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PRESIDENT'S MESSAGE

By Don Dumlao AIA

I am indeed pleased to see the editors of Hawaii Architect address the question of construction costs in Hawaii. It is perhaps one of the best kept mysteries in Hawaii. The fact that prices are higher in Hawaii is well accepted; why they are so much higher is not so well understood, or I should say admitted. When you dig into it, the only real explanation is people are willing to pay the price and put up with it; or, as an economist would say, "it's what the market will bear."

As an architect who has practiced here and on the Mainland, it is difficult to logically explain the cost differential. The Governor's Housing Committee, a couple of years ago, stated the cost of land, money, and time as major factors in cost of housing (although most of their apparent effort was spent on how to reduce the unit construction cost through innovative design). Of these three factors, the architect has no control over the first two and very little on the third. He only influences the time directly by the time required to do his work and the time requirement that his design imposes on others.

I do, however, believe that time, or the loss of it, in construction is a major factor in Hawaii's higher construction cost. My own experience is that most of the time lost is not that imposed by the design professional, but that imposed by others, i.e., approval processing by governing agencies and the lack of well coordinated construction process — from ordering, shipping, delivery, and installation — especially when the project involves extensive cross trade coordination. The time lag caused by shipping or lack of readily available warehoused items, must also be an added "time" cost. Often the project stops and everyone waits for the simple item which was not ordered on time, or the wrong one was shipped, and the correct one has to be flown in — all at added cost. Whereas, on the Mainland, it generally would be available at the competitor's warehouse and the project would proceed with relatively minimal time delay.

Although all three — land, money, and time — are major factors in Hawaii's construction costs, there is a fourth, which affects the other three and is the single most influencing factor. It is the one I alluded to initially — greed — the rip off on what the market will bear. Simply put, this is why most basic building materials cost 2 to 2.5 times that of the West Coast; why for the difference in the cost of a single kitchen appliance you can fly to the Mainland and return with the item; why there is increased movement to containerized drop shipments; why the savings in innovative design and construction are not passed on to the consumer; and why, as time normally deteriorates a structure, in Hawaii the value goes up. In all fairness, this fourth factor is not unique to the construction industry in Hawaii — it's in the total Hawaiian economy. Most of us don't like it but have learned to live with it, and are pondering where or when it all will end.
Almost everyone can and, at the drop of a hat will, give you a dissertation on the reasons for the high cost of building in Hawaii. The answers you will get will vary considerably depending upon who your informant is. Many of the answers will be at least partially valid. This is true simply because there are many factors involved and hence a many-faceted reason. This brief analysis may offend many people in many segments of the building industry. On the other hand it may be cheering news to know that others are also contributors to the problem. There is no single villain.

What does it take to build something?  
1—Borrowed money 
2—Land 
3—Materials 
4—Shipping 
5—Labor 
6—Government regulations 
7—Profit

There isn’t one of these elements which couldn’t find ways to cut its contribution to the cost of building if it really made a concerted effort to do so. Let us look briefly at each of these.

1—Borrowed Money

Almost no one, private individual or corporation, builds from cash reserves. He obtains a mortgage loan. Borrowed money is treated by the market just like any other commodity. When the demand is high in relation to the supply, the cost goes up. Two basic devices are used to increase the cost of borrowed money. These are: higher interest rates and premium “points” for the loan. Mortgage money was available 20 years ago at 5½ per cent interest and ½ per cent fee. It is now 8½ or 9 per cent, with a fee of 5 per cent or more.

What can be done about it? Probably the only answer, and it has its disadvantages, is some sort of government regulation. It’s a bad dose of medicine to take, but the patient is pretty sick.

2—Land

Volumes have already been written on this subject. In Hawaii there are two villains in this act — the peculiar land tenure pattern and poor thinking in the State government. The semi-monopoly on land, which the large land estates create, needs no elaboration. The role of the State government is less evident but equally pervasive. How? First the State’s taxation policy is highly inflationary and, second, its methods of disposal through sale and lease of State land equally so.

3—Materials

The building material industry in Hawaii is, in comparison with its Mainland counterpart, a very inefficient merchandiser. On the U.S. Mainland, high volume, low inventory, specialization, and competition for business have produced a very efficient and low-overhead and profit distribution system. Comparatively, Hawaii suffers in every one of these categories, the result being excess costs.

4—Shipping

In addition to the reasonable cost of shipping, which is unavoidable, the primary contributors to unnecessary high cost of shipping are labor stoppages and careless handling of many easily damageable items. The problem of labor stoppages is so obvious as to need no elaboration. Less generally known is the contribution made to high costs through damage in shipment. This results in high insurance rates and, perhaps more important, costly delays in construction time.

5—Labor

In comparison to the U.S. Mainland, construction labor, both skilled and unskilled, would get the best marks of any of the factors which we are considering. Hawaii has fewer strikes and fewer restrictive union work rules than almost any typical Mainland city. The only real problem is that the wage rates in the construction industry in Hawaii have followed the Mainland pattern, which has been a substantially faster rate of increase than manufacturing, service, or government employment. A service or government employee earning $6000 or $7000 a year cannot afford a home built by $15,000-a-year construction workers.

6—Government regulations

The government participation in unnecessarily high building costs comes in various ways and the City, State, and Federal bureaucracies all contribute.

Building Codes are frequently and justifiably singled out. During the past few years an aspect of this problem, perhaps unique to Hawaii, has developed. In an effort to meet the Federal standard for the City to be eligible for various types of Federal grants and subsidies, the City has adopted, pretty much in their entirety, codes and standards developed for U.S. Mainland use. Unquestionably this has resulted in increased costs of construction. All codes should be carefully examined by qualified persons from the private building industry — architects, engineers and contractors — to eliminate nonessential requirements. This cannot be left to government building officials. Their background does not encourage the type of thinking which is needed. Bureaucracy tends to proliferate and complicate regulations; not to simplify or eliminate.

Subdivision regulations are also to some extent a culprit. Under the guise of safety and protection for the public, and in an effort to eliminate maintenance costs, the City’s requirements for subdivision improvements have slowly but steadily increased the cost of developing raw land into building sites.

A newcomer into the field of cost escalation is the environmentalist and the ecologist. Pollution control is certainly a praiseworthy objective but, like everything else, it must be subjected to a cost-benefit analysis. The strident cries from some self-appointed experts on environmental problems, helped along by the news media, have produced a climate in which this type of evaluation is sometimes being overlooked.

7—Profit

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The State of Confused Affairs

By DAVE KNOX
President, Construction Ahead

The Hawaii homeowner cannot understand why he must be mortgaged beyond his means. The Hawaii architect cannot understand why his extremely simple, straightforward revolutionary design is so expensive. The Hawaii contractor cannot understand the architect or the homeowner.

All agree that construction costs in Hawaii are expensive. The reasons, if they can be defined, lie not exclusively with the homeowner, architect, or contractor. Each does, however, represent certain peculiarities which can unnecessarily augment the construction costs. But these idiosyncrasies are subordinate to the more consistent cost factors of labor and materials.

Comparative costs in Hawaii and those on the Mainland indicate the wage rates for skilled labor invariably are lower in Hawaii than any West Coast state. And this indication follows true for the majority of trades involved in the construction industry. Only in lesser developed southern states do labor costs fall beneath national cost averages. In Hawaii, however, the great boom that has prevailed for so many years has produced a negative effect on the quality and performance of skilled labor. In the rush for the construction industry to discipline skilled labor, the individual's concern for quality was not developed. In the workman's mind there has been no psychological pressure in regards to loss of employment. If he does, he merely walks down the street and commences work on the next crew. This has bred a lack of respect for quality and superior performance: an expensive factor when computed in construction costs.

Material costs in Hawaii are considerably higher than the Mainland. It is not uncommon for materials to be as much as 150 per cent over Mainland wholesale prices. The reasons are numerous. The obvious is transportation costs. Another is the high cost of land in Hawaii, for which the local supplier must pay for storage of materials. He buys volume quantities and requires a large area to stockpile his inventory. In the complicated process of shipping, storing, moving, sorting, restacking, milling, treating, holding, and delivering, there is considerable waste of material. Other elements are weather, theft, and large overheads created by the staff to manage the operations. All this by no means precludes the ancient law of supply and demand, which has been shrewdly expanded by the supplier. He established his business to bring building materials to the Islands because it is not feasible for each individual to do so. This limits the availability of materials only to those which he imports. By importing materials which return the greatest profit, he has indirectly established the demand as well as dictated the use of materials for construction. Demand is established by the type of materials purchased; thereby deleting the supply which is interpreted by the supplier to require replenishing. The supply and demand circuit is complete. Continuous repetition of this cycle over a prolonged period of time has produced a tradition in building materials use which is not necessarily the most efficient or economical. It is also one that is difficult to change.

A further development of the supplier is the "comprehensive supply house," a unique enterprise in Hawaii. A supermarket of building supplies with everything for everyone from the Sunday carpenter to the general contractor. Contractors can secure 100 per cent contract bonds without charge if all materials are purchased through that particular supply house. This is an attractive feature, since most contractors in residential construction have been small undercapitalized companies with little background. The failure of this approach is that the supply houses charge exorbitant prices for all non-volume orders. Lumber is their principal volume supply. Any contractor able to secure a conventional bond will save considerable dollars by purchasing non-volume items such as appliances, light fixtures, hardware, and others, directly from distributors whose principal commodity is that which the contractor requires. The supply houses also buy from those same distributors.

A history of antifunctional, non-aesthetic residential building in Hawaii has entrenched in the minds of a majority of homeowners the desire for more antifunctional non-aesthetic housing. The well-known Hawaiian style of architecture seems to have meaning to the homeowner in form only. His home must look Hawaiian. In current Island construction that form is only a copy with little or no regard to the function the old forms represented. In terms of costs, this generally represents more expensive construction due to complex features, such as double pitches, hips, gull wings, and so on. More efficient construction systems have been developed which can equal the functional requirements of the old Hawaiian style, but are less expensive to construct. Could there be a new Hawaiian style?

Hawaii architects seem to be of two categories: those dedicated to continuing the status quo and those seeking to invent the new Hawaiian style. The first and largest group can be eliminated from further discussion for obvious reasons. The second group is to be admired, but many handicap themselves through inexperience, idealism, or alienation. Lack of familiarity with the actual process of construction can severely limit the ability to produce economic details. Workable details are a necessity, and the simplest detail may not be the most economic. Those who remove themselves from the realm of practical application become too abstract to be concerned with economics. The most difficult is alienation, which places the architect above all others - the great protector of the unsuspecting owner and overseer of the unscrupulous contractor. It severely inhibits working relationships, causes unnecessary errors, and increases construction costs. While this isn't a large contributor to building costs, it is worth mentioning.

The contractor's performance is a demanding exercise, and the most critical in cost control. His ability to coordinate drawings, materials, and men is directly related to costs for constructing a project. Inefficiency will inflate costs. Material costs are easily de-
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Hawaii's Housing Crisis

By DONHAM M. WALKER
President, Kona Industries

A speech given at the 1972 Hawaii Congress of Planning Officials

Recently, the American public has been given, with a major assist from the various media, to utilizing short cliches to describe very broad subjects. “Women’s Lib,” “Ecology,” and “Hippie,” are words that only recently have come into common usage. “Housing Crisis” is another. Webster defines “crisis” as “a crucial turning point in the progress of an affair or of a series of events.” I would prefer to describe the current situation in Hawaii as a lack of adequate housing at sensible prices. Honolulu’s problems with overpopulation, urban sprawl and lack of buildable land do not very closely parallel Kona’s rural-oriented problems. To be sure, there are problems which are common to all areas, but the major stumbling blocks are quite varied. Since my experience has been in the Kona area, I will try to center on the situation here.

The Bank of Hawaii published a report on the County Economy in 1971, which showed that 69.4 per cent of the families in Kona have an income under $10,000. If we are to satisfy the housing demand in Kona, using the formula that the mortgage payment should not exceed 25 per cent of the adjusted income, housing in Kona must be made available in the $27,000 to $30,000 range.

How to provide adequate housing in that range is our major problem. The answer can be found by attempting to isolate the major causes of higher costs here and then applying individual solutions.

One major factor is site construction costs in Kona’s rocky topography. Excavation costs in Kona run 25 per cent to 30 per cent above Honolulu; therefore, less costly methods of installing improvements become the obvious solution to this problem. PVC sewer mains, an easing of County requirements on excavation depths for sewer and water lines and less the full Right-of-Way improvements within roads are areas that local government could assist. I feel we must consider pre-planned improvement districts 5 to 8 years after initial construction of a subdivision as an answer to this problem. Presently, regulations require subdivisions with lot sizes under 15,000 sq. ft. to construct full improvements, i.e., curb, gutter, sidewalks, sewers, to be installed initially. Our typical young homebuyer can afford to make mortgage payments of $200 now, but as his salary increases — and such things as furniture and appliances are paid for — he can better afford a larger payment for his home. The vehicle to accomplish this could be a homeowners association, accepting county-approved plans for an improvement district as a condition of original purchase. The improvement district would be 100 per cent paid for by owners. Right-of-Ways for wider roads would be initially set aside, but paving kept to a minimum with curb, gutter and sidewalks to be added later.

If we continue to have full improved subdivisions constructed, and our major market is in the $30,000 range, we face the possibility of beautifully improved land, covered with crackerbox homes. The mortgage pie can only be sliced in so many pieces and the last slice taken out is the actual house. We must be sure there is still enough left of this pie so that the last slice does not become a crumb.

Another major problem area is building material costs. Framing lumber costs in Southern California currently are $125 per M bd. ft. Over the counter costs in Kona are $290 per M bd. ft. Freight accounts for only $52 of this $165 difference. The remainder can only be reduced by encouraging competition among suppliers. The sooner lenders require commercial bonds from all builders, the sooner this active competition will start. A bill which would require building material houses to divest themselves of their bonding activity has been before the legislature for two years and will probably pass during the next session. A commercial bond allows a contractor to actively seek material price quotes from a number of suppliers and releases the hold of the material house on his purse strings. By obtaining commercial bonds, our company was able to lower our lumber costs by 2 per cent. When Kona’s second concrete batch plant opened 24 years ago, concrete prices on the job dropped from $32 to $27 a yard due to this competition.

We live in an age of specialization. The construction industry has been one of the slowest to adapt to this concept. The term “General Contractor” should be defined as “Coordinator.” Obviously, no one firm can be the most efficient at grading, excavation, laying pipe, paving, constructing sidewalks, landscaping and building homes with all their necessary trades. Yet, this practice is still followed in Hawaii; in fact, it is encouraged. We are making progress in this area, but it has been painfully slow. Competition among skilled trades does not lower quality, it increases efficiency. We have the capability to produce better housing at lower costs, but this will only come about when competition is keen among highly specialized subcontractors.

If housing costs are to be reduced, contractors and labor unions must work together to find solutions to common problems. Featherbedding almost killed the railroads in the U.S. and the construction industry is facing similar problems.

Union leaders must realize that their membership make up the majority of the housing construction industries’ customers and they must share in helping to find ways to lower costs. Our present system tends to stifle an individual’s progress by guaranteeing him a higher wage as he remains in the same job,
our unemployed. Government, througli example, thereby increasing liis pay and advancing to higher-paying trades. A laborer should be encouraged to become a carpenter apprentice, for example, thereby increasing his pay and making room at the bottom for more of our unemployed. Government, through trade schools, and contractors and unions through apprentice programs must work together to insure that a fair day's wage is paid for a fair day's work and opportunity for advancement is open to all.

In summary, the answer to making housing available at prices suited to the ability to pay lies in cooperation. Cooperation between local, state, and Federal governments to avoid duplication of effort and insure that building codes and requirements are adequate but not excessive. Cooperation between government and contractors, so that costly excessive delays are kept to a minimum and a free exchange of ideas and cost-saving methods are discussed. Cooperation between contractors and unions, to insure that the labor costs incurred in a home are not padded to one or another's advantage. Cooperation between lenders and contractors, to insure that financing arrangements are beneficial to the ultimate buyer and not structured to benefit narrow interests. If this kind of cooperation can be achieved, phrases like "make the developer put it in," or make the contractor install it" will become obsolete.

We all must realize when we see a new home in a subdivision in Hawaii, that the process to get it there has taken perhaps two years. All the incurred costs of our current slow, inefficient construction methods have been marked up 15 per cent for overhead, then 4 per cent for taxes. The developer has paid between 2 and 5½ points for a financing commitment. Sales commissions will add 6 per cent. Closing costs will add 2 more points.

All of these dollars are paid, not by the developer, not by any government, not by the builder, but by the little guy who signs the mortgage. By working together, we can come a long way to reducing his costs and giving him the value he is not getting now.

We are here at this conference to discuss methods of alleviating the housing problem. Let's not let it stop here! We must go back to work Monday morning and work together to put our ideas into practice. Cooperation is the key. Thank you.

The way I've been touting the advantages of using Decramastic roofing tiles wherever possible may seem to some people that I'm promoting an investment in L. J. Fisher Co. the manufacturers of Decramastic. Well, that wouldn't be too bad an idea, but I simply want to stress the practicality of using this tile in Hawaii. I could give you an article of superlatives about this product and why you should use it but in the wake of our recent rain storm I would like to present the results of a DYNAMIC WATER INFILTRATION TEST performed by Approved Engineering Test Laboratories of Los Angeles.

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INTRODUCTION
The purpose of this report is to present the testing methods employed and the results obtained during the performance of a Dynamic Water Infiltration Test on roofing shingles. The product submitted for testing was “Decramastic,” asphalt and slated granule covered shingles, the thickness including galvanizing. Each dis-assembled shingle measured 34-1/8” wide by 15-3/8” high, and when assembled (mounted) measured 32” wide by 14-3/4” high.

INSTALLATION DETAIL
The shingles were installed on an open wooden frame, and attached to 2” x 2” battens, located 14-3/4” O.C. Alternate means of attachment were used to secure the shingles to the battens at the lower edge of each over-lapping shingle. Some shingles were attached by four (4d) galvanized nails, and some by four (4) 1” long galvanized staples. The assembly of twelve (12) full courses of shingles, with three (3) shingles in each course, and ridge condition was installed on a test roof deck for testing. The pitch of the test deck was 4” in 12”.

TEST PROCEDURES AND RESULTS
An aircraft wind generator, with four (4) foot diameter propeller, and capable of providing a slipstream velocity of 120 MPH, was placed sixteen (16) feet downstream from the assembled roof deck. Water was added to the airstream by means of a spray grid nozzle. The simulated rain was equivalent to 10” per hour. The wind blast, and water were applied to the exposed side of the shingles for a period of fifteen (15) minutes. During the entire testing period, the unexposed roof shingles were visually examined for water infiltration. At the conclusion of the fifteen (15) minute period the following results were noted:

No water penetration was noted to occur.

I believe we can conclude that with a Decramastic roof, water problems are non-existent.

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October, 1972
Making No Little Plans

By JACK SIDENER, A.I. P.

Though many architects advertise themselves as architects and planners, I'm always a little doubtful as to the validity of their claim, since there's a basic contradiction in the two terms. Architecture may be defined as product-oriented, and planning as process-oriented. What this means for the average architectural practitioner is that planning, with its endless surveys and reports, is tedious, frustrating, and almost never results in a "commission"—that is, the opportunity to memorialize an ego trip in concrete. The number of architects (excluding "former" architects) in Hawaii who would truly subject themselves to the tedium of planning can probably be counted on one hand raised in the peace sign.

In order to satisfy those of us who may be considered to straddle the fence between the two professions, a new ecological niche was created about fifteen years ago, generally known as Urban Design. Since the gap between planning and architecture has widened, so has the field fostered by the two grown, until today it is accorded departmental recognition by both the AIA and AIC. A sign of maturity of the field is that my file of definitions is nearly an inch thick.

The most useful definitions of urban design seem to relate to time span, number of participants, means of effectuation, scale, and client. While there may be a built product in an urban design endeavor, its completion is usually after such an extended period of time that program objectives change, there may be several architects involved in separate buildings, and even clients may change. An example is the Golden Gateway Center in San Francisco, in which what I would call an "urban design concept" (that of a new pedestrian level over parking plateaus, and including controlled building height and placement) unified the work of several architects and a multiple client body.

The urban designer may also be involved in giving form to process itself; some of the more exciting university campuses (mostly British or Canadian) are based upon concepts of form which tell a story of change and process, usually through obvious expandability. Kahn's Richards Medical Research Building in Philadelphia was a precursor of this approach, as were his studies of form possibilities inherent in the movement systems and dynamic developments in Philadelphia's Center City.

Urban Designers may also be asked to design a process to create form, through a system of rules or controls within which later designers and architects will work. This might take the form of a competition program, a building envelope as proposed by the Oahu Development Conference for central Honolulu, or as a set of deed restrictions controlling materials, color, fencing, setback, and other elements of a street scene, such as those at Mililani Town.

The best examples of urban design, in my view, are distinguished quite clearly from planning, which ordinarily works with negative means of use and form control (constraints), and from architecture, which produces designs within constraints. Urban design produces results through positive stimulation more than by constraint. A couple of examples from Mililani Town: One, the golf clubhouse and its tree canopy were carefully located as a focal point of one of the main drives, and such siting stimulated architect Ossipoff to produce a building which is a true community landmark (the same is true of the siting of the Sales Pavilion); two, the Village Center North, Swim Center, High-Intermediate school, and the future Town Center are all linked by a well-used pedestrian greenway. The architects of the Village and Swim Centers recognized their opportunities and responded in terms of entrances, pedestrian spaces, and scale to the unifying nature of the walkway system. Hopefully the architects of the school will respond in the same manner.

While there is inevitably overlap in any attempt to define areas of responsibility, the following diagram attempts to show how project scale helps to further clarify differences among architecture, urban design, and planning:

As projects approach planning scale, an important element becomes part of the urban designer's kit of strategies: disposition of capital elements. By this I mean those items which in a municipal budget are called capital improvements: streets, utility systems, transit systems, parks, and certain public structures such as parking garages, schools, and so on, the location and siting of which have a great deal of influence on private development decisions and urban form. A university campus or a rapid transit station are examples of very powerful generators of urban form, and their locators should keep form implications in mind during all stages of planning.

Illustrating these implications is one of the many functions of an urban designer, in that his work often involves responsibility to a public client, such as a community citizens' group. The ODC, with Bill Grant as staff urban designer, has performed this function extremely well for the Moliiili and Kaliihi-Palama communities, encouraging the residents to be aware of the physical changes likely to occur as the planners move blobs of color around on those incomunicative documents known as General Plans. The best example in the country of showing form implications is probably still Philadelphia's central-city model, which has been constantly kept current since its initial construction in the early 50s.

My favorite example of a successful urban design project is the Student Center complex at Berkeley, partly because it's so much fun to be in, and partly because the process of its design has in it many of the elements discussed above. The Berkeley Student Center is a complex of four buildings containing variously a Student Union, ballroom, bowling alley, cafeteria, restaurant,
lounges, student offices and meeting rooms, an experimental theater, and a large opera-theatre, all surrounding a large paved plaza with parking underneath. The first, and in a way most form-generating, decision was that of the campus planners to locate all of these facilities together, at the gateway between the central campus and the Telegraph Avenue shopping district. The architects chose to capitalize on the location by providing spaces and locating building entrances, fountains, and arcades in such a way that passersby on the main campus promenade become part of the action, and are invited into the central activity spaces. This is where all the great FSM demonstrations took place, and at nearly any lunch hour there may be an anti-war demonstration on the upper plaza, a bongo-drum session at mid-plaza level, and a rock group in the lower plaza, with students bound for class filtering between.

This all happens because the architects (DeMars, Reay, and Hardison) became urban designers, and decided to make their buildings secondary to the spaces for outdoor activity, to the chagrin of early critics such as Allan Temko (a later, more urban-design-aware article by Roger Montgomery appeared in the Architectural Forum issue of April 1970).

The buildings, though designed within one firm, are in a sense purposely designed to appear as if they were by different architects. In fact, although Vernon DeMars was the partner-in-charge, each building was designed either by a different partner or a different design team, and built with different structural systems and materials. This "planned chaos," as DeMars calls it, is partly purposeful, but it is also a response to different functions, different view and site circulation conditions, different University building-committee composition, and to maturation of design concepts, as several years separate each building from the others.

What is critical to us, here, is that the project doesn’t look like "a project," but fits into the multiple-use character of its site, has responded to different building design concepts, and has absorbed a great deal of change (and punishment) in the way the campus has been used by people; it has "worked," in designers' parlance, because its spatial and circulation concepts, the urban design aspects, have transcended architectural whim and made the Center into a flexible and adaptable whole.

It's interesting to note that one Honolulu project, though much more somber, contains many of the same elements of urban design: The Financial Plaza. It is unified by space, color, and texture much more rigorously, yet has a sense of vitality which is in part due to the variations in height and character of each building. What's interesting is that each building of the Plaza was designed by the same architect, who obviously felt the need for variety, even if under his own individual control.

We come full circle now in our search for definition, for the last project noted above is a borderline case. It's certainly fine urban architecture, it's group building design, but its client complexity is subdued, its development was at a single time, and it shows the personal stamp of The Architect, rather than the concealed personality of the urban designer.

The most elusive and perhaps difficult role for urban design is in Comprehensive Planning, which I propose to discuss in another article. After many years of attack by policy planners, there seems to be a resurgence of interest in design at the metropolitan scale. Edmund Bacon, highly regarded former director of the Philadelphia Planning Commission, has long held that the most satisfying and exciting cities were built as an "act of will."

And that question of will is the final separator of urban designers from planners, if one believes (as I do) that design is the willful making of form. Although one may work within client-generated constraints, posing alternative solutions to problems as planners attempt to do, there still must be in every urban design project a designer. Good design, urban or otherwise, does not come forth of its own will.

1. Subdivision layout or Planned Unit Development work, in which many architects find themselves involved, is not considered to be "planning" by the American Institute of Planners, which currently considers its membership to be concerned with "... the unified development of urban communities and their environs, and of states, regions, and the nation (as expressed through determination of the comprehensive arrangement of land uses and land occupancy and their regulation)." The section in parenthesis was recently deleted under pressure from planners more oriented toward social-policy planning than to the traditional "physical" nature of planning.

2. The design of a transit station itself, or of other public buildings, monuments, or parks, I would term civic, as opposed to urban design.

3. Actually there was an urban designer involved, Alfred Boeke, who very forcefully occupied one of the positions important in urban design, that of heuristic filter. This position is one in which a design-trained person is situated between the architect and the developer, translating objectives, solving communication problems, soothing ruffled feathers, etc.

Three Costs: Living, Freight and Distribution

By DUDLEY W. BURCHARD
Vice President, Matson Navigation Co.

This has been titled "Three Costs: Living, Freight and Distribution," deliberately. As anyone who lives here can readily attest, our cost of living is inordinately high. Because that is a fact, it spurs all sorts of authoritative and, in many cases, heated opinions on the reasons why it is so high.

First, let us deal jointly with the first two costs: Living and Freight.

Last year the U.S. Bureau of Labor Statistics published a study comparing the annual budget for a family of four living in Honolulu against their counterpart families in Los Angeles and San Francisco. They found that a moderate or intermediate budget for a family of four on Oahu was $13,108 per year. The same family in Los Angeles had a budget of $10,093 and in San Francisco $11,683. The average of the differential of Hawaii over California was $1,774.

Because the Bureau of Labor Statistics study provided figures on what the family of four consumed in food, housing, transportation, clothing and other needs, we were able to calculate what the family actually spent in ocean freight charges to import everything that is needed. The total for the year was $290. The myth is that Hawaii's cost of living is second highest in the nation mostly because of our dependency on imports from the Mainland. Of the $1,774 differential, Oahu over California, $290, or 10.7 per cent, of that differential can be attributed to ocean freight. The truth, in contrast to the myth, is that Hawaii's cost of living is the second highest in the nation mostly because of reasons other than its dependence on imports from the Mainland.

We now move toward cost No. 3: Physical Distribution. To get the measure of what is at stake in this cost area, an appropriate beginning is to multiply the cost of living differential by the number of families, for example in the City & County of Honolulu. The most recent figures I have seen show 164,763 families in Honolulu, which, multiplied by 1,464, is 241,213,032. A quarter of a billion dollars in a town the size of ours is one whale of a lot of money. I wish that I, or anyone else, could itemize just what is in that quarter of a billion dollars. In any case, I can make some guesses:

1-The cost of land or the directly related cost of leasing it.
2-The availability of land.
3-Cost of developing land.
4-Mark ups between landed cost on the pier and the retail shelf.
5-Construction costs.
6-My last guess is the one cost I want to elaborate on: Physical Distribution. Again, making even the most wildly conservative guess, that physical distribution could count for 1 per cent of that quarter of a billion, we are talking about 2½ million dollars. Getting a little less wild, but still conservative, if it should be 10 per cent — 24 million dollars — again, it is a respectable sum for a small place.

It is the inherent strength and truth of those numbers that led us into the development and presentation to the community, in June, of what we have called the IDP, or Integrated Distribution Plan.

From 1945 until 1959, a typical freighter voyage began with up to five days loading at the West Coast port or ports, seven days transit from the coast to Honolulu, followed by up to six days unloading in Hawaii. In other words, a total of 18 days from the West Coast to place of rest on a pier in Honolulu.

The difference between Hawaii and 48 of the other 49 states, for the businessman, is that goods can be carefully scheduled in and out of warehouses on the Mainland. (Los Angeles is four days from Chicago, perhaps five, but never 18.) But in Hawaii, the businessman has had to keep an inordinately high inventory because he could not be sure how soon or late his goods would arrive. Nor did he know on what day or in what sequence his goods would arrive. But now, Matson's large new ships, having proven their speed and reliability, make it possible for the businessman in Hawaii to systematize his physical distribution in Hawaii to keep his inventory at a level only 10 days greater than a businessman on the Mainland.

Now, Matson will deliver containers from Los Angeles or San Francisco to Honolulu in a maximum of 10 days, no matter when you deliver the container to Matson in California. It will work as follows: Containers delivered to the Matson container yards in California on Day One (January 1st, for example) will be available in Honolulu Day 11 (January 11).

For a year, we asked our computer to measure performance of the ships in our fleet. We programmed the ships on the schedule required for 10-day service, and we will be able to fulfill our 10-day promise 90 per cent of the time.

The exact sequence of availability may not be important to all customers. But think if you will, of a construction project. Containers can now be delivered on the jobsite as they are needed. In such circumstances, the Matson Integrated Distribution Plan could be so carefully controlled by the customer as to eliminate entirely a need for warehousing on the project.

Construction projects give me an opportunity to return for a moment to mythology. Anyone who has tried buying or selling a home in the last two or three years will, I hope, agree with me that the most outrageously expensive thing in these Islands today is a family dwelling. Back in the early 60s we ran some newspaper ads in an early attempt to make the myths more interesting in the light of truth. A contractor friend provided us with his materials take-off list on a tract home of 1,400 square feet, 3 bedrooms, 2 baths, wood frame construction which, around 1962, could be put on the market at $22,000. His material take-off list enabled a precise calculation on ocean freight costs on everything that went into the dwelling, including appliances, tar and gravel for the roof, right down to the last nail. Total freight on that $22,000 house was $729.35. If I venture a guess that the three-bedroom house today would be a bargain at $40,000. In other words, the cost of the dwelling has probably risen close to 100 per cent in the last ten years — against an increase in freight rates of 12½ per cent — so that freight costs as a portion of dwelling costs are even less significant today than the $729 figure of 1962.
MONEY COSTS

By JOHN E. SCHREINER, Vice President
Income Property Loan Department
Bank of Hawaii

In relation to the commercial and industrial segment of the real estate development industry, the costs of financing during the past twelve months have become more reasonable in comparison to recent years. In any discussion of financing costs for Hawaii projects of this type, it must be borne in mind that the majority of permanent loan funds, as well as a sizable portion of interim loan funds, are obtained from Mainland sources. Financing costs are, therefore, influenced by Mainland market conditions, customs, and requirements.

Direct financing costs are generally regarded as a combination of initial "front-end" fees coupled with permanent carrying costs. While the former category has remained relatively stable, the latter category has exhibited a significant decrease in the past 12 to 18 months.

Not only have interest rates decreased approximately 2 per cent on average from their 1970 highs, the so-called "lender participation" feature is now virtually nonexistent in conventional loan arrangements where good credit borrowers are involved and/or where reasonable equity investment is evident. Institutional lenders, who during the 1969-1970 period of tight money found they could demand and obtain additional compensation in the form of "participations" in the income streams of commercial and industrial projects, now find the abundance of loanable funds has made such demands generally uncompetitive and, therefore, the financial cost has been effectively lowered for properties financed in the most recent 12 months.

Until such time as the supply-demand relationship is reversed, it is not likely that interest rates nor special loan structuring techniques will revert to former levels and cause undue financial burdens. At present, income property financing is hovering around the 8½ per cent level and appears stable for the remainder of the year. It can be concluded that this is a good time to arrange financing for such projects.

There are other related costs associated with the financing of commercial and industrial projects, however, that have increased during the time that the cost of money itself has decreased. These are predominantly in the area of professional services necessary to satisfy lender requirements, and include fees for legal services, accounting, feasibility studies, appraisals, surveys and, in relation to the construction loan phase of development, architectural and engineering services.

While the bulk of this increase can probably be attributed to the inflationary forces in our economy, a portion is directly related to the fact that an increasing number of projects are much larger in size and scope. This requires more sophisticated project analysis, requiring lending institutions to rely more heavily than before on independent professional evaluation of factors such as rental markets, structural adequacy, space utilization, financial feasibility, and others.

Here, again, the Mainland lenders' concern for the security of their investments is requiring this more comprehensive evaluation and underwriting as the loans increase in size and various markets are more heavily influenced by each project. It should be recognized that there is a definite trend toward larger commercial developments, including shopping centers, office buildings, hotels and apartments, and that the related costs associated with financing of these developments will most likely continue to increase.

As reported in the most recent issue of Bank of Hawaii's Monthly Review, authorizations for private construction projects in the State continue to surge ahead of last year, stimulated by a sharp increase in permits for multi-family structures.

In relation to the residential segment, residential financing is also enjoying one of its better periods, supported by a large and continuing inflow of savings to the various institutions here and on the Mainland as well as the recent entry of two government agencies, Fannie-Mae and Freddie-Mac. With conventional residential mortgage loan rates hovering around 8 per cent, and the availability of funds high, now is also an excellent time to seek a residential mortgage.
The Greatest Needed Amenity

By THE REV. EUGENE B. CONNELL
Chairman, Planning Commission
City & County of Honolulu

Speech given at the 1972 Hawaiian Congress of Planning Officials

Some of you may have seen the cartoon that appeared in a recent issue of the Wall Street Journal in which a husband and wife are sitting across the desk from a Realtor. The Realtor is saying to them, "Tell me what you can afford and we will have a good laugh together and then go on from there." The cartoon sums up not only the housing situation in Hawaii today, but also our immediate response. It is humorous to hear that moderate-income housing begins at $55,000. It is hilarious to be told that low-income housing is going to cost $35,000 plus. As is often the case when we are faced with a crisis, we laugh until the true reality sinks in, and then laughter is replaced with tears and a deep sense of frustration.

Planning commissioners throughout Hawaii probably share this sense of frustration because, by and large, we do not have the authority to do very much about the housing problem. Our function is primarily one of review, recommendation, and perhaps some educating of the general public. Therefore, our responsibilities have to be viewed in light of our authority.

In terms of review and recommendation, the Honolulu Planning Commission since the last meeting of the Congress has processed 64 zoning applications, 31 conditional use permits, and sufficient planned development applications to add more than 3,000 housing units to the Oahu scene.

Within the context of our reviewing responsibility I feel that there are a number of tasks. As appointed members of the Commission, we in a great sense represent a cross section of the general community. Some of the members have skills that allow them to question applications on a technical level but, by and large, we raise the questions that are being asked by the general public. We are to question first of all the planners, architects and developers in four basic areas:

First, how are the conclusions and recommendations arrived at? This involves questioning and examining the data that comes from the various agencies and not simply taking them at face value.

Second, are there other alternatives?

Third, what are the long and short-term effects? It is often very easy to see the short-term effect, but we have an obligation to try to forecast the long-term implications of growth and development.

Finally, what are the people (both residents and the general public) going to gain? This involves the general amenities of a project, but beyond that, questions have to be aimed at the developer, especially in terms of a PUD where a bonus in density is usually a standard practice. If the extra density is given, to what extent will this benefit those who buy in terms of open space, lower cost per unit, and so on? Somewhat in the same vain, questions have to be addressed to the County authorities regarding some of the required amenities. It is becoming more and more common to require in subdivision rules and regulations the construction of sidewalks, gutters, underground utilities, and so forth. This, as a general rule, needs to be questioned if the final result is to raise the cost of housing. Are these amenities really that necessary if they keep people from gaining their greatest needed amenity — namely, shelter?

It is also important that commissioners speak to the issues that are raised by members of the general public. I believe that all of us can empathize with the fears of those who have invested financially and emotionally in their neighborhood. Change is always the last thing we want in those areas of our life where we are happy and satisfied. Those who have a home in such a neighborhood have been able to achieve
the “American Housing Dream.” This dream is essentially the desire to have a piece of land of their own, with an adequate home located in the middle of the lot, and surrounded by a lawn. Anything that disturbs that dream or raises questions about the realism of such a hope is threatening. It is to this very point where planning commissioners have to enter into the area of education, in as diplomatic a way as possible, the often-raised-objections from the general public need to be examined and answered. This is especially so in relationship to some of the new forms of development such as clusters, planned developments, and the like. How often we have heard the following public cries:

We do not want apartment houses in our neighborhood!

Those houses and those kinds of people will not fit into our neighborhood!

It will make our traffic intolerable!

That development will depreciate the value of our property!

(I would appreciate finding some of that property that is being devalued!)

Underlying many such criticisms are honest issues of concern, but all too often what is really being said is, “I've got my dream - let them find theirs in someone else's neighborhood.”

Many of these criticisms can be answered through education. Commissioners need to be able to point out the advantages of such developments as PUDs and clusters. There are ways of indicating that these are not tenements, but new means of being able to supply homes so that others may also have their dream of a home made into a reality - a reality that will be attractive and that will enhance the neighborhood. To be able to do this requires that commissioners have to be willing to give the time not only for the official meetings, but also for study, to meet with community groups, to spend time on the phone or in person speaking about these issues on a one-to-one basis.

Our final responsibility is in the area of helping to establish a spirit of collaboration. So often today, we see the issue of housing being met with a combat model. People vs. Developers, Architects vs. Planners, Management against Labor. In this model everyone is blamed and the major problem is not met. We all share in the blame for the problem, but the solution will only come as attempts are made to get those who are in positions of decision-making in all sectors to sit down as reasonable men and find the answers. In this area of cooperation/collaboration I believe a new spirit is afoot. This can be seen in some of the following areas:

—Community groups once were prone to come in and tell commissioners only what they were against. Today, more and more of these groups are making use of the professionals who live in their area and are developing master plans of what they want so that their testimony is taking on a positive approach. They indicate what they are against, but also what they are for, and indicate some of the possible alternatives.

—Developers, in their pre-planning, are taking the time to find out what people want in their neighborhoods, rather than coming in and simply saying “This is what is going to be done.” Many developers are also finding it helpful in terms of saving process-time by working throughout the preliminaries with the Planning Department, thus answering many problems long before the application arrives before the commissioners or councilmen. The growing awareness and concern of developers regarding the environment is also helping to create a new attitude toward them.

—The Planning Department of the City & County of Honolulu, under the leadership of Bob Way, has created some very innovative procedures that have assisted in developing this sense of cooperation. Such things as the Planned Development Conference in April 1961 for developers, contractors, and the general public, gave people some new ideas about new housing approaches, as well as concrete suggestions in terms of processing the applications. Along with this has come an attractive brochure and a preliminary application check list. This and other procedures have made it possible to cut down the PD processing time from 17 months to 5 or 6 months.

The end result of such collaboration is finding creative and workable answers to the issue of housing. The American Dream is a need, and it is our responsibility to find ways of making that dream a reality.

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AIA Projects

Continued from September H.A.

CHAPTER TASK FORCES
1—Economic Study: Investigate and
report the Economic Practices of the
profession in Hawaii to recommend
appropriate Chapter action relating to
Case & Company report.
2—Political Funding: Investigate and
recommend action relating to Political
Funding Practices in Hawaii.
3—Political Action — AIA: To ad­
dress political candidates on issues re­
lating to the Architectural profession
and the Community interest it safe­
guards.
4—New Communities: To evaluate,
coordinate and make recommendations
on Governor’s New Community Task
Force and address issues of Hawaii and
National Growth Policies.
5—Employee Practices: Investigate
and recommend employment practices
for the Architect in Hawaii.
6—Chapter Goals: To formulate the
long range goals and objectives of the
Hawaii Chapter AIA.
7—Standardized Practice: Investigate
present architectural practices and
recommend items which are or can be
standardized for the profession in
Hawaii.

MAJOR PROJECTS
1—Completed:
Case & Company Economic
Survey.
University of Hawaii, Dept. of
Architecture Accreditation.
Chapter Status for Guam.
Dewey Kim Management Report
on Chapter Office Procedure and
Practice.
2—In Process:
Pacific Rim 73 — Sidney, Aus­
tralia.
1973 AIA Recess Convention Plan­
ing.
Pan Pacific Award — November
1972.
Chapter Honor Awards — De­
cember 1972.
Second Regional Director from
Hawaii.
Hawaii Growth Policy Conference
72.
3—Abandoned for Lack of Support:
Public Relations Action Plan.
1973 Grassroot West in Hawaii.
COMMUNITY ISSUE INVOLVEMENTS
1—Ward Street Widening: Opposed encroachment on Honolulu Art Academy and Thomas Square.
2—Civic Center Plan: Opposed the liberalizing of height and open space corridors of Civic Center improvement district. Also, the preservation of Historic Building sites.

GOVERNMENTAL RELATIONS AND LEGISLATIVE ACTION
1—Opposed:
H. B. 33-72 — Deletion of landscape architect from State Registration Law.
S. B. 1820 — Reduction of Art in public buildings.
2—Supported:
H. B. 1481 — Statute of Limitation reduction for Design Professionals from 10 years to 6 years.
S. B. 1008 — Frivolous liability complaints.
CILO (Construction Industry Legislative Organization) Membership and Fund Drive.

STUDENT ACTIVITIES
1—Financial support of Student Chapter — $150.00.
2—Student Professional Fund Contribution — $200.00.
3—University of Hawaii, Department of Architecture Accreditation obtained.
4—Community College Curriculum Advisory Board established.
5—Continuing Education Advisory Task Force established.

CHAPTER DOCUMENTS
1—Economics of Architectural Practice in Hawaii $5.00 for member; $25.00 for non-members.
2—AIA/GCA recommended Practice Manual, $5.00.

SEMINARS AND SPECIAL MEETINGS
1—Unionism and Employee Relations: Mel Ferris, CCAIA.
WHO?

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Bishop Estate Competition

This international competition which was announced last October as its purpose the determination of the best architectural development of the land which is located in Waikiki, a large part of Kalakaua Avenue between Lewers Street and the Old Moana Hotel. The leases on present sites expire in 1975.

"Since this property forms a sensitive part of Waikiki's environs, the Trustees were eager to get the advice available for redeveloping the areas," said Mr. Richard Lymn, President of the Trustees.

The judges who awarded the prize for the competition were Donald Brenner, Ernest H. Hara, George Kekoolani, Aaron Levine, and Vladimir N. Ossipoff. This competition was approved by the American Institute of Architects. Professional advisor for the competition was Thomas H. Creighton.

The Advisory Committee for the competition was chaired by Dr. Hung Wo Ching. Other members include Ronald H. Deisseroth, Thomas H. Hamilton, Charles Heen, Robert Holden, Norman E. Ing, Aaron Levine, Howard J. Marsh, Robert Midkiff, Gilbert W. Root, Eddie Tangen, and Robert Way.

Next Month: Jury Reports and Photos of Winning Entries.

LETTERS TO THE EDITORS

I have just finished reading Andrew Yanoviak's essay in the Architect: Master Builder or Master Planner. It isn't an easy task, but with perseverance I made it through. I have always believed that both the spoken and written word exist for the purpose of communicating ideas. This calls for clarity and simplicity in thought and expression.

Mr. Yanoviak appears to believe that the purpose of an essay is to overawe the reader with the author's intellectual profundity without really saying anything.

The practice of architecture also calls for clarity of thought and expression. If Mr. Yanoviak practices architecture the way he writes essays, I shudder to think of the consequences to both his clients and the public.

George V. Whisenand

Washington Metropolitan Chapter AIA

We have been overwhelmed with the professional quality of Hawaii Architect in recent months. You have our continued support and admiration... keep up the fine work.

The Staff

It was most interesting to note that Robert Fox's sketch, accompanying his article entitled "An example of Uncontrolled Greed," and the cover photo of the same title (HA, Aug. 1972) both featured prominently the work of at least one of your most esteemed fellows... keep up the fine work, as you noted in your first letter.
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