post-construction certification and recording.

"(Parking structures) with roofs count as impervious surfaces because they receive rain and don't absorb it."

—Russell Leong

Priority A projects are developments and redevelopments—typically residential—that disturb one acre or more of land. Priority B1 and B2 projects include retail gas outlets, automotive repair shops, restaurants, parking lots with 20 stalls or more, buildings greater than 100 feet in height, retail malls and industrial parks.

Project size often triggers the rules, as when redeveloping 50 percent or more of a B2 Priority project. An

LID at a Glance

The City and County of Honolulu's new Water Quality Rules include new development and redevelopment "Priority Project" classifications:

- Priority A projects impact soil in one acre or more, including "incremental developments."
- Priority B1 projects contain impervious areas of 5,000 square feet or more.
- Priority B2 projects contain impervious areas of less than 5,000 square feet.

Other Rules are as follows:

- If 50 percent or more of the impervious surface of a previously developed site will be altered, the entire redevelopment must meet the rule requirements.
- If less than 50 percent of the impervious surface of a previously developed site will be altered, only the proposed alteration must meet the rule requirements.
- The design must first consider LID site design by infiltration, evapotranspiration, or harvesting and reuse. If not feasible, the design then considers bio-filtration. If bio-infiltration is not feasible, the design then uses treat-and-release for 1.5 times the water quality volume.
- Priority A and B1 projects must submit a Storm Water Quality Report, while B2 projects submit a Storm Water Quality Checklist.
- The owner/developer needs to retain a licensed civil engineer to inspect and indicate that the PC BMP was constructed as designed.
- Owners are encouraged to add observation of LID during construction and production of the needed report to the engineer's scope of work.
- The PC BMP Plan and O&M Plan must be recorded at the Bureau of Conveyances or Land Court with the property deed.
- Examples of City LID proects can be found at: honolulu.gov/cms-dfm-swq-menu/ site-dfm-swq-sitearticles/22490-dfmswq-low-impact-design.html. The city also presents LID seminars to members of Hawaii building associations.
- The city encourages owners to place their LID projects in the Hawaii LID Atlas.

example, says Leong, is an existing commercial facility that wants to expand its parking lot.

"They would look at the impervious surfaces on the project site. That would include the building's roof, and the existing parking lot. If the existing (impervious surface) total was 1,000 square feet and they want to add an additional 700 square feet," the new parking lot will exceed 50 percent of the facility's existing impervious surface.

In this case, Leong says, LID structures would need to capture one inch of rainfall falling on the impervious surfaces—the existing building and parking lot (1,000 square feet, and the water coming off the new 700-square-foot parking lot.).

Permeable Solutions

Leong says a number of LID structures meet the city's post-construction mandate. These include infiltration basins, bio-retention, green roofs, permeable pavement, cisterns, rain barrels and vegetative swales.

On every project site, he says, the aim is stopping runoff at its source.

An example is the gravel infiltration trench at Maili Beach in Waianae, he says, where "whatever is running off



Permeable pavement at Kapiolani Regional Park PHOTO COURTESY DEPT. OF FACILITY MAINTENANCE - STORM WATER QUALITY BRANCH

the parking lot is going right into the void space of gravel and infiltrating to the sand." In parking lots, he says, this is critical, since toxic chemicals are otherwise carried by runoff into the storm drains and ocean.

Similarly, Leong says, at Kapiolani Park, "they have a long vegetative swale, a bio-infiltration area and permeable pavement. Some of the (rainfall) will go to the pervious concrete and go into the underlying storage gravel. And as it fills up, it will infiltrate into the underlying subgrade."

Other city sites with new or upcoming LID structures include the Waianae, Wahiawa, Kapolei and Kalihi police stations, Ala Wai Golf Course Driving Range parking lot and Ala Wai Community and Neighborhood Park. Other examples are the green roofs atop the Fasi Municipal Building and the Honolulu Police Department parking lot.

Builders' Mandate

"The (project) owner and designer are required to implement the (LID post-construction) permit requirements," Leong says, adding that "building contractors are responsible to construct whatever they have bid on in their drawings. Hopefully, our engineers will put notes on their drawings that will say, 'You need to pay attention to these things during construction.'

"I'll give you an example. If we're trying to establish a rain garden or a bio-infiltration area, we're digging a hole in the ground. And when we get to the bottom, we need to make sure the bottom is not smooth.

"We need to rake the bottom with the backhoe teeth. If



Runoff infiltration area at Kapiolani Regional Park
PHOTO COURTESY DEPT. OF FACILITY MAINTENANCE - STORM WATER QUALITY BRANCH

(the operator) instead scoops the bottom, takes the bucket and smears the bottom, then he is actually creating a very thin layer that is resistant to infiltration."

Owners, developers and contractors can learn more about these and other post-construction LID practices, structures and certification at honolulu.gov/dfmswq/learningctr.html. The site also directs contractors and employees to free training.

LID does require more care, Leong concedes.

But it can also attract more business. "So if your main skill set is, 'I can build a hotel,' now you can add, 'I also have a forté in doing sustainable green infrastructure or LID,' "he says. "That's a plus. That's a value-added thing for a client."



ROOTING ON THE RISE

Top firms enjoy brisk sales, bright outlook

BY BRANDON BOSWORTH

awaii roofers have been enjoying brisk business in recent years, and many

say the future remains bright. "Things look fantastic," says Elijah DeLaGarza, president and CEO of Roofing Solutions. "Roofing is a nearly recessionproof industry. You have to have



Elijah DeLaGarza

a roof." Deseret Kastner, operations

manager at Kokua Roofing, says the company's sales are up 10 percent so far this year, adding that "the roofing economy is robust, lots of new projects either being built or in planning stages."



Charlie Beeck, CEO of Tropical Roofing and Raingutters Inc., adds,

"the construction industry is booming."

However, Guy Akasaki, president and CEO of Commercial Roofing & Waterproofing Hawaii Inc., cau-

tions that the good times won't last forever.

Charlie Beeck





There's still some new construction on the commercial, industrial side and some work for the state."

He suggests roofing companies prepare for a downturn. "In times of feasting, prepare for times of famine."

A major factor contributing to the overall health of the local roofing industry is Hawaii's climate. The combination of sun, wind, rain and salt air can be hard on roofs. "A 30-year shingle will last 20 years if you're lucky," DeLaGarza says.

The level of damage caused by the environment combined with aging homes translate to a steady stream of patching and re-roofing work for local roofers.

"The homes built in the '60s. '70s and '80s are ready for re-roof-



Peter Michelmore

ing," says Peter Michelmore, owner of Oceanview Roofing. "But people are holding back out of fear of a bad economy. They want to patch, not replace. Homeowners think if it doesn't leak

it's OK. But there's still wind and sun damage.

"There has been lots of damage



Standing seam metal roofs, Kohanaiki, Kailua-Kona. PHOTO COURTESY OF KOKUA ROOFING



Can Roofers Handle the Next Big Storm?

Contractors concerned about the lack of building materials

BY BRANDON BOSWORTH

Climate conditions at the end of May pointed to an 80 percent chance of a near- or above-normal hurricane season in 2017, according to NOAA's Central Pacific Hurricane Center. The outlook calls for a 70 percent probability of five to eight tropical cyclones, which includes tropical depressions, tropical storms and hurricanes.

An average season, from June 1 to Nov. 30, produces four to five tropical cyclones. Hurricane Iniki, the last superstorm to hit Hawaii in 1992, caused more than \$3 billion in damage.

Are Hawaii roofers ready for the next major storm?

"A big hurricane will damage countless thousands of roofs, especially homes built in the 1980s or earlier," says Peter Michelmore, owner of Oceanview Roofing. "The local industry is definitely not ready for that. It would take months if not years for everything to get fixed. Kauai is still recovering from 1992's Hurricane Iniki."

Guy Akasaki, president and CEO of Commercial Roofing & Waterproofing Hawaii Inc., adds "Some think nothing's happened for 15 years so we don't have to worry."

Charlie Beeck, CEO of Tropical Roofing and Raingutters Inc., is more optimistic. "I think we're pretty well-prepared," he says. "We have some good companies here."

When a major hurricane hits, a major problem will be having enough supplies on hand to complete the inevitable repair projects.

"Getting materials will be slow," Michelmore says. "There's not enough material on-island for me to do my job now. I worked in Florida after Hurricane Andrew. Roofing materials were being hijacked and sold at a higher price."

Beeck says "materials by container would have to be shipped by container. Due to the cost of warehouse space in Hawaii, local inventory is not overly high."

Elijah DeLaGarza, president and CEO of Roofing Solutions, says there are enough materials on-island at any given time to "keep roofers busy for 30 to 60 days" in the event of a hurricane.

Even now, Deseret Kastner, operations manager at Kokua Roofing, says there are "long wait times for materials."

Another important concern has to do with the processing of insurance claims. After a hurricane hits, repairs are going to be first-come, first-served," says Michelmore. "Someone with money will be able to get repairs, while most others will have to wait for insurance payments and either be house-less or living in a damaged home."

"Contractors not understanding the claims process is the biggest threat for homeowners," DeLaGarza says, as this can drastically slow the repair process. "When a big storm hits, insurance companies tighten their purse strings. After Iniki, contractors had a hard time getting paid. We're trying to educate as many people in Hawaii about the insurance process."

Due to the lengthy claims process as well as the shortage of construction supplies, DeLaGarza suggests roofers and homeowners keep blue tarps readily available.

"We are aiming to have 500 tarps on hand," he says. "Insurance companies require owners to mitigate damage and putting a tarp on a damaged roof can do that."



Cedar shake shingles, Kohanaiki, Kailua-Kona. PHOTO COURTESY OF KOKUA ROOFING

from strong winds in recent years. You see shingles in your front yard and think they are from your neighbors' roof, but they are really from your roof."

Akasaki adds that "Hawaii is known for its mold, mildew and algae which is generated by Mother Nature herself, and is a relentless weathering element which has broken down even the best of fluid-applied coatings and put membrane manufacturers out of business."

Some weather-related threats are more rare but still damaging. 2012 saw a freak hail storm hit Oahu and Lanai, resulting in widespread damage.

"We're still fixing roofs damaged in 2012," DeLaGarza says. He adds that repairs were hampered by the slow response of the insurance industry. "Local insurers were blindsided," he says. "They didn't have enough staff so they had to bring in people from the mainland."

In general, DeLaGarza finds getting insurance companies to pay claims in a timely manner (or at all) is one of the biggest problems he encounters. "I've worked with insurance companies in 25 states," he says. "In Hawaii, insurers do things I've never seen, bordering on bad faith."

Another issue impacting roof health has nothing to do with nature. "The second bane to building facilities is man-made, and that is grease from rooftop grease traps and blowers," Akasaki says. "Most roof manufacturers will indemnify themselves of grease or animal fats that cause damage to their assemblies due to lack of maintenance, etc."

Heat is another big concern in



Hawaii, affecting both the longevity of roofs and the comfort of homeowners. Fortunately, there are ways to beat the heat.

"One thing that's become very popular over the last few years are cool roofs that reflect heat," says Beeck. "Most roofing manufacturers offer some sort of cool roof; they almost have to. They come in shingles, single-ply and every other type of roof. They cost more, but are worth it.

"I did a Mililani townhouse project six years ago with reflecting fiberglass shingles. I received a thank-you note telling me the cool roofs reduced temperatures inside the house by 10 to 12 degrees."

Beeck says about 60 percent of the new roofs he installs are cool roofs.

The materials used for a reflective roof are important. Akasaki warns that "silicone starts turning dark after a few months and your solar reflectivity drops significantly." He recommends roofing that incorporates titanium dioxide (TiO2), a rare



Overview of a Roofing Solutions project at Healani Gardens in Kaneohe.



earth ceramic material. Akasaki notes that titanium dioxide roofing is more expensive but highly reflective. "It can prevent solar radiation from getting into the assembly and reduces interior heat," he says.

Akasaki is also enthusiastic about water-based urethane roof coatings. "It's resistant to chemicals as well as animal fats, mold, algae and mildew and has a high solar reflective retention," he says. "It requires no PPE (personal protective equipment) to install." Rainwater runoff from a roof

using a water-based urethane coating is potable.

Michelmore is a fan of synthetic underlayments. "They are more pliable, self-adhesive and reseal completely," he says.

Synthetic underlayments also provide a higher degree of weather protection than traditional felt and are easier to reshape.

Aging buildings combined with new construction could mean plenty of future business for Hawaii roofers. "Houses and condos are being built at a fast pace," Beeck says. "The reroofing business is always steady. The outlook looks positive."

Kastner points to resort reroofs on Kauai, the Ainamalu at Waikoloa Beach Resort project on the Big Island and continued residential work on Oahu.

"We have lots of good Department of Education school jobs coming up, and insurance work from recent wind storms," says DeLaGarza. "There's enough work in Hawaii to last a lifetime."



Roofing Solutions crews working on a project at Healani Gardens in Kaneohe. PHOTO COURTESY OF ROOFING SOLUTIONS

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A Cultural Haven on

MAU

Hawaiian Dredging helps The Westin Nanea Ocean Villas rise from an 'ambitious vision' to 'reality'

BY DAVID PUTNAM

he Westin Nanea Ocean Villas, says General Manager Chris Rabang, "started with the goal of creating a world-class resort infused with rich Hawaiian culture."

That lofty goal, he adds, has been achieved. From its Puuhonua o Nanea



Chris Rabang

Cultural Center to the blend of local art, the resort sitting on Maui's North Kaanapali Beach was designed to celebrate native culture and traditions and provide a relaxing haven with authentic Hawaiian experiences.

And it comes as no surprise that *nanea* in Hawaiian means relaxation.

"Hawaiian Dredging's quality of work, professionalism and diligence helped make this ambitious vision a reality," Rabang says. "Hawaiian Dredging, along with WCIT Architecture and others, was a valued partner in bringing The Westin Nanea

Ocean Villas to life two and a half months ahead of schedule."

Hawaiian Dredging Construction Co. Inc. broke ground on the \$300 million project for client VSE Pacific Inc. in February 2015. Pat Palmer, project director,



Pat Palmer

says the resort fills "a need for a timeshare resort on the west side of Maui."





The 16-acre resort, which began confirming reservations as of May 1, consists of 390 timeshare villas. "There are eight wings—six wings being six stories, two wings are six stories plus a basement—and two four-story parking garages," Palmer says.

The first eight wings comprise approximately 813,000 square feet, he says, adding that "the structures are concrete, with the parking garages and a portion of Wings 3 and 4 using posttension cables."

He says the resort includes restaurants, kitchens, retail spaces, a sales gallery, fitness sauna and steam room, workout room, plunge pools and a heated lagoon pool. The back-of-house area includes mechanical, electrical, pool, laundry rooms, offices, employee cafeteria, lockers and storage.

All villas offer amenities such as fully equipped kitchens and washers and dryers.

Posing a challenge for the crew, he says, was having to work "next door to an operating resort that utilized the

same entrance road, and maintaining an access road to the beach park on the opposite side of the project."

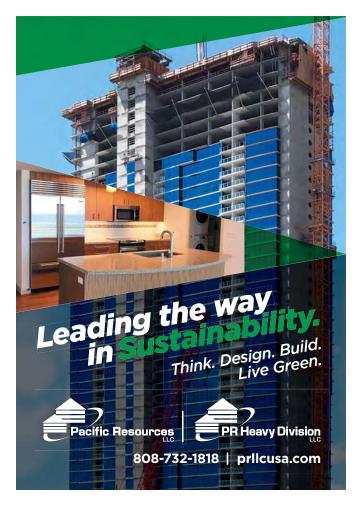
Palmer says the project is focused on receiving LEED Gold certification

by reducing energy in cooling, heating and lighting systems.

"Its unique heat exchange system uses seawater to cool the air conditioning system," he says. "It is one of



The elegant lobby of The Westin Nanea Ocean Villas PHOTO COURTESY HAWAIIAN DREDGING CONSTRUCTION CO. INC.







The Lahaina Courtyard pool

the few projects on Maui that uses the co-generation system to provide most of the electrical power for the resort. The heat by-product from the co-generation system is used to provide hot water for the project."

Another feature of the job, he says, was that "Hawaiian Dredging utilized a unique tunnel forming system where the walls of a floor and the slab of the floor above are poured monolithically."

The "tunnel form system was instrumental in the early completion of the project," he adds.

One of the first milestones for Hawaiian Dredging, Palmer notes, was turning over Wing 1 with a temporary certificate of occupancy on Nov. 15, 2016 as required. Wings 1-4 and the first parking structure had to be turned over for occupancy on April 5, he says, noting that the second parking structure was due to be turned over on Jan. 9, 2018 but was ready on April 1—nine months ahead of schedule. Wing 2 was turned over on Nov. 30, approximately three months ahead of schedule, and Wings 1-5 on April 1.

"By contract, Wings 5-8 were to be turned over on Jan. 9, 2018," Palmer says. "Hawaiian Dredging realized that Wing 5 had to be turned over with Wings 1-4 due to fire exiting requirements. Wing 5 was turned over on April 1, nine months ahead" of the estimated completion date.

"Hawaiian Dredging is scheduled to turn over Wings 6-8 on Sept. 29, three months ahead of the contract requirement."

Among the valued subcontractors, Palmer points to the efforts of Pacific Aquascapes, Resort Management Group, Dorvin D. Leis, Wasa Electric and Hawaiian Dredging's Heavy

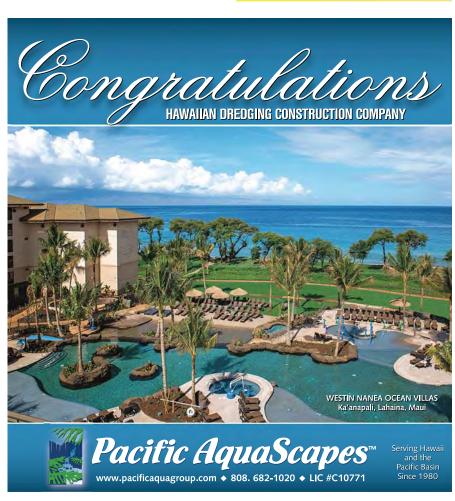
Division, which did the sitework. Also, the concrete was self-performed by HDCC's Building Division.

"The project's standout feature is the culturally inspired patterns and artwork in the design. The extensive central water feature area with a panoramic view of the ocean and lush landscaping will be a highlight for visitors," says Palmer. "There is a cultural center and garden that contains Hawaiian displays, books and plants."

Project Leaders

In addition to Hawaiian Dredging's Pat Palmer, the project team for the Westin Nanea Ocean Villas includes:

- Jim Neely, VSE Pacific Inc., senior director of Hawaii operations
- Alan Mullin, Cumming Construction Management, project director
- Larry Cunha and Paul Niiyama, WCIT Architecture
- Henriksen Design Associates, interior designer
- Baldridge & Associates, structural engineer
- Wilson Okamoto & Associates, civil engineer
- Walters Kimura Motoda Landscape Architects, landscaping
- Pacific Aquatech Inc., pools and water features



Guam Aims to Update Construction Laws

Proposed bill addresses sunset provisions on long-idle development projects

BY MAR-VIC CAGURANGAN

pdating laws that govern Guam's zoning and development projects' approvals is imperative, says Michael Borja, chairman of the Guam Land Use Commission.

"To try to resurrect a development plan that was approved in the 1990s is ludicrous. From 1990s to 2017,

conditions have changed," Borja says, noting that many local laws regulating construction activities are outdated.

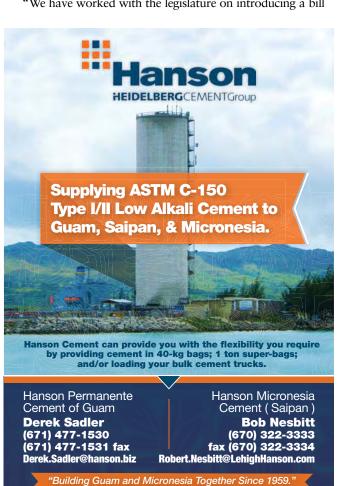
One particular law enacted in 1996 contains a sunset provision that allows a construction project to proceed despite being in hiatus for long years. Several projects were approved 20 years ago by the Territorial Land Use Commission and the Guam Seashore Protection, but these projects have not

begun and are awaiting building permits.

"We have worked with the legislature on introducing a bill



Michael Borja





to try to figure out a way we can bypass that sunset provision," Borja said at the Island Sustainability Conference hosted by the University of Guam in April.

The result of this collaboration was Bill 75-34, authored by Sen. Tom Ada, which seeks to prevent the commission from green-lighting projects that were proposed decades ago.

Bill 75-34 would give the commission the discretion to either approve or deny applications for variances and building permits, depending on its findings on the proposed projects. Under the bill, the "applicant shall apply for and receive a building permit for the approved project within three years from receipt of notice of action; however, a two-year extension may be granted." The notice of action would be deemed "null and void" if the developer fails to obtain a permit within the five-year window.

"There is always room for changes in the law," Borja says. "Making changes to the law is not that hard, but sometimes it requires more organized efforts through roundtable by various groups so it's workable for everybody."

However, he adds, the final version of the bill doesn't always come out the way it was intended. "When it becomes law, there are confines that regulating agencies have to work with."

Borja advises stakeholders—including developers as well as village leaders and community members—to actively participate by suggesting changes to the law or by attending public hearings. "We listen. It may not seem so to some people, but we do take note," he says.

Last year, protests by residents of Pago Bay against the proposed construction of the Pago Bay Marina Resort prompted an amendment to the law to allow village mayors to participate in the commission's zoning and construction permitting process. "(Public Law 33-68) has formalized community participation through their mayors," Borja says.

Chalan Pago Mayor Jessy Gogue welcomes the public's new role in reviews of projects and regulatory enforcements assigned to village leaders. But more important, Gogue says, is that developers hold a dialog with the community in which they intend to build their projects.

"Even before you announce that you are going to do this or that, I encourage you to visit the people who are going to be impacted by your proposed project. When an organization is going into a community, the community wants to know everything about that organization," Gogue says. "So if you want to be part of that community, you have to sit down with them."



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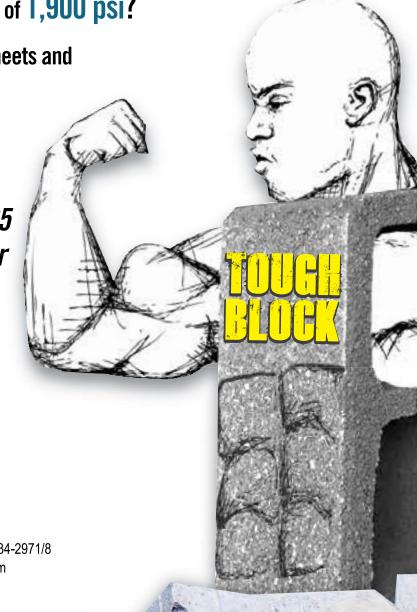
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Beauty & The Best

Great design—on display at AIA Honolulu's upcoming 2017 Awards—builds great projects

BY BRETT ALEXANDER-ESTES

n the age of such technology as Autodesk, it's no surprise that **Chris Hong, American Institute** of Architects

Honolulu Chapter 2017 president, supports the use of software in many phases of Hawaii construction and design.

Citing a current project, Hong notes "the



owner's rep is using (building software) to keep track of things on the construction side. And that includes laser scanning and the use of lasers to update and do the layout."

Software also dominates net-zero projects. "In terms of energy savings, you cannot ignore the influence and infiltration of net-zero and other smart technology," Hong says.

April's AIA Conference on Architecture 2017 in Orlando dangled even more enticing tools. "Every single one of the rendering software, whether it's Twinmotion, whether it's Lumion, whether they're with Autodesk, there were at least eight booths that all had VR (virtual reality) headsets ... to show off their rendering capabilities," he says. "The big push, from what I saw, is the shift to VR."

So what is the role of the architect—the human link in today's high-tech design equation?

"I think it falls upon the architect to not be dependent on technology," Hong says, "and how much you can actually accomplish on the front end of design."

The truth of Hong's assertion may soon be evident, as Hawaii's architects and students submit their entries to AIA Honolulu's 2017 Design Awards.

"An interesting thing about the Design Awards this year is that for the first time ever, we're

using outside jurors," says Abigail Spencer Mundell, AIA Honolulu executive vice president.

The awards jury, based in Abigail Spencer Mundell Portland, Ore., will include Ben

Lee, 2016 AIA Honolulu president. "In order to make sure that the people on the jury understood some design decisions, we thought having one (local) person there would be good, and Ben was a natural choice," Mundell says.





The Harirak Residence in Thailand, an AIA Honolulu 2016 Award of Merit winner, designed by Tadpole Studio/Natee Supavilai – Design PHOTOS COURTESY BAAN LAE SUAN/POIKAI STUDIO

Nearly 40 entries are expected. "That's why I'm so excited to see what Portland will come back with," Mundell says. "Because they don't know—they don't know our types of projects, they don't know where a building is located."

The verdict will be announced in September, when AIA Honolulu will celebrate the 2017 Design Award winners at a gala in Kakaako's iconic IBM Building.

Not Just A Pretty Place

The awards help develop Hawaii's design aesthetic, but AIA Honolulu's core mission is to support Hawaii's building community.

"At AIA Honolulu, our job as a membership organization is really geared toward member development," says Mundell. For example, AIA Honolulu polled its members to create "Get The Job," a workshop led by Howard J. Wolff, former WATG senior vice president and worldwide marketing director.

In the coming months, AIA Honolulu will present its 2017-2022 Strategic Plan. AIA members and professional development at all levels are the plan's main focus, Mundell says. "But the other thing we do is collaboration. So our professional development is geared towards architects, but also other people in similar industries"—like Hawaii contractors.

Currently, AIA Honolulu meets

Cafe Lani by Wanderlust Plus, an AIA Honolulu 2016 Award of Merit winner PHOTO COURTESY WANDERLUST PLUS regularly with the General Contractors Association of Hawaii, helping both these groups stay on top of industry issues

"I think ... software integration and advances ... just show the increasing importance of collaboration and coordination between architects and contractors," Hong says.

The AIA/GCA meetings also forge professional and personal bonds.

"The most successful and productive contractorarchitect relationships are built on teamwork and trust," says Brian T. Takahashi, Architects Hawaii Ltd. principal and AIA Honolulu member. "Construction procurement processes that encourage architects and contractors to





The IBEW Local 1186 Office / HI Electricians Training Cntr. - Kahului by Architects Hawaii Ltd., an AIA Honolulu 2016 Honorable Mention winner PHOTO COURTESY BAD MOON SALOON/ ARCHITECTS HAWAII LTD.

on, and we're trying to be efficient with it, and make the shift to more programs so things can build off one another. I think that goes in conjunction with our public outreach.

"The design process can help solve so many different problems throughout the world," Hong says, recalling one AIA Conference speaker who built a project in a remote African village. "It's working with local craftsmen. It's design incorporating local economies and cultures."

In building the project, Hong

says, the architect was also training the local population as masons and metalworkers. "So not only did that community get a new building, but you have several dozens of people who now learn a new trade that they can use in perpetuity to get an income.

"Good design overrules no matter where you are."



Brian T. Takahashi

collaborate as a team contribute to the constructability and pricing of the project and can greatly assist in creating positive relationships."

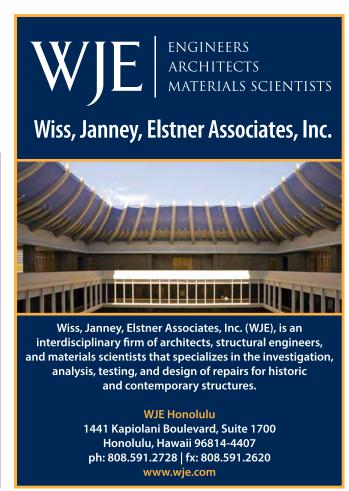
On another industry front, AIA Honolulu's new Housing Committee is bringing stakeholders together to address Hawaii's top construction issue. The committee, Mundell says, focuses on "one to three specific areas per year,

and talks about changes we can make in those areas" based on AIA Honolulu's research.

"Abby and I and the rest of the (AIA Honolulu) Executive Committee are really excited about the direction we're taking," says Hong. "We know we have a lot going

AIA Honolulu 2016-17 **Highlights**

- 2017 Annual Report (AIA Honolulu's first see it at aiahonolulu.org)
- 2017 Architecture Month: 20 events in April, including the Building Voices Ideas & Action Festival
- A new Housing Committee
- 2016 Design Awards (included AIA Honolulu's first Student Awards)
- 2017-2022 Strategic Plan (scheduled for a July release)
- 2017 Design Awards (First out-of-state jury; Awards gala on Sept. 16)
- 12th Annual CANstruction for Hawaii Foodbank (Sept. 30)
- 2017 Pacific Building Trade Expo (Oct. 24)
- 2018 Regional Design Symposium (TBA)



Sprinklers Bill on Brink of Victory

SB 611 staves off mandatory requirement to install costly systems in new one- and two-family dwellings

BY DAVE DONDONEAU

awaii's building industry and families looking to build a new home have reason to celebrate over the next decade.

Led by the Building Industry Association of Hawaii and other industry organizations, Hawaii Senate Bill 611 passed the 2017 state legislature. SB 611 keeps sprinkler systems as an option and not mandatory for all new one- and two-family dwellings built over the next 10 years.

Once Gov. David Ige receives recommendations following reviews of the bill by key state departments and agencies, he can sign it into law. The governor also has until June 26 to determine which bills will be on the intent-to-veto list. Any bill that has

not been signed or vetoed on July 11 will become law without his signature.

"I don't think homeowners know the bullet they dodged, but we do in the industry," says BIA-Hawaii



Evan Fujimoto

President Evan Fujimoto, also president of Graham Builders. "This is a big deal for all of us."

Keeping fire sprinkler systems optional for future homeowners is expected to save them thousands of dollars while preventing an already tedious permit process from lengthening and slowing the building process.

The BIA had claimed that mandating automatic fire sprinklers in one- and two-family dwellings in Hawaii would have increased the price of a home by \$25,000 to \$32,000.

Fujimoto says the cost increase would drastically cut the number of families who can afford to buy or build in an already high-priced market.

"The National Association of Home Builders has an Opportunity Housing Index that shows the number of households that would be priced out of the market if prices were raised just \$1,000 in 2016," Fujimoto says. "In Hawaii, the median for these type of homes is \$461,085 and the household income needed to qualify is \$96,817. A \$1,000 increase would eliminate 548 families from qualifying. This would be much more.

"We understand the fire department's concern to build the safest homes, but we have to balance affordability and safety. There are many advances in today's building materials and technology that make homes much safer. We want to continue working with the fire department to find a better solution and balance that won't raise housing prices so

dramatically and price some people out of their dream of becoming homeowners."

Fuiimoto and BIA-Hawaii CEO Gladys Quinto Marrone were among a strong industry group who fought for the bill. The Senate



Gladys Marrone

passed SB 611 in March and the House approved it in April.

Marshall Hickox, owner of designbuild general contractor Homeworks



Hawaii and vice president of the BIA-Hawaii, also was on the committee pushing passage of SB 611.

"For at least six months I've had to tell clients who are planning to build

> homes they could face an additional charge of at least \$10,000 if the sprinkler systems were mandated," Hickox says. "It was shocking to them and they were overwhelmingly distraught.



"With rising costs in building across the board, any additional costs would stop people from building the dream home they want to build, if at all."

Eventually, BIA-Hawaii would like to see the sunset clause erased with no threat of mandatory sprinklers. The battle over installation has been ongoing for a decade. In 2012, the National Fire Protection Association (NFPA) got the state to agree to have the installation of automatic fire sprinkler systems required in all new one- and two-family dwellings. The NFPA says that unprotected lightweight construction failed in six minutes when compared to dimensional sawn cut lumber, which failed in approximately 19 minutes. The goal behind the mandatory sprinklers is to protect occupants as well as firefighters.



"If it were only \$15,000 per home to add sprinklers, that's almost a billion dollars in added cost," Fujimoto says. "Even \$10,000 is \$650 million. That's a ton of money to be spending.

"You have to look at cost and

benefit. If it was \$5, I'd put sprinklers in myself because I want the safest house, but we're talking for some homes it could be up to \$40,000 or more depending on the location from meters and other factors."

However, Marrone and other industry experts say that advances in today's materials and technologies alleviate some of the problems.

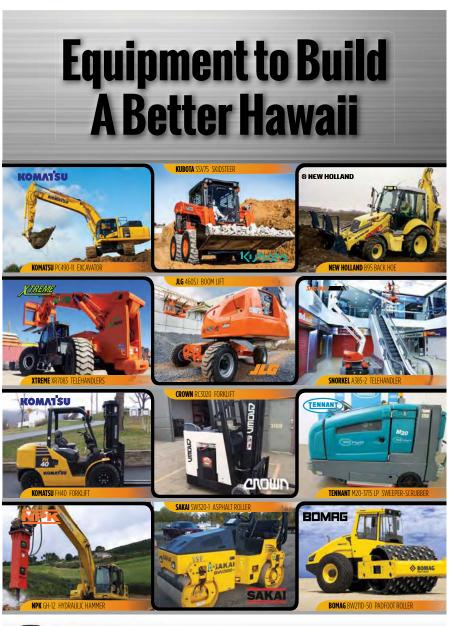
"New homes are built safer than ever before," Marrone says. "They are built with better fire-retardant materials and new technology such as hard-wired smoke detectors. We are in a housing crisis and mandating sprinklers will significantly impact the cost of new housing in Hawaii and exacerbate our situation.

"The passage of SB 611 will help keep new housing affordable for Hawaii's families," she adds. "We could not have accomplished this goal without the help of other industry organizations, including affordable housing advocates, and the public who took the time to express their support.

"SB 611 is now on Gov. Ige's desk and, to support housing affordability, we respectfully encourage him to allow this measure to become law."

Fujimoto also cites innovations such as motion sensors for stoves and other household items that can be installed at a cheaper cost.

Research shows more than 65,000 houses are currently needed to keep up with housing demands. The addition of mandatory sprinklers would drive up costs dramatically.





5 LOCATIONS

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KONA 808-326-1212

KAUAI 808-245-8472 **MAUI** 808-244-9158



Ritz-Carlton Residences Wins Project of the Year

The Ritz-Carlton Residences Waikiki Beach, Phase 1 has been honored as 2017 Project of the Year by the Post-Tensioning Institute at an event held May 1 in Atlanta.

BASE was the structural engineer for the project developed by Pacrep LLC, designed by Guerin Glass Architects and constructed by Albert C. Kobayashi Inc. with post-tensioning installed by Associated Steel Workers Ltd. and designed by Suncoast Post-Tension.

The PTI awards are given biennially to recognize projects worldwide for excellence in its application of post-tensioned concrete.

"We enjoy working with an active structural system such as posttensioning, so we were very excited to hear our project was recognized with the Project of the Year award from the Post-Tensioning Institute,"



says BASE President Steven Baldridge. "With stringent height limitations, long spans and cantilevers, multiple transfer girder and truss requirements all melded into an aesthetically appealing curved building profile,

post-tensioning became the choice for this structural, yet artistic composition.

"There really was no other structural system that could be used to meet this project's challenging requirements."

HSA Celebrates 20 Years, Installs New Officers

The Hawaii Steel Alliance recently installed new officers for 2017-18 while celebrating its 20th anniversary with seminars, jobsite tours, golf and a gala banquet at the Battleship Missouri Memorial.

New officers are president Debbie Kim-Ito of J&B Materials, vice president Pat Gill of Gill Construction, secretary Akira Usami of CEMCO and treasurer Tim Waite of Simpson Strong-Tie Company.



Debbie Kim-Ito

New directors at large include Andrea Benitez of Group Builders, Scott Coulter of Coulter Construction, Nathan Kabei of GW Killebrew/AMS, James Bergantinos of Castle & Cooke Homes Hawaii, Bruce Place of Commercial Building Systems, Colleen Mizuno of Unlimited Construction and Ralph Valentino of V&C Construction.

Attending the banquet aboard the Missouri were nearly 100 guests, including several past HSA presidents. New Lifetime members Doug Pearson, formerly with Castle & Cooke, and Ken Vought, formerly with USS Posco, were recognized at the celebration.

Guest speakers at the May 5-6 conference were Nader



The HSA celebrated its 20th anniversary at the Battleship Missouri Memorial.

Elhajj of Framecad Solutions in Virginia, Don Allen of Super Stud Building Products in Georgia, Gordon Barratt of the National Association of Steel Framed Housing in New Zealand, Larry Williams of the Steel Framing Industry Association in Washington, D.C. and Steve Campbell of CBC Steel Building Co. in California.

"While the rest of us have struggled during poor economic times on the Mainland, the Hawaii Steel Alliance has been a strong, shining beacon of success demonstrating to all of us the strength an alliance has in keeping steel number one in Hawaii," the SFIA's Williams said.

G70 to Create New HQ

G70, a leading Hawaii design firm, has slated renovations to one-and-a-half floors of Bank of Hawaii's main branch in downtown Honolulu preparatory to moving the firm's staff of more than 100 there in early 2018. The new headquarters for G70, formerly known as Group 70 International Inc., will encompass the Fort Street-facing half of the ground floor and the second floor mezzanine, which flows into the second

level of Bank of Hawaii's corporate banking tower at 111 South King St. Construction is expected to begin this summer.

The renovation illustrates "adaptive reuse," one of the firm's core concepts. "G70's new office location is testament to what can be achieved through creative vision, strategic planning and collaboration with a common goal to bring a fresh new light and energy to the heart of downtown," says Linda

Miki, G70 principal and vice chair. "We're excited about working with Bank of Hawaii to showcase our adaptive



Linda Miki

reuse insight in this iconic building."

"The extensive process involved not only a redesign of G70's visual presence, but also focused on the way we communicate," says G70 Principal



Craig Takahata

Craig Takahata. "We are so pleased to celebrate 45 years, unveil our new brand and now work with Bank of Hawaii to create a new physical space for G70."

G70, currently located in the

McCandless Building on Bethel Street, completed a brand renewal last year as part of its 45th anniversary.

G70's recent adaptive reuse projects include the Hyatt Centric Waikiki Beach and Hawaii Pacific University's Aloha Tower Marketplace renovations.



View of G70's future headquarters in the Bank of Hawaii building on King St. RENDERING COURTESY G70

Guam's Iconic Bridge Towers Reopen

The Umatac Bridge Towers, an iconic landmark in a southern village in Guam, reopened on April 19 following the completion of structural and electrical repairs.

The Umatac Bridge Towers were built in the 1980s. Over time, however, the staircases, balusters, interior and exterior walls, lighting system and other sections of the towers deteriorated. Repair work began last November.

The towers, one of the most photographed landmarks in the village of Umatac, had been closed to the public for 16 years until the ribbon-cutting ceremony on April 19.

The \$300,000 project was funded through the Guam Preservation Trust Fund.



The Umatac Bridge Towers on Guam reopened in April.

New Solar Facility Opens at Pearl Harbor

The Department of the Navy, Pacific Energy Solutions LLC, Hawaiian Electric Co. and the Hawaii State Energy Office celebrated the completion of a 14.3 megawatt direct current solar facility at Joint Base Pearl Harbor-Hickam (JBPHH) Waipio Peninsula with a ribbon-cutting ceremony on April 28.

"Our Navy is tough during wartime and while preserving peace," says Rear Adm. John Fuller, commander of Navy Region Hawaii. "That same level of determination drives day-to-day problem-solving as well as our approach to energy security. We are bold in our thinking—embracing innovation and new technologies, just as we have done throughout our history. Our senior leaders empower us and expect us to be adaptive, resilient and forwardthinking. That applies to both our nation's defense and to our commitment to energy security."

Pacific Energy Solutions built, and will own, operate and maintain



Rear Adm. John Fuller, commander of Navy Region Hawaii, speaks at a ceremony marking the completion of a 14.3 megawatt solar facility at Joint Base Pearl Harbor-Hickam.

the solar facility on JBPHH, and the installation will be the sole consumer of the power produced by the photovoltaic facility under a contract referred to as a Power Purchase Agreement.

"We are pleased to be part of the

Waipio solar project and to help the Navy achieve its clean energy goals," says Matt Handel, vice president of Development for NextEra Energy Resources LLC, whose subsidiary purchased the membership interest in Pacific Energy Solutions.

Hawaiian Rock Begins Work on Hamburger Road



Hawaiian Rock has begun work to repair Hamburger Road on Guam.

Hawaiian Rock crews have begun resurfacing work on Adrian Sanchez Street in Dededo's Harmon Industrial Park, where most of the island's construction companies are located.

The Department of Public Works awarded a \$441,642 contract to Hawaiian Rock on May 11 for the first phase of work on the street known as "Hamburger Road." The resurfacing is the first major repair to the potholed road since it was built in the 1960s. The work is being done from the area behind McDonald's in Harmon to Marine Corps Drive in Upper Tumon.

"This project was critical for our community," says DPW Director Glenn Leon Guerrero.

The project, scheduled to be completed in six months, is funded through DPW's \$2 million annual budget for road repairs.

"For far too long, motorists and pedestrians alike have had to deal with potholes and uneven roadways which continue to threaten their safe and timely commute to and from school, work and everywhere else in between," says Sen. Tommy Morrison, author of the bill to fund the project.

Pasha Hawaii Adding 2 LNG-fueled Containerships

Pasha Hawaii has selected Brownsville, Texas-based Keppel AmFELS, a subsidiary of Keppel Offshore & Marine (Keppel O&M), for the construction of two new liquefied natural gas-fueled containerships,

with the option to order two additional vessels. Pasha Hawaii is in the process of finalizing contract specifications.

The new U.S. Jones Act vessels will carry 2,525 20-foot equivalent



units (TEUs), including a fully laden capacity of 500 45-foot containers, 400 refrigerated containers and 300 40-foot dry containers, with a sailing speed of 23 knots. The ships will operate on LNG, reducing environmental impact and increasing fuel efficiency. Both vessels are expected to be delivered in 2020.

"Keppel O&M's technical expertise in LNG propulsion and commitment to customer service were two very important factors in our selection decision," says George Pasha IV, president and CEO of Pasha Hawaii. "From the start, they went above and beyond and worked closely with us in customizing a vessel design that matched our requirements. Their experience in LNG vessel conversions will also prove to be very valuable as we build LNG dual-fueled vessels for the Hawaii trade."

Ward Village 'Best-Planned' in U.S.

Architectural Digest, a leading international journal of design, in May chose Ward Village by The Howard Hughes Corporation as the "Best-Planned Community in the United States."

The Digest cited Ward Village's world-renowned architects, mixed-use towers, urban location, commu-



Todd Apo

nity events and walkability.

"We truly appreciate this recognition that validates our effort to build a vibrant Ward Village community in Kakaako,"

said Todd Apo, vice president of community development at Ward Village. HHC's neighborhood, Apo says, "is creating a new way of living in Hawaii, and this emerging trend

is beginning to be recognized on a broader scale."

Current Ward Village projects include

Aeo and Ke Kilohana, residential towers that include flagship retail outlets.



Ward Village's future Aeo tower with Whole Foods at its base RENDERING COURTESY THE HOWARD HUGHES CORPORATION

Shinn, Zia Appointed to HART Board of Directors

Ember Shinn, a former city managing director, and former corporate executive Hoyt Zia have been appointed to serve on the Honolulu Authority for Rapid





Ember Shinn Hoyt Zia

Transportation board of directors.

"During the time that Ember served as managing director, she oversaw the city's capital budget and program—billions of dollars of construction projects—and developed a reputa-

tion for diligently reviewing contracts and change orders and making hard decisions on cost cutting," said Mayor Kirk Caldwell said in announcing her appointment to the HART board. "I know that she will bring the same critical approach to her review of rail construction operations. ... I am confident that she will help HART control costs and increase accountability and transparency while completing the guideway all the way to Ala Moana."

Shinn replaces William "Buzz" Hong, who was recently appointed to the Honolulu Fire Commission. Shinn will serve Hong's remaining term until June 30, 2019.

Zia will replace former board member Colbert Matsumoto who was appointed last April to serve the remaining term of former HART Chair Don Horner.

"Hoyt's extensive corporate career and legal background encompasses a full range of experiences that will be extremely beneficial to the HART board as the panel guides the rail project through its current financial challenges," Caldwell said.

Zia, who served as senior vice president and general counsel and corporate secretary for Hawaiian Airlines from 2007-16, will serve on the board until June 30, 2020.

Two Join Armstrong

Sheldon Heck and Irene Hilgenberg have joined Armstrong Builders LLC as superintendent and project engineer, respectively.

Heck brings more than 25 years of construction industry





Sheldon Heck

Irene Hilgenberg

experience to his new position, where he provides site supervision, ensures quality control and manages safety and scheduling for commercial and residential projects.

Hilgenberg procures materials, coordinates with subcontractors and balances the project budget. Previously, she served as lead concrete engineer for J.P. Cullen & Sons in Wisconsin.

...continued from page 12

driving heavy machinery. "Some equipment is so big, it scares you, looking up at a tire five feet taller than you are."

Over the years he's worked for Kiewit, Goodfellow Brothers, Hawaiian Dredging, Delta and Oahu Construction, among others.

"You go where the jobs are," says Macfarlane, who is not related to Walter Macfarlane, for whom the big July 4 canoe races in Waikiki are named: "I've never really researched it, but I go to the regatta every Fourth of July."

These days he's working on a 6,000-square-foot private residence at Black Point, which entails breaking up blue rock.

"Did you know there's water inside blue rock? Break it open and there's moisture inside, water that's millions of years old. Open it up and it's almost black, and you can sometimes see just a couple of drops trickle out. Pretty cool."

Then there are menehune:

"Never saw it, but I heard of guys moving a big rock, and the next day it's back where it was. But I have seen where a Hawaiian operator is on a bulldozer and he gets to a certain corner and the engine breaks down. Next day, another Hawaiian operator, same place, a tire goes flat. But it was OK with a *haole* operator. Strange."

Two things have changed his work—safety and technology—and they're related.

"Technology is amazing in construction right now, especially safety," he says.

As an example, he notes that heavy equipment comes with rearview monitors.

"People get hurt every day in construction from doing stupid stuff. I have to give Kiewit credit for their safety program. It's based on Exxon-Mobil, which has one of the best safety records. They know what's gonna happen and they don't let it happen, they stay away from it. We're not allowed to do certain things we did as 'cowboys'—today you get fired for being that cowboy operator. We're riding huge bucking broncos, you know.

"I've become so safe now, people don't like doing things with me. I was riding bicycles in Chicago with my daughter, and she said, 'When did you become Mr. Safety Cop?' " Technology also has affected his old job.

"GPS," he explains. "I was the first on-island, with Kiewit, to walk around holding up this stupid stick with GPS on it and a computer. It tells you two feet this way, a couple of inches that way, and there's the corner of the house. You don't need a surveyor any more. It will tell you, you're 12 feet too low, you have to bring in 12 feet of dirt.

"Bulldozers have TV monitors in them now. And it's all joy sticks; we used to have steering wheels. No more steering wheels. This is very quick and responsive. It's a new learning technology for us. GPS, Bluetooth and internet, it's all connected. The bulldozer just shows up and everything is on the screen, and it's within a hundredth of an inch. That's how good it's become, you can't believe it."

But you still have to fly by the seat of your pants.

Have a good story about a good person in Hawaii's construction industry? Please e-mail me at don@tradepublishing.com.



Hydro-demolition Robot

The Aqua Cutter 410V is designed for use in confined areas, replacing hand lance work. Its small size and low weight allows the robot to easily pass through narrow passages such as doorframes or operate from scaffoldings. It can reach horizontal, vertical and overhead areas up to 4 meters without support, and even more with support. The 2,756-pound Aqua Cutter 410V uses 15,000- to 40,000-psi water jets to remove as much as 9 cubic feet per hour of concrete. The robot's stroke can be adjusted to control the depth of cuts.

www.aquajet.se



StoneFit Cladding

Glen-Gery recently released StoneFit with DryFit technology, a stone cladding product with patented tongue and groove panels that interlock the stone pieces together without the use of mortar. Panels

are mechanically secured with attachment brackets that can be drilled directly into structural sheathing, regardless of stud location. The attachment brackets assist in creating a water management system and result in a high wind load resistance.

www.glengery.com



When is a hammer not just a hammer? Fiskars offers a line of IsoCore Striking Tools designed to absorb strike shock and vibration with an insulated sleeve, dual-layer handle and technology to ensure maximum grip. Hammers are available in 13.5-, 15.5- and 16-inch lengths and weights of 16, 20 and 22 ounces.

www.fiskars.com



The Bosch GCB10-5 Deep Cut Band Saw tool makes clean cuts in rebar, conduit and other metals. Weighing 14.5 pounds, it includes a saw hook storage, a carry handle for easy transport and an LED light to illuminate the cut line for greater accuracy. The saw provides nearly spark-free cuts for safer metal-cutting operation as well as variable speed settings ranging from 100 surface feet per minute up to 380 surface feet per minute.

www.bosch.us

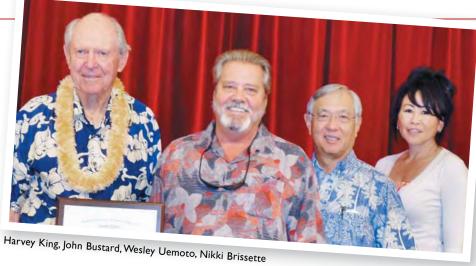
Cooling Hat

Ergodyne's Chill-Its 6686 Dry Evaporative Cooling Hat is a one-size-fits-all adjustable gray cap with an easy-to-activate (and reactivate) cooling system. By filling the watertight cap with three ounces of fresh water, wearers get up to three days of dry cooling relief that is 15 degrees below ambient air temperature, with a max cooling capacity of 59 degrees Fahrenheit. The cap is machine-washable and features an anti-microbial treatment to prohibit mold growth.

www.ergodyne.com

ASSE Workshop

The American Society of Safety Engineers Hawaii **Chapter hosted a one-day OSHA** workshop at the **Dole Cannery's Pomaikai** Ballrooms on May 10. In addition, ASSE members were given opportunities to network and to gain perspective on market trends.





Norman Ahu, Tristan Aldeguer



Terri Watkins, Stephen Stout, Jim Newberry



Alan Whitworth, Kemberly Thompson



Aaron Kent, Roxanne Ching, Michael Hirokawa



Marc Akiu, Alexis Pangilinan, Lucia Indelicato, Michael Monell, Cesar Contreras



Blaine Kalama, Joe Albinio, Jerald Dolak, Lawton Mauai, Dennis Maher

PHOTOS BY NATHALIE WALKER & KAREN BERRY



Barbara Yee, Mary Browne, Laury Cary, Cathy McCurnin





Lyla Stephens, Arthur Chang, Kimberly Aldeguer, Brittain Wabinga, Doug Sera, Bryan Mitsunaga



Dale Brito, Tracy Lawson, Nalani Choy



Lynn Sakamoto, Chuck Lum, Kurt Lemon, Paula Antoque



Floyd Mikasa, Gary Shalander, Royden Yamamoto, Eric Higa



 $Laureen\ McCoy, Jon\ Archambeau,\ Zoe\ Williams$

FACES

GCA's 2017 Build Hawaii Awards Gala

Approximately 300 persons enjoyed the 2017 Build Hawaii Awards banquet at the Hilton Hawaiian Village on April 29. Excellence awards were presented to twenty recipients. Story, page 13.





Gladys Hagemann, Lance and Kate Wilhelm





Garrett Sullivan, Jerelyn Brown



Whitney Nakama, Dom Cueva



Mike Johnson, Scott Campbell, Brandon Kapahu, John Bloom, April Santos, David Katsuda



Eric Teramae, Kasey Barcelona, Ryan Dennis, Aaron Yamasaki Jim and Joe Boyd, Sarah Beaton



Katheen and Al Linton



Kimo Pierce, Karen Watase, Ken Berry



Evan and Ayako Fujimoto



Lori and Marc Wong, Todd and Andrea Barnes



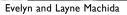
Clay and Lisa Asato, Gail and Cedric Ota





Rida Cabanilla, Maria Dasigo, Jerelyn Brown, Fatima Kempers







Kathy and Stanford Carr



Erika and Toshi Mori



Gerry Majkut, Karen Berry, Cedric Ota



Alexis Tansey, Mark Lennox, Meesa Otani, Sam Tansey

PHOTOS BY HAWKINS BIGGINS FACES



Ralph Valentino, Scott Coulter, Pat Gill, Bruce Place, Debbie Kim-Ito, Andrea Benitez, Akira Usami, Nathan Kabei, Tim Waite,

HSA Gala Aboard 'Mighty Mo'

Nearly 100 members of the Hawaii Steel Alliance gathered at the **Battleship Missouri Memorial in** early May to celebrate the HSA's 20th anniversary and to install officers and directors for 2017-18. Story, page 74.



Tom Porter



Tim Waite, Mardie Torres



Ralph Valentino, Gail Lincoln, Wayne Lincoln



Noel Santos, Lito Alcantra, Mel Lorenzo, Andrea Benitez, Debbie Kim-Ito, Angelica Hermano, Artjay Mercado, Roy Balantac, Amado Sanchez

Time for a Quarterly Report Card

Is Your Company Effective in All Areas?

BY GARRETT J. SULLIVAN

As the school year comes to a close, many students and their parents anxiously await their report cards. For many students, this report card can be significant, as it could mean the difference between obtaining financial aid and being accepted at a preferred school. Hopefully, the student has been focused, worked hard and arose to the challenges presented during the school year.

There are many ways in which a student report card can be compared

to how well a construction company owner runs their business when viewed from a distance. A successful contractor would indicate the owner has been successful in creating a standalone business and is always diligent in all areas of running a business.

A stand-alone business can be defined as one whereby the owner does not need to be present at all times in order for it to be successful. A question to ask is: "How long can you go away from your business and return to find it running exactly the way you want it to be managed?"

If you are uncomfortable to leave for at least three weeks, the following questions are designed to provide you with a self-assessment for improvement. Each question is rated from one to five, with one being the lowest and five being the highest.

Take time to honestly answer the following twenty questions and grade yourself as a way of measuring your progress toward developing a standalone business.

Contractor Report Card Test

- 1. Do you have a comprehensive, clearly written vision of where you see your company one, three and five years from now?
- 2. Do you have a set of written core values defining the way in which you live your life and manage your business?
- 3. Do you have a written 2017 year business plan, and does it contain a strategic planning section?
- 4. Does your company have an annual budget which is reviewed monthly with year-to-date versus budgeted amount section and reviewed monthly with your senior management team?
- 5. Are financial statements along with a work-in-progress analysis prepared and reviewed on a monthly basis to look for warning signs with your accounting team?
- 6. Does your company consistently benchmark and strive to be a Best-in-Class Contractor and implement the necessary changes to drive improved financial and operational performance?
- 7. Are financial ratios updated on a monthly basis to spot trends as they tell the story of how the company is performing?
- 8. If asked, does the Senior Management Team know the company's days in accounts receivable off the top of their head and consistently seek ways to improve it?
- 9. Do you have a scorecard which lists both financial and operational key performing indicators (KPIs) and which is reviewed monthly?
- 10. Does every area of the company have easy-to-understand written systems and procedures along with appropriate employee policies?

- 11. Do all employees have a written job description?
- 12. Do all employees regularly receive written evaluations at least quarterly?
- 13. Do you allow any employees "with attitude" to continue working for the firm, which speaks to your leadership or lack thereof?
- 14. Are you aware of and are paying at least the current industry salary and benefit package for all of the various positions within your company?
- 15. Do all employees have an individual development plan to internally support the development of talent for the next generation of leaders?
- 16. Do you have a fair-to-all, written bonus plan which is easy to understand and known by everyone?
- 17. Do you share job costs freely, as well as company financials, so everyone knows the score of the company's game of business?
- 18. Is the estimating library consistently updated to track current labor production and material costs?
- 19. Do you strive to keep a zero balance on the bank line of credit and seek to increase the line each year?
- 20. Do you have a rainy day fund to help you through a tough economic downturn?

Tally your score. If it is 90 to 100 points, you are well on your way and can start planning your next vacation. If it is 80 points or higher, you can move up to the Dean's List with just a little more effort before the year ends. If your score is below 80, you need to sit down and reassess your company and plan to make some upgrades.

Garrett Sullivan is president of Sullivan & Associate, Inc., a management consultancy which focuses on the construction industry and is tailored toward leaders who want a reliable, trustworthy partner to help increase profits, streamline operations, and influence employees to treat the company like their own. Reach him at GSullivan@SullivanHi.com or 478-2564.

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