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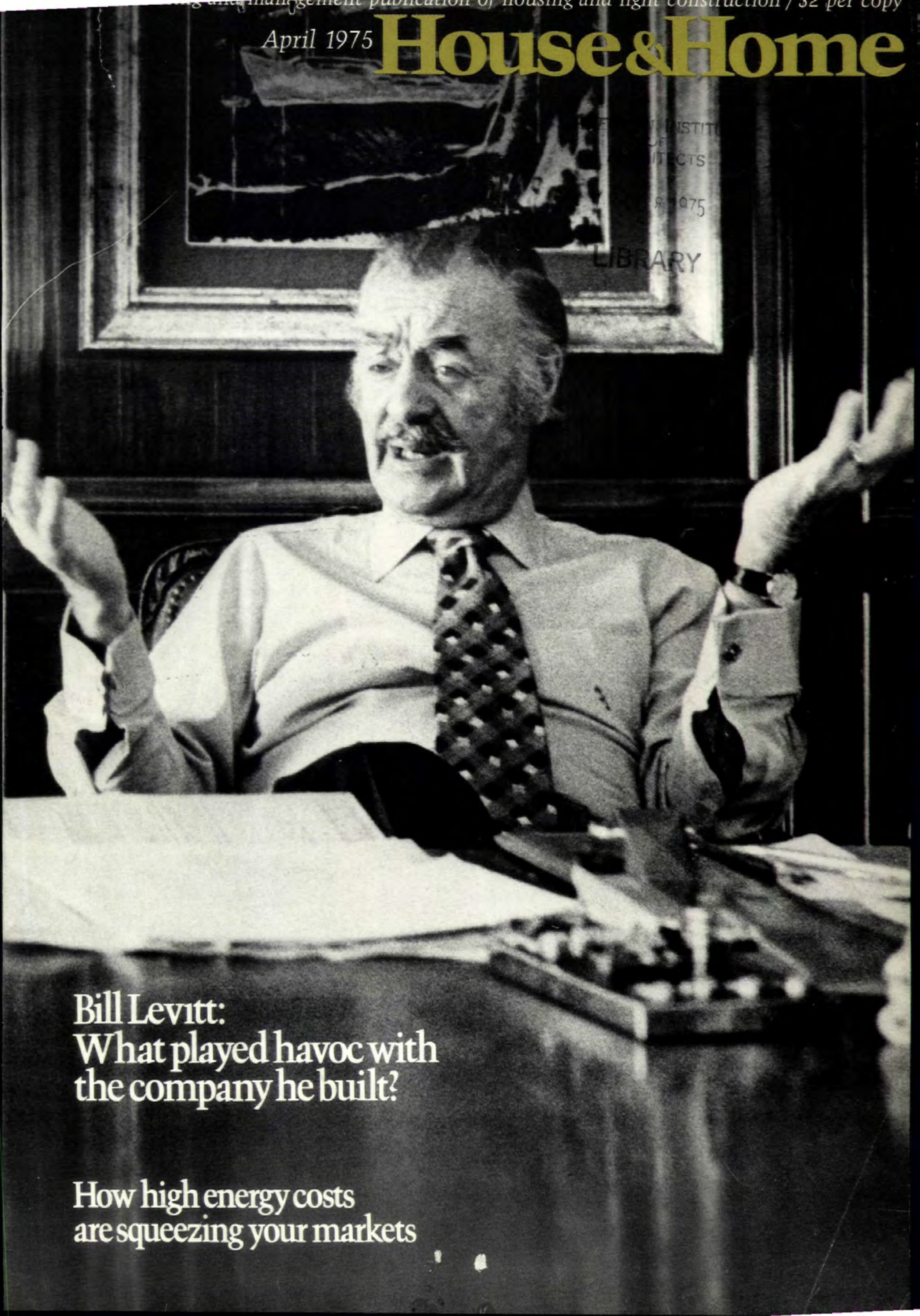
April 1975

House&Home



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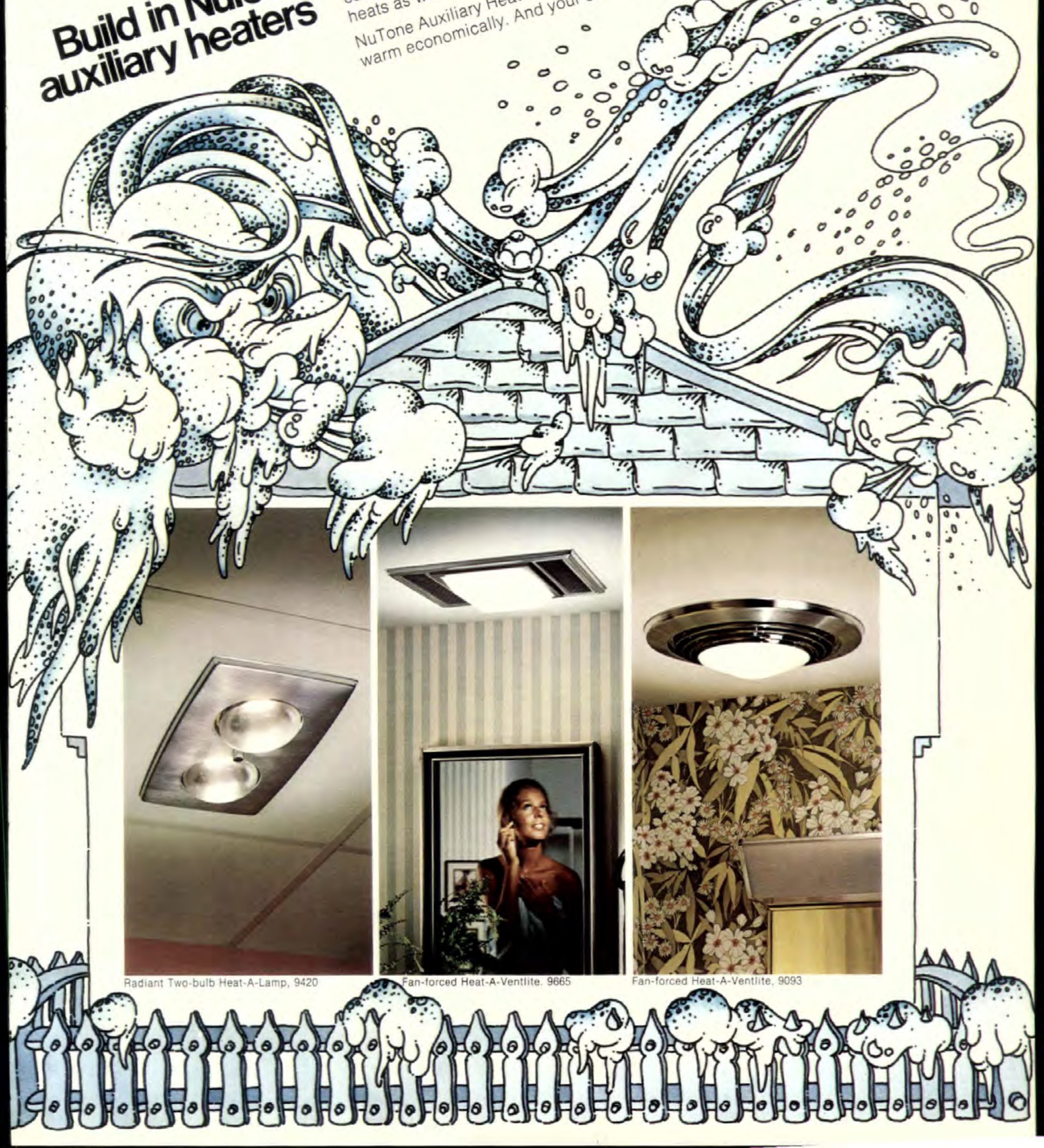

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House&Home

McGraw-Hill's marketing and management publication of housing and light construction

Volume 47 Number 4/April 1975

FEATURES

NEWS

DEPARTMENTS

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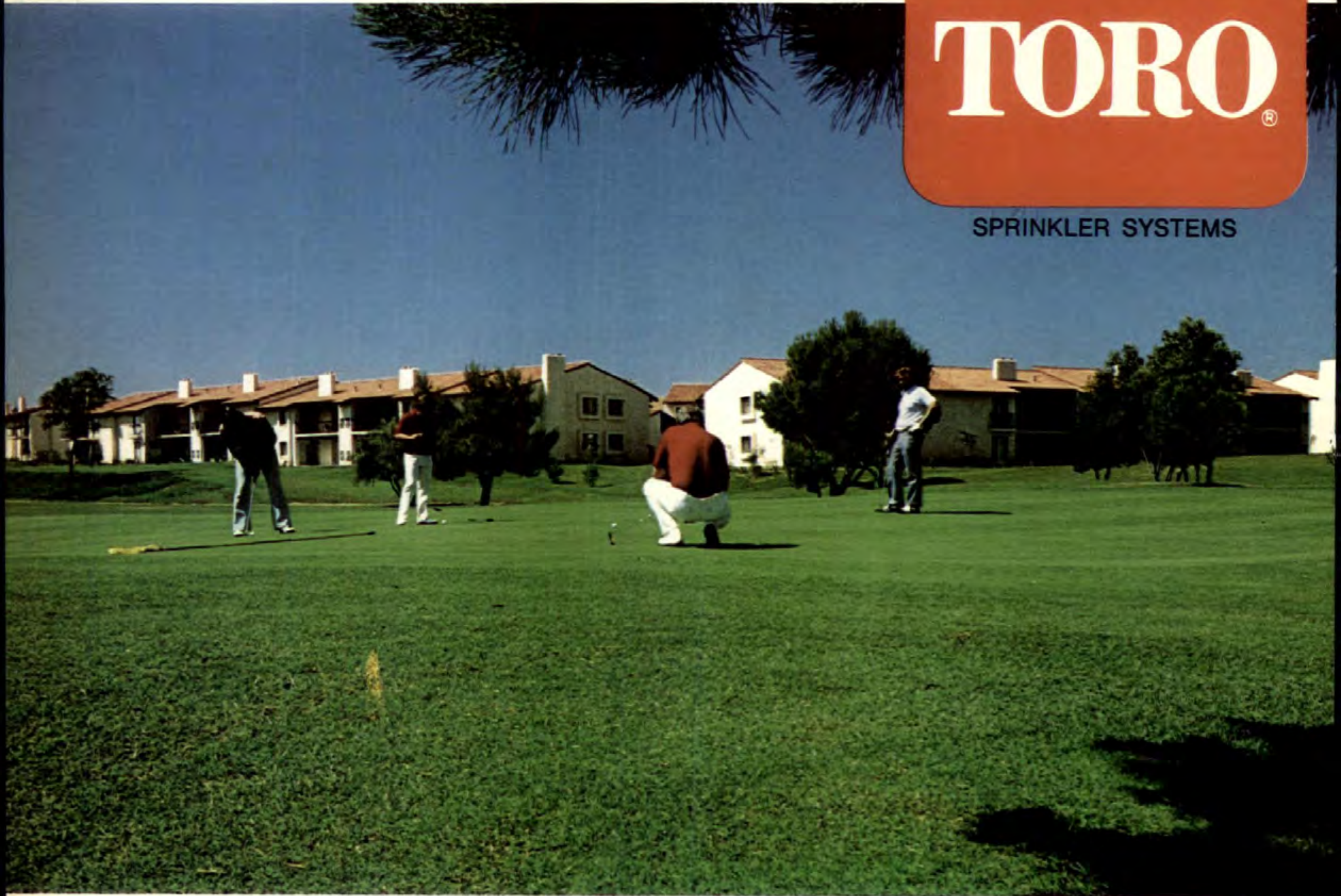

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CIRCLE 4 ON READER SERVICE CARD

tarts now expected to reach 1.9-million rate by fourth quarter

fter such a beating as the omebuilding industry took last ear, it's hard to believe in good ews.

But 1975 should see a strong covery in the housing market, ised on an even stronger recovy in the supply of mortgage oney.

And there are already signs at consumers and builders are sponding in the traditional ay to an easing of mortgage nds.

These are conclusions of Adnce Mortgage Corporation's irrent semi-annual survey, J.S. Housing Markets," which views national housing trends id those in 17 specific markets. dvance, with headquarters in etroit, is a subsidiary of Citiorp of New York.

1.5 million starts. President obert J. Mylod of Advance prects that total housing starts—iblic plus private—will attain 1.9-million annual rate by the urth quarter of this year. He ow projects 1.5-million total arts for the year, compared to e 1.35 million in 1974.

Mylod also expects that there ill be enough money in the ortgage institutions to support a 2-million-plus rate by the urth quarter—if the demand ises.

"The second half could be en stronger than we're now ojecting," Mylod adds, "if we e a truly significant and quick duction in the inflation rate."

One-family rally. Most of the ousing recovery that will be sible in the first half will be in e one-family-home sector. partment starts fell to a 15-ear low in the fourth quarter of 974 (48,000 units), and the first iarter of this year should be lite, if any, better. A general ckup in rental apartment conruction is not expected until te in the third quarter. In conominiums, none is expected fore 1976 or later.

Similarly, "U.S. Housing arkets" predicts the mobileome market will merely stay en with or very slightly irpass its 1974 level of 370,000 iipments, which was the west total since 1968. It is ounting on a second-half recovy to offset a dismal first half.

Cheaper mortgages. The ngle-family-home market already reflects signs of consumer and builder readiness. Mylod observes:

"We are most encouraged by the reports from many local markets of sharp increases since mid-January in single-family-home traffic and sales. These are mostly for Ginnie Mae's Tandem Plan subdivisions, with 7¾% mortgage financing.

"Many models are offering more home per dollar than a year ago; there are rebate programs. There are also reports from almost all the markets we survey of recent upturns in existing-home activity, particularly in FHA and VA applications since the rate was dropped to 8½% (January 24) and then to 8% (March 3).

Top markets. Mylod said that some of the survey's most interesting reports came from Miami-Fort Lauderdale, Atlanta and Detroit.

"All, in their very different ways, were among our most depressed markets," he explained. "Yet Fort Lauderdale builders reported tenfold increases in traffic. Some Detroit builders reported the best traffic in five years. Some Atlanta brokers have tripled their sales.

"Too much can be made of this evidence of a few weekends. We are dealing with interest rates lower than unsubsidized rates are likely to reach at any time this year. The traffic was more spectacular than the sales. The reports were all on single-family developments, not condos.

"But these testimonies do indicate that consumers will still respond to a reduction in interest rate and that the housing market is not hung up at its late-1974 level."

(1) 5% on new homes, 5½% existing. (2) FHA authority lapsed June 30, 1973; no rate to August 10.

High inventories will provide some drag on the market, the survey notes. There are some 410,000 unsold homes, compared to the 227,000 homes with which the 1971 recovery began. There was no condo inventory in 1971; this year, "U.S. Housing Markets" estimates, there are some 300,000 units, as many as 35,000 in Miami-Fort Lauderdale alone.

How bad 1974 was. Everyone agrees 1974 was a devastating year for the housing industry. "U.S. Housing Markets" cites some statistics to put it in perspective:

Total starts fell by a third during 1974 and apartment starts fell by more than half. There was never any letup in the rate of fall. There were steeper housing declines than this in the first year of the depression and the first year after Pearl Harbor—but not much steeper.

The real estate share of all credit commitments swung from about 45% in 1972 and early 1973 to an estimated 25% in the last quarter of 1974.

Mortgage yields increased two percentage points in nine months so that monthly payments (given a 10% price rise) increased nearly 30% while consumer incomes were increasing only 6%. This was the reverse of the long-term trend. In previous years, consumer income consistently rose faster than mortgage payments.

Jobs. There was a net loss in construction employment of 300,000 jobs (plus an undetermined number in construction-related industries).

An entire sector of real estate finance was virtually wiped out. New lending commitments by real estate investment trusts were 5% of the year-ago volume in the most recent HUD data.

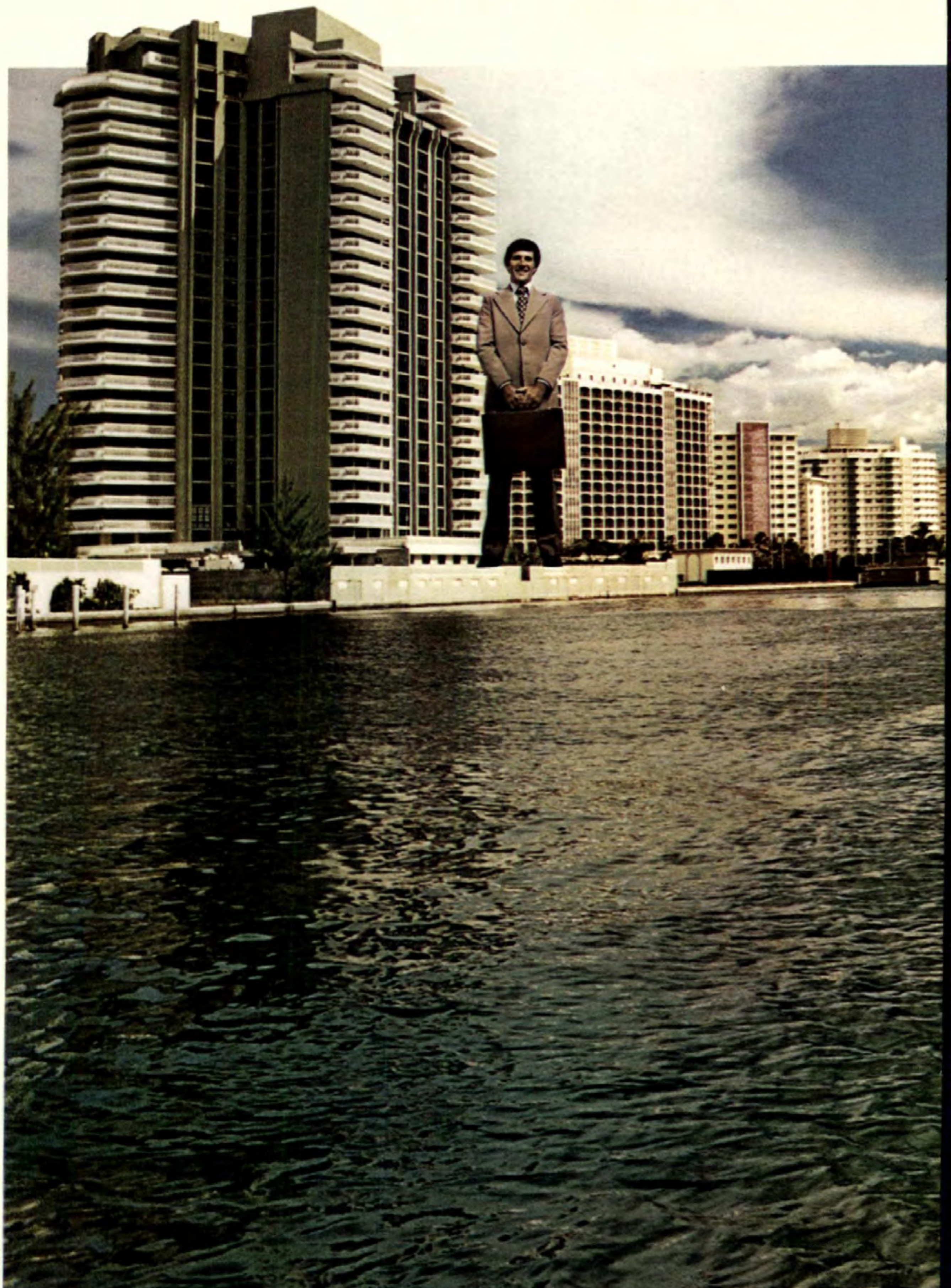
For the first time, mortgage rates rose high enough to intersect with 10% interest ceilings. Usury laws added to last year's discomforts in 14 of the 17 markets Advance surveys. In at least a half dozen of these markets, they shut off or severely constrained conventional lending part or all of the year.

And there was a grim toll of construction industry casualties. Builders were whipsawed between inflation, which produced cost overruns, and the escalating cost of their money or its outright unavailability.

Plea for reforms. The housing industry problems that came to the surface in 1974 will still be around after the current recovery, Mylod points out.

"The industry," he emphasizes, "has solved none of its problems. Tight money and the ills that flow from it lie just over the next hill, unless reforms are achieved.

"The housing market can probably never escape its contra-cyclical and stabilizing role in the national economy. But surely the violent swings such as we had last year can be moderated. One vehicle that has been proposed to accomplish this is the variable-rate loan and it has won increasing acceptance during the past year. A number of lenders are now making such loans on an experimental basis."



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CIRCLE 8 ON READER SERVICE CARD

Mortgage bond, note are devised to lure pension money into S&Ls

n the halcyon days not quite rgotten by bombed-out home-uilders, mortgage crises didn't ome as often or go as deep as ey do in the dismal 1970s. One omforting difference a decade r two ago was at least the token resence of pension-fund inves-rs supplying money to the ortgage market. Those inves-rs have long since departed, so Vashington now is starting a rive to lure some of them back.

To recapture the allegiance of ension-portfolio managers, the ome Loan Bank Board (HLBB) nd its affiliate for secondary arket purchase of mortgage ans, the Federal Home Loan Mortgage Corp. (Freddy Mac), re pinning their hopes on two ew-fangled ways to package ortgage loans. Board Chair-an Thomas Bomar and his ides talk expansively about pping pension funds for "bil-ons," with both of the new ortgage-backed debt instru-ents—a mortgage-backed ond, designed to be sold in the rivate market by the savings nd loan industry; and a guaran-eed mortgage certificate. reddy Mac will peddle the lat-er, hoping to turn the $5 billion n its mortgage portfolio into ash that it can channel back nto housing.

New opportunity. The tim-ng, at least, of the attempt to go n quest of the long-term capital arket's money seems to be fa-orable. Not only are interest ates and inflation easing, en-ouraging investors to place unds long-term, but pension unds are at an investment rossroads of their own. In the arly 1960s they deserted mort-ages in favor of a bull market in tocks. The equity market has one a full cycle back to de-ressed share prices in the inter-ening decade, and last year Congress wrote provisions into new pension law that will ause pension funds to sell off quities.

"Maybe it's time for them to ake a hard look and come ack," says a spokesman for the National Association of Home Builders.

Indeed, both the mortgage-acked bond and Freddy Mac's ertificate have already had airly promising dry runs. First Federal S&L of Rochester, N.Y., as sold a $15-million issue of bonds at an encouraging low interest rate. Freddy Mac placed a $300-million issue of certificates at a yield a few basis points higher than other equivalent kinds of federal-agency debt paper. Buyers in both cases were almost entirely pension funds or bank trust departments acting as pension fiduciaries. So the holders of the pension money bags are sniffing at the new mortgage packages.

Deficiency of GNMAs. The HLBB surmises that institutional investors want a mortgage instrument just like a straight industrial or utility bond—with none of the income-flow complications associated with mortgages themselves. The proof, says Chairman Tom Bomar and his associates, is the failure of the Government National Mortgage Association's mortgage-backed pass-through security to attract pension money.

Five years after the start of the GNMA program, pension funds and fiduciaries acting on their behalf hold only 19% of outstanding pass-throughs.

Pension managers seem to be dismayed by the irregularity of GNMA income payments, the uncertainty of maturities and—most of all—by having to accept monthly payments of principal as well as interest. Says Economist Donald Kaplan of the Bank Board: "They want their principal locked up so they can count on the yield."

Bond's features. The new mortgage bond has a fixed maturity of five years or more, with principal paid only at maturity, and interest in fixed amounts paid semi-annually. Such concessions to bond-market taste had to be made if the market was to be persuaded to swallow mortgage-backed securities at yields which S&Ls could afford to pay.

Bomar is experimenting to see whether the bond market will take these offerings without benefit of government guaranty, save the implicit guaranty in those cases where the collateral behind the bonds is composed of government-insured FHA-VA mortgages. First Federal of Rochester's collateral was in FHA-VA paper, which explains its Standard and Poor's Triple-A rating and low coupon rate.

If the mortgage bond proves unsalable without a government guaranty, says Harris Friedman, director of HLBB's office of Economic Research, "it makes more sense to use low-cost Treasury debt rather than a guaranty (of private lenders)."

Size of offerings. First Federal's issue had to be placed privately because it was too small to suit the capital market's preference for large, frequent issues easily sold in a liquid secondary market. To go in for big public offerings of bonds, the S&Ls will almost certainly have to use lower-rated conventional loans as collateral and, even then, they will have to club together in groups to achieve bond offerings on grand scale. Several S&L groupings right now are exploring the possibility of public issues offered through joint-service corporations.

Says James Hollensteiner of the U.S. League of Savings Associations:

"Wall Street isn't going to be interested in First Federal of Iowa with $10 million. The Street will want somebody with $50 million or $100 million in new issues every six months."

Complications. If it uses its own service corporation, an issuing S&L must go through the rigors of registration with the Securities and Exchange Commission. Further, when S&Ls, following the Bank Board's concept, guarantee to buyers of their bonds a fixed income stream, they lock themselves in with all the uncertainties of the haphazard flow of income from the back-up mortgages."

The small investor. Despite all these concessions to the bond market's notion of what a security ought to look like, S&L men and underwriters are convinced that, to have a firm market for public flotations of mortgage bonds, the S&Ls can't count on pension funds alone. They have to lure some money from individuals—and perhaps from the same people who now deposit in S&Ls. This is a very painful point. To placate those S&Ls that don't offer the bonds, the Board set the minimum denomination at $100,000.

If individuals are to buy the bonds, however, the minimum purchase must be brought down to around $5,000. So the Bank Board seems ready to approve small-denomination bonds provided they are publicly sold through an underwriting brokerage. They must also bear the name of a service corporation, not the name of an S&L.

Waning enthusiasm. The S&Ls, inundated this spring with savings deposits, are less keen than they initially were about trying the bond, but the Bank Board figures it has too much at stake to give up now. Unless the S&Ls lock in long-term money now, when rates are relatively low, housing will bear the brunt of a borrowing squeeze in any new credit crunch. And the Bank Board is still bruised by the criticism it received in financial circles for its own excessive borrowing to support the S&Ls in 1974.

Meanwhile, Freddy Mac intends to borrow long from pension funds on its own. Issues of its new certificates will run between $1 billion and $3 billion this year. Buoyed by a government guaranty, the certificate need not make all the concessions to the bond-market requirements that the mortgage bond does.

Innovations. The certificate is more like a bond than the Ginnie Mae pass-through is. New features are a 15-year maturity (although the maturity is not stated that way) and semi-annual payments of interest.

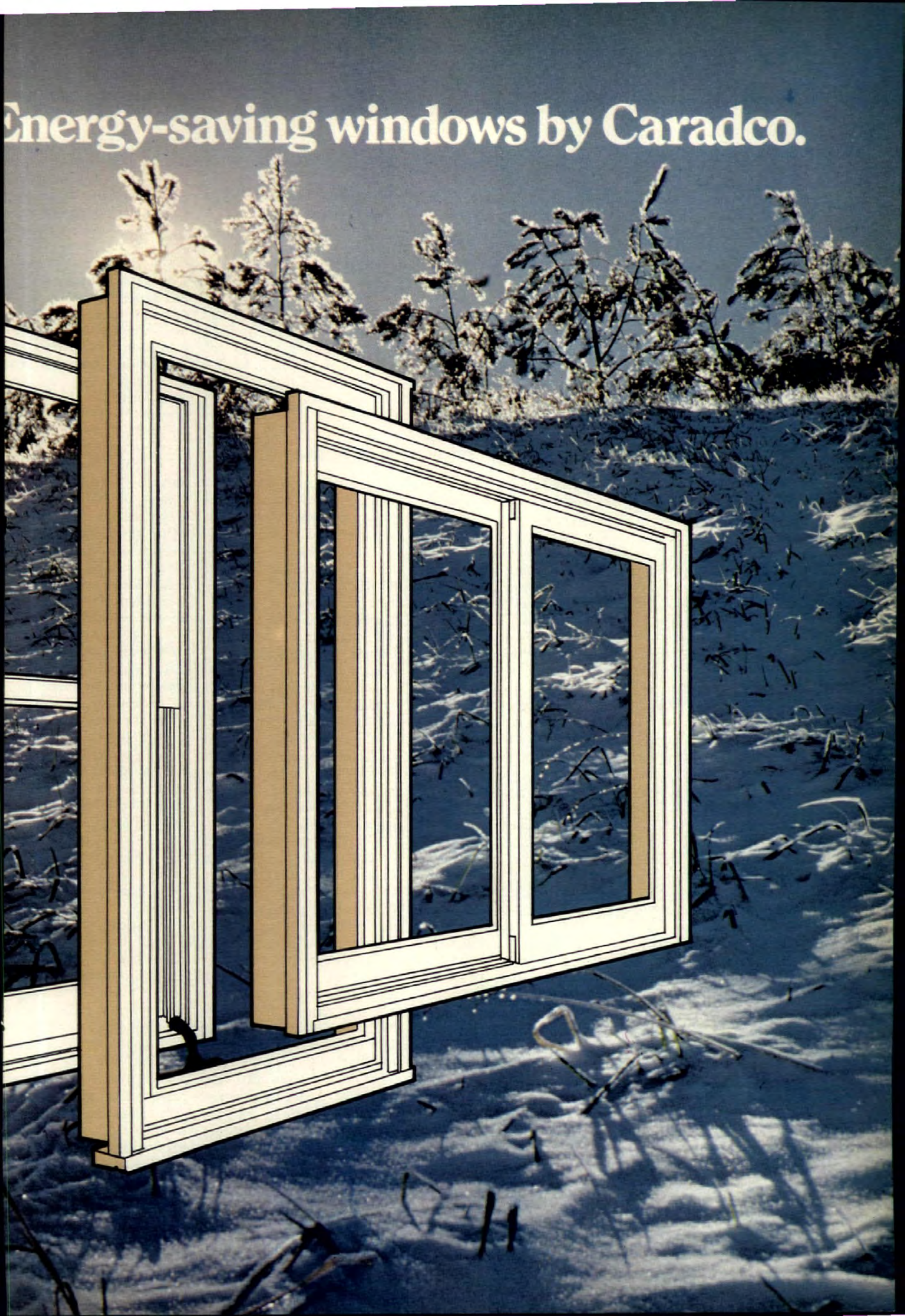
"We wanted to be as bond-like as we could," says Freddy Mac's Ronald Struck.

The next problem is to sell enough certificates so investors will be satisfied that there will be an adequately liquid secondary market in mortgage certificates when money tightens.

The acid test. For Bomar and the Bank Board the question remains whether the capital market will buy the un-guaranteed, industry-sold mortgage bond without insisting on an interest premium so expensive that the experiment fizzles.

The key test will come when public issues hit the market. If the market accepts them, the Bank Board would like to think mortgage bonds could bring $10 to $20 billion into housing in the next few years.

—STAN WILSON
McGraw-Hill World News,
Washington


Energy-saving windows by Caradco.

How Phoenix got $2.6-million block grant, most of it for housin

Under the new community development block-grant program, the Department of Housing and Urban Development is now approving the spending of $2.5 billion by 1,200 cities and a few urban counties under plans drawn by city officials—usually the mayors—and approved by HUD area offices.

Each city must submit a plan that conforms to the requirements of the law: A statement of its plans to improve living conditions for the poor by clearing slums and preventing blight, and a plan to provide housing for poor families and for the elderly. Plans must be broken down to show how the money will be spent over the first year and then over the years that are to follow.

A housing plan is a must. It has to include numbers of subsidized housing units to be financed and their location.

Here's a close look at the plan of one of the first cities to get its application approved—in this case by the HUD Los Angeles area office director, Roland E. Camfield Jr.

Housing will get most of the money Phoenix, Ariz., is drawing down for the first time under HUD's community development block-grant program.

Phoenix was one of the first cities to submit an application and get it approved. The application, dated December 10, calls for $1.6 million of its $2.6-million entitlement to be spent on the Booker T. Washington Neighborhood Development Program, a 121-acre urban renewal project begun in the spring of 1972. It will cost $11 million to complete.

Phoenix is Senator Barry Goldwater's hometown. It is one of those cities whose conservative politics have kept it out of many federal programs, but its politics is now easing toward mid-road.

100% rise in spending. The block grants replace the city's old categorical grant from HUD—grants for such specific purposes as open-space programs, urban beautification, historic preservation, water and sewer spending, neighborhood facilities, urban renewal, model cities and public-facility loans. Those grants had given the city a HUD spending level of $1.3 million a year.

But under HUD's formula for block grants Phoenix became entitled to $2.6 million, or twice its previous level of grants. Its grant will later rise to $9.7 million, more than seven times its income from the Treasury under the old way of doing things.

City Manager John B. Wentz, working under Mayor Timothy Barrow, filed a seven-page summary of the application. It included a statement of needs, a rundown of the short- and long-term objectives of each of its projects, a detailed breakdown of the housing it plans to build under federally subsidized programs and a general statement about where the units are to be located.

Planning since '72. Public hearings were held on the plan in mid-November, after which the plan was approved by the City Council. It was formally adopted in a public meeting November 26.

The city's housing plan was in good shape as the result of planning begun back in 1972. The planning was done so as to give the city a so-called workable program, which was required at that time to make any city eligible for HUD's categorical grants. Wentz in his application said the city was eager to "enter into a new pattern of relationship with HUD."

At the Booker T. Washingt project, the funds will be used acquire homes and to reloca homeowners.

Subsidized units. The cit housing plan shows the cit estimate of a need to demoli 4,000 dilapidated dwellings, habilitate 40,830 and provide least 77,323 subsidized units 1980.

The housing plan proposes series of residential restorati and preservation programs— nanced with $303,000 the fi year—which would inclu inspection, rehabilitation saveable units with rehab loa demolition of derelicts and general neighborhood upgradi program."

The city plans on 3,870 un of subsidized housing duri 1975. That includes 1,260 n units, 640 existing and 1,9 rehabs.

Phoenix is counting HUD's new Section 8 apartme program to provide the funds 1,000 of its new starts and 1 of the rehabs.

Locations. For the first ye Phoenix is planning to alloca 800 of its starts to housing the elderly poor, who are es mated to need a total of 14,3 housing units by 1980.

The housing plan specifi where the units for the elde will go (100 each for Paradi Valley, Deer Valley, Sunnysi etc.). For the non-elderly uni the plan says the new co struction will be sited accordi to a detailed allocation form including 20% of the units South Phoenix, 19% for D Valley, and so on. In each ca the census-tract numbers identified.

West Coast grant. Stockt Calif. is the first city on t West Coast to receive a blo grant, according to James Price, director of the San Fra cisco office of HUD. Stockt received a first-year grant of $1 million, which will be used continue two redevelopme projects and to initiate a n phase of code enforcement.

Price said that his office pla to issue block grants totali $81.4 million to 39 other co munities in northern Califor in the next four months.

—Don Loom
McGraw-Hill World Ne
Washingt

A national code for mobile homes

A national building code will be imposed on mobile-home makers early next year—a result of political bargaining between the House and Senate on the omnibus housing law Congress adopted last August.*

The National Mobile Home Construction and Safety Standards Act of 1974 is the latest advance by the federal government—through the Department of Housing and Urban Development—into vigorous consumerism. The department will become the regulator responsible for creating and enforcing standards that assure the safety, quality and durability of mobile homes.

When the national standard is officially promulgated by HUD, a state or locality may not have a standard for any aspect of performance covered by the federal standard that is not identical with the federal standard.

Uniformity. The national standard aims to minimize state mobile-home code variations, thus expanding the geographical market for any given mobile-home plant. A unit conforming to the national standard can be shipped freely from a factory in Pennsylvania, for example, to a distributor in Indiana or New York—and vice versa.

Officials at HUD plan to have a draft of the proposed standard published in the *Federal Register* for comment by May. Final standards are scheduled for publication in August, to become mandatory by February 1976.

"The first standard will be primarily the American National Standards Institute's A 119.1 standard, with variations," according to Maurice L. Fowler, a HUD official in charge of coordinating the standards procedure.

Mobiles under fire. The ANSI standard, which has been adopted voluntarily by 46 states, would be generally acceptable to the mobile-home industry. But already HUD is under pressure from consumer groups to come up with stiffer standards than required by ANSI.

In a slashing report titled "Mobile Homes: The Low-Cost Housing Hoax," the Center for Auto Safety, a Ralph Nader spin-off, takes 197 pages to bolster its case that mobile homes are generally a poor investment [News, March]. The result of a 2½-year study, the center's report charges the industry's leaders with being concerned more with "maximum profits and expansion" than "safety, quality, and integrity."

The safety, durability and quality of mobile homes are being investigated by the National Bureau of Standards with a $50,000 fire-research grant from the Mobile Home Manufacturers Assn., and a $200,000 grant from HUD—in addition to fire research financed by funds from the NBS budget. —D.L.

*Public Law 93-383, the Housing and Community Development Act of 1974, passed unanimously by Senate, 377-21 by House, signed by President Ford Aug. 22.

CIRCLE 13 ON READER SERVICE CARD

Britain adopts buy-now-and-pay-later plan to spur homebuilding

Britain's ailing housing industry has been given a multibillion-dollar survival kit by the Laborite government, but most industry leaders believe the plan has only a fair chance of achieving full recovery.

Freely admitting he is borrowing from a Conservative Party plan, Labor's Environment Secretary Anthony Crosland has announced these measures:

• A buy-now, pay-later scheme by which first-home buyers with annual incomes under $9,120 can defer part of their mortgage payments for ten years on houses costing less than $26,400. The plan is voluntary for Britain's version of savings and loan associations, known as building societies—and has higher ceilings on incomes and prices for the London area.

• Raising from $18,000 to $28,800 the ceiling on the so-called option mortgage scheme. This plan allows homebuyers to choose between lower interest rates and tax write-offs on normal interest payments.

• Pledges to continue massive loans to building societies, whose liquidity problems have prevented them from making many loans, even at the going 11% rate. So far, these loans have totaled $1.2 billion.

• Pleas to local authorities to speed plans for housing developments.

• A promise to let many developers go ahead with building plans despite legislation proposed by the Labor government to nationalize development land, chiefly in suburban areas.

Delayed-pay plan. The deferred-interest plan is complex, but in effect it means that purchasers would initially pay 8.5% interest. The rate would then rise by ½% a year until 11% was reached at the sixth year. The rate would remain at this level through the tenth year, after which payments would rise for the remaining 15 years of the standard mortgage length.

Homebuyers using this plan would ultimately have to repay more money than on regular mortgages, but the higher payments would presumably be made with inflated money. They would also be able to mortgage up to 95% of the house price.

A homebuyer, for instance, might take out a mortgage for 25 years at 11%. If the loan now amounts to $19,200 in today's market, monthly payments (including amortization) in the first year will be about $157.

The monthly payments will be about $7 higher in each succeeding year until they stabilize at about $190 a month for years six through ten.

For years 11 through 25 the monthly payments would be a flat $197 a month.

Drop in starts. To underscore the need to stimulate the industry, the Environment Department confirmed that housing starts continued to dr last year even after a large inje tion of capital into building s cieties. November's priva starts fell to 7,000, compared 8,000 in the previous month a 15,000 in November 1973. Re ovation grants—allocatio made to private homeowners local authorities—were runni late last year at about 50% of t 1973 level.

One of the few signs of op mism came a day after the go ernment's program was a nounced. The Building Societi Association reported that Ja uary deposits would set monthly record of nearly $6 million. The deposits, howev were clearly a reaction agai investment in the stock mark which had plunged in the p ceding months. Stocks bounded in January, and the surgence was expected to siph off potential deposits—at le in February and March.

—Don Edic
McGraw-Hill News, Lond

Tougher standards set for carpeting despite industry's objections

Because tests showed a decline in the quality of carpeting being sold under the assurance that it met Federal Housing Administration standards, the Department of Housing and Urban Development has raised the standards and made mandatory a new procedure for checking carpet quality.

With nylon—the pile fiber used almost exclusively in FHA homes sold with carpeting—costing about $1 a pound, the additional cost of material would run from 12½ to 25 cents a square yard. However, HUD also estimated that the cost to the manufacturer of complying with the new regulation procedures might run $1.50 to $2 for the 100 square yards of carpeting in the average FHA-insured house.

About 5% of all carpet manufactured in the United States is believed to be used in FHA homes.

Opposition. The Carpet and Rug Institute objects to the new standard (Minimum Property Standard 44C), as published in the *Federal Register* October 8, 1975, and 26 senators from the textile producing states urged HUD to delay the checking program. Manufacturers that do participate in the program may state that their products meet HUD-FHA standards, but they also include a statement that this does not imply endorsement by the federal government.

The institute has gotten a promise of another meeting with HUD officials and, one of its sources said, it will propose "a superior program." This source also said that the costs of HUD's own new regulation would run higher than HUD now estimates.

Testing program. The new procedure requires a manufacturer to submit samples to a HUD-approved testing laboratory, which functions as an administrator of the program. The administrator is responsible for the testing and certification that the carpet meets the FHA standards—and responsible for making two random spot-checks of the manufacturer's output each year.

Another procedure will allow a manufacturer to test the carpet in his own laboratory. If the laboratory is approved by an administrator, the administrator will then conduct three spot-checks of the carpet's quality each year.

The higher standard and tighter regulation replace a standard originally laid down in 1966, and a self-regulation procedure whereby the manufacturer certified that his carpet met the standard. However, tests done for HUD by ind pendent testing laboratories 1970 showed that one-third 100 samples tested failed meet the standard—and in 19 two-thirds failed. The test fa ures revealed that many man facturers were cutting back the amount of fiber per squa yard, thus lowering their o costs.

Test centers. At the beginni of March one labo tory—Electrical Testing Labo tories, New York City—h been signed by HUD as an a ministrator. The firm will n actually do the testing in its o shops, but will contract out t work to testing labs equipped do such work. Early in Marc about 30 manufacturers out the 350 in the country h signed up.

Officials at HUD's Washin ton headquarters say they' been trying to work out stan ards and a certification proc dure with the industry for yea and Undersecretary James Mitchell said in a stateme that "we are willing to con with industry representatives attempt to develop an additio method of self-certification u lizing end-use spot-checks."

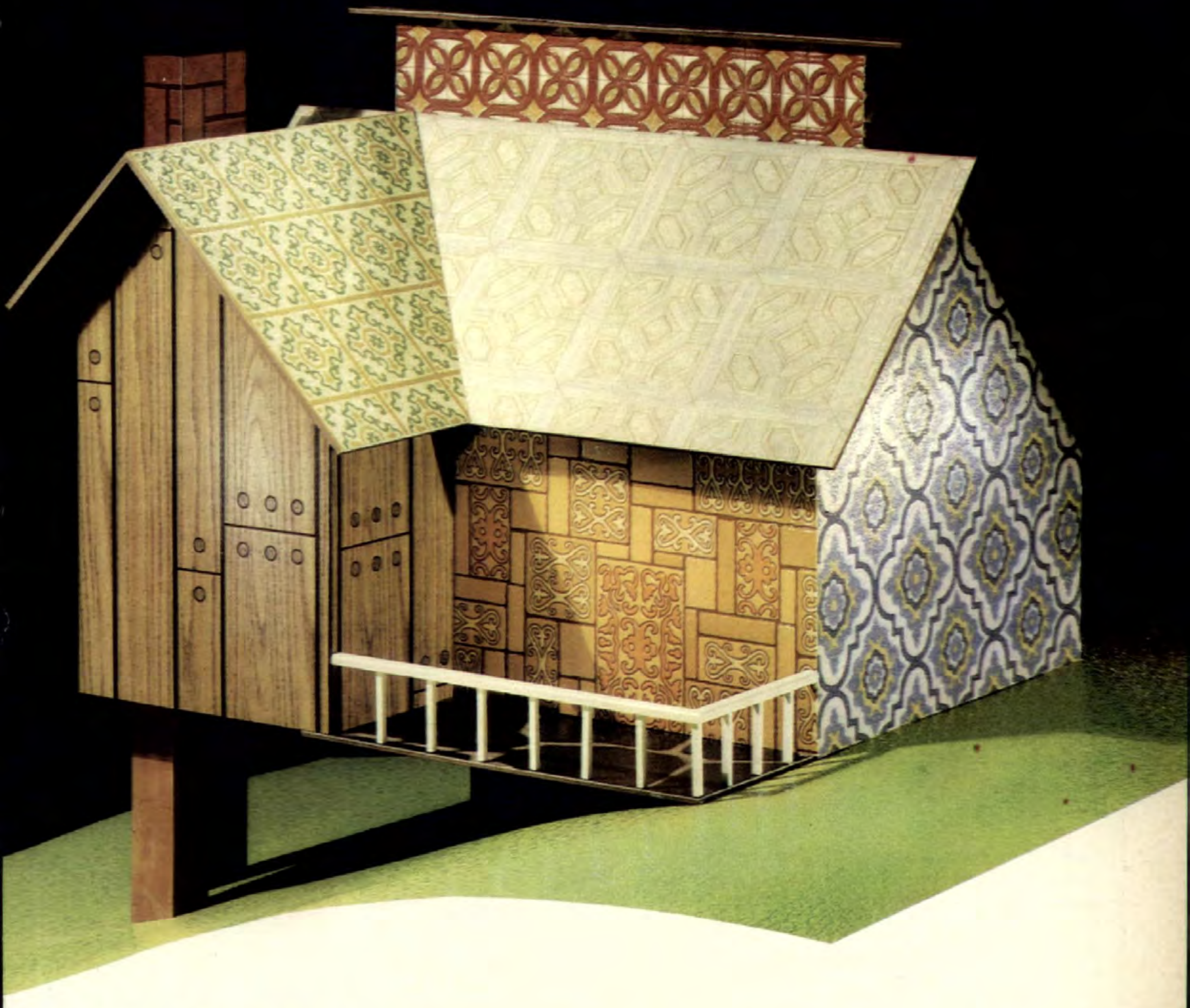
Two developers file in bankruptcy

Cavanagh Communities Corp., a community developer based in Miami Beach, and Co-Build Cos., a developer in the Virgin Islands, filed for reorganization Feb. 18 under Chapter 11 of the federal Bankruptcy Act.

Trading in Cavanagh shares was suspended on the New York Stock Exchange the same day.

Co-Build has been in financial disarray since 1973. Its former management has been sued by a major stockholder for allegedly releasing misleading financial information.

Under Chapter 11, a company operates under its own management but seeks court protection against creditor lawsuits while it tries to work out a plan for paying debts.



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Al Hayes leaving N.Y. Fed-Paul Volcker reported to be successo

Retirement of President Alfred Hayes is the key move in a changing of the guard at the New York Federal Reserve Bank, by far the most powerful of the 12 banks in the system. In the shuffle, several sensitive posts will fall to new hands.

In his 19-year tenure as New York Fed president, Hayes has come to epitomize the rock-ribbed, conservative, anti-inflation viewpoint of New York financial opinion, just as William McC. Martin did during long years as chairman of the Reserve Board in Washington. Now 65, Hayes will step down August 1. His successor presumably must inspire confidence in the conservative constituency to bolster confidence in the nation's money and its monetary policy.

PRINCETON'S VOLCKER
A change of voice and manner

A different type. While no one has been chosen to replace Hayes, all speculation centers on a former Treasury undersecretary for monetary affairs, Paul Volcker. At 47, Volcker is the same age Hayes was when the latter took charge in New York. Neither man has much fondness for Milton Friedman's monetarist economics, which the New York Fed, as operator of the reserve's policy-executing open-market trading desk, traditionally has resisted as destructive of the stability of financial markets.

An ex-banker with Chase Manhattan, Volcker did a five-year stint with the New York Fed early in his career. But perhaps his chief asset is his leadership in international monetary matters as Treasury undersecretary during the turbulent 1969-74 years. He is presently a senior fellow at Princeton University's Woodrow Wilson School of International Affairs.

Volcker may be as conservative an opponent of inflation as Hayes, but in manner he is conspicuously different. Volcker is a free talker, if not garrulous. Hayes has a reputation for silence, except with a small, inner circle of associates.

Other changes accompany the Hayes exit. Thomas Waage, se ior vice president for public fairs, left the New York F March 31. Waage is 63. Seni Vice President Charles Coom 56, in charge of the New Yo Fed's foreign exchange ope tions, will leave June 1. Waa will continue as a consultant both the New York Reser Bank and the Reserve Board Washington. Coombs has n revealed his plans.

Alan Holmes, the executi vice president who manages t Fed's trading desk, will assur Coombs' foreign-exchange sponsibilities. That, in tu will mean that more of the da to-day command of trading-de activities will fall to Vice Pr ident Peter Sternlight, who title is lengthened to inclu "deputy manager for domes operations." —S.

Research house at homebuilders' convention stresses new materials

Each year they meet in Dallas, the NAHB's members will see a house built by a local research group to demonstrate the economic feasibility and market acceptance of new products and techniques not in common use.

"Discovery 1975," a 3,300-sq.-ft. contemporary ranch-style house built by the Construction Research Center of the University of Texas at Arlington, was designed with special attention to energy and resource saving, to low maintenance costs and to security measures. Much of the work was done by architectural and engineering students under the direction of professionals, and manufacturers and suppliers donated most of the materials.

Funds from the sale of this house are going into continuing research and the construction of a 2,000-sq.-ft. house to demonstrate in 1976 a solar heating and cooling system in addition to advances in construction technology and materials.

New approaches. Among the innovations demonstrated this year were:

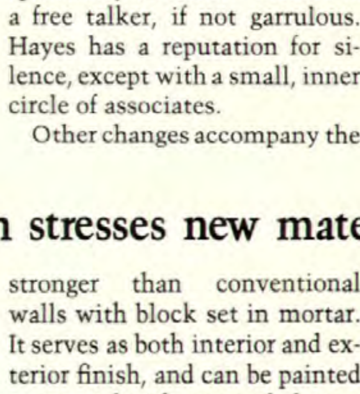
- The first residential floor slab made of concrete reinforced with glass fibers. The CRC says this fibrous concrete performs twice as well as conventional concrete reinforced with steel, apparently eliminates shrinkage and temperature cracks, and should be cost-competitive when the special alkali-resistant glass fibers are available commercially.
- Walls made of concrete block stacked without horizontal or vertical mortar joints (tripling a mason's productivity), then coated with about ⅛-in. of glass-fiber-reinforced mortar. The mortar (available commercially) is said to make the concrete block wall significantly stronger than conventional walls with block set in mortar. It serves as both interior and exterior finish, and can be painted or covered with textured plaster, if desired.
- A water-repellant, free-flowing granular vermiculite, poured into cores and cavities of the masonry walls, serves as a permanent barrier against transmission of heat and sound.
- Heating-ventilating ducts made of a flat glass-fiber sh bonded to an aluminized fabr then folded to form rectangu ducts, provide an economi system completely free of noi
- An under-foundation wa system to maintain supporti soil moisture and automatica provide water to lawns a plantings. Two parallel loops porous pipe are made from re cled rubber tires and plastics.
- Solar bronze wind glass—with hermetically seal air space between the doul panes—to control brightn and solar heat gain. This is n for single-family constructio
- A concrete tile roof, prov ing long life and minimu maintenance, is underlaid w a reflective coating—a wat proofing membrane with an e bedded foil barrier—to redu heating and cooling.
- Exterior doors which lo like conventional wood do have a steel face and back—s arated by wood—and a po urethane core. These elimin warping, bowing and signific heat loss, and magnetic wea erstripping assures no air moisture infiltration.
- A sheathing, made of truded polystyrene foam, wh is said to have superior insu tion characteristics. It is used wall and in gable areas, but i still experimental. It is light a easy to install. —L

McInerney leaves Long Island builder group

Timothy J. McInerney resigned unexpectedly last month as executive vice president of the Long Island Builders Institute, one of the largest locals in the National Association of Home Builders.

He attributed his resignation to "personal and professional considerations."

KENNETH SANDERSON



LIBI's McINERNEY
After 14 years, good-by

McInerney had held the executive's post for ten years and had been on the institute's staff for 14. He was also editor of the group's monthly publication, *The Long Island Builder.* He left to become construction editor of the *Long Island Business Review,* a weekly. He had been a reporter and political writer in the Bronx in the 1930s, but he had been a full-time trade association executive since 1937.

President Andrew A. Monaco of the institute accepted McInerney's resignation with "deep regret" and said:

"His years as our administrator were very fruitful for our oganization, which is a tribute to his ability."

McInerney's replacement is Thomas Junor, who has been associated with a planning board on Long Island.

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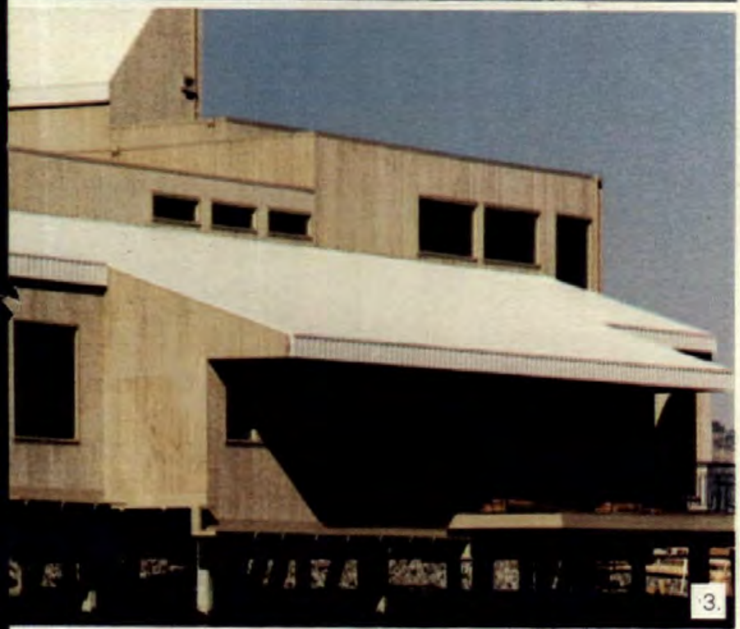

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Compared to tinted glass, Solarcool reflective glass can add as little as 10% to the cost of the total wall system.

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To find out more about it, see your local glass distributor, or write for our free booklets to: Dept. H45, Solarcool, PPG Industries, Inc., One Gateway Center, Pittsburgh, Pa. 15222.
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1. Professional Office Building, Panama City, Florida
   Architect: James Graham Chapman
   Contractor: Jean Mordellet
2. Roanoke Office Building, Phoenix, Arizona
   Architect: E. Logan Campbell
   Contractor: Shuart Corporation
3. Rusty Scupper Restaurant, Oakland, California
   Architect: Sandy & Babcock
   Contractor: Williams & Burrows, Inc.
4. Tucker Office Building, Atlanta, Georgia
   Architect: Arkhora & Associates
   Contractor: Hails Construction

PPG INDUSTRIES

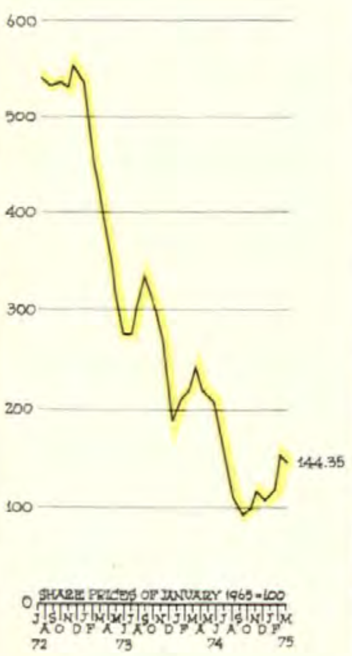
The housing industry's stocks take a tumble

HOUSE & HOME's value index of 25 housing stocks slipped to 144.35 from 151.98 in the month ended March 3.

The loss ended a two-month pattern of advances that had brought most housing issues into the new year on the upbeat. The new retreat was led by mobile-home and mortgage companies.

Share prices of January 1965 equate with a base of 100. The 25 issues comprising the index are overprinted in color.

Here's the graph of all 25 stocks on the composite index.



Here's how the five companies in each group performed.

	Mar.'74	Feb.'75	Mar.'75
Builders	199	128	126
Land developers	142	88	94
Mortgage cos.	672	221	199
Mobile homes	444	459	409
S&Ls	139	106	103

BUILDING

Company		Mar. 3 Bid/ Close	Chng. Prev. Month
Alodex	OT	⅛	....
AVCO Comm. Devel.—d	PC	⅝	− 1/16
American Cont. Homes	OT	1½	− ⅛
American Urban Corp.	OT	⅝	+ ⅛
Bramalea Con. (Can.)	TR	5½	+ 1
Campanelli Ind. (New America Ind.)	OT	1¼	+ ¼
Capital Divers (Can.)—d	OT	.36	+ .04
•Centex Corp.	NY	7¾	+ ½
Cenvill Communities	AM	2⅝	− ⅝
Cheezem Dev. Corp.	OT	¾	− ¼
Christiana Cos.	AM	1½	− ⅛
Cons. Bldg. (Can.)	TR	2.60	− .05
Dev. Corp. Amer.	AM	4¾	+ ⅛
Dev. Int. Corp.—d	OT	.062	+ .012
Edwards Indus.	OT	2⅞	+ ⅛
FPA Corp.—d	AM	3½	....
Carl Freeman Assoc.	OT	2⅛	− ⅜
Frouge Corp.—d	OT	4½	− ½
General Builders	AM	1⅜	+ ⅜
Hoffman Rosner Corp.	OT	3¼	+ 2
Homewood Corp.	OT	5½	+ 1
Hunt Building Corp.	OT	2	....
•Kaufman & Broad	NY	6⅝	− ¾
Key Co.—d	AM	1⅞	+ ¼
Leisure Technology	AM	1¾	− ¼
Lennar Corp.	NY	4⅜	− ⅞
McCarthy Co.—d	PC	1⅜	....
McKeon Const.	AM	2	− ¼
H. Miller & Sons	AM	6	+ 1
Mitchell Energy & Dev.	AM	11½	+ 1⅛
National Environment (Sproul Homes)	OT	¾	− ½
Oriole Homes Corp.	AM	5¾	− ½
Presidential Realty	AM	4	+ ⅛
Presley Development	AM	3	− 1
Pulte Home Corp.—d	AM	2⅛	− ⅛
Robino-Ladd Co.—d	AM	1	....
Rossmoor Corp.	AM	3½	....
•Ryan Homes	AM	16⅞	+ 1⅝
Ryland Group	OT	6¾	− ¼
•Shapell Industries	NY	8⅞	− 1½
Shelter Corp. of America	OT	3/16	+ 1/16
Standard Pacific—d	AM	2⅞	− ⅝
Universal House & Dev.	PC	⅛	− ⅛
•U.S. Home Corp.	NY	4¼	+ ¾
Valley Forge Corp.	OT	¼	....
Washington Homes	OT	1¾	+ 1
Del. E. Webb	NY	3¼	− ⅛
Westchester Corp.	OT	½	....

SAVINGS & LOAN ASSNS.

Company		Mar. 3 Bid/ Close	Chng. Prev. Month
American Fin. Corp.	OT	10⅜	+ ½
Calif. Fin.	NY	3⅝	− ¼
Empire Fin.	AM	14⅝	+ ⅜
•Far West Fin.	NY	5	− 1¼
Fin. Corp. Santa Barb.	AM	11⅞	+ 2¼
•Fin. Fed.	NY	10¾	− ¾
•First Charter Fin.	NY	11⅜	− 1
First Lincoln Fin.	OT	2⅝	− ¼
First S&L Shares	AM	8⅛	− 1⅛
First Surety	OT	3⅜	+ ¼
First West Fin.	OT	1¾	− ⅜
Gibraltar Fin.	NY	9¾	− ⅞
Golden West Fin.	NY	10⅞	− 1
•Great West Fin.	NY	16½	+ ⅝
Hawthorne Fin.	OT	7¼	− ⅛
•Imperial Corp.	NY	9	+ ¼
Transohio Fin. (Union Fin.)	NY	6	− ⅝
Trans World Fin.	NY	9⅜	− ⅜
United Fin. Cal.	NY	6⅞	− ¾
Wesco Fin.	NY	10½	....

MORTGAGING

Company		Mar. 3 Bid/ Close	Chng. Prev. Month
Charter Co.	NY	29	+ 4¾
CMI Investment Corp.	NY	9⅝	− 1⅜
•Colwell	AM	3½	− ⅞
Cont. Illinois Realty	NY	1⅞	− ⅜
Fed. Nat. Mtg. Assn.	NY	17⅜	− ¾
Fin. Resources Gp.—d (Globe Mortgage)	OT	¾	− ¼
•Lomas & Net. Fin.	NY	6⅜	− ½
•MGIC Inv. Corp.	NY	12½	− 1⅜
Palomar Fin.	AM	1⅛	....
United Guaranty Corp. (formerly FMIC Corp.)	OT	5½	− 1⅛
Western Pac. Fin. Corp. (formerly So. Cal. Mort. & Loan Corp.)	OT	2¾	+ ¾
UPI Corp. (United Imp. & Inv.)	AM	2⅛	+ ⅛

REAL ESTATE INV. TRUSTS

Company		Mar. 3 Bid/ Close	Chng. Prev. Month
Alison Mtg.	NY	3⅞	− 1⅛
American Century	AM	2⅛	− 1⅛
Arlen Property Invest.	OT	4¾	− ½
Atico Mtg.	NY	3¾	− ¾
Baird & Warner	OT	4½	− 2¼
Bank America Rlty.	OT	6⅛	− 2¾
Barnes Mtg. Inv.	OT	2½	− 1½
Barnett Mtg. Tr.	NY	2½	− ⅝
Beneficial Standard Mtg.	AM	4⅛	− 2⅛
BT Mort. Investors	NY	4	− 1⅛
Builders Investment Gp.	NY	4⅜	....
Cameron Brown	NY	2⅛	− ⅜
Capitol Mortgage SBI	NY	2¼	− ⅝
Chase Manhattan	NY	5	− 3
CI Mortgage Group	NY	1⅝	− ⅞
Citizens Mtg.	AM	2½	− ½
Citizens & So. Rlty.	NY	3⅝	− 1⅜
Cleve. Trust Rlty. Inv.	OT	3	− ¾
Colwell Mtg. Trust	AM	3	− 1
Conn. General	NY	13	− 1½
•Cont. Mtg. Investors	NY	1⅛	− ¼
Cousins Mtg. & Eq. Inv.	NY	2⅜	− ⅞
Diversified Mtg. Inv.	NY	1¾	− ¼
Equitable Life	NY	14⅝	....
Fidelco Growth Inv.	AM	7⅜	− 1
Fidelity Mtg.—d	NY	1⅝	....
First Memphis Realty	OT	3¾	− 1
•First Mtg. Investors	NY	1¼	− ⅛
First of Denver—d	AM	3	− 1⅛
First Pennsylvania	NY	3⅝	− ⅝
Franklin Realty—d	AM	2⅝	....
Fraser Mtg.	OT	9¼	+ ¼
Gould Investors—d	AM	4⅝	− ⅛
Great Amer. Mtg. Inv.	NY	2¼	− ⅛
Guardian Mtg.	AM	3	− ⅝
Gulf Mtg. & Realty	AM	2⅜	− ⅝
Hamilton Inv.	OT	1⅞	− 1⅜
Heitman Mtg. Investors	AM	2⅜	− 1⅛
Hubbard R. E. Inv.	NY	12⅞	+ ⅛
ICM Realty	AM	10¼	+ ¼
Larwin Mtg.	AM	1¾	− ⅜
Lincoln Mtg.	OT	⅝	− ⅜
Mass Mutual Mtg. & Rlt.	NY	11	....
Mony Mtg. Inv.	NY	6½	....
Mortgage Trust of Amer.	NY	3⅛	− ⅞
National Mortgage Fund	NY	1¼	− ¾
Nationwide R.E. Inv. (Galbreath Mtg. Inv.)	OT	4¾	+ 1
North Amer. Mtg. Inv.	NY	8½	− 1¾
Northwest Mut. Life Mtg. & Rlty.	NY	10½	− 1½
PNB Mtg. Rlty. Inv.	NY	4¾	− 1⅛
Palomar Mtg. Inv.—d	AM	1	− ⅜
Penn. R. E. Inv. Tr.	AM	8¾	+ ⅛
Property Capital	AM	9	+ ¾
Realty Income Tr.	AM	4¾	− 1¼
Republic Mtg. Inv.	NY	2½	− ¼
B. F. Saul, R.E.I.T.	NY	3½	− 1
Security Mtg. Inv.	AM	1⅛	− ⅛
Stadium Realty Tr.	OT	2½	+ ⅜
State Mutual SBI	NY	2⅞	− ¼
Sutro Mtg.	NY	3⅝	− ⅜
Unionamerica Mtg. & Equity	AM	1⅞	− ⅝
U.S. Realty Inv.	NY	3¼	− 1⅝
Wachovia Realty Inc.	NY	3¼	− 1¼
Wells Fargo Mortgage	NY	5⅛	− ⅞

LAND DEVELOPERS

Company		Mar. 3 Bid/ Close	Chng. Prev. Month
All-State Properties	OT	.15	+ .025
•AMREP Corp.	NY	3⅛	+ ⅛
Arvida Corp.	OT	5⅜	− ⅜
Atlantic Imp.—d	OT	2½	− ¼
Canaveral Int.	AM	¾	+ 1/16
Cavanagh Communities	NY	⅞	+ 1/16
Crawford Corp.	OT	4	....
•Deltona Corp.	NY	6¾	+ ⅞
Dominion Holding (Disc. Inc. of America)	OT	⅜	− ¼
Fairfield Communities—d	OT	¼	− ¼
•Gen. Development	NY	4⅜	....
Getty Financial Corp. (Don the Beachcomber)	OT	1	....
•Horizon Corp.	NY	3⅜	+ ¼
Landmark Land Co.—d (Gulf State Land)	AM	1⅝	− ¼
Land Resources	OT	⅞	+ ¼
Major Realty	OT	1.44	+.0025
•McCulloch Oil	AM	4⅛	+ ⅜
Sea Pines Co.	OT	2⅝	+ ⅛
South. Rlty., Util.—d	AM	4½	− ⅛

MOBILE HOMES & MODULES

Company		Mar. 3 Bid/ Close	Chng. Prev. Month
•Champion Home Bldrs.	AM	3½	+ ½
•Commodore Corp.—d	AM	1¼	....
Conchemco—d	AM	8	+ ¼
De Rose Industries—d	AM	1¼	− ⅛
•Fleetwood	NY	10¾	− ⅞
Golden West	AM	2	....
Moamco Corp. (formerly Mobil Americana)	AM	11/16	+ 1/16
Mobile Home Ind.	NY	2¾	− ½
Monarch Inc.	OT	1⅜	− ⅛
•Redman Inc.	NY	3	....
Rex Noreco—d	NY	1¼	+ ¼
•Skyline	NY	16⅝	− 2½
Town and Country	AM	2¼	+ ¼
Zimmer Homes	AM	2½	− ⅜
Brigadier Inc.	OT	1	....
Environmental Commun.	OT	⅛	....
Hodgson Houses	OT	⅝	+ ⅜
Liberty Homes	OT	1⅞	− ⅜
Lindal Cedar Homes	OT	1¼	+ ¼
Nationwide Homes	AM	10	+ 1½
Shelter Resources	AM	3½	+ 1⅞
Swift Industries	OT	1/16	....

DIVERSIFIED COMPANIES

Company		Mar. 3 Bid/ Close	Chng. Prev. Month
American Cyanamid	NY	25⅝	+ 2
Amer. Standard	NY	12¼	....
Amterre Development	OT	1⅛	− ⅛
Arlen Realty & Develop.	NY	1¾	− ¼
AVCO Corp.	NY	3⅝	− ½
Bendix Corp.	NY	29¼	+ 1⅞
Bethlehem Steel	NY	31	− 1½
Boise Cascade	NY	15⅞	+ 1
Building & Land Tech.	OT	1¼	+ ½
CNA Financial (Larwin)	NY	3⅞	− ⅝
Campeau Corp.	TR	5	+ .45
Castle & Cooke (Oceanic Prop.)	NY	14⅛	− ¾
CBS (Klingbeil)	NY	41¼	+ 4⅝
Champion Int. Corp. (U.S. Plywood-Champion)	NY	16	+ 1⅞
Christiana Securities	OT	98½	+ ½
Citizens Financial—d	AM	1⅝	....
City Investing (Sterling Forest)	NY	6⅛	− 1⅛
Corning Glass	NY	42	+ 3½
Cousins Properties	OT	3⅜	− ¾
Dreyfus Corp. (Bert Smokler)	NY	6	− ¼
Environmental Systems	OT	1/16	+ .013
ERC Corp. (Midwestern Fin.)	OT	17½	+ ½
Evans Products	NY	3⅜	− 1
Ferro Corp.	NY	24½	+ 4½
First Gen. Resources—d	OT	.05	− .075
First Rlty. Inv. Corp.—d	AM	1	+ ⅛
Fishback & Moore	NY	30½	....
Forest City Ent.	AM	4¼	....
Flagg Industries—d	AM	3	+ ¾
Frank Paxton Corp. (Builders Assistance Corp.)	OT	7¼	+ ¼
Fruehauf Corp.	NY	17⅞	− 1
Fuqua Corp.	NY	5	− ⅝
Georgia Pacific	NY	38⅜	+ 1⅛
Glassrock Products	AM	2¼	....
Great Southwest Corp.—d	OT	.312	+ .242
Gulf Oil (Gulf Reston)	NY	20½	+ ¼
Gulfstream Land & Dev.—a (Bel-Aire Homes)	AM	6½	....
INA Corp. (M. J. Brock)	NY	32	+ ¼
Inland Steel (Scholz)	NY	36⅛	− ¾
International Basic Econ.	OT	1⅜	....
International Paper	NY	39⅞	+ 1⅜
Inter. Tel. & Tel.	NY	19⅛	− ½
Investors Funding—d	AM	1	....
Killearn Properties—d	AM	1¾	....
Leroy Corp.	OT	1½	+ ¼
Ludlow Corp.	NY	10½	+ ⅜
Monogram Industries	NY	7⅜	− ⅛
Monumental Corp. (Jos. Meyerhoff Org.)	OT	10¾	− ¾
Mountain States Fin. Corp.	OT	5¼	+ 2
National Homes	NY	3⅜	− ⅜
National Kinney (Uris Bldg.)	AM	2¼	+ ⅛
NEI Corp.	OT	5⅛	+ 1⅛
Occidental Petroleum (Occ. Pet. Land & Dev.)	NY	14⅞	+ ½
Pacific Coast Prop.—d	AM	⅜	− 1/16
Perini Corp.	AM	6½	+ ⅝
Philip Morris (Mission Viejo Co.)	NY	46¾	....
Pope & Talbot	NY	12⅛	− ⅝
Republic Housing Corp.	AM	1⅞	− ⅛
Rouse Co.	OT	3½	+ ⅜
Santa Anita Consol. (Robt. H. Grant Corp.)	OT	6	+ 1¼
Tenneco Inc. (Tenneco Realty)	NY	22¾	− ⅞
Time Inc. (Temple Industries)	NY	34½	+ 4
Tishman Realty	OT	12⅛	− 1½
Titan Group Inc.	OT	15/16	+ 3/16
UGI Corp.	NY	12	− 1½
Weil-McLain	NY	8¼	....
Westinghouse (Coral Ridge Prop.)	NY	12¾	+ ⅞
Weyerhaeuser (Weyer. Real Est. Co.)	NY	33⅛	+ 1⅞
Whittaker (Vector Corp.)	NY	2⅛	− ¼
Wickes Corp.	NY	10¾	− 1⅜

SUPPLIERS

Company		Mar. 3 Bid/ Close	Chng. Prev. Month
Armstrong Cork	NY	25⅜	+ 3⅛
Automated Bldg. Comp.	AM	3	− ½
Bird & Son	OT	33	+ 1½
Black & Decker	NY	30¼	+ 4⅞
Carrier Corp.	NY	10¼	+ 1½
Certain-teed	NY	9¼	− ¾
Crane	NY	39⅛	+ 3½
Dexter	NY	10⅝	− 1⅝
Dover Corp.	NY	36½	+ 4⅝
Emerson Electric	NY	34¼	+ 5¼
Emhart Corp.	NY	19	+ 1⅛
Fedders	NY	4	− ⅝
Flintkote	NY	15⅞	+ ¾
GAF Corp.	NY	10⅜	− ¾
General Electric	NY	44⅞	+ 5½
Goodrich	NY	16¼	+ 1¼
Hercules	NY	27½	+ 3⅞
Hobart Manufacturing	NY	18	+ ½
Int. Harvester	NY	26½	+ 5
Johns-Manville	NY	21⅜	− 2¼
Kaiser Aluminum	NY	18	− 1⅛
Keene Corp.	NY	5⅛	+ ⅛
Leigh Products—d	AM	5	− ¾
Masco Corp.	NY	39¼	+ 3⅛
Masonite Corp.	NY	30⅜	− ⅞
Maytag	NY	26	+ 3¼
National Gypsum	NY	13	+ ¼
Norris Industries	NY	15¼	+ 1⅛
Overhead Door	NY	6½	− ⅛
Owens Corning Fibrgl.	NY	37½	+ 4¾
Potlatch Corp.	NY	27	+ 1½
PPG Industries	NY	25½	− ¾
Reynolds Metals	NY	16⅞	− ½
Rohm & Haas	NY	63⅜	+ 9⅛
Ronson	NY	7	+ ⅛
Roper Corp.	NY	13	+ ¼
St. Regis Paper	NY	24¼	+ 1½
Scovill Mfg.	NY	10¾	− 1¼
Sherwin Williams	NY	40	+ 2
Skil Corp.	NY	10⅜	+ ⅜
Slater Electric	OT	3¾	− 1
Stanley Works	NY	18⅜	+ ⅜
Tappan	NY	4⅞	− ⅜
Thomas Industries	NY	7	− ⅛
Triangle Pacific—d	NY	7½	− 1⅜
U.S. Gypsum	NY	17¾	− 2⅛
U.S. Steel	NY	50¼	+ 2⅛
Wallace Murray	NY	7½	− ¾
Jim Walter	NY	27¼	− 1¼
Whirlpool Corp.	NY	20½	+ 1⅞

AM—closing price American Stock Exchange. NY—New York Stock Exchange. OT—over-the-counter bid price. PC—Pacific Exchange. TR—Toronto Stock Exchange. a—stock newly added to table. d—not traded on date quoted. •—Computed in HOUSE & HOME's 25-stock value index. Source: Standard & Poor's, New York City.

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CIRCLE 21 ON READER SERVICE CARD

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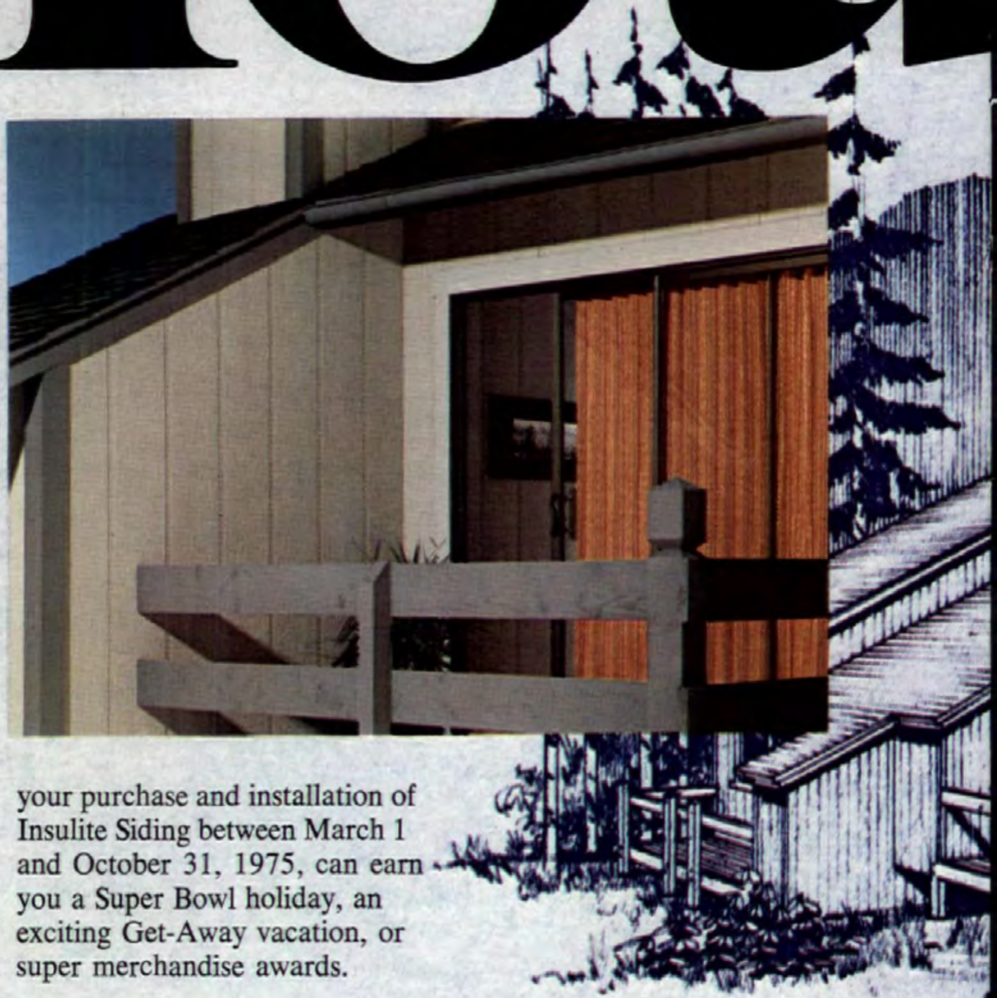

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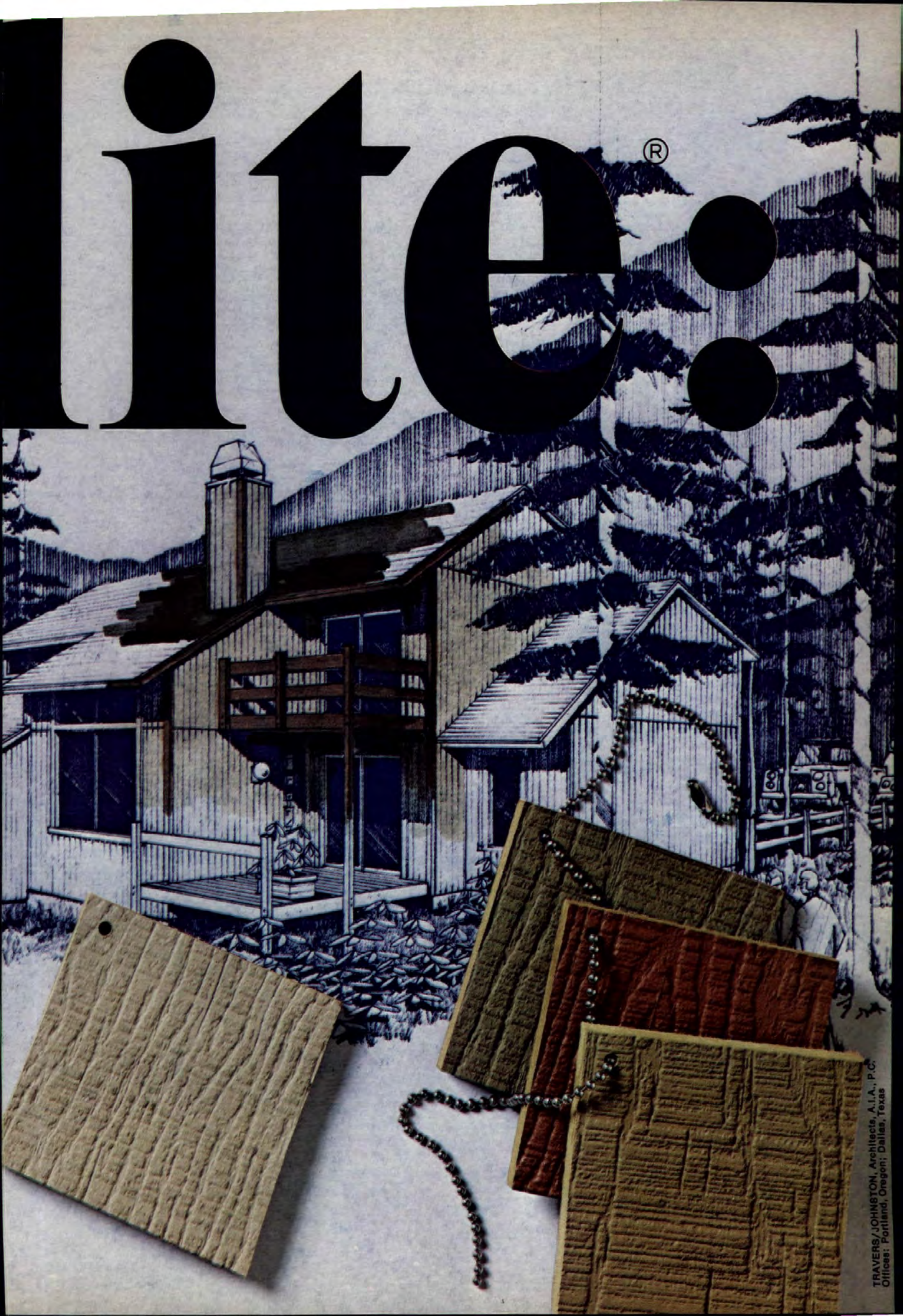
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'74 housing act's double-shot force: It can save rotting areas of cities and launch rescue financing for rental-apartment projects

There is more potential impact on the multifamily market in the Housing and Community Development Act of 1974 than in any federal legislation in years.

One program, now only a step from application, holds special promise.

This is Section 223f, which brings FHA into the financing of existing rental apartments that were not built with the agency's insurance.

This section is exciting. It provides tools for coping with two problems.

One is the accelerated decline, and eventual abandonment, of older neighborhoods with physically sound structures. Section 223f offers a mechanism for making such buildings viable and economically sound investments, thereby attacking the economic waste and personal tragedy of disposable cities.

The other problem involves the many thousands of new multifamily units that were started without a takeout—or permanent—mortgage in the 1972-73 boom and have never obtained such financing. Some were never completed, work having stopped when the money ran out. Some were completed as condominiums but then couldn't sell. Another tragic waste, because most of these projects are in local markets where there is strong and healthy demand for rental apartments.

Section 223f—under a temporary authorization—provides the tools for these projects to obtain permanent financing *as rentals*. Unfinished projects could be completed and made viable. Condos would have to convert to rental on a permanent basis, but that might be a better fate than waiting for the condo market to turn around in an overbuilt area.

This program faces one hurdle. (That may have been overcome by the time you read this.)

A short wait on GNMA. For technical reasons (the fact that the program insurance is backed by federal debentures rather than cash) the most favorable financing for Section 223f will be GNMA mortgage-backed securities. Hence the program and interested lenders and developers are all waiting at the starting line for a declaration from GNMA that it will guarantee securities backed by Section 223f loans.

A considerable financing volume is in prospect, once GNMA moves. Estimates for the first year range from $4 billion up.

Aside from the fact that it offers the only tools in sight for solving the problems mentioned above, Section 223f is really very favorable financing.

With the new 8% rate, the constant may be as low as 9%, compared to a 10.4% constant on today's typical conventional loan. There is no personal liability. Loans are up to 80% of value, based on projected cash flow (or up to 85% of acquisition cost, whichever is lower), with a cap rate in the range of 8½%, compared to 10.3% for a typical conventional project when this was written. A project financed under 223f is thus an ideal vehicle for syndication.

Liberal loan limits. The loan limits are the same as for the old Section 207, the most liberal FHA has. On a three-bedroom unit, the base rate is up to $32,750 in an elevator building, $26,500 in low-rise, and, of course, higher in higher-cost areas.

The loan term is three-quarters of the building's remaining economic life up to a maximum of 35 years. For some old buildings or neighborhoods with a limited future, terms may be as short as ten years.

With older buildings, 223f's primary role is to finance new purchasers, thus maintaining a market and sustaining property values in neighborhoods that may now be redlined. But it may also be used for refinancing, if the proceeds go for rehabilitation and cleanup to increase a building's economic life.

There are two criteria for 223f eligiblity, each defining one of the problems that needs attention. Where the problem is preserving viability of older neighborhoods, the criterion is that the building must be at least three-years old and have begun some occupancy. Where the problem is lack of a takeout on a new complex, the project must have been started before June 30, 1974, and be scheduled to complete before the end of 1975.

Those old FHA problems. What of the two standard bugaboos of FHA multifamily financing—points and red-tape delays?

Section 223f borrowers should come out well on points because of the very provision that is now holding up the start of the program—funding through GNMA securities. The GNMA market has been strong in recent months. Securities backed by residential FHA-VA loans have been selling at close to par for the 8½% loans, and that is several points better than the FNMA market. A security backed by apartment mortgages might not do quite as well initially, but, al in all, points should be moderate or low.

Processing time should be substantiall less than on other FHA multifamily pro grams because 223f does not involve ne construction. It should compare favorabl with conventional processing time.

Other reforms. Under the heading of un finished business, the new Housing Ac brings up to date several pieces of financin some of which can be turned into starts al most overnight.

For example, it provides funding for 32, 000 turnkey units that had been committe before the 1973 moratorium.

It authorizes a two-year extension of Sec tion 236, with an appropriation of up to $75, 000,000 for localities with special needs tha can't be met under the new Section 8.

The old land-development Title X ha been liberalized under the new act and coul become a potent tool if adequately funded It will now finance land purchases up t 80% and development costs up to 90% Funding will depend in large part o whether GNMA will approve this progran for issuance of securities.

Perhaps the simplest and largest immedi ate opportunity is in a program that doesn' even depend on the housing act. There ar still Tandem Plan allocations left, with dis counts that may run as low as 2 points o an 8% loan, for 60,000 unsubsidized units— 221d4s, 207s and 232s.

Critique of Section 8. It is difficult to writ about the new housing act and not touch o its centerpiece, Section 8. This is the pro gram that has received the widest industr and public attention, and it already has $900-million allocation.

I must confess I am ambivalent about thi section.

On the one hand, it is the best thought-ou conceptual approach to housing subsidies t date. It has eliminated many of the failing of the predecessor Section 236 and Sectio 23 programs.

On the other hand, its potential cost to th taxpayer is three times that of Section 236 And Section 8 offers limited benefits to th average builder. It favors state and loca housing agencies over private developers.

The high cost to the federal budget of Sec tion 8 will probably limit its growth. Th real breakthrough in the housing act will b a straight insurance program without subsi dies—223f.

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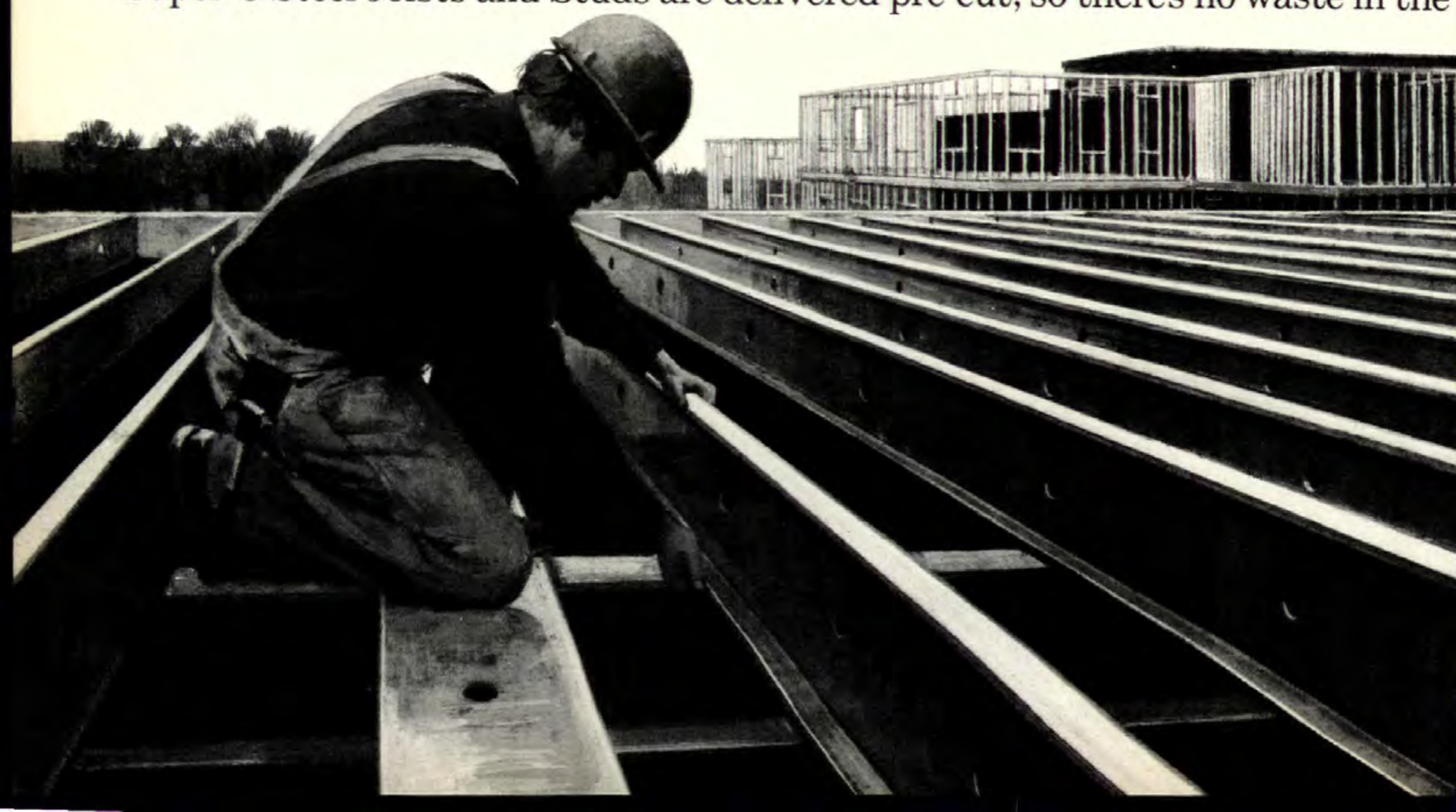
Super-C Steel Framing members, developed by U.S. Steel, are roll formed from hot-dipped galvanized steel (40,000 psi minimum yield point). Sized like framing lumber, steel joists weigh about 33% less per linear foot (and steel studs 25% less) than comparab wood members. Builders have found two men can handle and install Super-C Steel Joists with ease—even extra-long lengths.

And because they're strong, Super-C Steel Joists and Studs can be spaced 24" on center in typical installations. Walls can be prefabricated and set in place as a unit.

Here's how Super-C Steel Joists and Studs stack up in some other areas:

Which gives you a better frame? No contest. Super-C Steel Joists and Stu can't warp, shrink, swell, or split. They're termite and rot-proof. They don't caus floors to squeak. You should expect *no callbacks* with Super-C members.

How do in-place costs compare? Wood costs less per member today. But Super-C Steel Joists and Studs are delivered pre-cut, so there's no waste in the



Joists and Studs
time and costs.

eld. They're pre-punched for wiring nd plumbing. Add in the fast istallation we talked about, and nal installed costs can well be less ith Super-C.

Can Super-C Joists and Studs e used separately? Definitely. uilders have used Super-C members eparately and in combination, using variety of framing practices, for rojects ranging from detached houses to apartments and light commercial structures of many types. They're compatible with conventional building materials and methods. Plywood or steel decking and conventional wall coverings are easily applied.

How do I get more information? Details and specifications for Super-C Steel Joists and Studs can be found in the 1975 Sweet's Architectural File (5.3/Uni). Or mail this coupon. We'll send you structural design booklets on both Super-C Steel Joists and Studs—with load tables and the information you need to start working with them. Plus, the name of an independent steel fabricator serving your area. He's ready to work with you *now.*

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Robino-Ladd loses its top Robino; other homebuilder changes announced

The financially troubled Robino-Ladd Co. of Wilmington, Del., names **Steven J. Green** as chairman and chief executive. **Jerome C. Berlin** becomes president.

Green, at 30, replaces **Frank A. Robino Jr.**, 50, a company cofounder who, a spokesman says, has resigned for reasons of health. Frank's departure leaves the publicly held building concern with no Robino or Ladd in management, although Frank's brother **Charles** and son **Frank 3d** still work for the company (in Wilmington and in Palm Beach, Fla., respectively). Co-founder **Roger Ladd** resigned in 1971 as chairman and son **David**, who had become president, departed last December.

Green and Berlin controlled a real estate investment company called Sterling Capital Investments in Miami before joining Robino-Ladd last October.

Prel Corporation, based in Saddle Brook, N.J., elects **Walter D. Turken**, formerly a senior vice president of Landa Properties in Miami, as executive vice president.

Continental Homes, the modular producer in Roanoke, Va., makes **Joseph Campbell** its sales manager, and William Stringfield its Midwest sales chief.

CHAIRMAN GREEN . . .
New men taking control . . .

. . . PRESIDENT BERLIN
. . . of Robino-Ladd

STONE'S SPARKS . . .
More hiring expertise . . .

. . . AND RISBROUGH
. . . for homebuilders

In Los Angeles, meanwhile, the Barclay Hollander Corp., a builder, promotes **Dennis G. Harkavy**, 44, to executive vice president. And the Irvine Co., based in Newport Beach, moves **Richard W. Jimerson**, 33, to a project-manager post.

The Stone Institute of Marketing and Management in Santa Cruz, Calif., adds two principals: **Bayne A. Sparks**, formerly vice president of marketing for the Grant Corp., as executive vice president, and **Jack Risbrough**, an independent consultant, as vice president fo marketing services. Their pur pose is to expand the institute' capabilities as an advisor t builders.

The National Association o Realtors installs **Arthur S Leitch** president. The Nationa Corporation for Housing Part nerships, an organization fo promoting low-income housing promotes Steven N. Rupp t vice president for equity sale and **Robert L. Tracy** to vice pres ident for development. Both ha been directors. The Institute o Real Estate Management elect **Albert N. Justice** as president.

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CIRCLE 29 ON READER SERVICE CARD


Now you can glue Bruce
oak planks to concrete.

Three new chiefs for Lomas & Nettleton. Ted Enloe *(center)* is the ne president; M. DeWayne Wommack *(at left)*, executive vice president f control; and John F. Sexton *(at right)* who is the vice president for financ

Restless mood in mortgage banking; some execs moving up, some out

Major changes take place in the top management of Lomas & Nettleton Financial Corp., the nation's largest mortgage banker, with a servicing portfolio of more than $4 billion.

Its erstwhile president, **Gene Bishop,** leaves to take the presidency of the Mercantile National Bank. The bank and L&N's headquarters offices are both in Dallas.

Ted Enloe, 36, moves up from executive vice president to the presidency of L&NFC.

Chairman **Jess Hay** names **Everett Mattson,** L&N's chief government liaison officer and a past president of the Mortgage Bankers Association of America, as chairman of an eight-man executive committee.

James M. Wooten, 54, becomes vice chairman and chief administrative officer of the Lomas & Nettleton Co., the mortgage-banking arm of L&NFC. He was the company's senior executive vice president.

M. DeWayne Wommack is named executive vice president—control, and **John F. Sexton** vice president—finance.

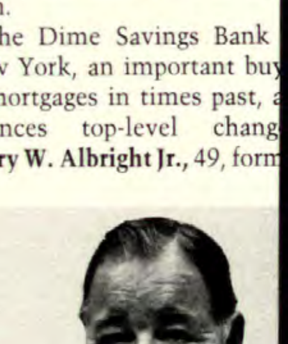
The Kissell Co., Springfield, Ohio, the mortgage banking subsidiary of Pittsburgh National Corp., (Pittsburgh National Bank) makes top-level shifts. **Robert W. Christie** replaces **Philip A. Greenawalt** as Kissell vice chairman and chief executive. Greenawalt remains chairman and a director. Christie is executive vice president of the parent company and senior vice president of the bank.

Change also sweeps CNA Financial Corp. of Chicago, the financial-services concern that owns the troubled builder, The Larwin Group, and its mortgaging company. **A. Bruce Matthews,** who replaced founder **Lawrence J. Weinbe** as chairman of Larwin, resign The job of coordinating CNA non-insurance subsidiari which include mortgage lendi and other financial services well as Larwin, goes to **Jay Kriegel,** one-time chief of st for New York City's ex-May **John V. Lindsay.**

CNA was taken over last ye by Loews Corp. of New Yo City, the theater and tobac conglomerate. Loews' cha man, **Lawrence A. Tisch,** has sumed the CNA chairmanshi

Sheldon B. Lubar, former FH commissioner, turns up as pr ident and chief executive of M waukee's Midland Nation Bank. He succeeds **John Kelly,** who moves up to cha man.

The Dime Savings Bank New York, an important buy of mortgages in times past, nounces top-level chang **Harry W. Albright Jr.,** 49, form



L&N's MATTSON
A well-known chairman

New York state superintende of banks and former spec counsel to Vice President N son Rockefeller, is the ban new president. **Charles Miller,** 59, former preside moves up to chairman but mains chief executive. **Gord S. Braislin,** 74, former chairm becomes vice chairman. He tends to retire next year.

It's easier to sell a house when it looks as if it's worth the price.

Brick Institute of America
1750 Old Meadow Road, McLean, Virginia 22101

New Video-taping station: HLBB-TV

Reporters going to the Hom Loan Bank Board's Washingto offices these days see three colo TV cameras trained on Ban Board brass. The cameras don belong to print journalism broadcast rivals—but rather t the HLBB itself.

The idea of in-house televi sion is not new to the housin agencies. When George Romne was secretary of housing, ther was a brief efflorescence o HUD television. Romney tape messages for mailing to thos field offices possessing play back equipment.

Low key effort. The HUI foray into television never go close to live broadcasts, nor wi the Bank Board's. Says a HLB official: "That would require a FCC license. We're not going t go into competition with th three networks.

Whereas an economy wav quickly cost HUD the thre audio-visual technicians neede to make TV tapes, the Ban Board's TV activities a flourishing. For one thing, th HLBB communicators argu TV taping is faster and cheape than making films.

Costs. The TV system, i cluding the innovation of col cameras in January, cost th HLBB $42,000.

The Board seems to thin that's a bargain. Says a Ban Board official: "People in th field get a cassette of a press co ference two days after it ha pens. Cassettes are easy to ma and to recycle like audio tape.

The idea of going into telev sion first came up at the Ban Board during former Chairma Preston Martin's tenure. But u of it is branching out und Chairman Tom Bomar. —S.V

REIT promotions

Connecticut General Mortga & Realty Investments creates new chairmanship and fills with **Harvey G. Moger,** 46, i former president and a vice pre ident of Connecticut Gener Life Insurance Co. **Maynard Bartram,** 46, formerly vice pre ident of the trust, replac Moger as president.

Gould Investors Trust a points its former preside **Nathan Kupin,** 59, as chairm and chief executive. **Fredric Gould,** 39, executive vice pre ident, becomes president.

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CIRCLE 37 ON READER SERVICE CARD

Location and value sell in a condo-glutted market

The market: Glendale, in northeastern Los Angeles.

In October 1974 there were an estimated 10,000 empty condominiums in the five surrounding counties. And the Glendale planning office reports that two condo projects in the community recently went rental because of slow sales.

Despite market conditions, The Baldwin Co.'s 85-unit Chevy Chase townhouse development, priced from $42,900 to $71,000, is 76% sold after opening in October 1973. Eight of those sales were made in this year's slow January and February.

One reason: The project is just five air miles from downtown Los Angeles. The company learned of the site from an s&l which had just foreclosed on a builder who had tried to develop the steep, rocky canyon with detached homes.

The Baldwin Co. bought the site for a low $5,500 per acre, but improvement costs averaged $12,000 per unit. Principal Jim Baldwin says he looks for such close-in, problem sites. He feels that even if they're more expensive to develop, people will pay the price to get prime location.

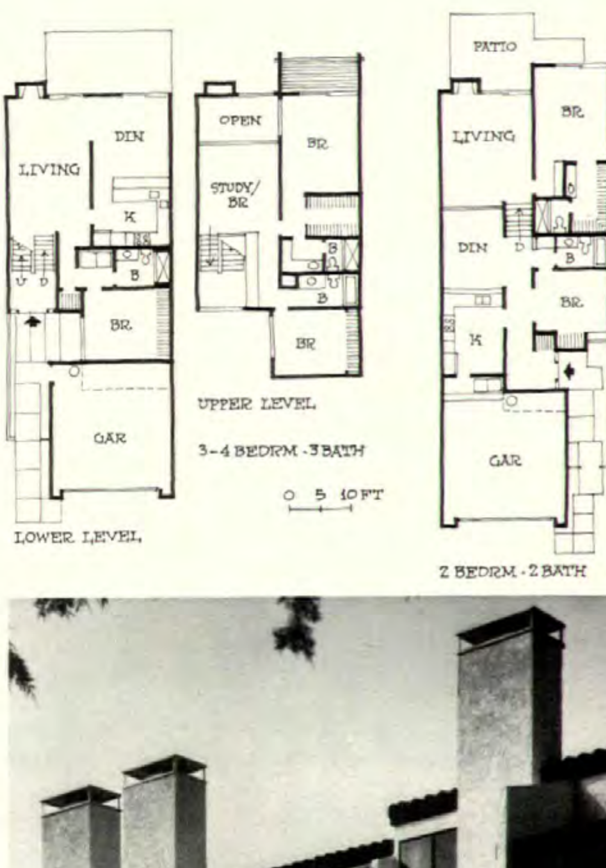
Another reason: The project has many standard features, says Marketing Director Al Baldwin, that would be expensive extras in other developments. For example:

- Fireplaces
- Continuous cleaning double ovens
- Mahogany entry doors
- Automatic garage door openers
- Spanish-contemporary exteriors (rough stucco walls, tiled shed roofs, wrought-iron gates and heavy wood trim).

When project planning started there was local opposition to the multifamily development because Glendale, at the time, had only detached homes. However, since completion, says the marketing director, community acceptance has been so high that his primary market is 40- and 50-year-old couples already living in the area.

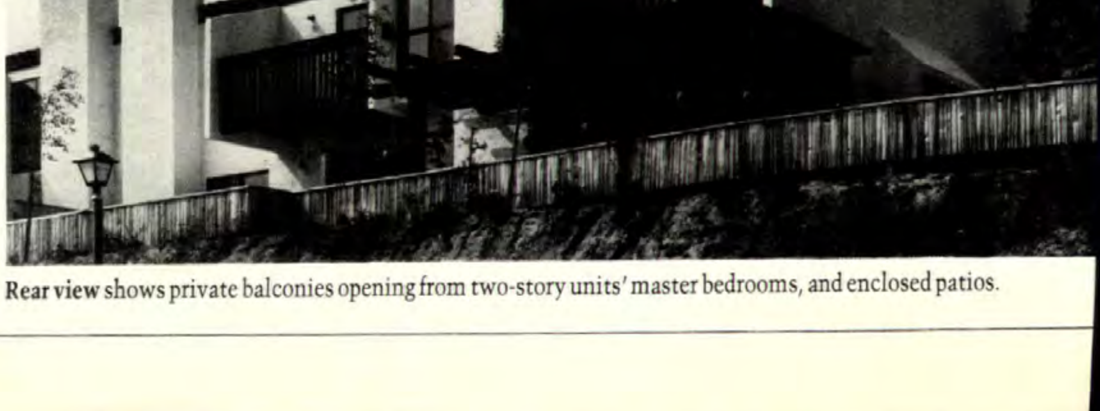
PHOTOS: DAVID ROSS

Street view shows two-car garages, and middle unit's wrought-iron gated entrance.



Small buildings, each containing from two to fi units, are sited along short dead-end streets th feed into a central drive. The rocky, 20-acre s drops 200 ft. in its 1,500 ft. length. Because of t site's slope, project density is a low 4.25-units p acre. Considerable grading was necessary; gradi scars were hydromulched, and $2,000 per u was spent on landscaping. Architects: Danieli Moon, Sampieri & Ilg, Newport Beach, Calif.

Floor plans include the 2,060-sq.-ft three bedro plus den, two-story *(left)*, and the 1,400-sq.- two-bedroom, one-story unit *(right)*. Prices ra from $42,900 to $71,000. A 1,700-sq.-ft. two be room plus den, says Al Baldwin, sold slowly b cause secondary bedrooms were too small. It is longer offered.



Rear view shows private balconies opening from two-story units' master bedrooms, and enclosed patios.

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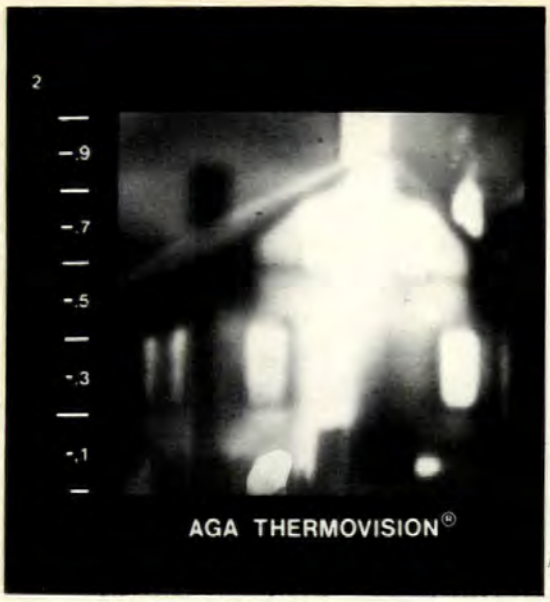
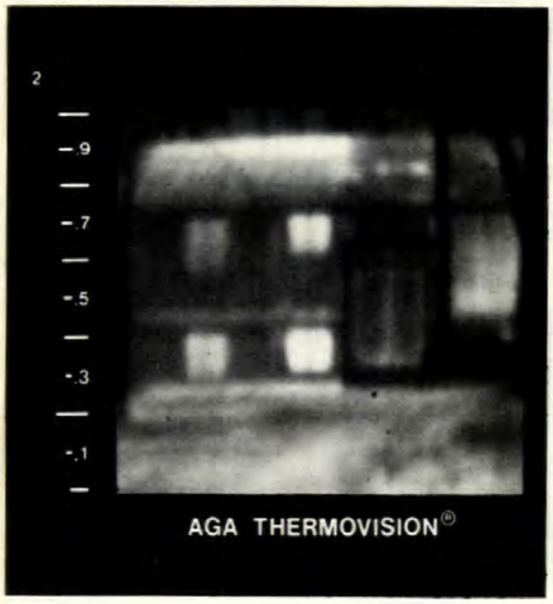
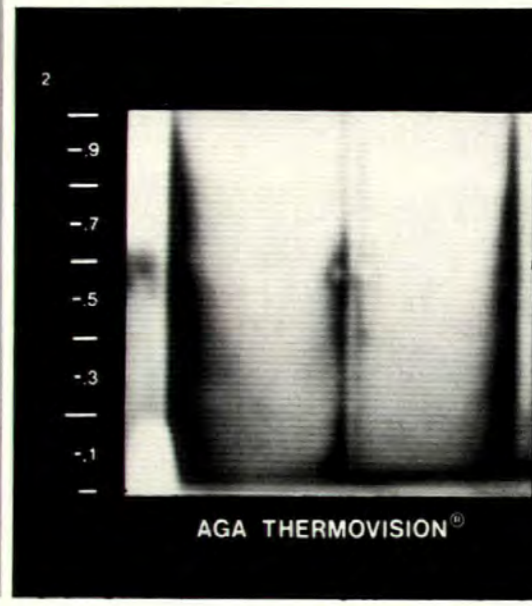


Heat loss shows up as light areas in exterior photos. Upper photo: heat escapes from windows, uninsulated gable-end and chimney inside end-wall. Lower photo: heat is lost through windows, cathedral ceiling, sill and foundation.

Air leaks show up as dark areas in interior photos. Upper photo: cold spots in wall are revealed at studs, blocking and two places where insulation was left out. Lower photo: drafts around double doors. Below: detection equipment.





Now you can see where your housing is losing heat

And the equipment above is what shows you the heat leaks. It consists of 1) an infrared camera that scans walls, roofs and ceilings and transforms heat radiation into electrical signals and 2) an oscilloscope that portrays the signals as heat images on a built-in screen.

The heat images, called thermograms, reveal heat leaks when there's at least a 20° F difference between indoor and outdoor temperatures.

When a significant heat leak is detected, a photo of it can be taken by slipping a special Polaroid camera over the oscilloscope screen.

Outside the house, heat loss in a thermogram shows up as light areas.

Inside the house, cold-air leaks show up as dark areas on the thermogram.

The equipment, developed and now manufactured in Sweden, is marketed here under the trade name Thermovision. Its U.S. distributor, AGA Corp. of Secaucus, N.J., says it has four practical applications for homebuilders:

1. Analyzing the insulating efficiency of prototype houses and apartments. Thermograms pick out gaps in insulation caused either by poor design or inferior workmanship.

2. Comparing the insulating properties of competitive materials. But AGA cautions that while a thermogram locates heat leaks, it can't tell you precisely how much heat is being lost.

3. Comparing the hidden workmanship of competing subcontractors.

4. Selling homes. A set of thermogram photos can be used to convince prospects that a house is well insulated.

Thermography can also be a cost-cutting tool for the owners of large buildings. For example: thermographic tests showed that the University of Massachusetts could lop $150,000 off its annual heating bill with such simple procedures as closing blinds and shutting down ventilating fans at night and on weekends; similar tests of a three-story office building revealed that turning off a 250-hp fan would save $53,000 in heat (plus $43,000 in electricity).

Still another application: Thermography has been used instead of costly trenching to pinpoint leaks in underground steam lines.

The Thermovision 750 camera and oscilloscope sell for $35,000. AGA says it takes a few hours to learn to operate the equipment and about a week to learn the basics of interpreting thermograms.

So far, three independent service-contracting firms offer thermographic analysis using Thermovision equipment.

• Sol-R-Tech, a subsidiary of Queechee Construction Co. i Hartford, Vt., offers thermographic analysis for $50 a hous Larger buildings cost $30 a hour with a $100 minimum.

• Northeast Electrical Testing of Meriden, Conn., a mechanical contractor, offers thermographic analysis of single family houses for $50 each wit a minimum of ten houses a day Multifamily buildings are analyzed from the ground and b helicopter for $500 a day.

• U.S. Thermographic, a firm whose principals have 15-years experience in infrared radiometry, hopes to set up a nation wide network of thermographi contracting subsidiaries. Th company expects to place nu merical values on the heat los of one house for $125; each sub sequent scan in the same subd vision will cost $30 a hous without numerical values.

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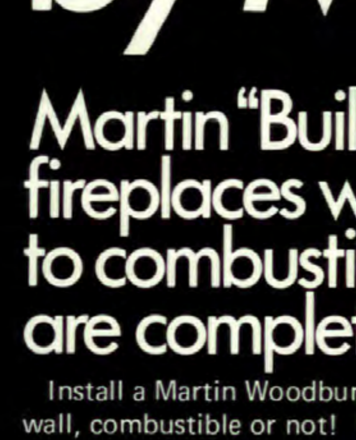

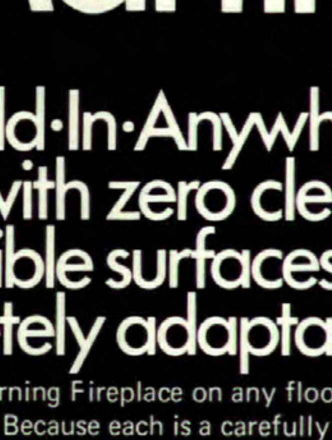

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Too many owners and developers see apartment management as just a necessary evil. As long as occupancy is good and rents get collected on time, they don't worry about the details of managing their apartment projects.

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Whether you're an owner, a builder or a professional manager, if you have a financial stake in apartments, this seminar is designed for you. It's designed to help you find—and stop—unnecessary cash drains caused by your management approach, and turn them into profit.

You'll learn practical solutions to problems like these:

In tenant-manager communications

How tenant surveys can uncover hidden complaints and stop them before they erupt.

How to become a master at the fine art of post-selling.

How to reduce turnover through lease-renewal interviews.

How to make sure managers really understand the law.

How far to go with social and recreational programs and newsletters.

How to organize a follow-up program for service requests.

What to include in the tenant's orientation interview, and the orientation handbook.

In marketing

Why pricing is the most important part of marketing.

How to structure rents and adjust as you go along.

How to raise rents without losing income.

How to interpret a rent roll effective marketing.

Why rents head the list of operating factors.

How comments from your tenants can be used to increa your cash flow.

In managing resident managers

Training: Is it worthwhile, is expensive experience the teacher?

Which organizational stru ture is best for your size operation?

Recruiting: Where to find good managers today.

How to tell the difference between a manager and a cleaning lady.

What level of compensatio it takes to get good manager

How special incentives ca almost always raise occupar a few more percentage poin

Organizational structure: How many managers can a district manager manage?

Reporting systems: Where draw the line on paperwork.

How to size up available training programs for mana

In maintenance

How to provide maximum service for minimum dollars.

What is the difference between maintenance admi tration and just nuts and bol

How to set up—and enforc work standards.

How to size up qualified contractors.

Why flexibility is the best approach to maintenance systems.

When to put workmen on your payroll and when to subcontract.

How to keep on-site staffs and effective.

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old Hewitt, Jr., CPM,

California-based real te investor and eloper, and president of firms involved in rtment management. Corbin-Hewitt Company rates apartment plexes, and his H/H earch Company ides apartment agement surveys and ibility studies. Hewitt's speciality is ving managers and ers how to turn around bled apartment projects make them profitable. 970, the nine-county amento Valley chapter e Institute of Real Estate agement voted Hewitt Outstanding ager of the Year.

Donald B. Lawrence, CPM,

is the national president of Levitt Property Management Corporation and a vice president of Levitt Multihousing Corporation. Formerly he was founder and president of an apartment company that for ten years was the largest in the Southwest, handling more than 18,000 units. He has long been an advocate of close supervision of resident managers in their relationships with tenants and in their understanding of tenant law.

Linda Stratton,

property manager for 6,000 apartments in Indianapolis, El Paso, Corpus Christi, San Antonio, New Orleans, Baton Rouge and Houston. She learned management from the ground up, starting twelve years ago as the resident manager of a 20-unit apartment building. Mrs. Stratton is considered an innovator in the operation of child day-care centers in apartment complexes. She is also a specialist in solving administrative problems in the field of apartment maintenance.

Edward N. Kelley,

Certified Property Manager and consultant to apartment developers, investors and lenders, has been chief administrator for the management of 60,000 apartments over the past 15 years. He was for many years vice president of property management for Baird and Warner, one of Chicago's oldest and largest real estate companies, and senior vice president of property operations for the Kassuba Development Corporation. He is past chairman of the Chicago Real Estate Board's renting and management division. Mr. Kelley's recently completed textbook, "Practical Property Management," is used in real estate training courses throughout the country.

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HOW THEY'RE SQUEEZING HOUSING—AND WHAT YOU CAN DO TO EASE THE SQUEEZE

They haven't made the headlines like high interest rates, the scarcity of mortgage money and lagging buyer confidence.

But, in their own way, the high costs of heating, cooling and lighting are fast becoming a serious problem for the homebuilding industry.

- Already some rental projects are moving from the black to the red because of energy costs.
- Already vacancy rates are rising because some tenants, unable to handle doubled or tripled utility bills, are doubling up or moving down.
- Already some buyers—particularly for lower priced housing—are being disqualified because soaring energy bills reduce the amount of income they have for monthly mortgage payments.
- Already some condo operating budgets are in big trouble because of energy costs for running common facilities.

That's the gloomy picture described by builders and developers around the country. And most of them told House & Home they expect the problem to get worse.

What can the industry do about the problem? Nothing, obviously, about fuel costs and utility rates.

But builders can do a lot to reduce the amount of energy needed to run their new homes and apartments. And that's what the next ten pages are about.

First you'll learn how the industry has been hurt in the past 18 months, and what builders are doing and plan to do about the problem.

Next, you'll learn about a new HUD study that pinpoints where you might best spend extra money to increase the energy efficiency of your new housing.

Finally, you'll learn about still another new study from the American Society of Landscape Architects Foundation that tells how you can use your site to reduce the cost of heating and cooling your homes and apartments.

Soaring energy costs: they're hurting sales, changing rental patterns and eating into profits

[redacted]

"It may not be long before utility bills equal mortgage payments."

That gloomy prediction from Houston apartment builder Jenard Gross sets the tone for the industry's next major crisis: the impact of soaring fuel and utility bills on an already depressed market.

With few exceptions, builders/developers contacted by HOUSE & HOME say they're already being hurt by skyrocketing heating, cooling and lighting bills. And even where the increases have been relatively modest—mainly in hydro-electric power areas or where natural gas still is abundant—most builders expect big problems in the future.

Here's a look at what's been happening to energy costs in the past 18 months:

- In Gross's Houston projects, 1974 bills were 50% higher than in 1973 and in some of his Florida projects, bills were more than double.
- In Dallas, builder Harvey K. Huie reports December bills jumped in one year by 51% and 89% at two all-electric garden apartment projects.
- Doug Pearson, senior maintenance supervisor for Gerson Bakar Assoc., says electric rates in southern California are up between 30% and 40% in the past year-and-a-half.
- Atlanta builder John Williams, president of Post Properties, says rates increased by 20% to 25% in the past year, and another hike is in the works. Post builds apartments, condos and shopping centers.
- New York City apartment remodeler Louis Rizzo's heating bill for mid-November through mid-January was $1,608 for a 24-unit building, about $600 more than for the same period a year ago.
- In Cincinnati, Neil Bortz says fuel surcharges jumped from 63¢ to 94¢ per kWh between October and December. Bortz is president of Towne Properties Inc., apartment and condo builder.

Skyrocketing fuel and utility increases like those are affecting the market base and profit structures in wide segments of the industry. Here, say people in the industry, is how:

"The typical marginal credit risk of a year ago has been knocked out of the new-home market"

Lenders are beginning to look at the cost of operating a home when they qualify buyers, says Ross Stemmer, communications director—U.S. Home Corp., Clearwater, Fla.

Stemmer cites the case of a buyer who was able to carry a $300 monthly mortgage payment when utilities cost $50 a month.

"Now with utilities running $100 a month, maybe he can only handle a $250 monthly payment. So he might have to buy down, or he could be disqualified completely."

Right now, the problem is primarily in the lower end of the market—especially where FHA/VA dollar factors for operating expenses are a determinant. Tom Zakucia, vice president of Detroit's Advance Mortgage Corp., describes a recent FHA transaction:

"In mid-December FHA said we should consider a monthly maintenance factor of $21 and a monthly utility factor of $41 for a $24,000 loan. But on February 6, FHA upped the maintenance factor to $29 and the utility factor to $53—an aggregate increase of 32%. So the buyer now needs $80 more gross income per month to qualify."

At the present time, Advance doesn't break out maintenance and utility costs when qualifying for conventional loans. Instead, the company says a buyer can go to 25% of his income for monthly mortgage payments.

"But if utility costs continue to rise," Zakucia says, "we may have to think about changing our requirements."

Marginal buyers aren't the only ones in trouble. High utility bills also are causing problems for marginal tenants—particularly young singles and elderly people.

"A lot of tenants are trading down or doubling up"

In Atlanta, some couples are moving from two-bedroom to one-bedroom apartments, says John Williams. "And many singles are teaming up in two- and three-bedroom units."

Rental patterns are changing in other cities, too.

In Houston, for example, Jenard Gross says that until recently some projects were running full in adult sections, but not in family sections. "Now it's the other way 'round as singles pair up in family-size units to cut operating costs."

Even where energy-cost increases have been modest, many people—particularly those on fixed incomes—are forced to move.

Russell Baltis Jr., executive vice president, North Kansas City Development Corp., says Kansas City electric rates rose 17% last July and the ut... fuel-adjustment factor for the July-January period.

"As we nudged rents up, we've priced many of our long-term elderly tenants out," he says. "Many are moving to subsidized projects."

If buyer and renter budgets are in trouble because of energy costs, some project operating budgets are in double-trouble.

"Our utility bills now equal—and sometimes exceed—our real estate taxes"

John Noonan, executive vice president o[f] Reynolds Metals Development Corp., ha[s] been worrying about the effects of escalatin[g] real estate taxes for 15 years, ever since h[e] has been in the business. Now, he says, soar[-]ing utility bills are just as big a problem.

His example is the Regency Plaza, a three[-]building highrise complex in Providence, R.I., with 450 apartments and 30,000 sq. f[t] of commercial space. It was joint-venture[d] by Reynolds Metals and the Gilbane Co.

"We pay for all utilities," says Noonan. "So when the energy crisis hit, we starte[d] an intensive program to reduce consump[-]tion—for example, using sophisticated tim[-]ing devices to shut off blowers, fans an[d] regulating devices on boilers. Even so, ou[r] 1974 utility bills were up 25% over 1973."

Energy costs in New England are abou[t] the highest in the country, and Noonan see[s] no end to the continuing increases. His fore[-]cast: "The combination of escalating real es[-]tate taxes and fuel costs is going to push ne[w] housing—both rental and for-sale—beyon[d] the reach of a significant part of the mar[-]ket."

Condo developers also are having energ[y] cost problems—particularly in on-goin[g] projects where high bills for common facil[i-]ties are forcing up monthly maintenanc[e] fees.

"Our energy costs have doubled in th[e] past year or so," says George Vickery, dire[c-]tor of group marketing for Arvida Corp. Th[e] company is developing Boca West, a 40[…] acre PUD outside Boca Raton, Fla.

A new Florida law is compounding t[he] problem. The law says an annual condo a[s-]sociation budget can't be increased mo[re] than 15% over the previous year unless t[he] unit owners approve. Which means, sa[ys] Vickery: "If owners won't go along wi[th] higher assessments, the developer either h[as] to cut back on services like mowing t[he] lawn, or he has to carry the extra load hi[m-]self.

"And when you're still selling, you o[b-]viously can't cut back on services, so y[ou] absorb the higher utility charges."

A different facet of the problem recen[tly] forced Carl Freeman Assoc. Inc. of Sil[ver] Spring, Md. to increase the annual condo [as-]sociation utility budget of a 300-unit proj[ect] from $164,000 to $400,000.

The master-metered project, in the Was[h-]ington, D.C. area, had enjoyed lower-tha[n-]normal rates under an interrupt-serv[ice] agreement with the gas company. (With errupt service, the customer agrees to witch to another fuel during peak usage eriods.)

"Historically gas might be cut off two or hree days a year," says senior vice president ob Friedman. "And the utility offered us a ate of 18¢ or 19¢ per therm compared to the ormal 30¢. It was a good deal because we ere able to reflect that low rate in our onthly fee schedule."

Late last year the gas company notified e developer it no longer could serve the oject. "So we had to switch to oil at 40¢ r therm and raise our monthly fees by out 80%," Friedman says.

"This really hurt our market base because me lenders consider monthly fees along ith interest and taxes when qualifying ndo buyers."

How do builders/developers plan to solve eir energy-cost problems? In existing artment projects, the answer seems to be: itch to individual meters or raise rents.

ny apartment owner ho wants to stay in business s to increase his rent roll"

Tenants don't like it, but it's the only an- ver," says Harvey K. Huie.

The question is: Can rents go up fast ough to cover continuing energy-cost in- eases?

Not when there's a high vacancy factor, ys Hans Hagen, president of Ban Con Inc., versified builders in the Twin Cities area.

"Around Minneapolis and St. Paul, we've st begun to get vacancies down to a tolera- e level. So landlords are now absorbing gher fuel costs."

In areas with rent control, red tape often lays rent increase. For example, says Bob iedman, regulations in various counties ound Washington, D.C. only allow the ss-along of certain expenses (or a percent- e of them) after they're spent.

"You pay the utility, file an appeal, then to get an increase. The process can take onths. Meantime, fuel costs go up again. you start the procedure all over."

A lot of builders don't think rent hikes are e answer—mainly because when you're ked into long-term leases, increases don't me fast enough to cover soaring bills. So ey're switching to individual metering.

In one of its all-electric, Lexington, Ky. ojects, Towne Properties is converting to parate meters as leases expire. Tenants re- ive substantial rent reductions: for ex- ple, a drop from $210 to $165.

And in three Dayton, Ohio projects where company had been paying for heat to et competition, tenants now pay their n heating bills. The switchover comes as ses are renewed—for the same rents.

'We tell tenants it's cheaper to pay their n bills than to pay big rent increases that er our outlays for other tenants who ght be wasting gas," says Neil Bortz. st tenants, he says, accept the change en though there are many vacancies in the a.

n Atlanta, Post Properties also is converting to individual meters (for roughly $100 per unit) as leases expire.

"Then we adjust the rent downward by about 50% of the tenant's projected monthly utility bill," says John Williams.

Some apartment owners think it's too expensive to re-meter existing buildings. But according to John Townsend, the expense is worth while. Townsend is vice president of the multifamily division of Korman Co., Jenkintown, Pa.

The company began converting to separate meters late in 1972—long before utility rates started to soar—because tenants were wasting electricity.

"We lowered rents or didn't raise them as leases expired," says Townsend. "if we hadn't re-metered, by now the financial strain would have been too great for us."

Whether or not developers plan to re-meter existing apartments, most say they'll individually meter future projects.

"We'll also install individual water heaters," says Hans Hagen, "which means we won't need an engineer on the premises. So the extra outlay for separate meters will pay for itself."

In rent-control areas, individual metering definitely makes sense, says Bob Friedman: "We won't have to worry about pass-along regulations."

One idea developers might consider is the approach used by Gerson Bakar Assoc. in three large projects that are master metered. The company gets a master-meter rate from the utility, then sub-meters to tenants at the rate individual homeowners pay.

"We've had some arguments and complaints as rates have gone up," says Doug Pearson. "But there haven't been any move-outs."

One reason: a public relations program begun by Bakar when rates started climbing.

"We published a brochure that answered anticipated complaints and included a list of energy-conservation ideas that helped tenants reduce their bills," says Pearson.

Individual metering isn't the only answer for new apartment projects. Tighter construction and smaller square footage also are in the offing.

Stanford Ackley of Wallace F. Ackley Co., Columbus, Ohio foresees major changes in apartment design in order to keep tenant utility bills at a minimum. The company now owns and operates about 1,400 apartments—mainly in two- to eight-unit buildings.

"In the future," says Ackley, "we'll probably build smaller units, go for central entrance halls rather than individual outside entrances, group units to get fewer exposed walls and go to three-story buildings."

Post Properties' John Williams also sees a trend to smaller apartments.

"We passed the peak two years ago in housing size," he says. "From now on it will be downhill because of utility and construction costs."

The company already is scaling down its square footage—building smaller baths (by eliminating compartmentalization) and eliminating walk-in closets and eat-in areas in kitchens. Williams admits this might make it tough to compete with older, larger apartments.

"But people are beginning to realize they'll be able to save on utility costs," he adds, "particularly when we aim the sales pitch at our improved insulation—5 in. in ceilings and special insulation board in exterior walls."

For-sale builders also are talking about smaller units and tighter construction.

"We're picking up the pinholes our insulating contractor misses"

That's part of a new program begun by Kurkjian Realty of Ann Arbor, Mich., a condo developer that also builds custom homes.

"After our insulation sub completes his work, we follow behind for about four hours of added back-up, like filling in around electrical outlets," says Al Sanborn.

The company also has increased ceiling and wall insulation and added special insulation around the perimeter of concrete footings.

Sanborn believes units will get smaller—particularly for empty nesters.

"I sense these people are beginning to feel: 'I don't really need 2,900 sq. ft.' And I think there will be more of that feeling as fuel and utility bills go higher."

But will the market really accept smaller homes and apartments?

"The developer who reduces his square footage but maintains environmental quality will be the one who'll make it," says John Williams.

Buyers may not have any choice, says Harvey Huie: "Just as people are switching to more efficient cars because of high gasoline prices, they'll have to accept smaller, more efficient housing so they can handle the operating costs."

Obviously, some markets won't be too badly hurt by high utility bills—luxury homes and apartments, for example, because those buyers and renters can absorb the added costs.

But for most builders/developers, soaring energy costs are going to be a growing problem with, says William Baker, hidden impacts that have just begun to surface. Baker is president of the Florida Land Co., a wholly-owned subsidiary of Florida Gas Co.

One hidden impact, he says, is the soaring cost of electricity for running sewage and water treatment plants, which will be passed on to consumers.

Another, he says, is occurring in central Florida right now.

"For the past five years or so, our utilities traditionally put in underground lines and paid for installing subdivision street lights for a nominal monthly fee. Now, because the utilities' own budgets are hurting from increased fuel costs, a developer pays the installation costs himself."

The end result, says Baker, is that those costs will be added to the lot price and eventually into the price of the home.

—June R. Vollman

TO NEXT PAGE

This HUD study shows just how much energy you can save by upgrading your building specs

It is valuable because it pinpoints where yo
might best spend extra money to improv
energy efficiency.

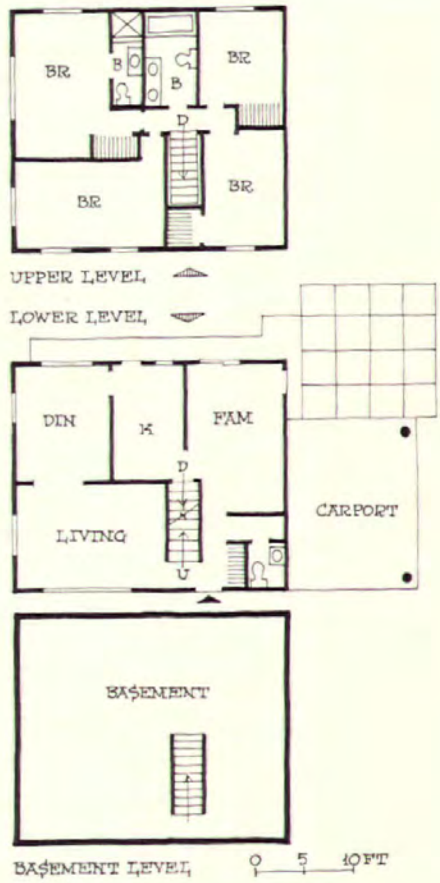
For example, it itemizes a variety of famil
iar structural modifications—everythin
from adding storm windows to increasin
insulation in walls, ceilings and roofs—an

CHARACTERISTIC SINGLE-FAMILY HOME: two-story and basement, frame, with 1,695 sq. ft. of living area; gas-fired forced-air heating system and electric forced-air cooling system; occupants: two adults, two children

Annual energy used for heating/cooling (In therms)*

	Heating (Gas)	Cooling (Elec.)	Total
per structure	1,010	125	1,135
per sq. ft.	0.675	0.084	0.759

*One therm is defined as 100,000 Btu's



Characteristic structural parameters		Modifications	Approximate percentage decrease in annual energy used for heating/cooling
Exterior walls:	Wood shiplap siding ½" plywood sheathing Insulation: R-7 batting* Interior surface: ½" drywall	1. Increase insulation value by 12% (Note: by substituting insulation with an R-11 value, there would be a 15% increase in insulation value)	10.0
Ceiling insulation:	Loose fill, blown in, 5"		
Basement:	Unfinished	2. Insulate exposed basement wall	5.4
Windows:	Type: Single-glazed aluminum casement, 190 sq. ft.	3. Add 100% storm windows** 4. Reduce window area by 25% Combination of 3 and 4 5. Change to wood casement	14.4 10.0 17.8 2.2
Doors:	Exterior: 3, wood panel, 60 sq. ft. Patio: single-glazed aluminum frame, 40 sq. ft.	6. Add storm doors** 7. Combination of storm doors and vestibule on north door	7.6 10.0

*R-7 equivalent to 2¼" fiberglass batting

**It was assumed storm windows and doors reduced window infiltration 50% and increased window R value 50%

breaks out the percentage of energy each saves in typical housing. And it charts energy-saving effects of changes in heating/cooling equipment, appliances and lighting. In short, it helps you evaluate which modification will work best in your specific building situation.

The study also is valuable because it shows how quickly extra first-time costs for built-in energy efficiency pay for themselves in fuel and utility savings.

Charts on this and the following three pages summarize findings from one of the most important aspects of the study: how various structural modifications in characteristic single-family homes, townhouses and low- and highrise apartment buildings reduce annual energy consumption for heating and cooling, which it is estimated, accounts for about 55% of energy used in homes and apartments.* TO NEXT PAGE

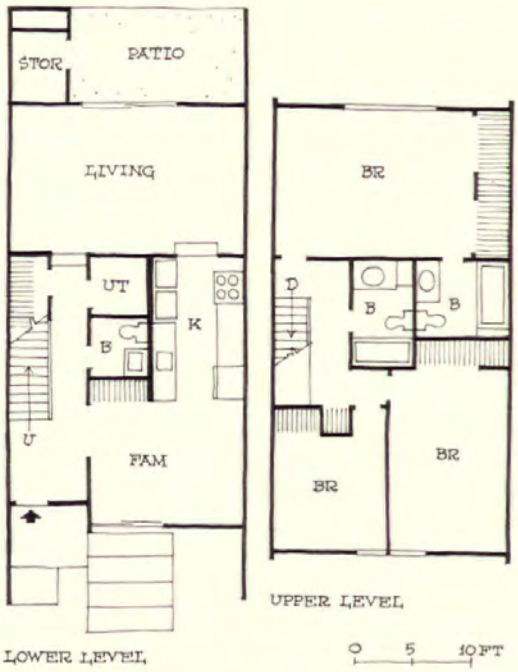
CHARACTERISTIC TOWNHOUSE: two-story masonry row structure with eight 1,300-sq.-ft. units; no basement; each unit has gas-fired, forced-air heating system and electric forced-air cooling system; occupants: two adults, two children per unit

Annual energy used for heating/cooling (in therms)*

	Heating (Gas)	Cooling (Elec.)	Total
per structure	5,526	1,645	7,171
per apt.**	691	206	896
per sq. ft.	0.531	0.158	0.689

*One therm is defined as 100,000 Btu's
**Average values

Dimensional Parameters	Intermediate Units	End Units
Exterior wall area	800 sq. ft.	1,450 sq. ft. (exclude attic)
Party wall area	1,300 sq. ft.	650 sq. ft. (exclude attic)
Roof area, % of floor area	57	57
Story height	10′	10′



Characteristic structural parameters		Modifications	Approximate percentage decrease in annual energy used for heating/cooling
Construction type:	Wall bearing		
Floors:	First: concrete slab on grade Second: wood joist and plywood system	1. Increase to R=20 insulation in ground floor (a 100% increase in R value)	4.2
Exterior walls:	4″ brick siding 4″ concrete block backup Insulation: 2 air spaces Inside surface: ½″ drywall	2. Increase to R=10.6 insulation in walls (a 128% increase in R value)	17.4
Party walls:	Core: 8″ concrete block Insulation: 2 air spaces Surface: ½″ drywall		
Roof & Ceiling: (attic unheated & ventilated)	Asphalt shingles Insulation: loose fill, blown in, 5″	3. Increase to R=21.7 insulation in roof (a 111% increase in R value) Combination of 2 and 3	8.2 24.6
Windows:	Type: single-glazed, aluminum frames Glass Area: intermediate units, 6% of floor area; end units, 8% of floor area	4. Add storm windows (interlayer R=0.8) Combination of 2, 3 and 4 5. 25% reduction in window area Combination of 4 and 5 Combination of 2, 3, 4 and 5 Combination of 1, 2, 3, 4, and 5	19.4 44.0 7.2 22.6 48.0 51.0
Doors:	Entrance: wood, solid core, 20 sq. ft., 0.5 sq. ft. glass pane Patio: single-glazed aluminum frame, 40 sq. ft.		

How the study was made:

Hittman Assoc. Inc. of Columbia, Md., which conducted the HUD-sponsored study, defined the characteristic buildings used in the study from demographic data supplied by government agencies, utilities, trade and industrial organizations and from field observations.

Modifications were limited to those which (a) would save enough energy to pay for themselves in ten years; (b) would not significantly alter the lifestyle of the residents; (c) could be accomplished with currently available materials and equipment.

Although the results apply specifically t characteristic housing and weather data i the Baltimore/Washington, D.C. area, r sults will be roughly the same for warm or colder areas.

A non-technical summary of the fu study, "Residential Energy Conservation

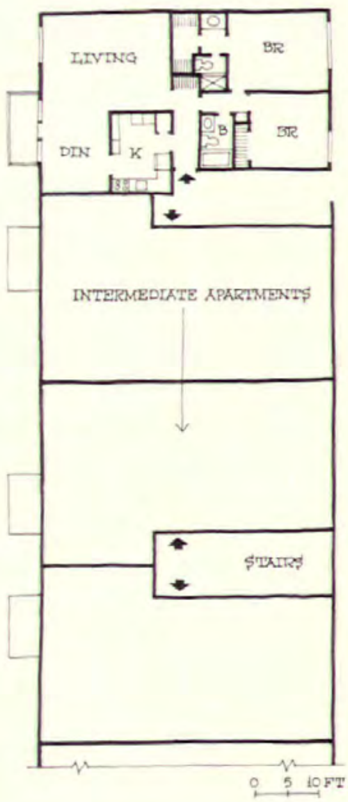
CHARACTERISTIC LOW-RISE APARTMENT BUILDING: three-story rectangular masonry structure with 24 two-bedroom apartments; no center halls, elevator or basement; each unit has gas-fired forced-air heating system, electric forced-air cooling system; occupants: two adults, one child per apartment

Annual energy used for heating/cooling (in therms)*

	Heating (Gas)	Cooling (Elec.)	Total
per structure	11,271	2,509	13,780
per apt.**	470	105	575
per sq. ft.**	0.419	0.093	0.512

*One therm is defined as 100,000 Btu's
**Average values

Dimensional Parameters	Intermediate Apts.	End Apts.	Stairwells
Floor Area (sq. ft.)	1,140	1,140	225 per floor
Wall area (sq. ft.)			
Exterior	500	950	270 total
Party	650	200	
Adjoining stairwell	295	295	
Roof area, % of floor area	115	115	115
Story height	10′	10′	10′



Characteristic structural parameters		Modifications	Approximate percentage decrease in annual energy used for heating/cooling
Construction type:			
Floors:	First: concrete slab on grade Others: wood joist and plywood system	1. Increase to R=20 insulation in ground floor (a 100% increase in R value)	3.0
Exterior walls:	4″ brick siding 4″ concrete block backup Insulation: 2 air spaces Inside surface: ½″ drywall	2. Increase to R=10.6 insulation in walls (a 128% increase in R value)	19.4
Party walls:	Core: 8″ concrete block Insulation: 2 air spaces Surface: ½″ drywall		
Roof & ceiling: (attic unheated & ventilated)	Asphalt shingles Insulation: loose fill, blown in, 5″	3. Increase to R=21.7 insulation in roof (a 128% increase in R value) Combination of 2 and 3	7.2 27.6
Windows:	Type: single-glazed, aluminum frame Glass area: 5% of floor area in apts., 10% of stairwell floor area	4. Double-glazing (interlayer R=0.8) Combination of 2, 3 and 4 5. 25% reduction in window area Combination of 4 and 5 Combination of 2, 3, 4 and 5 Combination of 1, 2, 3, 4 and 5	17.4 43.8 8.2 21.4 29.0 52.0
Doors:	Entrance, apts.: wood panel, 20 sq. ft. Entrance, stairwells: glass, 20 sq. ft. Patio/balcony: single-glazed, aluminum frame, 60 sq. ft.		

HUD-HAI 8), is available free of charge from Dept. of Housing and Urban Development, Office of Policy Development & Research, Room 8126, Washington, D.C. 20410. It includes a list of available technical reports on various phases of the study.

The HUD report lists each reduction in terms of decreases in total annual primary energy consumption—that is, the amount used at the originating source for all energy consumed in the home (for lighting, appliances, heating, cooling, etc.). According to Hittman Assoc. Vice President Douglas Harvey, who supervised the study, decreases in annual energy usage for heating/cooling can be estimated by multiplying total annual primary energy saving figures roughly by two. That's what was done to obtain the figures in the charts on these pages.

TO NEXT PAGE

CHARACTERISTIC HIGHRISE APARTMENT BUILDING: ten-story rectangular structure with 40 two-bedroom apartments and 156 one-bedroom apartments; center hall on each floor, three stairwells and three elevators; no basement; centrally heated and cooled with gas-fired furnace and electric chiller; halls serviced by mechanical ventilation system providing conditioned air; occupants: one adult in one-bedroom units, two adults in two-bedroom units.

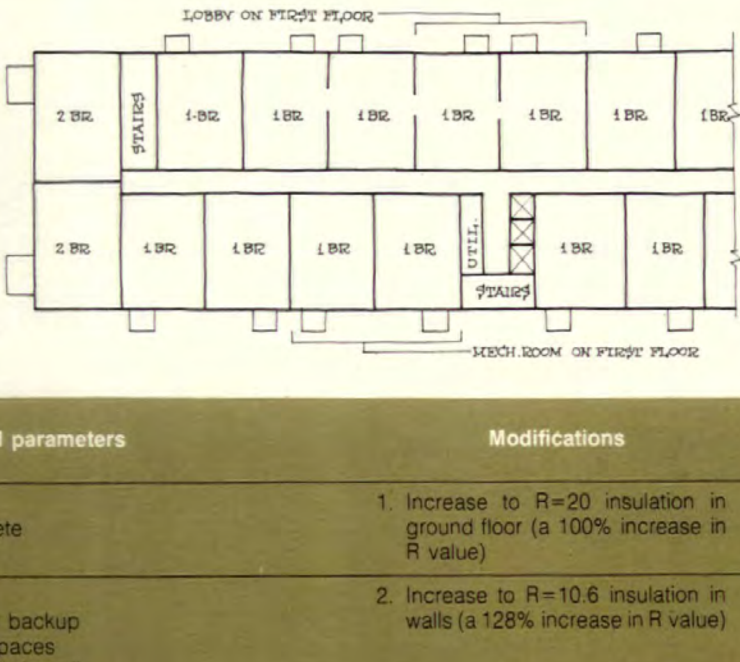
Annual energy used for heating/cooling (in therms)*

	Heating **(Gas)**	Cooling **(Elec.)**	Aux.† **(Elec.)**	Total
per structure	74,359	9,885	12,396	96,440
per apt.**	379	50	63	493
per sq. ft.**	0.390	0.052	0.065	0.506

*One therm is defined as 100,000 Btu's. **Average values. †Electricity used in distribution system

Dimensional Parameters	**Intermediate Apts.**	**End Apts.**	**Halls & Lobbies**	**Stairwells Elevators**	**Mechanical & Utility Rooms**
Floor area (sq. ft.)	850	950	3,500 (1st flr.) 1,800 (others)	1,160	1,810 (1st flr.) 110 (others)
Wall area (sq. ft.)					
Exterior	250	630		420	500 (1st flr.)
Party	680	600			
Hall	250	35		330	
Roof area, top floor (sq. ft.)	850	950	1,800	1,160	110
Story height	10′	10′	10′	10′	10′

2 BEDROOM UNIT



1 BEDROOM UNIT

Characteristic structural parameters		Modifications	Approximate percentage decrease in annual energy used for heating/cooling
Frame, floors & roof deck:	Reinforced concrete	1. Increase to R=20 insulation in ground floor (a 100% increase in R value)	1.1
Exterior walls:	4″ brick siding 4″ concrete block backup Insulation: 2 air spaces Inside surface: ½″ drywall	2. Increase to R=10.6 insulation in walls (a 128% increase in R value)	16.8
Party walls:	Core: 8″ concrete block Insulation: 2 air spaces Surface: ½″ drywall		
Roof:	Built-up; acoustical tile on underside of deck	3. Increase to R=21.7 insulation in roof (a 250% increase in R value)* Combination of 2 and 3	14.6 29.0
Windows:	Type: single-glazed, aluminum frame Glass Area: intermediate apts., 2% of floor area; end apts., 5% of floor area; first-floor halls and lobbies, 5% of floor area	4. Double-glazing (interlayer R=0.8) Combination of 2, 3 and 4 5. 25% reduction in window area Combination of 4 and 5 Combination of 2, 3, 4 and 5 Combination of 1, 2, 3, 4 and 5	21.2 44.6 10.0 26.8 50.2 49.0
Doors:	Entrance, apts: wood, solid core, 20 sq. ft. Entrance, lobby: single-glazed aluminum frame, 80 sq. ft. Patio/balcony: single-glazed aluminum frame, 60 sq. ft.		

*Based on observation that typical highrise in Baltimore/Washington, D.C. area was severely deficient in roof insulation.

This ASLAF study shows how you can use your site as an auxiliary energy plant

The study shows how to turn natural ele- ments like the sun, wind and vegetatio- into supportive heating/cooling systems fo- your housing; in other words, how you ca- use *free* energy from nature to reduce fue-

FREE ENERGY FOR THE INDIVIDUAL HOME

Landscaping plans can be custom designed so that trees and other plantings buffer a home from hot sun and cold winds, and also channel cooling breezes toward it. The trick lies in knowing where to place the plantings so they'll do the best job.

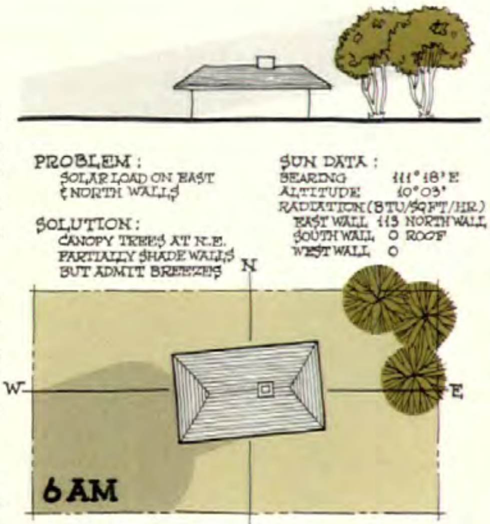
This study, by Edward D. Stone Jr. Assoc. P.A., shows how to work out an energy-saving planting scheme by using local solar data and relating it to a specific site, structural characteristics of the home and wind patterns in the area.

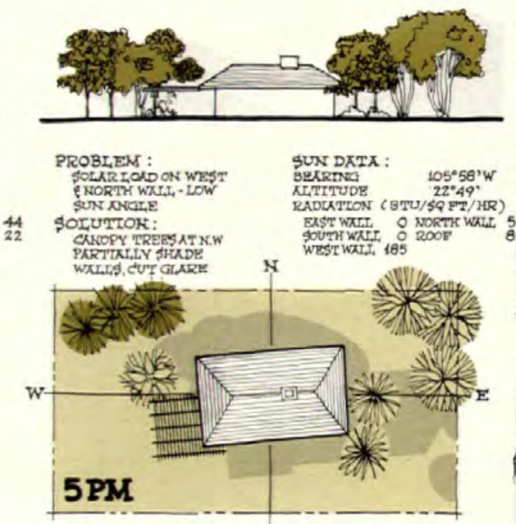
The Stone landscaping plan is for a hypothetical home in Miami, Fla. The house is rectangular, has an overhang, is built on a quarter-acre lot and is oriented 5° east of south. It was necessary that prevailing winds from the east not be blocked at ground level and the roof surface be unobstructed for solar collection.

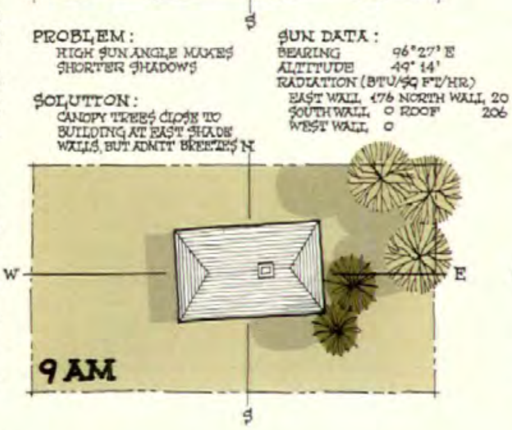
In the study, solar data was gathered during 12 hours (from 6 a.m. through 5 p.m.) on June 22, the longest and highest radiation day of the year. The data was translated into schematics that show how shifts in the sun's position during the day direct radiation to different areas of the home, thus indicating where trees are needed for shading.

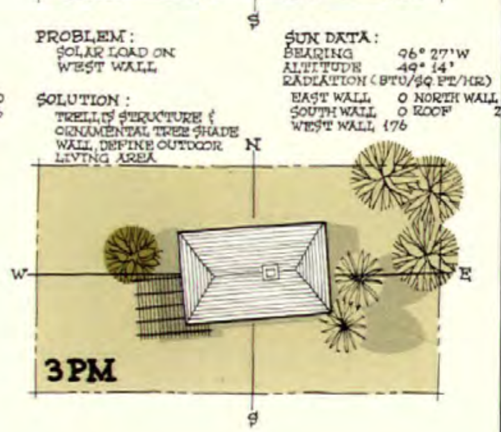
The small drawings at right represent key hours in the day-long study. From left *(running counter-clockwise)* you can see how shading requirements change between 6 a.m., when the solar load is on east and north walls, to 5 p.m., when the low sun-angle sends radiation to west and north walls.

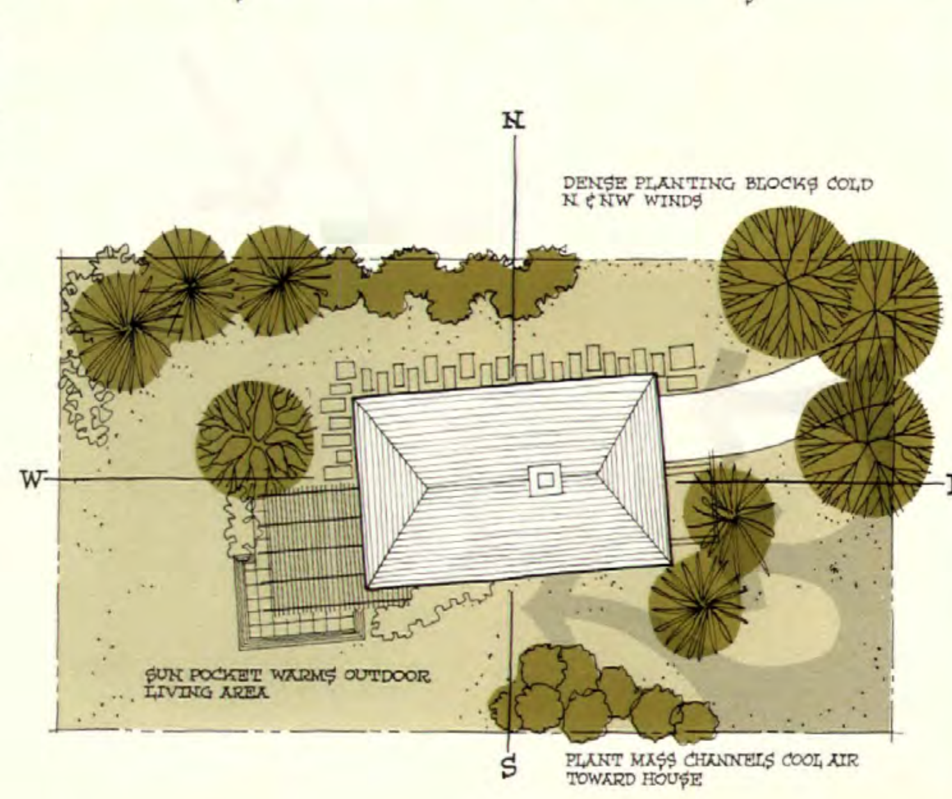
The large drawing at the bottom represents the final landscape plan, which incorporates some additional planting elements to improve wind control.











and utility costs. For as the study points out, modification of the mean radiant temperature by only 3° will reduce annual heating and cooling costs by 6% to 8%.

Specifically, the study focuses on such site-planning ideas as: how to use trees and other foliage to buffer homes and apartments from cold winter winds and hot summer sun; how to design and orient units so they are cooled by natural air-flow patterns; and how to treat the total site so that varying housing types benefit from topographical variations within the site.

The study also covers energy-related planning techniques for sloping and flat sites and

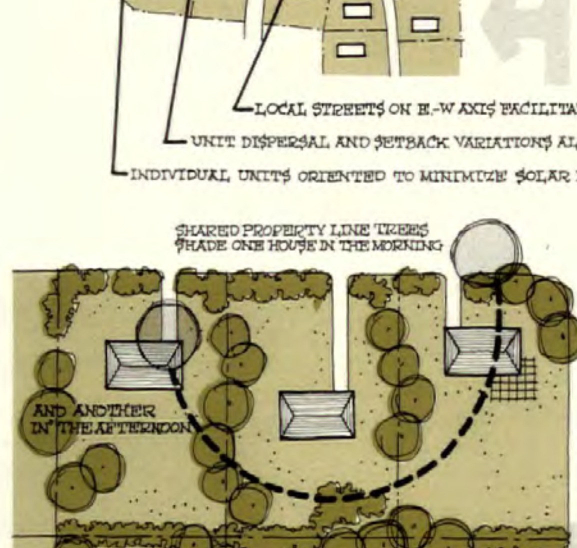
FREE ENERGY FOR HOUSING GROUPS

This study, again by Edward D. Stone Jr. Assoc. P.A., suggests energy-saving siting and orientation treatments for both single- and multifamily projects. Here, as in the previous study, the primary goal is to reduce cooling loads since the projects are in a hot, humid region.

Each home in the single-family project *(top plan)* is oriented on its lot so it will receive maximum cooling from the wind and minimum heat from the sun. Local streets are laid out on an east-west axis to channel cooling westerly breezes through the project.

The center plan—a small segment of the same single-family project—shows how trees can be placed on common property lines so the same trees shade adjoining homes at different times of the day.

In the multifamily project *(bottom plan)*, linear clustering of townhouses or apartment buildings is suggested. This allows the long side of most building groups to be oriented on an east-west axis, minimizing heating effects from the sun on wall surfaces. Cluster ends are kept open to channel prevailing breezes through the wide, open areas between building groups.



special requirements for solar-heated housing.

The planning ideas shown on this and the following pages have been selected from comprehensive reports prepared by several of the landscape architectural firms that participated in the study. The entire study can be purchased for $15 from American Society of Landscape Architects Foundation, 1750 Old Meadow Road, McLean, Va. 22101.

How the study was made:
ASLAF was authorized to investigate th implications of site development on energ collection and conservation as part of r search ordered under the Solar Heating an

FREE ENERGY FOR PROJECTS AS A WHOLE

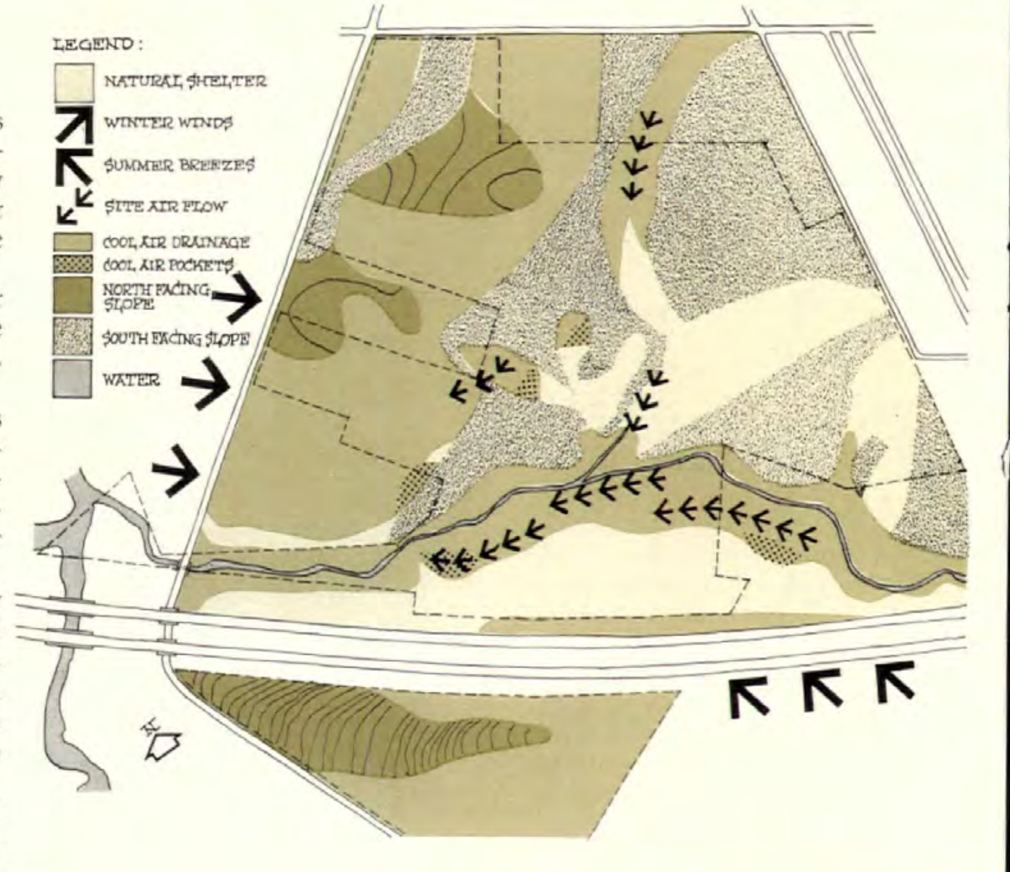
In the study shown here, Rahenkamp Sachs Wells & Assoc. discusses one facet of a project's energy-related planning process: how heating and cooling loads were reduced for all the housing by relating unit design to the site's topography and microclimate.

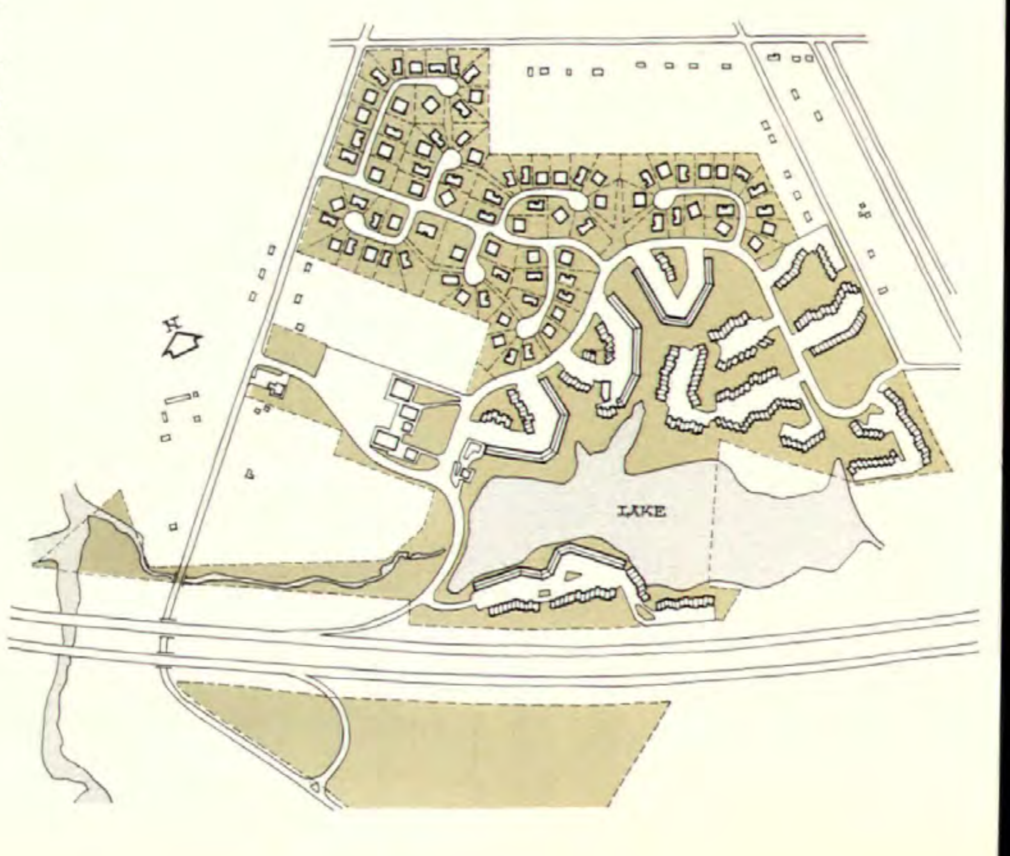
The project is Pine Run in Gloucester Township, N.J.—a 125-acre PUD with three types of housing: single-family detached, townhouses and garden apartments.

As indicated in the top plan, the project's terrain varies from sloping to flat and contains some natural shelter areas. Additionally, the site is chilled in winter by north-northeasterly winds and cooled in summer by south-southeasterly breezes.

In the project's single-family area *(lower plan)*, which is located on flatter sections of the site, the primary energy-saving goal was to minimize the effects of winter winds on heating loads. The houses have considerable glass areas, so the lots were fenced in to buffer these areas from chilling winds.

Multifamily units—both townhouses and garden apartments—are located in the hillier, more wooded areas of the site. The garden apartment buildings (with floor-through layouts for greater air-flow) follow the natural contours of the land *(see lower plan)*. This design increases summer cooling from natural air-flow patterns and allows existing vegetation in the southeast section of the site to act as a winter-wind block.





Cooling Demonstration Act of 1974.

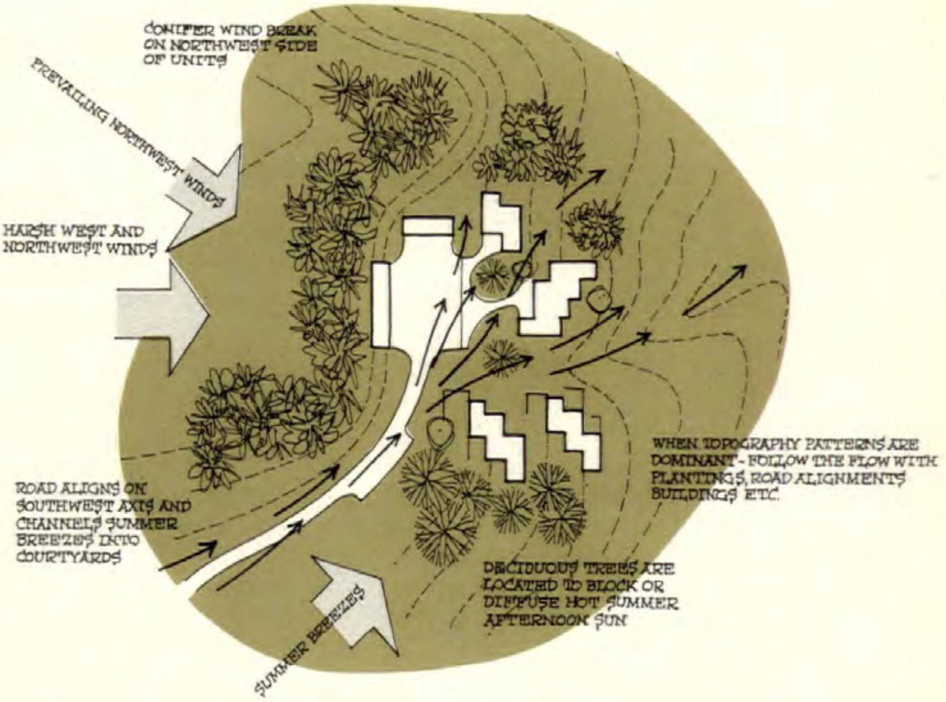
ASLAF hired six landscape architectural firms to produce reports on the relationship between site planning and energy used in their respective regions and in a variety of housing types. Their reports were coordinated into the study by ASLAF research director Charles McClenon.

The six firms are: Land/Design Research, Columbia, Md.; Edward D. Stone Jr. Assoc. P.A., Ft. Lauderdale, Fla.; Johnson, Johnson & Roy, Ann Arbor, Mich.; Rahenkamp Sachs Wells & Assoc. Inc., Philadelphia, Pa.; Sasaki Assoc. Inc., Watertown, Mass.; and Sasaki-Walker Assoc., San Francisco, Calif.

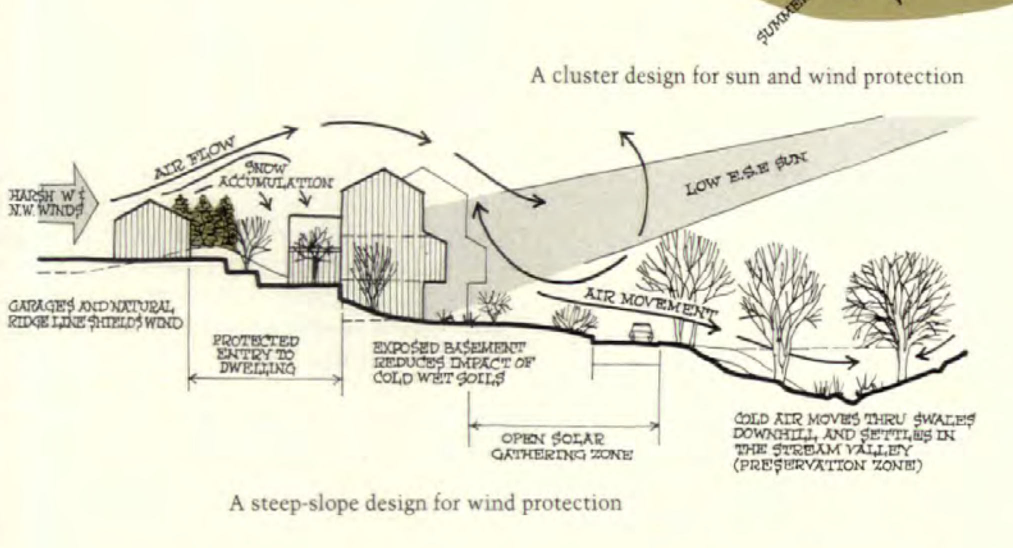
HERE ARE MORE ENERGY-SAVING PLANNING IDEAS

They're from a study by Johnson Johnson & Roy, and they suggest design, siting and landscaping ideas that help reduce energy loads for housing in colder climates. They include:

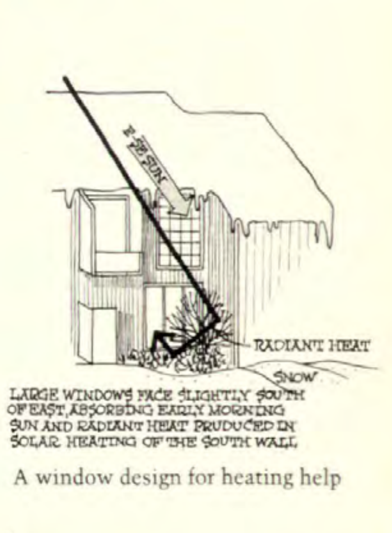
- A cluster and landscaping plan that blocks cold winter winds, but channels cooling summer breezes through the clusters *(right)*.
- A suggestion for a steep-slope design that channels cold winds up and away from the houses *(below)*.
- A house design that, among other things, uses its attached garage as a wind buffer *(bottom)*.
- A window design for a southeastern exposure that speeds morning heating during cold weather *(far right)*.



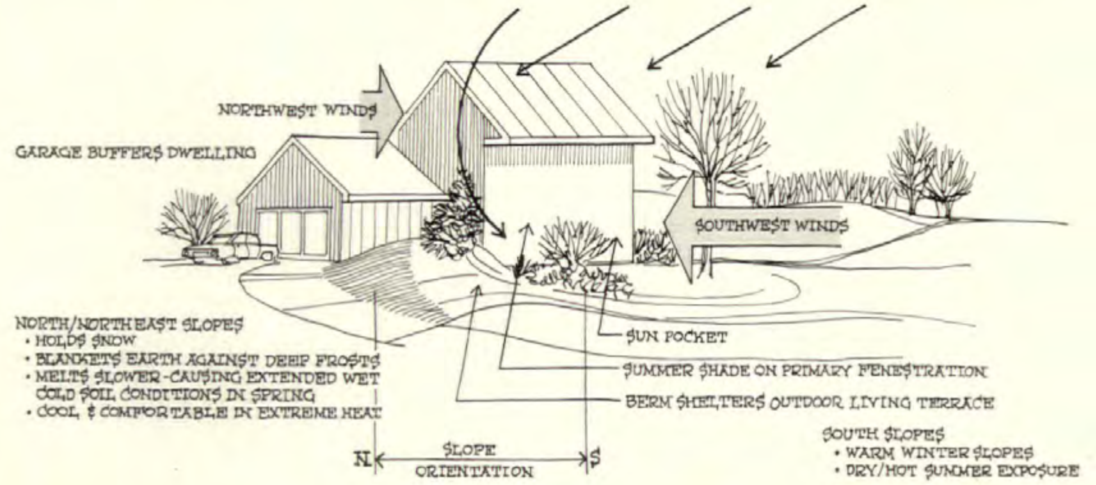
A cluster design for sun and wind protection



A steep-slope design for wind protection



A window design for heating help



A unit design for sun and wind protection

THE DECLINE OF LEVITT AND SON

what went wrong under ITT

ITT started trying to call the shots . . . Levitt's builder captains walked out . Ventures into modulars and apartments went bad . . . Unsold land accumulated like a creeping desert . . . Suddenly the world's greatest homebuilding company became a shambles . . .

Before the seismograph and the Richter scale, geologists had another way to gauge the severity of an earthquake. They would journey to the afflicted region and question the survivors: The tremor had been so bad if it had rattled the dishes in the cupboards, so much worse if it had set church bells to pealing wildly.

The worst quakes of all were those that left no survivors to question.

When the newly appointed trustee for Levitt and Sons entered the company's headquarters in Lake Success, N.Y., for the first time last January, he must have felt rather like one of those early scientists. The building still stood, to be sure, and it was inhabited.

But not by builders.

Virtually no-one left in active top management had ever built a house professionally. The most famous and once-greatest of all homebuilding companies was being run by accountants, by various other staff people, and by a harried contingent sent over one after another from the company's conglomerate-owner, International Telephone & Telegraph.

The builders had left.

Awaiting the trustee on the company's books were more of the results of some incredible corporate havoc. Thousands of acres of unbuildable land owned by the company. Sales volume and personnel rosters shrunk to a fraction of levels sustained a few years earlier. Net losses running into the *tens of millions* of dollars annually.

What had wrought such damage? And why had many of the industry's best building talents fled a company once unquestionably the industry's best?

Their exodus can be traced in the files of a New York firm, Barton-Sans, that specializes in finding housing industry talent. The searchers' collection of several thousand detailed dossiers recounts work histories, track records both good and bad, and present locations of the industry's most important executives; that collection would be materially smaller and poorer without Levitt's builders. Interviews with dozens of executives who occupied key positions in Levitt and Sons and who witnessed events there firsthand have brought to light the detailed and ofte astonishing account that follows . . .

IN THE BEGINNING . . .

. . . the company was William J. Levitt. His men, ar the industry, call him a genius; they may be right.

"A good case can be made," *Fortune* magazine onc wrote, "that the best thing that has happened to th housing industry in this century is Levitt and Son Incorporated."

Bill Levitt had not only the gift of innovation bu also a gift for people. He gathered around himself th very best men he could find, and he inspired unpara leled enthusiasm and loyalty in them.

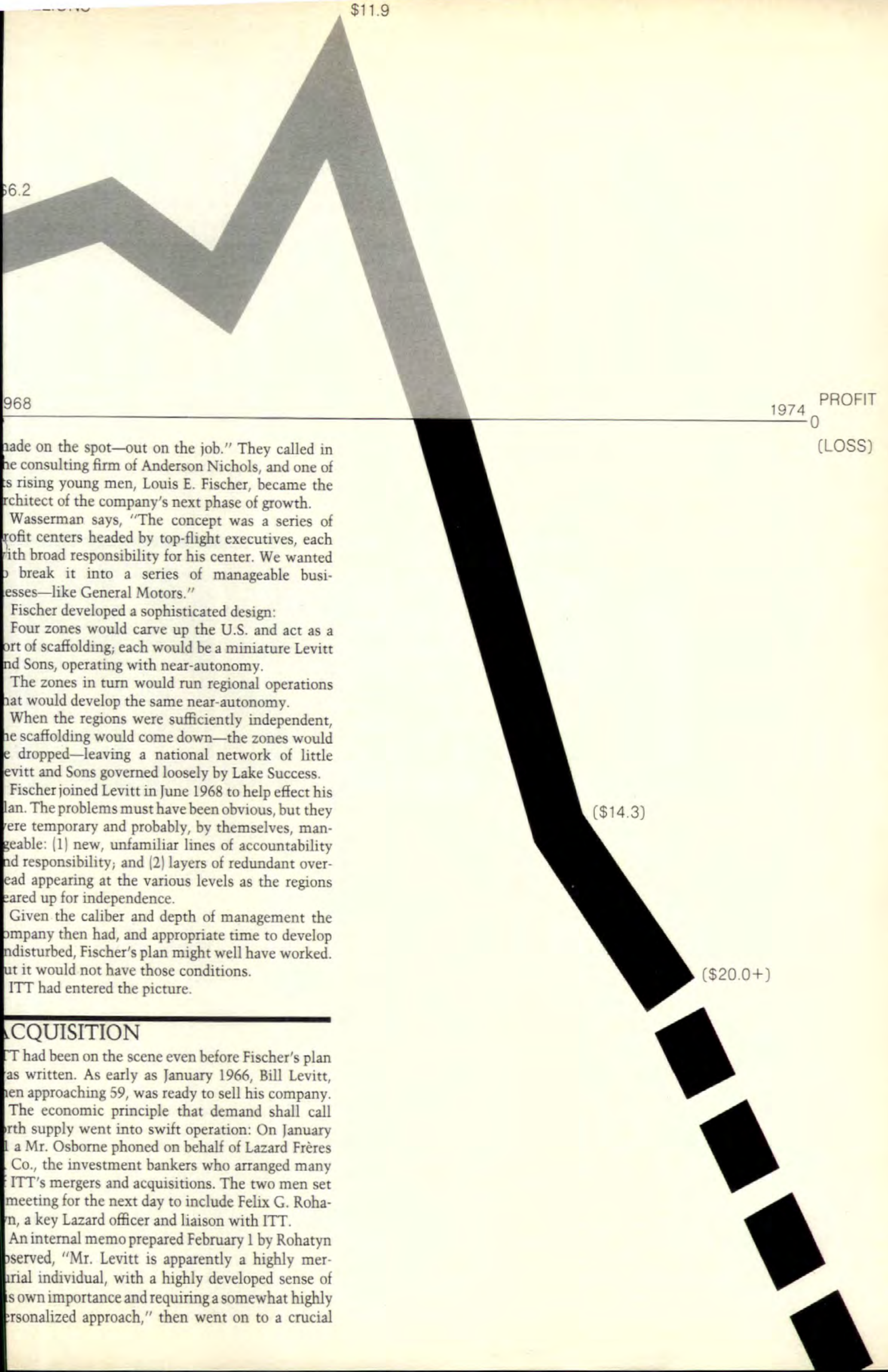
Together, he and they were the fountainhead fro which everything—profits, innovation, reputatic and the rest—flowed.

THE STAGE IS SET

In the 1960s, Bill Levitt's single-location compar set up "branch offices" and spread down the Ea Coast: New York, New Jersey, metro Philadelphi metro Washington. It jumped across country to Ch cago. It reached overseas to Puerto Rico and Pari The age of the original Levittown concept pass while this went on, but everything his compar touched continued to succeed anyway.

Levitt plainly meant for his company to ke spreading indefinitely. A computer constant scouted 250 marketing areas for opportunities. Ar when he began grooming a successor to run his no public company, he chose Richard A. Wasserma who had shown a superlative talent for people ma agement—the sort of man needed to govern the fa flung empire Levitt was creating.

Wasserman and Levitt both saw that the compa was becoming too big to manage on the one-man-ru principle Bill Levitt had used. Wasserman recalls, was clear that too many major decisions had to



nade on the spot—out on the job." They called in he consulting firm of Anderson Nichols, and one of s rising young men, Louis E. Fischer, became the rchitect of the company's next phase of growth.

Wasserman says, "The concept was a series of rofit centers headed by top-flight executives, each ith broad responsibility for his center. We wanted break it into a series of manageable busiesses—like General Motors."

Fischer developed a sophisticated design:

Four zones would carve up the U.S. and act as a ort of scaffolding; each would be a miniature Levitt nd Sons, operating with near-autonomy.

The zones in turn would run regional operations hat would develop the same near-autonomy.

When the regions were sufficiently independent, he scaffolding would come down—the zones would e dropped—leaving a national network of little evitt and Sons governed loosely by Lake Success.

Fischer joined Levitt in June 1968 to help effect his lan. The problems must have been obvious, but they ere temporary and probably, by themselves, mangeable: (1) new, unfamiliar lines of accountability nd responsibility; and (2) layers of redundant overead appearing at the various levels as the regions eared up for independence.

Given the caliber and depth of management the ompany then had, and appropriate time to develop ndisturbed, Fischer's plan might well have worked. ut it would not have those conditions.

ITT had entered the picture.

CQUISITION

T had been on the scene even before Fischer's plan as written. As early as January 1966, Bill Levitt, en approaching 59, was ready to sell his company.

The economic principle that demand shall call rth supply went into swift operation: On January 1 a Mr. Osborne phoned on behalf of Lazard Frères Co., the investment bankers who arranged many ITT's mergers and acquisitions. The two men set meeting for the next day to include Felix G. Rohan, a key Lazard officer and liaison with ITT.

An internal memo prepared February 1 by Rohatyn bserved, "Mr. Levitt is apparently a highly merrial individual, with a highly developed sense of s own importance and requiring a somewhat highly ersonalized approach," then went on to a crucial truth: ". . . in its own field Levitt and Sons is the number one company . . . *if proper safeguards can be taken for the retention of management . . ."*

The highly personalized approach of February 1 must have gone well; on February 7 Levitt wrote to Lazard authorizing it to act as his exclusive agent in a merger search.

Rohatyn's first thought was not of ITT, but of Gulf Oil, Kaiser and other corporate giants already involved in real estate. If he and Lazard Frères had pursued that thought . . .

Within a month, however, he approached ITT.

The initial reaction was negative. Hart Perry, an executive vice president, wrote in a memo to Chairman Harold Sydney Geneen on March 4, 1966:

"I basically do not believe that this is a business ITT should get into, although the record certainly suggests that Levitt has done a better job than most in producing steady growth in recent years."

But by May, ITT felt it had strong reasons for wanting Levitt and Sons. They were spelled out in a confidential review:

"1. . . almost unlimited world-wide and domestic growth potential . . .

"2. Most foreign governments are eager to improve the housing situation in their respective countries . . . they are more than amenable to dealing with Levitt . . .

"3. Levitt produces a ... ket for a complete range of consumer goods and services. Levitt creates not only new homes but new households . . .

"4. The acquisition would increase ITT's earnings per share."

In addition, ITT learned that Levitt and Sons' balance sheet was understated, permitting potential "instant earnings" of about $7 million after tax that could be injected into the income statement at need.

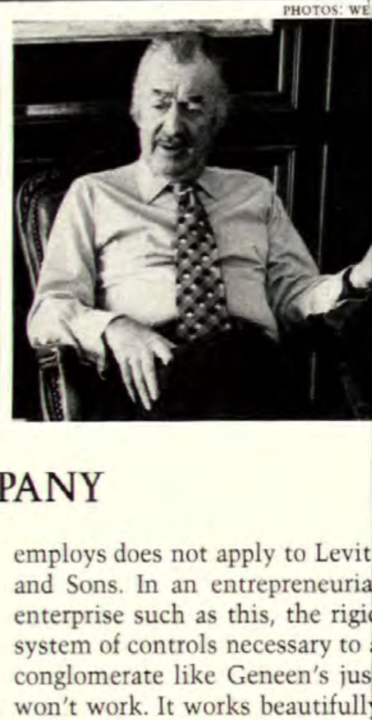
An irresistible list: By June 2, ITT and Bill Levitt were dickering over price.

The dickering, it turned out, took a long time. The deal was delayed by difficulties ITT encountered in trying to acquire the ABC Broadcasting Co. There were also some second thoughts on Levitt's part. He had eight premonitory questions that troubled him; he sent them to Geneen. They betray a concern for the company's continued separate identity under ITT, and for the welfare of Levitt's top executives once they were in the conglomerate's hands.

Rohatyn and Geneen reassured him, however, and the remaining obstacles to merger were cleared in 1967. That was in time for a closing around the end of Levitt and Sons' then fiscal year in February 1968. (By then, Fischer's plan was going into effect.)

Fixing the start of the decline of Levitt is easy enough now, in retrospect: February, 1968.

PHOTOS: WE



HOW IT ALL LOOKS NOW TO THE PIONEER WHO BUILT THE COMPANY

William Jaird Levitt has maintained an office at Levitt and Sons headquarters ever since ITT acquired the company in 1968. The office is large, walnut-paneled, richly appointed—entirely appropriate for a man whose title is founder-chairman. He is there often.

It is strategically placed on a second floor balcony-corridor overlooking the building's central atrium. This beautiful indoor space with growing trees and splashing fountains allows almost instant access to his office from any point in the building.

From his ideal vantage point, Bill Levitt has watched the decline and disintegration of his company. It was the basis of his fortune and international fame, and the instrument of his lifework, but he has watched as a virtual outsider. He is not in the active management.

"I have a management contract with ITT," he said in an interview in that office recently, "that runs until 1979. I'm here under its terms, to give advice if they ask for it. There are two pages full of stuff in it that I have to do, services I have to perform, help I have to give—*if* requested."

He said he did not know why the ITT-appointed executives who have long run the homebuilding company have never sought to consult him on how to turn around the failing enterprise.

"I'm here," Bill Levitt reaffirmed. "They never asked me."

Bill Levitt's views on ITT's world-famous management system may or may not have some bearing on his isolation. He sums up this way:

"The system [ITT chairman Harold] Geneen so successfully employs does not apply to Levitt and Sons. In an entrepreneurial enterprise such as this, the rigid system of controls necessary to a conglomerate like Geneen's just won't work. It works beautifully with routinized, repetitious businesses; you can run hotels with it you can rent cars with it, you can make refrigerators with it.

"But you can't build homes with it.

"I think Geneen had good intentions. Levitt and Sons was to become a billion-dollar company—that was his ambition, and mine, in the beginning.

"We were going to build all over the world.

"It was a very, very exciting vista; the merger opened terrific avenues for increasing volume for increasing the company's fame, for increasing its contribution to society. . .

In fairness to ITT, that requires qualification: In-
ernal problems—essentially manageable by them-
elves, in all likelihood—and the familiar litany of
he housing industry's troubles in recent years would
lo much to accelerate the decline. But the merger set
n motion a series of decisive forces.

SUPEREXPANSION

hose injurious forces were not perceptible at first: TT wanted expansion, apparently just as did veryone else involved with Levitt and Sons at the ime. But in fact there was a difference. What ITT eally wanted was fast and continual expansion of arnings per share.

The conglomerate had long since made a Faustian act with Wall Street that earnings would rise every uarter, every year, at a rate that was—ulti-nately—to prove unsustainable. Unfaltering growth vas the price exacted for a high price-earning ratio, vhich in turn was essential to ITT's massive acquisi-ion program. The pact had become specific by 1968: TT's goal was to make earnings grow 14% a year.

Levitt and Sons had been a publicly held company efore the acquisition, and so understood very well ie importance Wall Street attached to earnings per hare. But ITT's obsession with mushrooming this umber was a new ball game for Levitt.

Now the ultimate criterion of success shifted subtly and disastrously for Levitt and its executives: The company's achievements would no longer be measured against those of the housing industry, or the state of the housing cycle, or Levitt's own track record, but against geometrically accelerating requirements imposed on ITT.

The conglomerate has an ingenious tool for prodding subsidiaries to grow: its business plan. This document, prepared annually by each subsidiary, sets out in excruciatingly complete detail what the subsidiary plans to do for the year ahead, and the next, and the next—in fact for five years. The Levitt annual business plan ran 300-400 pages (the plan for 1972, written in 1971, was 437 pages long), and took months to prepare.

The projected growth rate determines the resources ITT will allocate; the better the projections, the more money available to meet them.

The projections on which the plan is based are necessarily made with ITT's demands in mind, but they also have the impact of being made by the subsidiary's executives themselves. It is their plan, their numbers, and they are thereafter held accountable for fulfilling it.

To a homebuilder, the more money he can get, the faster he can grow; the business plan therefore seemed as much an opportunity as a commitment to

"But within the first 90 days, I iew the ITT system wouldn't ork at Levitt and Sons. Geneen id I discussed it and he agreed ith me. Geneen wrote and gned a memo saying we both reed that there were certain rtions of the system he would aive; the portions to be adopted ould be decided by both of us. ie memo went out to the office the president (of ITT) . . .

"But afterwards, it was increas-gly overlooked.

"I stepped down as chief execu-ve in August 1969; I had no omach left anymore for the onthly meetings (prescribed by T). . . After that, Dick Wasser-an had to go without me.

"He quit in 1971. . .

"Then came the 1971 divesti-re agreement between ITT and e Justice Dept. We had been los-g top-flight people before that—our top men just didn't like the ITT system—but afterwards the pace of departures stepped up.

"Now there are only one or two in top management from before."

Levitt clearly feels the effectiveness of management has declined as a result.

"You can't compare Wasserman and Andlinger (as president). It's not fair, Wasserman knew the business and Andlinger didn't. All the ITT people who are here now are very *able* people, but they're not *experienced* people, not in this entrepreneurial, personal business. And there's no manual they can refer to; *we* 'wrote the book' (on high-volume building)."

The management factor may have had a bearing on Levitt's final decision against going through with his plan to repurchase the company last year [NEWS, March '74].

"We signed a letter of intent, subject to our own audit," Levitt said. "We went to work with our auditors, and found a tremendous land inventory that we didn't want. . . Around May we had a rough estimate of 'Company A,' the operating portion that we wanted; and 'Company B,' the land we didn't want.

"We were ready to go. I had signed up everybody I wanted to fill top management. Some were actually on my personal payroll.

"But by then things had gotten a lot worse in the industry.

"We took a closer look at 'Company A' and decided that it would not be a feasible thing to do to buy it. . .We would have had to go around and look at every damned house in the inventory, and we found we were buying something planned and produced mostly by amateurs. . .

"I have a great deal of respect for ITT—I'm one of their largest stockholders. And I've known Harold Geneen for a long time.

"But Levitt and Sons should not have been bought by ITT. It was an error."

Since Bill Levitt's decision not to repurchase, a polite curtain has been drawn once again between him and the homebuilding company that surrounds him.

"I have no access to the books now," he says. "I know nothing of the day-to-day operation of the company—they don't keep me posted."

For his part, Bill Levitt pursues many other interests. He owns all or part of several businesses: film manufacture and distribution, discount stores, and an Israeli company called Savkel that owns the non-North American rights to the Wankel engine.

And he sometimes muses on the reasons why the consultative clauses in his management contract remain unexercised.

"Maybe," he offers, with an almost-straight face, "maybe they don't think I know enough about the business."


Richard Bernhard


Carl A. Rudnick


Herman Sarkowsky

CYRIL MORRIS

Levitt and Sons executives.

The late 1960s were a euphoric time. A boom had been under way for so long that economists were beginning to say the U.S. had permanently smoothed out the ups and downs of its business cycle. The government was projecting housing shortages so vast it almost seemed ready to underwrite continuous 2-million-start years for a decade to come.

Levitt's ambitious and hard-driving officers were seduced by the prevailing optimism and the potent ITT psychology. They wanted to meet and exceed the parent's standard when they wrote their first business plan. ITT wanted 14%; they would shoot for 20%. They played down the cycles of the building business because the company had beaten the cycle in 1966. Future lags in the Levitt markets would be offset by rapid diversification into new kinds of housing and by using financial and marketing muscle to take market share from the smaller builder.

So, diversification and accelerated growth were added to the decentralization effort, complicating enormously the task of management.

The company pressed for faster growth in its existing regions. It also poured resources into Detroit, a massive new single-family operation.

But it didn't stop there. During the first three-and-one-half years under ITT, while Dick Wasserman was president, the company created two major multifamily construction arms, a commercial development arm, a modular housing factory in Battle Creek, Mich. and a mobile-home plant in Fountain Valley, Calif. The company acquired United Homes of Seattle and former owner Herman Sarkowsky stayed on to expand the operation throughout the West.

Levitt and Sons also stepped up its buying of land, started a single-family project in Madrid, planned one in Munich, scouted Portugal and Scandinavia.

"Levitt-U.S.A.," the joke began that went around Lake Success, "Levitt-Europe; Levitt-World; Levitt-Moon; and the holding company, LEVITT-UNIVERSE!"

Wasserman and the executives under him undertook this expansion with their usual energy and intelligence. But it was forced rather than natural growth, and major problems would soon appear.

LAND

"We made a conscious decision to acquire enough land to meet our growth projections for a five-year period," says Dick Wasserman. "That decision let us buy raw land, develop it ourselves and apply careful planning to it."

There was an even more pressing reason to buy land in large quantities, Wasserman explained: "If you're a major homebuilder, with the kind of large organization that entails, and you get caught short on land, what do you do with the juggernaut you've got rolling? You can't stop."

Richard Bernhard, an executive vice president under Wasserman, elaborates: "Our affiliation with ITT made the resources available and encouraged us to add land inventory. So did the stretchouts we were running into on zoning and approvals.

"But things happened—sewer moratoria, no-growth legislation and the like—and the market changed and slowed down. What we thought was a three-year inventory turned out to be seven years'."

Levitt and Sons was not alone in its fascination with the idea of banking land. In a confidential report prepared for ITT prior to the 1968 acquisition, Lazard Frères enthused: "Were Levitt to obtain an additional $20 or $30 million it could inventory land for future use ... The risks ... are believed to be relatively small ... the land bank would also serve as a hedge against inflated prices and ... [Levitt] could probably resell ... at a profit."

With these assumptions, the company was an aggressive buyer. It purchased, and then found itself holding, $20 million worth of land in Puerto Rico; $20 million worth in the Washington D.C. area—of which approximately 80% was eventually covered by moratoria; perhaps $15 to $20 million worth acquired with United Homes in Seattle and elsewhere in the Pacific Northwest; $7.5 million in California, Arizona and Colorado; and extensive and numerous parcels elsewhere. The carrying costs of all this land, of course, were capitalized up to market value, steadily adding to the burden on the balance sheet.

The land inventory totaled a stunning $117,780,000 at the end of 1973 and its peak was still higher.

Some of the acreage was in markets that turned sour; some fell afoul of no-growth politics and sewer moratoria; some proved simply in excess of need.

The enormous inventory, made possible by the merger with ITT, and made apparently necessary by the five-year business plan, and made apparently attractive by the economic forecasts and outlook of the time, in reality proved to be a crushing financial burden to the company.

EARLY PROBLEMS

On the surface, things went well enough in 1968 and 1969. Levitt's sales and earnings rose in 1968, the year the company went into ITT—sales to $162. million and profits to about $6.2 million. In 1969, the first year under a business plan, sales soared to about $225 million. Earnings, despite numerous start-up expenses, probably exceeded the business-plan goal of $7 million.

The ITT control system includes monthly and annual meetings between parent and subsidiary. Those with Levitt and Sons went well. Such difficulties as did arise were expectable. Overhead became more burdensome as the zones and regions took shape. And spotty problems with control of the operations appeared because of the extent of decentralization.

Dick Bernhard explains: "If a problem turned up in a project somewhere, by the time word filtered back up to the region, from the region to the zone and from the zone to Lake Success, the war was over ... the moment you have more than four or five balloons in the air you're completely dependent on the guy reporting to you."

And Lou Fischer adds: "Finding good people to staff the expansion was our toughest problem."

The relationship with ITT was manageable, but it had its vexing side—a harbinger of things to come.

Wasserman still ran his own show, but the show had to be reported continuously to ITT. The 400-page plan wasn't enough; there had to be the detailed monthly reports, and a seemingly infinite number of internal financial and other records.

"At first [after the acquisition] it was all right," reports Charles Biederman, a vice president in 1968. "But after six months or so, an ITT guy might say 'Would you mind including this form in your monthly report?' Then next time, 'I hate to bother you, but it would help us an awful lot if you'd report these figures this way.' This grew and grew, until in a year-and-a-half, everything was ITT."

"These constant reports were a restriction," adds Bernhard. "The cost was incalculable ... in term of time spent by officers. More than that, it was a distraction from our own list of priorities.

"And you always had the feeling of, Was big brother watching, and did he approve?"

Many executives who dealt with the reports were ambivalent about them, because they had their good side. Joseph Henn, who became director of financial controls in 1970 and then served as vice president-comptroller until late 1972, was perhaps the Levitt officer most familiar with these documents.

"The reports, by and large, were not useful management tools for Levitt and Sons," Henn says. "They were geared toward a manufacturing company's needs; therefore they were just numbers we generated. I'd say 50% to 75% of the reports were useless to us as an internal management tool. We had to keep an internal set of management reports for our own use. Even the balance sheet was different; we had to translate it into real-estate terms.

"On the other hand, ITT obviously has an excellent reporting system for itself. I learned a lot from them, and some of the basic control concepts have been brought over to The Richards Group, where I now work, and applied in a real-estate context."

ITT may have indirectly made a positive contribution to the homebuilding industry. Its control techniques, in their original form, were oppressive. But Levitt men have learned to put them in their place. Adaptations of some are now nearly as common in the housing industry as former Levitt executives.

The least copied procedures are those of the ITT personnel department, universally recognized at Levitt and Sons as a bureaucratic stumbling block. The department eventually won authority to evaluate any new promotion or any hiring or termination that involved a salary above $25,000. Evaluation often took months. Approval was not assured in advance, so hiring and firing became extremely difficult.

"By 1971," says Al Powell, who was the vice president in charge of personnel at Lake Success until 1972, "ITT was approving almost all managerial hiring. In addition to the delays, it became progressively more difficult to get [approvals]... It got to the point where hiring anybody became an issue with them.

"I think it was because the credibility of Levitt and Sons management declined at ITT—starting with the [earnings] falloff in 1970."

THE FIRST CRACKS

"ITT is totally unforgiving if you don't make the numbers," explains Jerry Thompson, who was a part of the Levitt commercial-development arm in 1970, "because they are *your* projections, for which you are given money and resources."

As 1970 began Levitt and Sons knew it was not going to escape the housing slowdown of that year.

"In [late] 1969 ITT started to get nervous, because the near-term projections at Levitt and Sons were becoming very bad," observes Nelson Kamuf, who went to work for Bill Levitt in 1951 and was the company's senior vice president of operations in 1970.

The numbers continued to deteriorate: The 1969 forecasts assumed a turnaround that didn't happen.

Instead of recovery, Levitt and Sons faced the financial squeeze of May and June 1970.

The lower Levitt and Sons forecasts would be accepted by ITT--but now there were strings attached.

"ITT began focusing more of its attention on us," recalls Nels Kamuf. "They assigned more people to work with people in our company, more people to review our decisions and policies; and they increased their reporting activities.

"Naturally, they also began to intervene," Kamuf adds with deceptive mildness.

This well-meaning interest did not sit well with Levitt executives, and they soon reached a consensus. Phrased printably, it was: "ITT does not understand the building business."

According to Wasserman, final earnings were down sharply, to "around $4½ million."

The ITT intervention in 1970 dealt the first of several body blows from which the homebuilding concern would never completely recover.

"I had been really turned on at Levitt and Sons," Wasserman recalls now. "I badly wanted to build it up... I worked at it twenty hours a day, really pushed myself, spent half of my life on a plane, went through a divorce, made all the 'normal' sacrifices [this with a wry face]—It's amazing what the human body can do when it's motivated.

"But I saw that it was a losing battle with ITT. They wanted to involve themselves more and more in the decision-making process.

"I had done my thing, I thought I had positioned the company very well. I was satisfied. When I left we had a $13-million profit buttoned up.

"ITT wanted me to take over very large portions of the [parent] company. Geneen told me once, 'Dick, the future of ITT is in your hands, and those of two other guys.'

"But I'd had enough. I'd proved to myself that I could do it. I wanted to enjoy life a little more. I told him, 'I'm sorry, Harold, but I can't. It would ruin my backhand.'"

Wasserman was determined to leave in a good year,

The ITT board room, where the two companies met annually. Dubbed "The James Bond Room," it fills the top floor of a Manhattan skyscraper. Fifty or more ITT executives occupied one side, as many from Levitt the other. Attendants in the center space ran sound equipment and projectors. Meetings could last all day—no smoking—with Chairman Geneen presiding under the large ITT emblem. "How could you go in," asks one Levittman, "and tell him yours is the only subsidiary of hundreds to take gas next year?"

Richard A. Wasserman

Nelson C. Kamuf

and he did, in June 1971. It was, in fact, the company's record year: about \$11.9-million profit on \$300 million or more in sales.

Levitt and Sons lost more than a president. Its executives now realized that they were just employees in a rather minor (4% of sales) subsidiary of a much larger company. Even the name had changed to "ITT-Levitt and Sons." Their élan, which made Levitt so different from every other company, started slowly but irretrievably to fade.

Robert Gale, running the company's multifamily operations on the East Coast in 1971, sums up the forebodings of many Levitt executives at the time:

"I feel that when Wasserman left, the company died."

DIVESTITURE

Wasserman left June 1, 1971; in July ITT signed a consent decree that affected people problems at Levitt and Sons as much as did his departure.

The agreement with the Justice Dept. settled several long-standing corporate disputes. It let the conglomerate keep its prized Hartford Fire Insurance Co., a billion-dollar acquisition with earnings in the \$100-million range. In exchange ITT would dispose of other companies with revenues also totaling \$1 billion or so, but with earnings that Wall Street analysts then calculated at about \$35 million. One was Levitt and Sons.

Far from being relieved at the sudden prospect of ITT's exit, many Levitt executives became still more deeply disturbed: Now their company was soon to have another, but this time unknown, owner.

Robert Ross, who was a senior vice president in 1971, recalls: "There was a lot of uncertainty . . . about divestiture. And the thing was, everybody was constantly getting these great job offers. Everyone wanted to hire away Levitt men; the headhunters (executive search firms) were constantly calling. If I didn't get at least one good offer a week my ego was destroyed. A lot of these deals doubled salaries, meant real promotions. In the old days, people wanted to stick with Levitt; but afterward, they'd say, 'To hell with it, I'll take this great offer rather than put up with all the uncertainties.'"

Divestiture also intensified the other people problem: hiring. Earlier, the Levitt name alone had been enough to meet competition for housing talent.

But the divestiture agreement put Levitt and Sons in a peculiar situation. Bob Ross took over single-family construction east of the Mississippi in 1972, and recalls the problem:

"You'd bring in a good man for an interview, and he'd say, 'Who's going to own the company?'

"We'd have to say, 'We don't know yet.'

"So he'd say, 'Well, what are the company's objectives and policies going to be?'

"And we'd say, 'Gee, we don't know, it depends on who buys the company.'

"'OK, so how big will my area of responsibility be?'

"'That depends on what the policies are.'

"'Why did you bother to call me?'"

Divestiture also cost Levitt and Sons Palm Coast, a 100,000-acre Florida tract that ITT had assembled for installment land sales and had transferred to Levitt in 1968. "It was an overhead cost to us in its start-up year, 1969," recalls Joe Henn, "and it produced zero profit in 1970 because it was under development." Just before signing the agreement to divest, ITT took Palm Coast, which made money in 1971, back from Levitt.

Meanwhile, Geneen was seeking a replacement fo Wasserman; Bill Levitt stepped back into active man agement as a stopgap. First, ITT approached Dic Bernhard, who had established a remarkable recor running Levitt's Puerto Rico operation and then a an executive vice president at Lake Success.

Bernhard's reaction, in short, was to thank ITT fo the compliment—and quit.

The search turned to two other key officials: Lo Fischer and Norman Peterfreund, the company's to financial man. Fischer became president Septembe 17; Peterfreund took the titles of vice chairman o the board and chairman of the executive committee Bill Levitt was still chairman and chief executive.

For a time it looked as though the company woul recover. Morale, which had sagged when Wasserma left and the divestiture was announced, picked u noticeably.

"While . . . Fischer was there," says Joe Henn, " thought we had an excellent management team. still wanted to stay because I thought it would jus be a matter of two years and we'd be out on our own.

Fischer and Levitt began phasing out the broa zones created in 1967, eliminating overhead and im proving control, and reducing land inventory.

But new problems developed with ITT. Say Fischer: "I felt the interests of the two companie need not diverge. . . But ITT was concerned abou protecting its own interests, and I finally had to te them I felt I couldn't always put their interests abo those of Levitt and Sons and of its people."

Sources disagree on what issue was involved—th balance sheet or a management contract to prote Levitt people after divestiture.

Whatever the difficulty, Fischer says, "ITT becam very uncommunicative."

Early in 1972 there was a change in their relatio ship, but not for the better.

SURPRISE

In January 1972 Carl Rudnick, Levitt's multifamil manager on the West Coast, was aboard ship in th Pacific.

"I was on a weekend cruise-conference with m executives," he recalls. "I got an urgent summons be in (ITT Executive Vice President) Richard Be nett's office in New York at 5 p.m. Monday.

"I had to have a helicopter whisk me from the sh to the Los Angeles airport, where a flight to Ne York was being held for me. It was a Boeing 747.

"When I walked in, I found that all fifteen top exe utives of Levitt had been called there.

"Gary Andlinger was there too; Bennett intr duced Gary and then said there had been a meeti of the board of Levitt and Sons, that Bill Levitt h been voted out, and that Andlinger had been chos as chairman and chief executive.

"That was the first any of us had ever seen or hea of Gary Andlinger. Including Lou Fischer.

"I don't think Gary said more than five words."

Comments Fischer, who had been summon from Houston: "The basic idea at ITT was that surprises go up to headquarters—but it sure did apply on the downstroke."

"After the meeting," Fischer recalls, "Andling came up to me and asked, 'Are you staying?'

"I said, 'I don't know, let me think about it.' I took a vacation and thought about it. When I ca back, I told him I'd decided not to stay."

Fischer left in March and Andlinger assumed t presidency as well as the chairmanship. He was prepare the company to go public in September.

Whether the executives who planned the meeting in Bennett's office were happy with the surprise they achieved remains a subject for speculation. Certainly, they had gone to great lengths. If they did enjoy their success, it's doubtful their satisfaction endured. In the course of 1972 Levitt and Sons had some surprises of its own for ITT.

Surprise No. 1 was crucial. Outraged by ITT's treatment of Fischer, half or more of the fifteen key executives at Bennett's meeting left within the year. Six left within the first six months.

Surprise No. 2. Many in the company's second echelon also walked out.

Surprise No. 3. Andlinger, with no experience in home building and a vacuum in management opening under him, was hard-pressed to keep the company above water; earnings plummeted from the $11.9 million in 1971 to a pretax deficit. (Tax credits produced a profit of $517,000.) All of that led to . .

Surprise No. 4. The realization developed that Levitt and Sons was not going to go public in September—or perhaps ever.

Surprise No. 5. The modular housing plant proved so deeply flawed it had to be shut. That required extensive writeoffs.

The next two surprises did not originate at Levitt and Sons, but they had considerable impact anyway.

Surprise No. 6. The Accounting Principles Board tightened the rules for claiming profit from presold (that is, sold prior to completion) income projects. This change, and subsequent cost overruns, transformed the profits booked by the multifamily operations into sizeable losses.

Surprise No. 7. The collapse of Boeing destroyed the Seattle housing market, and Levitt's investment in United Homes' Washington and Oregon operations had to be written off. United and the modular plant combined produced a net after-tax loss of $9.7 million, *not* including an additional $4.2 million from the modular plant's start-up costs.

These surprises erased the profits Levitt and Sons had booked in 1968, 1969 and 1970.

And the man ITT had chosen to run the company, however intelligent he might be, was still learning the housing business.

The skilled and experienced building executives who left in 1972 would have had their hands full. Andlinger himself was sorely put to salvage Levitt and Sons: The storm burst as soon as he appeared, and he became part of a flood racing downhill.

Two of the sources of the deluge, the surprises in multifamily construction and in modular housing, are worth exploring separately.

MULTIHOUSING

From a standing start in 1969, Levitt's two apartment divisions—both dubbed Multihousing—rushed into commitments in the next three years to build about ,000 units. The figure comes from Rudnick, who ran the West Coast operation and eventually took over the East as well.

Bob Gale, who started the eastern division, explains the reasons for the presale technique:

"We needed earnings, not tax shelter, so we built apartments for sale.

"We presold most projects, committing a price to the buyer; for maximum tax benefit the buyer had to own the project prior to initial occupancy. The accounting rules (before 1972) allowed the company to book the profits the year of the sale.

"Many other companies building multifamily rentals did the same thing for the same reason."

In dealing with investors who bought projects, Levitt and Sons took back long-term notes; so financing construction costs and other cash outflows added to the company's increasingly heavy short-term debt.

"We were trading cash for paper profits," comments Thomas Silvestri, an assistant Levitt comptroller until late 1974.

Gale continues: "Preselling presented certain problems. Costs had to be locked in very early to assure profitability. The sale price was based on projected rental income and we did the best we could, internally and through outside consulting firms, to determine accurately the income and expenses of each project.

"Naturally, some mistakes were made. Some rent-ups took longer than expected, or the taxes would be higher than anticipated. But for the most part the projects performed well, providing owners with the desired returns."

They didn't perform well for Levitt and Sons.

Construction delays and cost overruns began to appear. "Things looked good at the time," says Fischer. "Construction costs were supposedly pinned down by our contracts with the general contractors. But it turned out that the stipulations weren't as tight as we thought."

Levitt's apartment markets became overbuilt, greatly lengthening rent-up times—to the company's heavy cost.

In 1972 the accounting profession changed the rules, requiring earnings to be booked over a long period of time instead of the first year alone, and an IRS crackdown on tax shelters sent tax-conscious investors scurrying out of apartment projects.

The rules changes and other problems abruptly ended Multihousing's profits, and replaced them with losses estimated by outside analysts at about $5 million in 1972. In 1973, the two multifamily operations lost $8,074,000 more.

The executive reaction to the changes in rules and markets appears to have been uncertainty about what to do. Andlinger was in, learning the ropes, and the men who knew the ropes were leaving. Eventually, though, Lake Success decided to wind down the apartment business. Gale left in 1972; Rudnick in 1974.

Once into multifamily construction, Levitt and Sons would have run into the cost problems whatever it did, given inflation. But it need not have approached this new field with the presale strategy, which left booked profits dangling at the end of a two- or three-year rope of contingencies; that was dictated by "stock-mindedness"—that is, the need to book earnings fast. And the company need not have built the multifamily operations up so far, so fast; that was dictated by the numbers in the business plan. Indeed, since Levitt's expertise lay in single-family construction, the company need never have gotten into multifamily at all.

MODULAR HOUSING

Levitt and Sons was not the only company to lose on modular housing; the landscape is littered with evidence of other examples. But Levitt is the only one to go wrong in quite the way it did. Most others sustained losses because they couldn't find sales enough to justify their operations.

"Sales were no problem," avers Carl Kovitz, who was vice president of marketing for Levitt Building

GRAY STUDIOS

Gerhard R. Andlinger

Louis E. Fischer

Robert Ross

CYRIL MORRIS

Robert Gale

Systems Inc., as the modular arm was called. "We could sell everything we produced, because we kept the price competitive."

Charlie Biederman, who took charge of the modular idea quite early in its development, seems to have approached the project skillfully enough.

"We spent the first four or five months looking at the modular-housing industry. Then we did a six-month formal study, spent about $50,000 and hand-built four prototypes. Then ITT reviewed it for three months. They approved it, more than a year after we started."

Levitt located strategically in Battle Creek, Mich., between the Chicago and Detroit markets.

Then came the hurry up.

ITT seems to have been excited by the project; here at last was a chance to apply its vaunted manufacturing expertise. Recalls Biederman:

"Bennett said to me, 'You take care of sales, we'll take care of production.'

"They (ITT engineers) came in and mechanized all the operations. The machinery was all newly designed. Some of it we bought from other manufacturers, who were new themselves to the game—after all, this was an infant industry. Some we bought and adapted. Some the ITT guys designed themselves. We had a relatively sophisticated conveyor system designed for us. It was a system of air bags; the modules were supposed to float on air from station-to-station; one guy could move a wall with a shove.

"But none of the machines worked.

"The air bags kept breaking; every time one broke, the production line stopped and we had to move the units by hand. Did you ever try to move an entire wall by hand? I had to throw the gluing machine out after two months. I had to do the same thing with other machines—the floor framing machine, for instance—and switch over to hand production.

"On several occasions I panicked; I called Bennett at ITT and said nothing was working right. He said 'Don't worry; *we'll* handle it . . .'

"We were supposed to produce at a rate of 2,000 units a year using one shift; we were lucky if we got above 500 a year using *two* shifts.

"The design of the product was complex, and that added to our manufacturing problems. But the machinery was all untested; the industry was too new. There was no homogeneity among the machines because we had to get them from different sources. Some were designed to require too much uniformity in the two-by-fours and other materials.

"In *hindsight,* I would've used a warehouse we owned in New Jersey and set it up there and puttered around with it for a year or so.

"We should've done everything by hand at first then mechanized step by step as proven, superior-to-man machinery became available . . .

"Finally, I replaced the ITT guy in charge in June 1971 with another ITT man. By February (1972) I saw that he couldn't make it work either.

"In March, Lou (Fischer) said to me, 'Look, the best thing for your career is to get out (before this thing destroys you).'

"So I left."

Kovitz stayed on as marketing chief through 1972. "The ITT liaison man took over after Biederman left," he recalls. "His immediate problem was to increase production or cut overhead. They couldn't cut materials cost without cutting quality, and they agreed with us that they didn't want to do that.

"They tried very hard, put in a lot of people, time and effort for three or four months. But they couldn't up production enough and there was too much fixed overhead, so finally they just wound it down.

STEPPINGSTONES TO DISASTER: LEVITT

CONSOLIDATED BALANCE SHEET	1973	1972
Assets:		
Cash	$ 12,664	$ 12,764
Notes and accounts receivable (due within one year—$26,232 and $35,605)	55,854	65,988
Inventory of land, construction and materials	224,014	206,731
Prepaid expenses and other assets	7,857	9,138
Rental properties, at cost, less accumulated depreciation of $1,192 and $825	11,404	7,919
Property and equipment, at cost, less accumulated depreciation of $3,536 and $2,951	4,517	4,966
	$316,310	$307,506
Liabilities:		
Notes payable to banks (due within one year $37,918 and $49,613)	$ 40,193	$ 52,958
Notes payable—other (due within one year $2,000 and $1,000)	89,000	90,000
Accounts payable and accrued expenses	49,938	37,581
Federal and foreign income taxes (deferred portion—$23,689 and $14,028)	23,548	13,383
Mortgages payable (due within one year—$9,995 and $13,619)	30,603	40,979
Payable to affiliated companies	24,828	4,601
	$258,110	$239,502
Stockholder's equity		
Preferred stock—		
Authorized, 2,000,000 shares, without par value, to be issued in series		
Common stock—		
Authorized, 20,000,000 shares, $1 par value		
Outstanding, 10,000,000 shares	10,000	10,000
Capital surplus	15,013	10,513
Retained earnings	33,187	47,491
	58,200	68,004
	$316,310	$307,506

CONSOLIDATED INCOME (LOSS)	1973	1972
Revenues:		
Sales	*$224,930*	*$274,50*
Rental, interest and other income	*2,759*	*1,37*
Total revenues	227,689	275,87
Expenses:		
Cost of sales	*220,086*	*246,95*
Selling, general and administrative	*23,990*	*23,11*
Interest	*11,580*	*6,43*
total expenses	255,656	276,50
Income (loss) before income taxes	(27,967)	(63
Provision (credit) for federal and foreign income taxes	(13,663)	(1,15
Net income (loss)	(14,304)	51
Dividends		(1,65

INVENTORY OF LAND, CONSTRUCTION AND MATERIALS	1973	1972
Land held for development and long-term investment—at cost	$117,780	$113,63
Residential and commercial construction in progress—at lower of cost or market	52,248	48,47
Sectional land improvements—at cost	30,791	24,18
Unapplied community-wide improvements—at cost	19,626	19,27
Materials—at lower of cost or market	3,569	1,17
	$224,014	$206,73

"Production was completed in December 1972, when I left.

"I believe they made pallets for a while after that."

Even given flawlessly functioning machinery, Levitt and Sons undoubtedly would have run into the cost problems that bedeviled other modular producers. In fact, the company actually had figured on it. "We thought," says Wilbur Gasner, who was vice president of research and development at the Battle Creek plant, "that even if a manufactured house cost a couple thousand dollars more than a conventional, we'd absorb it while we learned. We expected costs to fall and the market to improve.

"I don't think the basic premise was wrong, but the numbers weren't right yet."

The problems at Battle Creek sprang from the same source as many problems elsewhere in Levitt and Sons: a push to do too much, too soon.

DESCENT

"I left around August of 1972," says Ami Tanel, who was an engineering vice president at Lake Success at the time. "It was heartbreaking to see what was happening and to be unable to do anything about it.

"There was a total loss of control at the top (that year), and a loss of initiative in the lower echelons. People didn't want to make any decisions; they were waiting for something to happen.

"The upper echelons were filling up with ITT guys who didn't know the business. They seemed so concerned with paperwork and financial reports that it was as though they forgot the purpose of Levitt and Sons was to build homes.

"They had better control over calculating vacation and sick-leave days than they did over operations in the field."

ITT tried at first to halt the exodus of top management with stock options, when it was still thought that the company might go public.

"They flew eight or ten of us to Paris for a meeting in early 1972," recalls Rudnick. "We were all given substantial promises—stock options, basically. If the company had gone public . . .

"We got all these promises: the 'phantom-stock' program, the 'incentive-stock' program, the 'option-stock' program. But they all kept fizzling."

Meanwhile, Andlinger set about trying to take control. He reshuffled divisions, tried to cut overhead, dived into learning about the business.

"He's a fast study," comments Rudnick. Everyone agrees that Andlinger is personable and intelligent—even his critics say he tried hard—but somehow almost everything seemed to go wrong.

ITT's abrupt injection of him into the company started badly—and the first impression he created was not helped when he arrived at Lake Success in a chauffeur-driven limousine during a company-wide economy drive.

He brought in an associate from ITT, John B. Santamaria, and gave him wide administrative powers; Santamaria's approach to administration helped alienate the Levitt and Sons executives Andlinger was trying to keep.

The crises that hit Andlinger all at once greatly slowed the decision-making process.

Moreover, ITT management techniques seemed to backfire when applied to Levitt and Sons. Reliance on management reports wasn't good enough. "A report can tell you that a house has been built," says Biederman, "but not how well."

Holding a man to his own forecasts and projections proved counterproductive in the always-uncertain housing business. TO NEXT PAGE

D SONS ANNUAL REPORT 1973 (all figures in thousands of dollars)

REVENUES, PROFITS AND (LOSSES) BY SUBSIDIARY—1973	Profits (Losses)	Revenues
Single-family:		
Levitt Residential Communities—East	(2,571)	76,224
Mid Atlantic	(2,696)	21,046
Levitt and Sons of Puerto Rico (and subs.)	2,403	24,493
Levitt and Sons of Europe (and subs.)	(90)	16,498
Levitt West	(1,595)	34,747
Levitt and Sons of Florida	(253)	2,111
Multifamily:		
Levitt Multihousing Corp.—East	(4,368)	9,109
Levitt Multihousing Corp.—West	(3,706)	18,477
Apartment management:		
Levitt Property Mgmt., Inc.	(202)	—
Commercial construction:		
Levitt Commercial Corp.—East	14	6,915
Levitt Commercial Corp.—West	(1,211)	11,722
Mobile homes:		
Levitt Construction Systems, Inc.	(532)	5,322
Levitt and Sons, Inc. (parent Co.)	1,640	—
Accounting eliminations	(1,062)	—
Unidentified items*	(75)	1,025
Total	(14,304)	227,689

*Unresolved discrepancies in available figures

CONSOLIDATED SOURCE AND APPLICATION OF FUNDS	1973	1972
Source of funds:		
Operations—		
Net income (loss)	*($ 14,304)*	*$ 517*
(Increase) decrease in subordinated trust deed notes	*9,901*	*(22,961)*
Increase in deferred income taxes	*9,661*	*5,986*
Depreciation	*1,475*	*1,161*
Cash provided from (applied to) operations	6,733	(15,297)
Financing activities—		
Proceeds of bank and other loans	98,002	132,108
Increase in mortgages	8,475	15,287
Advances from affiliates	23,354	4,601
Capital contribution by ITT	4,500	6,650
Decrease of investments in and advances to unconsolidated subsidiaries	—	5,942
Increase (decrease) in accounts payable, accrued expenses and current income taxes	12,861	(268)
Decrease in other assets	1,281	1,316
(Increase) decrease in other receivables	223	(14,147)
	$155,439	$136,192
Application of funds:		
Repayment of		
bank and other loans	$111,767	$ 77,097
Mortgages	18,851	18,367
Advances from affiliates	3,127	13,975
Increase in inventory	17,283	28,269
Increase in properties, net	4,511	2,589
Dividends	—	1,650
	155,539	141,947
Decrease in cash	(100)	(5,755)
Cash balance, beginning of year	12,764	18,519
end of year	$ 12,664	$ 12,764

Norman C. Peterfreund

COURTESY OF GULF RESTON, INC.

Robert T. Craig

"We'd say that we were going to build x number of houses per month in a project," says Peter Taylor, who was senior vice president of operations under Andlinger. "But let's say the weather halted construction one month, or some other contingency occurred. They (Andlinger and others drawn from ITT) couldn't understand the impact of those contingencies. They'd say, 'Why didn't you deliver x houses last month?' And we'd explain the reasons why we couldn't, and they'd say, 'We don't want excuses; we want to know why you didn't do it.'

"They couldn't figure out why things didn't go according to schedule."

It was sometimes worse when they did: project managers often felt forced to finish scheduled houses even after it became apparent the scheduled market for them had dried up.

Sending people from outside the normal line of responsibility to verify reports, another ITT technique, caused trouble. It seemed to operations people in the field that Andlinger mistrusted them and was trying to manage through staff officers. ("I think Andlinger felt threatened by guys who could say to him, 'Look, I know this business and you don't,'" remarks an executive who was then building single-family homes.)

Inexperienced or marginally competent men moved into positions over their heads because of the developing management vacuum.

Andlinger's lack of familiarity with the industry tended to let him accept extremely optimistic projections from the field at face value, according to several observers.

"Everybody always thinks he's going to do just great next year or next month in this business," says Bernhard. "One of the jobs of a top man is to go around and throw cold water on everybody—or at least play devil's advocate."

The blizzard of reports that now went up to Lake Success, *à la* ITT, also presented unexpected problems. Tom Silvestri, who dealt with cost control, says: "There was no way to guarantee up-to-date, accurate cost information from the field. Some guys were less timely than others, some kept data differently, some were less accurate than others . . .

"And the way the information was recorded, it was a major project to develop houseline data (cost-per-house figures) on projects."

A heavy outflow of people at all levels, and the reshuffling of responsibilities it necessitated, guaranteed the disappearance of operating control.

"We had four managers in two years running northern New Jersey," says Bob Ross. "We finally had to shut the operation, and a lot got lost between the cracks."

One of the projects there was in Freehold. By the time the project hit the newspapers, all of its 226 California-style homes were sold and 160 families had moved in. They complained about houses that flooded, had windows out of plumb, were built on improperly levelled slabs, and in which the indoor temperatures dropped to 40° in the winter and soared to 110° in the summer despite the best efforts of the heating and air-conditioning systems.

Quality control during construction had left something to be desired: Repairing the damage cost Levitt and Sons $1½ million in 1973.

"We had to tear some of them down to the slab and start over," fumes Peter Taylor.

Levitt Residential Communities and the "Mid Atlantic" operation, which include all single-family construction east of the Rockies, lost $5.3 million that year.

Levitt and Sons lost quite a few people in 1973—and $14,304,000, overall.

Besides these internal troubles, there were new external problems. Two examples suffice.

"Our Detroit region was selling about 600 units a year until the GM strike," says Ross. "Then the market collapsed. And it never did come back. Volume fell to 300 a year, instead of going to 900 a year, as called for in the business plan."

The other example is a 2,248-acre tract of well-placed residential land owned by the company in Poolesville, a Maryland suburb of Washington, D.C. The tract became subject to a sewer moratorium expected to last, according to one source familiar with the area, "for at least ten years."

ABORTED RESCUE

Sometime in 1973 Bill Levitt was moved to act. The word spread rapidly around company headquarters, and through the nationwide network of Levitt and Sons alumni that has sprung up. Bill Levitt would try to buy back his company.

The report was true: Negotiations began at Lake Success. The books were examined, the land appraised, the price discussed.

On February 14, 1974, Bill Levitt called a press conference in New York City and made it official: A letter of intent to purchase was signed and on its way to the Justice Dept. for approval.

To understand the stir this caused among the Levitt alumni, one must understand their feeling for the company.

"I can remember the day I was made regional manager in Philadelphia for Levitt and Sons," says Ross, now a senior vice president of General Development Corp. in Miami. "I was so happy I was in tears; I called my parents long distance . . . It was the culmination of everything I'd worked for."

"It was exciting working there," says Ami Tanel. "I still have a lot of affection for the company. And just about anywhere you go, you bump into a Levitt and Sons graduate. The spirit is still there among them. If you ever put them all back together in one building again . . ."

And now it all started to come back. Bill Levitt brought in John Guinee, executive vice president of Gulf Oil Real Estate Development, to act as president of his company.

ADDING IT ALL UP
or
The quarter-billion dollar mistake

Our rough tally of identifiable costs so far to ITT of its Levitt and Sons acquisition. Several figures are of necessity approximate.

Purchase price (In ITT stock, at market price at time of acquisition)	$ 92.0 million
1972 extraordinary losses	4.2 million
	9.7 million
	5.0 million
Known capital contributions—1972	6.7 million
—1973	4.5 million
1973 operating loss	14.3 million
1973 writeoff	35.4 million
1974 operating loss	20.0+ million
Approx. "outside" debt assumed—1974	100.0 million
	291.8+ million
Deduct: Total est. L&S profits 1968-72	30.6 million
Total cost to ITT	261.2+ million

Levitt and Sons was to be divided into Company A, a viable operating entity; and Company B, essen-tially a holding company for the $100 million worth of land, closed-down projects and tail ends of multi-housing enterprises that Bill Levitt did not want.

A Justice Department official says, "We would not have been adverse to separate disposal of the exces-sive land . . . at that point. The rule of reason has to apply, after all."

But then the pace of negotiations dragged. Bill Lev-itt had his reasons, which he cites in an interview on pages 66 and 67. He finally decided he did not want his company any longer; he broke off talks in August. The letter of intent lapsed.

DISINTEGRATION

Robert Craig, who was Levitt and Sons' successful vice president and regional manager in Chicago until last September, made a considered judgment last year and acted on it:

"I turned down the presidency of Levitt's single-family operations east of the Rockies," he says.

Gary Andlinger made the offer, he added, with the backing of ITT. Instead, Craig elected to become a senior v.p. with Gulf Oil Real Estate Development.

At the time, it was an eminently sensible act; Lev-itt and Sons was in an advanced state of decay. The following measures of its conditions were knowable:

First: The company had opened and then closed projects in several new markets around the country in 1974, at a loss. They were not large projects for Levitt; a building venture in Atlanta, for example, included only 128 single-family lots and four model homes when it closed last summer. But they failed, and small failures can add up.

Second: By the autumn of 1974, the employee ros-ter had been slashed 25% from a year before, to about 2,200. (The all-time peak was about 3,000 in 1971.)

Third: The multifamily divisions finished up old commitments and became almost dormant.

Fourth: Operating losses continued to mount: the 1974 loss could not have been less than $20 million.

Fifth: The loss could go as high as $40 million or more, depending on the write offs that year.

Sixth: The land burden weighed as heavily as ever: more than $120 million at its peak.

Seventh: Almost the last of the top talent said good-by. Besides Ross, Rudnick and Craig himself, the company lost its longtime vice president of cor-porate communications, Ed Cortese, in November and Peterfreund, its financial chief for many years, in December.

Peterfreund's exit was not surprising. Several sources say his once-important responsibilities had been diminished under Andlinger until virtually none was left to him. No one is willing to guess why; it is between Peterfreund and Andlinger.

The departures left Andlinger nearly alone in top management. As the top executives departed, one by one, Andlinger did not replace them. Their subordi-nates reported to him instead. Knowledgeable sources counted those reporting directly to And-linger in late 1974: seven or eight domestic regional managers, two overseas; various staff officers at Lake Success . . . 20 or perhaps 25 people.

No man can do that and make it work. Such a number of executives reporting to the top man con-stitutes a state of corporate anarchy.

This situation suggests that the desolation of Lev-itt and Sons, whose true strength had always been abundance of talented men, was all but complete.

A TRY AT RESURRECTION

If $100 million can still save Levitt and Sons, how-ever, the company has already been saved.

Knowledgeable sources say ITT cleaned all the bank debt off the Levitt balance sheet before the com-pany went into trusteeship last January.

They estimate that debt at about $100 million.

"The banks had made those loans assuming Levitt and Sons had the full support of ITT," explains one source. "If ITT hadn't assumed this debt it would have damaged its credit rating."

The $100 million is believed to be resting on the books as an "intercompany loan" between parent and subsidiary. But since ITT must, by agreement with the Justice Dept., supply any funds necessary to operate the subsidiary and prepare it for disposal, the question arises as to how much of this loan will ever be repaid. At least one well-placed source frankly describes it as "an infusion of capital."

This, at one stroke, utterly transforms the subsidi-ary's financial condition.

Ultimately, credit for the cliff-hanger rescue be-longs to the Justice Dept. Its decision that a "viable, operating homebuilding company" must come out of the divestiture headed off any liquidation of the Lev-itt company under ITT and forced creation of a trus-teeship. That, in turn, forced ITT's massive bank-debt transfusion.

The trustee is Victor Palmieri & Co., a Los An-geles-based doctor for troubled companies, which also administers the nonrail assets of the bankrupt Penn Central Railroad [NEWS, Feb. '75].

Palmieri was appointed January 14. On February 27 his board of directors publicly announced And-linger's resignation.

The word broke first at a meeting the trustees staged with surviving Levitt executives at a Long Is-land motel-restaurant called The Island Inn. And-linger appeared at the end of the meeting to say he was quitting. For the record Andlinger said, "My as-signment was to insure a smooth transition for Levitt from ITT ownership to control by the trustee. I con-sider that assignment completed."

He was replaced initially by Edward P. Eichler, a principal of Palmieri & Co. Ned Eichler, son of pio-neer builder Joseph Eichler, is a former vice president of the new town of Reston, Va., and a former profes-sor at the University of California at Berkeley.

Edward P. Eichler

Several other changes were under way when the trustee came in last January.

Bill Levitt's rough division of the assets into Com-panies A and B had been formalized, with the un-wanted B portion set up under Bertram Schwartz as Levitt Realty Co.

One source says the Company A land (being kept for construction) had already been written down in value, as necessary, until "you know damned well you can make money with it."

A better system to track and forecast direct con-struction costs had been put into place. And And-linger, having noticed the many vacant positions at Lake Success, had had the management consultant firm of McKinsey & Co. (for which he worked from 1956 to 1960 before joining ITT) devise a plan for hiring and holding executives.

Finding skilled executives is the one important task remaining for Victor Palmieri. The task is essen-tial; if the trustee can find talented homebuilders and keep them, Levitt and Sons may have a future.

Old friends of Levitt and Sons can only wish him well. —HAROLD SENEKER

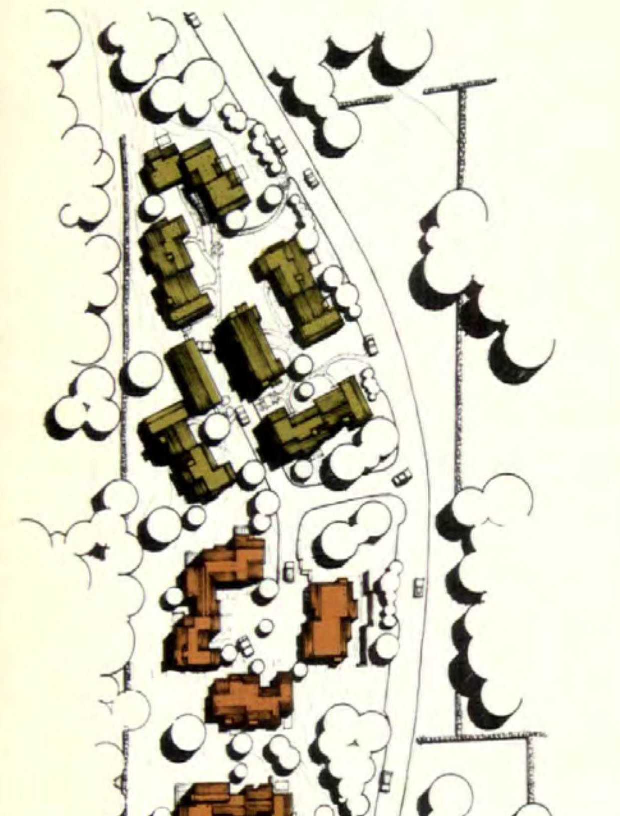
MARTIN TORNALLYAY

PROJECT PORTFOLIO 23

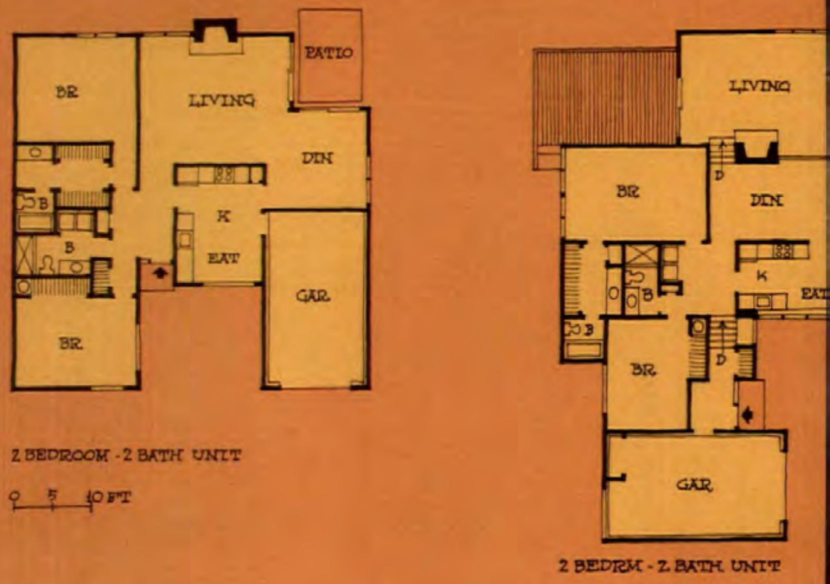
PROJECT: Heritage Hills
LOCATION: Somers, N.Y.
DEVELOPER: Heritage Development Group, Inc.
ARCHITECT: Walz & McLeod
SITE AREA: 1,100 acres
NUMBER OF UNITS: 3,100 condominiums
PRICE RANGE: $38,500–$76,000 plus premiums and options

MARTIN TORNALLYAY

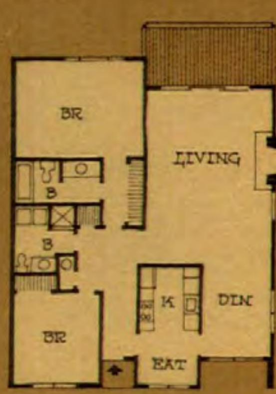
f Heritage Hills seems to bear a marked resemblance to the now-famous Heritage Village in ìouthbury, Conn., it's not surprising. It's done by the same developer (with a new corporate ıame), it has some of the same architectural style, it is equally respectful of the natural ıssets of its site, and it gives early promise of being just as successful: despite a horrible narket, there were 50 closings between the first of February, when the project opened, and the ınd of March, and sales are continuing apace. But there are also marked differences from the ıarlier project. Heritage Hills is aimed less at the retiree market and more at active people; ninimum age is 40 rather than 50 (children must be 18 or older). And there is a far wider hoice of models—18, built in three different configurations: Cluster Houses (photos above), *imilar to the original Heritage Village models; Court Houses, built around a central auto ourt; and Hillview Houses, designed to take maximum advantage of the site's steep terrain ınd consequent superb views. All three types are detailed on the following pages.*



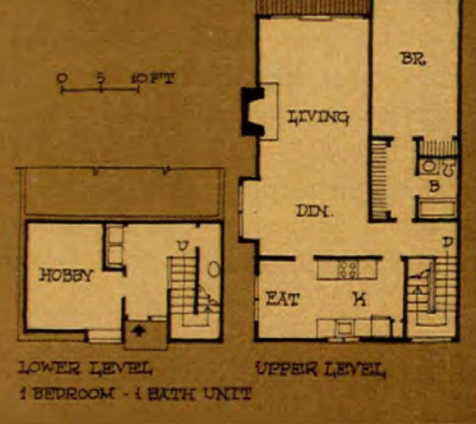
Site plan of a portion of Heritage Hills' first condominium shows how the three different types of housing are intermingled. The orange units are Court Houses, green units are Cluster Houses, and brown units are Hillview Houses. The latter are not clustered like the others, but sited on ridge lines and slopes to take advantage of the view.



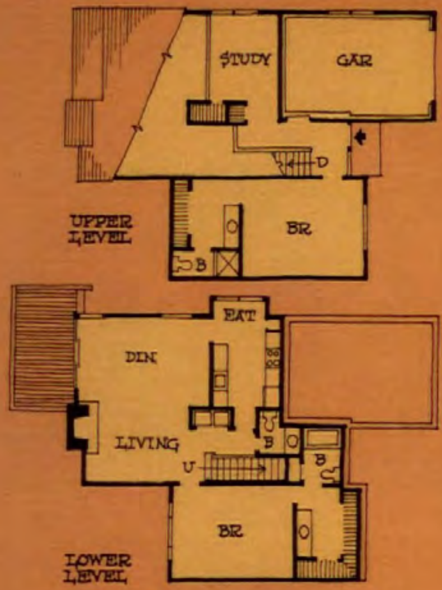
JOSEPH MOLITOR



Hillview-House plans include *(clockwise from above)* the Fairfield, $58,000; Litchfield (best seller in the group), $49,000; and Suffolk, $50,000. The picture on the facing page shows how the units are fitted into sloping sites, and it also highlights a problem: buyers don't like the idea of walking downstairs, either into a living area or a bedroom area. So new models will be introduced into this group.



3 BEDRM - 2 BATH UNIT

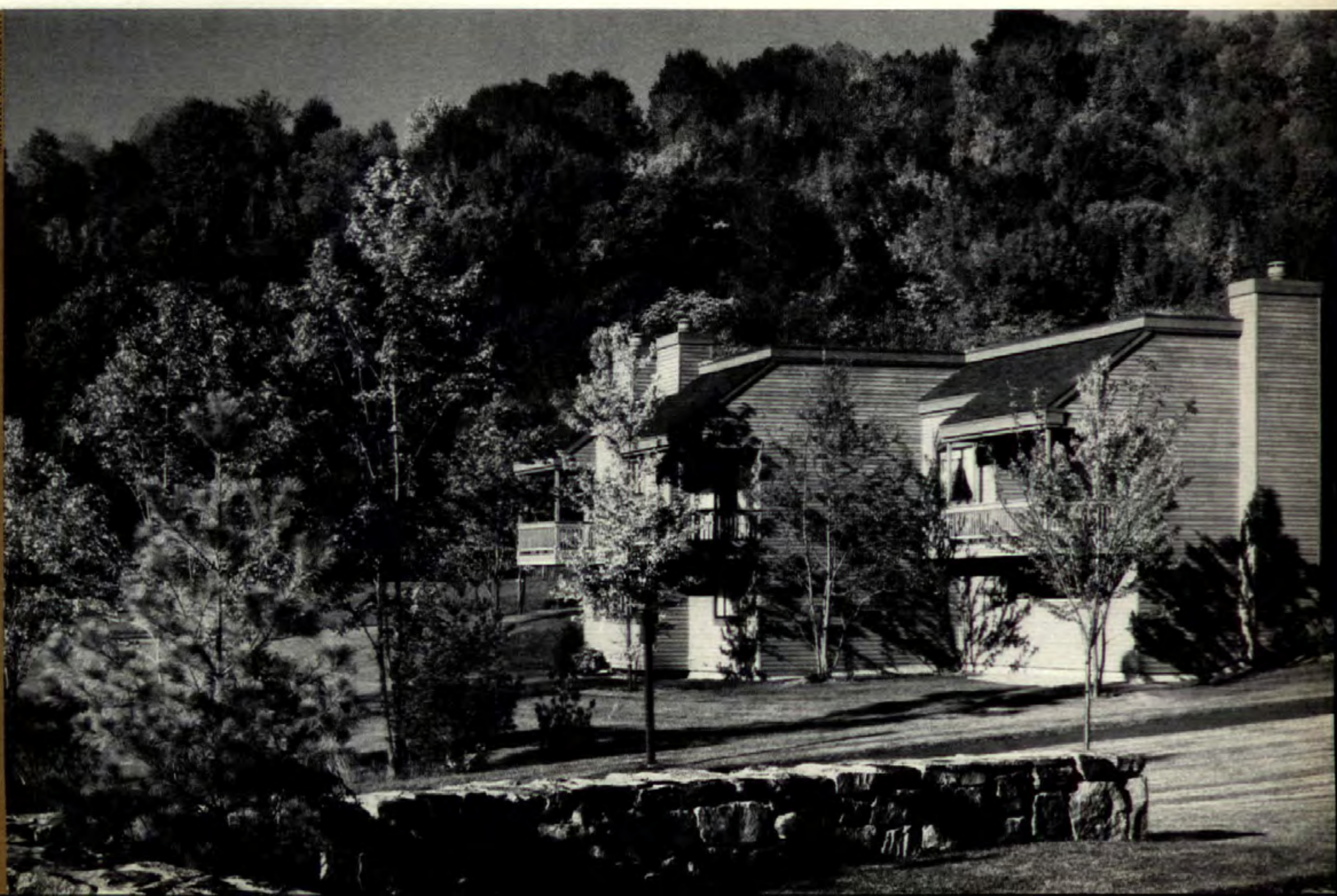


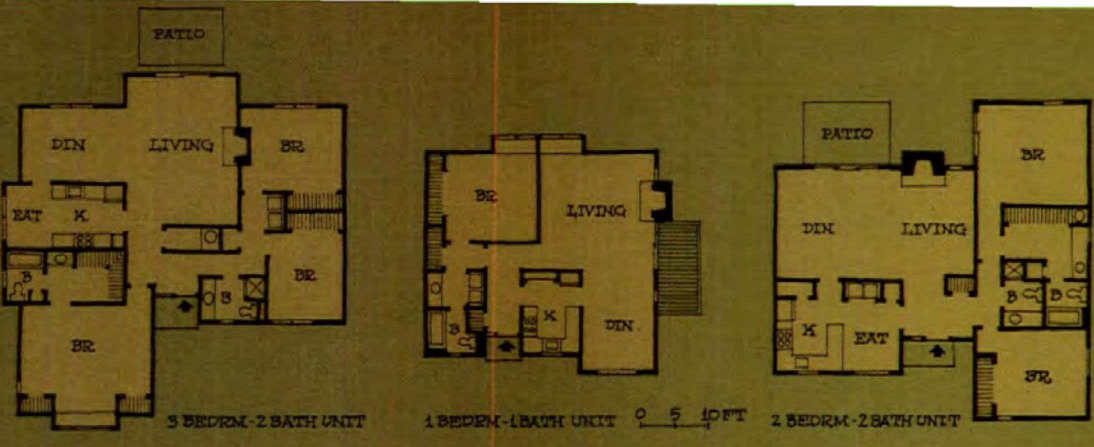
2 BEDRM - STUDY - 2½ BATH UNIT

Court-House cluster is pictured below from the outside *(left)* and the inside *(right)*. Convenience is a major feature; residents can drive up to their houses, open the garage door electronically, drive in and close the door without leaving their car. Condominium by-laws require cars to be parked inside garages at all times, and guest parking is provided outside the clusters. Four Court-House models, shown at left, include, from left to right: the Salem, \$65,000; Somers, \$64,000; Croton (the best seller in the group), \$73,000; and Hanover, \$60,000.

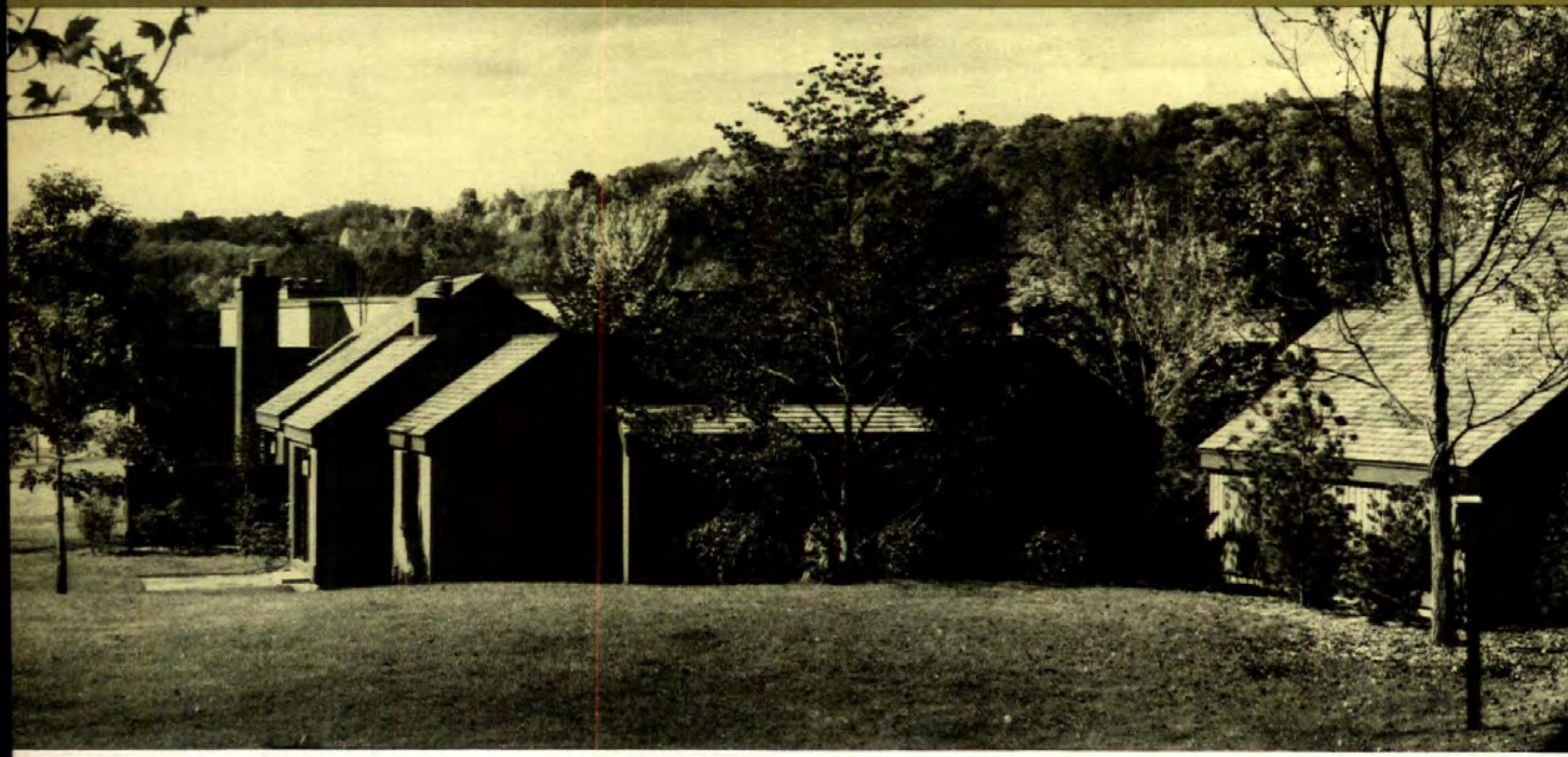
JOSEPH MOLITOR

MARTIN TORNALLYAY





Cluster Houses, pictured below and at right, are basically the same as the original Heritage-Village models. Interiors of the clusters are landscaped, with cars parked in detached garages. Three of the plans, at left, include (left to right): The Jefferson, $67,000; Franklin, $38,500; and Monroe, $59,500. The latter two are the group's best sellers, with the Franklin selling chiefly to single women.



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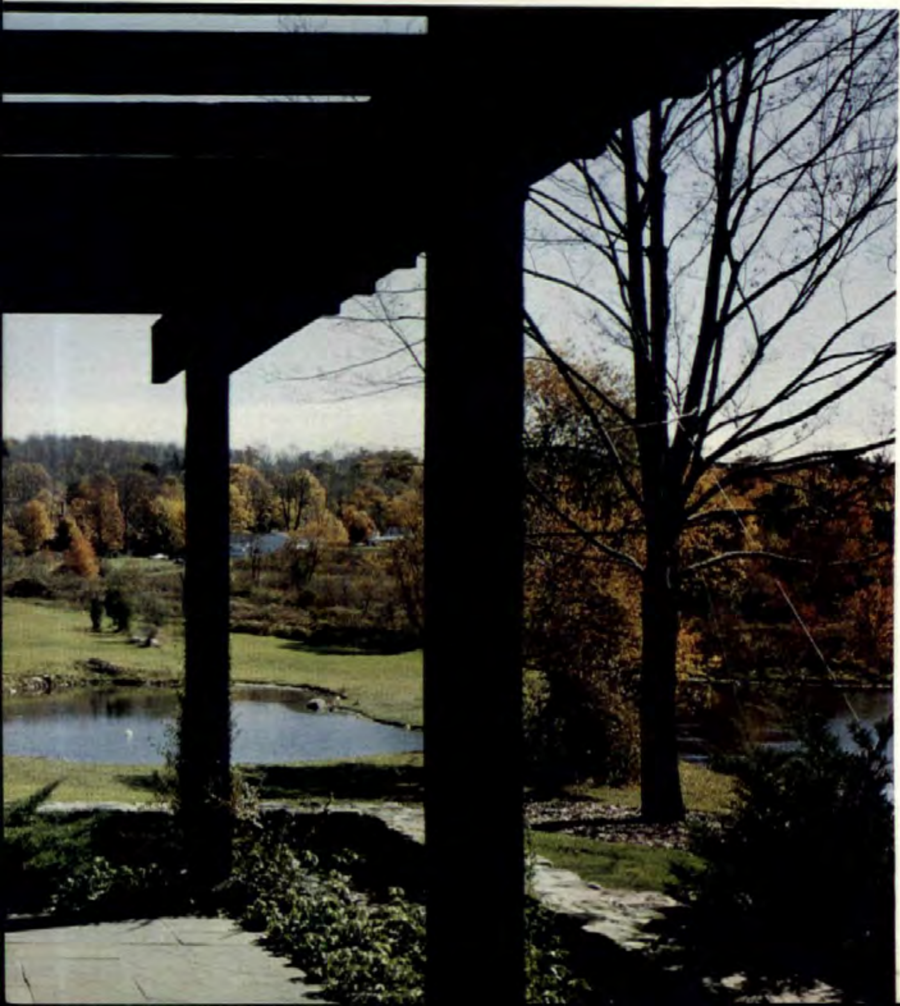

Entrance to the sales office is shown in the photo at far left; immediately at left is the view of the model area prospects see when they leave the sales office. Homes are sold in three stages; a $50 refundable selection fee, a $2,500 non-refundable down-payment when the contract is signed, and the closing. An early problem was dropouts from the $50 category who were kept from selling their existing homes by mortgage scarcity. But this situation has eased, and two-thirds of the dropouts have been re-sold. Another feature of Heritage Hills is a central recreation center with rec building, tennis and paddle-tennis courts and a pool; these will be completed later this year. Women's and men's club-houses will be built at a later date in the same center. A nine-hole golf course is now playing, and another 18-hole course will be started soon. They will be part of a private club, while the other facilities will be part of the condominium common property. Other small tennis and swimming centers will be built throughout the project as development proceeds

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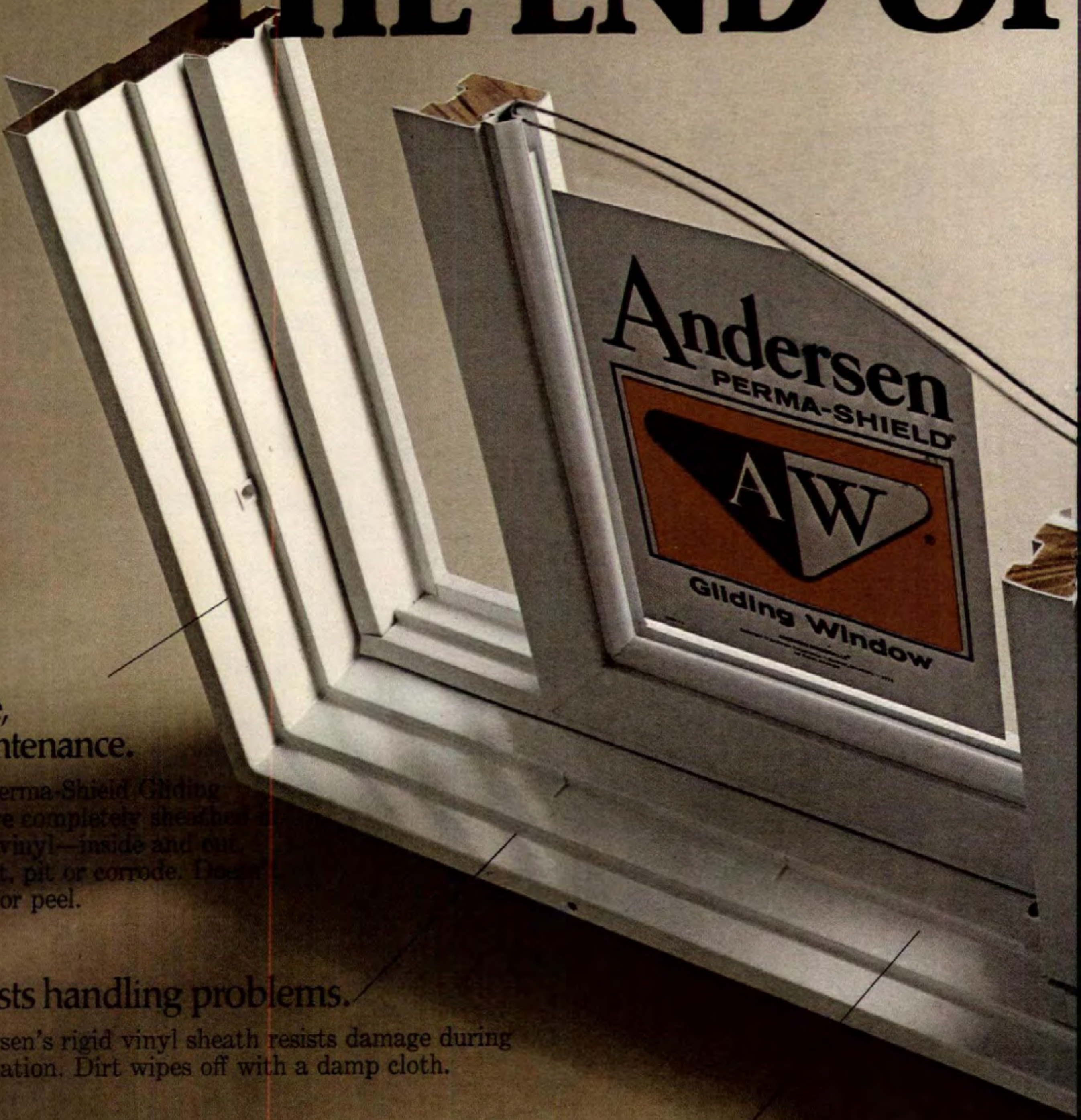

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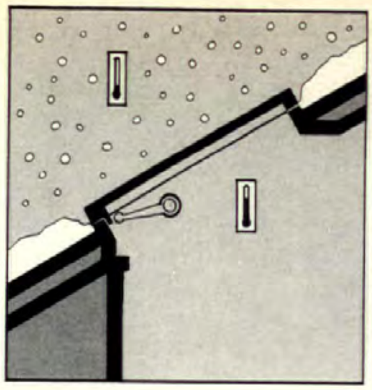
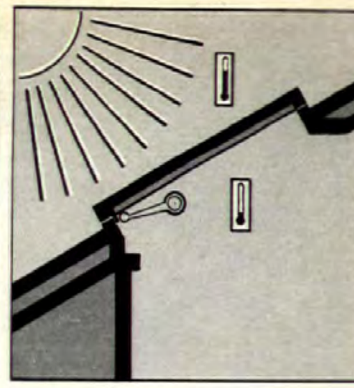
CONTENTS

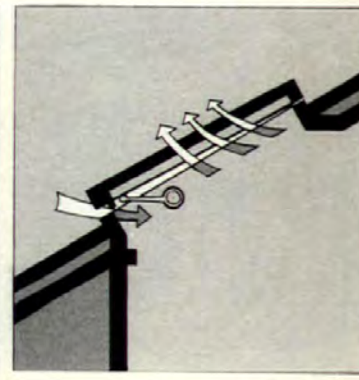
Ventilating skylight opens wide

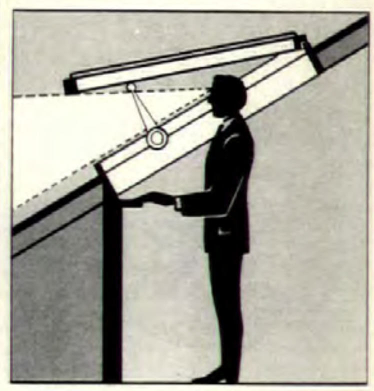




[A] see-through roof that opens up to [al]low air circulation and ventila[ti]on, the Roto® skylight is equipped [w]ith insulating glass. No storm win[do]ws are needed to maintain ther[m]al efficiency. Easy-to-install in any [ty]pe of roof, skylights can be used to [tu]rn an attic into extra living space. [Lo]w-maintenance units come with [al]l-aluminum sash or aluminum-[co]vered wood sash for better insula[ti]on. Skylights are shipped as complete, ready-to-install packages, which include roof flashings, eliminating time-consuming on-site fitting. Available in a range of twelve sizes, skylights lock open to a variety of positions to provide everything from two-in. draft-free air circulation to full-height viewing. Matching screens, shades or remote-control venetian blinds are optional. I.M.M.S., Essex, Conn.

CIRCLE 200 ON READER SERVICE CARD





Fire safety system . . . a cool idea

"Fire Warden," a built-in extinguishing system concealed behind a decorative wall plate, protects life and property. Capable of extinguishing or at least controlling a fire in the minutes before the fire department arrives, the system is equipped with a hose and nozzle (connected to plumbing lines) to douse Class A fires (1) and a dry chemical extinguisher for Class B blazes. For new construction, the easy-to-install unit is fitted into studding during framing; in existing homes the "Fire Warden" can be installed wherever a plumbing hook-up can be made. A square is cut in the wall to fit the unit (2). A water pipe is then tapped and a line fed through the wall into the box and soldered to the elbow joint provided (3). Box can accommodate lines coming in from the bottom as shown, top or right side. Once the hand extinguisher is positioned (4), the concealing panel is closed (5). Unit can be supplied with a choice of stock pictures, an empty frame, or a decorative mirror insert. American General Products, Ypsilanti, Mich.

CIRCLE 201 ON READER SERVICE CARD

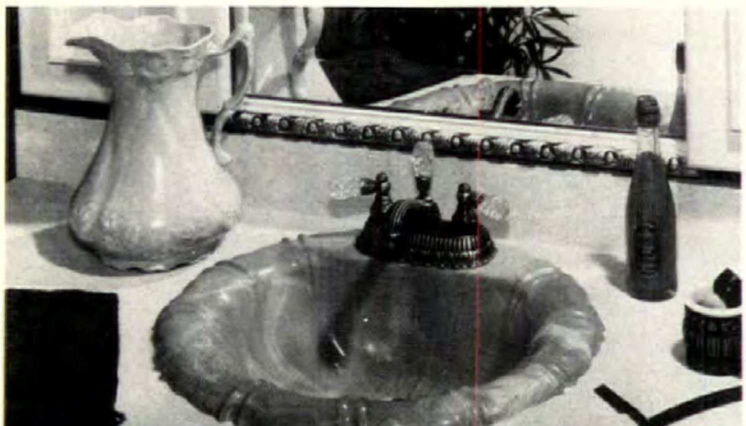
PRODUCT INDEX

"Builder Bath Plan" package, show in a contemporary style, includes ac cessories, lighting, mirrors and ca binetry. All hardware, includin door pulls and switch plates, is coo dinated with accessories. Ha Mack, Harrodsburg, Ky.
CIRCLE 203 ON READER SERVICE CAR

Three-in-one convertible showe "Ondine Futura," *(above)* serves an overhead fixture or a hand-he spray. The three-position showe head can produce a full, even spra pattern, an aerated spray with gentle, bubbling flow and a pulsa ing spiral of water for invigoratii massage. Interbath, El Monte, Cali
CIRCLE 204 ON READER SERVICE CAR

Easy-to-assemble vanity *(left)* fe tures a system of preattach brackets which easily snap togeth Offered in six widths, vanities com in single- double- and triple-do models and the door and drawer ve sion shown. Three furniture styl come in a choice of two finishes. Be wood, Ackerman, Miss.
CIRCLE 205 ON READER SERVICE CAR

Marble patterned tileboard, "Pompeii," *(left)* is a plastic finished hardboard. Offered in green, beige or blue with matching moldings, the easy-to-install and maintain panels are dent, heat and moisture resistant. Masonite, Chicago.
CIRCLE 206 ON READER SERVICE CARD

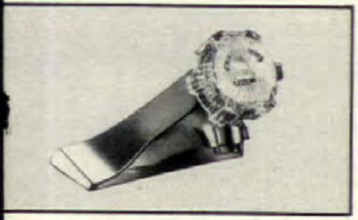


Cultured-marble self-rimming bowl fits a standard 18"-round center opening. The fluted "Nostalgia" style shown is one of two models. The other is a seashell-shaped "Neptune." Both bowls come in eight colors. Williams, Leigh Products, Elkhart, Ind. CIRCLE 207 ON READER SERVICE CARD

"Brentwood" cut-back vanity features a cultured-marble top offered i choice of eight colors. The 36"x18" unit is available with left hand drav *(as shown)* or right. Factory-assembled cabinets come in three styles a seven finishes. Arlington, Tex. CIRCLE 208 ON READER SERVICE CARD

Vitreous china bidet, "Carmen," can be ordered with or without a standard fitting. Chrome-plated, three-valve set has a transfer valve to direct tempered water to a fountain spray-head in the center of the bowl. Unit comes in eight colors. Briggs, Tampa, Fla. CIRCLE 209 ON READER SERVICE CARD

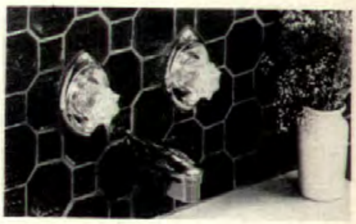
Molded vanity top for the powder room measures 20½" wide and 18" deep. Unit, with a high-luster marbelized look, comes in six colors. The durable top weighs one-third less than conventional poured tops. Bradley, Menomonee Falls, Wisc. CIRCLE 213 ON READER SERVICE CARD



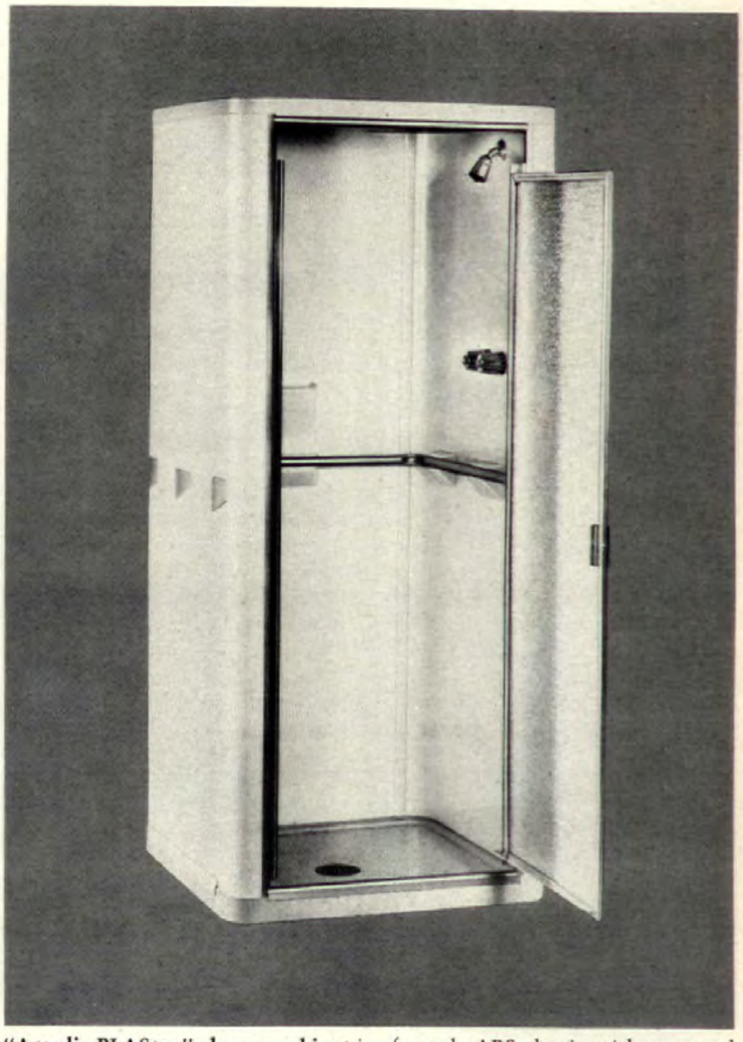
Single handle control, "Avante," features a patented cartridge compatible with all fittings in the line. Cartridge, with no O-rings, features a single moving part which controls both flow and water temperature. Price Pfister, Pacoima, Calif.
CIRCLE 210 ON READER SERVICE CARD

Solid-brass ¾" diverter spout has a brass adapter which makes it suitable for use where a ½" spout is specified. Spout "25734A" complements a line of solid-brass flow-control shower heads and arms. Chatham Brass, Linden, N.J.
CIRCLE 211 ON READER SERVICE CARD

Two-handle washerless faucet line consists of five different models. All "Delex" fittings have oversized escutcheons and crystal-look handles. The "Rigid Mount" tub-set shown is a basic unit for 8" centers. Delta Faucet, Greensburg, Ind.
CIRCLE 214 ON READER SERVICE CARD



Royal Provincial" vanity, with Formica doors, features a grooved design. The modular unit, offered in a range of styles and sizes, has self-closing hinges and a washable vinyl interior. Matching medicine cabinets are available. Formco, Cincinnati, Ohio. CIRCLE 212 ON READER SERVICE CARD

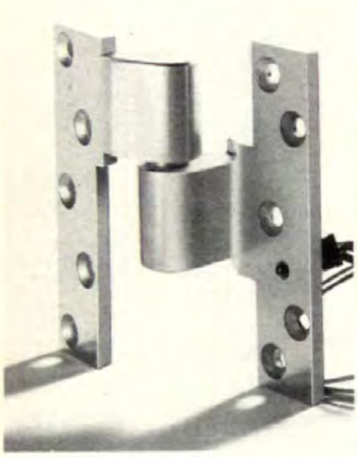


"Arcadia PLAStex" shower cabinet is of sturdy ABS plastic with no metal parts to rust. Easily installed without screws or bolts, unit features an integral soap dish, a continuous anodized-aluminum grab bar and a slip resistant "Stonelite" base. Gerber, Chicago. CIRCLE 215 ON READER SERVICE CARD

more products on page 92

Smoke and gas detector, Sta-Saf™ GSD-100, employs a semi-conductor type sensor that responds to the presence of smoke or any toxic or combustible gases. The sensing device is comprised of bulk N-type oxides that become conductive after absorbing oxidizing smoke and gases. Detector has an alarm. Perfect-line, Lindenhurst, N.Y. CIRCLE 216 ON READER SERVICE CARD

Electronic CYPHER® LOCK/Card Prep, can only be opened by both card and pushbutton code. Housing is mounted outside the protected area. Once card is inserted and correct four-digit code tapped out, door unlocks for a set, adjustable period of time. System can activate an alarm. Continental Instrument, Hicksville, N.Y. CIRCLE 219 ON READER SERVICE CARD

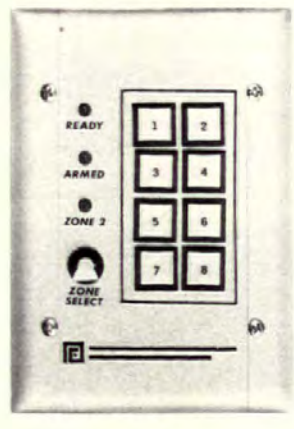


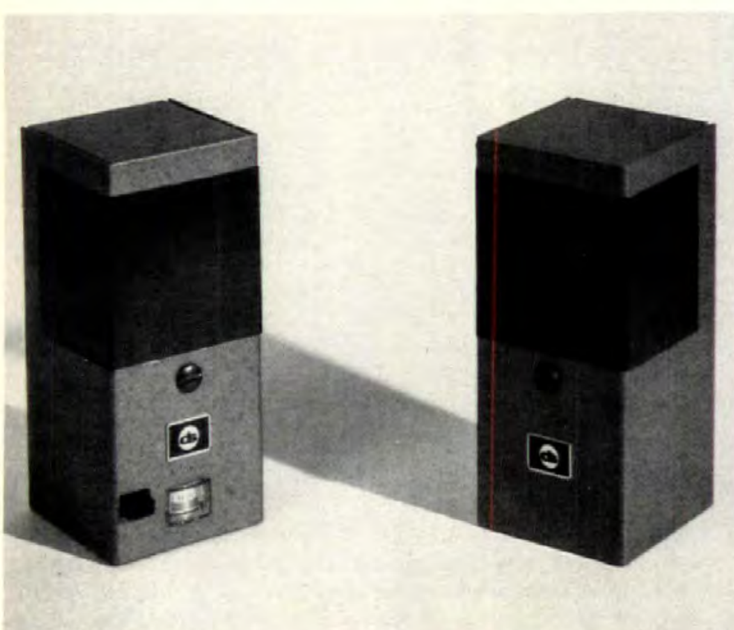
Electric door pivot with a microswitch is designed for electrical-security door application. A signal, transmitted to a central control point when door is opened or closed, can activate an alarm. Rixon-Firemark, Franklin Park, Ill.
CIRCLE 217 ON READER SERVICE CARD

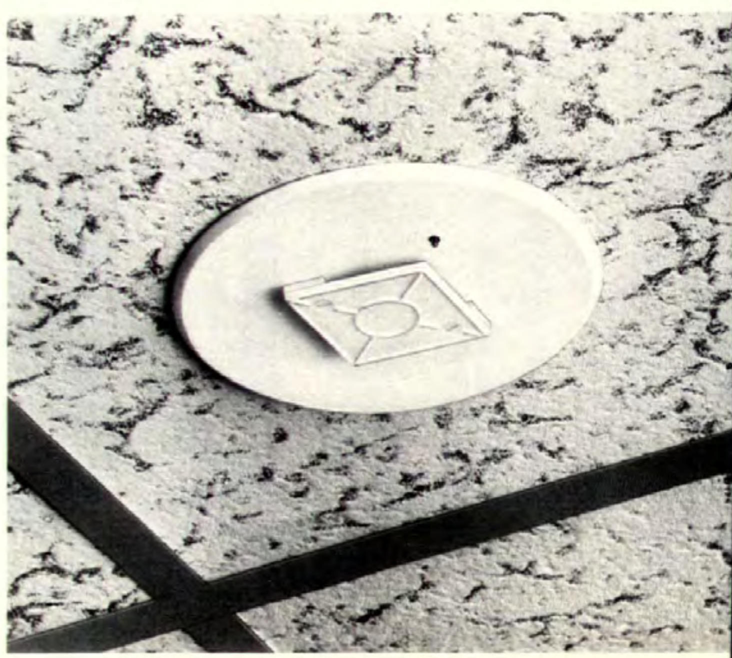
Intrusion detection system, "DS 402," (*below*) consists of small, separate transmitter and receiver components. The pulsed-infrared system has a 500′ operating range and a beam direction range of 180°. Detection System, Fairport, N.Y.
CIRCLE 218 ON READER SERVICE CARD

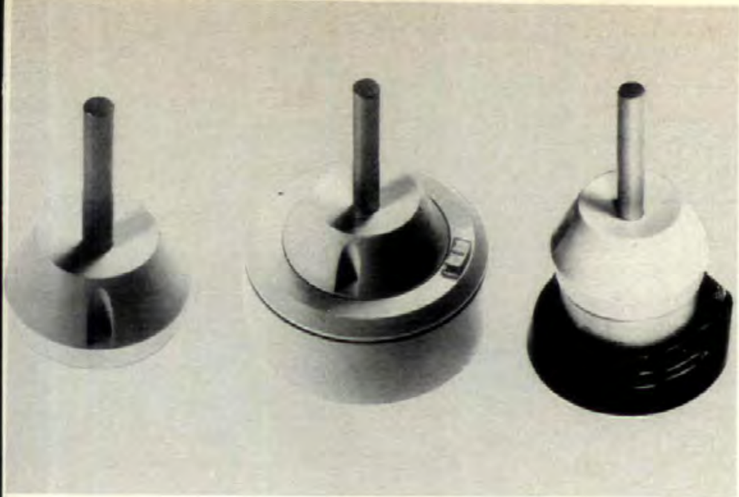
Keyboard security control unit for residential or commercial use features false-alarm protection, an audible alarm, integral battery back-up and delayed entry/exit. Tamper-proof unit is easy to install. Functional Data, Santa Ana, Calif.
CIRCLE 220 ON READER SERVICE CARD

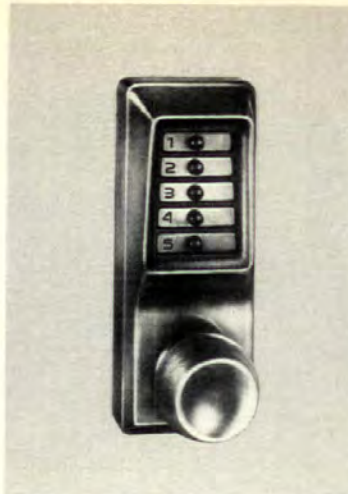
Ionization smoke detector (*below*), "Ion II," features dual chambers to ensure constant monitoring of conditions. Solid-state unit is UL-listed and compatible with all UL, 24V, DC fire-alarm control panels. Gamewell, Marlborough, Mass.
CIRCLE 221 ON READER SERVICE CARD



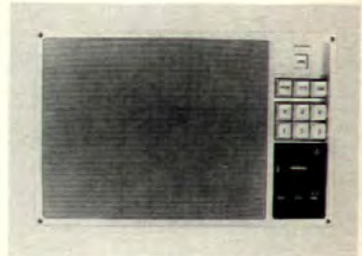








Apartment master control unit for "High Rise Security System" sounds smoke, fire and intrusion alarms. Unit also allows for two-way conversations, unlocks the downstairs door and monitors itself. Westinghouse, Pittsburgh, Pa.
CIRCLE 235 ON READER SERVICE CARD

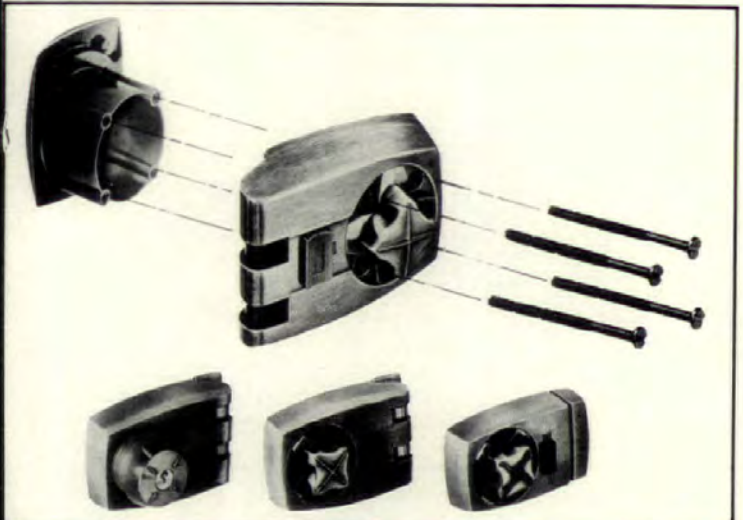


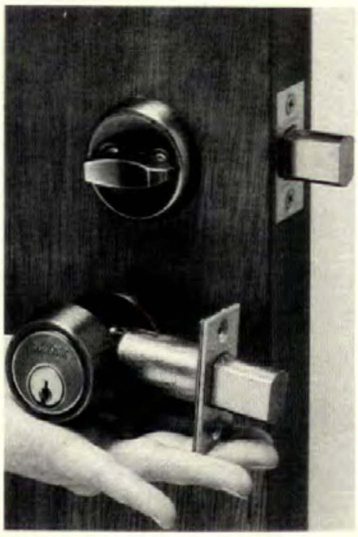
Thermal detectors for Pyr-A-Larm systems operate on a rate compensation/fixed temperature principle which utilizes the different expansion rates of the detector's metal shell and enclosed contact supports. Pyrotronics, Cedar Knolls, N.J.
CIRCLE 222 ON READER SERVICE CARD

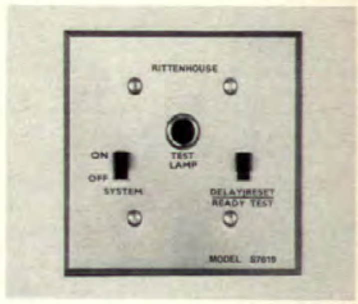
Self-bolting "Super Guard" locks *(below)* bolt to themselves, not to the door. Offered in double- and single-cylinder models and a night-latch-deadbolt combination, the strong locks have decorative styling. Ideal Security, St. Paul, Minn.
CIRCLE 223 ON READER SERVICE CARD

Heavy-duty pushbutton lock *(above)* features a zinc die-cast housing. The maximum security unit has a ¾" anti-friction deadlocking latch. Pickproof lock is designed to replace cylindrical or tubular locksets. Unican Security, Montreal, Can.
CIRCLE 234 ON READER SERVICE CARD

Residential burglar alarm system "S7619" consists of connected door/window switches which form a security loop based at a central control panel *(below)*. System has a key-lock disarm and time delay. Rittenhouse, Honeoye Falls, N.J.
CIRCLE 236 ON READER SERVICE CARD







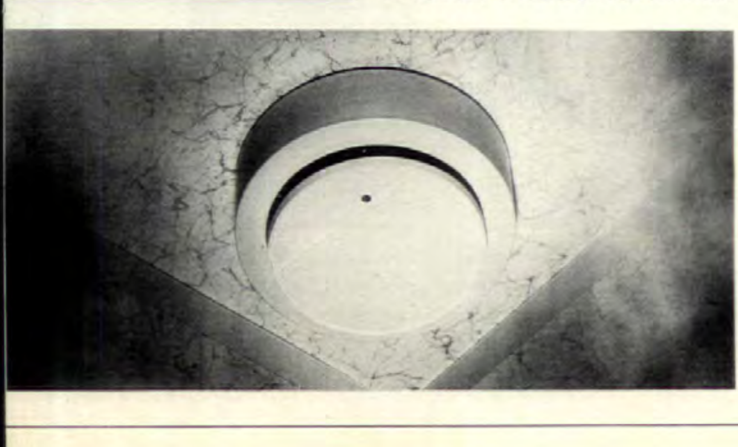
Deadbolt appearance, construction and basic chassis have been standardized for the "B400," "B200" and "B100" series. Stainless steel deadbolts *(left)* with 1" or ⅝" throws have anti-cutting features. Schlage Lock, San Francisco.
CIRCLE 237 ON READER SERVICE CARD

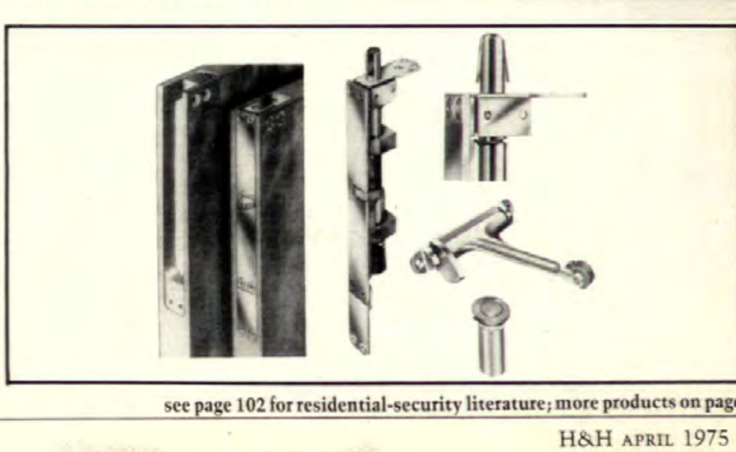
Miniature smoke alarm is a solid-state unit that can be mounted easily on walls or ceilings. Measuring only 3½"x5¼"x1⅜", the "Scout" is available in both plug-in and permanently wired models. Edwards, Norwalk, Conn.
CIRCLE 224 ON READER SERVICE CARD

Residential smoke detector, "Model 706," is operated by a photoconductive sensing cell which triggers a solid-state circuit to energize an alarm horn. Unit is primarily of Noryl® thermoplastic resins. Electro-Signal, Rockland, Mass.
CIRCLE 233 ON READER SERVICE CARD

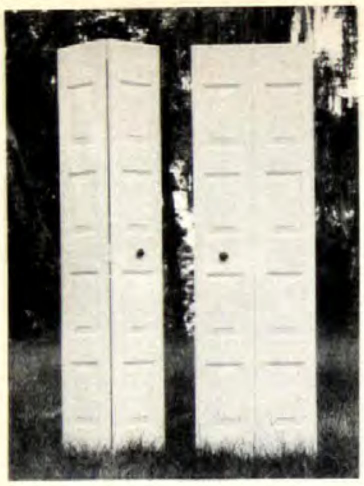
Keyless "Dialoc" *(right)* for commercial applications allows multiple entry without the expense of keys. Dial the correct sequence of four numbers, turn the knob and the door opens. Unit operates silently. Dialoc, Denison, Iowa.
CIRCLE 238 ON READER SERVICE CARD

Automatic flush bolt, "456," is designed for fire-rated wood doors. Shown below are mortise and finished installations at top of a door, the automatic locking feature, and the door coordinator and dust-proof strike. Ives, New Haven, Conn.
CIRCLE 239 ON READER SERVICE CARD





see page 102 for residential-security literature; more products on page 94

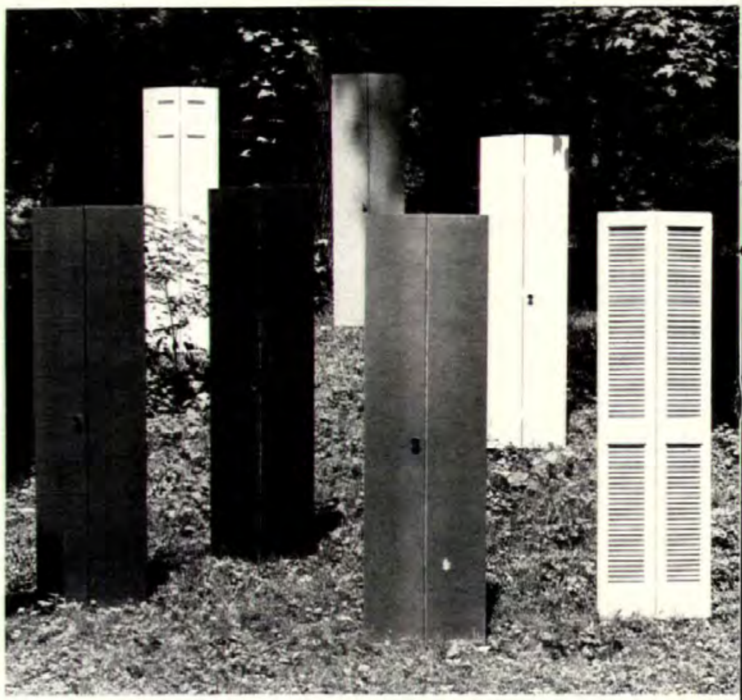


Elegant solid-wood entry door, "Westminster," *(right)* features intricate hand-carving. The rosewood door with a hand-rubbed finish has the design on both sides. Matching side panels are available. Elegant Entries, Worcester, Mass.
CIRCLE 230 ON READER SERVICE CARD

A full line of bi-fold doors fabricated of non-metal materials is designed to compete in price with metal doors. The "Slim-line" series includes raw Lauan, primed hardboard, prefinished Lauan, walnut permagrain, and plastic models. Walled Lake Door, Richmond, Ind.
CIRCLE 231 ON READER SERVICE CARD

Textured steel bi-fold doors have a crinkle finish that is rolled at the mill. Doors are painted by a Dual Ransburg Disc System so that they resemble white-painted plaster. Two styles, "Kent" and "Tyler," are offered. National, Ocala, Fla.
CIRCLE 225 ON READER SERVICE CARD

Steel bi-fold doors with traditional styling feature sculptured-looking paneling. Deeply-embossed doors are finished in a low-gloss white enamel that can be painted. Units come with tracks. General Products, Fredericksburg, Va.
CIRCLE 226 ON READER SERVICE CARD



Molded polystyrene "Bowindow," designed to simulate the look and feel of wood, is durable and inexpensive. The prefinished unit, glazed with ¾" "Insul-glass," features cellular core construction for superior insulation. Offered in three sizes, windows will not split, rot or swell and are insect-proof. Burton, Cobleskill, N.Y. CIRCLE 227 ON READER SERVICE CARD

Double-hung aluminum tilt windows *(below)* are designed for easy maintenance. Both sashes tilt and lock at any point of travel. Windows, with an anodized finish, have no metal-to-metal contact. Available with insulating glass, units feature weatherstripping and integral screen channels. Graham, York, Pa.
CIRCLE 228 ON READER SERVICE CARD

"Thermo-Barrier" glider window *(below)* has inner and outer frames of aluminum connected by a rigid insulating barrier. Unit also features wide air-space glazing that helps control heat and sound transmission. Sashes are weatherstripped and glass cushioned with vinyl. Mon-Ray, Minneapolis, Minn.
CIRCLE 229 ON READER SERVICE CARD

"Uni-Panel" one-piece plant-on in a traditional "Heritage" design converts any plain flush metal or wood door to an interesting entry. Made of high density urethane, "Uni-Panel" can be finished in a medium walnut tone or primed for painting. Applied with an adhesive, the plant-on will not chip, crack, peel or fade. Entol, Miami, Fla. CIRCLE 232 ON READER SERVICE CARD

Fire retardant cedar shakes add a colonial look to a townhouse project. Red cedar roof shakes are pressure impregnated with chemicals that enhance the natural weathering qualities. Koppers, Pittsburgh, Pa.
CIRCLE 247 ON READER SERVICE CARD

Patented Leveleze® roof drain features a gasket that eliminates the need for sealants between the adjustable collar and the drain body. The non-hardening rubber gasket gives a watertight bond. Josam, Michigan City, Ind.
CIRCLE 248 ON READER SERVICE CARD

Fancy butt shingles *(right)*, with a colonial look, come in nine patterns. Each course of the 16"-long Western Red Cedar shingles can be applied over solid sheathing with a 6" weather exposure. Shakertown, Winlock, Wash.
CIRCLE 250 ON READER SERVICE CARD

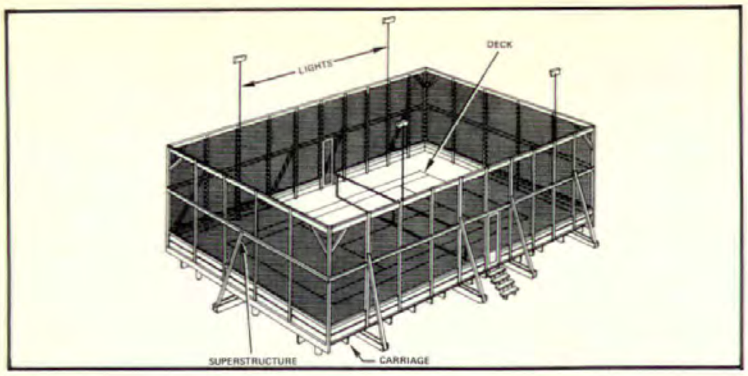
Man-made masonry siding panels, "Brookline," *(above)* simulate the look, texture and color of oven-fired brick. Offered in white, buff or red, panels come premortared for easy installation. Roxite, Masonite, Chicago, Ill.
CIRCLE 251 ON READER SERVICE CARD

Superstar® siding *(below)* is corrosion resistant Galvalume® steel with a bonded Dupont Tedlar PVC finish. Offered in five colors, the low-maintenance siding has a woodlike texture. Mastic, South Bend, Ind.
CIRCLE 252 ON READER SERVICE CARD

Rustic asphalt "Dimensional Shake Shingles" have a deep tab look created by a special on-line production technique. Offered in four colors, shingles carry a UL Class C fire rating. A factory applied thermoplastic adhesive that bonds courses together provides wind resistance. Celotex, Jim Walter, Tampa, Fla. CIRCLE 249 ON READER SERVICE CARD

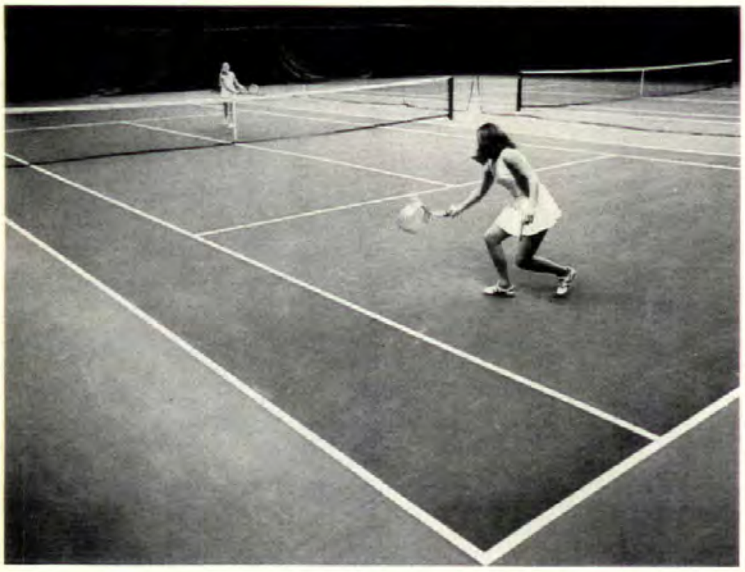
Custom colored precast stone for exterior use requires no footings or building ties. Offered in volcanic, petrified wood, random ledge and fieldstone styles, each piece is individually molded for a natural look. Durable material for new construction or remodeling can be installed on any type surface. Crown Hill Stone, Westfield, N.Y. CIRCLE 253 ON READER SERVICE CARD

more products on page 96



Complete platform tennis court including lights is available on a lease arrangement with terms up to 66 years. Conventionally constructed court is legally classed as a temporary structure. North American, Bridgeport, Conn.
CIRCLE 240 ON READER SERVICE CARD

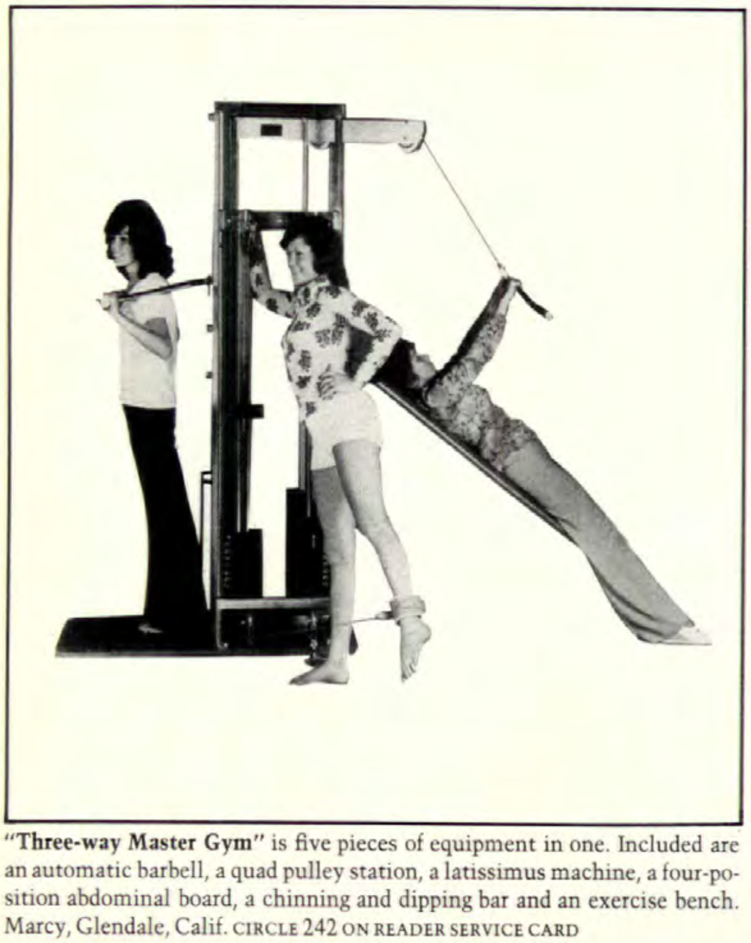
Cushion tennis surface, "Plexicarpet," *(below)* is suitable for indoor or outdoor use over asphalt or concrete. Material provides a $\frac{3}{16}''$ rubber sub-base for the Plexipave finish system offered in eight colors. California Products, Cambridge, Mass.
CIRCLE 241 ON READER SERVICE CARD



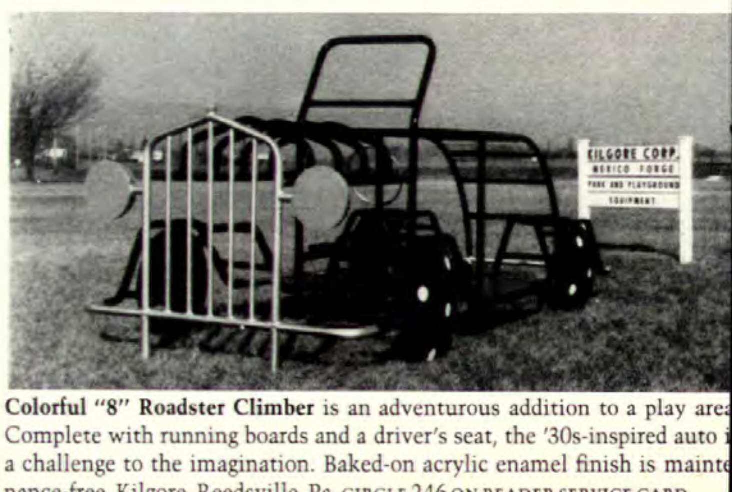
"Hayloft/Haystack" provides climbing and jumping play for pre-school ag children. Composed of a 4'-high platform jump tower and a deep, resilien landing mat, the unit is virtually hazard-free. The "Hayloft" doubles as climber. Playlearn, St. Louis, Mo. CIRCLE 243 ON READER SERVICE CARD

Lightweight fiber glass steps for vinyl-lined swimming pools are safe and durable. Easy to install and remove for storage, "Sure Step" comes in a corner unit or a shallow-end wall model. Miami Pool Equipment, Miami, Fla.
CIRCLE 244 ON READER SERVICE CARD

Fiber glass therapeutic pool, "Whirl-Spa," *(below)* comes completely prepiped. The octagonal, seven-person unit has six Venturi jets. Package includes pumps, filter and water heater. Viking, Ft. Lauderdale, Fla.
CIRCLE 245 ON READER SERVICE CARD



"Three-way Master Gym" is five pieces of equipment in one. Included are an automatic barbell, a quad pulley station, a latissimus machine, a four-position abdominal board, a chinning and dipping bar and an exercise bench. Marcy, Glendale, Calif. CIRCLE 242 ON READER SERVICE CARD



Colorful "8" Roadster Climber is an adventurous addition to a play are Complete with running boards and a driver's seat, the '30s-inspired auto i a challenge to the imagination. Baked-on acrylic enamel finish is mainte nance-free. Kilgore, Reedsville, Pa. CIRCLE 246 ON READER SERVICE CARD

more products on pa

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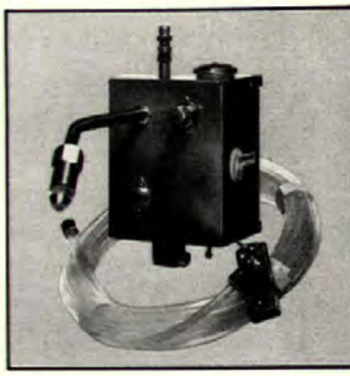
The flammability characteristics of cellular plastics used in building construction, and low density cellular plastics used in furniture are tested under numerous test methods and standards. Included among these are ASTM D-568, 635, 757, 1433, 1692, E-84, 162 and 286; UL 94 and 723; and NFPA 255. The Federal Trade Commission considers that these standards are not accurate indicators of the performance of the tested materials under actual fire conditions, and that they are only valid as a measurement of the performance of such materials under spcific, controlled test conditions. The terminology associated with the above tests or standards, such as "non-burning," "self-extinguishing," "non-combustible" or "25 (or any other) flame spread" is not intended to reflect hazards presented by such products under actual fire conditions. Moreover, some hazards associated with numerical flame spread ratings for such products derived from test methods and standards may be significantly greater than those which would be expected of other products with the same numerical rating.

The Commission considers that under actual fire conditions, such products, if allowed to remain exposed or unprotected, will under some circumstances produce rapid flame spread, quick flashover, toxic or flammable gases, dense smoke and intense and immediate heat and may present a serious fire hazard. The manufacturer of the particular product or The Society of the Plastics Industry, Inc., should be consulted for instructions for use to minimize the risks that may be involved in the use of these products.

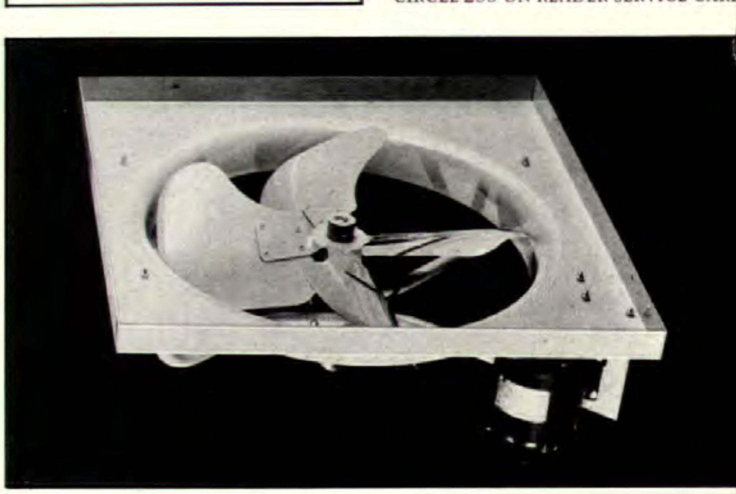
The Federal Trade Commission, Washington, D.C. 20580 requests that any representation that is inconsistent with the terms of this Notice be brought to its attention. This Notice is distributed by The Society of the Plastics Industry, Inc., 250 Park Avenue, New York, New York 10017.

CIRCLE 70 ON READER SERVICE CARD

Gas-fired upflow furnaces come in nine models ranging from 50,000 to 175,000 Btu. The quiet, efficient units have resiliently-mounted blower assemblies and burner/heat exchanger combinations. Dunham-Bush, Harrisonburg, Va.
CIRCLE 254 ON READER SERVICE CARD

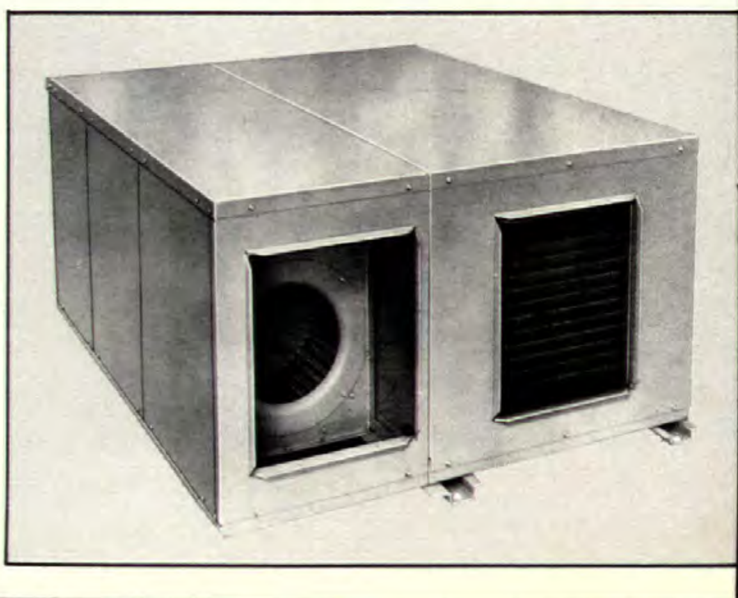


Central humidification system "Sprayzaire," *(above)* also serves as a fully transistorized early warning disaster alarm. The dual-purpose, easy-to-install system is a maintenance-free energy-saver. Comspace, Farmingdale, N.Y.
CIRCLE 255 ON READER SERVICE CARD

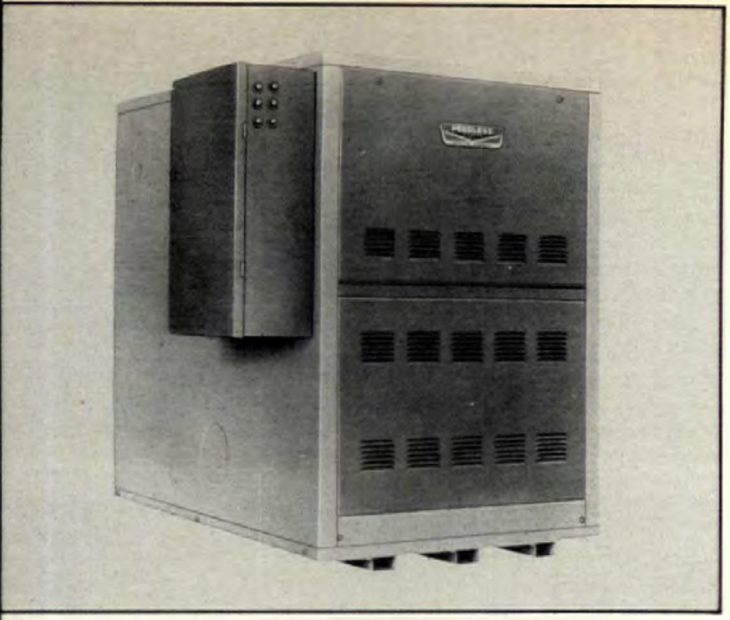


Ceiling cooler ventilating fan *(above)* is designed for non-air-conditioned houses. Unit installs in the ceiling at a central location and exhausts large amounts of hot air through attic openings. Vernco, Columbus, Ind.
CIRCLE 256 ON READER SERVICE CARD

Single package heat pumps have cooling capacities from 22,000 to 56,000 Btu and heating from 22,000 to 60,000 Btu. Units come in side-by-side *(below)* or over/under duct connection models. Mueller Climatrol, Piscataway, N.J.
CIRCLE 257 ON READER SERVICE CARD

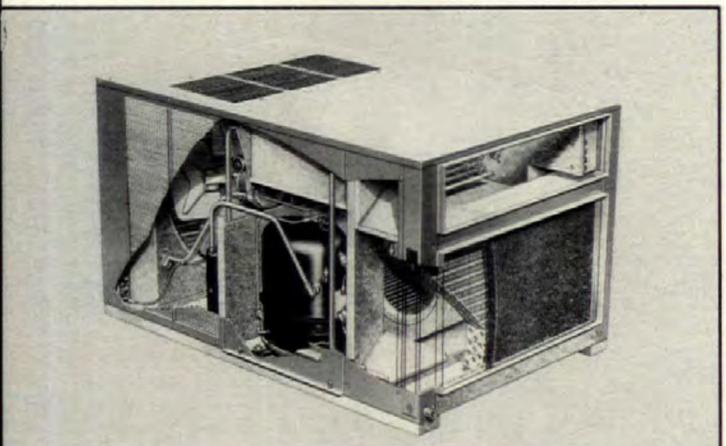


 CIRCLE 98 ON READER SERVICE CARD



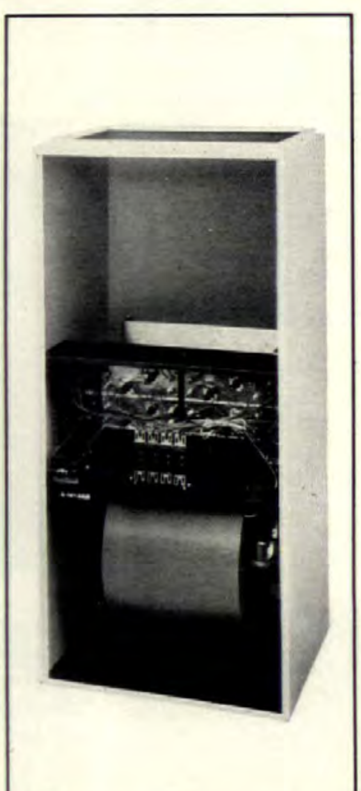
Cast iron electric boiler line includes 102,400; 153,600 and 204,800 Btu units. All boilers are factory assembled, pre-wired and packaged, ready for quick installation. Units are UL-listed. Peerless Heater, Boyertown, Pa.
CIRCLE 258 ON READER SERVICE CARD

Packaged electric heat pump *(below)* is available in 2- to 5-ton sizes. Cooling capacities range from 23,000 to 56,000 Btu and heating from 25,000 to 63,000 Btu. Compact units are UL-listed. Lennox, Marshalltown, Iowa.
CIRCLE 259 ON READER SERVICE CARD



High-power roof vent *(below)* is designed to exhaust hot, moist attic air. An automatic, adjustable thermostat has a range of 80° to 120°. Units, molded of durable, gray ABS plastic, are UL-listed. Leigh Products, Coopersville, Mich.
CIRCLE 260 ON READER SERVICE CARD

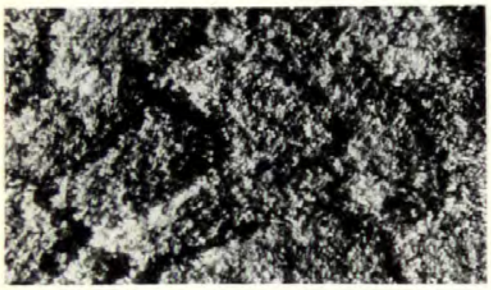
Electric furnace *(right)* features integral curcuit breakers for overcurrent protection. Units, approved for zero-clearance installation, range from 20 to 40 kW with 68,260 to 136,520 Btu outputs. Fasco, Fayetteville, N.C.
CIRCLE 261 ON READER SERVICE CARD



more products on page 100

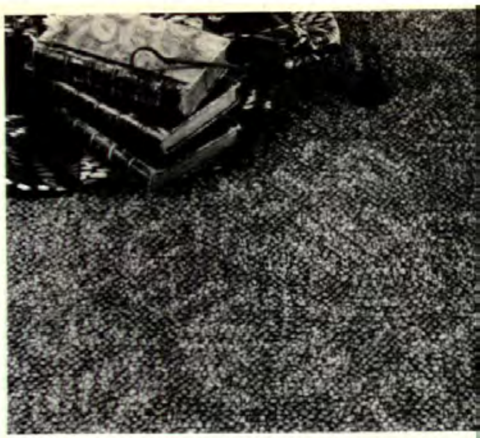
Contemporary cut and loop carpet is manufactured by the Jac-Tuft® process, which tufts the pattern directly into the backing. Part of the "Aterian" collection, "Random" comes in two colorations. Carpet of space-dyed nylon retails for about $15 a sq. yd. Aldon, Calhoun, Ga. CIRCLE 262 ON READER SERVICE CARD

Low-profile, sculptured shag, "Risque," *(below)* adds a feeling of contemporary elegance to any room. Multi-colored carpet, available in a range of popular shades, is dyed using a special technique that provides unusual color placement. Dense cut and loop nylon carpet retails for about $8.95 a sq. yd. Walter, City of Industry, Calif. CIRCLE 263 ON READER SERVICE CARD



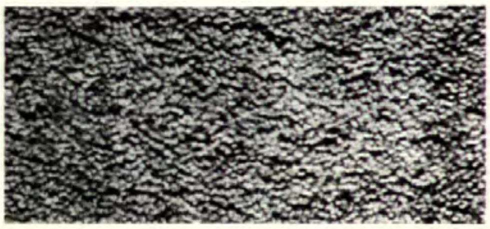
No-wax flooring, "Franciscan Court," *(below)* is an octagonal-tiled courtyard pattern. Part of the "Solarian" collection, floor with a "Mirabond" finish comes in four colors. Complementary washable vinyl wallcoverings and stain-resistant fabrics are also offered. Armstrong, Lancaster, Pa. CIRCLE 264 ON READER SERVICE CARD

Jackstraw pattern carpet, "Haystack," *(right)* is long-wearing and easy to maintain. Constructed of continuous filament Cumuloft® nylon in tri-dye yarns, carpet features Mastat™ anti-static control. The multi-color floorcovering comes in nine colorations in 12′ widths and retails for approximately $6.95 a sq. yd. C.H. Masland, Carlisle, Pa. CIRCLE 265 ON READER SERVICE CARD



Cushioned sheet-vinyl flooring with a Mexican flavor, "Tres Vidas," *(below)* looks like a hot item. Part of the Gafstar A-1 line, motif features four small, hand-painted tile designs surrounded by a border in an irregular stone pattern. Offered in five colors, floor is easy to maintain. GAF, New York City. CIRCLE 266 ON READER SERVICE CARD

Bulky-textured, cut-pile carpet, "Classica," *(above)* has a nubby look. Thick, three-ply nylon piles are heat-set by the autoclave process for twist preservation and texture retention. Offered in 24 solid colors, including muted earth and natural tones, the dense carpet retails for about $14.95 a sq. yd. Philadelphia, Cartersville, Ga. CIRCLE 267 ON READER SERVICE CARD



Axminster carpet, "Diamond Gems," *(below)* part of the "Regal Touch" contract series. Sui able for use in hard-wear public areas, the floo covering is constructed of soil-hiding, static-co trol Anso nylon. The line of nine designs includ geometrics, plaids and other patterns that dor easily show dirt and wear. Mohawk, Amsterdar N.Y. CIRCLE 268 ON READER SERVICE CARD

Mini-Saxony plush carpet, "Desert Dawn," *(le* provides a rich, elegant look at a reasonable pri The dense carpet is constructed of deep-pile, tufts with a stand-up twist. Made of easy-to-ma tain, long-wearing nylon fibers, the floorcoveri is offered in 12 colorations. Retail price is abo $7.95 a sq. yd. Firth, Amsterdam, N.Y. CIRCLE 2 ON READER SERVICE CARD

Residential security

"In terms of cost, the major difference between an adequately secure and highly secure single-family house is in window security," says one chapter of a HUD-sponsored publication of The Center for Residential Security Design.

The book then discusses window-security improvements, describing secure window construction, and naming effective brands of window-security hardware.

In other sections, the booklet describes four approaches to residential security improvement:

• "Creation of a fortification with ... controlled-access points

• "Subdivision of a large residential complex into smaller components so that each can be controlled naturally by a small number of residents

• "Relocation of a particularly vulnerable group into a safe area wholly occupied by that group

• "Inundation of a residential complex by security personnel"

In two detailed chapters, the booklet discusses secure building design and security hardware. It describes door construction and door locks, and suggests particularly effective lock brands.

Electronic security, such as contact and motion alarm systems, intercoms and closed circuit television, are described and compared.

Security-improvement case studies of garden apartments and larger buildings are given, and detached-home security is discussed.

Improving Residential Security is sold for $1.30 by The Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (stock #2300-00251).

Merchandising through interior design is the subject of a book by Carole Eichen, a prominent model home and apartment decorator, and HOUSE & HOME contributing editor.

The book tells how to create model interiors "that directly relate to the demographic profiles of prospective buyers and renters."

This design technique is illustrated by 50 four-color room photographs and 100 before and after annotated sketches of the photographed interiors.

Other subjects discussed are:

• Budgets: How to make interior design costs pay for themselves.

• Scheduling: How to make sure models are ready on opening day.

• Helping models sell: How to get back-up from salesmen and publicity.

• The sales office: How to tie it directly to the models.

How to Decorate Model Homes and Apartments is available for $24.95 from House & Home Press, 1221 Avenue of the Americas, New York, N.Y. 10020.

Gypsum board products are cataloged in 35 pages. A table lists different systems, their fire and sound-transmission ratings, materials, weight and cost indexes. Details for many of the listed systems are given. Gypsum board application over masonry is discussed, application of water-resistant gypsum board is diagrammed, and manufacturer's finishing products are described. Some available patterns are shown. Georgia Pacific, Portland, Ore.
CIRCLE 301 ON READER SERVICE CARD

Stump cutters are cataloged in four pages. Four models are described and shown in color. Special features are discussed and specs are given. Vermeer, Pella, Iowa.
CIRCLE 302 ON READER SERVICE CARD

Cabinet/furniture hardwood species are compared in ten fact sheets. Physical properties are listed and shear and screw-holding strength, color uniformity, gluing, finishing and other characteristics of different woods are compared to those of Western Alder. Northwest Hardwoods, Portland, Ore.
CIRCLE 306 ON READER SERVICE CARD

Pole-house construction is the subject of a 12-page brochure. Design and cost advantages are given, and pole fabrication is described. Use of pole construction in four projects is discussed in text, and shown in color photographs. Specs and a bibliography of pole-house construction are included. Koppers, Pittsburgh, Pa.
CIRCLE 307 ON READER SERVICE CARD

Decorative furniture hardware is th subject of a 20-page, mail-order cata log. Four lines are shown, with thei prices given. Faultless, Evansvill Ind.
CIRCLE 303 ON READER SERVICE CAR

Rotary-dial calculators are cataloge in 14 pages. Warm-air heating, ele tric lighting and estimator's calcul tors are among those listed. Hunte Somerville, N.J.
CIRCLE 304 ON READER SERVICE CAR

Insulating glass is shown in a eight-page brochure. Insulating eff ciency for different size air spaces charted, glazing information, co struction details and specs are give Ardco, Chicago.
CIRCLE 305 ON READER SERVICE CAR

CIRCLE 102 ON READER SERVICE CARD

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A Architectural File (green)
I Industrial Construction File (blue)
L Light Construction File (yellow)
D Interior Design File (black)

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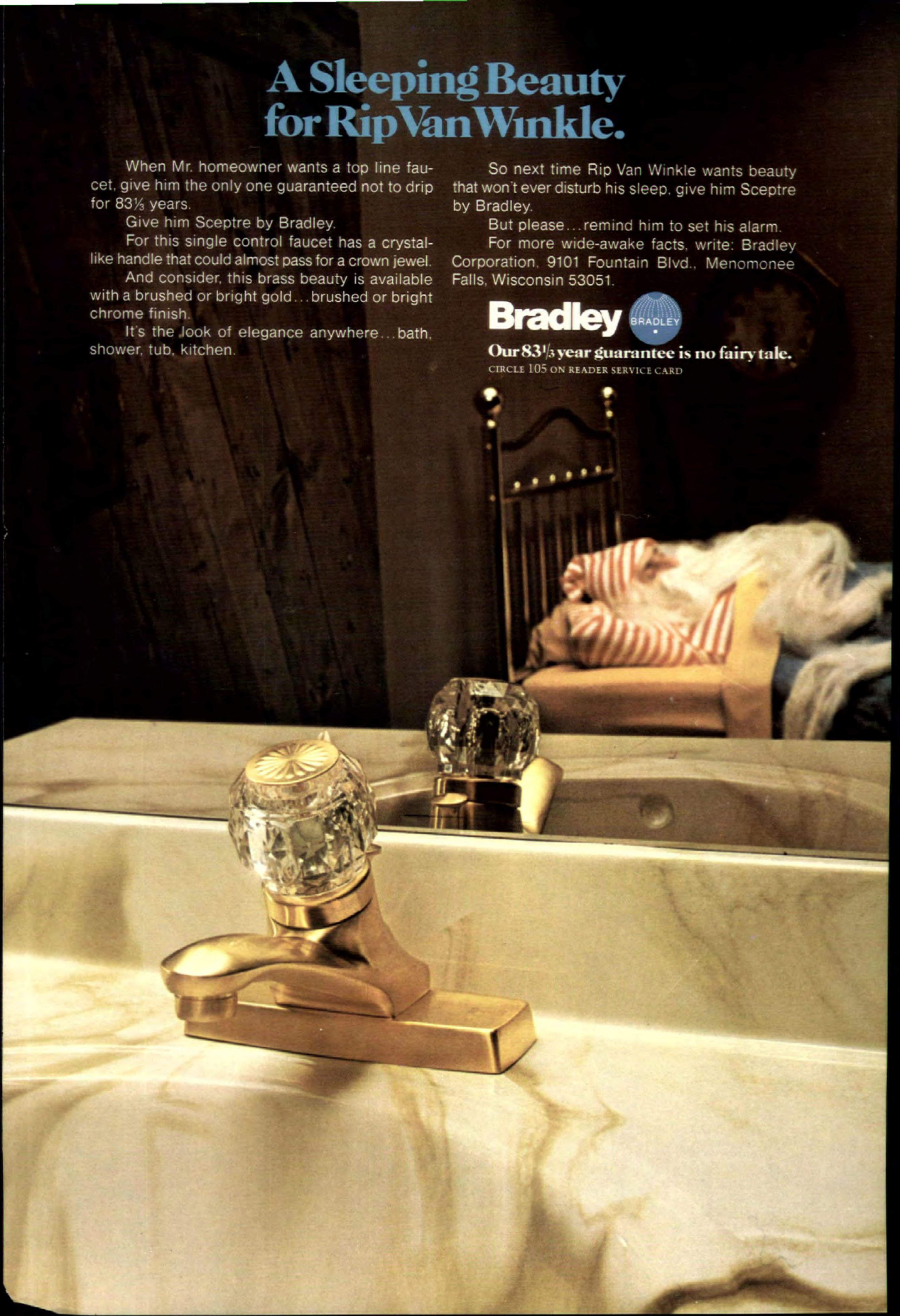
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CIRCLE 105 ON READER SERVICE CARD

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