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Cover: The elegant executive suite bathroom of the Regent Okinawa is a Media Five design concept. This unified concept blends with and opens onto the living and bedroom area, and the view beyond. Lorrie Dalton, interior designer, explains both concepts of today, beginning on page 24. Photo by Dana Edmunds
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Planning for Tomorrow

by Evan D. Cruthers, AIA
Hawaii Society/AIA

"The Tax Reform Act of 1986 could result in "slowdowns, lean times, buyouts, closed practices and an overall shrinking of the architectural profession. . .""

As a result of tax reform, the perceived cost of construction is greater now even without any change in such direct costs as material, labor and architect's fees," according to J. Chandler Peterson, founder and chairman of the Peterson Wealth Management Companies, an international financial services firm. He expects "slowdowns, lean times, buyouts, closed practices and an overall shrinking of the architectural profession in the near future."

This attention-getting remark was stated emphatically by Peterson in his speech to over 800 members of the AIA at the annual GRASSROOTS meeting in Washington, D.C., held at the end of January. I attended that conference together with our Treasurer, Carol Sakata, who substituted for President Elect Norman Hong, and Lee Mason, our Executive Vice President.

In building construction terms, Peterson believes this means an artificial barrier to needed work beginning. A higher level of needed building will be required before new construction is actually considered or begun. During this waiting period, architects will face a severe challenge.

Create a lack of work for architects. Peterson's predictions may or may not come true. Nevertheless, each of us must consider this eventuality. And, this is one reason for Long-Range Planning. This year, Norman Hong heads up a committee to prepare such a Plan for presentation to the general membership at our HS/AIA State Convention scheduled for Nov. 6, 1987.

The value of our Long-Range Plan will be directly proportional to the input from our members. If, for example, our profession must face an artificial lag in construction, we must find alternatives to weather the lean periods, as well as cope with compressed deadlines for new construction already behind schedule.

In summary, each of us should take the time today to identify short- and long-range goals and objectives for ourselves, our firms and our professions. From these, valuable input can be provided the Society for its Long-Range Plan. I'm sure the Plan can be of great assistance to all of us, based on wide participation from our membership. In the end, we hope the Plan will provide the framework for the protection and the success of the Hawaii Society/AIA and its members in the future.
Of all the art patrons in Hawaii, the State government is probably the largest patron of the arts. Since 1967, the State, mostly through the State Foundation on Culture and the Arts (SFCA), has commissioned over 350 permanently installed works of art (WOA) and has acquired over 3,900 relocatable WOA, temporarily displayed in various State buildings on all Islands. Of course, there have been, and I hope there will continue to be, more WOA sponsored by the Counties, the Federal Government and by the private sector.

Significant WOA which come to mind include the bas-reliefs of Marguerite Blasingame at the Board of Water Supply and Ala Moana Pavilion; and naturally, Isamu Noguchi's stately "Sky Gate;" Tadashi Sato's murals in the Kahului Library and at the Maui Armory; the Shinmachi Tsunami Memorial next to the Hilo Visitors' Center, where the large ceramic floor mural was also designed by Tadashi Sato but executed by Claude Horan; the sculptures of Peter Voulkos and George Rickey; and the hanging textiles by Ruthadell Anderson in the Prince Kuhio Federal Building.

In the private sector, works by various artists are installed at the Ala Moana Center, the Financial Plaza of the Pacific under the guidance of Murray Turnbull, and the Kaiser Permanente Medical Center at Moanalua Valley, arranged by the Fine Art Associates.

The WOA in the State Capitol in Honolulu were funded as part of the building's construction cost, before the establishment of the SFCA. The artists were selected by the Hawaii State Capitol Commission with the

(continued on page 34)
Service Ability

Since the first of the GracePacific companies began serving Hawaii in 1921, our airports and highways have been the arteries through which our progress flows. Hawaii enjoys the skilled application of native materials to this basic system, up-to-the-minute equipment, economical methods of construction, and GracePacific's dedication to serving the industry and the public with the best.
Hawai‘i’s tropical climate, with its high temperature and relative humidity, is hard on art. Heat and moisture accelerate deterioration reactions and encourage mould and fungi growth. Our climate is particularly appealing to a host of insects which find the materials of our art objects very tasty. Our intense light causes fading of pigments and dyes and embrittlement of organic materials. Pollutants, both indoor and outdoor, create harmful environments which cause deterioration of materials.

These factors - temperature, humidity, light, pests and pollutants - must be monitored and controlled if we are to preserve art for generations beyond our own.

To control these factors, museums are looking more toward the “black box” concept of building design for the storage of their collections. The black box consists of a well-sealed and insulated space designated solely for collection storage, with controlled and limited access, central air-conditioning and no natural light. Buildings that are designed to incorporate the concepts of a black box will favor the long-term preservation of art. This presents a great challenge to those of us who are concerned with art conservation. How do we preserve art which is housed in buildings designed to take advantage of wonderful trade winds for ventilation and glorious sunlight for illumination? This article will barely scratch the surface of this question. It is simply meant to encourage consideration of the influence on preservation of the key factors of temperature, relative humidity, light, pests and pollutants when planning or renovating buildings which will house art.

Humidity
A constant and moderate relative humidity is critical for the preservation of art. Organic materials such as wood, bone, ivory, leather, natural textiles, basketry,
some adhesives and certain components of paintings respond to changes in relative humidity by losing or absorbing water. When this occurs, the objects change shape, setting up stresses that can result in extensive damage.

It is extremely important for those who have the responsibility of caring for art to monitor the levels of relative humidity and temperature. The best device to have is a recording hygrothermograph which provides a permanent record of these conditions. Sling psychrometers and hygrometers are also suitable.

Most materials should be maintained at 55% to 60% relative humidity and 70 to 75 degrees Fahrenheit. Metals are one example of an exception as they are best preserved at a relative humidity below 45%. For all organic materials, a relative humidity above 65% to 70% will encourage mould. In Hawai‘i, we are fortunate to have only minimal seasonal variations, but our consistently high relative humidity does promote mould and fungi growth. To combat this, one would ideally install central air-conditioning with precise relative humidity and temperature controls. For large and valuable collections, this should be considered. When this is not possible, good air circulation must be maintained. If the relative humidity is excessively high, refrigerant dehumidifiers with humidistats can be used to bring the relative humidity down to a safe level. Again, conditions must be monitored. An extremely low relative humidity is just as damaging as a high one; and a relative humidity that fluctuates dramatically is guaranteed to damage art.

Light

All types of light, but particularly the shorter wavelengths, cause fading and embrittlement of organic materials. Levels of illumination must be controlled and the shorter wavelengths have to be eliminated. Fortunately, glass absorbs radiation of wavelengths shorter than 300 to 310 nanometers, but allows the ultraviolet (UV) component of visible light between 310 and 400 nanometers to pass. Most of these harmful rays can be filtered with the use of UV absorbing films applied to windows and UV filtering sleeves placed over fluorescent lights, another source of ultraviolet. But it must be remembered that these protective films and filters only slow the rate of photochemical deterioration. Sensitive materials must not be exposed to light for long periods of time.

Another way to reduce the amount of UV falling on objects is to reflect light off walls painted with titanium dioxide or zinc white pigments. These pigments are UV absorbers. Windows can also be recessed into thick walls and the height of the windows can be kept down to reduce as much direct light as possible.

In addition to the elimination of UV, light levels must be controlled. While lowering the intensity of light will not prevent damage, it will decrease the rate of photochemical deterioration.

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March 1987 Hawaii Architect 9
deterioration. Numerous studies have been conducted to determine adequate and appropriate light levels for art and the following are recommended:

For oil and tempera paintings, undyed leather, horn, bone, ivory and lacquer 150 lux

For textiles, costumes, watercolors, tapestries, prints and drawings, manuscripts, wallpapers, gouache, natural history specimens, feathers and fur 50 lux

For stone and metals up to 300 lux for special effects

**Pests**

Pests pose one of the greatest threats to art in a tropical climate. Pests thrive in our high relative humidity and temperature. They can do irreparable damage to many types of objects such as books, textiles, prints and drawings, and all organic materials. The control of insect pests is particularly complicated in Hawai‘i by the style of architecture that suits this climate. So many of our buildings are designed to take advantage of the trade winds for natural ventilation; and pests have easy access to such buildings. Once inside a building, pests are difficult to eliminate. Monitoring and housekeeping will be constant chores and chemical means of control may be unavoidable.

Chemicals which kill and repel pests should never be used indiscriminately and should be considered a last resort option. Not only do chemicals pose health hazards for humans, but certain fumigants are known to react adversely with a variety of materials. For example, dichlorvos impregnated strips are acidic and corrosive to objects in high relative humidity; para-dichlorobenzene (moth balls) melts plastics; and sulfuryl fluoride, a fumigant most often used in Hawai‘i for control of termites, oxidizes metals. Before eliminate and consult with conservators who have access to new studies which are continuing to reveal the complexities of fumigant-artifact interactions.
The only way to protect art from pests is to design and construct a well-sealed building. If this is not an attractive option, the presence of pests will have to be dealt with through monitoring, housekeeping and, as a last resort, through chemical means of control.

Pollutants and Airborne Particulates

This discussion is restricted to indoor pollutants and particulates which cause damage to art:

- **Concrete** - New concrete and cement gives off fine dust with particulates measuring .01 microns. These pass easily through most air filters and can deposit on art objects. They are alkaline and can cause damage to many materials. Studies have shown that it may take up to two years before the alkalinity in concrete drops to a safe level. Concrete should always be sealed with a high quality paint or varnish.

- **Paints** - The choice of paint that will be used in the proximity of art is also very important. As paints which contain oils age, such as polyurethanes, alkyds, epoxy esters and most varnishes, they give off acidic vapors which are corrosive to objects.

- **Wood and wood products** - Woods are a source of volatile acids which are corrosive to many materials. Adhesives in wood products like plywood and particle board have formaldehyde which breaks down into formic acid, causing corrosion of objects. Conservators should be consulted before enclosing any art object in a wooden case or container.

“Pollutants . . . cause damage to art . . .”

For more information on art preservation, conservators at Bishop Museum’s Pacific Regional Conservation Center are available. The Center has six conservators and three fully equipped laboratories for the care of paintings, paper and objects. Call (808) 848-4112.
Stained Glass in Hawaii: An Art Whose Time Has Come

by Joline Miller

When stained glass becomes the subject, it often creates mental pictures of the great windows of Chartes Cathedral, the colorful lamps of Tiffany or the clean geometric windows of Frank Lloyd Wright. These works of art, however noteworthy, met the needs of other buildings, other places and other times. With its long, rich tradition, stained glass deserves to be reassessed for this time and this place, Hawaii.

The beauty of this environment invites the use of stained glass as a significant element of architecture. Its successful use can bring in this quality of our natural surroundings and create a more open setting. In practical terms, it can be used to bring in needed light, to diminish glare or even act to camouflage an unwanted outdoor scene.

The varied functions of a building can also be enhanced by the sensitive use of stained glass. Just as a stage design helps to set a mood, so can stained glass enhance the special purpose of a structure; be it space for quiet meditation, a busy office, hospital, hotel lobby or university.

The wide range of types of glass (hand blown, machine rolled), the techniques in handling (acid etching, sandblasting, slumping, etc.), punctuated by the graphic strength of the lead line, provides the artist with numerous possibilities. The colors of the glass, its reflections and light transmission may cause the very character of a building to change as the prevailing light conditions change during the day or night. The use of light as refracted by glass to illuminate our surroundings can make a space vibrant and alive, transcending the limitations of other static media. The response to glass is unique and exciting.

Much of the stained glass in Hawaii has been used as decoration for a finished architectural concept and not as an integral part of the design. At times, harsh colors dominate the setting instead of responding to the structural form and spirit of the structure. The medium, as applied in Hawaiian architecture, has not yet been pushed to its greatest potential. To be used more creatively, and effectively, stained glass should be treated as one of the primary elements of a building, rather than as an afterthought.
“Madake” is an entry window stained glass creation by Joline Miller. The use of light as refracted by glass can make a designed space vibrant and alive. Photo by John Wilson

A review of architectural stained glass would certainly merit a study of the world’s leading designers. Notably, Germany’s Johannes Schreiter, Ludwig Schaffrath, Jochem Peonsgen and Jochim Klos, England’s Brian Clarke and the U.S.’s Ed Carpender. There are many reasons for German glass being preeminent, but they are too numerous to detail here. The point is, these individuals are worthy of study for they can suggest wonderful possibilities for the use of this art form in Hawaii.

Stained glass is just one way in which we can improve the state of art in architecture. In the past decade, architectural schools have begun to include information on its use in modern buildings. It’s an idea whose time has come, for stained glass has the power to create a richer environment and to enlarge our everyday life. HA
The Hawaii Theatre is an exquisite example of those grand old movie palaces of a by-gone era. Built in 1922, at the time when movies were still a novelty, the owners hedged their bets by including a full stage for vaudeville acts and other live productions just in case the fad of movies didn’t last.

It was designed in the extravagant manner of dream palaces using a wide variety of eclectic design components such as, ceiling murals, fluted, guilded Corinthian columns, plaster scrolls and projecting side balconies.

Over the years, the theatre fell into disrepair and just before its closing in 1983, had developed a reputation as a seedy second-rate movie house in a dilapidated part of town. By that time, only a portion of the theatre was open and many of the seats were uncomfortable with projecting springs. The fate of the theatre was in question...demolition?? Or renovation?? Various alternatives were considered. One idea was to gut the entire interior of the building and turn it into a mechanized parking structure. Fortunately, a group calling itself the Hawaii Theatre Center was formed, and was able to intercede, mobilizing a strong following of dedicated individuals who wanted to see the theatre renovated to its previous grandeur and developed into a cultural oasis in downtown Honolulu.

Despite insensitive earlier renovations, many of the finer works of art integrated with the interior design are still in place, although in need of repair and restoration. There have been some contacts with artisans to restore small sections of the theatre such as the guilding on the columns, to demonstrate the positive effect that crafted restoration will have on this once opulent structure.

The comparison between the restored portions and the still deteriorated areas is a marked contrast. It is the hope of the non-profit Hawaii Theatre Center that

(continued on page 16)
TOUGH

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this first restoration effort will attract a concerted effort by the Honolulu cultural community to contribute to the restoration and reuse of the building as a permanent cultural center. The task is monumental, but the result will be an artistic and cultural symbol of our heritage for all to enjoy.

The Hawaii Theatre Center welcomes any assistance in the restoration of this grand theatre. Donations can be forwarded to Hawaii Theatre Center, Historic Stangenwald Building, 119 Merchant Street #504, Honolulu, Hawaii 96813, or call (808) 521-2729 or 536-6300 to volunteer your services.

Robert Fox sits on the Board of Directors of the Hawaii Theatre Center.

(Above) A view of the grand mural running the full width of the stage at the Hawaii Theatre is one of many of the finer works of art still in place. (Left) Artisans restoring the guilding in 1986. (Below) The majestic Hawaii Theatre when it first opened in 1922.
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Artwork at the Hyatt Regency Waikiki

The Hyatt Regency Waikiki is the new home of 10 huge, bronze Oriental lions, weighing just over 5,000 pounds.

The lions were acquired by the Hyatt through art curator Carl Semczak, who was instrumental in the purchase of the artwork in both the Hyatt Regency Waikiki and the Hyatt Regency Maui.

The main entrance of the hotel is now graced by a pair of sculptures which are sometimes called “The Dogs of Fo.” These are the first pair of this size to be cast in bronze.

A pair of Cambodian style lions now guard the Ewa entrance to the Hyatt. They are duplicates of the pair guarding the Emerald Buddha in Bangkok.

The other three pairs of lions acquired represent Thai and Chinese design. The Thai lions are of the same style which guard the Grand Palace in Bangkok.

As the protector of sacred buildings and defender of law, sculptured lions are frequently placed at the entrance of houses and gates of temples. They were originally set there to scare demons.

On two pairs of the lions there are fragmented mirrors set in place; these also are “anti-demon,” as evil spirits reputedly cannot stand their own reflection.

Some lions are postured with a ball under their foot. It may represent a precious stone, the sun...
A bronze protector and defender guards an entranceway in the Hyatt Regency Waikiki.

or an egg, which is the symbol of the dual powers of nature.

An ancient legend tells the story that a lion can produce milk from its paws. Country people placed hollow balls in the hills hoping that the lions, who enjoyed playing with balls, would leave milk in them. The male is represented with a ball, the lioness with a cub. **HA**
Art in Architecture?

by George S. Berean, AIA
Principal
Wimberly Whisenand Allison Tong & Goo Architects

For you poor souls about to embark on this adventure, allow me to warn you: The views expressed herein are my own and do not represent my firm’s, family’s, country’s or this magazine’s. These views have been and are being shaped by my unclear biased perception of reality.

Should you be foolhearty enough to continue—this, in all likelihood, will not (1) fatten your bottom line, (2) increase your FAR; (3) make you an FAIA. At best, this journey may bring back fond notions of when all else fails—why we’re in business. Having established myself as an expert with a sound frame of reference let us continue.

Everyone that remembers when we were in architectural school, raise your hands! You that don’t --it was in the sixties. Back then, into how many projects did we incorporate art? How often did we consider murals, ceiling frescos, sculpture, tapestries, playful use of color, etc.? Why did we feel less than good if our forms encapsulated more than the volumetric envelope generated by our anthropometric analyses from our sacrosanct program?

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that for the vast majority of time that the notion of architecture existed, art was an integral part of it. For some fifty years, this relationship has not been in vogue for the western world. Has the pendulum swung in a direction more sympathetic to this integration?

We read of the post-industrial society, information society and high tech/high touch. Will the rising expectations of our clients and the users of our "places" demand more than the all too familiar minimalist approach? Can we rise to meet the expectations of those who wish a more personalized - humanized environment? Will we be comfortable in creating places that are happy, playful, romantic, inspiring — or any other desired states of being? I suggest that coupled with the efforts of our team members, we can reach a comfort level with the reintegration of art in architecture, and shall be able to create "places" that more nearly satisfy our whole needs. 

**NEWS**

**Amfac Product and Service Show**

Amfac Distribution Hawaii, Inc. will be hosting its 1987 Product and Service Show for architects and designers on Tuesday, March 17, from noon to 5 p.m. at 465 Coral Street.

The show will feature a variety of products such as Eljer plumbing fixtures, Moen faucets, State water heaters, General Electric and ITE electrical apparatus, Weather Shield windows, Windor doors and many other building supplies. Representatives of the various manufacturers will be on hand to discuss the products or provide demonstrations. Refreshments and pupus will also be served.

Amfac is holding the same show for builders and contractors on Wednesday, March 18. For further details or reservations, call 945-8879.

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**March 1987 Hawaii Architect 21**
Artwork in Washington AIA Lobby

“A game of perception” was played recently in the lobby of The American Institute of Architects building with the installation of a trompe l’oeil sculpture and mural. The exhibition “2D-3D” opened in January and will be on view through March 31.

Designed by local artist Mame Cohalan and architect Michael Cohalan, AIA, the 13’ x 9’ x 9’ work takes advantage of a 60-degree triangular wedge of space between two lobby walls to depict a classic interior scene of a view through four arches with column supports and a horizon beyond. The work uses the basic elements of architecture (planes, arches, columns, bases and capitals) to convey a sense of receding space. A 13’ x 9’ high perspective view of the installation is painted on a flat wall to the right of the sculpture.

“We are not portraying ordinary architectural space here,” say the Cohalans. “This is a shrinking or vanishing space, which plays with the notion that space appears to get smaller as it recedes.” A mathematics enthusiast, Michael Cohalan has dealt with the challenge of coordinating the vanishing space in both halves of the exhibition.

The intent of the exhibition is to demonstrate architect-artist collaboration in incorporating artwork into architectural spaces. The Cohalans believe the artist adds another dimension to architectural space. Mame Cohalan’s work of the past ten years has been an elaboration of architectural concepts in the context of particular spaces, interior and exterior.

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The TWA Terminal at New York’s Kennedy Airport exemplifies the integration of structure and architectural design that is advocated in the Building Systems Integration Handbook, developed by the AIA.

AIA Handbook Wins Citation

The Building Systems Integration Handbook, sponsored by the American Institute of Architects and published by John Wiley & Sons, has won a citation in the 34th annual P/A Awards program sponsored by Progressive Architecture magazine.

The handbook looks at how the various systems in buildings interrelate. It contains case studies as well as generic information about building systems. It also develops a theory about building system integration and shows how that theory can be used to better understand the way in which buildings go together and operate.

The jurors saw the research as a real advance in the area of systems theory. “It uses information,” said one juror, “to create a new way of thinking about things. That is research.”
The School of Architecture
University of Hawaii at Manoa

wishes to express publicly its appreciation to the following firms and individuals who generously supported the 1986-87 Architecture Development Fund Drive:

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The School of Architecture was established as a professional school of the University of Hawaii at Manoa in 1980. Its mission is to provide Hawaii’s future design and construction professionals with a quality education in architectural principles, with emphasis on their application to the unique physical and cultural environment of our island state. The School is also firmly committed to research in the area of tropical architecture and to providing continuing education for professionals in the community.

In conjunction with the fourth annual Great Hawaiian Pumpkin Party, the supporters listed above made substantial contributions to the University of Hawaii Foundation to enhance and enrich the programs of the School of Architecture. These funds will be used to provide for visiting lectureships and sponsor continuing education for practicing professionals.
Bathrooms - The New Retreat

by Lorrie Dalton, Interior Designer
Media Five, A Design Corporation

Inviting... appealing to the senses... luxurious in feeling. The bathroom of today has become a spacious retreat with plenty of room to stretch out and relax. It is a comfortable, attractive place to linger in, a place where people seek to spend quality time. It is as well, a place for social interaction, as people enjoy the luxury of soaking in a tub together and unwinding after a full day.

The amount of space allocated for this room, and how space is used in it, has changed over time in accordance with its expanded role in our lifestyle today. It has become a part of the living environment, blending in with other spaces. It is now larger than is functionally required, and typical functions and spaces of the bath—the toilet, shower, vanity/dressing area, lavatory/statue and tub platform—are given individual attention and treatment.

Partitioning off the toilet from the bath is part of the general direction that signals the current trend toward a feeling of luxury and a certain quality of space in the bathroom. Tubs and showers are given individual attention as separate facilities, a separation that has freed tub design from the limitation of walls and curtains that were previously needed to control splashing water from the shower.

These characteristics are represented in Media Five’s design for the Hotel Hana-Maui, the Regent Okinawa Hotel, and the Burns residence, where in a unified design concept, each bath blends with and opens into adjacent spaces, letting in the sunlight, view, and social interaction as desired.

The Regent Okinawa executive suite bath, for example, is oriented toward and open to the living and bedroom areas, adding light, dimension and depth to the sense of physical space in the bathroom as well as the suite. It sets up an immediate connection with the view beyond, and at the same time, allows one the choice of

Highlighting the spacious Burns residence bathroom, open to the sun and fresh air, is a large tub adjacent to and blending with a private garden full of plants and flowers. Photo by Augie Salbosa
Designed as part of the living environment, the Hotel Hana-Maui bathroom has its own garden and is a comfortable, attractive retreat with lots of space in which to stretch out and relax. Photo by Augie Salbosa

conversation and involvement with the activity in the rest of the suite. The wooden shutters add charm and warmth, and by drawing them shut, the option of total privacy.

The bathrooms for the Hotel Hana-Maui and Burns residence were also designed to blend with adjacent spaces, and in each case, the tub looks out into a private garden filled with plants and trees. Plants and flowers, placed in the bathroom and in full view outside, heighten the sense of relaxation and well-being. Windows open to flood the room with sunshine and fresh air.

Mirror reflections visually expand the size and openness of each of these bathrooms. Further enriching and enhancing the quality of these spaces are finishes such as the marble used throughout the Regent Okinawa bathroom, and sandstone for the Hana vanity/dressing area. Color schemes for all materials, including tile or marble on the walls, floor, tub surround and vanity, were kept monochromatic to further contribute to the feeling of luxurious spaciousness, while providing a sophisticated, integrated look.

A variety of light sources were also designed for greater flexibility, in response to the higher levels of consumer awareness that exist today regarding the relationship between the quality of light in the room and the mood and atmosphere it can create.

In these baths which are like living spaces, the feeling is expansive and the look is that of richness and luxury. Providing an environment that is as significant and delightful to be in as any other room, they convey a sense of intimacy and private refuge, a feeling of openness, well-being and harmony with life.

Lorrie Dalton is Interior Design Department Manager and Senior Associate of Media Five, a design corporation that provides architecture, planning, interiors, graphics and multi-media services through its offices in Honolulu, Costa Mesa, California and Queensland, Australia.
Amplification Systems for the Hearing Impaired

by Scott Posner, Regional Manager
Phonic Ear, Inc.

In the last few years, more and more architectural firms have been asked to incorporate systems for the hearing impaired into plans for new and renovated structures. Advocacy groups have insisted that public buildings be equipped with systems which enable the hearing handicapped to take full advantage of programs and events in those facilities. Many types of structures will need systems to serve the special amplification needs of the hearing handicapped.

According to the latest annual survey of the Hearing Industries Association (HIA), there are over 17.5 million hearing impaired persons in the United States, with hearing losses ranging from mild to profound.

Interestingly, only 2.7 million persons having hearing losses utilize personal amplification, i.e., hearing aids, according to the HIA survey. There are a number of reasons which explain low hearing aid usage. However, without going into details on those reasons, it is important to understand this statistic as it will be relevant to your understanding and recommendation of “special amplification” or “special hearing” systems.

It is important that you know what hearing aids or instruments can and cannot do in large area environments. Simply stated, a hearing aid is an amplifier, with select controls to adjust to certain frequencies and output levels. In large rooms, a hearing instrument picks up and amplifies all sounds, not only the desired sound, which usually is the spoken word of one individual. A hearing aid will amplify a cough, a turning page, other voices from the background, shuffling of feet, movement in a seat, etc. Thus, the spoken word from that one individual has to compete with ambience from within, and sometimes beyond, that room.

Finally, distance from the primary signal (the spoken word, musical program, etc.), to the listener’s hearing instrument varies from room to room. As the distance varies, so does the input signal. Distances greater than 12 to 15 feet greatly affect hearing aid performance.

In large area environments, a “special hearing” system may be more appropriate to meet special needs. Some of the major systems available include hardwire systems; magnetic loop systems; infra-red systems; AM systems; and FM systems.

Hardwire systems have been around longer than any other type of “special hearing” system. These systems can provide clear, crisp amplified sound, when properly integrated into a regular sound system or when the hardwire system has a quality amplifier of its own. Such systems provide amplification through special listening devices located in specific areas throughout a facility.

Headsets or “listening wands"
have been a source of irritation for non-hearing impaired church members because of feedback (whistling) and vibration if the devices are not being used but are left on.

Magnetic loop systems also provide the hearing impaired with special assistance in large area environments. This system must be installed around the desired listening area. Most loop systems have their own amplifiers and can offer stand-alone capabilities. Loop systems which do not have amplifiers, must be incorporated into a regular sound system.

Magnetic loop systems require that the hearing impaired listener use a hearing aid with a telephone or "T" switch. Many hearing aids have telephone switches, but some do not. Without an instrument having a telephone switch, the hearing impaired individual is unable to use this "special hearing" system.

Proper installation is critical for the successful use of this system.

Room size and loop strength are also important considerations.

To further complicate the issue of full and successful utilization of magnetic loop systems, we have to acknowledge the possible existence of outside interference from fluorescent lighting fixtures or powerful electrical sources. These can interfere with the magnetic field and create unacceptable noise.

Relatively inexpensive to acquire and install, the magnetic loop system has several drawbacks which should be recognized before recommendations are made for its introduction into large area environments.

The two most common "special hearing" systems are: Infrared and radio (AM and FM) systems.

Infrared systems provide clear, integrated into the existing sound system, picking up the acoustic signal from that sound system, combining it with an infrared (light) beam, and dispersing that infrared beam throughout the room. A hearing impaired person wears a receiver with an infrared sensor which receives the beam, decodes the acoustic signal and sends that decoded acoustic signal to the user's ears via a listening tube for each ear.

This system must be carefully installed to assure proper line-of-
amplified sound, which emanates from special transmitters or emitters installed in specific locations throughout a large area environment. Such emitters are sight infrared transmissions throughout the large area environment. Without an adequate number of large area emitters that are properly installed and aligned to cover the area, signals can be broken by structural barriers, such as balconies or columns; or broken by temporary barriers, such as a...

(continued)
person standing in front of a receiver or obscuring the infrared sensor.

This system is limited to indoor use, because it utilizes infrared beams, which cannot be used in direct sunlight.

Because of the decoding process, when converting an infrared beam with its superimposed acoustic signal back into an acoustic signal, the sound pressure levels of that decoded signal are only sufficient to amplify mild, moderate and moderately severe hearing losses.

An infrared receiver with volume control (left) and a sensor (right).

This limits the use of an infrared system to those persons with hearing losses falling into those categories. For those persons having hearing losses greater than these, an infrared system would be inadequate for their "hearing" needs.

In the 1980's, radio systems have come into their own, serving the hearing impaired in auditoriums, theaters, government facilities, churches, and schools.

There are two types of radio systems: AM and FM. Most systems offered today are FM (Frequency Modulation) because of the "clean" signal it provides. AM (Amplitude Modulation) carrier waves tend to be considerably noiser than FM carrier waves. AM radio systems are less costly than FM systems, but, due to the "noise" of AM transmissions, are infrequently offered as "special hearing" systems.

FM radio systems for the hearing impaired provide clear, amplified sound transmitted by a special transmitter. It uses one or several frequencies, specifically set aside by the Federal Communication Commission for use by the hearing impaired. This FM special transmitter is connected to the existing amplifier/mixer of a facility. Installation, in the traditional sense, is not mandatory. These FM systems can be moved from one area in a structure to another, to accommodate the hearing impaired.

These FM systems include an FM...
audio control/transmitter and FM radio receivers. Taking an output signal from the house amplifier, this special transmitter broadcasts the FM carrier wave up to 600 feet. Each hearing impaired person wears a small FM receiver which receives the FM signal and sends the signal to the listener's ears via one of several listening devices.

The FM receiver can be used by persons having mild, moderate and moderately-severe hearing losses who do not use hearing aids or instruments. Furnished with a lightweight listening device which fits under the chin or a lightweight headset which is worn on the head, these people can take advantage of this "special amplification."

For those persons owning hearing aids with telephone switches, a personal "loop" (teleloop) worn around the neck can be furnished, creating a magnetic field which surrounds the head with no wires going from the receiver to ear. A second accessory, called a silhouette coil, can be placed behind any hearing aid with a telephone switch. This accessory will create a magnetic filed around the hearing aid only, but a wire would go from the receiver to the ear.

Another means of connecting the FM receiver to a hearing instrument is via a special audio-input boot or shoe which is attached to the hearing aid. A cord is connected to the boot and on its opposite end to the FM receiver. Audio-input enables persons with mild, moderate, severe and profound losses to take full advantage of an "FM special hearing system."

Having looked at five very different systems for use by the hearing impaired, you may now be better prepared to serve your clients with recommendations for "special amplification" systems. It will be a challenging new frontier for many architects, but one filled with exciting and rewarding possibilities.

Scott Posner is Regional Sales Manager of Phonic Ear, Inc., a leading manufacturer of speech, language and hearing instruments.
Building the Straub Family Health Center at Windward Mall shopping center took a combination of teamwork, precision and professionalism only Allied could provide.

"Giving the center a comfortable, homelike atmosphere required the skills of a perfectionist," said architect Dennis Osato. "Allied's fine detailing work did an excellent job in translating a complex design into reality."

Timing was crucial, especially when substantial changes were made to the original plans. According to Straub's Nathan Mau, "Allied's cooperation and flexibility made this one of our smoothest projects."

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Teamwork. Our motto. Our method.
Communicating with Bidders

Talking to bidders can hardly be avoided. It is in the owner's best interest for you to respond to questions reasonable contractors will ask during the bid period, and it is in your best interest to be in a position to do so. But the benefits are not realized without risk. You can expect each and every contractor with a bid set in hand to look to you to provide the competitive advantage that will bring in the job. As you know only too well, the questions they raise can be double-edged swords.

On the Positive Side

There is much to be gained from the bid process. Your communications with the bidders afford you with important opportunities to clarify intent and preclude misunderstanding. They may reveal errors or omissions in the plans and specifications which can be corrected quickly—absent the costly pressures of the construction arena. Inconsistencies and ambiguities can be brought to light and resolved in advance—before they become quantified as misjudgments that can only lead to conflict later over who is going to pay to make things right.

From the owner's point of view, your contributions to the process are essential to the fine tuning of the bids. As you respond to inquiries with clarifications, corrections and refinements, you reduce uncertainty, and in so doing, you reduce the need for contingency factors based on worst case assumptions. Your presence tends to elicit more comparable bids. The technical issues raised by prospective bidders can also yield (continued)

The law firm of Bays, Deaver, Hiatt, Kawachika & Lezak, concentrating on real estate, business law, civil litigation and arbitration, is pleased to announce that

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has become a partner of the firm. Mr. Lung will continue to concentrate on construction, insurance and commercial litigation.

The firm is also pleased to announce that

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formerly with Cades Schutte Fleming & Wright, has joined the firm. Mr. Byrns will continue to concentrate on real estate and finance law.

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positive results for the owner. Careful analysis of your documents by those who would turn your ideas into reality can produce valuable insights and cost-saving suggestions. Inquiries as to changes and substitutions can be evaluated and either accepted or rejected before the safety valve of competition is released. All this is a net plus, but there are countervailing forces at work.

On the Other Edge
Essential to the functioning of the bid process is the assumption that each of the prospective bidders has access to the same information. Given equal access, it is generally assumed that the owner will realize the benefit of a construction contract (with the most qualified available contractor) that is as competitively priced as the process can produce. In theory, there is nothing wrong with these assumptions. In practice, things do not always work out this way.

Contractors are going to bid what they see, and they are not likely to see requirements that could have an adverse impact on cost if they believe there is no need to do so. The challenge facing even the most responsible of bidders is resolving an inherent dilemma between pricing the work high enough to produce a reasonable profit and low enough to bring in the job.

Very often, a fortuitous opportunity to resolve this dilemma lies in the plans and specifications. Turning opportunity into great good fortune may require little more than a telephone call requesting clarification. Such a call, taken by a young professional on your staff, eager to help but unwary of the pitfalls, can produce disquieting surprises later on.

"... jobs to be let for bid require extra care and attention during design."

The principal source of the problem stems from the fact that representations made to the bidders are treated as an extension of the original bid package and, thus, assume the same legal status. This is as likely to be true of oral as it is of written communications, in spite of the clear warning in the Instructions to Bidders that no clarification or interpretation will be binding on the owner unless it is incorporated into the bid package by addendum. The difference between oral and written communications is clarity. The true meaning of what is said on the telephone may not be known until the lawyers are called in to resolve a dispute over the consequences.

Maintaining Balance

What can you do to control the risks of the bidding process without compromising either your clients' best interests or your own? Consider the following suggestions:

- Finish your design in the office. It makes very little sense to place the contractor in a position to assist you in completing it in the field. You are
not likely to be thrilled with the results, and your client is not likely to be enthusiastic about the eventual cost. Contractors have been complaining more and more in recent years about being handed incomplete, poorly coordinated documents and being asked to bid on the basis of what you may or may not later insist was "reasonably inferable" from them. There is an element of truth to these complaints. If anything, jobs to be let for bid require extra care and attention during design. It helps to preclude creative costing.

- **Take all inquiries seriously.** They have important legal implications. Responding to questions contractors raise during the bid period requires the same careful consideration, coordination with consultants, and correlation with the balance of the bid package as you put into the original design. Notwithstanding intense pressures of time and a natural inclination to turn your attention to new challenges, your responses must be timely, complete, and in writing for all to see. Otherwise, you can easily introduce elements which can lead either to acrimonious challenge to the award of the contract or to unnecessary claims during the course of the work.

- **Make your procedures clear.** It may not be a bad idea to appoint a single, senior professional to coordinate and control your communications with bidders. Make certain everyone involved understands that the only representations to be made will be made by this individual—in the form of written addenda to the bid package. You might also require that all contact with prospective bidders be recorded and that a copy of that record be forwarded to your "informational gatekeeper" for evaluation and response. Keep in mind that a failure to respond may well be construed to be an affirmative representation of one kind or another if the bids hinge on the assumptions that are made as a result.

- **Leave the owner's decisions to the owner.** There is little comfort to be gained from exculpatory conditions which seek to shift responsibility for the consequences of the uncertain or the unknown to the bidders. Most will cheerfully defer the costs for later recovery if they believe their path to financial security can be paved with unit prices and carefully structured qualifications to the bid. Resolve uncertainties if you reasonably can. Even at the risk that your response to an unanticipated problem may force the bids well beyond the construction budget, you have little to gain and much to lose by shielding your client from the bad news. Far better that you be prepared with design alternatives which can readily be adopted, if necessary, to bring costs back into line. It may take but a modest effort, and you will sleep more soundly at night.

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March 1987 Hawaii Architect 33
Art in Public Places Program

(continued from page 6)

SFCA participating.

In 1967, the Hawaii State Legislature passed Act 298, based on a Short Form Bill prepared by the SFCA and introduced as an Administration Bill by the late Governor John A. Burns.

This Act has been emulated by states and cities throughout the United States. Although similar laws were previously enacted by some cities and for use in U.S. embassy buildings worldwide, Hawaii’s law is unique among states. Hawaii’s law mandates that one percent of construction costs of every State building be set aside in funds for the acquisition of WOA, which may neither be deleted nor deducted.

Under the provisions of this law, the SFCA, in collaboration with the Department of Accounting and General Services (DAGS), prepares statewide annual plans. They identify building projects which qualify for WOA and determine that portion of the one percent amount to be allocated for such identified building projects. Also, determination is made on how much will be allocated for the supplementation of insufficient funds for WOA in other State buildings and for costs of the acquisition of relocatable WOA for transportation, insurance, handling, repair, maintenance and for other similar expenditures.

Since the SFCA’s assignment under the administrative

(Above right) One of three marble and granite bas-relief murals by artist Hon Chew Hee gracing the outer walls of the Mililani Town Community Library. Entitled “The Golden Days of Hawaii,” this commissioned work was completed in 1986. Architectural design by Franklin Gray & Associates. Photo by Patrick Abe. (Right) “Ho’olana” (afloat), 1984, is a sheet copper sculpture by Bumpei Akaji. It is located in the Learning Resource Center garden area of the University of Hawaii in Hilo. Architect on this project was Hogan-Chapman-Cobeen. Photo by SFCA
supervision of DAGS in 1980, the processing of various administrative tasks has been progressively eased. Therefore, it is now possible for the SFCA to begin its work concurrently with the architect’s design phase, allowing time for architects to consider and prepare suitable locations for chosen WOA.

Experience has shown that WOA, when placed in a community which may consist of people unfamiliar with, or having little or no experience with, contemporary art forms, have difficulty of being accepted, not to mention of being enjoyed, understood and appreciated. For these reasons, the SFCA has learned to rely on the advice and guidance of persons working in or living in the vicinity of the buildings about to receive the WOA. These selected people form and participate in Art Advisory Committees (AAC) in efforts to help other community members better relate to the prospective WOA.

The AACs decide whether a WOA is desirable, where it should be located, what it should express, and what art form or medium it should consist of. In addition, after viewing color slides, the AACs will recommend to the SFCA the names of three artists in order of priority. The AACs also submit to the SFCA any reactions to all progress presentations by the commissioned artists.

In this manner, WOA have been commissioned on all of Hawaii’s major Islands, including Lanai and Molokai. Chosen WOA have been installed in, on or next to buildings of schools, universities, libraries, courts, correctional facilities, stadiums, gymnasiums, state parks, aquariums, hospitals and health care centers, airport terminals, civic centers and state office buildings of all types.

Except in the Hawaii State Capital District (for reasons of civic pride) and in institutions of higher learning where art is taught, all WOA are commissioned to local artists. This gives local artists the opportunity to gain experience in the field, to work under contractual strictures, to obtain mastery in their work and, frankly, to have access to an art market where none previously existed. Additionally, this provides incentive to other governmental bodies and to the business community to participate more in the artistic embellishment of Hawaii.

For more information or any assistance on the Art in Public Places program, contact the SFCA office at the old Federal Building at 335 Merchant Street, Suite 202, Honolulu, Hawaii 96813, or call (808) 548-7657. HA

After 20 years as principal in architectural practice, Alfred Preis was appointed State Planning Coordinator in 1963, by the late Governor John A. Burns. Mr. Preis served as advisor on social and aesthetic planning questions. He was instrumental in the establishment of the State Foundation on Culture and the Arts in 1965, and was named its Executive Director in 1967.
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AIA Selects 1987 Institute Honors

A variety of architectural organizations, individuals and achievements that "enhance or influence the environment and the architectural profession" have been chosen to receive 1987 Institute Honors from The American Institute of Architects.

The Institute Honors, to be presented at the 1987 AIA National Convention in Orlando, June 19-22, will pay tribute to six individuals, a national park's preservation program, an architectural-awareness public foundation, a publisher of architecture books and periodicals and an architectural lighting design firm.

The 1987 recipients are:

- Professor James S. Ackerman, Cambridge, MA, Arthur Kingsley Porter professor of fine arts at Harvard University and author of books and films on architectural history;
- Jennifer Bartlett, an international artist of major works in the General Services Administration building in Atlanta; the Institute for Scientific Information in Philadelphia; Philip Johnson's AT&T building in New York City; and the Volvo Headquarters in Goteborg, Sweden.
- Steven Brooke, a nationally recognized photographer with numerous magazine covers and features to his credit, as well as an active proponent of historic preservation;
- Charles Guggenheim, the academy award-winning documentary film maker and producer of the upcoming five-part PBS series "America by Design," whose work has centered on architecture and the problems of urban renewal, urban and regional planning, and the role architects play in creating a quality environment;
- John Brinckerhoff Jackson, founding editor of Landscape magazine, as well as author, lecturer and university professor;
- Carter Wiseman, architectural writer, critic and lecturer, who for six years wrote New York magazine's popular "Cityscape" column and who has served as an editor of Portfolio, Horizon and Newsweek magazines;
- the Chicago Architecture Foundation, established in 1966 to increase public awareness and understanding of Chicago's built environment and to preserve its architectural heritage through a variety of educational programs at its own ArchiCenter;
- Jules Fisher & Paul Marantz Inc., New York City, architectural lighting designers and consultants to some of the world's most famous architects and works of architecture -- including the Boston Museum of Fine Arts, Proctor & Gamble's corporate headquarters in Cincinnati, Denver Symphony Hall, the rehabilitation of St. Louis's Union Station, the Jacob K. Javits Exposition and Convention Center in New York City and the Hubert H. Humphrey Metrodome in Minneapolis;
- Mesa Verde National Park's Anasazi Preservation Work, the preservation and documentation of the remains of a nearly 1,000-year-old civilization in the high plateau country of southwestern Colorado; and
- Rizzoli International Publications Inc., New York City, publisher and distributor of scholarly and general interest books, periodicals and journals of architecture and related arts.

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The Honolulu Chapter of the Construction Specifications Institute (CSI) has formed an interim committee called CIRIES. CIRIES is an acronym for Construction Industry Research Information Education Services.

CIRIES is based at the Fujio Matsuda Technology Training and Education Center at the Honolulu Community College (HCC). Walter Chun is director of the HCC Matsuda Center, which is part of the University of Hawaii system.

CIRIES will have access to a microprocessor Computer Data Base which is being created at the HCC Matsuda Center. Charles Yamamoto is head of Engineering Technology at HCC, and Mervin Chang is head of Architectural Technology.

The Construction Industry Apprenticeship Programs are also based at HCC. They use the word processing, spreadsheet analysis and computer graphics laboratories at the Matsuda Center where they will interface with the Hawaii/Pacific CIRIES Group.

Activities of the CIRIES committee will be governed and regulated by the Honolulu Chapter CSI as well as the CIRIES Advisory Council. The major goal of CSI nationally, regionally and locally is the “Advancement of Construction Technology.”

CIRIES conducts interviews and seminars, as well as publishes a tabloid insert CONTEXT 16, which can be filed on the basis of the 16 Division CSI Master Spec format. This is basically the same indexing format used by McGraw Hill Information Systems for their Sweet's Catalog File of Building Products and manufacturer's literature, as well as the Ramsey/Sleeper Architectural Graphic Standards edited by the American Institute of Architects in Washington, D.C. CONTEXT 16 is distributed to Honolulu Chapter CSI members via DIVISION 17, their monthly newsletter, as well as to contributors of CIRIES.

The Editorial Review Board for CONTEXT 16 includes Walter Bell, AIA, CSI; Peter Jordan, AIA, CSI; Russell Moy, AIA, CSI; Roy Nihei, AIA, CSI; and Carl Saake, AIA, CSI. CIRIES Advisory Council members are HCC Provost Peter Kessinger; HCC Matsuda Center Director Walter Chun; HCC Engineering Technology Head Charles Yamamoto; HCC Architectural...
Microcomputer laboratory at the Honolulu Community College Matsuda Center.

Technology Head Mervin Chang; Building Industry Association Executive Director Elroy Chun; Honolulu Chapter CSI President George Parrish, CCS; Robert C. Hockaday, FCS; W. Michael Mullahey, CSI; Hideo Kobayashi, CSI; Vice President of Crossroads Press, Kenneth Harding; and Hawaii GCA (General Contractors Association) Manager Alan Los Banos, Jr.

CIRIES’ immediate goals and objectives are to conduct research and publish information in the following areas:

- **Local and Regional Building Construction Failures and Remedies.** Hawaii has its share of design and construction deficiencies. However, there have not been any collective attempts to classify and categorize these problems on a local basis. In several instances, the remedial repairs specified have also failed for various reasons. CIRIES will conduct comparative analyses and publish statistical information utilizing computer graphics.

- **Construction Litigation Problems and Solutions.** Hawaii also has its share of design and construction lawsuits. It is well-known that this can be a very expensive way to learn. Several sectors of the construction industry have requested that CIRIES present quality control research alternatives.

- **Architectural and Engineering Performance Criteria.** National case (continued)
studies indicate that architects and engineers and their professional liability insurance carriers are taking the bulk of the responsibility for design and construction deficiencies and remedial repair costs. CIRIES, in conjunction with AEPIC (Architectural and Engineering Performance Information Center), will attempt to provide insights on performance standards and criteria for various sectors of the construction industry including the design professionals.

- **Emerging Building Codes and Standards.** In several recent conferences and seminars involving design and construction problems, it has become increasingly apparent that in many instances the building codes and standards are minimal at best. CIRIES plans to offer contributions to the development, interpretation and application of codes and standards.

- **Properties and Behavior of Building Materials.** Wherever possible, CIRIES will publish generic research data of interest to the various sectors of the construction industry, without direct reference to specific products, participants or product trade names.

The Hawaii/Pacific CIRIES Group has been organized to align itself in the near future with the University of Maryland based AEPIC Research and Education Center established in 1982.

Until funding can be secured to pursue CIRIES' more comprehensive goals, voluntary contributions are being sought from all component sectors of the local construction industry. Substantial local support will also give more credibility to grant applications.

If you are interested in supporting CIRIES, contact Mike Mullahey, CSI, fund drive chairman at 836-3811, Craig Williams, CSI, fund drive vice chairman at 533-3652, or Laurie Breedan, development consultant at the Matsuda Center at 845-4296.

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BIA Annual Expo
Set March 11 and 12

The 17th annual Builders' EXPO hosted by the Building Industry Association (BIA) of Hawaii is scheduled for March 11 and 12 at the Neal Blaisdell Exhibition Center. This year's event will offer the newest products, materials and services that the construction industry has developed for home and commercial applications.

Innovations in materials used for the roofing and siding trades will be featured, along with products for insulating with cost efficiency and energy conservation. Designers will find water resistant and fireproofing substances strongly represented in exterior and interior insulating materials of particular importance to Hawaii's climate. Safety and durability are major themes this year, along with emphasis on security systems and acoustical privacy.

The American Society of Interior Designers Industry Foundation will feature its own exhibit section, offering displays of the latest furniture and fixtures for home and business use.

Also featured will be the local chapter of the Concatenat Order of Hoo Hoo, the oldest industrial fraternal organization in existence. The Honolulu Club #142 membership includes individuals and businesses who subscribe to a united and progressive forest-based industry. Activities include benefits to the local youth and community, in addition to liaison services to the construction industry.

Exhibit hours are 4 to 8 p.m. on Wednesday, and 11 a.m. to 8 p.m. on Thursday. Admission is free to members of the building trades, with convenient downtown shuttle service to and from the exhibition hall. In addition to hourly and grand prize drawings, a cocktail reception will be held between 4 and 8 p.m. each evening.

BIA of Hawaii is affiliated with the National Association of Home Builders, a federation of approximately 800 state and local builders' associations throughout the United States. Local members represent the diverse ranks of building trades which compose Hawaii's construction industry. Builders, contractors and subcontractors, suppliers, interior and architectural designers and engineering groups form the body of membership which currently numbers 380 individuals and businesses.

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range of exhibits, demonstrations and information on the many services and products which the building industry offers to homeowners and businesses. BIA is in its 31st year and has contributed significantly to the strength and development of the professional building trades in the state.

Arakaki Relocating To Micronesia

Lloyd T. Arakaki, AIA, was recently named by Architects Hawaii to administer construction of the new national Capitol for the Federated States of Micronesia (FSM).

Arakaki, who recently was promoted to associate at Architects Hawaii, is relocating to Pohnpei, island capital of the FSM. The

FSM Capitol Complex, and recently was selected to design a new national Capitol for the Republic of Belau (Palau).

Arakaki joined Architects Hawaii in 1979 and was project architect for the FSM Capitol Complex. Additionally, he was project architect for the Community College of Micronesia, also on Pohnpei.

In Honolulu, Arakaki was project architect for the Fleet Intelligence Center Pacific, Pearl Harbor; the Waikiki Prince Hotel at Yacht Harbour Plaza; First Insurance Center; and renovations to the Hawaiian Tel building. He also was one of the designers for Queens Medical Center.

Prior to joining Architects Hawaii, Arakaki was a draftsman for the Honolulu firm of Building Design Systems.

Honolulu Roofing Recently Recognized

Honolulu Roofing Company, Ltd., was recognized by the National Association of Remodeling Industry (NARI) as Western Region “Contractor of the Year” for the massive four-acre retiling and waterproofing of Ala Moana Shopping Center.

Entered in NARI’s specialty contracting division, Honolulu Roofing beat out entries from 13 western states, including Texas and California. The Ala Moana job is believed to be among the largest tiling installations ever accomplished in the U.S.

Bonded Materials Opens New Office

Bonded Materials Company, a supplier of building material products throughout Hawaii, recently announced the opening of its first Big Island sales office.

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**NEW MEMBERS**

Henry T. Y. Kwok, AIA, is an associate with the firm Wimberly Whisenand Allison Tong & Goo Architects, Ltd. He received his Bachelor of Fine Arts in Environmental Design from the University of Hawaii, Manoa in 1976.

Douglas E. Collinson, AIA, is a recent member. He is with the firm DMJM-Hawaii. Collinson received his Bachelor of Architecture (5 years) degree from the University of Oregon in 1976.

David Harris Hart, AIA, is a recent member and is one of the architects with DMJM-Hawaii. He transferred in from the Salt Lake Chapter/AIA and the Utah Society of Architects. Hart attended the University of Utah where he received his Bachelor of Science degree in Urban Design in 1979, and his Master's degree from the Graduate School of Design in 1981.

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**Major Exhibit At Bishop Museum**

A major exhibition of more than 100 original paintings and sculptures of North American birds opens March 12 at Bishop Museum for five weeks. The 11th annual Birds In Art exhibition features the work of artists from 25 of the United States and eight other countries, including Japan, Australia and Canada. Following its Bishop Museum showing the exhibition moves to the Beijing Natural History Museum in The People's Republic of China.

Birds In Art features 97 paintings and 27 sculptures by 89 previous exhibitors and 23 newcomers. These artworks were selected from more than 750 entries submitted for consideration. A painting by Honolulu-born Thomas Quinn is included, as is the original of the 1986-87 Federal Duck Stamp by Burton E. Moore.
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For more information, contact Armstrong at 2828 Paa St., Ste. 2100, 833-9988. HA

Antislip Grip Line For Ceramic Tile

Hawaii Pacific Sales recently added a new antislip Grip line to its Premier Collection of glazed ceramic tile. Premier Grip is available in two sophisticated colors with a geometric finish.

The Premier Grip Collection is a perfect tile choice wherever slip resistance and beautiful, contemporary composition are the design criteria. It is particularly appropriate for use in the bath, spas, around pools and other wet areas. The collection may also be used on moderate duty floors such as auto show rooms and boutiques.

The thin, dry-press tile is ideal for remodeling. It will not add extra thickness to the former floor or interfere with door height.

Sable and Platinum tiles with domino or linear designs are available in 4" x 8" or 8" x 8" sizes. The domino and linear designs are also part of the Hawaii Pacific Sales Collection.

Premier Grip tiles may be used individually with Premier plain colors to establish a design statement. It can also complete the mood for an overall design scheme by harmonizing with other materials as background for furnishings.

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Cover: A sweeping view of part of the continually growing city of Honolulu with the Kakaako Redevelopment District in the foreground and dramatic Diamond Head as a backdrop. Photo courtesy of Hawaii Community Development Authority.
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MESSAGE FROM THE PRESIDENT

Back to Basics, Forward to the Future

by Evan D. Cruthers, AIA
President, Hawaii Society AIA

Sound business. Let us roll up our sleeves and work for it this year—as individuals, as firms and as a Society. For architecture and the pursuit of design excellence can better be achieved by individuals and firms who practice in the context of a sound business environment.

It is the basis for our success as individuals and as firms, and it is the groundwork we need for success as a Society. For it ensures that we have the economic strength to serve as advocates in our profession—an important role in our community that we are privileged to fulfill today.

In the past decade, the growth of our Society to over 600 members has brought with it special opportunities for the views of architects in Hawaii to be known by government agencies, legislators and the general public. Over time, the architect has become an increasingly influential leader in the community, whose presence on committees and boards adds talent and resources.

These relationships with our community, in which people can be comfortable in depending on us, speak of a growing awareness of our professional commitment to service through architecture. And always, moving forward to the future brings new levels of growth for us as a Society.

Our new direction for this year can be called “Back to the Basics, Forward to the Future.” The complexity of our time calls for us to be focused in our growth. Toward this end, our first two goals are a long-range plan, and providing all members with resources,

programs about practice management, and AIA resources to support you in your professional and economic success.

Other goals for the year are increased membership and membership awareness and services; harmony, efficiency, financial solvency and independence of our sections; improved government relations and consideration of legislative issues; increased public awareness and an improved public image; a state convention that provides educational opportunities with planning as our theme; and supervision of the energy grant.

That’s a tall order to accomplish in one year. I have, therefore, taken action to provide you with a comprehensive plan for 1987, and an Ad Hoc Committee to prepare a Strategic Plan for presentation at our annual Membership Meeting in early November 1987.

But most of all, these goals call for your dedication; for strength through the Society; for a return to the all-for-one and one-for-all concept of duty to our clients, service to our community and dedication to our professional society. The AIA is our opportunity to share our experiences, enhance our profession, and move forward together on a wave of synergy in the New Year.

I invite you to take the first step. Let us know what you want and how you feel. And join me and your fellow members in making 1987, our 61st year as a Society in Hawaii, a year of planning and sound business for all.

Evan D. Cruthers became a Media Five principal in 1973, subsequent to a year of private practice in Honolulu during which time he consulted with Media Five. He is currently President and Chief Operating Officer of the firm.

Cruthers is widely traveled and has lived and studied in London, the Panama Canal Zone and Puerto Rico. He earned a degree in architecture from the University of Idaho in 1964, and is licensed in Hawaii, Washington and Oregon. In 1985, he received an Executive Masters of Business Administration degree from the University of Hawaii.

In addition to serving as 1987 President of the Hawaii Society, American Institute of Architects, he is a member of the American Institute of Architects and serves on its National Professional Development Committee.
The Architect and
Kakaako Redevelopment

by Rex D. Johnson, Executive Director
Hawaii Community Development Authority

As the urban form of Kakaako takes on a new, more attractive appearance during the ongoing redevelopment of the 580-acre district, architects are facilitating and playing a large and vital role in the process. The Hawaii Community Development Authority (HCDA), which is planning and regulating this revitalization effort, recognizes the important contributions the architectural profession is making in Kakaako, and we will continue to work closely with architects to ensure that the District will become a better looking, more functional community.

Implementation of the Master Plan for Kakaako involves a different approach, both for government and the private sector. It requires the cooperation and combined talents of the public and private sectors. First, architects, as well as other professional and community groups, played a vital role in the formulation of the Kakaako Master Plan. Feedback and concerns from these groups were taken into consideration when goals for Kakaako were drafted, and later, finalized. It is a process that is still ongoing, as the Kakaako Plan is tested, and at times, amended to facilitate development.

The HCDA staff strives to touch bases with architects and planners of Kakaako projects, even in the initial stages of the development planning. The HCDA planning office has, as resources, many invaluable topographic boundary maps of the Kakaako District, as well as studies conducted on soil and geology conditions of the area. We welcome architects to come in and make use of these resources in planning these projects.

Because getting any project through the government bureaucracy can be frustrating at times, the HCDA endeavors to walk architects and developers through the process. For example, on a typical large-scale development, we urge architects and designers to meet with the HCDA staff even prior to the initial submission of (continued on page 9)
A spectacular aerial view of the Kakaako District which is undergoing redevelopment of its 580 acre area. The HCDA is planning and regulating this revitalization effort. Photo by R.M. Towill Corporation.

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During these "presubmission" meetings, the HCDA planners will explain the permitting process and evaluate the architect's rough plans to check for conformance to Kakaako Plan rules and requirements. Potential problems or conflicts can be pointed out at this early stage, and the HCDA can make suggestions or discuss alternate avenues to ensure facilitation of the project review process.

In many instances, such presubmission meetings will save the developer and his architect time, and help cut through some of the bureaucratic inconveniences normally associated with government-private sector interaction.

After the presubmission meeting(s), the HCDA performs another check (with the assistance of City and County agencies) to ensure that adequate infrastructure exists to accommodate the project. Acknowledging the importance of time in the review process, the HCDA works to complete the entire review (including public hearings) within 60-90 days for larger, planned development projects. Smaller projects are generally reviewed in one day.

The Kakaako Plan's rules and regulations have made the job more challenging for the architect. It is a unique plan, with goals bolstered by strict requirements for building setbacks, preservation of open spaces, building height, density and footprint limits, and provisions for parking. However, it is a challenge that is being met, evident in the creative and attractive planned development and smaller scale designs which have been approved and/or constructed in Kakaako.

Kakaako's successful redevelopment is dependent on the continued hand-in-hand working relationship of the HCDA and the private sector. The architectural professional can take pride in the fact that it is instrumental in shaping one of the most important projects in the State of Hawaii. HNA
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Phil Urquhart, Project Engineer, Allied Builders System
Connie Manuel, Owner's Rep., McDonald's Restaurants
Regulations and Architectural Quality

by Donald W.Y. Goo, AIA

The recent passage of the Tax Reform Bill, coupled with deregulation, may be one of the most significant events that will affect the quality of future architecture in Hawaii.

Much has been reported about the effect of the Tax Reform Bill in its elimination of the need to discuss business decisions with tax accountants and tax attorneys. The emphasis will be placed on making business decisions on the basis of profit rather than tax incentives. This should tend to improve the quality of the architecture because the motivation will change from high leveraging to higher equity. Emphasis will be put on low operational costs (better materials and equipment) to generate actual profits - not paper profit. Higher equity financing will reduce interest rates.

This revolutionary piece of legislation, although controversial, will cause a fundamental change in the quality of architecture. Our personal perceptions of value will be changed and will have a very profound effect on the future generation of building developers, occupants and taxpayers.

Governor Waihee, each of our legislators and County mayors should consider the long-term, social and economic effects of all legislation which they support. It is not often that a significant piece of legislation will be passed; however, that goal should be kept in mind. Someday there will be a proposal made that will be as significant as the “highest and best use” theory that contributed to the economic development in Hawaii in the early 1960s. Hawaii has been struggling to be sensible in its growth and sensitive to the needs of business development. Good “growth and development” legislation supports and promotes high architectural standards. This type of legislation is fundamental to the molding of responsible attitudes toward our environment and the education and health of all people.

The challenge is: Can we, at State and County level, initiate and pass significant legislation that improves our environment and citizens?

Our greatest resources are our environment and our people, and therefore our priorities should be the development of our environment for the benefit of our citizens and guests and the education of our people.
Special Districts Up for Review

by Benjamin B. Lee, AIA

After finishing one major overhaul of city zoning regulations, which resulted in adoption of the new Land Use Ordinance (LUO), we have embarked on another long overdue—and equally challenging—review and revision of Special District regulations.

In developing the LUO, we did not review these districts in any detail, but chose rather to bring them into the basic zoning ordinance and defer an in-depth study and specific recommendations for change until after adoption of the LUO.

There are currently eight Special Districts under city zoning jurisdiction: Waikiki, Chinatown, Punchbowl, Diamond Head, Thomas Square/Academy of Arts, Haleiwa and the Hawaii Capital District.

The impetus for creating these special regulations was a reaction to an intense period of development during the late 1960s and early 1970s. This concern led to the adoption of eight districts, each of which was designed to protect and enhance a specific geographic and/or cultural resource.

The first of these new districts was the Hawaii Capital District, in June 1972. The final district was the Haleiwa District, in May 1984. During this period of 12 years, a new district was adopted, on the average, every 18 months.

Until the LUO was adopted, the regulations for these districts were contained in separate ordinances which existed independent of the main body of zoning regulations, the Comprehensive Zoning Code (CZC). Sometimes this separate treatment resulted in a lack of consistency across the districts and conflicts with CZC standards.

With the LUC adopted, we now want to review the Special Districts comprehensively for internal and external consistency. This study will also look at the BMX-4 Central Business Mixed Use District, primarily because of an expressed interest in providing additional growth potential for the Downtown area.

The revision effort has an ambitious work schedule which
targets December 1987 as the completion date. At that time, proposed changes to all districts should be ready for submittal to the City Planning Commission.

This study's work program has many similarities to the LUO work program. For example:

An in-house "staff team" approach, is being used, rather than consultants;

A technical advisory committee which will include architects, is being used to provide balance to staff and neighborhood perspectives; and

There will be a commitment to out-reach programs and public input.

Some of the issues which we will be addressing are:

- Assuring clear linkages between the objectives and the land controls system of each district.
- Providing better guidance on what types of development will be required to undergo what types of permit processes.
- Creating informational handbooks to more fully illustrate the architectural objectives of the district. These handbooks should be useful to architects designing projects within the specific district.
- Updating district boundaries where necessary to specifically relate to district objectives.
- Clarifying what types of design review (and the level of design review) are appropriate for the specific district.
- Determining the physical growth of the Central Business District in terms of permitting additional height and densities.
- Updating provisions which are out-of-date or which conflict with other public policies.

As the study progresses, we look forward to input from the Hawaii Society/American Institute of Architects, as well as individual architects. Several suggestions have already been made during the LUO project, which we will be considering in this study. We welcome continued and additional input from architects to assure that adopted regulations are reasonable, appropriate and as clear as possible.
Light Law for Star Watchers
by Rick Chong, Electrical Engineer

If you ever have the opportunity to trek up to the top of Mauna Kea and see the stars, do it. Considered by most astronomers as the pristine astronomical observation site in the world, Mauna Kea presently has a handful of observatories in year-round use, with another facility soon to be in operation. There is also a group of astronomers that are seriously considering Mauna Kea for their national observatory.

Why is Mauna Kea a prime observatory site? A strategic location on the globe, elevation above the layers of pollution, large percentage of clear viewing days throughout the year, low amounts of water vapor and no light pollution are the major reasons why Mauna Kea is a desirable location.

Of all the reasons, only one, light pollution, can be controlled through regulation. In comparison to Kitt Peak Observatories, where the adjacent city of Tucson, Arizona has grown tremendously and has a detrimental effect on research, Mauna Kea has a small community around it which produces no measurable light pollution or sky glow. Observatories do most of their work in the infrared and visible region of the light spectrum and the smallest amount of stray light can be detected by the highly sensitive telescopes.

To maintain existing conditions, laws have been passed, with the strong influence of the astronomers who use the observatories at places like Mauna Kea, Kitt Peak and Mt. Polomar (San Diego), which regulate the type of outdoor lighting used throughout the community.

On the island of Hawaii, an ordinance exists (Article 9. Section 14-50) that requires all outdoor lights, except low pressure sodium (LPS), to be shielded, and all outdoor lights having more than 15 percent of the total emergent flux (unit of light) living in the spectral region below 4400 anstrom units to be filtered with a filter whose transmission is less than 10 percent. Simply put, the ordinance requires outdoor area lighting or flood lighting for security, streets, highways, parking lots, etc. to be of the LPS type, which is a

(continued on page 17)
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Facilities housing public recreation, car dealers or advertising that require good color rendition for the activity conducted or the product sold, are exempted, but must turn off their lights between 11 p.m. and sunrise. This is the time period when most astronomers conduct their research. Special exemptions can be obtained through written requests submitted to the County Chief Engineer.

Why LPS? Why not another lamp source? Since research relies so heavily on the ability of the equipment to detect, examine and record faint light sources from distant universes, any stray light in the infrared or visible spectrum bouncing around in the sky would ruin any data recorded. With only LPS outdoor lights, any amount of sky glow would obviously have the same characteristic bandwidth of LPS lamps. Astronomers can now look at all the different bandwidths produced by what they are observing, and ignore the minute amount of data gathered in the bandwidth characteristic of LPS. Discarding this data has no effect on the end results. With other light sources such as mercury vapor (MV), metal halide (MH) and high pressure sodium (HPS), there is more light interference in a wide range of bandwidths. This would require more data to be discarded, resulting in unclear pictures and conclusions.

Hawaii has a valuable asset in the observatories. They bring in millions of dollars to the economy and provide much recognition for the state as a center for astronomy. Presently, Hawaii County is systematically changing all street lights from MV, MH or HPS to LPS.

Some resorts have already agreed to use LPS in their access roads and parking lots. Our astronomers are also preparing proposed changes for stricter laws governing light pollution or sky glow. The revised ordinance would further guarantee that Mauna Kea will remain a pristine and beautiful location for looking at the stars. HA

The University of Hawaii maintains an 88mm telescope at the top of Mauna Kea, which is considered a pristine astronomical observation site.

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“BUILD HAWAII STRONG WITH MASONRY”
The Development Process and Building Failures

by Andrew Charles Yanoviak, AIA, CSI

The Construction Specifications Institute (CSI) is an organization of members from various sectors of the construction industry, who have formally adopted the "advancement of construction technology" as their primary goal. The Honolulu Chapter of CSI recently held a public seminar and workshop addressing "Failure Modes in Construction." This article is based on my presentation, which dealt with the need for fundamental structural reform in the development process.

Before we can seriously discuss reform in any interactive process, we need to more carefully examine the context within which it operates. For discussion purposes, we will assume that the construction market in Hawaii is equally divided as shown in Figure 1. We will also assume that architects and engineers (A/E's), as professional design firms, do only 50% of the public work (the remainder being done "in-house"), and 40% of the private work (excluding residences, remodeling and other work done without A/E's).

On the basis of these assumptions, the extent of A/E involvement with development is limited to about 25% of private building construction in Hawaii and therefore, only about 10% of the total construction market.

Figure 2 is based on the smaller "developer" square in Figure 1. It apportions the assignment of responsibility for building construction failures based on national averages.

Figure 3 represents the contrasting compensation rewards for each class of player in the typical development project. These graphics vividly portray the major differences between assumption of culpability and profitability in this skewed arrangement.

McGraw-Hill's F.W. Dodge Construction News reports on comments made by President John A. Busby Jr., FAIA, at the recent national AIA convention. Some of his comments were "Architects have lost too much control over their profession during the last two decades...we've had a dilution of who has authority." And, "For too long, we've had the legal profession telling us how to do architecture...I think architects ought to be the ones who direct that...it is the architect who designs the building."

Further, Busby stated, "Architects' concerns about liability have always been with us...let's look at this not as a crisis, but more objectively, as an opportunity to perfect our work...and see how we can improve." However, he also added, "If architects are going to
improve their profession, they
deserve to be materially rewarded
for the effort...the architect must
understand that it is fair for him to
be compensated for the risk taken.”

Regarding a 1983 AIA study
“...showing median annual pay for
firm principals at $39,000 and
project architects at $28,000...”

Busby stated that, “During the
1980s, we have seen a decline in
compensation in relation to the
responsibilities that we took on...the
percentage fee is no longer a proper
and just method of compensation...architects must take an active role
in long-term city planning.”

Busby did not mention that A/Es
do not have a court system or a
hospital system to facilitate their
individual efforts. During the CSI
seminar, I asked the attorneys to
imagine how their individual
practices and financial renumeration
would be affected by the lack of a
court system.

Figure 4 shows the typical
traditional triangular relationship
where there are written contracts
between the owner and the A/E,
and between the owner and the
contractor; however, there is no
contract between the A/E and the
contractor which creates quite a few
problems in practice, some of which
have led to eventual “I told you
so...” building failures.

Figure 5 shows transitional
developments in attempting to
alleviate some of the communication
(continued on page 23)
The new sales and service facility for Shelly Mazda was a challenge and an opportunity. Three existing buildings had to be integrated to fill the needs of the client to expand a successful new car dealership in the central Honolulu area.

The Kakaako site included five buildings, two of which were demolished to provide the Kapiolani Boulevard frontage and parking area at the back of the site. Three buildings were renovated to incorporate (A) the Showroom and Dealership offices, (B) Service building with stalls and equipment for 20 cars, and (C) Parts warehouse and service and parts staff offices.

The principal architectural problem was to clean up and simplify space by demolishing all elements except basic structure, walls and roof. The new image was developed by opening the ground floor showroom with full height glass walls and placing a new facade of prefinished metal panels over the old walls. This facade was extended perpendicular to the front building for a lanai along one side to further extend the building front toward the street and provide additional covered display area.

This adaptive reuse project illustrates an interim stage between development of Kakaako at its maximum long range potential expressed in the Kakaako HCDA Plan and its present unimproved but intensively used business district.

The interior design concept for Kapiolani Mazda was defined using clear retailing techniques long established in apparel and jewelry sales. The first step was to define the typical Mazda buyer. As the
price of the automobile has risen in the past few years, the image of the car has changed from economy to mid-priced well-engineered sedan and luxury sport car as in the popular RX-7. The buyer can be defined as a person willing to spend $10,000 to $20,000 plus, but looking for top value in the product.

Materials for the interior were chosen to reflect the materials found in the product. Chrome strip ceiling and metal columns painted by the in-house body shop, with automobile paint, are used in the same ways chandeliers and mirrors are used to enhance diamonds and gold in a jewelry store.

Colors were selected to compliment the range of Mazda colors with particular consideration for the two top selling colors, silver and gunmetal gray. A navy blue tile floor and deep purple walls are livened with white and flashes of brilliant yellow. Natural white oak furniture and interior trim are used, along with a custom designer carpet using the Mazda logo.

Architectural and Interior design were carried out together by the design team so that furnishings and finishes were integrated with the overall design concept which had as its goal the display and sale of cars in an environment that reflects the quality of the product and the dealership.

Client:
Shelly Motors, Inc.

Architect:
Sutton Candia Partners

Interior Design:
Dian Cleve Design

Structural Consultant:
Richard M. Libbey, Inc.

Mechanical Consultant:
Kenneth Thom Associates, Ltd.

Electrical Consultant:
Douglas V. MacMahon

Civil Engineers:
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problems inherent in the traditional contractual relationship addressed by the typical AIA standard documents; whereby, the A/E convinces the owner to hire a "clerk of the works" and the contractor in turn bolsters his camp with a "hard-of-hearing" superintendent with a very short memory span. Of course, this arrangement has also led to problems and the eventual retention, by the owner, of a construction management specialist who may have also served as a value engineering ("cost-savings") expert; and consequently, has assumed major liability responsibility in the process.

The diagram also depicts one of the major problems with building elements such as elevators, windows, hardware, etc. where the A/E, as a part of his percentage fee, meets with the manufacturer's sales representatives; however, the "job-shopper" contractor and his developer-client are talking directly to the factory, and what the A/E sees in the catalog literature when he makes his selection, (and the product components shown on the shop drawings) may not be entirely recognizable after installation.

Figure 6 shows a trend which is now prevalent in the mainland in many areas, but which has not yet really surfaced in Hawaii, with the exception of some commercial interiors contract work. It is based on the "design-build" concept where the owner/developer no longer contracts directly with the A/E, but rather, retains a contractor who in turn retains the A/E and keeps his creative effervescence well disciplined. In the process, the frustrated A/E has now relinquished many aesthetic and technological design decisions and has lost direct contact with the owner/developer as he moves toward self-annihilation and premature extinction.

Figure 7 shows how some aggressive and well-capitalized A/E's reacted to the previous arrangement by seizing control, as well as direct communication with the owner/developer. Realizing that many contractors are nothing more than brokers hiring and coordinating sub-contractors, some A/E's have decided to take complete charge of both the design and construction functions, and hopefully improve quality control in the process.

Figures 8 and 9 comparatively illustrate what happens to the culpability and profitability factors shown previously in Figures 2 and 3, resulting from this advanced "design-build" arrangement shown in Figure 7. Notice that the A/E has now assumed 75% of the responsibility instead of 50% as before; however he has also increased his profitability from 3% to a full 25%. Therefore, it is up to the individual A/E firms to decide their own risk management options as they increase their compensation and their overall professional quality control of the construction project.

Figure 4: Typical traditional triangular contractual relationships.

Figure 5: Transitional triangular contractual relationships.

Figure 6: "Design-build" contractual relationships favoring contractor.

Figure 7: "Design-build" contractual relationships favoring A/E.
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Figure 8: Assignment of responsibility for building construction failures.

Figure 9: Apportionment of compensation in building construction project.

"CULPABILITY"

- A/E = 75%
- CONTRACTOR = 12%
- MANUFACTURER/SUPPLIERS = 10%
- DEVELOPER/OWNER/FINANCE = 3%

"PROFITABILITY"

- A/E = 25%
- CONTRACTOR = 13%
- MANUFACTURER/SUPPLIERS = 12%
- DEVELOPER/OWNER/FINANCERS = 50%

Generally, the owner/developer and financiers are not overly concerned with this new arrangement, because they are still entitled to at least 50% of the compensation for accepting only 3% of the liability responsibility, which is not a bad deal. Also, the contractors and suppliers have balanced and acceptable deals. Of major concern, of course (especially to professional liability insurance carriers), is the overwhelming liability responsibility assumed by the A/E.

Figure 10 illustrates a development which has already taken place on the mainland where...
it has involved some very well-renowned A/E firms, and reportedly, although it has not yet been formally announced, a major Hawaii developer has purchased an A/E firm that will be providing him with "in-house" services.

Some owner/developers have also purchased contractors, and now they are in direct control of materials and products purchases, with the assistance, of course, of their certified public accountants and attorneys to keep them out of troubled waters.

The A/E should keep in mind that he still is required by law to stamp and sign the drawings, regardless of his capabilities to exercise quality control or even observation of construction. It is also not known how the professional liability insurance carriers are responding to these new arrangements and organizational structures, in which the legal profession is directly involved.

Figure 11 is based on my own architectural design research efforts. It simultaneously represents a marriage between ancient Egyptian and classical Greek geometries (man's very first math and science, and the soul of architecture). It indicates how these harmonic proportions, which are part of all living matter, can perhaps be a guiding light to synergistically integrate and harmoniously balance the levels of responsibility and profitability in a building construction project.

The area defined by unit lengths 1 and 2 (precisely defined by nature) belongs to the owner/developer, while the 2 x 4 goes to the material and product suppliers, and the 1 x 3 is the realm of the contractor and his sub-contractors.

The area defined by the 3/4/5 triangle of Pythagoras is naturally assigned to the architects; and, of course, his engineering consultants have the remaining area defined by unit length 5 (the radius of the "Golden Section" extending out into the "city" community), and the square roots of 5 and 20.

How to achieve an organizational structure and a viable economic communications network appropriate for a marketplace such as Hawaii, in order to aspire toward the framework of Figure 11, is the real challenge of the near future. Perhaps, attorneys and accountants would be willing to work with owner/developers, A/E firms, contractors, manufacturers and suppliers to achieve such noble purposes in this island city community.

A/E firms do much more than produce construction documents, and they should be compensated adequately by society in order to have the opportunity to institutionalize their design research efforts and its attributes.

Figure 11: Unified Egyptian "Quadrature" and Grecian "Golden Section."
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AIA Membership Tops 50,000

The American Institute of Architects honored Rhonda R. Shephard Harrell, AIA, of Delray Beach, FL, with a citation acknowledging her induction as the 50,000th member of the Institute. Harrell received the citation during festivities for the inauguration of the 1987 AIA President, Donald J. Hackl, FAIA, at the National Building Museum in Washington, D.C., on Dec. 5.

John A. Busby Jr., FAIA, 1986 AIA President, presented Harrell with the citation. Noting the significance of her membership, Busby called reaching the 50,000 member milestone "a measure of the growing value and unity of America's architects, and a reminder of the unwavering commitment of the profession to be of ever greater service to the nation and its people."

The AIA, founded in 1857 with 13 members, is a voluntary, not-for-profit membership organization representing architects in nearly 300 state societies and local chapters stretching from Maine to Guam. The AIA fosters professionalism and accountability among its members by providing continuing education and training, by assuming a strong leadership role in influencing the direction of change in the built environment, and by promoting design excellence.
Ceramic floor tiles have several advantages in architectural design. Probably the most significant are permanence and durability. Maintainability is another advantage. Ceramic floor tile does not require sealants or other recurrent special treatments as needed on some floor coverings. Its surface is easy to clean and it is a simple procedure to repair a damaged surface by replacing individual tile units.

While ceramic floor tile is manufactured in a variety of shapes, sizes, colors, textures and styles, there are actually only a few classes of ceramic tile won't lose its 'shiny smile.'

or types. These classes differ basically in the materials from which the tile units are formed and pressed and the kind of firing operation employed.

Conventionally, ceramic tile has been classified as "vitreous" or "nonvitreous." Floor tiles are more often vitreous than nonvitreous. The vitreous type of ceramic tile provides greater structural strength and a higher degree of resistance to abrasion.

Ceramic floor tile is as much at home in the corrosive environment of a chemical plant as it is in a residential application. It can be used for interiors as well as exteriors.

Whether it is the lobby of a hotel or a living room in a family dwelling, ceramic tile is unmatched. Unlike carpeting, there is no nap to wear down. Unlike vinyl, ceramic tile won't lose its "shiny smile."

Here are a few common myths about ceramic tile:

- "Ceramic Tile is Heavy." Incorrect. Ceramic floor tiles weigh about the same as traditional 3/4" oak flooring, and the weight is distributed evenly. Any well-constructed floor will support ceramic tile without problems.

- "Installation is a time-consuming mess." Untrue. In fact, many installations, if laid out properly are finished in as little as one day. Some of the new installation materials used to adhere tile need no mixing and raise no dust.

- "You need a special surface" No special surface is necessary. Ceramic tile can be applied to a variety of smooth, sound, dry surfaces including plywood, gypsum board, concrete, vinyl and even existing tile.

Considering the longevity of ceramic floor tiles, they are among the most economical of floor coverings. The advantages are many.
National Laminates Gets New Color Line

Wilsonart® Laminator recently introduced 33 new solid color decorative laminates to its Color Quest line for 1987. This increases the selection to 110 items, according to Bill Reeb, vice president of marketing.

All Color Quest selections are available in a wide range of finishes and product types, including colorthrough SOLICOR®, grooved Decorative Tambours, and in specialty laminates, to resist fire, abrasion and chemicals.

New selections come from the four major color directions, including Fresh Pastels - clear, soft, lustrous; Blended Classics - mid-tones, colored neutrals; Jewel Brights - radiant, brilliant, lively; and Dramatic Darks - deep, elegant, luxurious.

A 6-page 1987 Color Quest brochure containing a selection of solid colors, individually swatched, as well as application photos and a complete technical data listing is available by calling 833-4344.

Appointment For Skylights of Hawaii

Super Sky Products, Inc. recently announced the appointment of Skylights of Hawaii as its exclusive sales representative firm.

Ron York, principal of Skylights of Hawaii has over thirty years of experience in the construction industry, mostly as a general contractor building custom designed homes. In January 1979, Skylights of Hawaii began as a sole proprietorship and was incorporated in October of that year.
March 11 and 12 at Neal Blaisdell Center

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NEW MEMBERS

Bruce R. Christensen

Bruce R. Christensen is a new Professional Affiliate Member. He is the Senior Sales Engineer with Brewer Chemical Corp. involved in waterproofing, corrosion control and concrete restoration material. Christensen graduated from San Francisco State University with a Bachelor of Science in Marketing, and minor studies in International Business and Economics.

Aza Summers, AIA, is a recent new member. Summers is self-employed; and has a Bachelor of Arts degree from the University of Washington.

1987 HAPPY NEW YEAR!!!
ASLA Members Host Annual Meeting

The Hawaii Chapter of the American Society of Landscape Architects (ASLA) held its annual meeting at the Plaza Club on Dec. 3 and recognition was given to accomplishments of the year, the installation of new officers and presentation of the Malama Aina Award.

During the past year, the chapter had sponsored a series of Talk-Story luncheons on planning, and held a series of lectures at the University of Hawaii on "Landscaping in Hawaii." Additionally, the chapter had co-sponsored a slide-talk of Roberto Burle Marx, and provided judges for the Parade of Homes.

The Hawaii Chapter of the ASLA also initiated a Community Action

1986
Malama Aina Award to Aaron Levine

Team to assist the state Department of Transportation in its problems with landscaping along state highways. At the University of Hawaii, the chapter initiated an education committee to assist in the establishment of a landscape architecture degree program and co-sponsored a landscape industry seminar.

New chapter officers sworn in at the annual meeting were President, Jan Fong; President elect, Greg Boyer; Vice President, Randy Fujimoto; Secretary, Alan Schildknecht; Treasurer, Todd Black; Member at Large, Richard Brownlie; Trustee, Alan Clarke; and Past president, Ted Green.

Some of the ASLA members at its recent annual meeting were (left to right) Ted Green, Past President; Alan Clarke, Trustee; Greg Boyer, President Elect; Randy Fujimoto, Vice President; Todd Black, Treasurer; and Alan Schildknecht, Secretary.

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The 1986 recipient of the Malama Aina Award was Aaron Levine, FASLA. Levine was recognized for his outstanding contribution to landscape architecture and planning in Hawaii.

The Malama Aina Award is an annual recognition award for persons, agencies or organizations outside of the landscape architecture profession who have supported, promoted or served the profession or preservation and enhancement of the Hawaiian landscape.

1987 Architectural Photo Contest

Entry forms for the 1987 AIA Architectural Photography Competition, organized by the St. Louis Chapter AIA in cooperation with national AIA, are now available. Deadline for entries is March 31. Winning entries will be exhibited at the 1987 AIA Convention in Orlando, and will be published in Architecture. Images for the 1989 AIA calendar will be selected from the entries.

There will be cash prizes totaling $2,500 to include: 1st prize $1,000, 2nd prize $700 and 3rd prize $300 for any architectural subject or some element of the man-built environment. Photographic interpretation of the subject matter is the issue, not the architecture. There is also the Louise Bethune Award of $500 for the best image of an architectural subject in the United States.

Photo Competition chairman is Albert B. Fuller Jr., AIA, of St. Louis who has worked in cooperation with John Hoke, AIA, of the national staff to bring this opportunity to members, associate members, professional affiliates and student members of the American Institute of Architects.

Entry fee for AIA, Associate and Professional Affiliate members is $15 for one to five slides, and $10 for student members. There is no limit to the number of entry fees that may be submitted by any one person. Great care will be taken with all slides submitted, but no responsibility for loss or damage during transit or any phase of the competition will be assumed by the St. Louis Chapter AIA or by the AIA.

Entrants must use the official entry form, which will appear in the January 1987 Architecture and a future issue of Memo, or may be obtained by sending a stamped self-addressed envelope to St. Louis Chapter, AIA, 911 Washington Ave. #225, St. Louis, MO 63101-1203.

Fabrica International Receives Award

At the recent Hawaii Flooring Association (HFA) Convention, Fabrica International was honored by being selected Supplier of the Year. HFA members include dealers, contractors and retailers, who rate suppliers based upon service, quality of product (including consistency of quality) operations and support of the Association.
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Green Makes Move To Group 70

Edward T. (Ted) Green has recently joined Group 70 architects, planners and interior designers as computer systems manager, according to Norman G. Y. Hong, managing partner. “Ted Green comes to Hawaii with unique credentials,” noted Hong, “He is by education and training both an architect and a computer programmer, one of the real pioneers in the integration of computers and design.” Green’s computer-design career includes the co-creation of some of America’s earliest software systems designed for use by architects. These systems are specific application of the general field of computer-aided design and drafting, commonly called CADD. He most recently served as architectural applications consultant across the western U.S., Canada, Hawaii and Alaska for Sigma Design, Inc. Sigma is recognized today as one of the pacesetters in the CADD field.

Papandrew Named Fellow of ASLA

Thomas P. Papandrew has been elected one of only 15 national Fellows of the American Society of Landscape Architects (ASLA) for 1986. Papandrew is only the fifth person in Hawaii to receive this honor which has been presented by the ASLA since 1899.

Papandrew, director of planning at Belt Collins, was presented the award for direct service to his professional society and excellence in his landscape work that spans 17 years and covers a wide range of projects in Hawaii and around the globe. Belt Collins has worked on projects in over 25 countries. Papandrew assisted with the formation of overseas offices for the firm in Sydney, Singapore and Hong Kong.

Papandrew has traveled extensively to manage projects for Belt Collins in such areas as Southeast Asia, Australia, the South Pacific, Israel and Egypt. He has served on local governmental and professional committees. For the City Council of Honolulu, he served on the Urban Design Committee of the Comprehensive Zoning Code Overhaul, and the Task Force Committee on Zero Lot Line Development. Additionally, Papandrew also served on the Hawaii Coastal Zone Management Citizens Forum.

Papandrew has held many positions in the ASLA. Among them, he has served as president of the local chapter, chairman of the national convention in 1985 and national vice president.

Papandrew received a Bachelor of Architecture degree from Arizona State University and did work in Graduate Study, Pacific Urban Studies at the University of Hawaii.

CIDS Named Outstanding Project

A concrete honeycomb structural system, developed and patented by Alfred A. Yee, was instrumental in the Concrete Island Drilling System (CIDS) which was recognized as an Outstanding Civil Engineer Project of 1986 by the American Society of Civil Engineers.

The honeycomb structure is composed of more than 200 precast concrete “silos,” 42 feet high and 11 feet in diameter. Each silo is constructed by integrating five precast units, each unit about eight feet in height. The precast units are joined together by NISSCO Splice Sleeves, another patented invention of Alfred A. Yee, first utilized in the construction of the 38-story Ala Moana Hotel building.

Each silo is then tied together by cast-in-place interconnecting vertical walls, perimeter walls and top and bottom deck slabs. The entire perimeter wall and slab areas are post-tensioned for structural strength and crack control. The concrete used is a new type of high-strength, lightweight, cold weather marine concrete.

The CIDS is unique as a drilling platform. Its modular design reduces construction time as silos were prefabricated simultaneously as the slabs were being poured. Sensitive environmental implications such as dredging and gravel-handling activities are avoided since the structure is simply ballasted down with seawater to sit directly on a natural sea-bottom. The entire platform can be refloated and relocated at minimum cost and impact to the environment.

Built by Global Marine Development, Inc., the CIDS, also known as an Arctic Ocean platform, has revolutionized the method of drilling offshore on the north slope of Alaska. “With the CIDS, substantial economic and technological advantages have been realized and this method has replaced the only other previous method of offshore drilling which was performed on artificially constructed gravel islands,” said Ed Cambridge, senior vice president and executive director of Alfred A. Yee Division...Leo A. Daly in Honolulu. “The honeycomb system was chosen for its strength against the extreme ice pressures, as well as the high wind and wave forces that occur in the Arctic.”

According to design engineer Fred Masuda of the Alfred A. Yee Division...Leo A. Daly, the CIDS project is only one of the possible configurations. “Other sizes and plan configurations have been designed to meet various needs of other users such as the ROFOMEX,” he said. “The ROFOMEX is a prestressed concrete honeycomb system used for phosphate mining operations in Mexico.”
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New Business Center In Iwilei Area

The Iwilei Business Center, a conversion of the 300,000 sq. ft. Del Monte Cannery to industrial condominiums, has been completed and is sold out, according to Gordon Hess, District Manager of Grubb & Ellis Company, Commercial Brokerage Services in Honolulu. The largest industrial condominium project ever developed in Hawaii, the center was purchased from Del Monte Corporation in 1983 by Iwilei Business Center, Inc., a subsidiary of Lone Star Hawaii Properties. Grubb & Ellis acts as exclusive sales agent for the property; Architects Hawaii planned the conversion, and Michael S. Myers, Senior Marketing Consultant with Grubb & Ellis Company, was the project coordinator.

"We’re proud of this project and the conversion because it is the first of its kind in the state," says Myers. "We’ve already seen signs of further renovations and restorations in the Iwilei area, following our lead."

The site includes five contiguous buildings of the former pineapple cannery at 500 Sumner Street. The area was zoned I-1 (light industrial), but was recently changed to MX (Mixed Use) under the State Master Plan. Tenants include a variety of users such as industrial, warehouse, commercial, office space, light manufacturing, distribution and more.

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Tile Contract For Kalakaua

International Tile Design, Inc., supplier of imported ceramic tile, recently announced that it has been awarded a contract to supply materials for the Kalakaua Avenue redevelopment project. The contract was awarded by the City and County of Honolulu.

According to Ken Ryan, general manager at International Tile Design, the contract calls for some 130,000 square feet of tile. "The tile will be used to delineate pedestrian crossings at major intersections," Ryan pointed out. "It will also be used on both sides of Kalakaua Avenue running its entire length from the intersection of Ala Moana and Kalakaua to the intersection of Kapahulu and Kalakaua."

BIA Installs 1987 Officers

The 32nd annual installation banquet for the Building Industry Association of Hawaii was on Dec. 5 at the Hilton Hawaiian Village.

James Watanabe, president of J W, Inc. was installed as president.
Senior officers were Donna Goth, president of Blackfield Hawaii Corp., as association president-elect; Walter Arakaki, Walter Arakaki General Contractor, as vice-president; Marvin Uehara, Hasegawa Komuten Hawaii Inc., as secretary; and Frank Machado, Reef Development of Hawaii, Inc., as treasurer.

The Building Industry Association of Hawaii is an affiliate of the 130,000-member National Association of Home Builders.

New Management For Kaneohe Shopping Center

Blackfield Hawaii Corporation recently purchased Kaneohe Shopping Center from the Magoon Estate.

Located in the heart of Kaneohe's business district at 45-934 Kamehameha Highway, the Center covers approximately 3.2 acres of leasehold land area and has 44,994 sq. ft. of ground floor retail space in three separate buildings. The major tenants are Times Supermarket, Walrich Drugs and Wendy's.

Hawaii Management Corporation, a subsidiary of Blackfield Hawaii Corporation, has been named the managing and leasing agent for the center, which is presently 100 percent leased.

U.S. Postal Service In The Millyard

The U.S. Postal Service recently purchased the largest lot in The Millyard, a new business park in Wailuku, Maui, according to Monroe & Friedlander, Inc., the exclusive sales agent for The Millyard.

The landmark Wailuku Sugar Mill, which stood on the site for many years, was recently removed to make way for the construction of the Postal Service's new one-story facility, which will have about 16,000 square feet under roof.

Construction of the building on the 146,955 square-foot fee-simple parcel is scheduled to begin late this year, with completion set for June of 1988.

Architect for the new post office building is Gima, Yoshimori & Associates, AIA, Inc. The Millyard is a development project of C. Brewer Properties, Inc.

Located next to Iao Stream with views of macadamia nut orchards on one side and the ocean on another, The Millyard is divided into 55 parcels from 10,024 square feet suitable for a broad-based selection of commercial and light industrial companies.

The design of The Millyard includes wide roadways, underground utilities and attractive landscaping. Quality design guidelines enhance the project's business environment.

Monroe & Friedlander, Inc., the exclusive sales agent for The Millyard, has sold all but 18 of the business park's lots to date.

The Millyard was first placed on the market in March of 1985.

New President At Shipyard

D. Scott Fitzwater, chairman of the board and chief executive officer of Honolulu Shipyard, Inc., (HSI), a subsidiary of Dillingham Industries, recently announced the appointment of Roy J. Yee, as president and chief operating officer of HSI. Yee replaces Steven C.H. Loui, who, after two years of managing HSI, has announced his resignation in order to devote his time to other business interests.

Loui will retain his position as a director.

Also appointed as vice president was James V. Sterling, Jr., who has been with HSI since its formation.

Dillingham Industries is responsible for maritime companies owned by Dillingham Corporation, including HSI, Dillingham Ship Repair (Portland), Foss Marine (Seattle), Pacific Towboat (Long Beach).

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Welcome to New Editor

The Hawaii Society of the American Institute of Architects welcomes Anita K. Painter, new Managing Editor of Hawaii Architect. She joined PMP Publishing Company over a year ago and is also managing editor of two tabloids, The REALTOR® and Ka Nupepa, a Central Oahu community newspaper.

Painter is a former school teacher with the Department of Defense Dependents Schools, working with families of U.S. military personnel stationed overseas. For 15 years, she has worked with schools and communities in the Far East in Japan, the Middle East in Turkey, and in Europe. She returned "home" to Hawaii in 1984.

Coming Up in Hawaii Architect

For 1987, the following themes are scheduled to be featured in Hawaii Architect.

January
Architecture in Government
Floor Coverings

February
Building Renovation
Versatility of Wood

March
Art in Architecture
Bathroom Design

April
Resorts
Lighting

May
Historic Preservation
Waterproofing

June
Architects at Work and Play
Kitchen Planning

July
Shopping Centers
Appliances Update

August
Architecture Around the World
Roofing

September
Computer Versatility
Office Automation

October
Landscape Architecture
Restaurants

November
Medical Facilities
Remodeling

December
Reflections on '87

Writers wishing to contribute articles for publication are encouraged to contact Anita Painter, Managing Editor, at PMP Company, Ltd., 319B North Cane St., Wahiawa, Hawaii 96786 or call (808) 621-8200. Deadline for editorial material is the first of the month, prior to the month of publication.
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