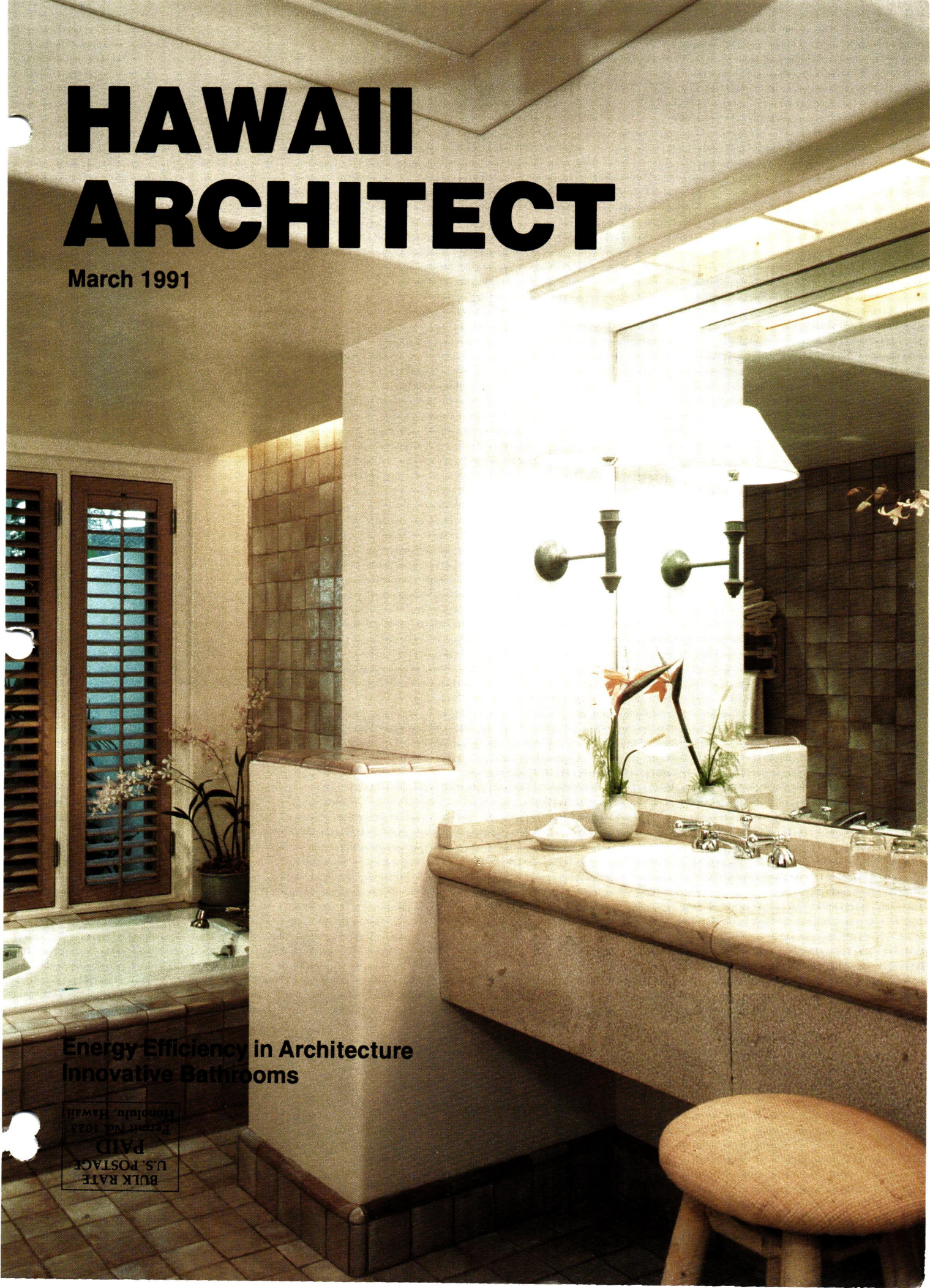
HAWAII ARCHITECT

March 1991



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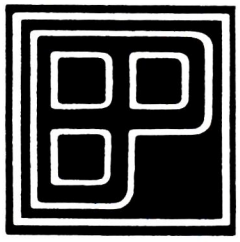

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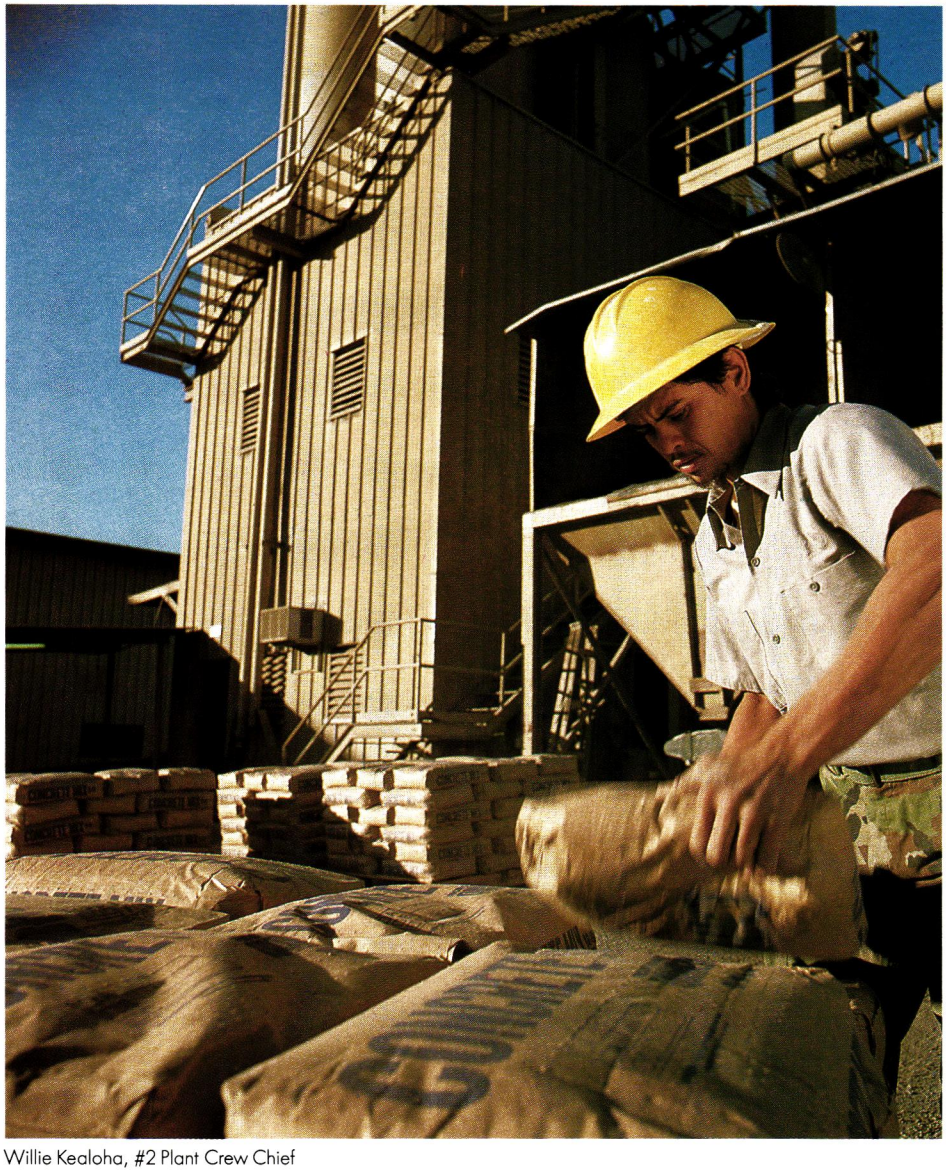

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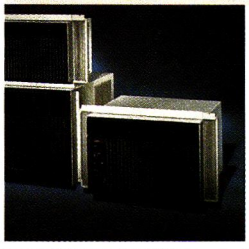

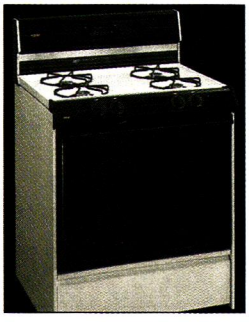

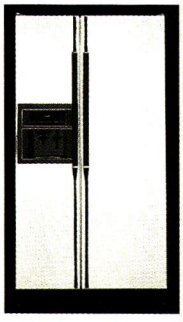

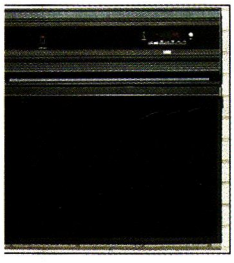

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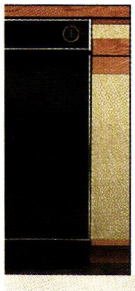

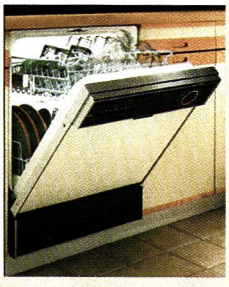

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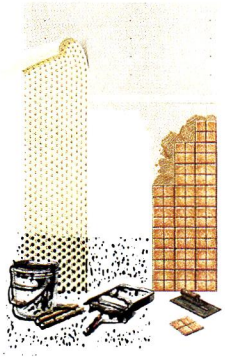

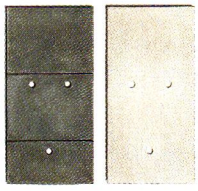

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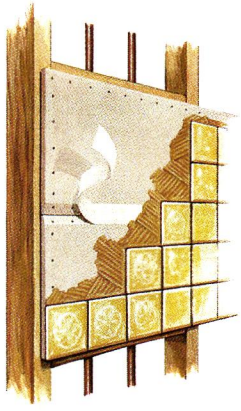

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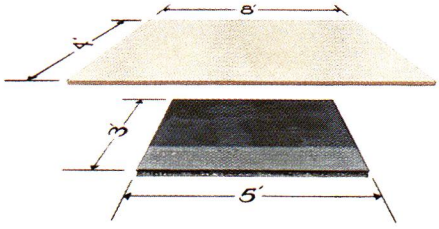

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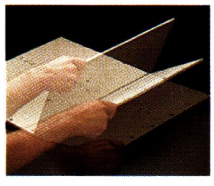

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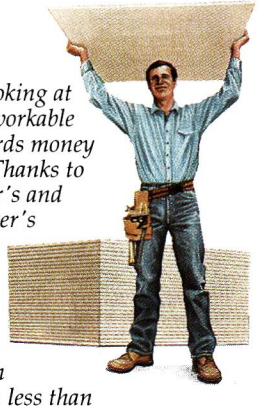

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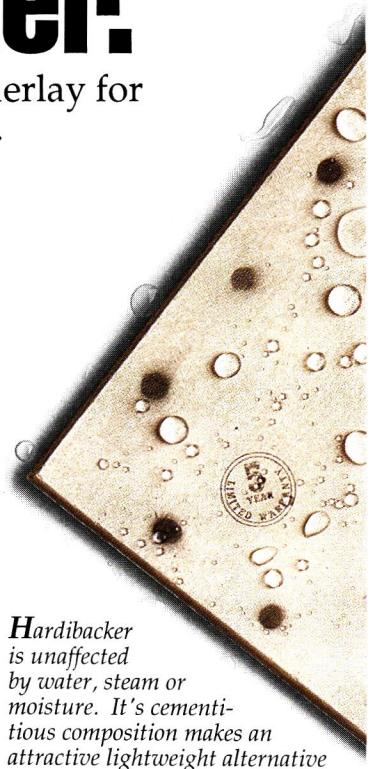

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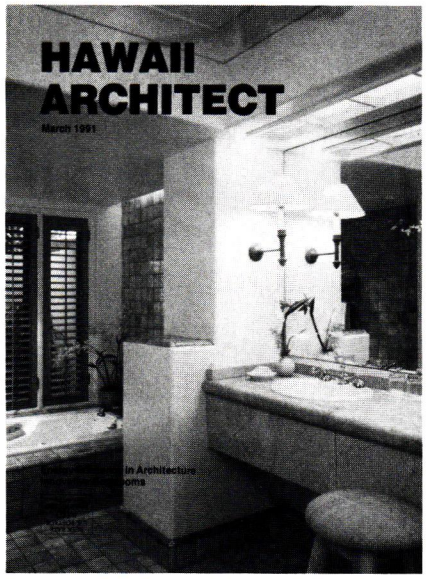

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Maui Chapter: The New Beginning

by Barry A. Rand, AIA
President, Maui Chapter AIA

Our first year as a Chapter found our membership deeply committed to the involvement in Maui community affairs. Targeting the problems of rapid island growth, members testified at public hearings, served on county committees and worked with community leaders and government officials to find solutions to a deficient and overburdened infrastructural system and the ever-present need for affordable housing. In a tumultuous election year, we invited candidates to meet with our Chapter and address environmental concerns.

In our second year, we will continue our commitment to the community in government activities and with the youth of Maui. Our membership will be involved in local government offices through membership in committees with planning, building and cultural resource concerns. We shall conduct student tours of architectural offices, stage the popular bridge building and sandcastle contests, and, through money raised at our annual golf tournament, provide two scholarships to deserving architectural career-oriented Maui students.

This year, however, we will focus more of our attention toward public awareness and professional practice areas. We intend to program three or four meetings devoted to design in architecture.

Projects that are in design, under construction or already built, will be presented by member firms to engage our Chapter membership in a dialogue concerning project design development through individual project program, conceptual, client approval, construction document and building phases. The purpose of this program is to educate the general membership regarding the process of architectural practice and to stimulate aesthetic attention and debate.

We will focus more of our attention toward public awareness and professional practice areas.

These programs will serve as a catalyst for our goal to hold the first Maui Chapter Design Awards program. We have formed a committee to formulate a timetable, format, entry regulations and jury selection so this can be accomplished in the fall of this year.

1991 will be a challenging year for our members. We have grown rapidly in membership as Maui has grown. We have produced many projects in response to the robust economic growth. It is appropriate that we pause to consider the quality of our work and look at what contribution we have made to the aesthetic of the built environment of Maui. **HA**

Geothermal Energy Gathers Steam

by Chuck Ehrhorn, AIA

Despite heated debates on geothermal energy throughout Hawaii in the 1980s, geothermal energy development on the Big Island is picking up steam in the 1990s. A joint survey conducted last September by the *Honolulu Star-Bulletin* and KGMB-TV showed that geothermal development was favored by 70 percent of residents polled, an increase from 56 percent in July.

Fueled by volatile conditions in the Middle East and increasing concerns about the environment, the quest for energy alternatives such as geothermal is reaching a new level of urgency not only in Hawaii but throughout the world.

One of nature's gifts to Hawaii, geothermal is a renewable, reliable and clean energy alternative to the burning of oil and coal.

Geothermal technology was developed in Italy about 80 years ago when scientists discovered energy could be produced by tapping underground reservoirs of water heated by magma. Over the years, technology has evolved and improved. Today, over 250 geothermal facilities are operating in 21 countries, including Italy, the Philippines, Japan, Mexico and the United States.

Several methods are used today to convert geothermal energy to electricity. In a "dry steam" source, where there is almost all steam and no water, steam is directed to a power-generating turbine.

In a "flash steam" power facility, hot water is brought to the surface by pipes and fed into a separator. The separator draws steam from the hot water and directs the water or brine back into the ground through an injector well. The steam goes to a power-generating turbine and is condensed during a cooling process and then reinjected. Non-condensable gases, such as hydrogen sulfide, can be scrubbed out during the cooling process or reinjected into the ground.

Energy also can be produced by using a closed binary system, which is the type being used by one, and possibly both, of the geothermal developers on the Big Island. In such a system, hot water is pumped from geothermal reservoirs through a heat exchanger. The water heats another fluid, commonly isobutane, which turns a power-generating turbine. The water is directed back into the ground.

A geothermal reservoir can be used to produce electrical energy in large quantities. The resource below the Kilauea East Rift on the Big Island has been studied for the past 15 years, and scientists have estimated that it holds the equivalent of 1,400 megawatts of electricity. In comparison, Hawaiian Electric Company's total production capacity on Oahu is about 1,270 megawatts.

The state government has been vigorous in its search for alternate energy sources such as geothermal since the early 1970s, when oil and energy shortages had a profound impact on life in the Islands. After experiencing long gas lines and watching energy costs soar, Hawaii became acutely aware of the importance of developing renewable energy sources and of the dangers of relying on fossil fuel.

> One of nature's gifts to Hawaii, geothermal is a renewable, reliable and clean energy alternative.

Today, Hawaii is a leader in developing and utilizing alternative energy sources — the wind, sun, sea and heat from the Earth, all abundant resources in Hawaii. After decades of research and experimentation, geothermal energy was determined to be the most technically and economically feasible source of alternative energy to pursue in Hawaii on a large scale basis.

Last summer, Sen. Daniel Inouye told members of the Senate he was convinced that the development of geothermal energy is the best means of meeting Hawaii's energy demands.

Tests conducted thus far on the proposed undersea cable that

would link the Big Island resource to Maui and Oahu have shown the technology is feasible. However, the current goal of geothermal developers is to provide the Big Island with electricity. Eventually, we may see electricity created by the Big Island's geothermal wells transported to other islands.

To meet its electricity needs, Hawaii currently imports about three million barrels of residual oil annually to supplement the nine million barrels of residual oil from Hawaii's two refineries. Residual oil is the by-product of refining gasoline and jet fuel from crude oil.

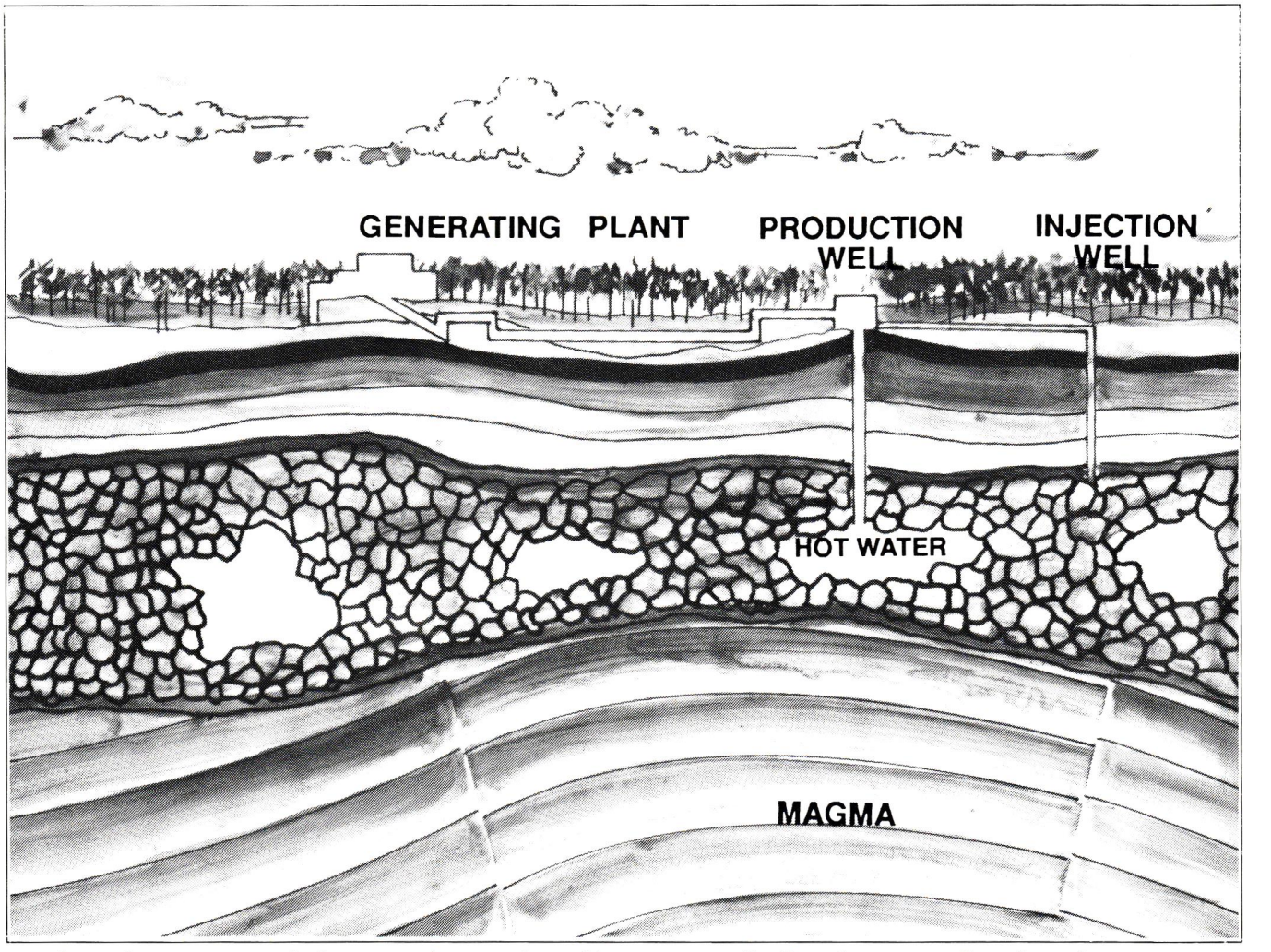
Local electric utilities have predicted that a growing population will require the state to import additional residual oil in the future, unless energy alternatives are developed here. The utilities say that if the residual oil output of Hawaii's refineries remains constant at nine million barrels per year and other energy alternatives are not sought, Hawaii will need to import about seven million barrels annually by the year 2000 and about 11 million barrels by 2010.

The 25-megawatt geothermal facility in Pohoiki developed by Puna Geothermal Venture, which is owned by Ormat Energy Systems and a subsidiary of Baltimore Gas & Electric, is expected to be on line this year and will cut imported oil by an estimated 450,000 barrels (or 18,000 barrels per megawatt) per year. A 100-megawatt project, a joint venture by True Geothermal Energy Company and Mid-Pacific Geothermal Company, continues to be developed on land owned by the Estate of James Campbell in the Kilauea East Rift Zone.

Development of energy alternatives such as geothermal is crucial if Hawaii is to reduce its 90 percent dependency on imported fuels. There are those who say conservation is the key, but conservation alone is not going to adequately offset the energy requirements of our growing state.

The people of Hawaii have been admirable in putting the state at the forefront of energy conservation in this country. Hawaii leads the nation in the use of energy-efficient lighting, appliances and solar heaters.

However, even with the best conservation plan, the energy



Geothermal steam is created when groundwater is heated by magma. Wells allow the steam to flow through pipes to power plants.

demands of our growing population will continue to make it necessary to develop geothermal energy and other energy alternatives. "Homegrown" energy alternatives such as geothermal will keep Hawaii's future bright by diminishing the need to import foreign oil and giving local control over energy supplies.

So what makes geothermal such a logical choice over other energy alternatives like solar and wind? Reliability. Even here in paradise, the sun doesn't always shine and tradewinds sometimes cease to blow.

Ocean thermal energy conversion is another alternative that may prove to be feasible in years to come, but it is a relatively new technology that has yet to be tested as far as reliability, environmental impacts and cost effectiveness. In contrast, geothermal is a proven source of energy that is available to us today.

Geothermal also offers an opportunity to combat global warming. By replacing oil and coal-fired power generation with geothermal energy, we can reduce the release of carbon dioxide in the Earth's atmosphere. Based on data from The World Resources Institute, replacing oil-generated energy with 500 megawatts of geothermal power could have the same positive impact on global warming as planting nearly a half-million acres of trees.

Despite the many pluses geothermal energy has to offer, some doubts have been raised by opponents to geothermal development on the Big Island. Hydrogen sulfide emissions, which caused problems at the state's experimental HGP-A well in Pohoiki, have been a concern of residents living close to geothermal sites.

However, current technology, which will be used at the planned commercial facilities, has far

surpassed the older technology used at the HGP-A well. After visiting geothermal facilities on the mainland, local legislators, union representatives and business leaders returned with more confidence in the industry because of current technology.

In addition to using state-of-the-art equipment and techniques, the state has asked a team of geothermal experts from Italy to act as consultants on Big Island geothermal development, an action that is endorsed by Speaker of the House Daniel Kihano.

By using the oldest company and most experienced personnel in the field of geothermal development as consultants, Kihano has said the state hopes to satisfy people's concerns that geothermal energy development can be done safely, and in a way that protects our environment.

Can it be done? A look back at the controversies that surrounded projects such as the first observatory atop Mauna Kea may be indicative of what lies ahead. When first proposed in 1967, people challenged the project and the impact its existence might have on the delicate balance of the mountaintop environment.

Today the observatory stands as one of the premier working environments for scientists from around the world, proving harmony can be achieved between man, technology, nature and even countries of different political beliefs.

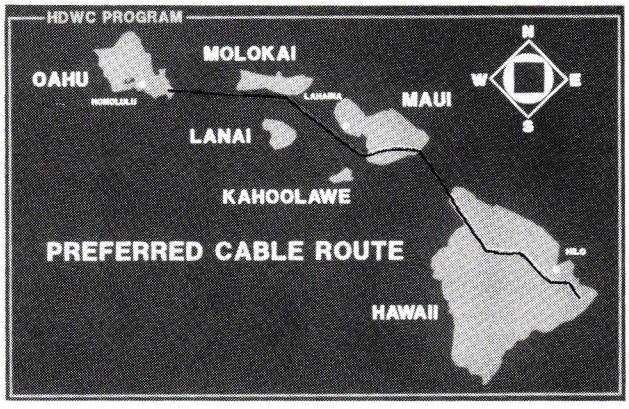
Now, with geothermal development, the Big Island can again prove how advanced technology can help man in a way that is compatible, indeed beneficial, to the environment. **HA**

Chuck Ehrhorn is the planning coordinator for the Estate of James Campbell and is responsible for its land planning. He is a past officer and board member of the Hawaii Society/ American Institute of Architects.

Transporting Energy Under the Sea

Hawaii's Deep Water Cable Program

By the end of the 1970s, imported oil accounted for over 90 percent of Hawaii's energy consumption. It was obvious alternate energy sources were needed. Solar, wind, biomass, ocean thermal, hydroelectric and geothermal all seemed to be viable energy alternatives. Geothermal exploration began in Hawaii near Kilauea's lower east rift zone.



The preferred cable route of the HDWC Program was determined after extensive studies.

The problem with the geothermal option immediately became apparent — there would need to be a way to transport the energy created by the geothermal resources to Oahu, which consumes 82 percent of the state's electricity.

It was concluded that this electrical connection could be accomplished only by way of a submarine cable crossing the Alenuihaha Channel between Hawaii and Maui, where the environmental conditions are extremely severe. Hence, the Hawaii Deep Water Cable (HDWC) Program was created. The goal of this research program was simply to determine the technical feasibility of deploying and operating, over a service life of 30 years, a submarine power transmission cable between Kohala on the island of Hawaii and the Makapuu area of Oahu.

The program began by asking a simple question: How do we determine if the submarine cable is feasible? The HDWC Program set out to determine which of 251 possible designs which appeared capable of meeting the cable subsystem feasibility criteria would meet the initial project criteria, that is, to operate for at least 30 years and be laid successfully considering the existing environmental conditions.

Computer analysis concluded that 192 designs did meet these criteria. It was further concluded that conventional cable technology would suffice for a deep water installation and that regardless of cable type, aluminum conductor designs could provide the necessary mechanical strength but copper could not.

Finally, the "best" design was selected and a cable sample was constructed for testing. Six individual tests were designed to do three things:

- measure the cable's performance under individual worst-case stress conditions,
- determine selected as-built mechanical characteristics needed in the design of sequence tests, and
- establish minimum safety factors.

An additional six sequence tests were performed to observe the cable's response to the cumulative effects of installation and operation for 30 years under extreme fatigue conditions.

The conclusions from these tests were:

1) The cable meets industry-recommended electrical and mechanical guidelines for a submarine cable.

2) Additional mechanical tests that reflect the special conditions of the HDWC Program were conducted and the cable passed all the tests.

3) Electrical strength of the cable and joint after a simulated service life of 30 years exceeds the acceptance requirements for a new cable for commercial interisland electrical transmission.

4) There is no evidence that 30 years' simulated service degraded electrical performance of the cable.

The final phase of the program was the at-sea test of the cable

and the subsystem testing, design and procurement directly related to its accomplishment. The at-sea test first required a route selection. A number of preliminary studies indicated a preferred route, although this route would not necessarily be used in a commercial application. However, based on the information available, it appeared to be the least intrusive means of transmitting electricity to Oahu. Before the cable was actually laid, extensive environmental data was collected for over a year, including wind measurements, wave measurements, currents in the channel including tidal, wind-driven, eddy and oceanic.

The objective of the at-sea test was to determine if the combined cable laying systems (vessel, control and cable handling equipment) are capable of installing the cable along the selected route with the required accuracy of placement. In planning for the at-sea test it was soon discovered that no existing cable laying ship could lay the prototype cable in the deepest part of the Alenuihaha Channel. Because the channel is almost 2,000 meters deep, the cable was too heavy for existing pitfitted vessels due to the armor needed to support its weight. Several options were studied which would meet the objective of the program. That which was chosen used a surrogate cable with hydrodynamic characteristics (weight/drag) equal to the prototype commercial power cable, a unique cable laying control system and an existing cable vessel with cable handling equipment. It was shown during the study of the at-sea test options that if the surrogate had the correct ratio of weight to drag that the cable laying system would have as difficult a time laying the surrogate cable as it would laying the prototype cable. The two cables would have the same shape in the water and the only difference would be that the tensile loads from the surrogate would be less than those generated by the prototype.

The test areas would encompass the most challenging portions of the intended submarine route. The test would determine whether the cable could be placed with the accuracy required by cable design and bathymetric considerations, and the degree to which the amount of residual tension on the cable could be controlled.

After preliminary subsystem tests, the at-sea test was performed. The surrogate cable was laid and recovered three times. It was confirmed that the surrogate cable was properly laid in the most difficult areas of the channel and that a power cable could be properly laid across this channel using the methods developed for and demonstrated in this test. Placement accuracy of the cable far exceeded requirements and tensioning of the in-place cable met the at-sea test criteria. Several recommendations were reported as a result of the at-sea test about placement of the cable, the route and possible improvements to equipment and software to reduce costs and complexity.

The HDWC Program has succeeded in determining the technical feasibility of deploying a submarine power cable system between the islands of Hawaii and Oahu. Major accomplishments of the program include designing, fabricating and testing an appropriate power cable, developing an integrated system to control all aspects of the cable laying operation and testing all deployment systems at sea in the most challenging sections of the route. **HA**

Harvesting the Sun's Energy

by Ron Richmond

The Hawaii Solar Energy Association (HSEA) is a non-profit organization dedicated to the implementation of solar energy systems to increase energy self-sufficiency and enhance the environment for the benefit of people in Hawaii.

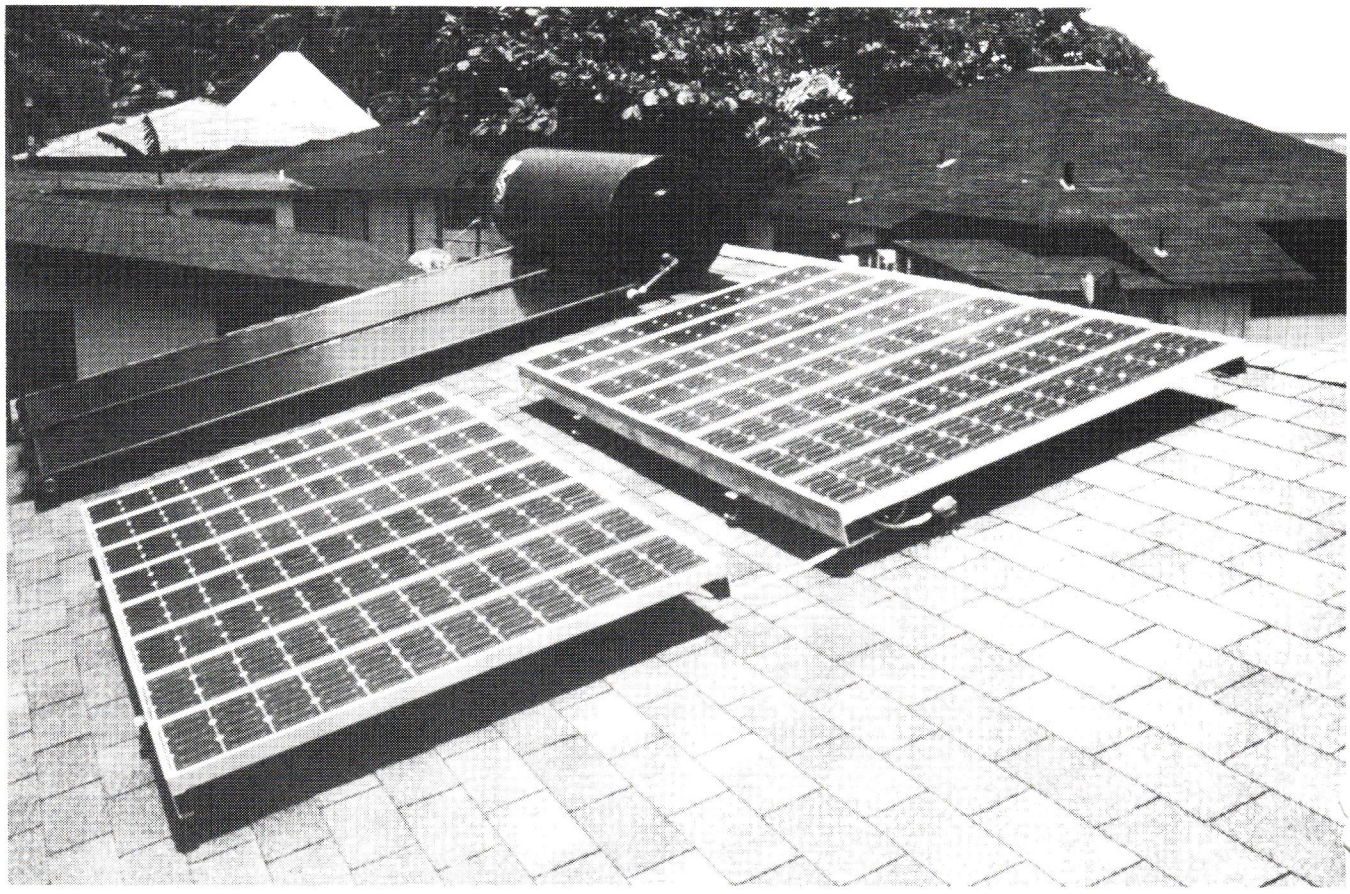
The need for solar system implementation has never been greater. After the oil embargos of the 1970s and a current war in one of the world's major oil producing regions, Hawaii is still more than 90 percent dependent on fossil fuels for its energy.

The framework for accelerating implementation of solar systems is in place. Last legislative session, the state government expanded the tax credit for solar systems and other fossil fuel displacing technologies to 35 percent and extended the credit through the end of this decade.

HSEA goals and objectives for 1991 are:

- To actively promote the use of solar energy technologies, including solar domestic water heating, solar pool, spa and hot tub heating, and solar photovoltaics;
- To increase public awareness about the benefits, including the state tax credits, of solar energy technologies; and
- To double the number of solar water heating system installations from the 1988 level of just over 300.

Founded in 1978, HSEA, in conjunction with the state Department of Business, Economic Development and

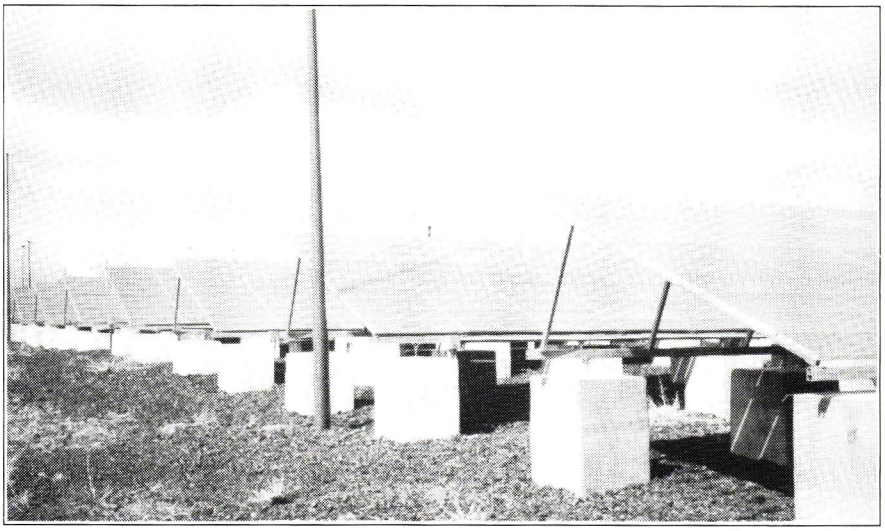


RON RICHMOND PHOTO

A retrofit system on a private residence in Punaluu, incorporates a solar system for water heating and a photovoltaic power system for lights and receptacles.

Tourism, provides, as a public service, a solar hot line (Ph. 521-9085).

The purpose of the solar hot line is to provide callers with information, referrals and technical assistance relating to solar systems. Inquiries range from requests for general information on solar, requests for names of reputable contractors to install new systems and to service existing systems, to questions about specific products, system sizing and system operation and maintenance. This public service is available to all building professionals, including architects.



BOB FREITAS PHOTO

A 20 kilowatt utility scale solar photovoltaic power system converts sunlight into electricity which is fed directly to a utility grid for use elsewhere.

The role of the architect is pivotal in increasing Hawaii's energy self-sufficiency. By incorporating solar systems, along with energy conservation and energy efficiency measures as standard amenities with projects, architects can make a great contribution to Hawaii's energy security. Making solar a design criteria can save on overall system costs.

HSEA and its members stand ready to assist the architectural community with the nuts and bolts of solar technology. The creative challenge to the architect is to do so in an aesthetically pleasing way. But isn't that what makes architecture interesting and exciting? **HA**

Ron Richmond is the executive secretary for the Hawaii Solar Energy Association.

Owner-developers Cluster 'Energy Houses'

by Cliff Terry, AIA

The Waiomao Stream Cluster represents a unique effort at creating an affordable, energy-efficient urban community in Honolulu. The 11-unit single-family project is a testament to the vision of its original architect and to the principle of moderate cost, appropriate housing for the state.

The catalyst for the project was the Hawaiian Energy House, a demonstration project designed by the late Jim Pearson, AIA. Jim designed the house as a model for comfortable, island-style architecture which responded to the local climate and was as energy-efficient as possible. The project was a public success and resulted in the construction of over 50 similar houses state-wide.

In 1978, Jim and I were approached by a friend with an idea for a moderate cost, owner-developed housing project. He had located a seven-acre parcel of land in the back of Palolo Valley, two acres of which were zoned R-5 and five P-1. His concept was to pull together a group of owner-investors who would finance the construction of the project jointly and build their own "energy houses" in the cluster.

Largely through word of mouth, a partnership of 11 investors was established, mostly couples for whom these houses would be their first. Probably the most common factor among us was that our budgets were extremely limited, which entered into the design and planning process on many occasions.

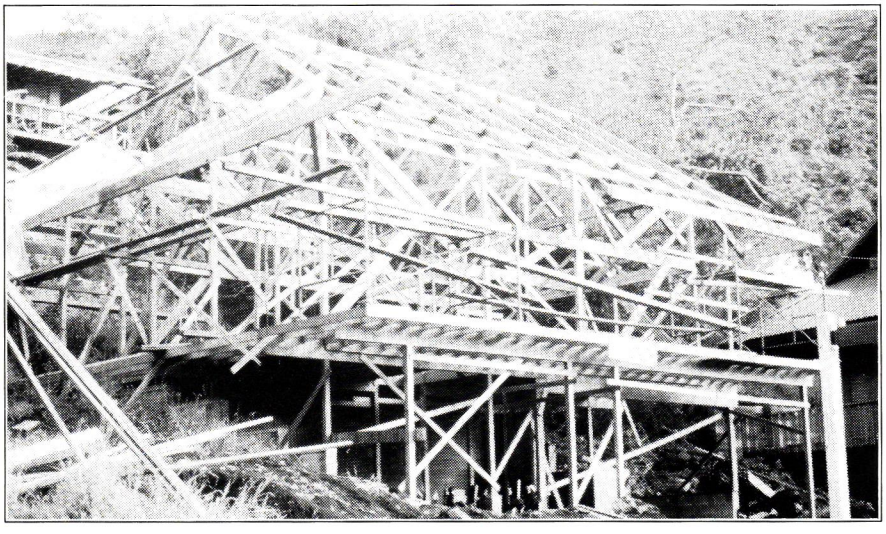
Implicit in the design of the cluster was that each house would be a model of energy efficiency and appropriateness to the micro-climate of the rainy back end of Palolo. These design principles helped persuade the City Council to approve the cluster late in 1978.

At that point, the need for financing became apparent. Most of the lenders we approached balked at the idea of lending a half-million dollars to bunch of amateur developer/homebuilders. Fortunately, a sensitive and courageous lender was persuaded to take the risk, and each of the 22 or so of us signed individually (and ludicrously) for the entire loan amount.

During clearing and grading of the jungle-like site and construction of the road and utility infrastructure, design of the individual houses was done. The Energy House plan was modified to suit each individual house lot while respecting the original design principles of solar shading and natural ventilation. Because of the sloping terrain, two models were developed to fit uphill and downhill lots.

The post-and-beam design of the Energy House enabled the units to be enlarged in several directions under the wide overhangs while respecting the simple basic frame structure.

Perhaps the one factor which brought the investment hui together as a community was the fact that most of us had to build much, if not all, of our houses ourselves in order to afford them. For six months in early 1980, the site was filled with both contractors building parts of the houses and owner-builders completing them. The loaning of tools, the exchanging of newly acquired construction knowledge and the sharing of materials characterized the entire construction period until we all



CLIFF TERRY PHOTO

The post-and-beam design of the energy houses enabled the units to be enlarged while respecting the simple frame structures.

moved into our new homes in June and July of 1980. Some of the homes (the author's in particular) resembled little more than plywood boxes on the inside, and remained under construction for many more years.

Another factor which increased the sense of community was the periodic work parties by which we built the site improvements required by the cluster ordinance and the project's design. Many Saturday mornings would bring one representative from each household to the street with tools in hand and work boots on, ready to build the trash enclosure, erect the kids' play structure in the park, lay the grassblocks in the off-street parking pads, restore the streamfront taro patch walls or improve the landscaping. While the necessary improvements have long been completed, ongoing maintenance still requires the occasional call for communal effort.

The Waiomao Stream Cluster has matured into a stable, safe and comfortable community. Eight of the 11 homes are still owned by the original investors. Growing families and higher incomes have allowed the construction of additions and the remodeling of some original budget-oriented features of the houses. Due to the use of solar hot water, low-flush toilets, gas appliances and similar features, and due to the rainy climate which reduces the need for irrigation, the community offers an energy-efficient, low cost home for those of us fortunate to live there. It also stands as an example of what can be done by a group of people to provide housing for themselves by communal effort who otherwise could not have afforded to become homeowners. **HA**

Cliff Terry is co-author of "Hawaiian Design Strategies for Energy Efficient Architecture."

'Outrageous' Open Baths Please Guests

by Lorrie C. Dalton

The designers at Media Five Limited first experimented in the 1980s with an open bath concept for hotel guestrooms. While we considered it somewhat daring, our clients at the time viewed it as outrageous.

Hotel owners and operators noted that more sophisticated travelers and stressed executives were enjoying longer soaks in the tub. Their response was to expand the space provided for the bath area.

Our idea went one step further. To promote a luxurious feeling in the bath, we opened and integrated it with the entire guestroom. We felt that this open bath concept — where a sliding door or wall opens the space to the guestroom — would be especially appealing when it allowed visitors to enjoy private views of the outdoors while soaking in the tub.

The first project which integrated the bath with the guestroom was in the design of the Regent Okinawa, now known as Palace on the Hill, in Naha, Okinawa, Japan. While our client was skeptical at first, the concept proved to be a wildly popular feature with guests, creating a real demand for the junior suites. Since then, our clients frequently ask for the open bath feature to be incorporated into their hospitality design. We've adapted the concept for guestrooms at the Dai-ichi Hotel Tokyo Bay, the Hyatt Regency Guam and for junior suites at the Manhattan Hotel in Makuhari, Japan.

DAVID FRANZEN PHOTO

Some baths at the Hyatt Regency Guam are open to the guestrooms, providing a private view from the tub.

The open bath has to fit the overall architectural and interior design in order to be appropriate.

The open bath has to fit the overall architectural and interior design in order to be appropriate. In addition, the specified opening between bath and bedroom area changes depending on the theme and materials selected for the guestroom as a whole. For example, at the Hotel Hana-Maui, the cottage baths open to a private garden. A wooden louver was selected to separate the bath from the garden, in keeping with the natural materials used for the rest of the cottage.

Due to the tropical theme, a slatted sliding door was used for the Hyatt Regency Guam guestrooms. In contrast, we chose an etched glass panel to separate the bath from the bedroom for the Manhattan Hotel, which features a 1930s theme.

In all cases, Media Five's designers have been sensitive to the privacy issue. All our open bath designs have given visitors the more conventional option of separating the bath from the remainder of the guestroom. Other design features which enhance a feeling of privacy include a separate toilet area and shower stall.

Whether you enjoy your bath in the confines of four walls or with sunlight and a view, the option is available through the open bath concept. We feel it is a design trend which will continue well into the 1990s. **HA**

Lorrie C. Dalton is a senior vice president and interior design department manager at Media Five Limited.

RON STARR PHOTO

Slatted doors at the Hyatt Regency Guam separate bath from bedroom.

Bye Bye to the Blah Bath

by Tim Anderson

The days of the blah bath are behind us. Or at least they should be. With all the exciting new products on the market, there's simply no excuse for mundane designs.

There are valves with memories, mirrors that won't mist, anti-aging shower treatments and things to bring you water that put a sparkle in your eye and a spark in your imagination. From soothing aesthetics and arresting illusions to hi-tech functionalism, there have never been more innovative products to inspire the designer.

Let's start with the valve that remembers. A company called Memry Plumbing Products (get it?) has developed what they call the UltraValve™. And it is ultra. The control panel with digital readout is located wherever you desire on the interior wall of the shower. You reach in and press it on and let it do its first trick: adjusting the temperature of the water to 98° Fahrenheit with its integrated micro-processor. Then you step in the shower and push an up or down arrow until the temperature is exactly where you want. As a safety feature, it will shut the water supply off if you inadvertently set the temperature above 112° Fahrenheit. The control panel has several finish options and you don't have to be as smart as it is to do the installation.

Other manufacturers offer thermostatic controls through alternative technological approaches. Hansa, in Germany, maintains a pre-selected temperature with a patented wax element in their HANSAMAT system. A streamlined design with sensitive heat conducting surfaces allow quick reaction and precision temperature leveling.

But before we leave the shower, let's get steamy. The truth is, it's good for you. A steambath (and virtually any shower can become one) can help you reverse the aging process that has been accelerated by the change in our ozone layer. Some systems even let you add therapeutic herbs to the mist. With or without herbs, the health benefits of a steambath are well documented.

And yes, even steam has become hi-tech. The Steamist Company in New Jersey, now offers a control package that takes all the guesswork out of setting time and temperature. You set the time selected for your steambath on a digital panel outside the shower/steambath. Inside, a control panel digitally displays the temperature and provides adjustment and on/off swithches. Again, modification of any shower to become a steambath is relatively simple. Today's sophisticated steam generators are small (about the size of a 24-can case of soda pop) and can be hidden from view anywhere within 25 feet of the shower enclosure.

Of course when you step out of the steambath your big concern

becomes fogged-over mirrors. Now that you look clean, healthy and fit you want to see that youthful glow. So you open your Mirror Plus™ cabinet with its electrical option. Created by Robern in Pennsylvania, this ingenious option has a built-in de-misting system which maintains a clear vision area of about two square feet. It also provides a convenient outlet shelf for rechargeable personal appliances like shavers or toothbrushes.

Of course, the technological advances are not limited to electronic things. Some ceramic quarter-turn valves now feature ceramic "fingers" which actually reduce the sound of the flow of water through the faucet. Indeed, all you hear is the water as it hits the surface of the tub or lavset.

Obviously, the most exciting aspects of the new water delivery systems are the designs. And while there is always a myriad of rip-offs between the leading style-oriented companies, creative credit becomes secondary as long as flair is there and the valves and finish are of superior quality.

Your design options increase exponentially with exposure to the latest products. And the better suppliers will help you take your own creative concept beyond what's in the showroom, the brochure or the catalog. Make them work for you. Products should inspire you, not limit you. In the end, they're the tangible and enduring expressions of your ideas.

The few companies and specific products used here as illustrations represent a vast selection of constantly changing sources for intelligent design, quality production and superior service. The industry is exciting and vital. And I'm sure they all would invite you to join in a rousing chorus of "Bye Bye to the Blah Bath!" **HA**

Tim Anderson is the executive vice president for Details International, Inc.

Japanese Bathing Cleanses Body and Soul

by Alan W. Rowland, AIA

Shintoism dictates "be clean" and for hundreds of years doing so has become a virtual rite among the Japanese people.

So much so that the ritual has spilled over into the areas of nature appreciation, common sense and aesthetic sensibilities.

Common sense comes into play when every subject desires to bathe daily and must share affordable resources of water and energy to heat it. The drill is to become clean by wetting, soaping, scrubbing, shaving and rinsing before immersing oneself in the furo. To enjoy the hot, clear water, the smell of water-heated cypress and a framed garden view are close to a national ideal. Sadly, not every tub is made of cypress nor every bath given a view of nature. But the bathing sequence remains a constant.

However, the benefits of bathing to the Japanese go beyond just becoming clean. If that was the sole requirement, a shower would serve the purpose as well. It is the calming sense of well-being that comes during the subsequent soaking that is esteemed as well as the bonding when done with family and friends.

Although *sento* or public baths are less common today, the requirements of daily bathing by all economic strata mean that those who can't afford the water and energy to heat it, opt for using them. Here the bathing drill is the same except the facilities are shared by others, either known or unknown but usually of the same sex. As the furo water is not changed until the end of the bathing day, the watchword is get there early.

The love of nature by the Japanese is manifested in traditional architecture by allowing natural materials to remain unpainted and, by so doing, enhancing the indoor-outdoor relationship. In recent years, with the shortages of cypress, private furos have reflected the growing Japanese affluence by incorporating materials such as marble and granite. But the vast majority of furos are constructed of fiberglass, stainless steel and ceramic tile including the latter material for floors which slope to drain. Gone are the wood fire-heated cast iron hemisphere tubs called "goyemon-burd," named for the legendary robber who was cooked to execution in one.

The compulsion to be physically and spiritually clean and the national aesthetic sensibility has resulted in a preference to isolate the furo from other bathroom fixtures. Typically, bathing and defecation don't occur in the same space.

That the Japanese are ingrained with pre-rinsing, scrubbing and rinsing before immersion is attested to by the fact that, after a number of disasters, the Kahala Hilton has been converting existing baths at the rate of three per month to a watertight floor sloped to drain. **HA**

The Japanese bathing ritual serves as a bonding process when done with family and friends.

Alan Rowland is a principal in the firm of Ossipoff Snyder and Rowland.

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Affordable Housing Design Contest Opens

The Honolulu Chapter/ American Institute of Architects has taken steps to further affordable rental housing in Hawaii through the sponsorship of the first Affordable Housing Design Competition.

Open to architects statewide, the competition is co-sponsored by the Affordable Housing Coalition, a non-profit group formed to provide affordable rental housing by developing a coalition of landowners who own vacant land and are willing to utilize it for the construction of rental housing units. Landowners who participate receive favorable interest rates and assistance in the design and construction of rentals in exchange for agreeing to maintain rental costs below the market rental pool for a 10-year period.

The competition calls for the design of free-standing dwelling units to be designed for construction in residential neighborhoods. Comprised of six categories, designs should meet the needs of 1) the elderly and/or handicapped, 2) single parents, 3) groups of up to five unrelated adults, 4) large families (five to eight people), 5) small families (three to four people), and 6) duplex residences.

Among other requirements, construction of the designs must be affordable but sound. Projects must fit gracefully into existing residential neighborhoods, and designs should avoid the appearance of cheap or low-quality construction.

Competition participants whose designs are selected for publication in a bound reference volume for the AHC will be given full credit for authorship of designs. Honor and merit recognition will be given in each category and a special recognition will be given for design quality, innovative use of materials, affordable housing construction systems, appropriateness to the needs of a specified group, and in other categories as determined by the judges.

The deadline for entry submissions is Friday, March 15, at 5 p.m. For more information about the competition and entry requirements, contact the HC/AIA office at 545-4242. **HA**

Officers Installed

The Hawaii Chapter of the American Society of Landscape Architects recently installed R. Stan Duncan of PBR Hawaii as president and Chris Brown of Belt Collins & Associates as president-elect. Other elected officers serving on the 1991 ASLA Executive Committee include Randy Fujimoto, past president; Russell Chung, vice president; Michael Miyabara, trustee; Enid Paulk, treasurer; David Kumasaka, secretary; and Allan Schildknecht, member at large.

The ASLA Hawaii Chapter held the Annual Membership & Awards Dinner at the Hawaii Maritime Center in January. Duncan presented ASLA's Malama Aina Award to Beatrice Krauss. The award is given annually by the Hawaii Chapter — ASLA to recognize individuals, agencies or organizations outside the profession of landscape architecture who have supported, promoted or served the profession of landscape architecture or the preservation and enhancement of the Hawaiian landscape. **HA**

Proposed Guidelines Available

Proposed guidelines concerning the 1990 Americans with Disabilities Act have been published and are available at Honolulu Blueprint for $5.22 plus tax or can be borrowed from the Commission on Persons With Disabilities (548-7606).

These proposed guidelines are comprehensive and would be useful to architects or others involved with the design of public accommodations and commercial facilities. **HA**

Energy Seminar at EXPO 91

A special seminar titled "Energy Standards for Glazing in the '90s" will be held during the 21st Annual BIA Building Materials EXPO at the Neal Blaisdell Center. The seminar, coordinated by Ron York, Sr. of Skylights of Hawaii, Inc., will be held March 14 from 9 to 11 a.m. in the Pikake Room.

A panel of professionals will speak at the meeting. Jim Roesing, president and CEO of Super Sky International, Inc. in Wisconsin, is an expert in the field of skylight features. He has served in his present position for the past 23 years. Super Sky is an international manufacturer of extruded-aluminum custom skylights and is represented around the world in 15 countries.

Richard Beall is the consulting principal at Benjamin S. Notkin/Hawaii. He has been responsible for the mechanical engineering design of commercial and institutional facilities, preparation of contract documents, client coordination, project management and establishment of engineering standards. He has over 12 years experience on projects throughout the country.

Scott Rowe is a regional director of sales for Viracon, the world's largest glass fabricator. Viracon specializes in manufacturing high performance coatings, tempered glass, laminated glass, insulated glass, spandrel glass and silk screened, patterned or acid etched glass.

Todd W. Sitrin is a product marketing engineer in the Heat Mirror® marketing group at Southwall Technologies, Inc. Sitrin is the technical liaison to several industry associations and

Continued

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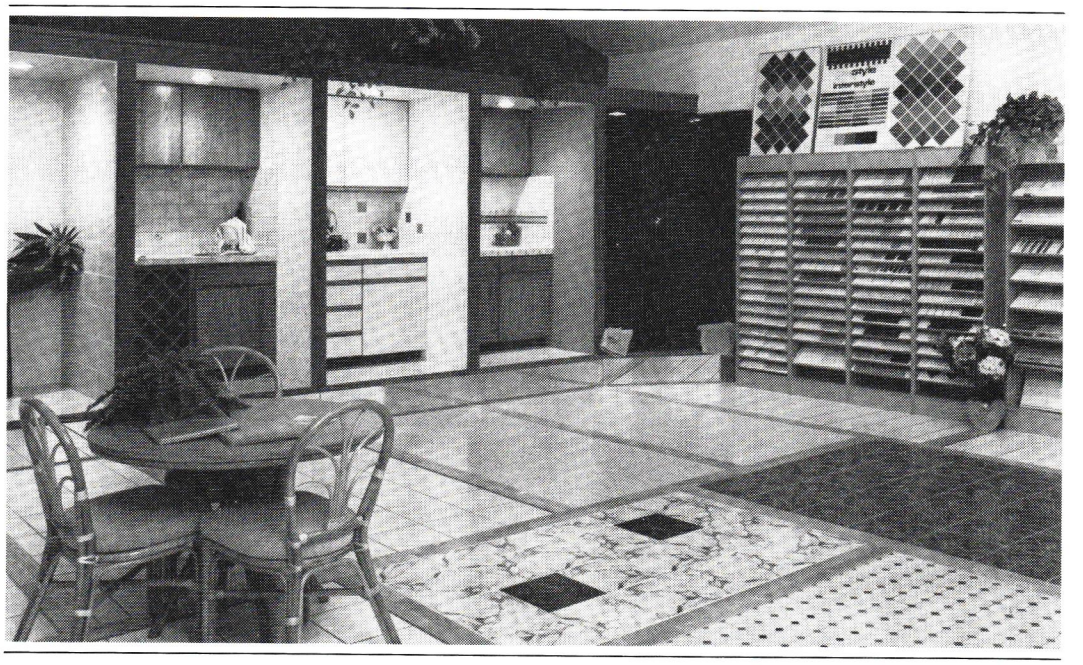

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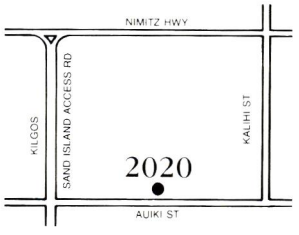

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a member of Southwall's glazing product development team. He holds bachelor's and master's degrees in mechanical engineering from Stanford University. His primary area of study was heat transfer and fluid mechanics.

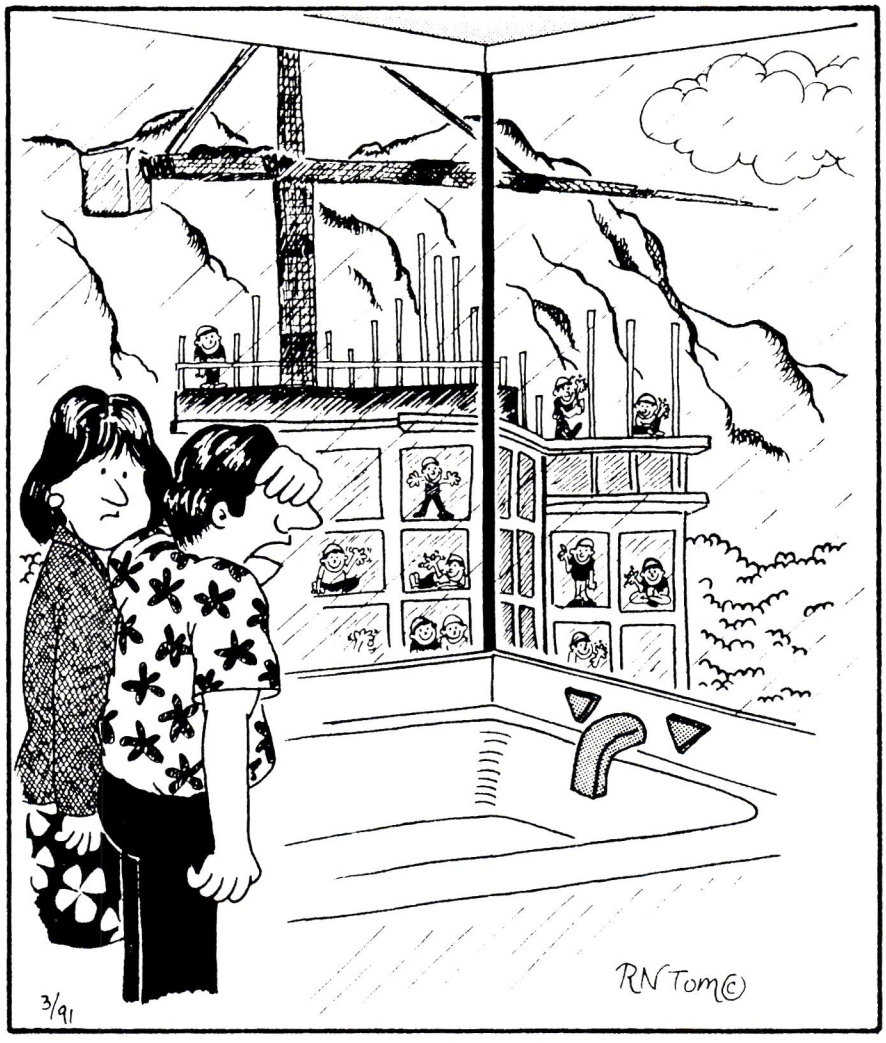
Master of ceremonies for the event will be Kent Royle, AIA, of TRB Architects. Royle has extensive experience in energy efficient architectural design and is the author of "Hawaiian Design Strategies for Energy Efficient Architecture."

Registration for the seminar is limited. Call 847-5500 for more information. **HA**

Correction

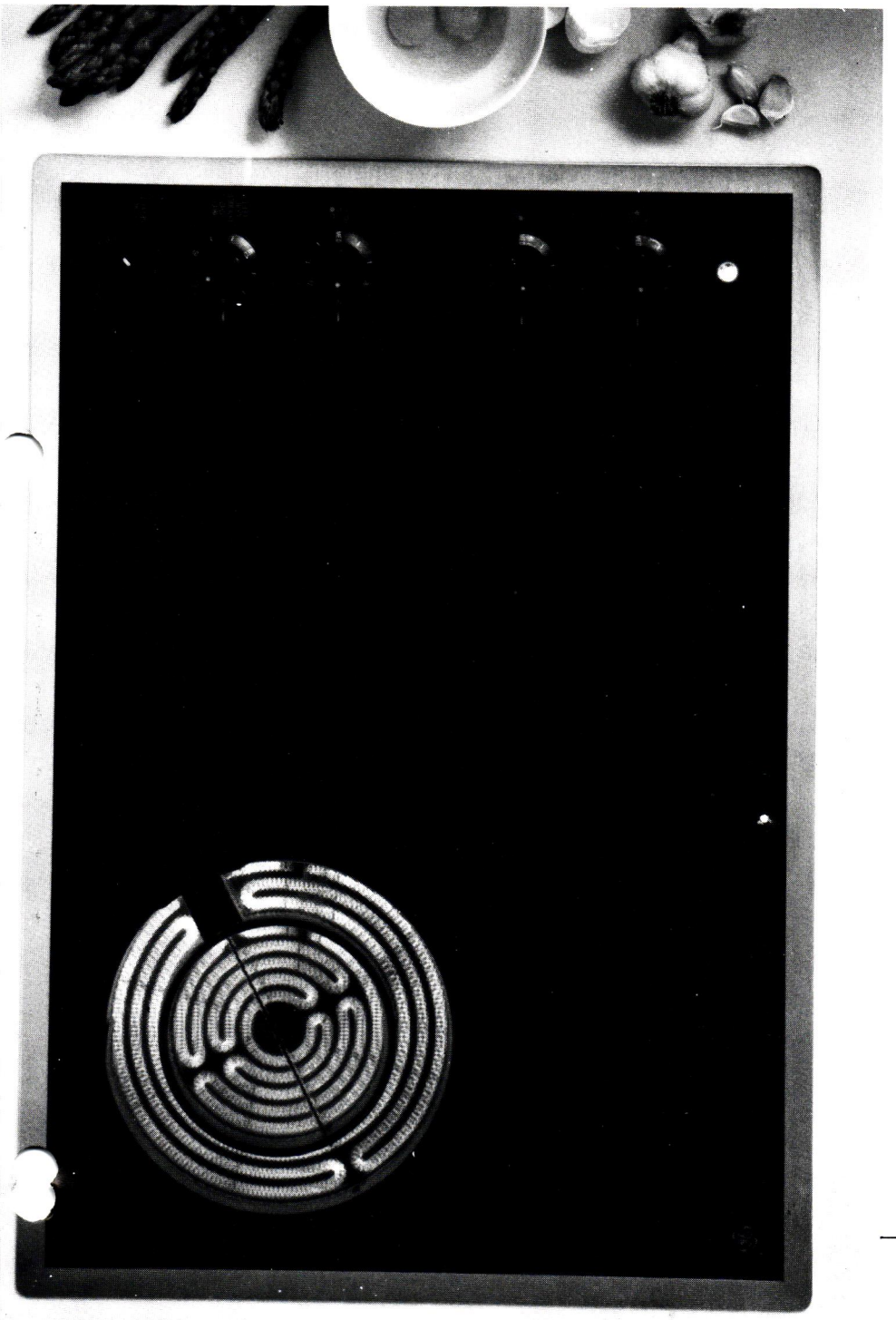
An error was made in "Designing for Americans with Disabilities" in the 1991 issue of *Hawaii Architect*. The Board of Coordination of Model Codes was referred to as BOMC rather than BCMC. *Hawaii Architect* regrets any confusion on this matter.

BLUEPRINT BY R.N. TOM



"Having a view from the bathtub was a great idea until they decided to construct a condo in the valley."

Intelligence applied to the art of cooking.



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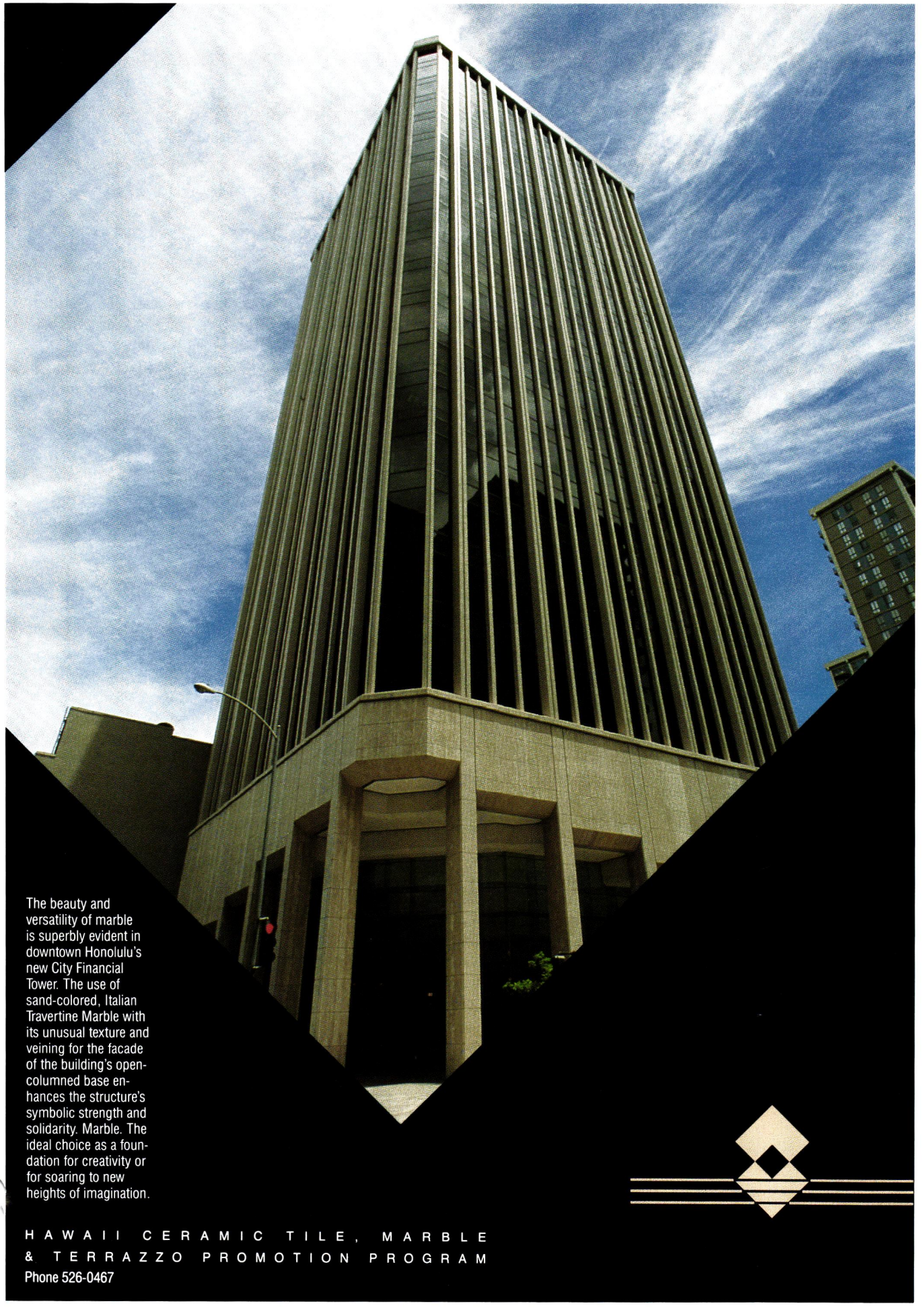

The beauty and versatility of marble is superbly evident in downtown Honolulu's new City Financial Tower. The use of sand-colored, Italian Travertine Marble with its unusual texture and veining for the facade of the building's open-columned base enhances the structure's symbolic strength and solidarity. Marble. The ideal choice as a foundation for creativity or for soaring to new heights of imagination.

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EXPO 91 Features Waterfront Redevelopment

The 21st Annual BIA Building Materials EXPO, sponsored by the Building Industry Association of Hawaii and GECC Financial, will open at the Neal Blaisdell Center Exhibition Hall with a record-breaking 272 booths entered by 107 exhibitors.

Professionals involved in the building industry and related businesses such as real estate and finance, and from industry-related military and government agencies are welcome to attend EXPO 91, March 13 from 4 to 9 p.m. and March 14 from 11 a.m. to 9 p.m. A business card is required for entry and admission is free.

Building Materials EXPO is Hawaii's major annual trade show for companies supplying Hawaii's construction industry with materials, equipment and services. Exhibits will range from windows, roofs, appliances and cabinets to trucks and forklifts. A number of new products will be introduced at the show.

The special feature exhibit at this year's EXPO will be The Waterfront at Aloha Tower, an $800 million redevelopment project planned for Piers 5-14. The project was designed by Aloha Tower Associates, a partnership of five local developers and James W. Rouse's Enterprise Development Company of Columbia, Md. A detailed scale model of the project will be displayed and Bob Gerell, one of the Hawaii partners, will be available both evenings to explain the various project components and answer questions. **HA**

Remodeling Competition Seeks Entries

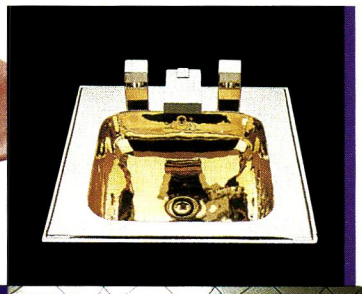
The Building Industry Association of Hawaii has announced that entry applications are now available for its 6th Annual Hawaii Renaissance remodeling competition.

Sponsored by Honfed Bank and *Honolulu* magazine, the BIA Hawaii Renaissance is a statewide competition recognizing excellence in design and construction of residential and commercial remodeling projects. Chairman of the event for the second year is James Zweedyk, president of TKC, Inc.

Last year's Hawaii Renaissance had a record 29 entries submitted by Hawaii architects, interior designers, contractors and suppliers, two of which won awards in the national Renaissance remodeling competition sponsored by the National Association of Home Builders' Remodelors Council and *Remodeling* magazine.

Winning entries in the Hawaii Renaissance are featured in the September issue of *Honolulu* magazine. Entrants who submit project binders prior to June 1 will be included in a special Renaissance display at the Honfed Better Home Show in June.

To be eligible for entry, remodeling projects must be completed between Jan. 1, 1990 and June 1, 1991. Residential projects need not be on the market or open for viewing by the public. For information, call Lisha Okuda at the BIA, 847-4666. **HA**



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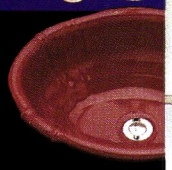

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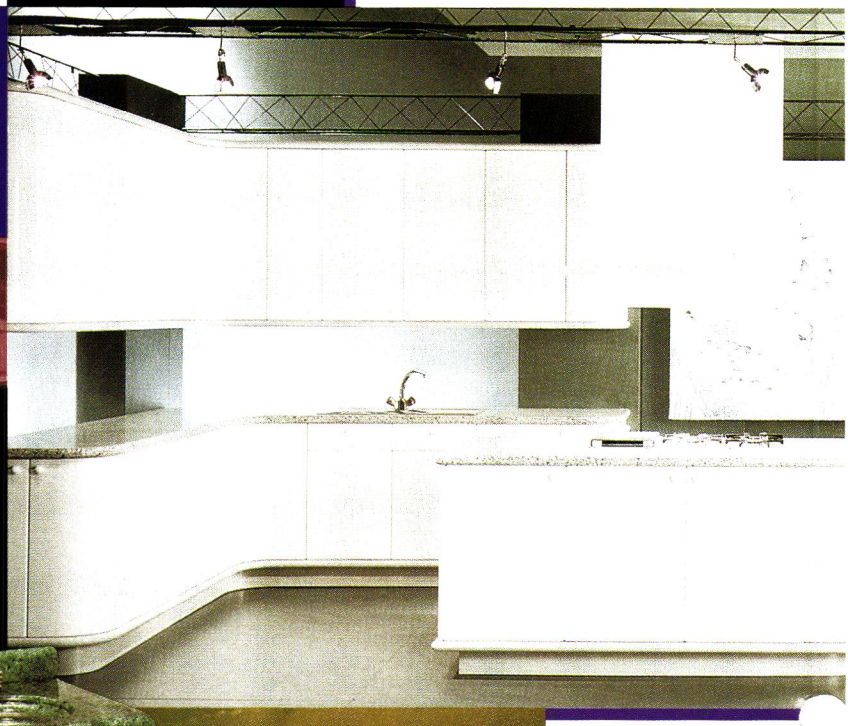

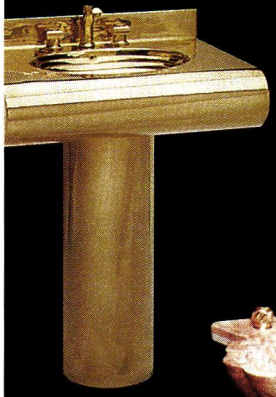

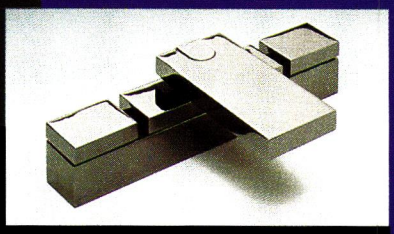

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Memorial Designs Chosen

Gov. John Waihee and the state Commission on Memorials for Veterans of the Korean and Vietnam Conflicts announced the selection of the design for memorials for the Korean and Vietnam conflicts.

The winning design was submitted by the team of Benjamin B. Lee, AIA, and Elaine Murphy. Lee is the director of planning for the City & County of Honolulu. Murphy is the coordinator of the mayor's office of culture and the arts.

Their design consists of two granite horizontal walls, one representing the Korean conflict and one the Vietnam conflict, leading up to three triangular shaped prisms standing on granite pedestals. The names of Hawaii-born men and women who died in the conflicts and those who are still missing will be inscribed on the walls.

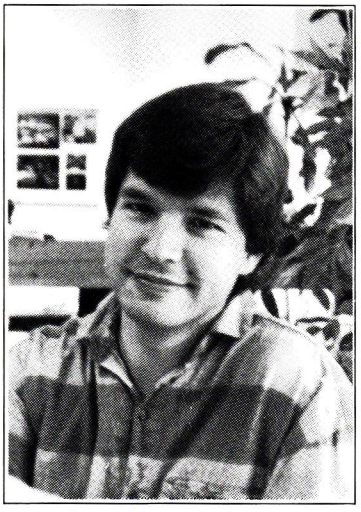
The Lee/Murphy design was selected out of 35 submitted during an open competition held last year. The final selection was made by the state commission following recommendations by an awards jury chaired by noted island architect Vladimir Ossipoff, FAIA-ME.

The memorials will be located on the west lawn of the state Capitol and are expected to be completed within 12 to 15 months after construction begins. **HA**

Two New Members Join Honolulu Chapter Ranks

The Honolulu Chapter/AIA welcomes two new members to its ranks.

Alan H. Nemiroff received bachelor's and master's degrees from the University of Washington and is employed by Media 5 Limited. He is married and his free time is filled with travel, volleyball and surfing.



Timothy H. Hamilton Jr.

Employed by Wimberly Allison Tong & Goo, **Anne E. Hritzay** graduated from the University of California, Berkeley with a bachelor's in architecture and received a master's from the Massachusetts Institute of Technology. She is married and enjoys photography.

Three associate members are welcomed to the Honolulu Chapter. **Timothy H. Hamilton Jr.** received a bachelor's degree in architecture from Auburn University and is employed by Garduque Architects. His pastimes include sculpting, music and astronomy.

Joseph A. Jacobs Jr., an employee at Wimberly Allison Tong & Goo, graduated from the University of Texas at Austin, and enjoys photography and outdoor sports.

Employed by DMJM, **Steven P. Zemski** received his training at the University of Wisconsin, Milwaukee. His hobbies include rock climbing, baseball, football, soccer, hunting, fishing and taxidermy. **HA**

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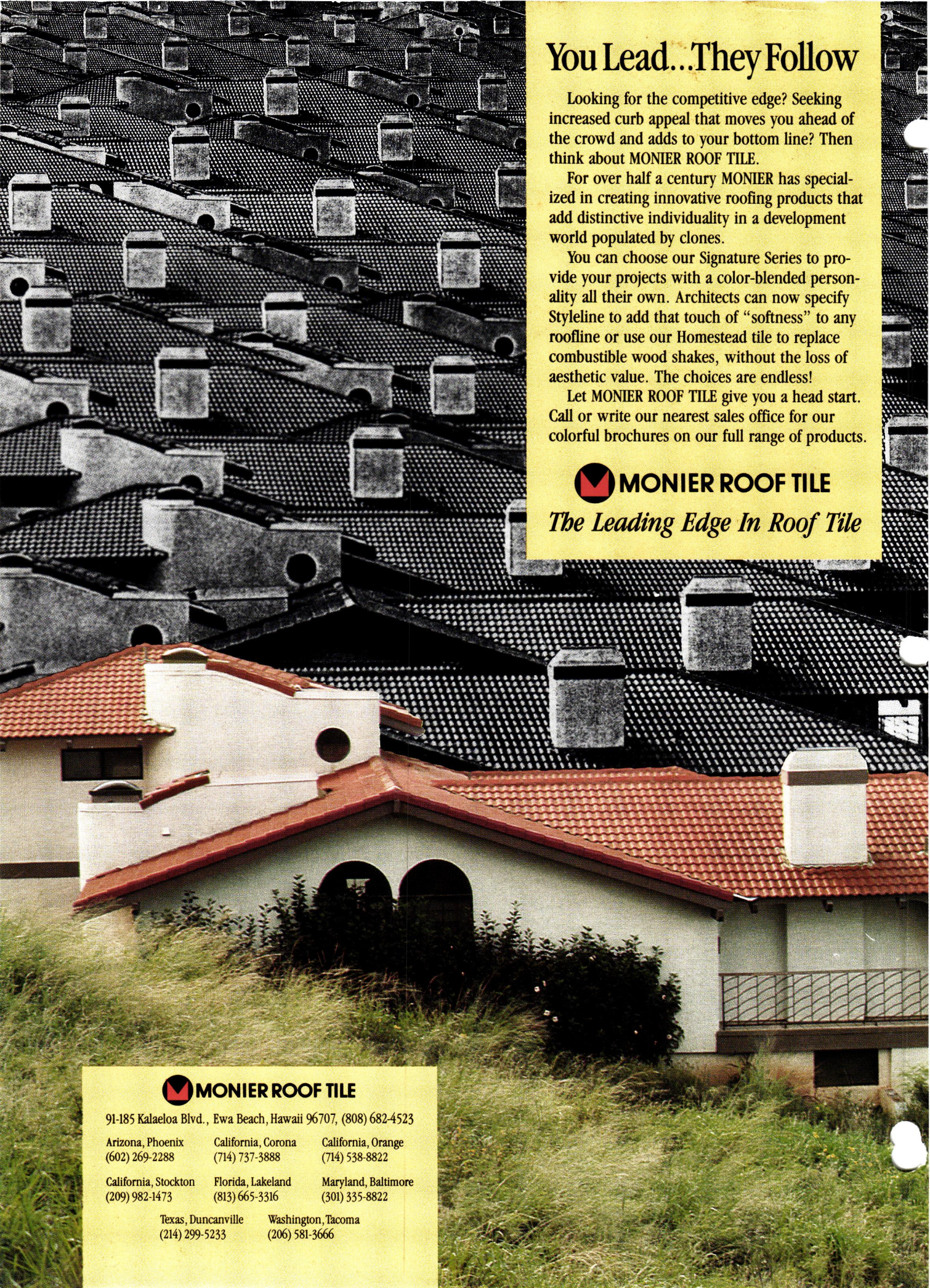

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