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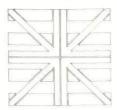
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# HAWAII ARCHITECT

## Volume 9, Number 7

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# **Vladimir Ossipoff, FAIA**

by JACK C. LIPMAN, AIA President, Hawaii Society/AIA

As a graduate of the University of Southern California five-year accredited College of Architecture in 1936, I always felt a great deal of superiority over the unfortunate chap who went to the University of California at Berkeley for architecture; at that time a four-year course under the College of Engineering. Who could possibly develop into a well-rounded capable architect in that environment? At least I felt this way until



Jack Lipman, AIA

I came to Hawaii some thirty years later and heard the name Ossipoff used in the greatest of reverence by business executives and housewife clients alike.

It is my extreme pleasure to be able to add to this issue my thoughts of respect and envy which I hold for Val. This was most pronounced to me when I was in-

# Features which relate to Ossipoff's past honor awards are shown on Pages 10 and 22.

volved with the Physical Plant Committee of the Pacific Club a few years ago. It was interesting, almost unbelievable, to note the reverence (or fear) that the club's elders held for Val, as the original architect of the Pacific Club. Absolutely nothing could be changed, added onto, repainted or recarpeted without Val's approval. As a matter of fact, even pictures could not be hung without first receiving his concurrence. I decided right then to get on the good side of Val or my job, as chairman of that committee, would be useless. After a few conferences with Val I concluded that he was guite willing to discuss my problem and even effect a mutually agreed decision. From then on I could only envy the position (or the image) which he had been able to develop throughout the membership of the club. Not only did I envy this image, but wished that all architects could effect such awe from their clients.

Comparing Val's image at the Pacific Club I recall what I had considered to be the epitome of an architect's reputation: the old Imperial Hotel in Tokyo. During the 1950s, before the demolition of Frank Lloyd Wright's world renowned hotel, I used to enjoy sitting in the lobby and hearing the comments of those entering. I can say, without hesitation, that I had never before experienced a building where the average visitor knew and mentioned the name of the architect. Now, after 15-plus years in Hawaii I can also say, without hesitation, certainly in this state, that Val's reputation equals that of FLW. Because of this reputation the Hawaii Society/AIA is having a testimonial dinner for Val on July 17, at the Pacific Club. This testimonial dinner will give past clients, contractors, classmates, lawyers, and employees, the opportunity to take this formidable image and have a little fun with it.

Of statistical interest, Val was born in Russia in 1907 and was educated through intermediary schools in Tokyo, Japan, where he lived with his family from age 7 to 16 years of age. He moved to California for his college years and graduated from the University of California at Berkeley in 1931 with a Bachelor of Arts degree in architecture. He moved to Hawaii in 1932, and married Raelyn in 1935. They have two daughters both of whom graduated from Punahou.

Val started with Theo H. Davies Co., opening its Home Planning Service in 1933. He then went with Architect C.W. Dickey, obtained his registration to practice architecture in 1935, and opened his own office in 1936. During the World War II years Val closed his office and gave his services to PNAB, Pearl Harbor, as Project Engineer (none of us called ourselves "architects" during this period if we wanted government employment).

Val's numerous civic activities include membership in the Rotary Club, Honolulu Academy of Arts, Bishop Museum, Honolulu Symphony, mayor's committees for an auditorium and for Waikiki redevelopment, Honolulu Harbor Task Force, TH-3 Design Advisory Committee, and the Palama Settlement Board of Governors. He is a director of the Hawaii Council for Culture and the Arts and the Chamber of Commerce of Hawaii.

Professionally, Val is a past national director and a Fellow of the American Institute of Architects; past president of the Hawaii Society/AIA in 1942 and 1965; chairman of the National Jury of Fellows (AIA), and a member of many national AIA design award juries.

The corporation of Ossipoff, Snyder, Rowland & Goetz was formed in 1973. Val sold his ownership in the firm in 1978, relinquishing the reins to his senior partner, Sidney E. Snyder, AIA. Although Val may not be found behind his old desk, he is daily at drafting table or desk doing the design work for which he has become renowned and appreciated in Hawaii and the nation.

RESERVATIONS for the Val Ossipoff testimonial dinner may be made through the HS/AIA office (Beverly McKeague) at 538-7276. Early reservations due to limited seating.

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# Low and Moderate Income Housing— Where are the Costs?

by BOB KAMALU Housing Consultant

A good way to approach all of the variables associated with the development of low and moderate-income housing is to explain what we mean by low and moderate-income housing. Simply stated, it is housing built for sale or rent at prices which families earning less than \$29,500 annually can afford to pay.

Traditionally, low income housing included public housing proiects built, owned, and managed by a public housing agency (such as the Hawaii Housing Authority) for families with incomes below the federal poverty index level. These projects were funded primarily with federal dollars. Families living in these projects whose incomes exceeded these income levels had to move out. To accommodate them, the state appropriated state funds to build middle-income projects that these families could move into. Again, they were built, owned, and managed by a public housing agency using public funds.

There were many negative features related to this practice of herding families into economic ghettos, the result of which created new programs by the federal government and the state which were intended to decentralize the poor and develop an economic mix of families. Such programs required that a minimum of 20 percent of the families living in these projects would have to be low income and 80 percent moderate income. Thus was born the terminology for low and moderate income housing which is commonly used today.

Initially, it showed promise. The state jumped on the bandwagon of the federal initiative and created the omnibus housing bill commonly referred to as Act 105. Within five years of the adoption of this new housing bill giving the state broad powers to do whatever was necessary to increase the housing options for their residents, the state legislators passed legislation conveying identical powers to each of the counties in the state. We now have all levels of government empowered with the necessary tools to develop the housing opportunities for low and moderate income families.

The role of the federal government is to provide long term (40-50 year) financing and subsidies in a variety of ways:

 as a direct loan with funds provided by the federal government;

• as a mortgage insurance program with loan funds coming from a private or quasi-public source and the federal government insuring the loan against default;

• as an insured subsidy program similar to the mortgage insurance program with the added feature that interest rates may be subsidized by the federal government to 1 percent; and as a direct subsidy to qualified individuals reducing rents to as low as 15 percent of their monthly income.

Until recently, the state's role has been supportive of the federal role. It has chosen to utilize the powers of Act 105 to:

• Provide short-term interim financing at favorable interest rates (7<sup>1</sup>/<sub>2</sub> percent) and 1 point discount.

• Offer tax incentives by eliminating the general excise tax from the cost of construction.

• Offer state lands at low cost or a nominal fee.

• Use its powers to exempt current zoning and permit development at feasible densities.

Since 1979, it has also assumed the role of long-term mortgagor at below-market interest rates for housing sales, and the 1980 legislature adopted a bill authorizing bond sales to finance rental and sales projects on a long term basis.

The counties can assist with perhaps the most powerful tools of all: control of growth and development through their local codes and ordinances. This is an important step in the development process and should be given the highest consideration. Unless property can be prepared to comply with all the conditions imposed by the counties for development, it may be the most significant factor in delays which contribute directly to cost.

So, with all the tools on hand, what is the problem? It's ironic that the programs developed to close the gap between the supply and demand for housing, especially in the low- and moderate-income market, may in fact be widening it.

It's a complex situation which involves attitudes, commitments, politics, and bureaucratic hangups. These kinds of problems cannot be easily explained or resolved. All programs created to provide low- and moderate-income housing impose rigid ceilings and guidelines which many times operate at cross purposes with each other. Housing of this nature must be low cost to begin with.

To achieve this, we can utilize tax incentives, build at lower subdivisions standards (curbs, gutters, sidewalks, and roads may be reduced to save costs) and save \$2,000 per home. Then, however, we must install underground utility lines which increases our cost another \$2,000 and wipes out any savings. We can comply in every respect with all the requirements for a normal development only to be delayed or stopped completely by community objection. These objections may be for no other reason except to prevent those without homes from moving into their neighborhoods.

More specifically, the problems can be outlined in the following order of importance:

### GOVERNMENT CONTROLS

These would include local codes and ordinances at the county level

Continued on Page 9

# THE PRI SOLAR SYSTEM A MARVEL OF EFFICIENCY THAT PAYS FOR ITSELF

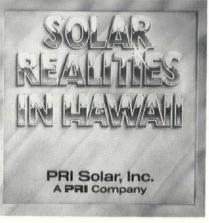
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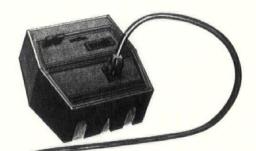
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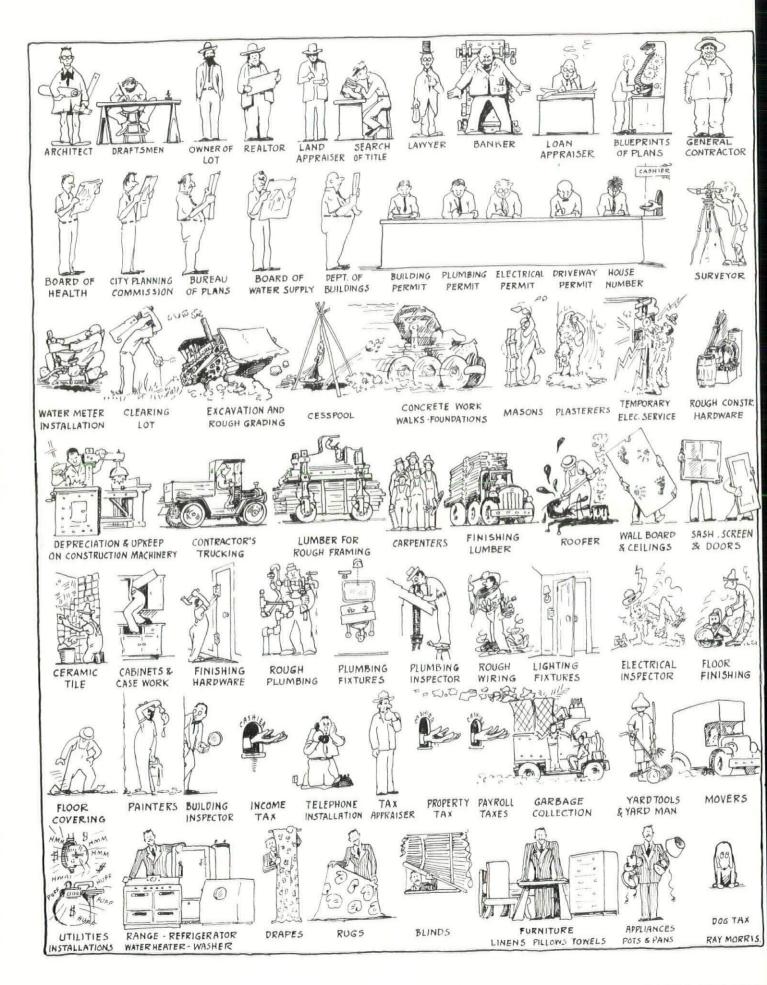
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# **Housing costs**



### Continued from Page 6

as well as those rigidly enforced by the federal or state government to qualify for use of their housing program funds. An example: In order to determine your eligibility for obtaining Community Development Block Grant (CDBG) funds from any county within the state, the proposed project must be inserted into the Housing Assistance Plan prepared by the county and submitted to the federal government for approval.

Preparation of the Housing Assistance Plan begins 12 months before the plans are submitted for approval. Public hearings are held approximately six months later. After it's submitted, the approval process at the federal level is at least six months, so 18 months will have elapsed before approval. Then after approval, it's another three months before funds are actually received by the county and approximately two months before the county can disburse to you. Twenty-three months in all from start to finish.

If you did not have your plans ready to meet this schedule, then you can apply for funds which may be re-allocated from the federally approved initial plan. This procedure is contained locally, but the required processing covers a period of 15 months from the time you make your request until the time you actually receive the funds. In a recent request in which I was involved, adoption by the council took three months alone.

In fairness to the government, not all the timing problems are caused by the agency involved, but clearly 75 percent of all timing problems for CDBG funding are a direct result of bureaucratic inefficiency. If you're going to involve yourself in this field of low- and moderate-income housing, you've got to allow for that kind of timing.

Who can afford this kind of timing in private development? Before 7/80

you can even apply for any government funding, you must have site control-the title, option, or signed agreement to buy the property. If the property cost is \$250,000 and you had to borrow that money at today's interest rates at 18-20 percent on a short-term basis, interest costs alone due to the delays just described would increase your development costs by \$86,250 or \$3,750 per month for 23 months. Add to that the additional delays for rezoning, environmental assessment processing, shoreline management approval, and such, and you're talking yourself right out of economic feasibility.

For this reason, it would be impossible for any private landowner to develop his property for low- and moderate-income housing and get any sort of reasonable return on his investment without some sort of public assistance. This is why low- and moderate-income housing is often referred to as public-assisted housing when the project is built, owned, and operated privately but public funds are used to develop the project or for rent subsidies.

These remarks are a minute sampling of the effects government controls can have on a project.

### FINANCING

We all know the effects of high interest rates especially during a period of inflation or economic recession. There are three sources of financing:

 Seed funds to cover pre-construction planning costs.

 Interim financing to cover costs during the construction.

· Long-term mortgage financing.

These funds are available from the state and federal governments, and privately. If government funds are used, you will be asked to meet some very rigid requirements. The requirements differ from program to program, depending on whether they are for sale or for rent.

If we take a rental project, the most favorable program existing today is a Section 8 Rental Subsidy with a 40-year FHA Mortgage Insurance and a Program 25 Ginny Mae take-out at 71/2 percent. This permits a family to pay no more than 25 percent of their income for rent. In some cases, the very low income families can pay 15 percent of their income for rent. Feasibility is dependent on whether the fair market rents established by HUD are adequate to cover your construction costs and operating expenses.

At today's costs, feasibility is difficult if you're paying market prices for private property. Even with free land provided by the state, meeting the rent ceilings is extremely difficult. This is especially true on the Neighbor Islands where costs tend to be higher and rent ceilings are lower.

If the project is a sales project, ceilings are established by mortgage limits. The maximum mortgage ceiling under the FHA 235 loan program is \$57,500. The purchase price cannot exceed \$68,400. At today's cost, it is impossible to build within those ceilings. The Hula Mae program has a mortgage ceiling of \$90,000. While this is more realistic to meet today's cost, it is still short of the average price of a single-family home in the state of Hawaii today.

So we have a classic example here of how one program is obsolete for today's housing situation and another soon may be obsolete in a few years unless some mechanism can be built in to absorb the changes from year to year.

The only viable housing program for anyone who wants to buy his home today is the state Hula Mae program. This program is available

# **Decades of Honors**



A Photographic Retrospective

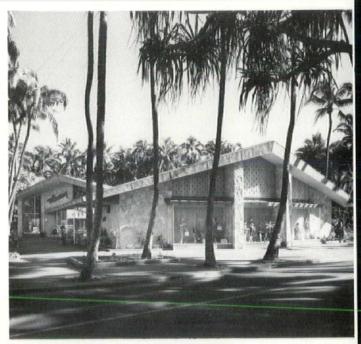


**Ossipoff Residence, 1958** 



Above: Blanche Hill Residence, 1961 Below: IBM Building, 1963





Above: McInerny Store, Waikiki, 1958 Below: Outrigger Canoe Club, 1964 With Wimberly, Whisenand, Allison, Tong & Goo Honolulu International Airport, 1976 With Sam Chang Architects



HAWAII ARCHITECT

In 1958 the Hawaii Society/AIA formally honored exceptional design for the first time. That year the firm of Vladimir Ossipoff & Associates won two of the awards. Since that year the firm, and its successor, Ossipoff, Snyder, Rowland & Goetz, has been the recipient of fourteen additional awards. The 1980 award for Wailea Elua Condominium marks the latest in that series which has now touched four decades.

The Ossipoff name was synonymous with superlative design long before 1958 and it is certain that the future will see a continuation of that tradition. Presented below are some of those award winners. Wailea Elua is covered in our regular Honor Awards feature on page 22.



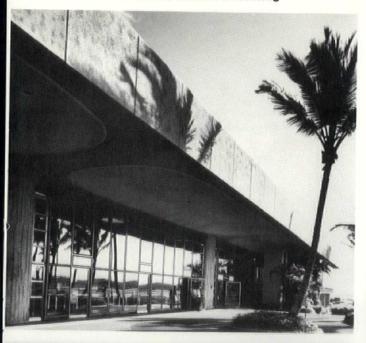
Vladimir Ossipoff FAIA



Pacific Club, 1964 With H. Seckel and Merrill, Simms & Roehrig



C. Brewer Building, Hilo, 1972







Above: Hawaii Preparatory Academy, 1970

**Right: Porteus Hall, 1974** 

Left: Thurston Memorial Chapel, Punahou, 1969

Above left: Kahului Air Terminal, 1970







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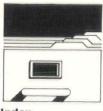
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# The Land Use Question

by RORY H. HAHN Executive Director Land Use Research Foundation of Hawaii

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The Land Use Reserch Foundation of Hawaii is a non-profit Hawaii corporation whose principal purpose is to investigate land use issues confronting the state of Hawaii and carry out research activities which contribute toward the development of sound policies and legislation.

In response to recently proposed state and county legislation, the Land Use Research Foundation as well as other industry groups have been actively involved in evaluating the relationship of land supply to the demand for land and its impact on pricing. The major problem in evaluating this relationship is the severe lack of reliable data. Since most of our work has been concentrated on Oahu, the major part of this article will present some of our preliminary findings with respect to Oahu's land situation.

As a result of bills such as H.B. No. 1775, the housing, tourism, and agricultural functional plan hearings, and recent constitutional amendments, much attention at this year's Legislature was focused upon agricultural land priorities. The conflict between conversion of land for competing urban uses. e.g., housing and resort projects, versus the retention of land for agricultural uses, was consistently in the limelight. State legislators were presented with a range of solutions: from the extreme-a grant of absolute priority to the preservation of all currently designated agricultural land, to the reasonable-the preservation of high priority agricultural lands.

From a statewide prospective, the current distribution of land under State Land Use district categories indicates that as of January 1979, less than 4 percent was districted urban and 48 percent agricultural, with the remainder falling into conservation and rural districts. Although estimates vary greatly, approximately 85 percent of the designated agricultural land remained uncultivated as of 1978. (This excludes lands used for aquacultural activities and the grazing of livestock. If these lands were included, then the total acreage in agricultural use would be 1,543,030, representing 80 percent of all designated agricultural lands.)

These figures indicate that, for numerous reasons, the amount of designated agricultural land far exceeds the amount estimated to be in cultivation. Even if one were to redistrict 10,000 acres of agricultural land for urban use, this would amount to less than 1 percent of the total amount of currently designated agricultural land and still leave over 300,000 acres statewide for future agricultural expansion.

Although these statistics are general in nature and further work is needed to see how much land is available by sub-category (e.g., prime agriculture land), there appears to be a significant cushion of agricultural land which could be converted to urban use without significantly compromising our state agricultural goals.

With respect to Oahu, current Planning Commission hearings on the proposed development plans (DP) involve as a primary issue the availability of land for urban uses and the preservation of land for agriculture. Very briefly, the City's DP recommendations (April 1980) would result in the following:

• Reduce the amount of currently zoned high density apartment land from 640 acres to 86 acres.

• Reduce the amount of vacant high density apartment zoned land to zero.

 Reduce the amount of currently zoned medium density apartment land by approximately 20 percent.

· Reduce the amount of currently

zoned low density apartment land from approximately 1,100 acres to 800 acres.

• Downzone approximately 8,000 acres of single-family residential land, representing over 10 percent of all currently zoned single-family land on Oahu and leaving approximately 3,200 acres of vacant usable single-family land available for development.

• Significantly reduce the allowable heights in almost all medium density apartment-zoned areas to less than or equal to 150 feet.

Thus, an obvious result of the DP process is that vacant usable lands available for residential or apartment development will be significantly reduced if the city's recommendations are adopted.

With the exception of Ewa and Central Oahu, the current land supply for each area of Oahu is proposed to be cut back from the existing zoning capacity. Central Honolulu (our prime source of high density apartment land supply), Koolaupoko, Koolauloa, North Shore, Waianae, and East Honolulu would all experience a significant decrease in the amount of urban land available for development. Assuming the demand for housing remains the same, this reduction in land supply will generate a further slowdown in the number of housing starts in each area and further escalate the price of housing.

A National Association of Home Builders (NAHB) econometric study now underway for Oahu indicates that a doubling or halving of the number of housing starts from a previous year will generate a 5-15 percent increase or decrease in the average price of housing. This relationship was clearly reflected during the period 1973-1977 when price increases slowed, following a period of high production (1972-1974) when annual starts



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# Land Use Question

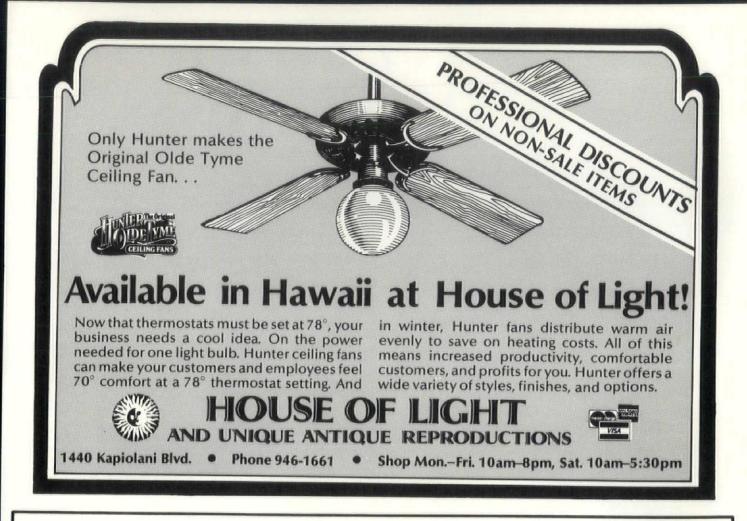
### **Continued from Page 13**

averaged 12,000. Conversely, prices have escalated significantly since 1977, when annual housing production declined to 4,000-5,000 units. While it is obvious that housing price increases are a function of a number of variables, the NAHB work indicates a high correlation between housing starts and pricing.

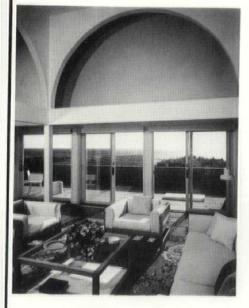
In summary, increased legislation aimed at reducing land supply, densities, and heights is having a significant impact on the number of housing starts and the price of housing. This is compounded by the fact that most of the prime sites on Oahu, particularly for high rise apartment development have been utilized in the last ten years. In addition, proposed legislation such as inclusionary zoning, if handled poorly, will further aggravate rather than help the situation. In the next several months, the Land Use Research Foundation will be evaluating and proposing measures which we feel will positively and equitably improve our land supply and thereby increase housing starts. HA



Rory H. Hahn



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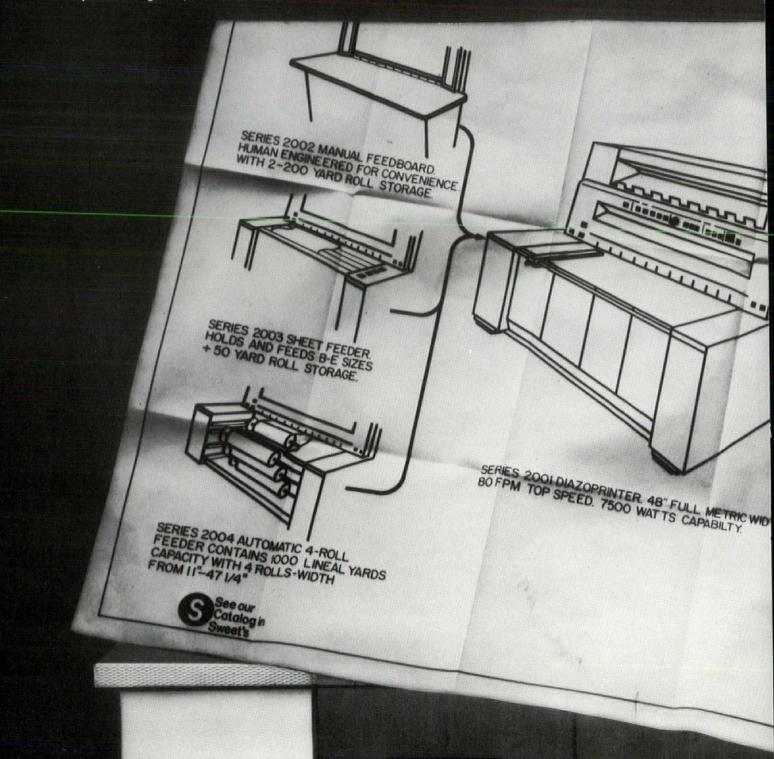
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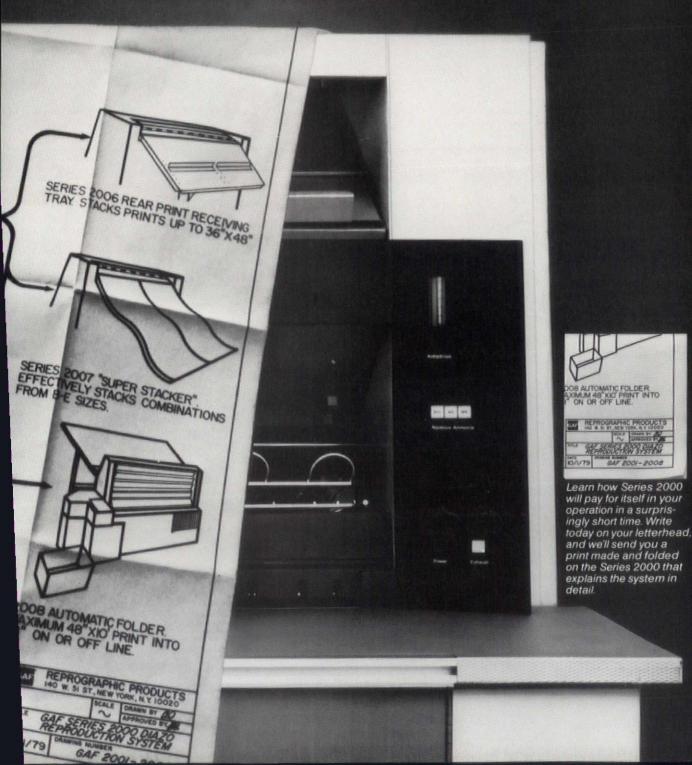
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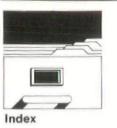
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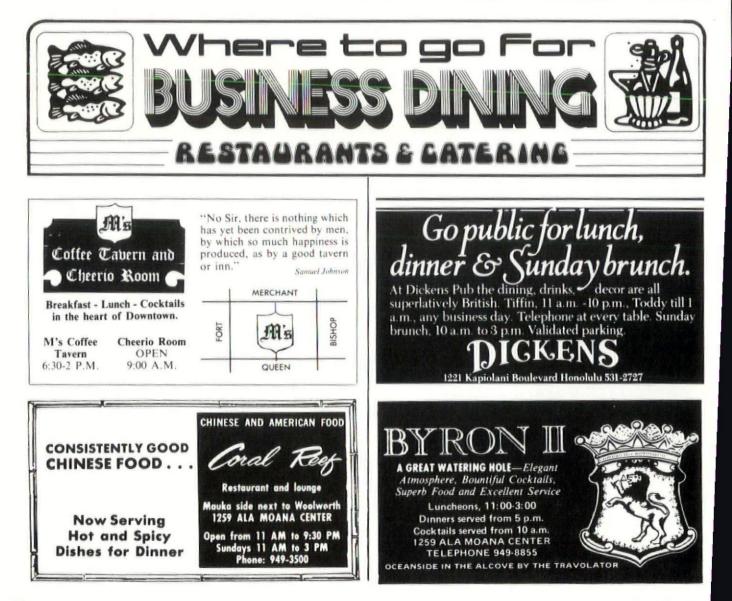


# Regulating Housing Development

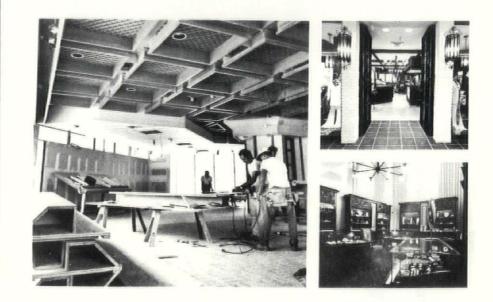
by JOHN WHALEN

John Whalen is a long-range planner with the city's Department of Housing and Community Development. His professional experience here, on the Mainland and in Latin America includes land use, housing and economic development planning. He is the project coordinator for a proposed "inclusionary zoning" program for Oahu. Copies of the proposed ordinance and accompanying report are available from the Department of Housing & Community Development upon request. The "rising cost of regulation" has been cited by some people in the housing industry as a major factor in the high cost of housing. Several studies have been made of "regulatory cost" but its actual contribution to housing market prices is extremely difficult to fix. Moreover, the studies rarely have attempted to balance regulatory cost against the consequences of *not* regulating.

To be sure, "red tape"-or the



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procedural side of regulation-can be as costly as it is confusing and annoying. The city's Department of Land Utilization has been spearheading efforts in the last couple of years to reduce the processing time for various land development permits, coordinate and consolidate processing requirements such as public hearings and application forms, and centralize and improve information sources on permit requirements and land development controls. The unraveling of red-tape is no small task, since it extends well beyond the city's jurisdiction. Private sector land developers can help by lobbying for specific measures to streamline permit processing.

While there is need to keep the procedural side clear and efficient. the substantive side of land development regulations is essential for the protection of valuable environmental and aesthetic resources. the promotion of safety and wellbeing and the shaping of urban development in such a way as to minimize public costs. These do add to costs for housing development, but the costs to the housing consumer would, in the long run, be even greater if there were no regulations to control and guide development.

Some housing industry representatives claim that, if they were unleashed from land development controls, they could increase supply to meet the demand and deliver housing at a lower price. There are several problems with this notion, aside from the consequences of "no control" mentioned above.

First, land development controls are by no means the only constraint to housing production. The risks involved with financing and shifting market characteristics are certainly major factors. Furthermore, Oahu's peculiar land tenure and water rights arrangements combine with

Continued on Page 20

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# Regulating Housing Development

### Continued from Page 19

a finite supply of these resources to put relatively few private interests into a commanding economic position. These conditions severely limit competition in the market place and hinder housing production.

Secondly, the demand for higher income market housing on Oahu, in large part from nonresident buyers, is so great that lower income households would have to wait a long time indeed before affordable housing could "filter down" to them.

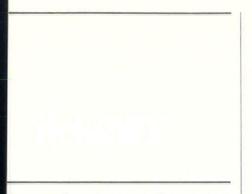
About 70 percent of the island's households, based on current household income data as compared to average sales prices for new and used single-family and multifamily dwellings, are shut out of the housing market.

This percentage has been on the rise during the last couple of years. The needs of this large segment of our population are, in many cases, immediate and cannot wait for some theoretical day when supply harmonizes perfectly with demand through private sector initiative.

Thirdly, the private sector clearly prefers to build housing for the upper economic strata where investment returns are greater. In the last two years, building permits for new single-family dwellings outnumbered those for multifamily units by at least two-to-one. The average single-family unit is about twice as expensive as a multifamily unit and usually results in a higher profit margin.

In 1976, the City Council made a number of changes to the Comprehensive Zoning Code to provide incentives to build "lower cost" housing. These amendments include the zero lot-line provision, density bonuses for cluster and planned development projects and flexible standards for roadways, lot sizes and lot dimensions.

The record shows that these incentives have not been used frequently or used in the way in-



tended. Only 8 out of 100 subdivisions in the past three years were zero lot-line, even though this option requires only normal subdivision approval. Likewise, the record shows that density bonuses and flexible development standards tend to be used to build large, expensive homes on smaller lots rather than smaller, more affordable units for moderate-income households.

Attempts to create a more favorable housing market through incentives and private sector initiative alone will not work unless the public sector steers the industry in the right direction. One way of doing this is through "inclusionary zoning," which requires that private residential developers address the housing needs of low- and moderate-income people in new housing projects.

The city's Department of Housing and Community Development has put together a proposal to institute an "inclusionary zoning" program on Oahu.

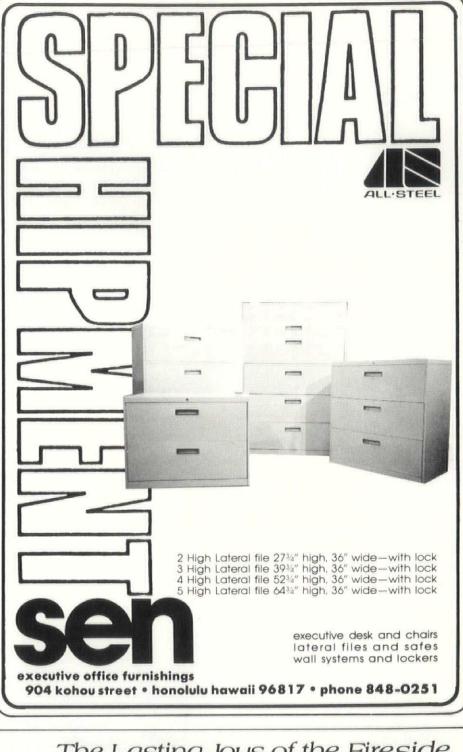
The proposed ordinance would require one of three alternatives:

• That 10 percent of the units in new residential developments of 10 units or more be sold at an approved price to low- and moderateincome households.

• That the developer dedicate 10 percent of the site area.

• Or, that the developer pay a fee based on 10 percent of the appraised value of the site. (The land or fee would then be used to develop housing for low- and moderateincome people.)

This is one of several such regulatory measures which should be considered to help generate an increase of housing supply which is appropriate and affordable to island residents, including those on the lower end of the economic scale.



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STRUCTURAL ENGINEERS Shimazu, Shimabukuro, Fukuda, Ma-

tsumoto and Richard M. Libbey MECHANICALENGINEER

Ferris & Hamig

ELECTRICAL ENGINEER

Douglas V. MacMahon

LANDSCAPE ARCHITECT

Walters, Kimura Associates

### PROBLEM

Wailea Elua is the second condominium village at Wailea, Maui, with 152 condominium apartments for use as second homes and in some instances, as permanent residences.

On a site that slopes approximately 80 feet between access road and sea, the design problem was one of providing a quality environment with visual and audial privacy and a marine view from all living rooms and bedrooms where possible.

#### SOLUTION

The project has been constructed in three increments with minor modifications made to unit design and mix between phases. Six floor plans in various combination comprise the 25 two-story clusters. The units include 1 bedroom, 2 bath; 2 bedroom, 2 bath; 3 bedroom, 2 bath and 3 bedroom, 3 bath, the latter being a townhouse. Parking for approximately 200 cars is distributed throughout the site with, where the topography allows, garages under four clusters.

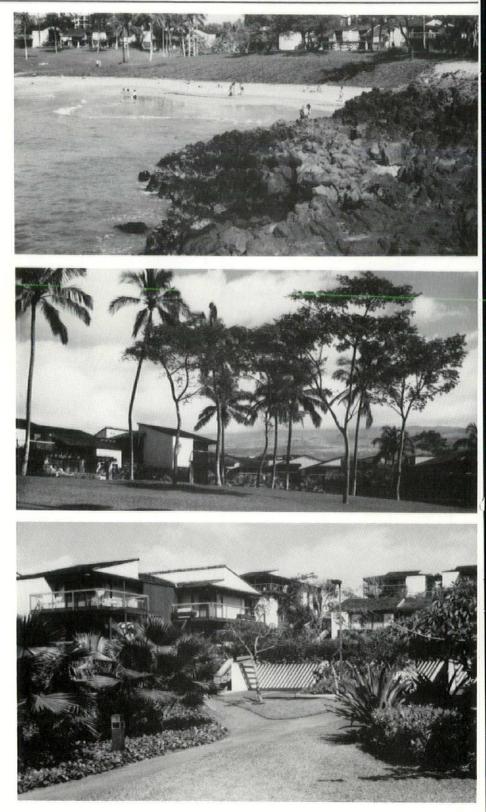
Construction is of wood frame with shake roofing and walls of stucco and redwood siding. The project's design vernacular is one of clipped eaves at wallsand with door and window openings indented to provide shade. Sprayon insulation and air conditioning ductwork is provided in all units with the buyer given the option at time of purchase to complete the air conditioning system. The natural ventilation/ ceiling fan option is aviable one preferred by many buyers.

On-site amenities provided include two swimming pools with attendant locker, shower, toilet, BBQ and entertaining facilities, plus a paddle tennis court and a putting green.

# HS/AIA Awards Program Wailea Elua Condominiums

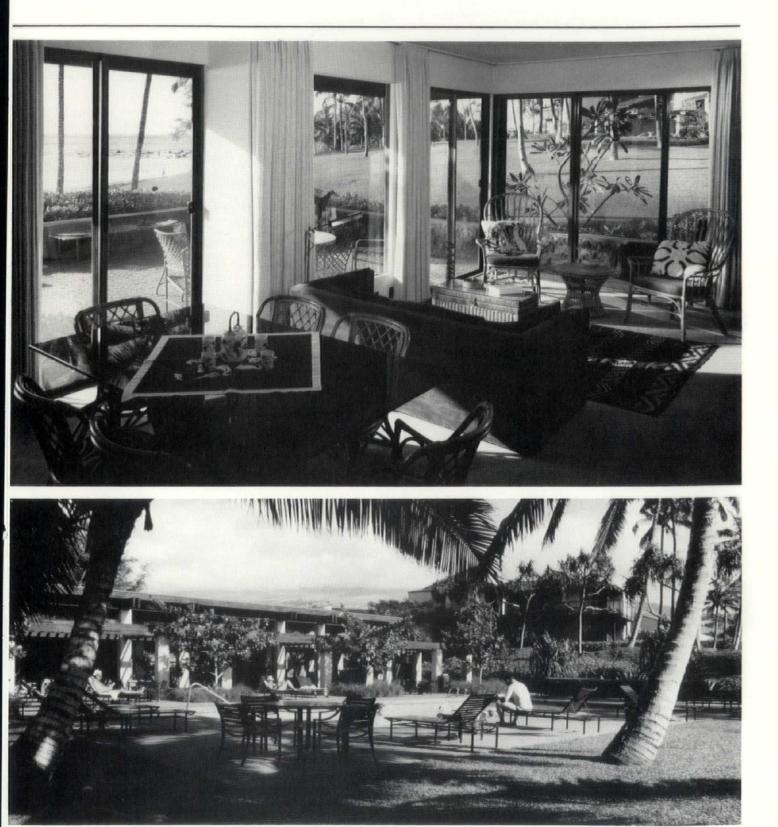
Award for Design Excellence by OSSIPOFF, SNYDER, ROWLAND & GOETZ

Photos by David Franzen



### JURY COMMENT

A delight—a sensitive use of and integration with the terrain. Well integrated into landscape, subordinate to the natural surrounding and takes advantage of the natural terrain without obvious manipulation. The physical planning of the units is extremely well done; they appear as a series of well de-signed single residences rather than a condominium development. The scale is superb. An excellent integration of indoors and outdoors.





# The NAHB Cost Buster House

by ELROY CHUN Executive Vice President Building Industry Association

Told the floor slab was an inch less thick than the building code allows, Kauai County Mayor Eduardo Malapit stepped into the living room. After a quick look at the house he turned to his wife and chuckled, "Why, just like our first house, not fancy or big, but cozy."

The Malapits, accompanied by several Oahu city councilmen and a dozen Isle delegates from the Building Industry Association, were satisfying their curiosity over a simply designed single-family dwelling being touted as the "Cost Buster House."

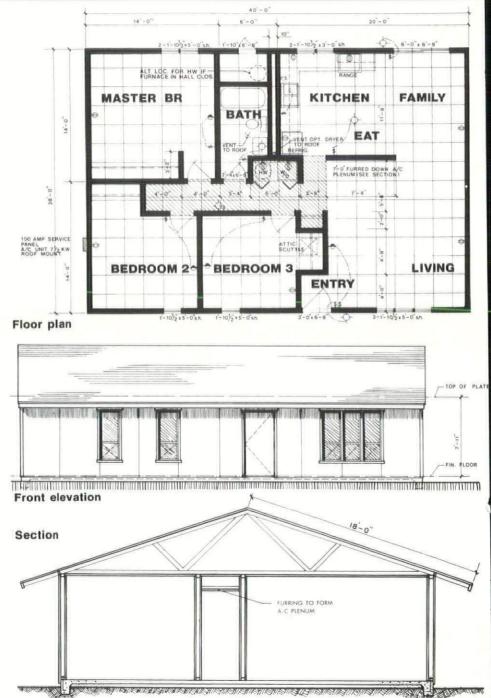
In the carport area, Honolulu Councilman Tom Nekota offered an unquestioned observation: "If this weren't Las Vegas, I would swear we went through a typical house in Kalihi."

The model—built by a Las Vegas contractor from specs developed by the NAHB Research Foundation—was the brainchild of a resident builder, Ernie Becker, who was NAHB's president in 1978 and who as host for the following year's convention-exposition wanted to show fellow builders that a decent low-cost dwelling is feasible, provided some of the more rigid local code regulations are waived or eased.

The emphasis, as its name implies, is on money savings. The Nevada model has 1,120 square feet, three bedrooms, and a bath. Some of its features do not adhere to the area's building code standards. However, city officials gave full cooperation, allowing deviations where health and safety were duly protected and where sound engineering data and facts supported the variations.

A review of the features—not typical, incidentally, in the Las Vegas area—discloses where savings were achieved:

1—Modular design. 4-foot major, 2-foot minor module. (28' x 40')



2—In-line framing, 24" o.c. exterior and interior wall framing. 3—Wall intersections falling on

2-foot module, eliminating extra studs.

4-In-line truss alignment over studs, eliminating cap-plate

(second top plate) and extra header framing.

5—Wide windows (221/2") which fit between 24" o.c. studs, eliminating structural headers over windows.

6-Glue-nailed plywood box-

beam over sliding glass door (installation in header).

7—Two-stud exterior wall corners instead of typical 3 or 4.

8—Monolithic footing-slab. Footing 8" wide, slab 3" thick (suitable for non-expansive soils).

9—Prefabricated plastic drainwastebasket plumbing with reduced size vent.

10—Two electrical outlets per room vs. at least one every 12 ft. of wall and 100-amp entrance panel instead of 150.

11—Central hallway droppedceiling heating/cooling supply plenum with high inside wall registers.

12—Single layer 4 x 8 hardboard primed siding without diagonal let in bracing and without felt.

13-No felt under roofing.

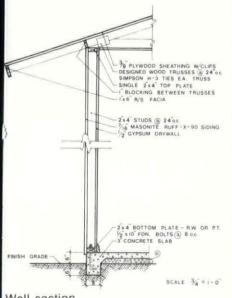
14—No soffit (exposed truss tails).

15—No rake overhang.

16—Plywood roof sheathing in 3/6 plyclips.

The house used for cost comparison purposes contained 1,064 square feet of living area, three bedrooms and a bath, and was also a single-story unit with slab-ongrade construction. It also was without the aforementioned features.

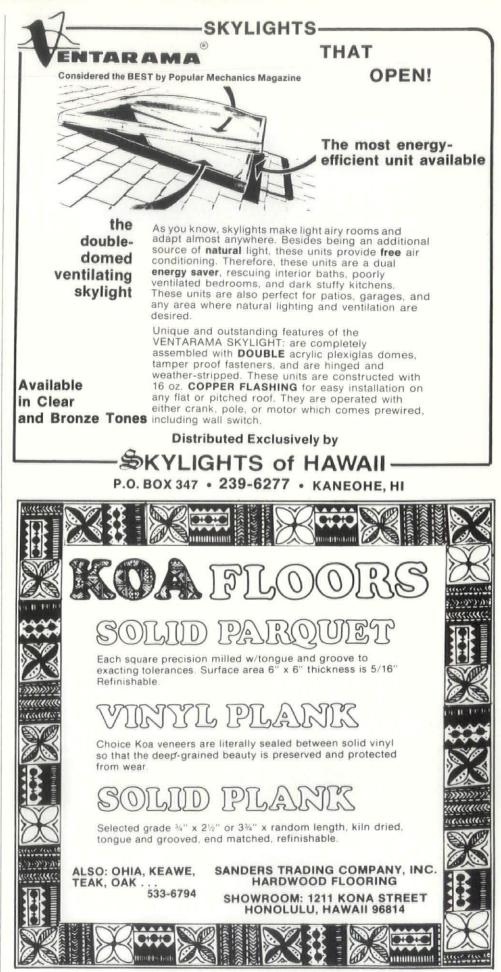
The in-place comparison showed total cost savings for direct con-



Wall section

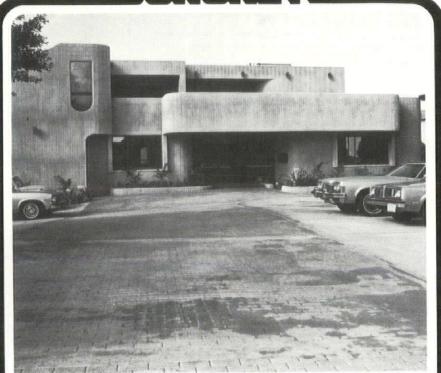
struction cost for labor and materials to be \$4,147. This included savings in labor of \$2,115 and in materials of \$2,032. The total cost savings were achieved in 14 different categories, with only one item,

Continued on Page 26



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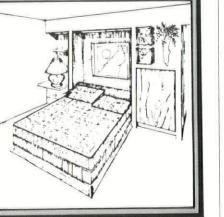
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### Continued from Page 25

**Cost Buster** 

flooring, showing a total cost increase of \$3.

The Cost Buster is 56 square fee larger than the comparison home. There was no difference in cost for appliances or for landscaping, equipment rental, or security during construction.

(The accompanying box gives the in-place cost comparison between the conventional and cost buster units.)

Despite the acclaimed savings, why haven't builders and homeowners responded in the past year and a half—a period when inflation has boosted costs probably another 20 percent and interest rates have rocketed and will likely stay double-digited?

"The Cost Buster is just one of a number of modules we've examined the past year," said Franklin Sunn, executive director of the Hawaii Housing Authority. "We hope to deliver a cost-effective unit without having to deviate from any code provision."

Sunn's agency is banking on Edward R. Aotani & Associates, who have been contracted to develop four engineered modules. The firm is currently researching conventional and innovative systems involving all basic building materials including wood, metal, siding, roofing, flooring, hardware, and the rest.

After approval of each Aotani design, the HHA will commission construction of the module units on the major islands.

Though in a sense abandoned, the Las Vegas Cost Buster approach has served a purpose in stimulating local communities to develop the elusive "affordables" in housing. The HHA involvement, however, reminds us that government still has to be in the picture to help produce conditions more conducive to building reasonably priced shelters in our land-limited archipelago.





### Continued from Page 9

to qualified families earning \$25,000 or less, which means that in order to qualify for a \$90,000 loan, your income must be at the maximum level. In other words, \$25,000 is the minimum any family can earn today to be a homeowner.

On the other hand, a family is eligible to rent a public-assisted (Section 8) project if their income is below \$17,500 annually. The problem here is that there have only been 50 newly constructed units available under this program each year for the past three years hardly enough to meet the demand of 32,000 units which are needed by 1985.

Private developers are not interested in building rental projects because it is not economically feasible. For this reason also, there is a massive movement to convert rentals into condominiums. The returns are better and there are no headaches. Passing legislation to prevent this practice does not resolve the problem. Rental units must offer identical or similar economic incentives, or we may find rental housing becoming obsolete in a few years.

### CONSTRUCTION COSTS

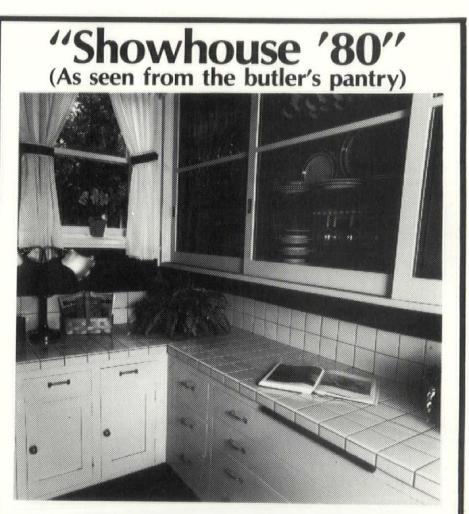
This is perhaps the most difficult area to do anything about. The cost for materials and labor will continue to rise as inflationary trends continue.

We have been talking for more than 10 years about reducing these costs through innovative design and utilizing new building systems. Precut housing packages, double wall modular systems, concrete modular systems, factory-built housing, drop shipments of materials and labor have all been tried at one time or another, and there has been little impact on the reduction of construction costs over the conventional stick built method.

The unfortunate part is that this portion of the total development

constitutes the major cost area, accounting for at least 75 percent of the overall costs. High-rise de-

velopments are being built at costs exceeding \$80 per square foot. (Continued on Page 28)



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# **Housing Costs**

### Continued from Page 27

Low-rise projects are at \$55 or more per square foot for construction costs alone. When you consider all the other indirect costs, you're talking \$70-\$100 per square foot or more upon completion. This is true if you have no unusual problems to contend with and if you build under a public-assisted project which offers low interest funds, tax incentives, limited profits, etc. Some unusual problems would be extensive off-site improvements which add delays and increase costs.

If gains are to be made here to reduce costs, it would have to be initiated by the industry itself. Manufacturers, labor unions, supply houses, contractors, etc., must get together to work this out.

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LAND

This is the single most important ingredient in putting together a housing project. Location no longer plays as important a role as it once did in deciding where to build your projects. Dominating the decision on where to build is availability whether the present owner is willing to sell or lease his land at a price which is feasible for development. The location of the property is determined more by its relationships to zoning and accessibility to public services for utilities, schools shopping, etc., but clearly the lack of such services is no longer a deterrent to marketing appeal as i once was. Owning our own home is so ingrained in all of us as the ultimate dream that most are prepared to make many sacrifices to achieve that.

The importance of availability cannot be underestimated. Anyone seeking the highest and best use for his property is not a candidate for a low- and moderate-income housing venture. State properties offered at a nominal fee (\$1 a year lease) are being utilized now and it is extremely difficult to meet the rigid cost and rental ceilings even with a zero land cost.

An example is a 62-unit apartment rental complex on the Big Island of Hawaii which is currently under construction on state lands. In order for this project to meet feasibility, it was necessary to obtain a \$150,000 CDBG subsidy from the County of Hawaii or the project would have been scrapped. And this was a project with no land cost!

If given the proper densities, land costs can be scaled down to a very minimum factor. So while there are ways to deal with land costs so that it doesn't become a negative factor, this is not so with

> Continued on Page 30 HAWAII ARCHITECT





# Housing Costs

### Continued from Page 28

### construction costs.

### COMMUNITY REACTION

This is becoming an increasingly significant factor in the success of a project. It is a constant issue of the "haves" against the "have-nots" or that new housing and increased densities disrupt life style and by all means we must preserve life style. More important is the preservation of life. Underlying this negativity to new housing development is the "stigma" attached to low- and moderate-income housing in the minds of many of our residents. Often this is the silent objection to new housing.

What most people don't realize is that even moderate-income families must qualify to buy a home in the same manner as everyone else. They must have gainful employment, good credit standing, and be able to meet the financial requirements to buy a home. This never seems to adequately erase the stigma, however. A requirement for public funding now includes neighborhood support. This issue cannot be ignored but must be dealt with in a very delicate manner for a project to succeed.

### DESIGN

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20, 25

As a final measure in the development process for low- and moderate-income housing, it is important to engage the services of an architect who is sensitive to the needs of the target group you are trying to serve and who can create a living environment which is functional, stimulating, and attractive. He must be aware of government requirements and capable of innovative designs which are sensitive to costs.

The knowledge, experience, and background of the architect will be a major asset in the success of your project. Those interested in designing monuments have no place in the low- and moderate-income housing field. For the most part, we have had excellent relations with architects we have worked with in this field. They have displayed a strong commitment to face the challenge of developing decent homes for all segments of our population.

### SUMMARY

In summary, the only deduction one can make of the low- and moderate-income housing situation is that it is heading towards a fatal destiny. Attitudes must change. Politicians, civil servants, administrators, bankers, landowners, labor groups, businessmen, planners, designers, suppliers; they all must be made aware of the seriousness of the situation and must be willing to work together in a spirit of cooperation. This is the greatest challenge; the major hurdle to overcome. A

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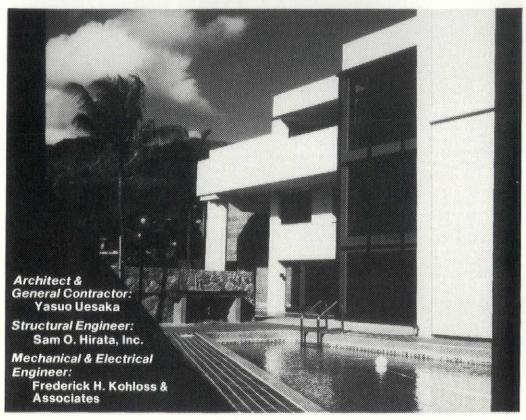
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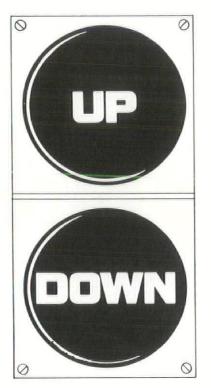
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