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Home building's young men: how bright is their future? – page 130

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YOUNG MEN IN HOME BUILDING

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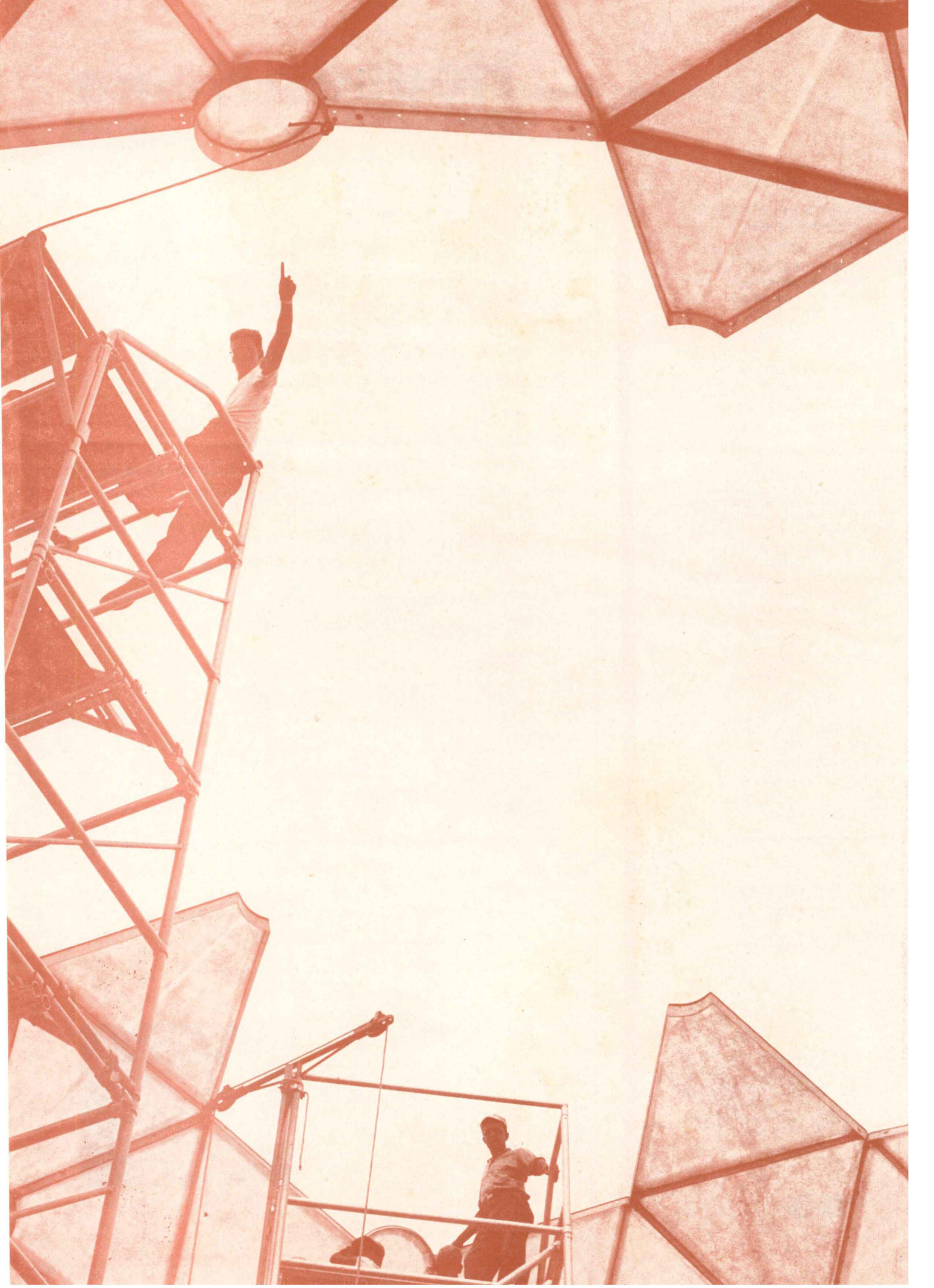
Cover: Students work on community plan at Pratt Institute. Photo by Hans Namuth.

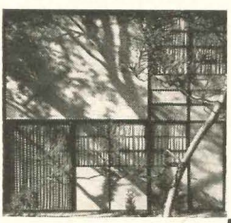


FOR THE DARING YOUNG MAN IN HOME BUILDING

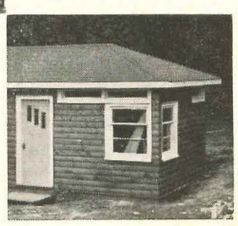
the future has never looked brighter.

by Peter Blake

This is true not only because of the current level of prosperity. Less obviously, but more importantly, it is true because of two major postwar advances on the American scene: first, the growth—at long last—of a building technology capable of handling the tasks assigned to it years ago by advanced architects and builders; and, second, the emergence of an enlightened and sympathetic public.



"Today it is entirely possible to assemble a complete modern house from standard . . . components." Charles Eames house Santa Monica, Calif. 1949.



"Some . . . prefabbers of the Fifties are trying, instead, to make their machine produced houses look rough-hewn and handicrafted." Prefabricated log cabin, 1956.

Geodesic structure by R. Buckminster Fuller
Photo: (opp.) Jay Maisel (above) Julius Shulman

To understand how radical a change this represents, look back to the days before Pearl Harbor:

- *Then* to build a modern house—a house designed to reflect, among other things, the technology of our time — required expensive special equipment, details and materials, all tacked together by men who had no training for the job.
- *Today* it is entirely possible to assemble a complete modern house from standard, inexpensive, well-designed, precision-made components. In fact, where modern architects of the Twenties and Thirties struggled to make their hand-made houses conform to a machine-esthetic, some of the builders and prefabbers of the Fifties are trying, instead, to make their machine-produced houses look rough-hewn and handicrafted.
- *Then* to live in a *modern* house was considered almost eccentric.
- *Today* many builders of *traditional* houses are finding it hard to sell their houses in the face of popular demand for a new kind of architecture—a demand built up, over the years, through intense publicity in all media.

That is why the future looks bright for young architects and young builders alike. They have an unbeatable combination to work with: an enlightened public, an advanced technology, and a healthy economy to encourage both.

And they have another unbeatable combination: each other. For this bright future is going to require a monumental *collaborative* effort—an effort on the part of architects, builders, planners, manufacturers and any number of other specialists. Are these specialists being trained to make that effort?

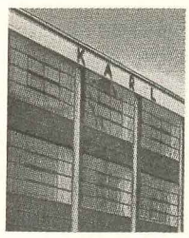
The answer is that some of them are, but many of them are not. For there is no great sense of urgency in the air today: the young men of 20 years ago were faced with a daily struggle which produced a ferment of new ideas, an almost revolutionary zeal that seems largely absent today. And because this sense of urgency is today largely absent, there is some danger that the new generation will not face up to the seriousness of our coming needs.

Today's young would-be architect has the choice of dozens of excellent schools—schools in which faculty and students are in tranquil agreement on all basic issues. Upon graduation, he has the choice (particularly if he has tux, and will travel) of dozens of well paid jobs doing the sort of architecture he was trained to do in the classroom. And upon receiving his license, he has the further choice of several types of profitable practice—and the practice, he thinks, will be the more profitable the farther removed it is from the design of individual houses.

In short, the young architects have never had it so good—which is another way of saying that the incentive to make things better is not particularly strong. As Prof. Henry-Russell Hitchcock said a couple of years ago, "One cannot help noting the slower pace of architectural development compared to that of 25 or 30 years ago . . . neither in theory nor in practice have there been proposed such revolutions as made the Twenties so exciting."

If the temper of the times is not revolutionary, neither does it favor stagnation (stagnation being the Number One Enemy of prosperity in a free society).

The revolution in architecture—from 1900 to 1940—was so violent that it went far beyond the bounds of the "immediately possible." It has often been said that the millenium will come when we are able, ideologically, to keep up with what is being produced by the technicians. But the one place in which ideology has been consistently ahead of the technicians is in architecture; here ideology overtook technology by so many leagues that, in the end, the architects have had to turn back a little and lend the producers a helping hand.



"Walter Gropius built his glass curtain wall in 1911 and then had to wait for 40 years until the . . . manufacturers agreed with him."

Frank Lloyd Wright talked about "continuity" 50 years before the plastics industry and the reinforced concrete engineers finally caught up with him and made "continuity" a major reality.

Walter Gropius built his glass curtain wall in 1911 and then had to wait for 40 years until the glass manufacturers agreed with him.

Henry Wright, Clarence Stein and others defined and built the garden community 30 years ago—but not until recently has the idea begun to interest many builders.

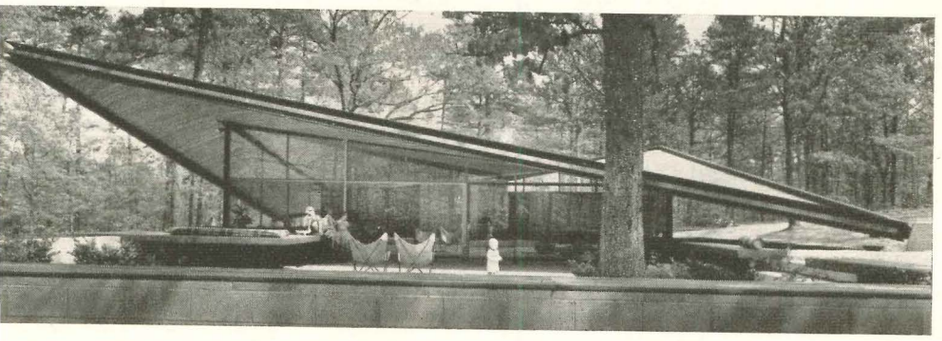
The fact that these and other ideas have now begun to interest builders—*young* builders in particular—is reason for optimism. So, too, is the fact that universities are beginning to offer undergraduate training in home building. Even more important, many young home builders are coming from the engineering schools and some even graduate in architecture. This is raising the general level, if not yet producing advanced thinking.

This is indeed a time of consolidation. A time in which the modern house may, at long last, be built with modern materials and modern techniques; a time in which the "Machine Art" of the Twenties may, at long last, be produced by machines; a time in which the "Panelized Facade" may, at long last, express a true system of prefabrication, in which the metal house, the plastics house, the foam house, the space-frame house (and even just the plain, ordinary, run-of-the-mill house) may, at long last, be built to work and to serve the needs of families rather than to serve as a manifesto.

And this is also a time of re-examination. For as technology finally catches up with theory, certain assumptions made in the past (when there were few ways of checking them against available data) begin to look questionable.

For instance: The "skin-and-bones" architecture so characteristic of early modern work is being re-examined as we make more use of the strength inherent in the skin alone. *Item: Eduardo Catalano, by building his own all-skin house near Raleigh, N. C. (see H&H, August, 1955), has given impetus to an entirely new approach to structural design —an approach now dominant not only at N. C. State College (where Catalano teaches), but at many other architectural schools as well. Characteristically, the most popular visiting lecturers at U. S. architectural schools today are such visionary engineers as Buckminster Fuller (to whose work the North Carolina Student Publication regularly devotes a major portion of its space), Konrad Wachsmann, Pier Luigi Nervi, Robert Le Ricolais, Paul Weidlinger and others. The popularity of these men seems to suggest a very real interest in structures that go beyond the rectangular cage.*

© Ezra Stoller



Eduardo Catalano,
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as given impetus
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tructural design."

• The notion that all structure must be "expressed" is being revised in many places. *Item: Architect Marcel Breuer states in his new autobiography: "There is such a thing as excessive structural expression — structural exhibitionism . . . it makes no sense suddenly to decide that the structure and everything else (mechanical equipment, etc.—Ed.) . . . must be visible for some reasons of doctrine or dogma."*

• The happy thought that today's young architects are free from the dictates of stylistic fetishes turns out to be something of a pious hope instead of reality. *Item: Writing in a recent issue of* Triangle, *the University of Pennsylvania's student magazine, Lewis Mumford suggests that "eclecticism and historicism, the two stylistic sins of the old architectural schools, did not disappear: rather they came back in modern disguise. Students who would not imitate Palladio or Adam imitate Le Corbusier or Gropius (he might well have added Wright—Ed.) . . . Instead of drawing on the history of 20 centuries the student now draws on the history of 20 years . . . the organic development of modern forms, through a deeper insight into the entire architectural complex, is now threatened with arrest."*

• "Traditional" functionalism, once the most Sacred of Cows, is being slaughtered right and left. *Item: Writing about "The Functional Neurosis" in a recent issue of the British* Architectural Review, *a young Australian architect, Robin Boyd, says: "Design-for-function . . . is the mold in which architecture is cast, not an ingredient . . . Functionalism is being renounced because the first attempts to apply the functional ethic always tend in the same direction, and we are tiring of this direction." And he calls for a new interpretation of functionalism: "There is no need to cut the functional anchor while we explore architecture further . . . functionalism . . . can and must provide the discipline under which the architect's idea is worked out to its conclusion in terms of building materials . . . but what matters is the strength of the idea, and how it is developed . . . What matters in terms of art is whether the idea is developed consistently enough to permeate the entire work."*

"The most popular visiting lecturers
at U.S. architectural schools today
are such visionary engineers
Buckminster Fuller." Photo from *Perspecta.*

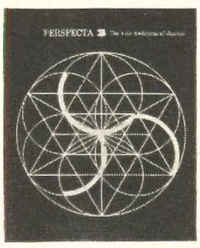
And yet there is very little disagreement on the basic concepts of today's architecture. As the student-editors of the MIT architecture school publication put it recently: "The question as to whether architecture should be 'traditionalist' or 'modern' . . . was answered long ago . . . satisfying architecture can best be provided by using our modern resources in materials, systems of structure, new forms and our own convictions about art and life." And the student-editors of the University of Pennsylvania's *Triangle* have announced categorically that

"the battle is over. We have won." (This, by the latest count, is the 739th time that "the battle" has been won.) So there is no turning back.

Yet what of the creative future? Consolidation and re-examination are both important, both long overdue. But few young men are willing to limit themselves to the review of things past, and there is evidence that a new upsurge of creativeness is at hand.

Creativeness of what sort? Some of the clues may be found in the student publications currently produced by the leading US architectural schools.

The most striking fact about these *student* publications is that their contributors, *almost without exception,* are professors rather than students, established practitioners rather than beginners. The excellent Yale review, *Perspecta,* publishes Prof. Henry - Russell Hitchcock, Prof. Christopher Tunnard, Architects Louis I. Kahn and Philip C. Johnson. The N.C. State Review publishes articles by Buckminster Fuller, Mies van der Rohe and J. Robert Oppenheimer. The University of Cincinnati's *One Quarter Scale,* in its latest issue, publishes an article by Architect John MacL. Johansen, discusses the work of Felix Candela and the Aspen Conference. All very stimulating, all very worthy.



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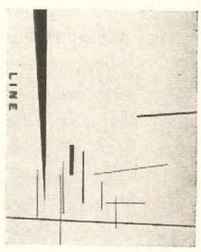
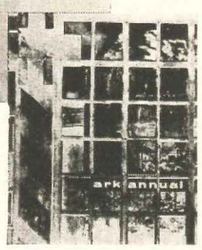
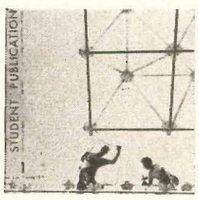






But when the young men have something to say for themselves, their talk goes far beyond the narrow field of the single building: they talk about a new dimension in architecture, a dimension most dramatically defined by Yale's planning school when it attacked the problem of "a 34 million population city, 600 miles long, stretching from Norfolk, Va., to Portland, Me." Here was some inkling of the new architectural scale—the kind of scale that seems to intrigue young architects throughout the US.

For, judging by the student publications, some of the young men are ahead of many of their elders in one important respect: they have grasped the fact that the smallest design unit of tomorrow will be the super-block rather than the brick, that the smallest planning unit of tomorrow may be the region rather than the house and its lot.

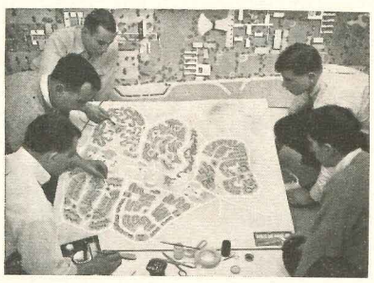
In every single student magazine being published today, the outstanding *student* contribution tends to be an article dealing with this new architectural dimension. The only student contribution to N. C. State's Spring, '55 Review, for example, was a study of an 80 square mile area northwest of Raleigh; the recurring theme in *Space*, the lively publication of the University of California's School of Landscape Architecture, concerns itself almost exclusively with the bigger dimension in architecture; and Yale's *Perspecta* has consistently devoted a portion of each issue to architecture seen not by the single building, but by the whole city or region.

This, then, is where the students stand today: In their immediate work they are still greatly dependent upon the inspiration of the first 50 years of the modern movement. But in their advanced thinking they are coming to grips with the biggest problem architects, planners and builders have ever had to face: how to re-design entire regions, how to give form to spaces beyond the range of the naked eye.

If the future of US home building seems brighter it is because both young builders and young architects are helping to make it so.

At architectural schools throughout the country, students are learning to work with builders on practical solutions for specific suburban developments. Last year, Prof. Bruno Funaro at Columbia got his students to work with Rockland County builder Eugene Ellish on a realistic community project; at Pratt Institute, Dean Olindo Grossi proposed that his students design a new suburban community for Long Island (see cover); Dean Arthur Gallion at UCLA, Prof. James Lendrum at Illinois, Professors Larsen and Sanders at Michigan—to mention only a few—have encouraged their students to concentrate on home building problems, and have encouraged builders to come in and participate. And so have the heads of town planning schools and schools of landscape architecture. Without much fanfare, collaboration between architects and builders is becoming a reality at schools throughout the US.

And the young builders now have their own schools, too (see box). Today's young builder is often a man academically trained in light construction (and eager to make some drastic changes in that field); a man increasingly conscious of good design (he chooses, in many cases, to live in a modern house himself); a man deeply concerned with problems of community planning. And he has learned to recognize something of the greatest importance—something which many of his elders failed to see in the past: *that the output of his industry produces a permanent change on the face of the earth, and that such changes cannot be made lightly, or for immediate commercial advantage alone.*



"At architectural schools throughout the country, students are learning to work with builders on practical solutions for specific suburban developments."

Schools offering architectural engineering courses that include home building construction:

Alabama Polytechnic
Catholic University
Clemson
University of Colorado
University of Florida
Iowa State
Kansas State
University of Kansas
Montana State
University of Nebraska
North Dakota Agricultural
Oklahoma A & M
University of Oklahoma
Pennsylvania State
University of Pennsylvania
Renselaer Polytechnic
Tulane
Virginia Polytechnic
Washington University

Schools also offering home building courses (light construction and construction management):

University of California, L.A.*
University of Denver
Georgia Tech
University of Illinois
MIT
Michigan State**
Temple
Texas A & M
Trinity University (San Antonio)
Washington University
University of Wisconsin**

* Offers degree in Construction Management
** Offers degree in Light Construction

By 1965 this country will need 2 million new houses a year to take care of new family formation and to replace obsolete structures. The challenge to all young men in US home building is tremendous—and sobering.

As of today, our production of certain materials is not equal to the challenge—so new ways must be found, immediately, to construct houses more efficiently, to use materials to greater advantage.

As of today, our accumulation of savings is not equal to the challenge—so economists had better go to work figuring out how the US can afford to build what the US will need.

As of today, our supply of developed land in the right places is not equal to the challenge—so builders and land planners had better start getting together, fast.

But most importantly of all, our supply of design, planning and building talent is not equal to the task. And the young men in home building had better do something about that in a hurry.

So all the arguments about whether builders and architects could or should collaborate are beside the point. Obviously, they must learn to collaborate—not tomorrow, but here and now. The need is too great and the problems are too great.

And so is the opportunity.

Today's young architects are busy re-examining the principles first laid down by the pioneers between 1900 and 1940.

These principles need to be re-examined in the light of two new developments: First, because our building technology has advanced sufficiently so that many of the ideas first put on paper dozens of years ago may now, at long last, be realized. And, secondly, because the way we live today is sufficiently different from the way people lived 30 years ago (when many modern plan assumptions were first made) to call for a fresh look at the house plan.

Much of this re-examination is being done by young architects because so many new custom houses are being designed by men who are just starting out on their own.

On the next 13 pages are shown examples of some of this re-examination in two major fields—structural systems and family plans. If these examples lack radical novelty, they make up for this lack by their uniformly high standard—a standard much higher than any achieved in US home building in many generations.

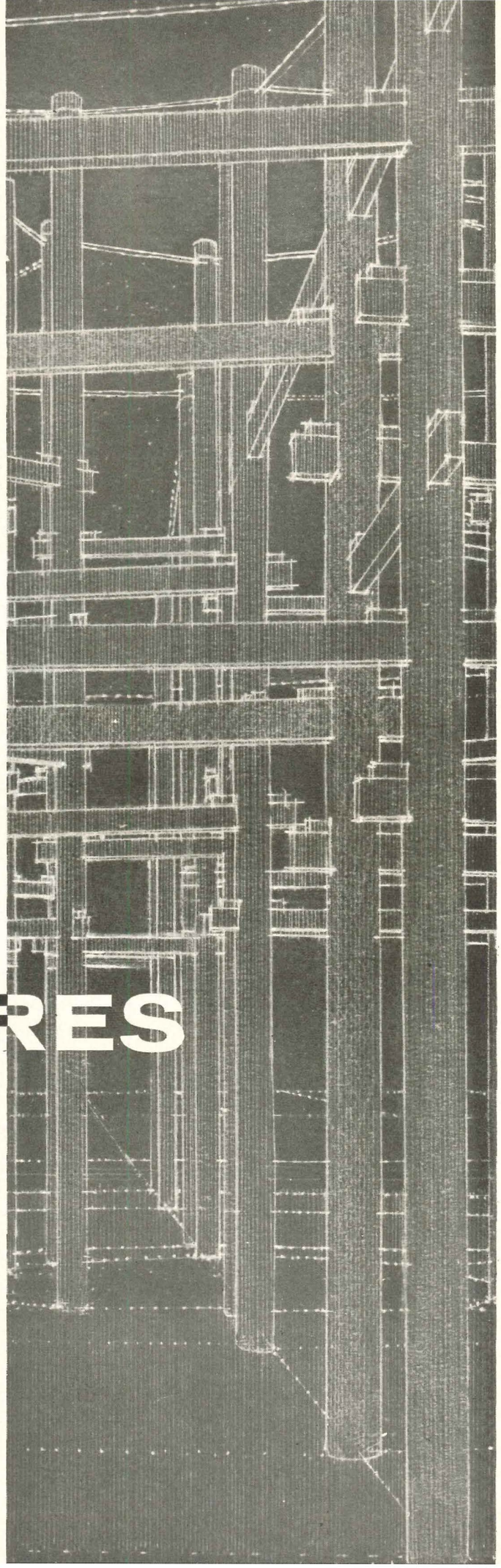
Five young architects re-examine

STRUCTURES

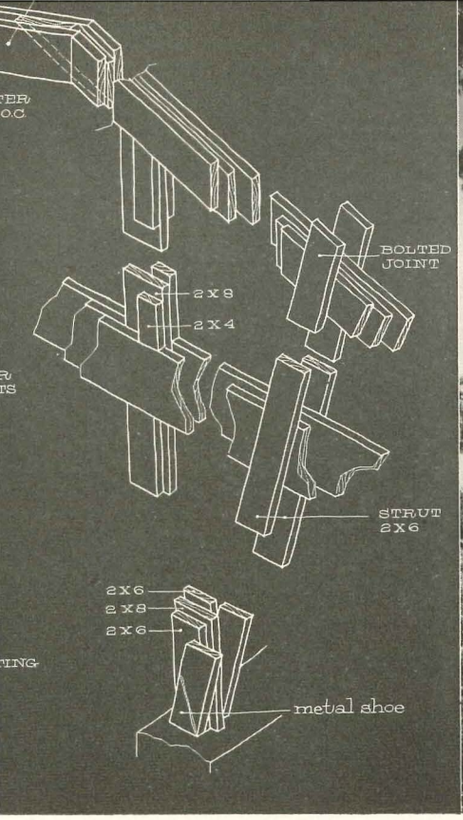
Most modern structural systems try for two things: they try to replace the load-bearing wall with a structural "cage" supported on only a few points; and, in doing this, they try to leave the interior spaces as open and uninterrupted by structural supports as possible.

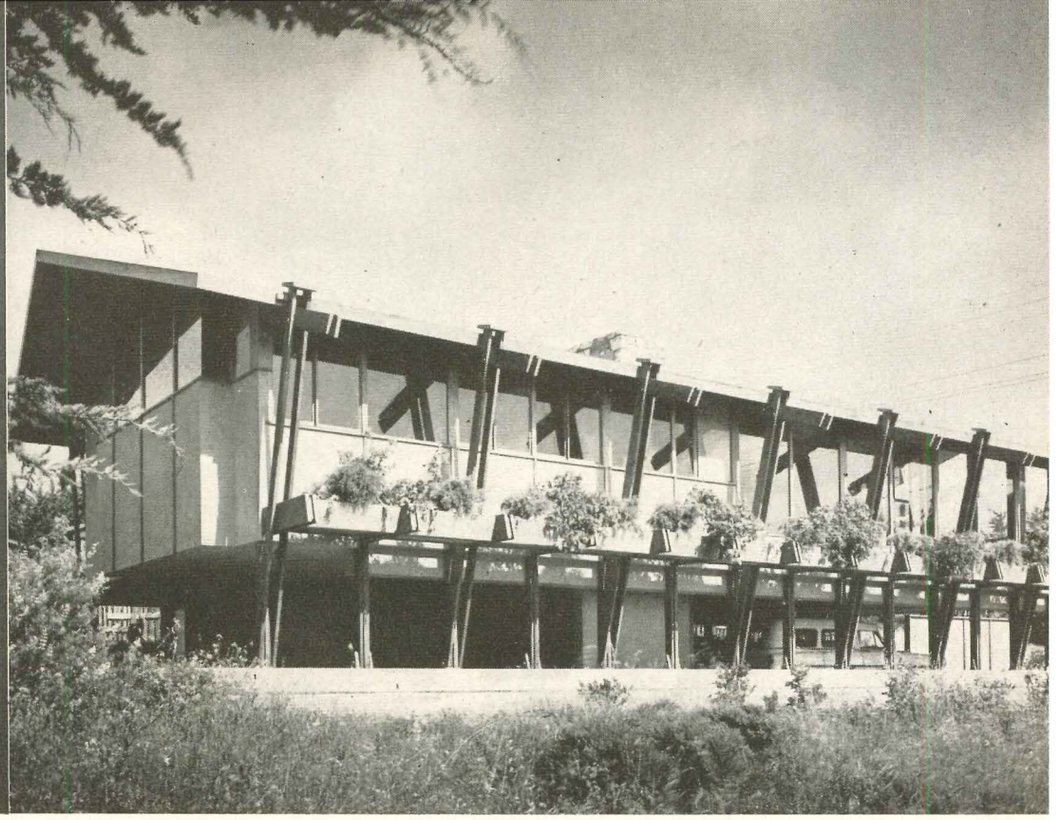
One reason for point-supported structures is to facilitate the insertion of sheets of glass or of opaque wall panels between structural frames. And the reason for opening up the interior is to get open, flexible plans.

The experiments on the next five pages suggest a further attempt to make the structural cage an effective, rhythmical and decorative design element. This is particularly evident in the hillside house by Mark Mills, shown opposite.



Detail of drawing by Ara Derderian, Department of Architecture, Yale University

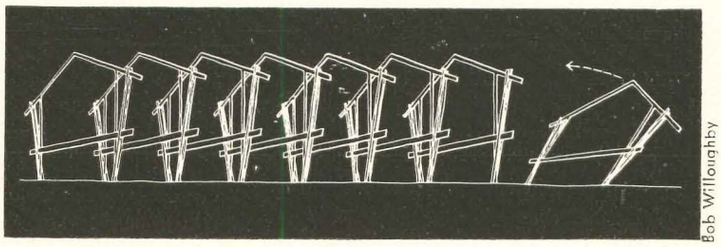




Details *show frame braced and triangulated with double posts, built-up girders.*

Hillside lot *faces the Pacific at Carmel. Lower floor contains carport and utilities. Mills hung flower boxes between his structural frames and brought landscape up to the window sill.*

Designer Mark Mills re-examines the **TRUSS FRAME**



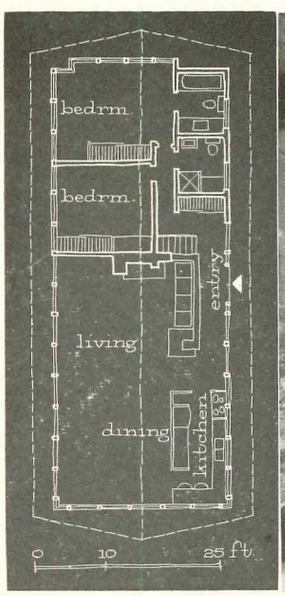
Bob Willoughby

Truss frames *were bolted together on the ground. First frame served as jig for other seven. Frames were then tilted up into place. Stilt-construction cuts foundation costs.*

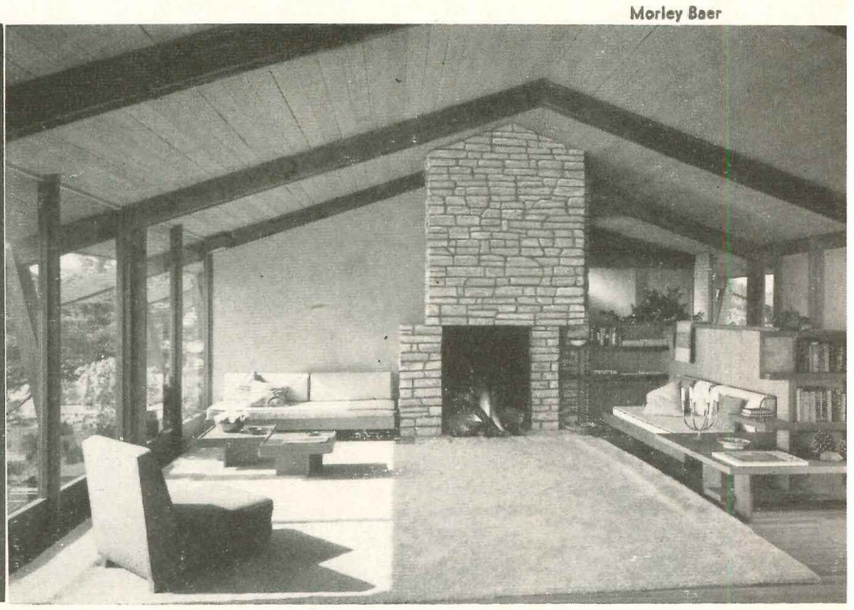
The structure of this beautiful hillside house consists of eight identical, two-story-high truss frames that were assembled flat on the ground, then tilted up into place. The frames are set 8′ on centers, exposed both inside and out to form a highly decorative structural pattern.

Mark Mills was born in a mining town in Arizona, received a degree in architectural engineering at Colorado University, then spent four years studying with Frank Lloyd Wright. He now practices in Carmel, Calif.

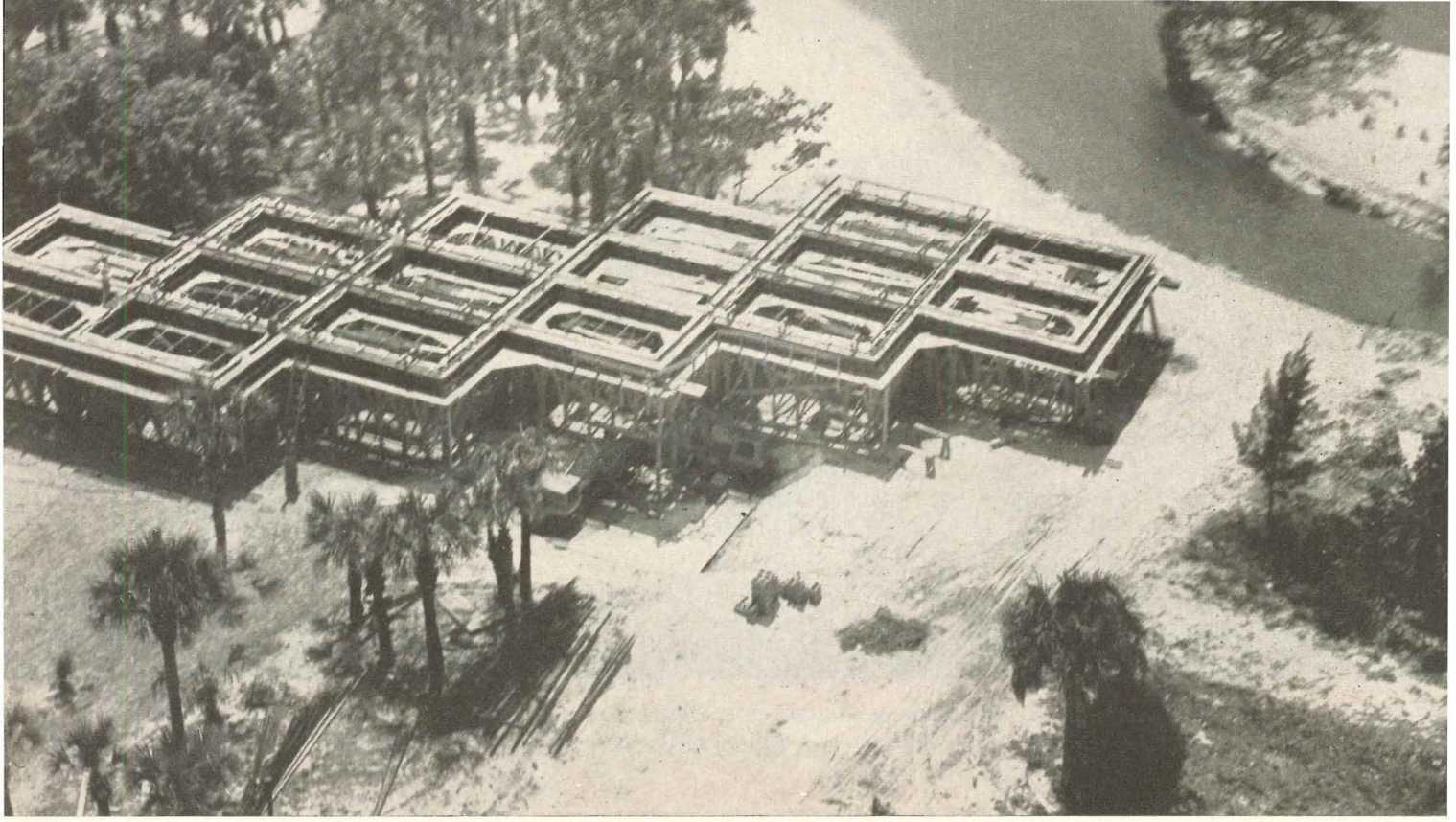
DESIGNER: Mark Mills
GENERAL CONTRACTOR: A. De Vries
LOCATION: Carmel, Calif.



Morley Baer



Two-bedroom plan *was developed for a Carmel builder who put house up on speculation. Three more houses will be built on the property in the future. At right, living area with built-in seating units, stone fireplace.*



Formwork *for 2-way cantilever structure is seen in this aerial view of the site*

Architect Reginald Knight re-examines the **REINFORCED CONCRETE FRAME**

ARCHITECT: Reginald C. Knight
STRUCTURAL ENGINEER: Thomas H. McKaig
GENERAL CONTRACTOR: Elmo A. Knight
OWNER: Ben Stahl
LOCATION: Sarasota, Fla.

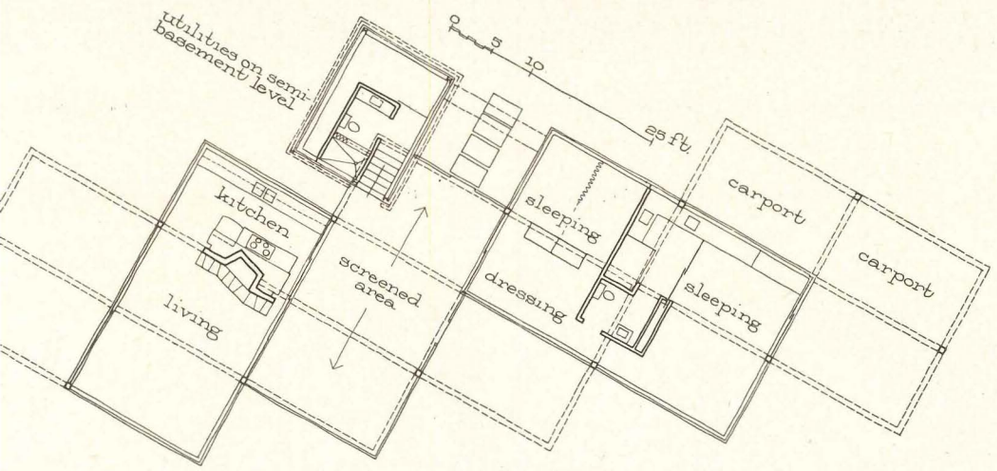
Stilted roof deck *sits on short steel pins embedded in concrete girders. Ribbons of glass, mitered at the corners, fill in space between girders and roof.*

Photos: (opp. and left) Joseph Janney Steinmetz

Because this Sarasota house is in the line of tropical winds and a mere 3′ above the Gulf of Mexico's average high tide mark, Architect Knight chose a fully continuous structure for his basic frame. This structure is supported on 12 columns tied together with gradebeams so that, in theory, the whole house could withstand being overturned by a hurricane.

The concrete frame was designed according to the Greek "Golden Section:" the clearance under the girders is about 7′ (i.e. the height of an average man with arm upraised.) The width and length of each bay is then determined by the the ancient formula $\left(\frac{a}{b} = \frac{b}{a+b.}\right)$

To increase the ceiling height in some of his plan areas, Knight de-



Glamorous setting *makes this a perfect house in which to entertain guests. Owner, a well-known commercial artist, wanted just that.*

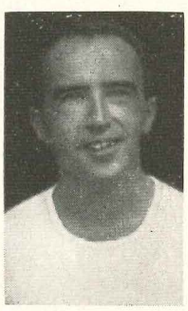
Plan pattern *shows structural bay system based on proportions of "Golden Section." Utility area, which is part underground, contains year-round air conditioning system, which uses underground ducts.*

Approach side *of house (below) shows roof of utility area at right, topped off with planting box.*

signed a laminated deck stilted on 1″ square and 12″ high steel pins that stand, in turn, on the concrete girders. The space between this deck and the top of the girders was closed in with ribbons of glass.

The plan consists of two "islands" —one for daytime use, the other for the bedrooms. A 500 sq. ft. screened porch connects the two and forms an outdoor entrance hall. The structural system has proved flexible enough for the owner to make several basic plan changes without affecting the general appearance of the house.

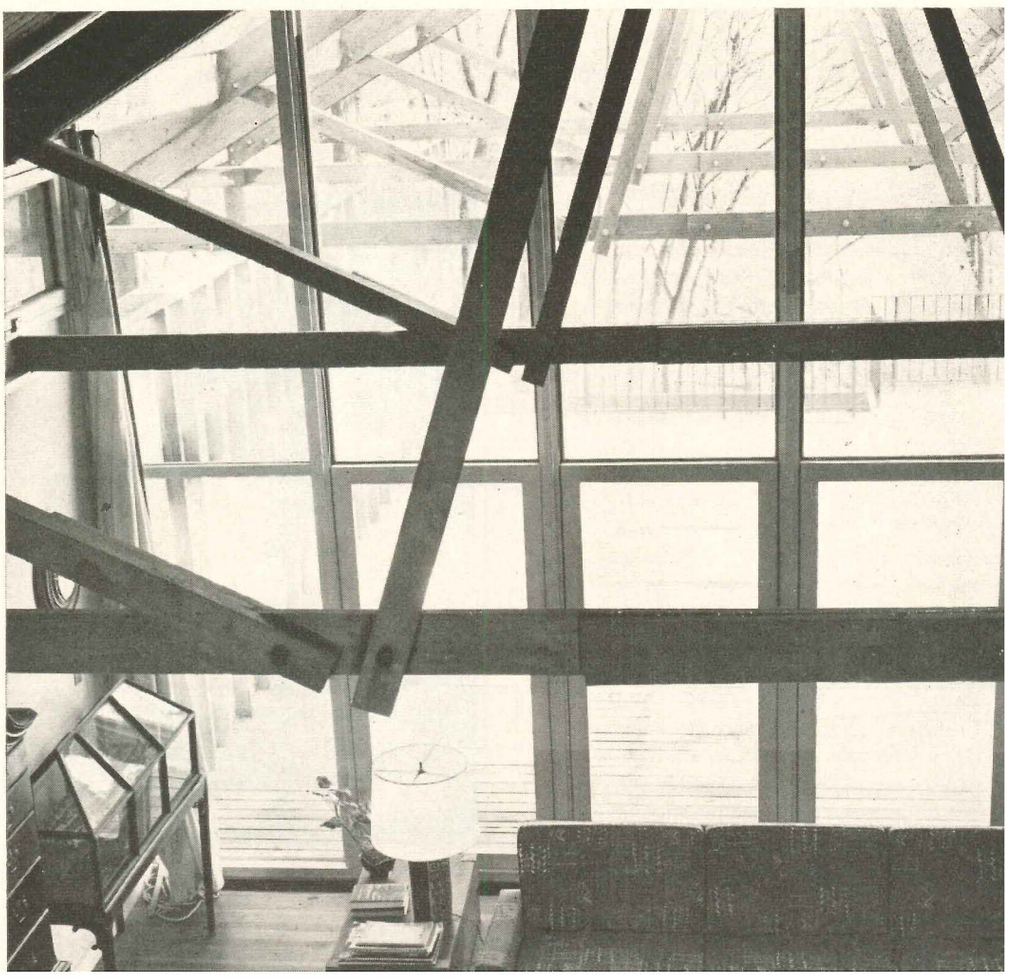
Reginald Knight was born in Grandfalls, Newfoundland, and trained at Columbia and Harvard. As a designer for Skidmore, Owings & Merrill he worked on Lever House, is now in private practice in Sarasota and New York.



Under construction, *building revealed all the grace of its modular frame. Clerestories along length of h*

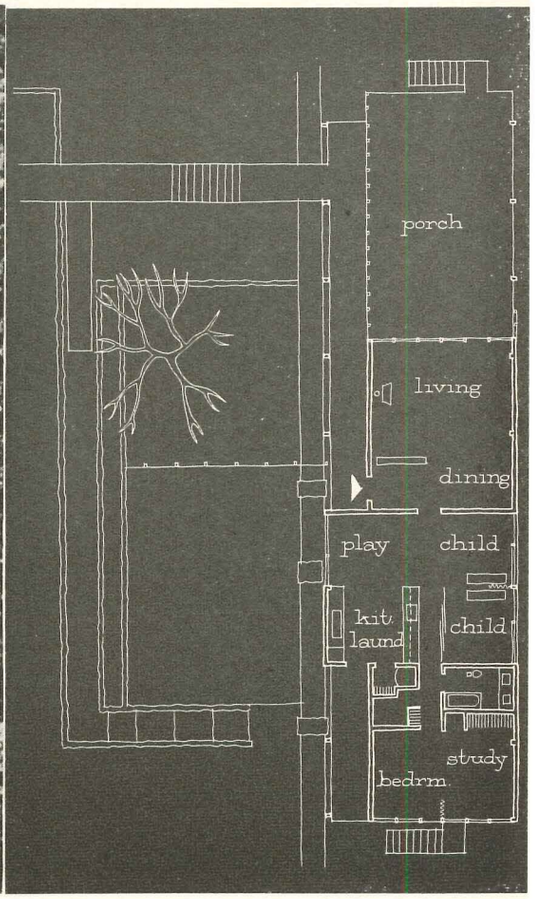
Architects Twedell & Wheeler, and Designer John Garber, re-examine the **CLERESTORY TRUSS**

ARCHITECTS: Twedell & Wheeler
DESIGNER: John Garber
GENERAL CONTRACTOR: David Kugler
LOCATION: Cincinnati, Ohio



View down *into living room from high guest-bedroom balcony reveals a decorative abstract pattern of overlapping trusses. Designer Garber feels that skinny, taut construction is characteristically American, tried to stress this aspect. Big screened porch (750 sq. ft.), framed just like enclosed part of house, forms an extension of the living area.*

entilate interior



North elevation *expresses dramatic truss frame with clerestory strip above. End wall panels are filled with glass or vertical redwood siding.*

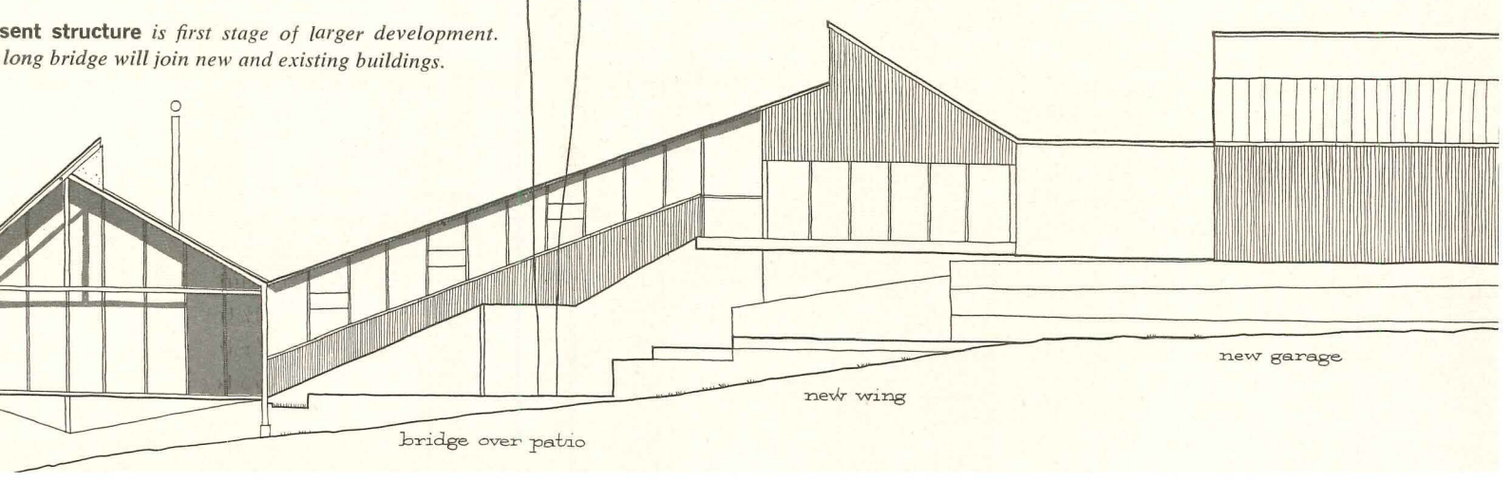
Plan *is a simple 24′ deep, 90′ long rectangle. One third of length is taken up by screened porch. Center portion is flexible family space.*

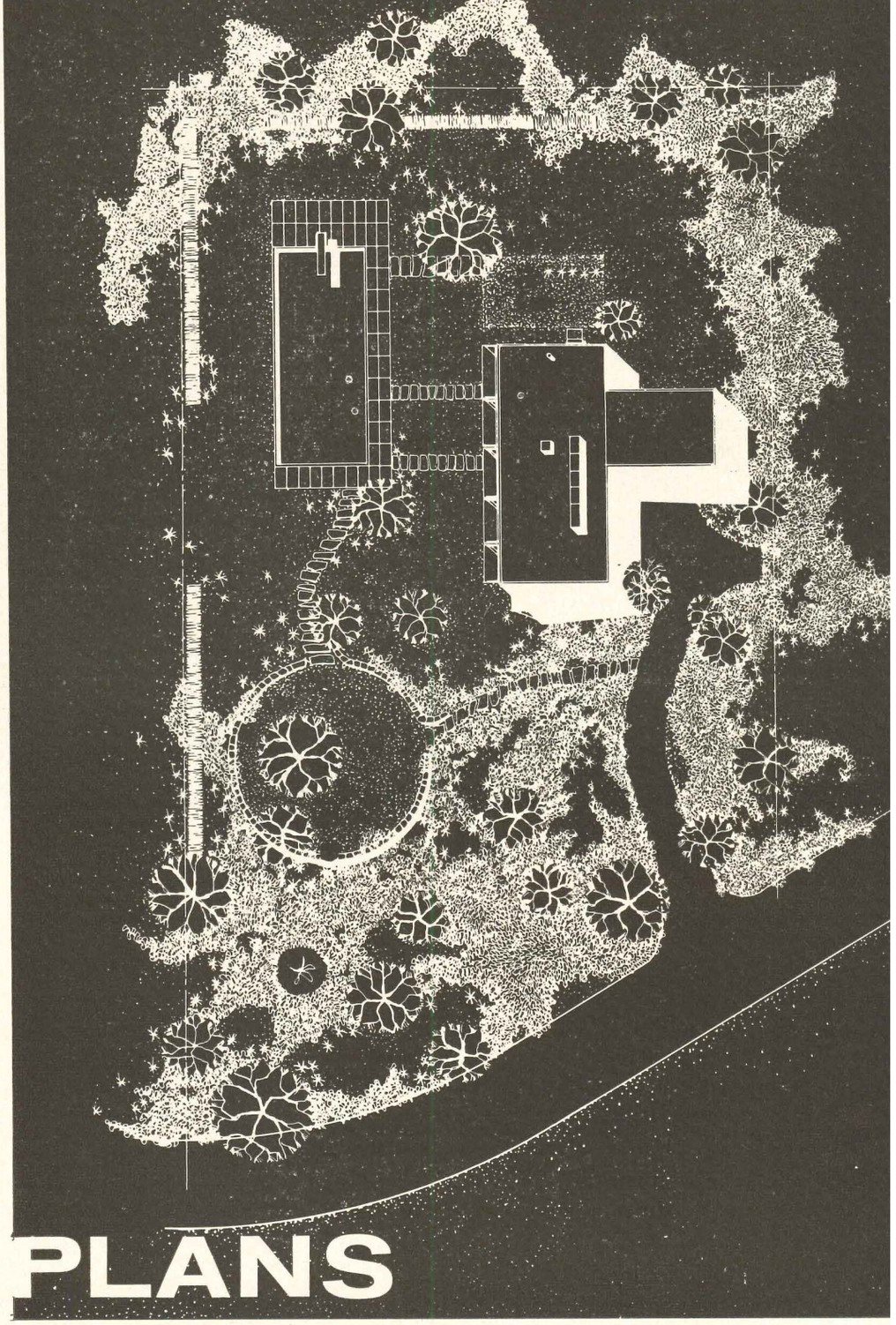
This dramatic studio house is composed almost entirely of wood trusses and trussed girders that have been traditional in US farm structures for generations. The effect, however, is anything but traditional (see above).

The structure consists of ten identical frames set 10′ apart and left almost entirely exposed to form a decorative skeleton that appears and reappears inside and out. All connections were made with Teco ring connectors, steel gusset plates, or both. The trussed girders which carry the floor are assemblies of 2 x 14″s, tension rods and struts. They span 24′. Within this framework, an impressive volume of space was enclosed at relatively low cost ($1 per cu. ft.).

Architects Richard Twedell and Richard Wheeler, and Designer John Garber met at Harvard before they opened an office in Cincinnati, where they now practice.

sent structure *is first stage of larger development. long bridge will join new and existing buildings.*





Site plan of William Holland residence by Architects Eshbach, Pullinger, Stevens & Bruder, Philadelphia, Pa.

Six young architects
re-examine house

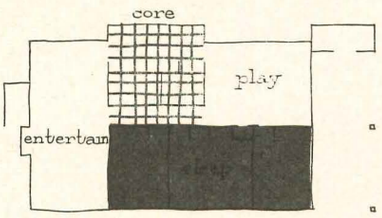
PLANS

The biggest change in US family living over the past 30 or 40 years is that it has become fuller and, thus, more complex.

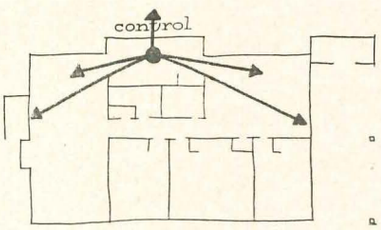
Our families are bigger; they do more entertaining with less help; and they have more hobbies and more elaborate facilities with which to pursue them.

All of this tends to make some of the "old" modern plans at least partly obsolete. The all-open plan, for instance, won't work in a servantless house. The compact bedroom and study cubicles once so popular now are being supplemented with spacious family rooms. And the service wing of old must be replaced with a centrally located kitchen from which the mothers of today can control all entrances and all outdoor and indoor play areas—unaided.

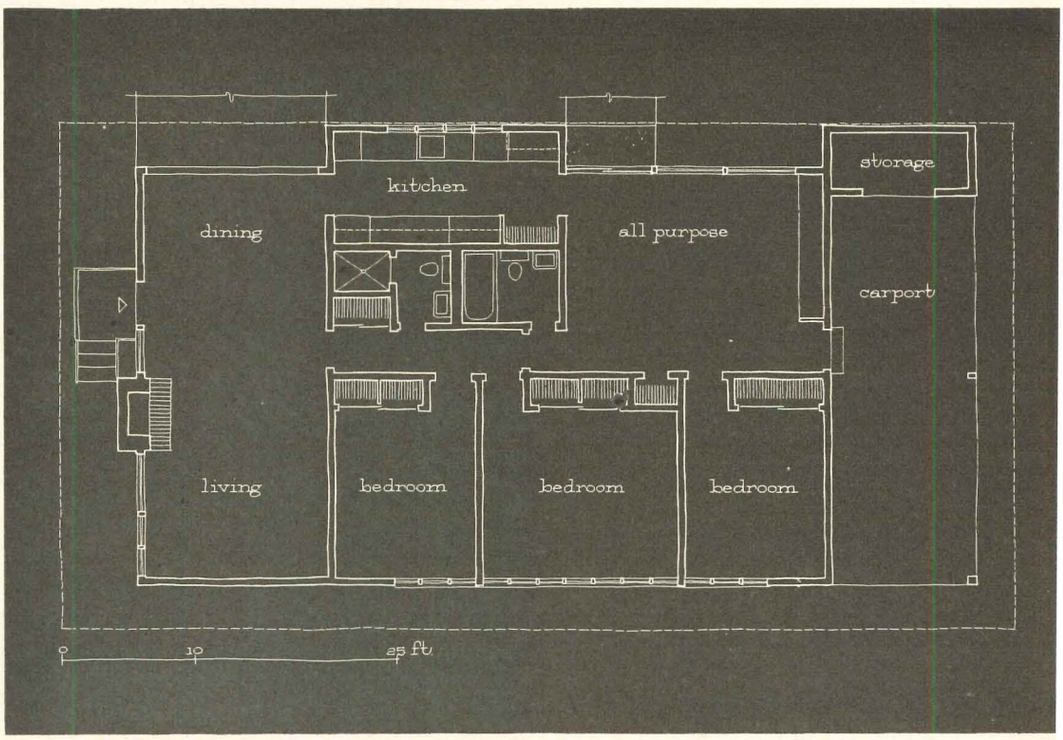
On the next seven pages you will see some fresh modern plans that are based upon a re-examination of these and other new factors.



Plan *divides simply into areas for entertaining, sleeping and play—all grouped around service core.*



Kitchen *controls both entrances, dining area, family room and outdoor play areas.*



Architects Harmon & Caldwell re-examine the **FAMILY PLAN**

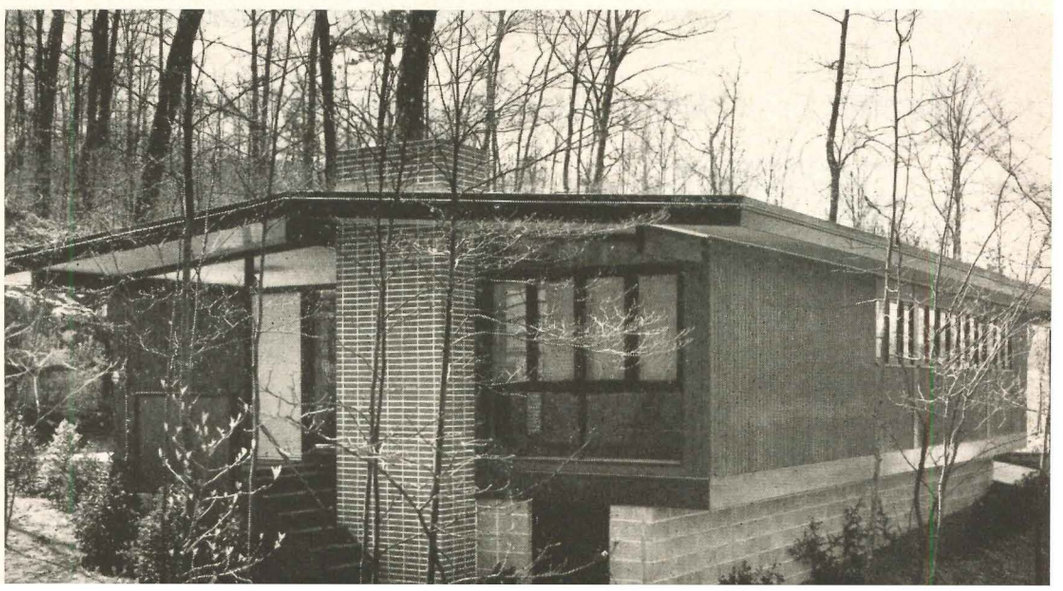
ARCHITECTS: Harmon & Caldwell
BUILDERS: Byrd Realty Co.
LOCATION: Birmingham, Ala.

This plan permits the housewife to supervise all major areas inside and outside the house—and prepare the dinner at the same time. From the centrally located kitchen she can see both entrances, the formal living room as well as the family room, dining areas and indoor and outdoor play spaces. And the careful placement of utilities and storage units sets up sound-barriers between zones—an asset in a 1,400 sq. ft. house.

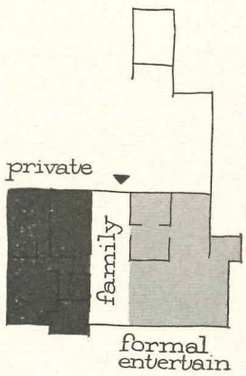
Carroll Harmon, a graduate of N.C. State, and Herbert Caldwell, a graduate of the University of Oklahoma, now practice architecture in Birmingham, Ala.

Living-dining room *looks out on rocky hillside through glass walls.*

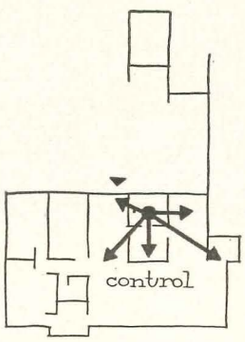
Photos: Joe Winters



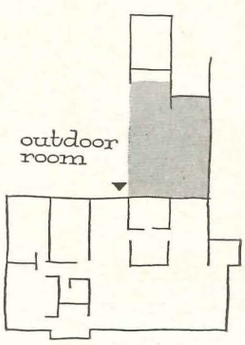
Cantilevered main floor *rests on concrete block base which contains utilities and storage. By recessing foundation walls architects were able to reduce size of floor joists because of the structural economies inherent in continuous cantilever spans.*



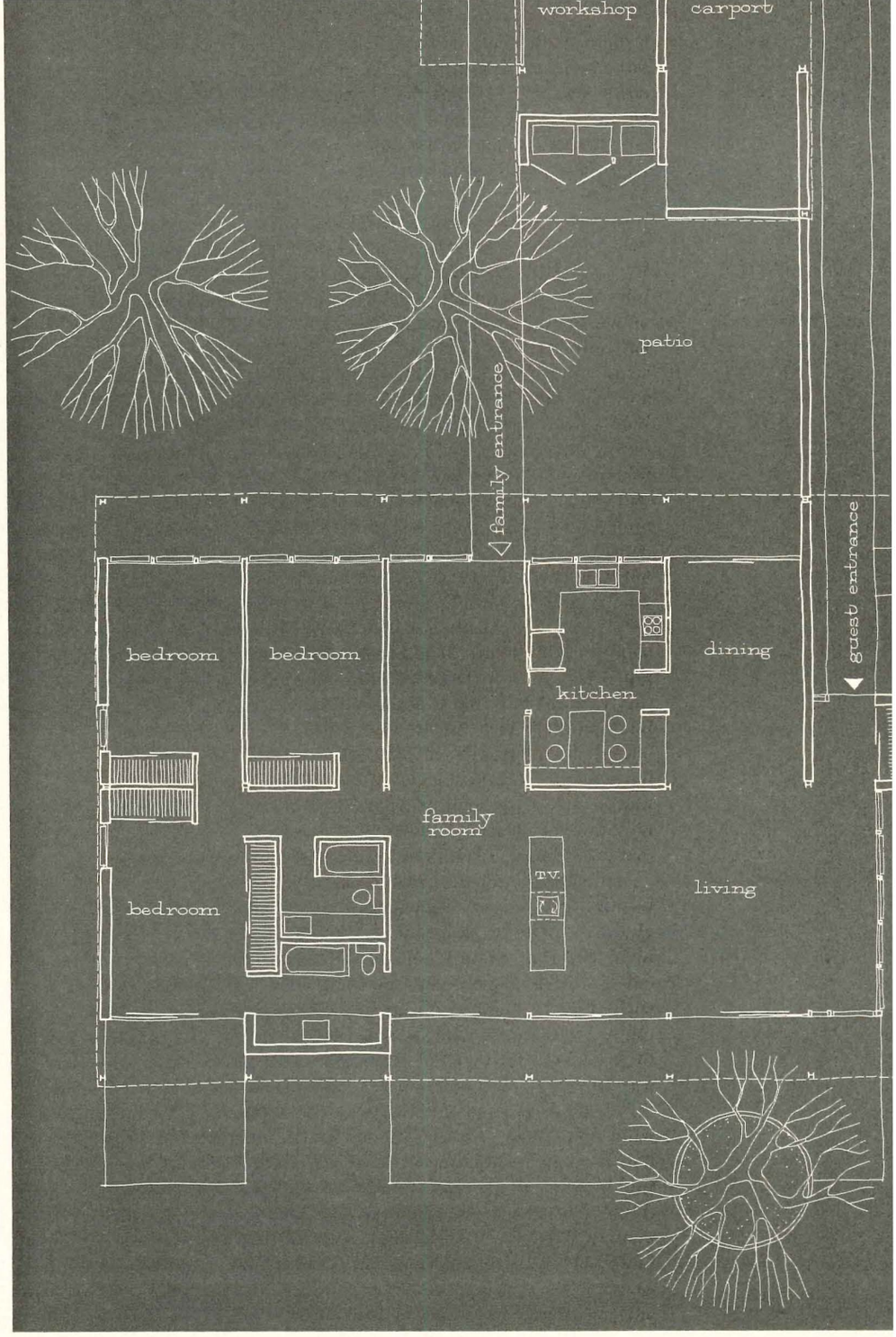
Plan *divides naturally into a nighttime zone, a buffer-zone containing family room and family entrance, and a zone for formal entertaining.*



Both major entrances *are easily accessible from the kitchen.*



Outdoor living *with indoor privacy is assured by proper placement of carport, extension of house wall.*



Architect Gene Leedy re-examines the **3-ZONE PLAN**

Commercial Photo Assoc.

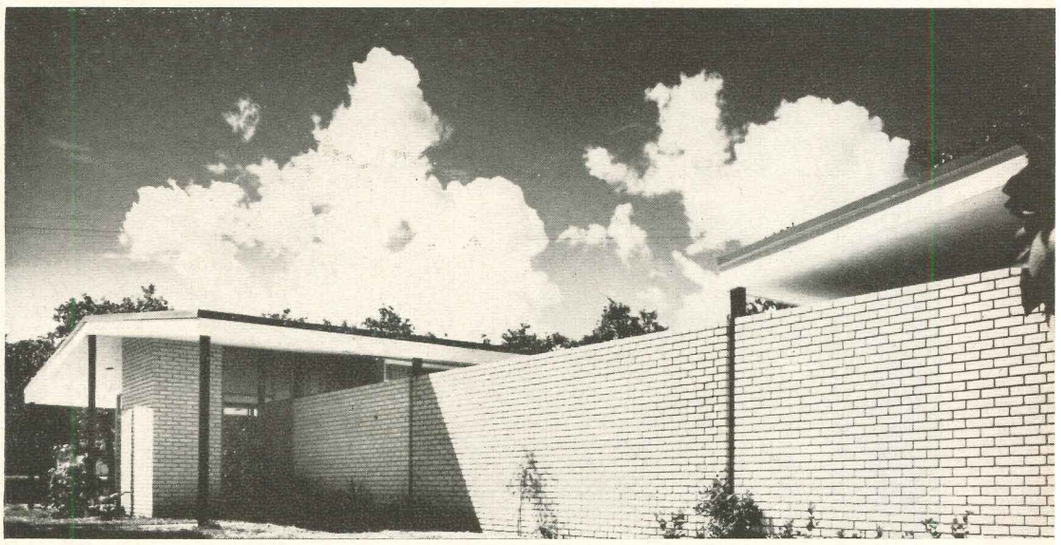
The resemblance of this house to others of similar plan is deceptive. In this house the family area acts as a buffer-zone between bedrooms and formal living room. In addition, it serves as a spacious hall for the family entrance—a place where children can dump toys and overshoes as they come indoors.

That puts the family entrance right into the center of the house where it should be—and the guest entrance can then be placed at the far end of the formal living area, well away from areas of privacy. The kitchen has easy access to both of these areas.

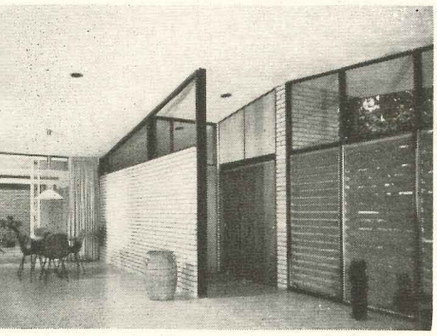
Architect Gene Leedy, who designed this house, graduated from the University of Florida, worked briefly for Paul Rudolph, is now practicing in Winter Haven, Fla.

ARCHITECT: Gene Leedy
GENERAL CONTRACTORS:
Frank Sparrow & Ike Pidgen
OWNERS: Mr. & Mrs. Frank Sparrow
LOCATION: Sarasota, Fla.

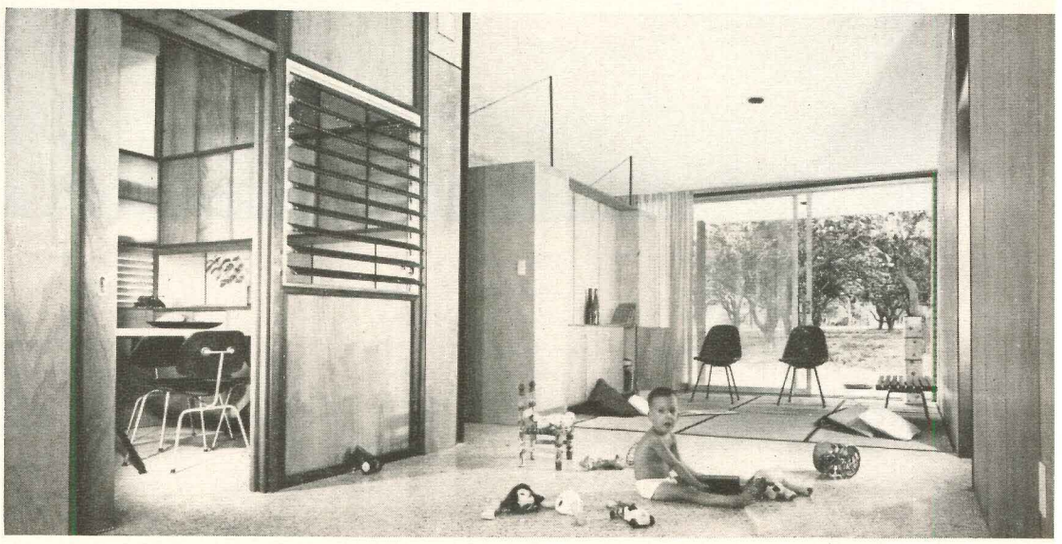
Photos: Wm. Amick



Structure *is a cage of light steel columns with brick or glass panels used to fill in the bays*

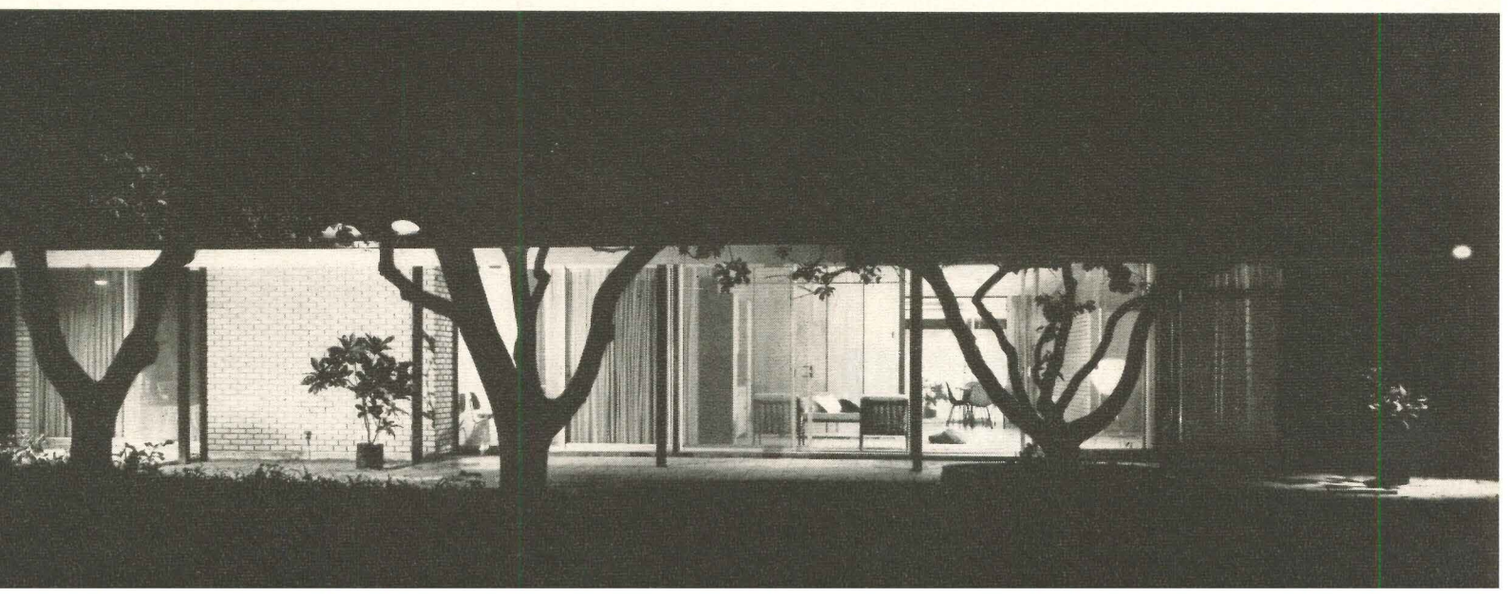


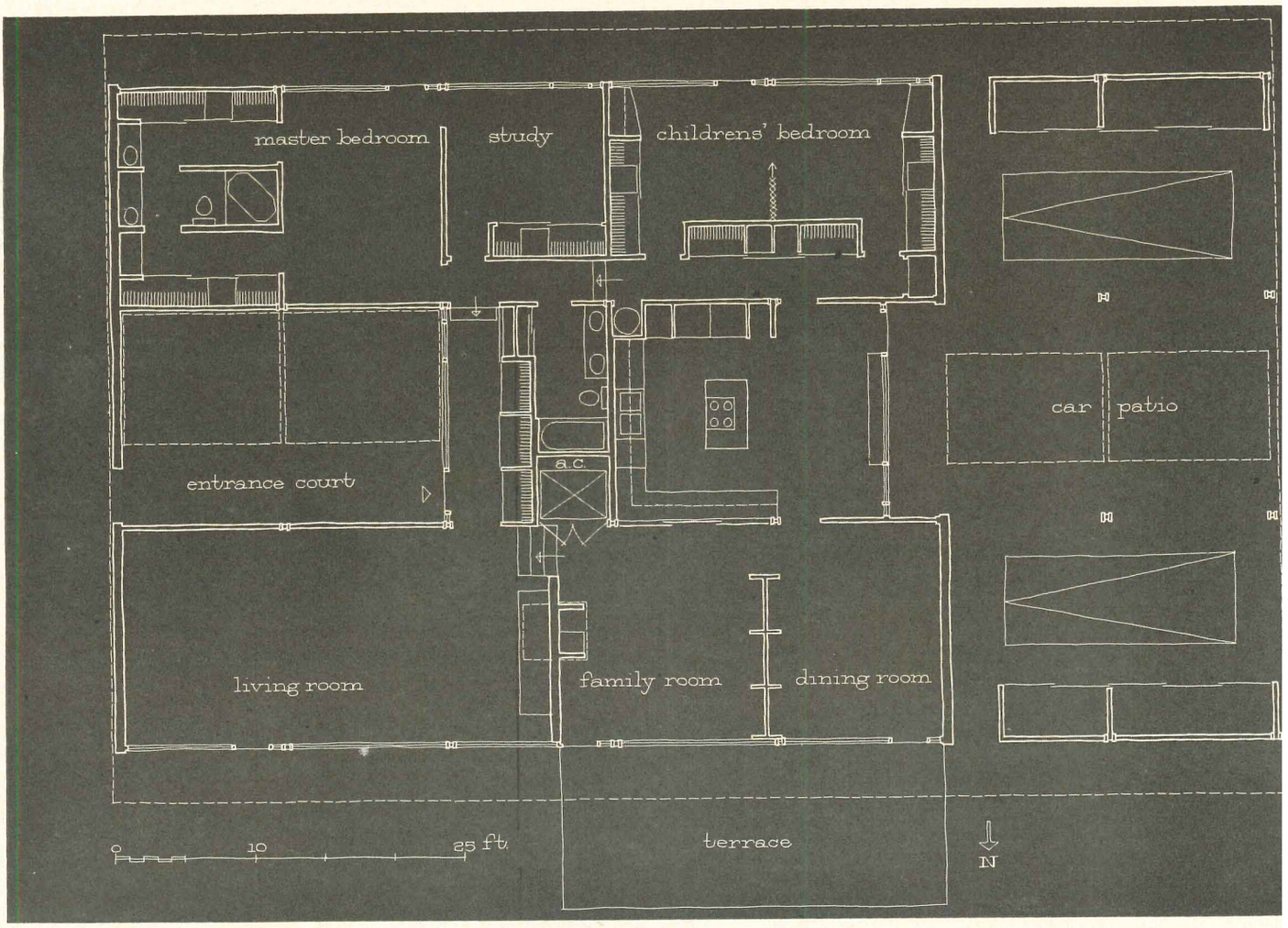
Guest entrance *at living room end is screened by brick partition.*

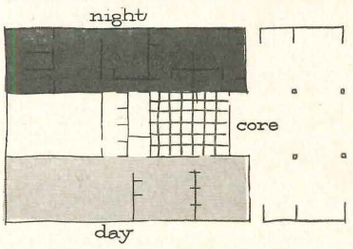


Family room *(right) is buffer between sleeping areas at right, formal living areas at left. A storage wall with built-in, 2-way TV set on a small turntable separates family room from living room.*

Garden facade *is almost all glass, with brick enclosure to the left containing the 2-bathroom area*

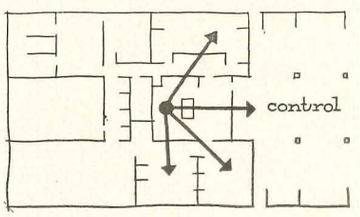




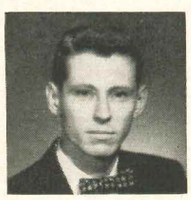


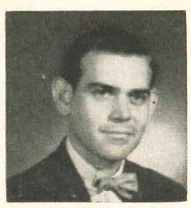
Plan *divides naturally into daytime and nighttime areas, separated by utility core and patios (see sketch left).*

Kitchen controls *children's rooms, family entrance, dining room and family room, in clockwise order (see sketch at right).*



Architects Short & Murrell re-examine the **H-PLAN**





OWNER: Carl Jones

ARCHITECTS: Short & Murrell

GENERAL CONTRACTOR: E. A. Tharpe & Co.

LOCATION: Shreveport, La.

The standard H-plan offers several advantages and poses some problems. This handsome Louisiana house shows those advantages to the full—and is equally notable for its solutions to the problems.

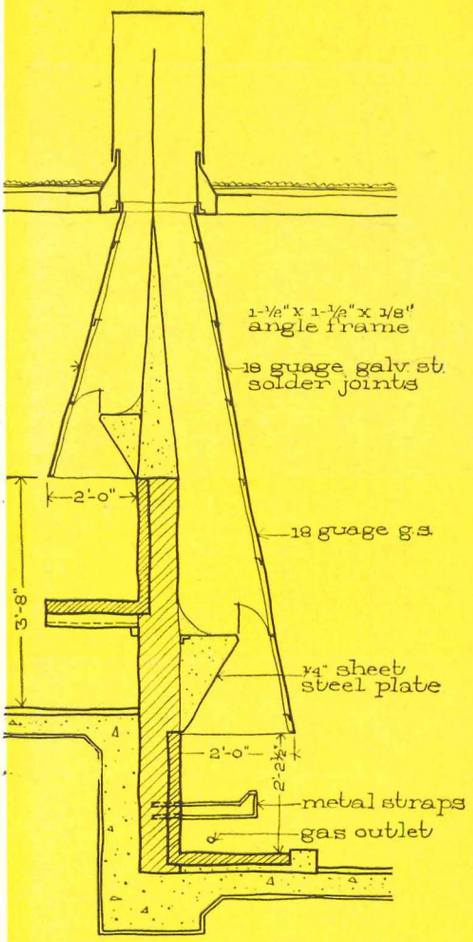
To be specific: this H-plan house is neatly divided into daytime and nighttime areas; it gives privacy to each; it has an efficient utility core—doubly efficient because it puts the air conditioner right into the center of the house—and it has two patios, one of them a formal entrance court.

The chief problems of the standard H-plan have to do with entrances and control: it is hard, in an H-plan, to place the garage close to the kitchen and it is hard to control the main entrances from the kitchen. In this house on a corner lot, the architects solved both problems by turning the rear court into a car and service entrance directly adjacent to the kitchen. The formal entrance is thus used mainly by guests.

Both Sam Short and George Murrell were born in Louisiana, studied architecture at Tulane. Their practice is in Baton Rouge.

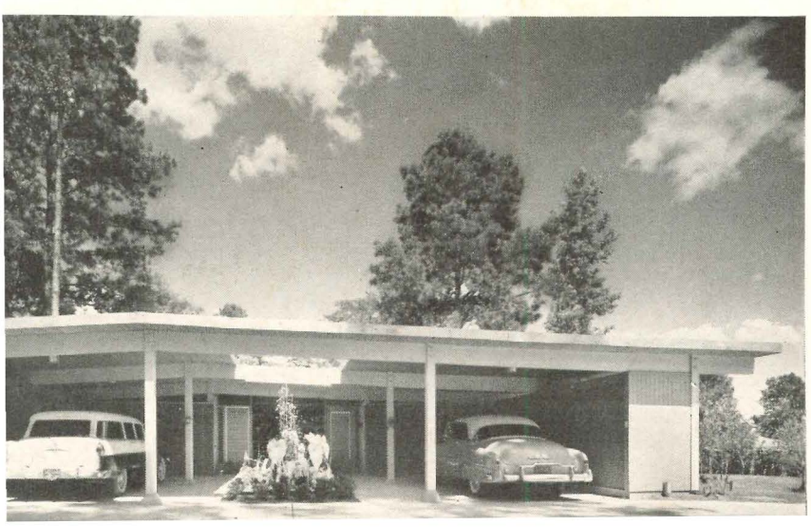
Photos: Frank Lotz Miller

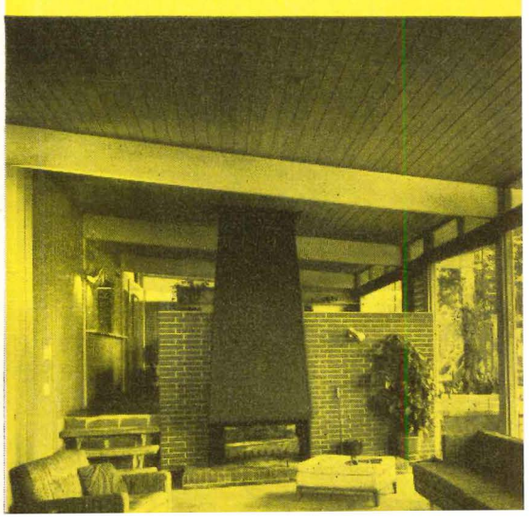
Entrance patio *is small formal garden, used mostly by guests*



Two-way fireplace *faces family room and living room. On family room side (top), unit contains a rotisserie and a firebox; on the living room side is a regular, log-burning fireplace with built-in andirons. Hood is made of 18 ga. galvanized steel.*

Car patio *is the family entrance, leads straight into kitchen area*

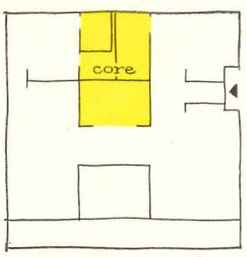




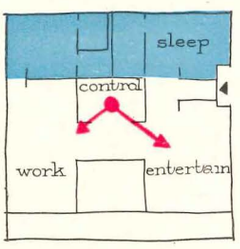
Photos: Morley Baer

Post-and-beam structu
and right) carries a plar
deck made up of 2" x 3
2" x 4"s set on edge and
together. Architect Hoop
up dozens of details at f
scale. He says that his c
tor found these much
helpful than the usual r
scale drawings. Hoops'
were drawn on small 12
sheets that could be
with ease on the job.

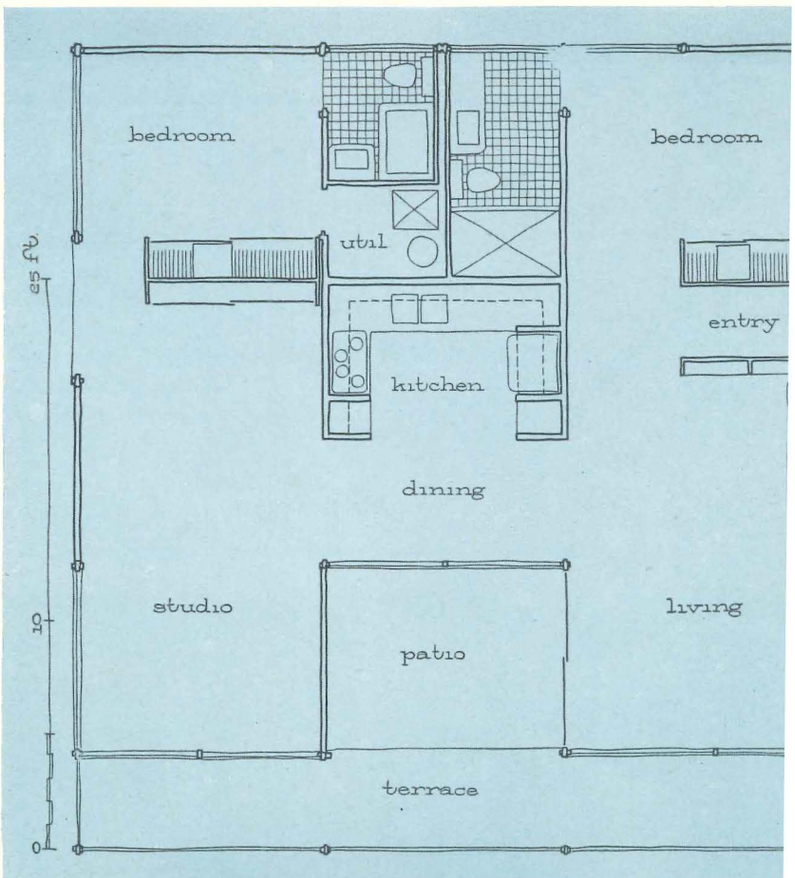
Architect John Hoops, in this hillside house, re-examines the **PATIO PLAN**

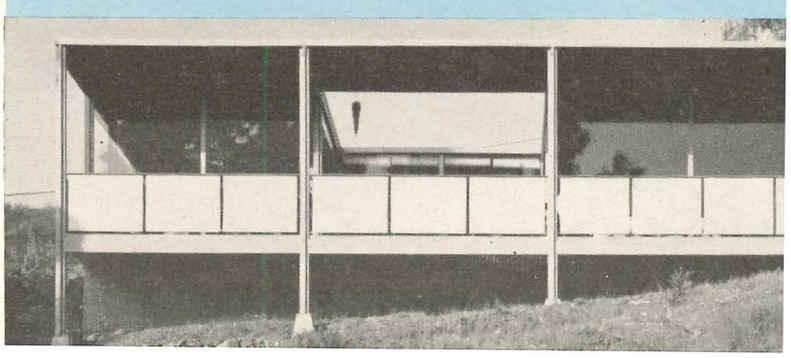


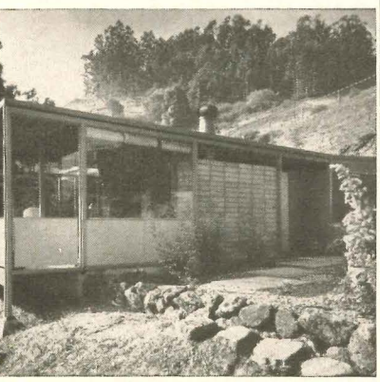
Plan of house *is centered on utility core which contains kitchen, two baths and services. Core, patio and storage walls divide the plan into areas for sleeping, work and entertaining.*



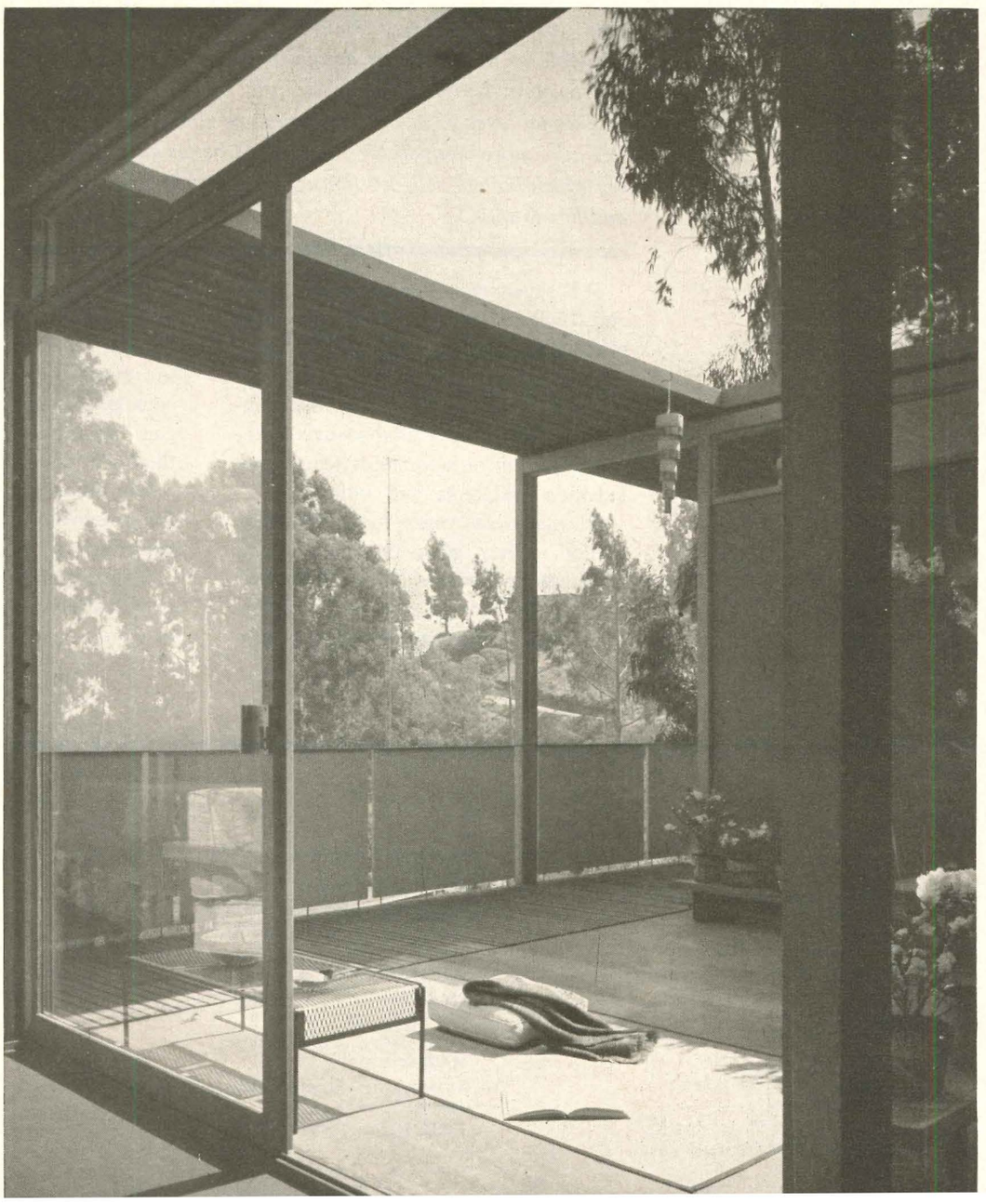
Structural bays *are 11', 11', and 13'-7" wide, respectively. Terrace parapet is of waterproof plywood.*







Central patio *(above and below) forms an extension of all the rooms that surround it*



This post-and-beam pavilion erlooking Sausalito is a fine exple of several simple planning d building ideas. For example:

All rooms center on a compact ity core, which divides the plan o areas for sleeping, work and ertaining.

All daytime areas are grouped und a small central patio, ich serves as an outdoor exten- n of the indoor spaces that sur- nd it.

A system of double-posts that d beams between them. This minates the use of expensive, vy timbers so often found in t-and-beam construction.

A neat system of glass and ply- od inserts between structural ts completes the building and es it all the logic and grace of apanese tea house.

Architect John Hoops was train- at Pratt Institute, N.Y., and at nbrook. After some years in . Francisco, he moved to the cago office of Architects Skid- re, Owings & Merrill, where is a senior designer./END

HITECT: John Hoops
JCTURAL ENGINEER: John E. Brown
IERAL CONTRACTORS: Gardner & Johnson
NER: Isabell Chesnut
ATION: Sausalito, Calif.

ROUND TABLE

Here are the unanimous conclusions and recommendations of a Round Table on architect and builder collaboration to assure better design for a million new homes a year.

The Round Table was jointly sponsored by the AIA, the NAHB, and HOUSE & HOME.

Joining in the report are editors of eight leading consumer magazines concerned with better houses, and representatives of the Realtors, the mortgage lenders, the appraisers, and the prefabricators.

***Good design for a million houses a year is the architects' great new challenge**—a challenge to help millions of Americans enjoy a better way of life in better homes in better communities—a chance to open up a major new source of professional income.*

The architects can meet that challenge and realize that chance only by working with the merchant builders (who now build five houses out of six) and helping them offer better living for less money.

For young architects this challenge and chance should have a very special appeal, for here is a virgin field the older architects have passed by. Already the few young architects who have entered this field have achieved a success for which they might have had to wait years had they specialized in any other type of design.

Better design is at least equally important to the builders

It will tap a new market among millions of families already well housed, families who can be sold a new home only if it is far more desirable than anything now available to them. Better design offers builders their one best chance to keep new construction booming when the price of good existing houses drops back to its traditional level 15% or 20% below new house costs.

In the more competitive years ahead better design may be the No. 1 factor deciding which builder sells his houses and prospers, which builder fails to sell his houses and has to quit.

It is seven years now since architects and builders began talking up these obvious truths.

It is seven years since AIA and NAHB first gave them official recognition and set up Collaborative Committees to encourage closer team work between architects and builders.

Those seven years have not been wasted. They gave time for a few architect-and-builder teams to achieve outstanding success and so let others see that architect-and-builder collaboration can pay off in practice as well as in theory. They allowed time for enough architect-and-builder failures to reveal the pitfalls to avoid. And each year more and more builders began looking for an architect to help them with their problems.

But this is not the place to overstate the progress in architect-builder collaboration so far.

The sad and perhaps shocking truth is that after seven years and thousands of words . . .

The panel:

American Institute of Architects

L. MORGAN YOST, chairman
Home Building Industry Committee,
JOHN HIGHLAND, past chairman
Home Building Industry Committee,
THOMAS SCOTT DEAN, Dallas
CHARLES GOODMAN, Washington
GEORGE HAY, Philadelphia
A. QUINCY JONES, Los Angeles
RUFUS NIMS, Miami
DAN SAXON PALMER, Los Angeles
NICHOLAS SATTERLEE, Washington

National Association of Home Builders

MARTIN BARTLING JR., secretary
ALAN BROCKBANK, past president
THOMAS P. COOGAN, past president
JOHN DICKERMAN, executive vice president
ROBERT P. GERHOLZ, past president
RALPH JOHNSON, technical director
RAY K. CHERRY,
Hadley-Cherry, Inc., Los Angeles
STANLEY EDGE,
Sampson-Miller Associated Co.'s, Pittsburgh
JOSEPH L. EICHLER
Eichler Homes, San Francisco

Prefabricated Home Manufacturers

RICHARD POLLMAN, Chairman, Design Committe
Pollman Homes Corp.
FRANK P. FLYNN, JR.
National Homes Corp.

American Bankers Association

THOMAS L. NIMS, secretary
Mortgage Division

American Institute of R. E. Appraisers

A. N. LOCKWOOD, president

American Society of Landscape Archite

LESTER A. COLLINS

Lenders, realtors, appraisers, editors all join to urge closer architect-builder teamwork

Not more than 100 architectural firms from coast to coast have taken an effective interest in working with the merchant builder and qualified themselves to give him the difficult, exacting, and highly specialized kind of design service he needs;

Not more than 2,000 builders from coast to coast are ready to let an architect do more than a face-lifting job on their product or willing to pay a fee big enough to let him do an all-out job of designing better living into their houses.

In a few cities where builders can see local examples of how well architect-and-builder collaboration can pay off, scores of builders are now trying to team up with architects—some for superficial service, some for full collaboration. But there are still many important cities where no builder has yet turned to an architect for help, and there are whole states where the builder, if he tried, would find it hard to come upon an architect ready and qualified to meet his needs..

It is high time to find out why. Why has progress in architect-and-builder collaboration been so slow? What can be done to get it moving faster? To answer these questions was the purpose of this Round Table.

We have agreed on 15 reasons why past progress has not been faster.

> Some of these reasons involve money and fees—but money is not the heart of the problem.
> Some of these reasons reflect todays confusions over changing styles and taste—but better design is not a matter of style.
> Some of these reasons are up to the architects and builders to cure—but others cannot be met without changing the design attitudes of the Realtor, the appraiser, mortgage lender and the government agencies, too.

All 15 reasons are facets of one big reason:

> There is not enough understanding between architects and builders, and not enough understanding from Realtors, appraisers and lenders. Because there is not enough understanding there is not enough respect for the contribution each could make, not enough willingness to seek and take advice, not enough eagerness to learn one from the other.

So all our reasons can also be summed up in one:

We need better team work based on better understanding and greater mutual confidence.

ıtional Association of Real Estate Boards
GENE P. CONSER, executive vice president

ıtional Savings & Loan League
ROLD P. BRAMAN, executive vice president

; Savings & Loan League
IRMAN STRUNK, executive vice president

ɔducers
BERT W. LEAR, general marketing manager
erican Radiator & Standard Sanitary Corp.
.ER S. ROGERS, technical director
ens-Corning Fiberglas Corp.

Magazine Editors
PETER BLAKE, architectural editor, House & Home
HUBBARD H. COBB, building editor, American Home
MARY HAMMAN, modern living editor, Life
MARY KRAFT, director, building forum
Good Housekeeping
MAXINE LIVINGSTON, family home editor, Parent's
ELIZABETH MATTHEWS, home furnishings editor
Woman's Home Companion
WILLIAM MEHLHORN, architectural editor
House & Garden
JOHN NORMILE, building editor
Better Homes & Gardens
JOHN PETER, home living editor, Look

Life Insurance Institute
JOHN G. JEWETT, vice president
Prudential Life Insurance Co.

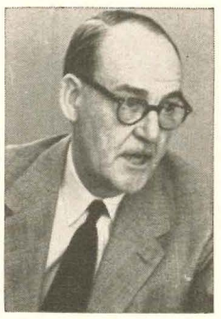
Government Observers
NEIL CONNOR, director
Architectural Standards Division
Federal Housing Administration
CHARLES HOPKINS, construction valuation service,
Veterans Administration

Moderator
P. I. PRENTICE, editor and publisher
HOUSE & HOME

Here is what we all mean when we say the builders need much better design:

Walter Daran

Bartling: Architects ought to recognize that home building takes an entirely different design approach.



Normile: Flops are made by good designers and good builders, because there is not adequate consumer research.

Goodman: The real obstacle is the lenders' and appraisers' attitude toward forward-looking design.

Conser: More and more realtors are learning to help builders sell good design.

Better design means design for better living and more delight in your surroundings, indoors and out. It means much more than lining up the windows, cleaning off the gingerbread, unsplitting the banan split, and using better color —important though all these are. Specifically . . .

It means design that will make it easier and pleasanter for people to live the way people want to live today, which is often quite different from and less formal than the way their fathers wanted to live.

It means design for more enjoyment of the land (which is the biggest reason people move to the suburbs).

It means design for pleasant spaces to see through the windows and pleasant spaces to use outdoors. It means design for coordinated indoor-outdoor living.

It means design for fuller use and multi-use of space.

It means design for privacy where privacy is needed, and openness where openness makes sense.

It means design for easier house work when few even pretend they have servants.

It means design for more family l and for more children.

It means design for better storage, people can get more pleasure and use their belongings.

It means design for maintenance ec omy, which means—among other thi —better orientation, wider overhar right use of materials.

It means design for building econor for every cent of waste squeezed leaves just that much more for be living.

It means better tract planning, be land planning, better siting, better la scaping, and more trees.

It means planning better neighl hoods and better communities.

It means design that will achieve riety with dignity, good taste and g proportion.

Above all, it means design that integrate all this commodity of better ing in the delight of a simple and monious whole that will rest the eye satisfy the emotions—design that make the buyer proud of his home the prospect eager to buy and move

What about contemporary desig

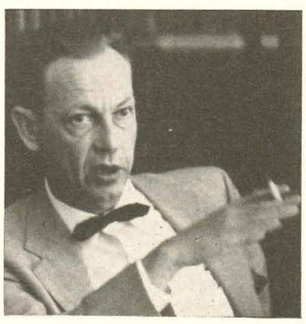
We believe today's architecture sh mean using today's methods and ma als to provide this better living for to It should not be a matter of styl clichés.

The essential difference between day's new architecture and the so-c "traditional" design is not that the architecture usually uses larger areas, fewer and larger openings, l roof pitches. The essential differ is . . .

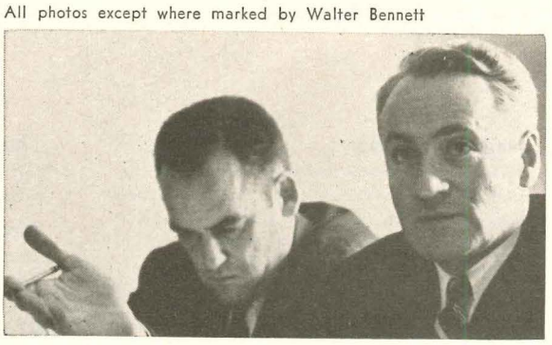
1. The new architecture tries to costs down by taking full advantag today's materials and methods, wh traditional design often uses mate and details better suited to yester handicrafts than today's mechar construction.

2. Today's new architecture start planning for better living first, befo tries to make the house look as goc it is; whereas traditional design us starts by deciding what the house look like, before it tries to make house as good as it looks.

All photos except where marked by Walter Bennett



Nims: The merchant builder is primarily a manufacturer and his architect is his industrial designer.



Flynn: Low appraisals often keep good design from selling.

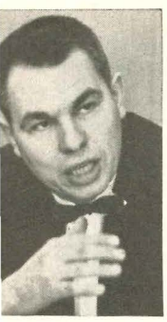
Edge: When design becomes commercially acceptable we will work with architects together as a team.

or: Before FHA nake evaluations have to go back hat the market ay.

Jewett: Our men aren't hired to be architectural critics.

ns: One of the lacks is in the onship between er, architect and tectural schools.

Eichler: I personally have seen everybody that lives in one of our 3,500 houses. They tell me what I ought to do with the next house I build.



: A way of life nly includes the ut the way peoant to live.

Lear: I don't see how any builder can deny that he needs advice and help.

an: Architects get their fee bethey aren't deng what they they're selling.

Hay: I'll be starving to death after all this —I'm a bachelor, I don't use much money.

Here are 15 reasons why architect-and-builder collaboration has progressed so slowly:

1. Too many builders have found it easy to sell houses without good design. Too few builders realize how fast the market is changing now that the housing shortage is over. Too few builders realize that in the highly competitive markets ahead it will be harder and harder to sell houses with Model T design. Too many builders still hope that more gimmicks and gadgets will keep their houses selling.

2. Too many established architects are too busy to bother with a new field, and too few young architects realize what a wide open opportunity the production house offers them (see p. 153).

3. Too many architects think small about working with builders. Too many architects think designing and engineering production houses is easy. Too few architects realize it is among the most difficult of all architectural disciplines (see p. 153).

4. Too many builders think small about the value of an architect's services. Too few builders are willing to pay an adequate fee for such exacting work (see p. 154).

5. Too many builders think they alone know what design the public wants. Too few builders realize how many good new architect-developed sales appeals they are missing.

6. Too many architects, conversely, think they already know all the answers. Too few architects realize how many good economies the builders can teach them.

7. Too many builders think an architect would waste their money on costly details and methods. Too few builders understand that a really well-designed and well-engineered house should cost not more but less to build. Too few builders realize that with the right team work the architect can often teach them many new ways to build better for less.

8. Too few builders realize that the right architect's special training could help them every step of the way — advising them about the land they are thinking of buying, helping them lay out their tract and make the best use of their lots, helping them find subcontractors familiar with the kind of construction his design calls for, helping them pick and specify better products and materials, re-working details that prove costly and modifying plans as customers react to the model house.

9. Too few architects have any contact with local builders and too few builders have any contact with local architects.

To improve that local contact, we suggest that local AIA chapters might well invite the local NAHB president to address them once a year—and vice versa. We suggest that architects interested in production house design should join as associate members the local NAHB unit (where they would be more than welcome), attend its meetings regularly, get to know the members, talk to them about their problems and so allow time to win the builders' confidence. This would not conflict with their AIA membership.

10. Too many builders think of the architect as an artist they can call in almost at the last minute to pretty up the appearance of their houses. Too few builders realize that good design must be more than skin deep, that good design means design for better living as well as better appearance (see p. 152).

11. Too many builders think of design in plan-book terms. Good design must always be tailored to local tastes, local temperatures, local prevailing breezes, local availability of materials, local construction economies. Good design for one site can be bad design for another; often the right house for one side of the street would be wrong on the other.

12. Too few lenders and appraisers encourage better design by giving it adequate credit in their valuations. Too few understand the sound and practical reasons behind all the changes architects are introducing into house design. (See Section VIII). Too few realize that public taste in houses has always changed from decade to decade and is changing faster than even now. Too many think yesterday's house will still be a best seller tomorrow and penalize progress in their valuations.

As one immediate result of the Round Table the American Institute of Real Estate Appraisers is urging all its chapters to invite a leader of the local AIA to speak at any early meeting and tell the appraisers more about what is new and why in better design.

13. Too few Realtors understand how to sell the better living the architects try to plan into their houses.

14. Too often FHA and VA give too little credit for better design in their valuations (see section VII).

15. Too few architects realize how many builders are sincerely interested in offering the very best house they can sell at a given price, how many builders are less interested in making a quick profit than in establishing a lasting reputation for offering good values in good neighborhoods.

Production house design is a very difficult type of architectural practice, because . . .

1. It calls for planning so much into so little space.

2. It requires an intimate understanding of construction methods often quite different from those used on custom houses. It means weighing the saving offered by any unfamiliar method against the cost of teaching the subcontractor a new trick. And sometimes the method that is cheapest for one builder and his crews will spell added expense on a nearby project.

3. It requires far more pains to minimize waste. A $2 saving on a single house becomes a $100 saving on 50. One builder and his architect found it profitable to detail a roof three different ways and then clock the carpenters to see which took the fewest man hours.

4. It requires special attention to smooth scheduling (which is perhaps the biggest single economy the production builder has brought into home building). Often a method which has proved itself more economical on a single house will run up the cost of a production house by upsetting the scheduling of crews or the scheduling of inspection.

5. It calls for the most intimate knowledge of what feature will get full credit from local FHA, VA, and other appraisers, and what features will just run up the down payment. It means knowing the MPR backwards and forwards. It also requires an intimate knowledge of how FHA, VA and local inspectors think.

6. It means designing to standard dimensions, so you can use standard parts and sub-assembiles that will fit together with as little on-site labor as possible.

7. It means designing for an unknown client, a client to whom the architect can never explain why this or that feature would make the house pleasanter to live in or cheaper to maintain.

8. It means designing houses for a lower income group than the income group most architects serve in their custom-house practice, an income group with whose tastes, prejudices, and preferences many architects are unfamiliar. It means designing for an income group that is not as sure of itself, not as familiar with the best new ideas in modern living, not as ready to experiment.

9. It means designing a common-denominator house for a composite customer, which is completely alien to the architect's whole training to create something special to meet the special needs of a particular client. It means designing houses that will appeal to a broad range of tastes and cultural backgrounds —houses to attract second time buyers and houses for people who have always lived in apartments, houses that will appeal alike to those who want to be thought smart and those who would rather be thought solid and substantial.

Cherry: The architect should be a clearing house for the use of new materials.

Jones: We should get all our clients together and work as a team for a fine looking community.

Gerholz: Some architects offer us more service than they can deliver.

Hopkins: VA offices can accept plans which are certified by architects we approve.

Here is a fine chance for young architects

Recently some of America's very best and best known architects—men who built national and international reputations for the fine custom houses they designed for single clients—have recognized the importance of the production house market and have begun designing production houses. Among them we might name (panel members excluded):

Anshen & Allen	Mies van der Rohe
Campbell & Wong	Alfred Parker
Curtis & Davis	The late Burton Schutt
Vernon De Mars	Smith & Williams
DeWitt & Swank	Raphael Soriano
Victor Gruen	Hugh Stubbins
The Keck Brothers	Oskar Stonorov
Carl Koch	Royal Barry Wills
George Matsumoto	Minoru Yamasaki
Wurster, Bernardi & Emmons	

Even Frank Lloyd Wright himself has been working with his builder son-in-law on a tract of houses for sale in Phoenix.

The interest of such outstanding architects is raising the prestige and dignity of a type of architectural practice which at first did not enjoy as high a standing in the profession as we believe it should. It would be hard to overestimate the importance of this added prestige.

But none of us expects established architects to play as big and important a part in designing production houses as the newer men.

Today's successful architects are already too busy. Only the newer men have the time to apprentice themselves in the architectural firms which have pioneered in this type of practice. Only the younger men can afford to go out and take jobs on the builders' tracts to study first hand the very special problems of production work.

So young men head up most of the firms which now do the biggest volume of production design, and these young men have won in a few years a success that would almost certainly have taken much longer to achieve in any other architectural field?

What about money? What should a builder pay?

What should an architect ask for volume design?

Ten years ago builders just lifted their lesigns from plan books, at a cost of ot over $10 a house

Ten years ago architects designed only ustom houses, on which their standard ees of not less than 6% ran from $1,000 house up.

Architect-and-builder relations are still edeviled by memories of those widely livergent figures. Too many builders still tart their design fee thinking at the lan book level and wonder why they hould pay even $25 a house. Too many rchitects still start their builder house ee thinking at the custom house level nd wonder if it would be even ethical not to mention profitable) to take less han 6%.

Both attitudes are impossible

Six years ago the AIA formally recgnized that designing production houses ad more in common with industrial deign than with traditional architectural ractice. Six years ago AIA agreed that s recommended percentage fees for cusom work could not and should not pply. Six years ago AIA agreed that roduction house design should be comensated on an industrial design basis.

Six years ago the NAHB recognized hat plan book design was no answer to he industry's needs and urged its memers to associate themselves with local rchitects on a mutually profitable basis.

Builders expect to pay the price for everything else that goes into their houses.

They pay high wages for their labor, big fees and discounts for their money, high prices for their land. There is no sensible reason why an adequate architect's fee should be the only cost at which builders balk.

All of us agree it is nonsense for an architect to expect custom house fees on production work. Conversely all of us agree it is penny wise and pound foolish for a builder to think he can save money by paying the architect too little.

Conditions vary so widely from job to job that we cannot recommend any standard schedule of fees or royalties. But here are some points on which we all agreed:

1. Designing a small house is harder than designing a big one, and designing a production house calls for much more time and pains than designing a once-only house.

2. The architect's work is only half done when the basic design is finished and accepted. He must offer far more than such a localized plan-book service. He must give special attention to each separate house to fit it to its site, to get proper orientation and to create harmony of color, texture, and scale along the street.

Palmer: The number one service of architects is good design—but they must understand what every item in the house costs.

Brockbank: A builder may be dedicated to doing something for his community but if his architect designs something that won't sell, he won't do much for the community very long.

Strunk: We're definitely going to encourage better design.

Now let's be more specific:

The ten architects on our panel have videly different methods of charging for heir services to production builders. Most of them ask a basic fee to cover heir basic design which may run $3,000-,000 for all the work needed to assume naximum economy on a production model plus a royalty for each repeat to cover their added costs for varying the basic design and fitting each house to its site. Most of them believe it is impossible for an architect to offer full service for a fee that scales down to less than $100 a house overall on even the biggest tracts of moderately priced houses. Several of them get up to $500 a house in $30,000 to $40,000 developments, for in that price range each house requires special design. Only two of them scale their fees down under $100 a unit overall on tracts of 100 low cost houses (one gets down to $35 when the same plan is repeated 500 times).

All of us believe the question of fees will work itself out fairly easily and quickly as more architects learn how to give builders the design help they need and as more builders learn how much the right architect can do to cut their costs and improve their sales.

ost: Mediocre houses ell because they get nancing.

Johnson: One of the problems is the appraiser and how he interprets value.

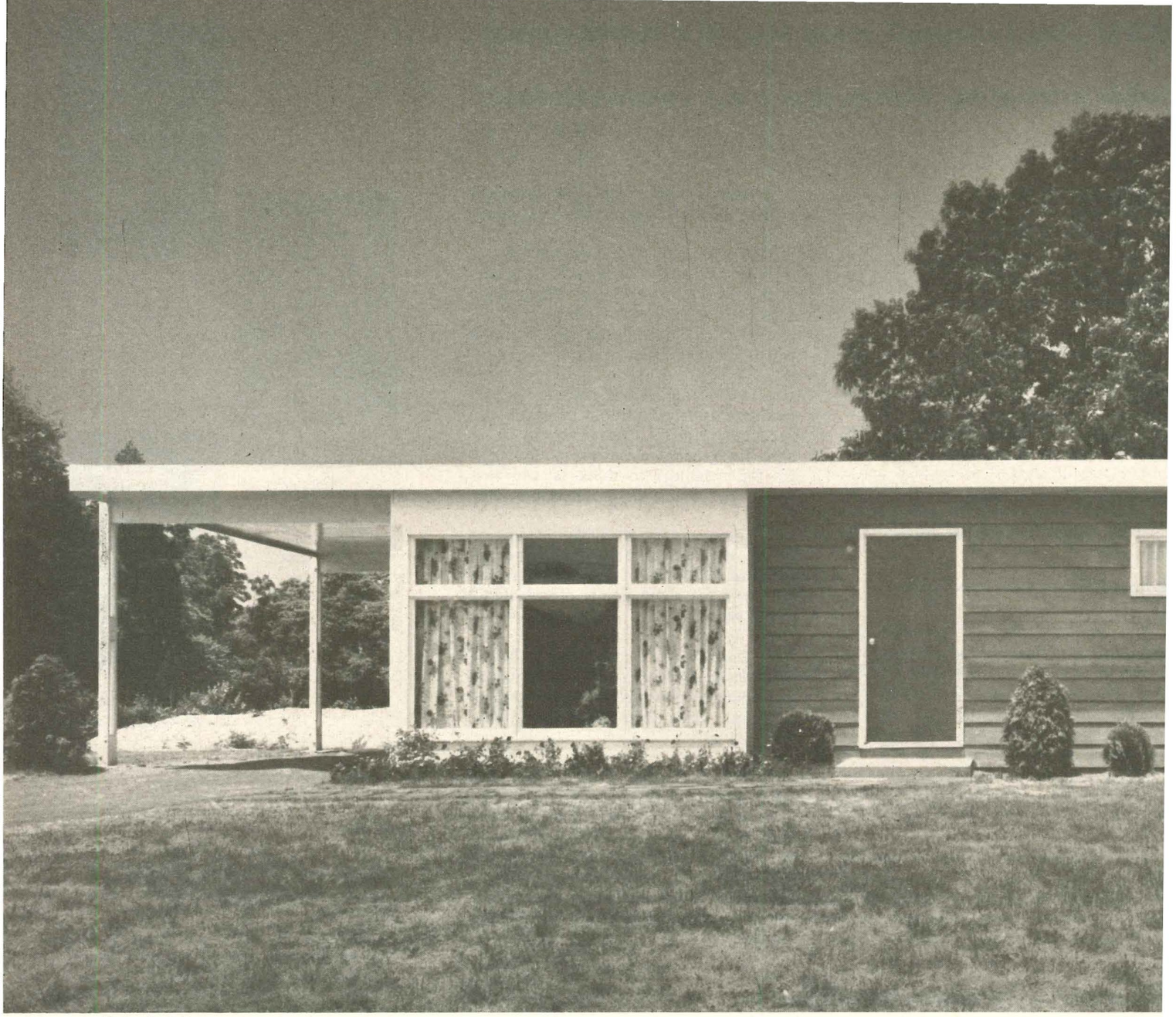
Chase Studio

FHA and VA should help more than they have

FHA and VA could help in many ways to speed the progress of architect-and-builder collaboration. At the very least they should give the builder clear and firm assurance that they will include his full architect's fee in the cost estimate that goes into their valuation. More important, they could and should give more credi for good design in their appraisals and tell their appraisers not to penalize new ideas in their valuations.

Up to now FHA has actually depressed the market for architectural services by including in its cost estimates only "whatever is the local custom for architects' fees." In practice this has usually meant giving all builders the same $25 credit whether they actually paid their architect $7 or $150. FHA headquarters in Washington disapproves this $25 leveling off and does not deny that it has had a most unfortunate influence.

Another way FHA and VA could encourage builders to employ architects would be to extend and clarify the two-year-old VA practice of letting builders by-pass the pre-appraisal review of their plans if a licensed architect certifies that they meet FHA's minimum property requirements. This certification can often save six precious weeks, but most architects and builders are afraid to use it because they do not know what would happen if FHA or VA later decided the architect had misinterpreted some ambiguous requirement.



Photos: Louis Reens

TWO YOUNG MEN BUILT THIS HOUSE

BUILDER: Sheffield Building Corp.
ARCHITECT: William L. Landsberg
DECORATOR OF MODEL: Eva Phyl
LENDER: Dime Savings Bank of Williamsburgh
MORTGAGE BROKER: LoPinto & Kelly
TERMS: FHA 203(i) loans, $489 down
LOCATION: Selden, L. I.

"This house, nearly everyone told us, would never sell even if we could build it for $7,000."

Eugene Farrow, 29, and Phillip Kallenberg, 35, told the story at their Selden, L. I. development where the first 47 of their 130 contemporary houses are going up. All have been sold to buyers qualified for loans under FHA's section 203(i). This section, limited to houses selling for under $7,000, allows builders to omit about $1,000 worth of work and materials which buyers can add later.

"We thought it best to break into home building in the low price bracket," Farrow said. "We wanted to offer something different. For a while we were stumped. We looked at a lot of plans but they left us cold, and at $7,000 you can't do

Builder Eugene Farrow (left) is 29; his partner Phillip Kallenberg is 35. Farrow formerly worked as trouble-shooter for a builder of shopping centers. Kallenberg was a plastics merchandiser before the two formed Sheffield Building Corp. in 1955.

O SELL FOR $6,999

ıch to change them. Time was running out, too—we had tioned our land and summer was almost on us."

That was when—and why—they approached Kallenberg's ighbor, Architect William L. Landsberg, with a radical idea. uld he do a flat-roof 960 sq. ft. house to sell for $7,000?

:hitect and builder worked together

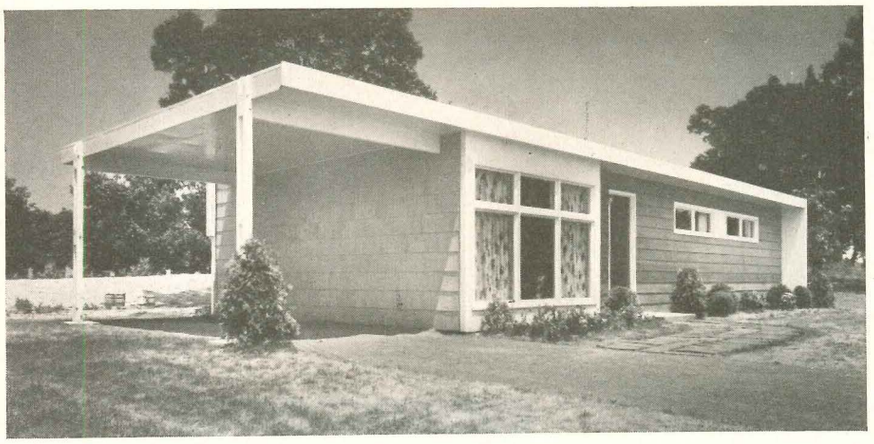
Landsberg agreed to take on the problem on a royalty basis. : laid out the floor plan for four bedrooms and gave the use its handsome lines. He and Farrow worked closely, the :hitect showing ways to cut costs, Farrow guiding on meths that fit Long Island's special building practices.

"When we took the finished plans around," Kallenberg recalls, "we got the same reaction from almost everyone They liked the floor plan but nobody thought we could sell it with the flat roof."

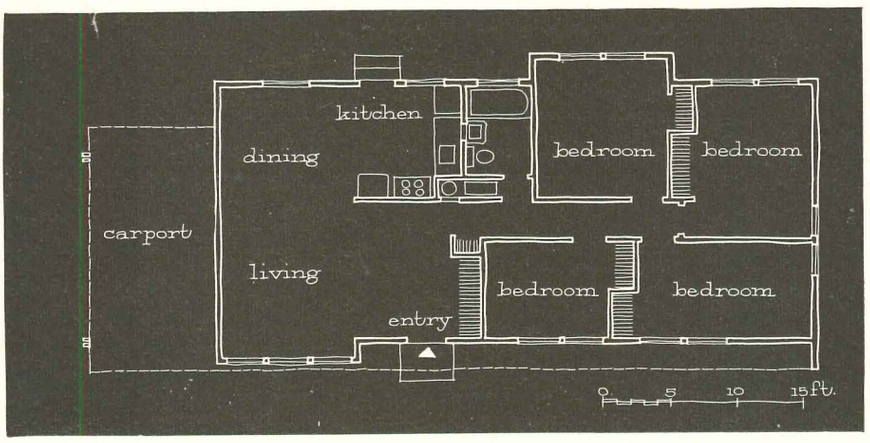
"But we had a few encouraging things on our side," Farrow added. "Our lumber dealer liked the design so much he scarcely looked at our financial statement. Our mortgage man liked it so much he agreed to take all the loans. He said he was sure the house had a high long-term value."

"We went ahead, figuring there must be 130 people among New York's millions who would like a chance to buy a flat-roof contemporary house. And even if there weren't, there ought to be that many who would live in one if it meant they could get the extra space we could give them."

Here is what the flat-roof house offers for $6,99

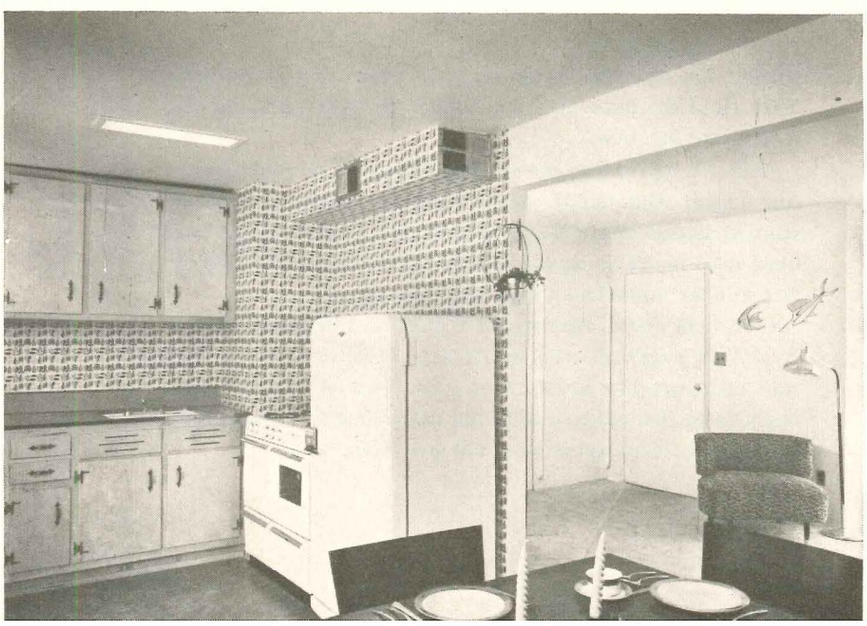


Eave *over front window of living room affords fairly good protection from sun, adds to appearance. Front siding is cedar.*



Tightly planned house *has 960 sq. ft. of living space, with four bedrooms. It is 56′ wide, including carport, and 20′ to 22′ deep. The plan emphazises maximum living space on one level.*

Living and work areas *are all open to each other, receive ample light from floor-to-ceiling windows at front and rear. Coat closet is provided next to front door. House is heated by overhead warm air ducts. Long hallway (right) viewed here from bedroom toward living area, makes house seem larger.*



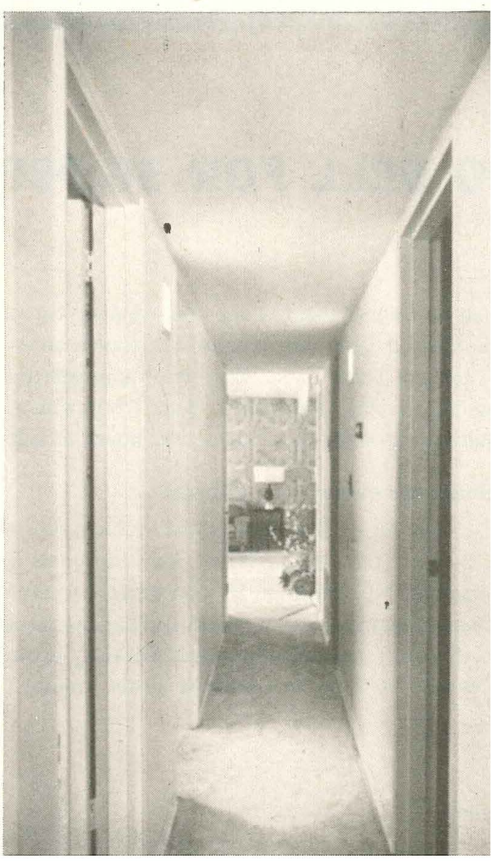
Farrow and Kallenberg include the following tures in their selling price of $6,999:

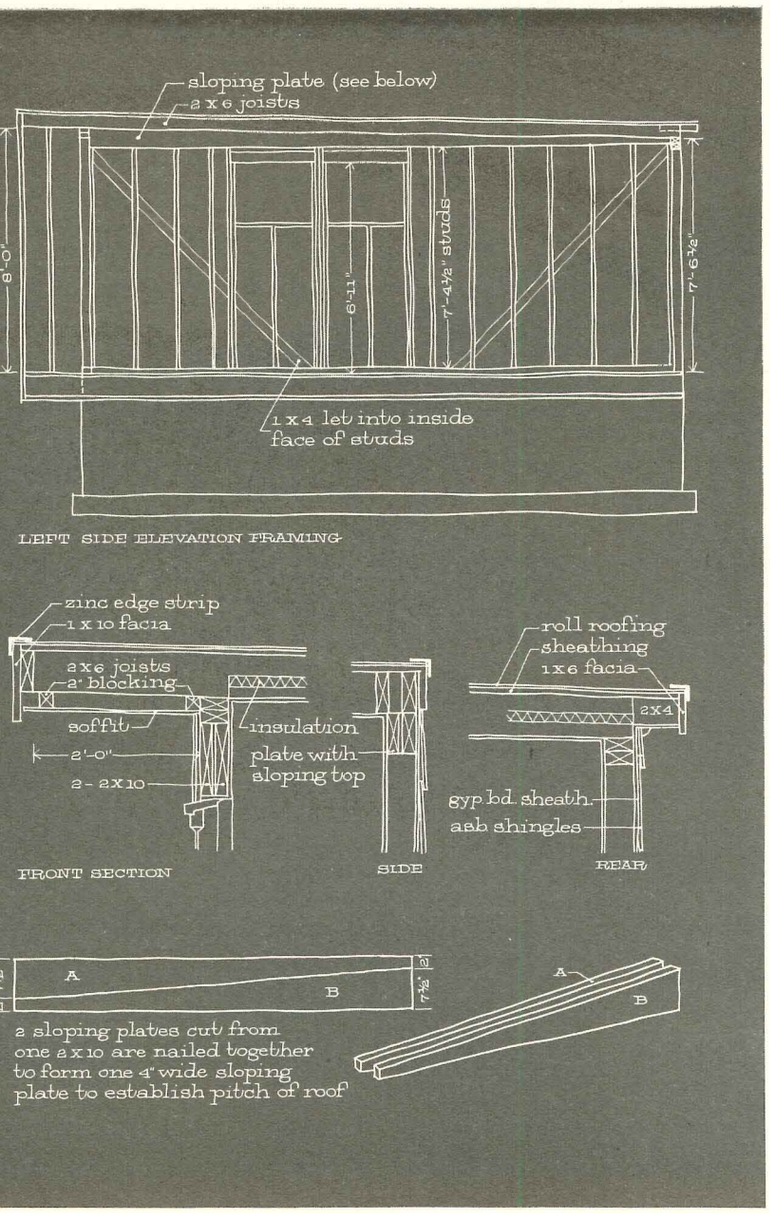
Poured concrete foundation.
Weather-tight windows, some floor-to-ceiling.
Ceramic tile on bathroom floor and walls.
Colored bath fixtures.
Plastic kitchen counter-top.
Linoleum on kitchen floor.
52 sq. ft. of closet space (doors included).
Copper plumbing lines; hook-up for washer.
Gas-fired forced-air heating through ducts tc rooms (providing 100,000 Btu's for house ı to require only 75,000).
60-amp. entry box and 220 volts; circuit brea switches controlling lamp outlets; built-in hall kitchen light fixtures.

About $1,000 more would complete the house

The builders estimate that less than $1,000 ı would cover all their costs for adding the follo to meet FHA's standard MPR requirements: f flooring, $150; landscaping, $80; driveway, painting the interior, $300; more cabinets, $6 range, $125; ¾″ instead of ⅜″ sheathing, more wall insulation, $85. This shortcoming in lation would cost the buyer about $200 to rei after house is built. First ten buyers installed lation themselves in walls during construction.

The houses were sold under FHA's section 20 intended to make it easier for do-it-yourself bı to make down payments and complete the hı at a later time.





First 47 houses *are being completed this spring. Eighty more, already sold, will be built in summer. Trees are saved wherever possible, even on side lots.*

Here are two ways they saved on roof construction

1. This "flat-roof" house actually has a slight pitch—5½" across 20' to 22' from front to back. The pitch permits rain to flow off readily but at a rate slow enough to reduce the need for a gutter, the architect says. It also eliminates the need for an expensive tar-and-gravel roof. Architect Landsberg specified a 36" rolled 90 lb. felt roofing laid with a 17" overlap, which he considers as serviceable as tar-and-gravel though less attractive. "In fact," he says, "this rolled roofing gives better covering at the coping, which is where most leaks develop." The builders estimate they saved about $200 by using this type of roofing.

2. Despite slope of roof and ceiling, all side wall studs are the same length, thanks to the ingenious device of a sloping plate to support the 2 x 6" joists. This plate is easily formed by cutting one long 2 x 10" lengthwise (see drawing) to obtain two similar pieces which are nailed side-by-side to form a 4"-wide sloping plate over the 2 x 4" studs and under the 2 x 6" joists.

Cost-cutting held the price to $6.45 a sq. ft.

To keep costs at a minimum, Partner Farrow and Architect Landsberg worked together closely on construction and design so that they could (1) hire regular subcontractors in the area and (2) still use all these cost-saving building methods:

Precutting all framing material.

Tilting up exterior walls, assembled on the floor at one time.

Laying the entire floor before partitioning.

Applying wallboard on both ceiling and side walls before partitioning.

Using a double wall around plumbing.

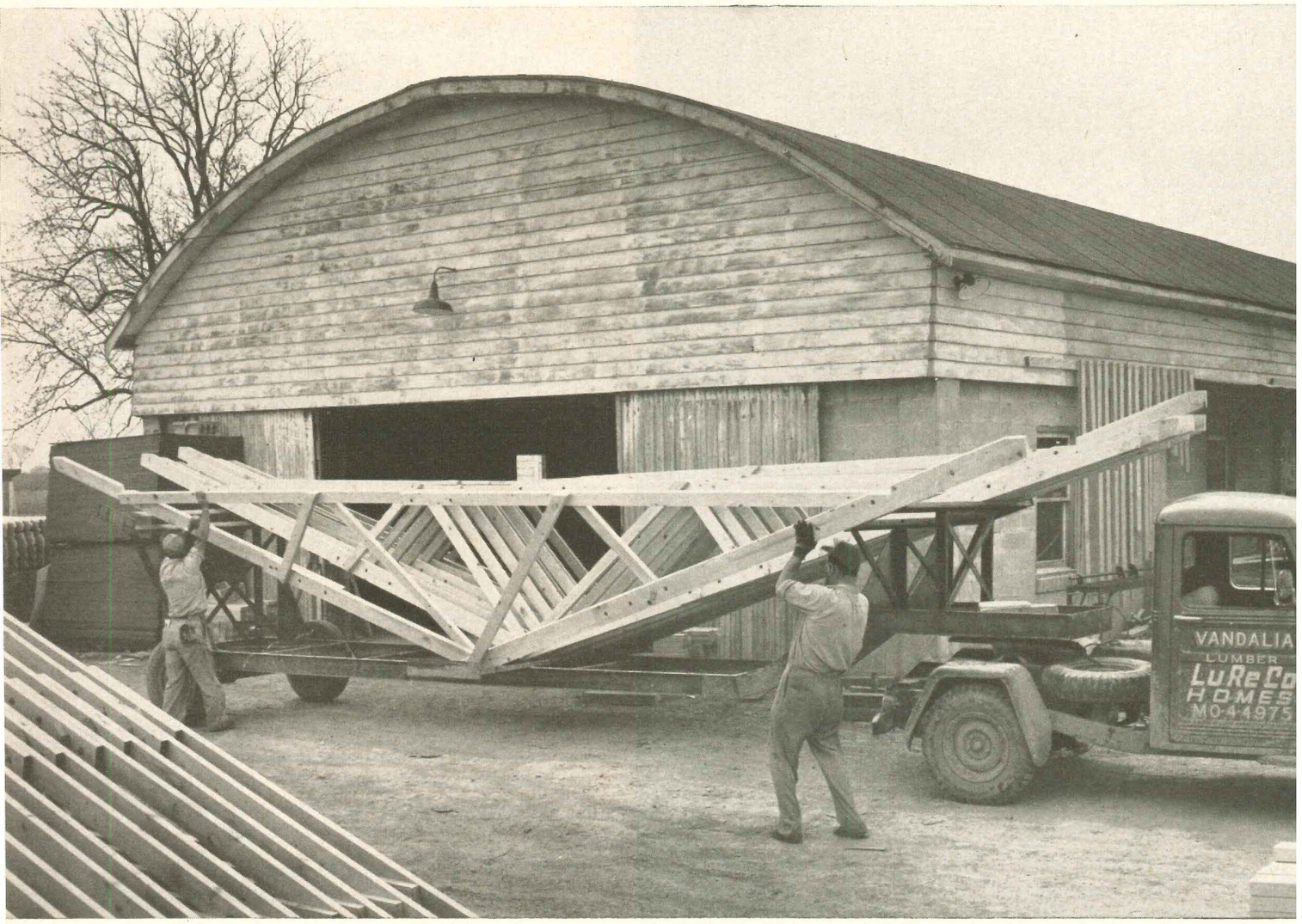
Using mastic to install tile on walls.

Using weather-tight windows to eliminate later service calls.

Using local crews wherever possible because: local men can (1) handle service calls easily, (2) help get town officials to approve the development and (3) bring around friends to buy, or sometimes even buy themselves.

Paying slightly more for 20' and 22' pieces for full-length joists rather than buy shorter lengths and pay more for carpentry (about 4 minutes less is needed to put up roof joists when full-length are used.) /END.

IN THIS BARN, A YOUNG LUMBER DEALER . . .



Business of Building

. . . TURNS OUT 700 LU-RE-CO HOMES A YEAR

Carl R. Scholz

Six years ago at 26, Carl Scholz switched from building contractor to lumber dealer. He set up his first "yard" in an 8′ x 10′ shed which contained a chair, a stove, six open kegs of nails, a telephone, a plywood board for a desk—and 6′-3″ Scholz.

At 32, Carl Scholz runs a lumber yard which does better than a $500,000 annual volume in Vandalia, Ohio (pop. 4,000). In addition, he produced and sold nearly 700 Lu-Re-Co panelized houses last year. and present orders point to a bigger volume in '56.

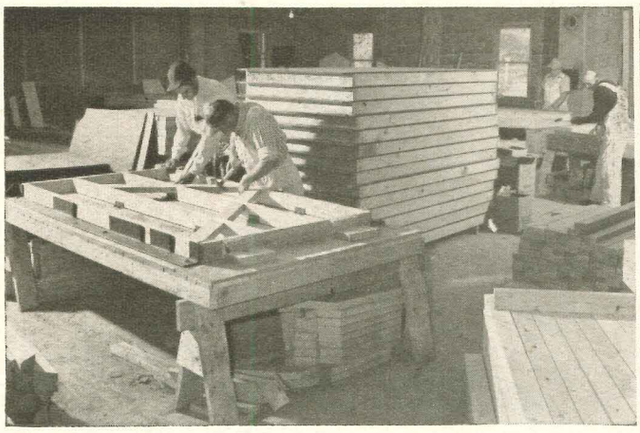
His success has not gone unnoticed. Scores of lumber dealers from around the country have visited this young man to learn his secret of success as a Lu-Re-Co producer and hear what he thinks of this end of the business. They find him enthusiastic about Lu-Re-Co.

"Lu-Re-Co helps our regular lumber company business," Scholz says, "because business gets business. We attract more customers and handle more lines. Vandalia Lumber has doubled its retail volume since we started panelizing houses.

"Furthermore, we can make a profit on some items we'd otherwise sell for no profit. Other lumber yards have loss leaders in certain lines and we have to meet them. But when we sell such material as part of our Lu-Re-Co package, our profit on it is included as well as on everything else."

Scholz thinks Lu-Re-Co houses can be sold to local builders with these five advantages over out-of-town prefabbers: (1) delivery cost is lower; (2) deliveries can be held up quicker if rain starts; (3) various components can be delivered when needed; (4) if parts are missing, they can be sent out quickly; (5) overhead is lower.

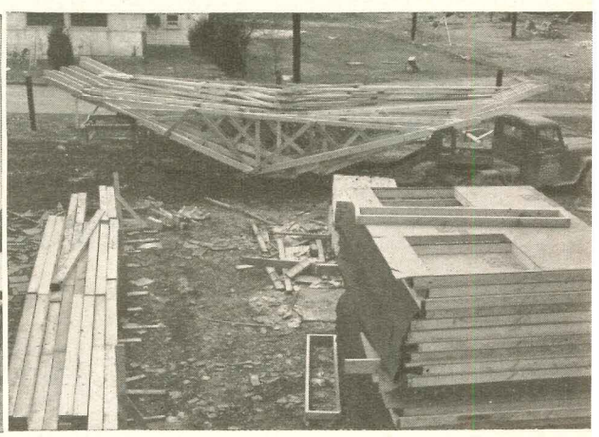
Here is how Scholz assembles components



Hoover Photos

Scholz has a minimum investment in the Lu-Re-Co end of his operation, although he employs 15 men to handle it compared with only nine in the lumber yard. Crew includes two on panels and two making gables (above, left), two making trusses, one man on plates and beams, two who cut all lumber, an accountant, a superintendent, and four on deliveries. Power equipment includes two radial saws, a table saw, a few hand tools, two forklifts and four trucks and trailers. Usual Lu-Re-Co panels are 4′ wide, but some (above, right) are produced in 12′ lengths—a Scholz adaptation to suit the needs of his largest builder client, Victory Construction Co.

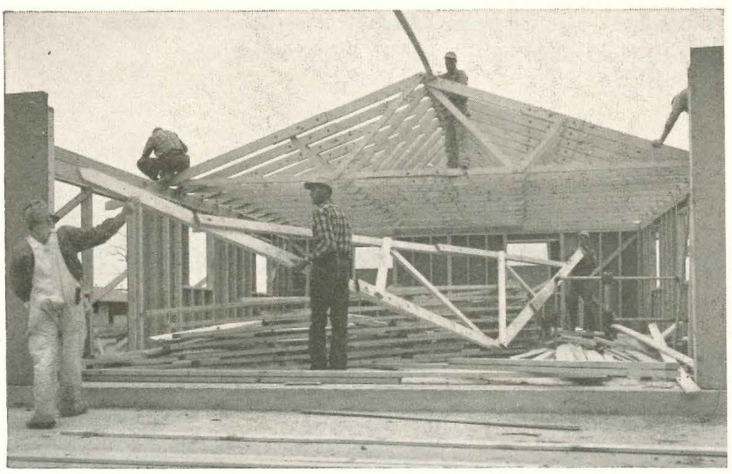
Here is how he cuts material handling costs

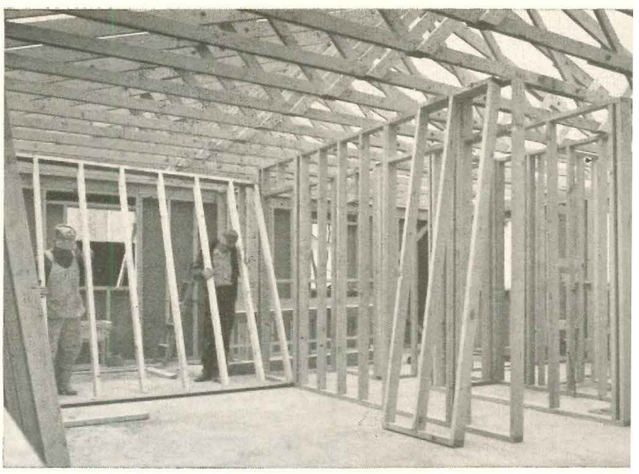


Two semitrailers and two 1½-ton stake trucks deliver the components in Vandalia and to Dayton (10 miles away). Scholz designed the truss trailer, which carries 23 trusses. This rig and friction-plate "fifth wheel" on jeep chassis cost only $1,000 to build locally. Another semitrailer carries panels. Both deliver to builder's site together and the two drivers help each other unload. One stake truck handles trim, the other rough hardware, etc., and these drivers also help each other unload. Two forklifts are used in Lu-Re-Co plant and yard. Forklift in picture at left holds all the outside panels for one house.

Photos: Rube Henry, Hedrich-Blessing; courtesy of Business of Building

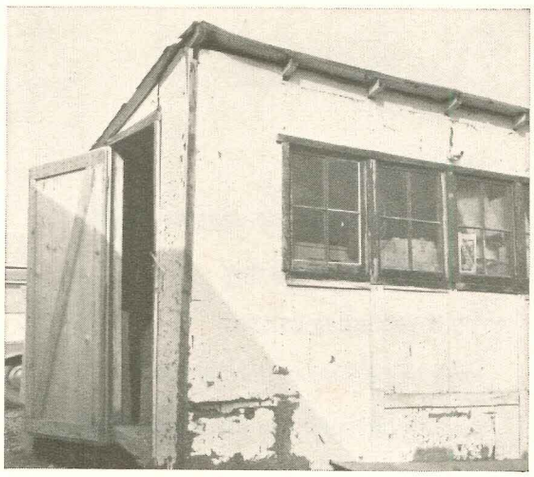
Builders like the speed and ease of construction





which the Lu-Re-Co panel-and-truss system provides

Scholz grew from a shed to a big modern lumber yard . . .



. . . in six years by following these eight rules

1. Find time for new ideas. "The difference between the average lumber yard and an aggressive one is that the average yard allows its men to become bogged down under a full load of business. They haven't time for new ideas. The aggressive yard brings in new men to take charge of each new department or service growing out of each new idea learned."

2. Accept new ideas courageously. "For example, you can't play around with the Lu-Re-Co idea. You must be willing to take a big contract at the outset if the opportunity offers."

3. Keep the regular lumber yard and Lu-Re-Co business separate. "The fault with so many lumber dealers is that they won't put on a force to handle Lu-Re-Co. They try to sandwich it in with their regular business. That method just doesn't work too well."

4. Pay more attention to net profit, less to mark-up. "I'm not interested in mark-up. I'm willing to take a low mark-up if I can make more money by doing a much larger volume of business."

5. Make sure you have a "driver on the job." Scholz himself works about 80 hours a week. Currently, about 50 are spent on Lu-Re-Co and during most of that time, Scholz helps buyers.

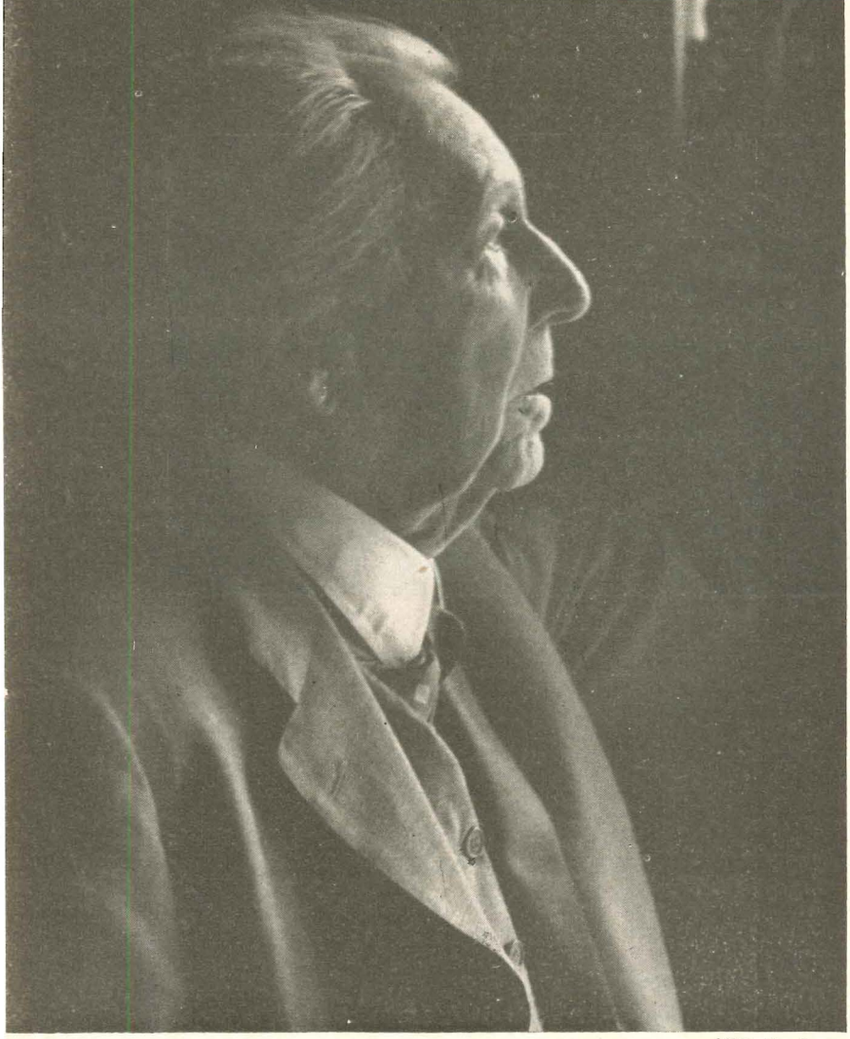
6. Offer all the services you can. "As far as Lu-Re-Co customers are concerned, for most of them we do everything except build the house. We help them find lots, get construction money and loans, fill out FHA papers for them, recommend good bookkeeping systems, help with floor plans and help them find good subcontractors."

7. Make sure each employee specializes. "Find good men for each job and give them plenty to do. A steady team making trusses can turn out 60 a day at a wage cost of only 90¢ per truss. Even a good delivery man on a truck can save you 50%."

8. Cut delivery costs to the bone. Scholz knows Lu-Re-Co offers lumber dealers a great advantage over out-of-town prefabbers in delivery and makes sure that no chance is lost to capitalize on this advantage.

. . . and the biggest client is the biggest booster

Victory Construction Co., Dayton, has built about 600 of Scholz' houses in less than 18 months, all in Vandalia and the Dayton area. This year it expects to build about 1,000 houses, several hundred in Cincinnati and other cities. "We'll use prefabs in other markets," says Victor Napolitano, president, "simply because we can't find people like Scholz handling Lu-Re-Co elsewhere. He's very efficient, has good men around him and gives his personal attention to our needs." Napolitano prefers Lu-Re-Cos to prefabs in Dayton because "Lu-Re-Cos are more flexible and you don't have any worries about damage or missing parts. Lu-Re-Cos are a cinch to put up, especially since Scholz supplies 12′ panels." Victory Construction's 1956 houses have 1,100 sq. ft. of floor space, sell for $14,400.



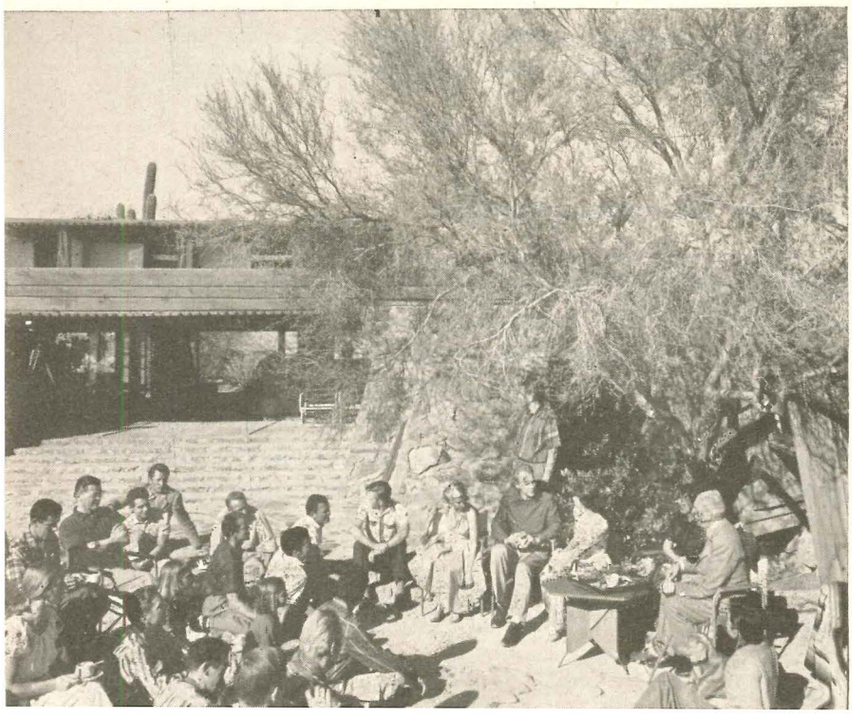
LIFE: Lisa Larsen

A young man
thinks young all the days of his life.
His eyes see every day
as if yesterday existed
only to deepen understanding
and to sharpen the joy of discovery.
What does he discover?
Perhaps, something as simple as the way
rough stones feel . . .
. . . or as intricate as a new way to put
stones together
so they look the way they feel.
He discovers the world, with wonder
seeing it—always—
with the eyes of youth.

On the following pages, HOUSE & HOME *reviews memorable aspects of four houses which have had a marked influence on contemporary work. Designed by Frank Lloyd Wright, they were first published in earlier issues of this magazine.*

FRANK LLOYD WRIGHT

Photo: Taliesen Fellowship

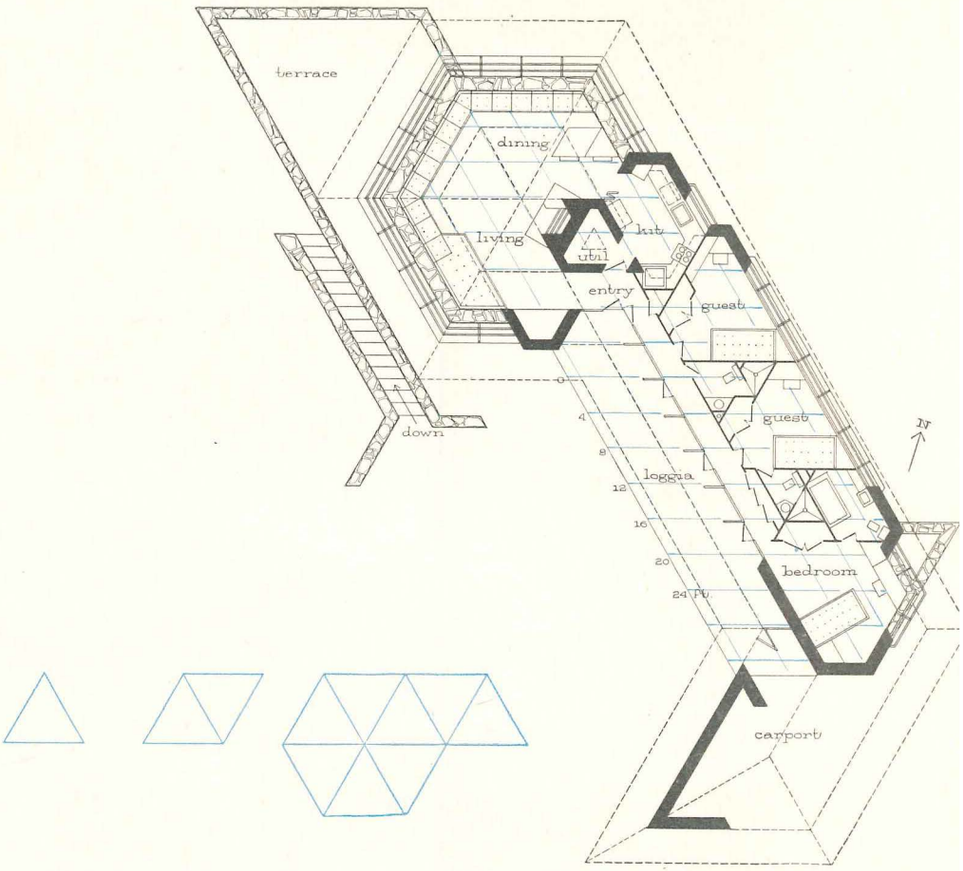


For other young men
men who have not been young for very long—
he is a teacher . . .
. . . he points out the stones.
He finds ways to measure and express the world
He builds for them the wonders he finds.
And because he has the wisdom of years to
balance the youth in his heart
His building helps them to find and shape
their own discoveries.
He is a beginning, never an end . . . .

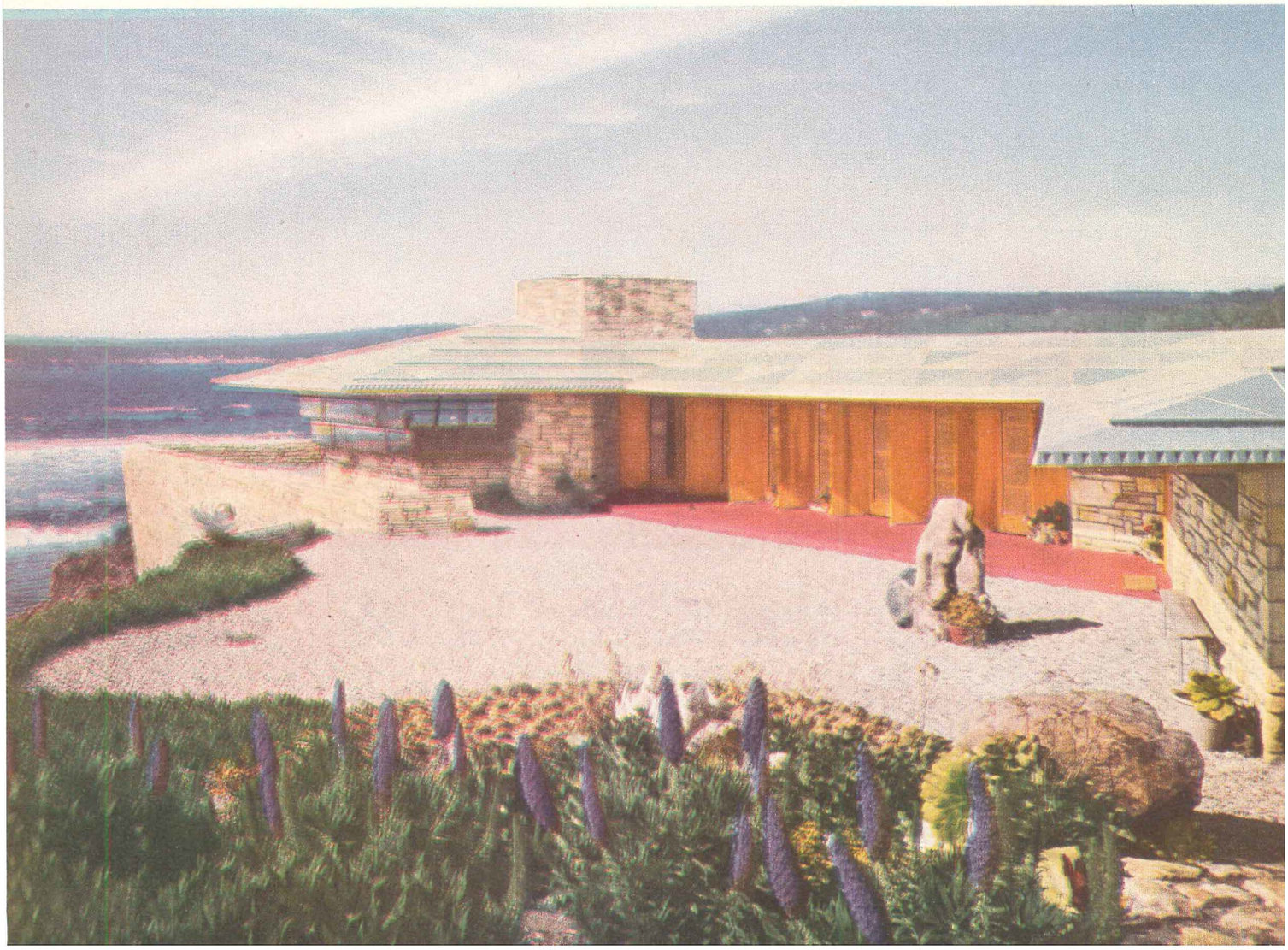
House in South Bend, Ind. H&H, Dec. '52; photo: Ezra Stoller

Years before the world had heard of indoor-outdoor living, Frank Lloyd Wright opened up his houses to the world outside with great windows, so that the boundaries of a room stretched "as far as the eye can reach." Diagonals in this big living room window wing upward, form a counterpoint to the wide angle high pitch of the ceiling which is etched with slender wooden strips. For all its monumental scale, the room is warm and human with its below-ceiling light cove and its friendly corner fireplace.

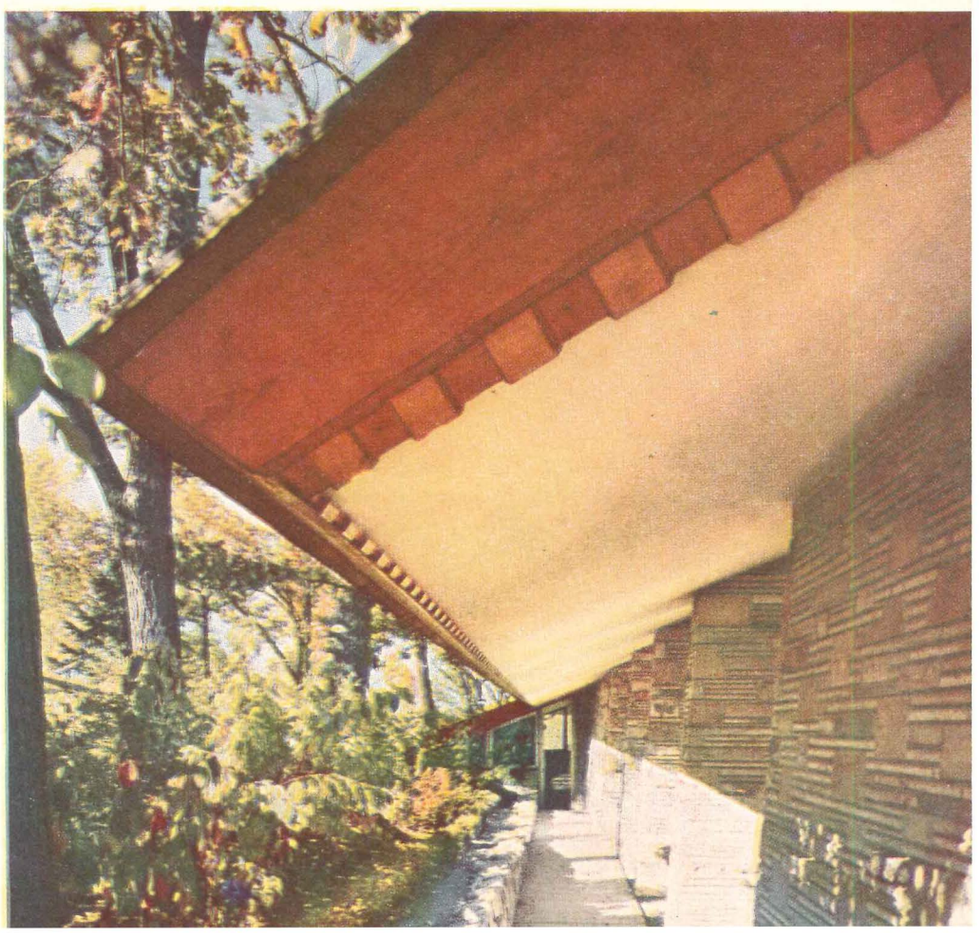
This little house is indeed a lesson in planning. Frank Lloyd Wright lavished the infinite pains of genius to fit all the many spaces together so that every inch would count, to make little rooms spacious where spaciousness was needed, to make all the living areas seem bigger than they really are. Using as a module a 4′ equilateral triangle, or doubling it to make a diamond, he achieved an in-line plan with three bedrooms, three baths, kitchen, 400 sq. ft. living area—all in 1,000 sq. ft.!



House in Carmel, California, H&H Mar. '54; photo: Roger Sturtevan



House in Minnesota, H&H, Nov. '53; photos: P. E. Guerrero

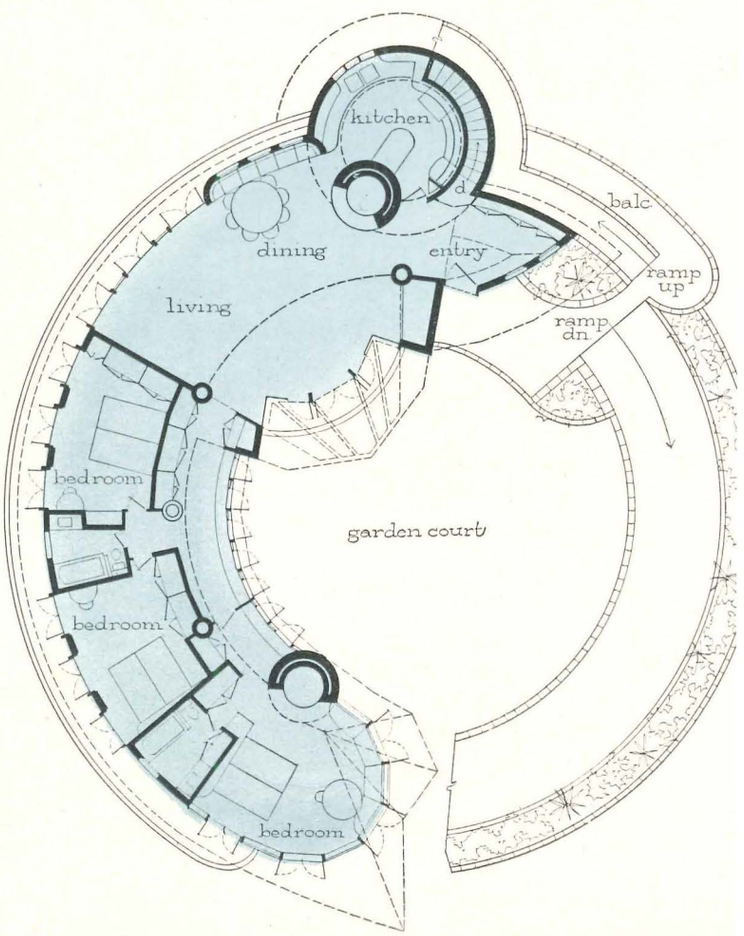


Perhaps Frank Lloyd Wright's greatest influence has been his deep concern for the inseparability of house and site. His houses are one with their surroundings—seldom more evident than in this house, with its sweep of protective gables and slanting battlements of masonry that seem to grow right out of the ground. Even the colors blend house and grass, trees and sky.

At right, a detail shows how many things contribute to this harmony of land and house. The overhang is broad to shelter a path which ties indoor rooms to outdoor vistas.

House in the Desert, H&H, June '53; photo: Ezra Stoller

The infinite possibilities which a good material possesses are an ever-changing challenge to Frank Lloyd Wright. His use of concrete block was never more daring than in this strange and wonderful desert house. Wright's ideas have changed the course of architecture for more than 60 years. They have changed it because the ideas are so challenging in themselves and they have changed it because Wright drives the ideas home forcefully and dramatically./END



CLARENCE STEIN

LAND PLANNING'S MAN OF INFLUENCE

Every architect, engineer or land planner who ever laid out a cul de sac, designed a super block, built green areas around houses or apartments, faced living rooms to rear gardens or planned safety streets for children owes a debt to Clarence Stein.

Nearly 30 years ago Stein and architect Henry Wright began planning Sunnyside Gardens in Queens, New York City. That was the beginning of a series of admirable and farsighted plans. In all he has completed about a dozen such projects.

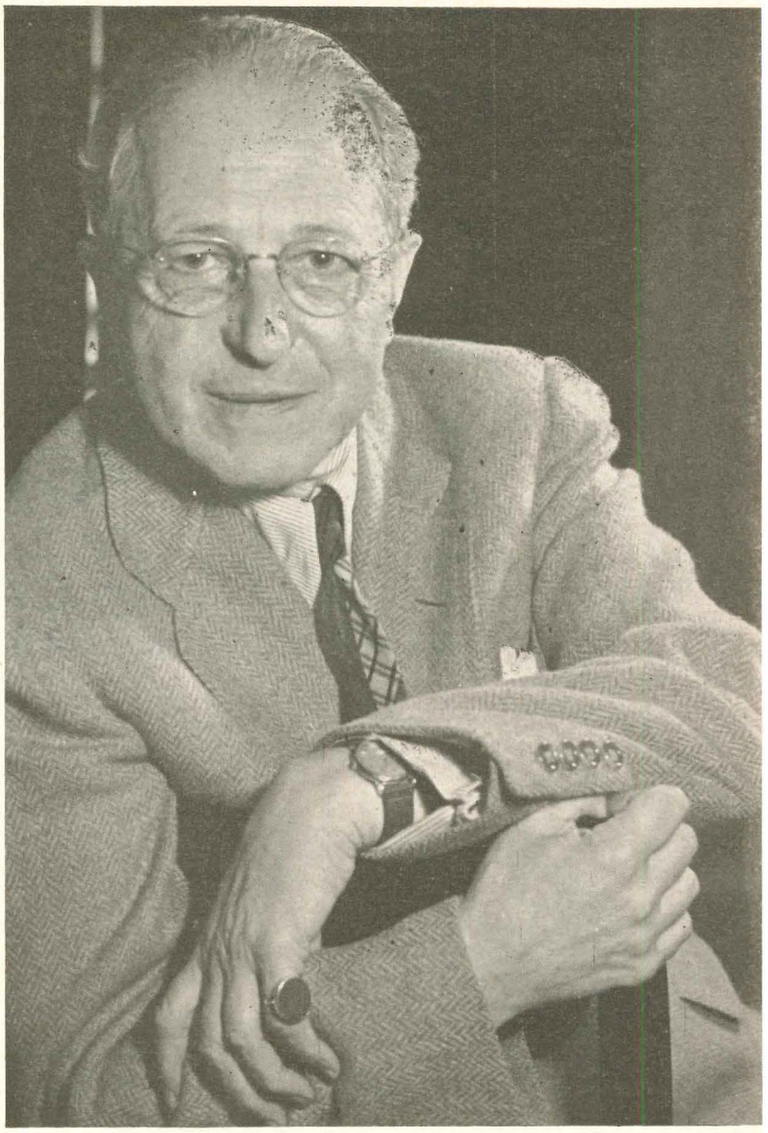
The circle of Stein's influence has steadily widened. In Canada today the largest of the new towns, Kitimat (being built by the Aluminum Co. of Canada, with Stein as planning director and Mayer & Whittlesey as architects and land planners) is exerting an influence on other new towns around the world.

In Sweden, the newest of Stockholm's big suburban communities is a lineal descendant of Stein's Radburn. The street layouts of new towns in India show some of his trademarks. And closer to home, a large new development was recently announced in Memphis as "A Radburn-type subdivision."

There is talk today that builders are erecting "the slums of the future." Few would deny that land planning is the feature that could be most improved. To improve it, builders would do well to study Stein's designs. They are so well planned that his communities are always good places to live and they improve with age.

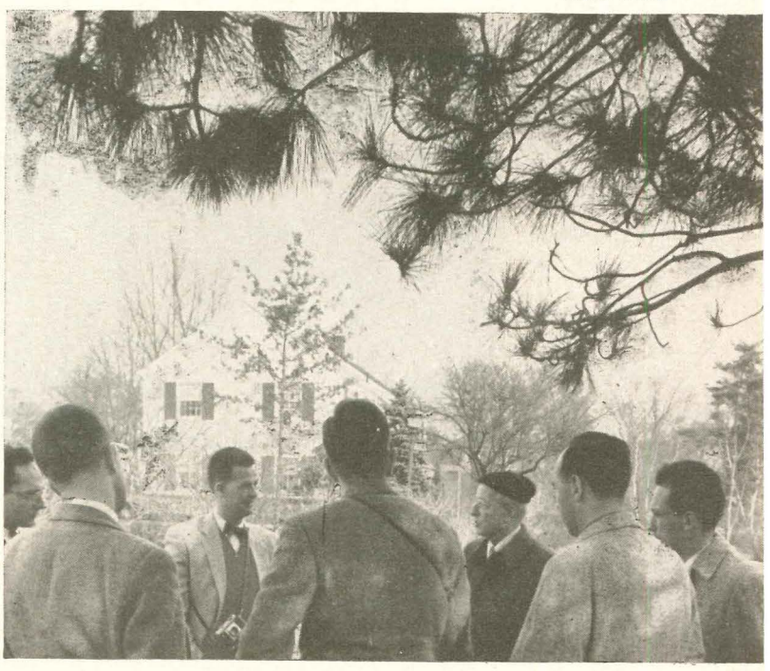
This month in Los Angeles, to Clarence Stein's long list of honors and distinctions, the American Institute of Architects will add its highest award, the AIA Gold Medal.

Gretchen van Tassel



"Clarence Stein *is a quiet man, with no itch for publicity," says critic Lewis Mumford. But to professional land planners and graduate students Stein's words and his plans carry great weight. Below: Stein explains Radburn to MIT students during Easter holidays last month.*

Walter Daran

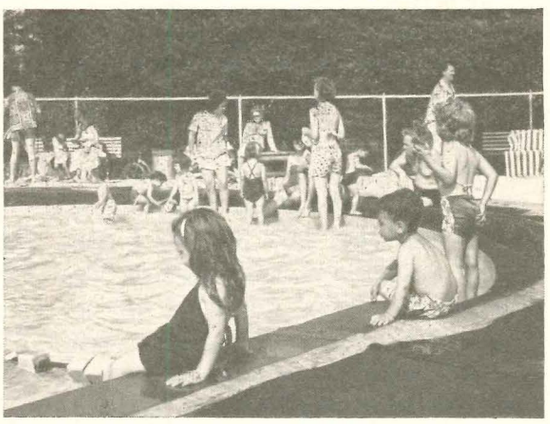


Detached houses *like these and row houses have cul de sac auto entrances at the rear, pedestrian walks like this at the front. Many face on a large, green park. Because of excellent planning and landscaping, 25-year-old houses are today valued at far more than ever before.*

RADBURN, N. J.

1929 plan *for Radburn shows original ideas of Stein and Henry Wright with superblocks replacing the usual narrow, rectangular blocks; specialized, 1-purpose roads with service lanes for direct access to buildings; collector lanes around superblocks; express highways. Some plan details were changed before project was completed.*

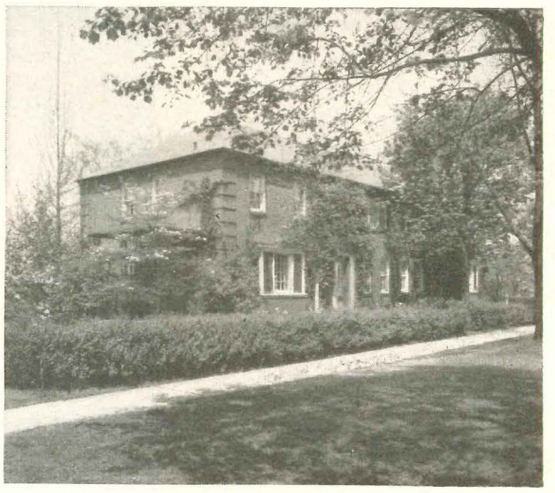
Radburn idea, *says Stein, is to answer enigma, "How to live with the auto." Underpasses like this are one answer, which lets pedestrians, especially school children, cross under auto roads. Because of these 1-purpose roads, Radburn has one of the nation's best safety records.*



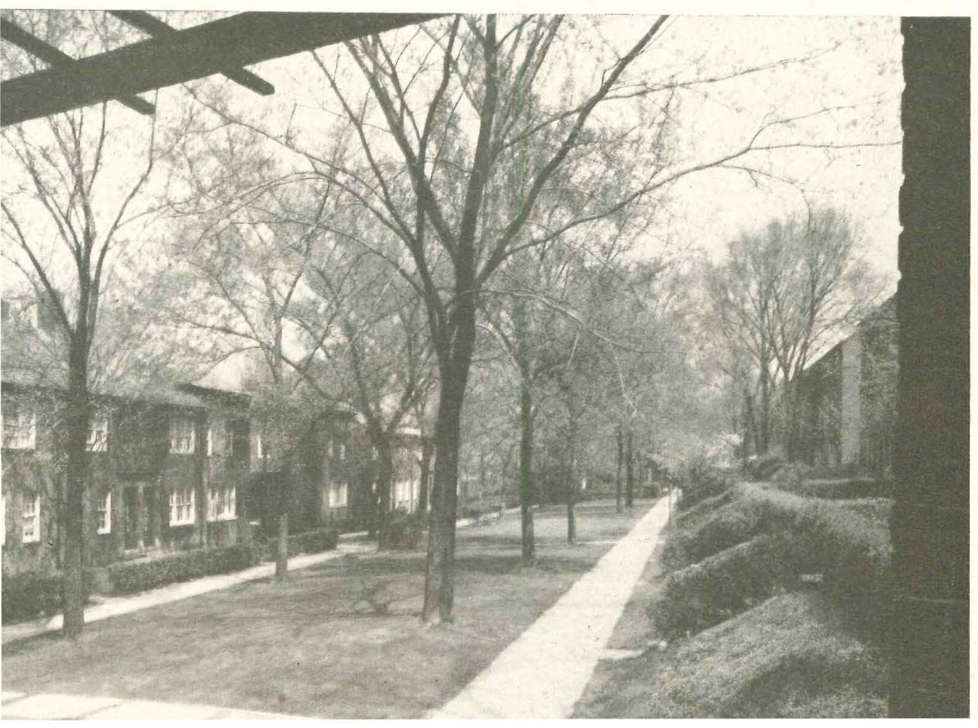
Swimming pools *are important part of Stein planning and a factor which he believes adds much community life. He recommends two pools, including one like this for smaller children with shallow depths for wading, water games. Benches allow parents to rest, sun, supervise activities.*

Excellent planning *has given Chatham Village international recognition. Air view above, shows how much of property is left to open parks and walkways. Amount of foliage has almost doubled since this photo was made. Project was sponsored by the Buhl Foundation, long known for its farsighted endowments.*

CHATHAM VILLAGE, PITTSBURGH

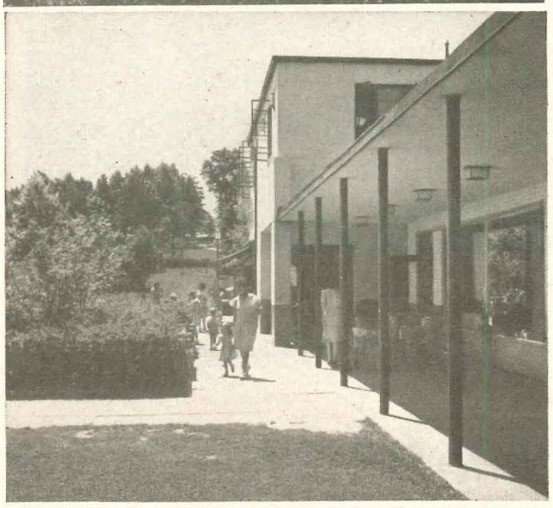


Landscaping *gives a unique character to these attached houses, demonstrates what "garden apartments" can look like. Catherine Bauer has called this "the best planned development in the country." Henry Wright worked with Stein on the planning. Houses were designed by Ingham & Boyd. Nineteen new units are being added this year.*



Apartments *at left have been almost 100% rented for 23 years, demonstrate that good land planning is good business. Units in these row houses now rent for $74 to $124 a month. Surrounding the 197 units is heavily wooded area. Of total of 46 acres, only 17 are used for houses.*

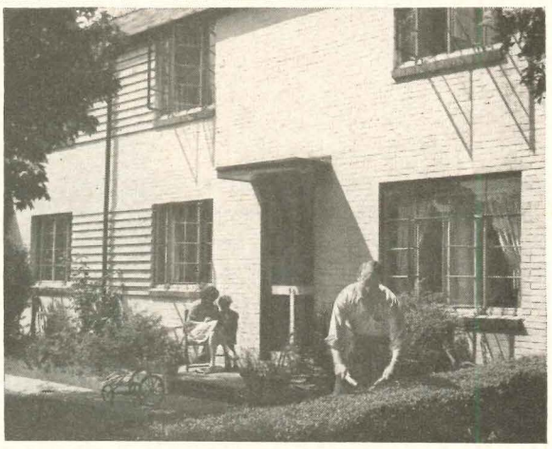
Large open areas *surrounding the apartments and carefully preserved trees are characteristic of this project, 13 miles from downtown Washington. Despite lavish land use, private builders can learn much from the planning that went into it.*



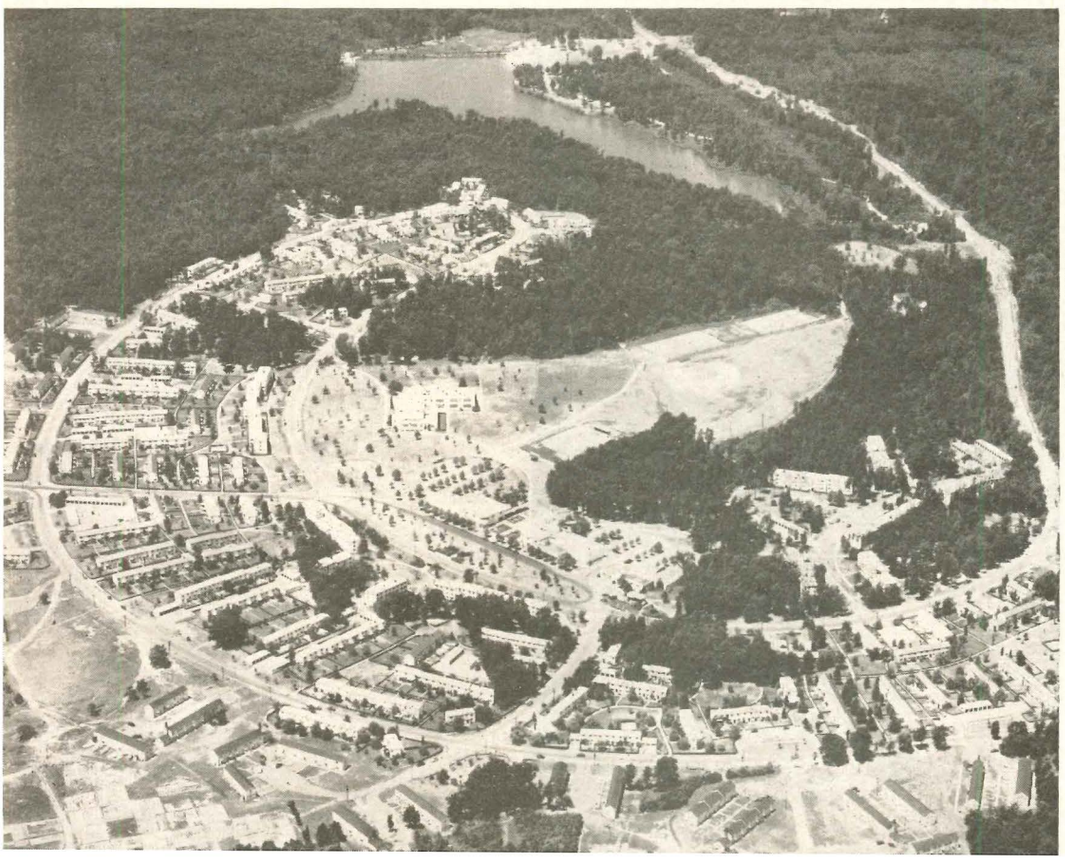
Shopping and community *center, says Stein, was "most important forward step at Greenbelt." Here the modern market square was integrated into the plan, separating pedestrian from motorist—a Stein trademark.*

GREENBELT, MD.

One of three Greenbelt towns built by the government, this is considered by many to be the best planned big public housing project in the US. Nearly 900 families moved in during 1937-38. In 1941 another 1,000 units were built for defense workers but original plan suggested by Stein was not followed. About 7,500 people live here now.



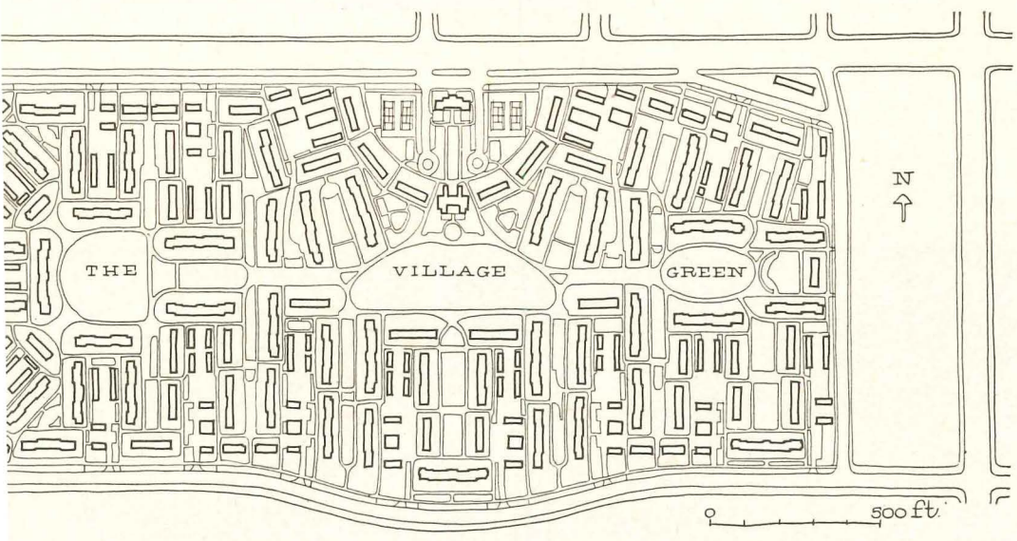
Tenants *take pride in their homes, help reduce maintenance costs by taking care of their own hedges. Such activity helps carry out idea of a garden city. Below: inner walks separated from auto roads are safety feature.*



Double crescent roads *enclosed most of original Resettlement Development area, with two schools, community buildings and shops at center of inner loop. Stein was adviser to large group of government planners and his ideas were carried out here as well as in other Greenbelt towns.*

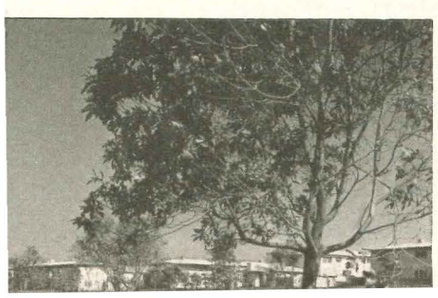
Photos: Gretchen Van Tassel; Fairchild Aerial Survey, Inc.; Margaret Lowe; Lewis Wilson

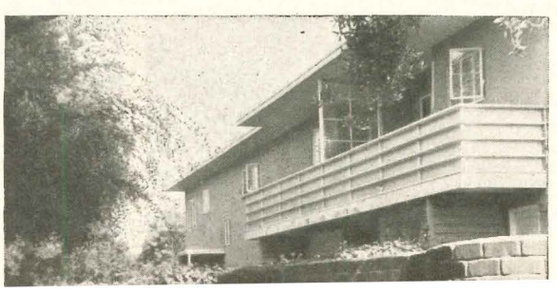
Row houses *provide 7.8 dwelling units per acre in contrast with 3.5 to 4 of typical 1-family house projects. Plan below shows entire 80-acre superblock where 627 families live.*



BALDWIN HILLS VILLAGE, LOS ANGELES

"We think this is the best thing in the country," says an official of New Engand Mutual Life Insurance Co. of Boston who owns the project "it is always 100% rented."





Stein *was adviser on plan; buildings were done by Lewis Wilson, Reginald Johnson, Robert Alexander. Says Lewis Mumford: "I know of no other recent community that lends itself so fully to strict scrutiny, simply because every aspect of its physical development has been thought through."*

Here's how

TWO YOUNG ARCHITECTS

specialize in

BUILDERS' HOUSES

When you walk into the architectural office of Palmer & Krisel, you might even find a subcontractor in the reception room.

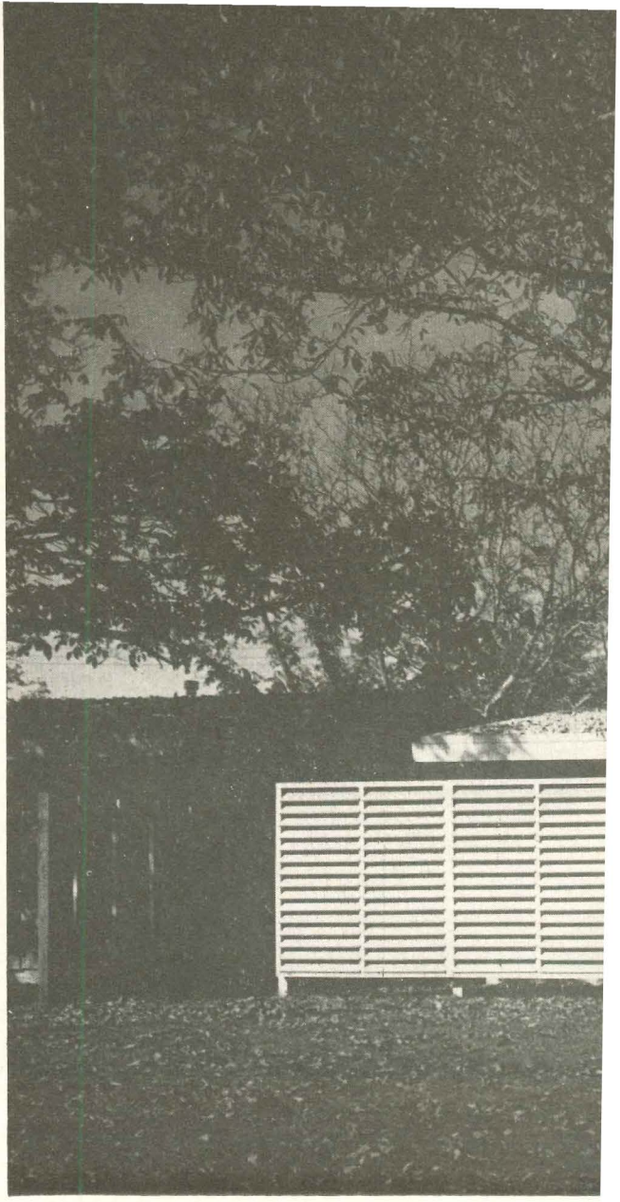
For these two young architects are deeply involved with their builder clients in every phase of home building.

Theirs is a closer-than-usual client and architect relationship; they are almost as absorbed in building houses as in designing them.

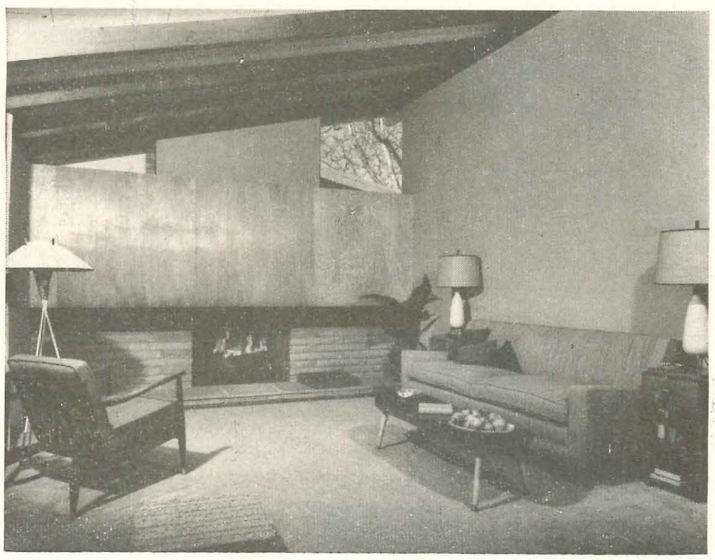
This concentration pays off in many ways. Latest pay-off came when Palmer & Krisel won two NAHB Awards of Merit. The houses which won the awards are typical of Palmer & Krisel's work: they are contemporary, livable, bristling with ideas. But more important to their builders, they are very salable houses.

Grossing $423,000 in 1955, working with about 40 builders, Palmer & Krisel are tract-house "experts" who are still growing. On the next seven pages, you'll find some of their trade secrets . . .

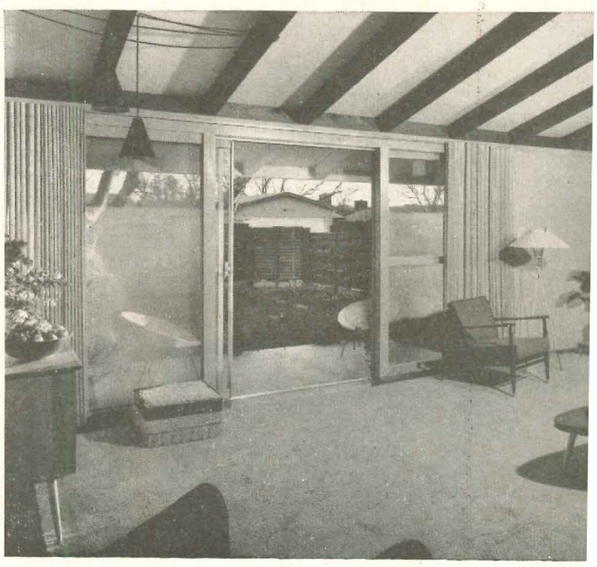
Photos: (right) Joe Paul; (below) Douglas M. Simmonds



Interior *shows how construction methods influence the design—roof is ceiling, walls are merely dividers.*

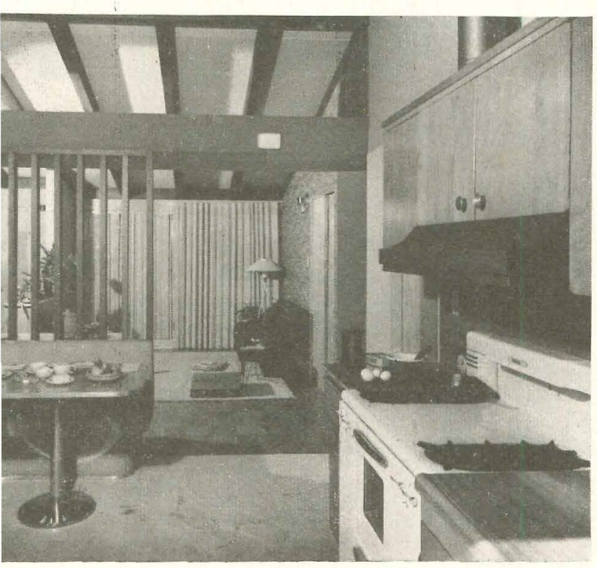


Sliding walls *open on fenced-in yard. Paved patio works as an outdoor extension of the living room.*

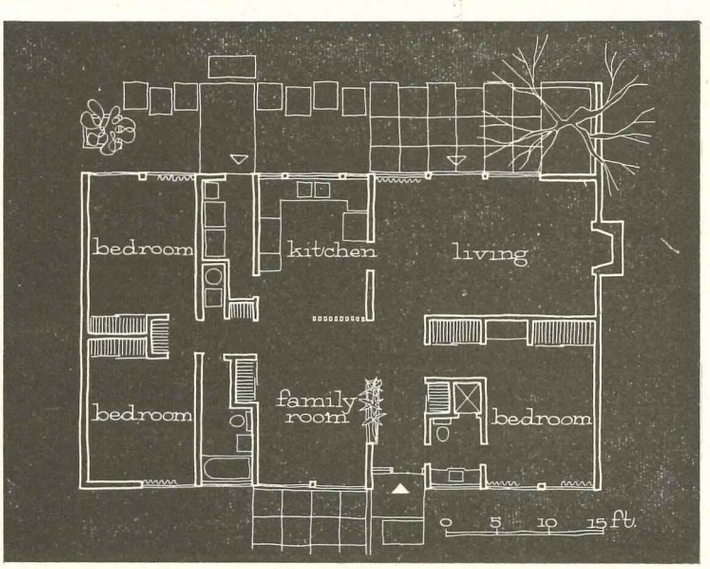


NAHB award house, *built by Harlan Lee, has a patio in front protected by louvered fence. Garage is at rear.*

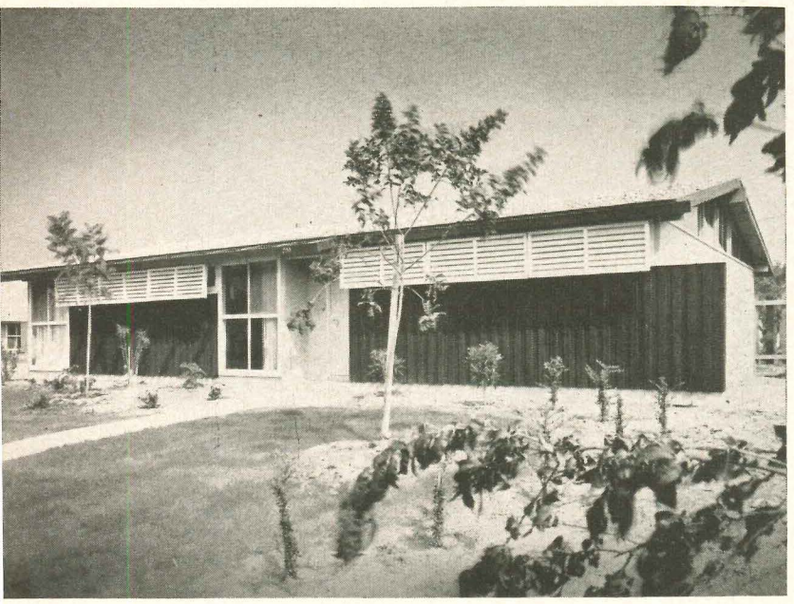
Wood divider *separates dining end of kitchen from family room without blocking openness of these rooms.*



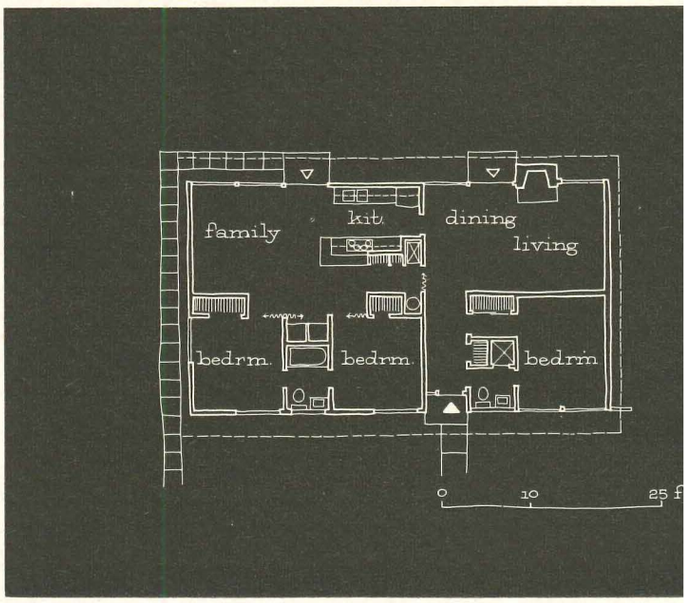
Plan *shows several P&K trademarks: simple rectangle, three bedrooms, two baths, family room close to kitchen.*



Photos: Julius Shulman



NAHB award house, *second this year, was designed for Midland Properties*



Rectangular plan *has children's bedrooms handily adjacent to family*

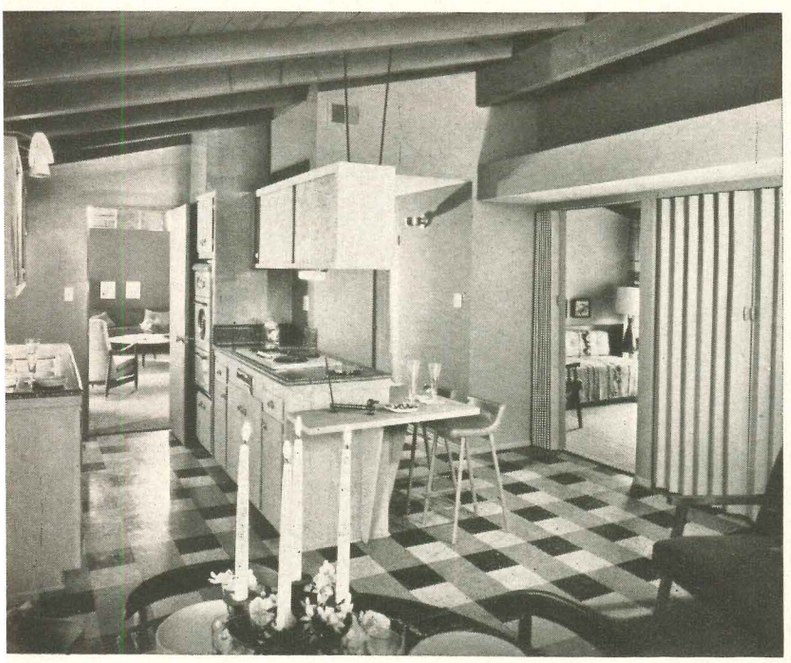
This practical plan won firm a second NAHB award

Good design like this is the most important service an architect can give a builder.

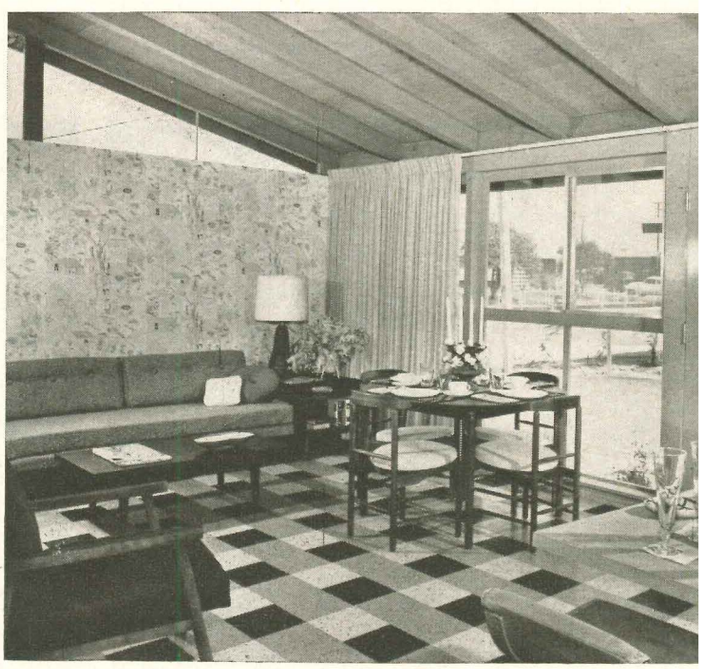
But with good design as the basis of their service, Palmer & Krisel offer builder-clients optional "extras." They consult with FHA, VA, lending institutions, get city or county code okays, help evaluate bids, confer with job foremen, subcontractors, supervise model construction, decoration and photography. They supply landscape design and color plans, elevation changes, schedules, details, site plan.

Palmer & Krisel's builder client George Pas of Weber-Burns says: ". . . All our architects are involved in every phase of planning. . . . Our work takes an architect who has had experience working with builders."

Open kitchen *is core of house, around which flow family, living rooms*



Family room *and kitchen split two informal eating areas*

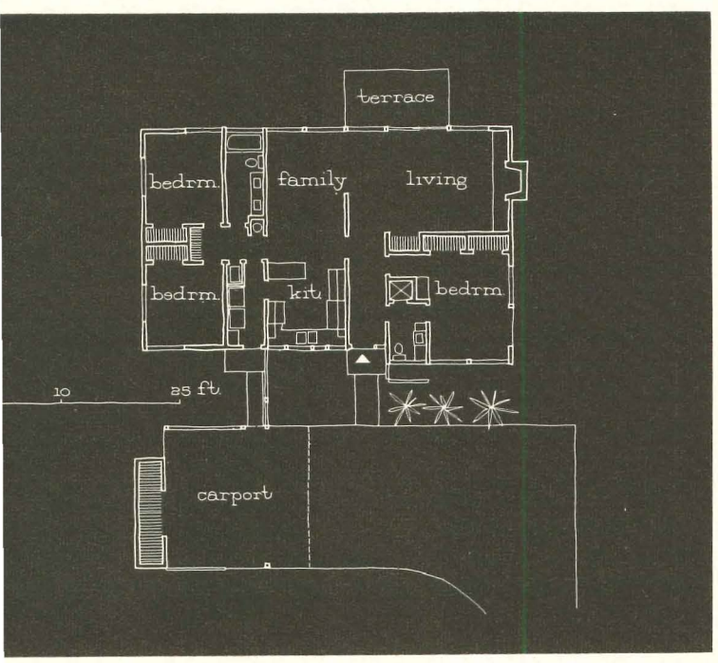


Joe Paul

Exterior *shows result of architects' work in its proportion, restraint, style. At $16,800 in Parkwood it has finish of far costlier house*

Warm, friendly exterior does a lot to sell this house

Straightforward plan *is also used with alternate elevations*

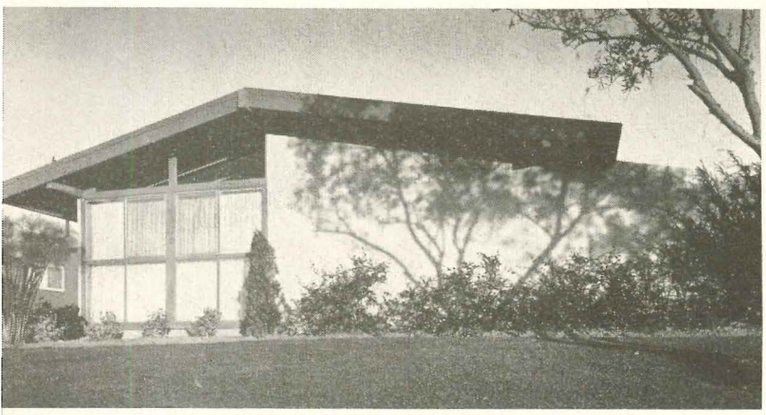


A really salable house earns money for both the architect and the builder. But Palmer & Krisel do not depend on royalties. They work on a fee basis, the fee depending on the size of the planned project. Here are typical Palmer & Krisel fees:

For a 25 house tract:	$3,450
51	5,780
101	8,460
151	9,950
201	11,240
351	13,930
501	16,525

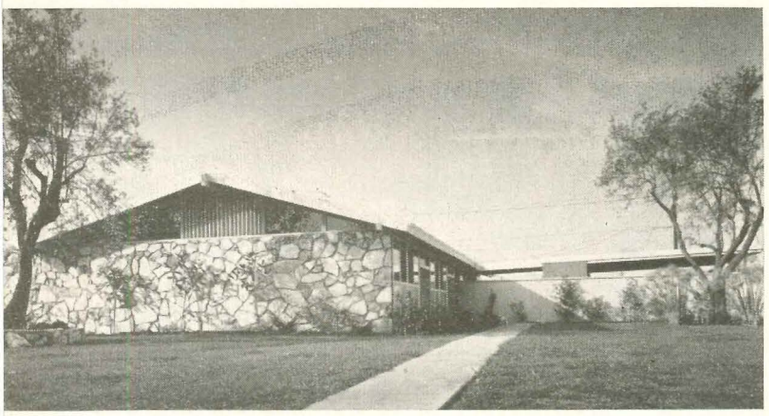
These fees are based on varying numbers of basic plans and elevations. For instance, the 25-house tract fee covers one floor plan with 2 elevations at $750, four additional elevations at $50 each and for each of 25 houses, $100, or $2,500, totaling $3,450.

Palmer & Krisel estimate that an architect in this field can net 33⅓% or better on his gross billing, depending on the efficiency of his operation and overhead.

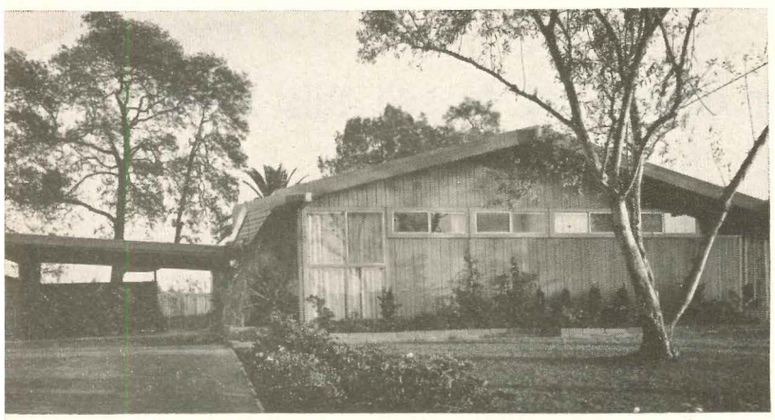


Photos: Joe Paul

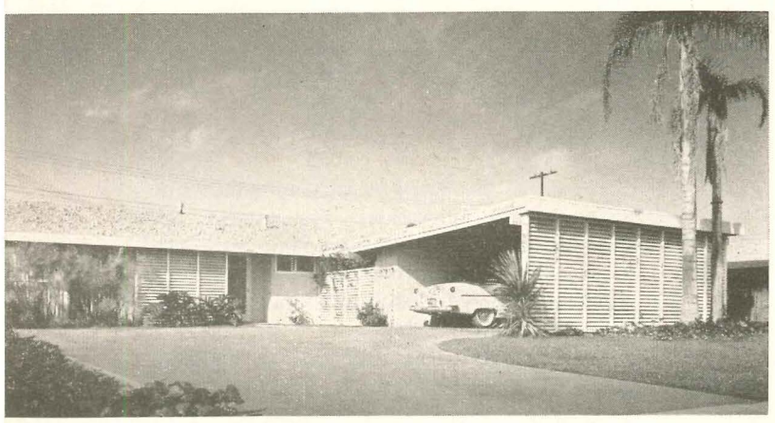
Here, Palmer & Krisel used contrast of paned glass, solid wall



Stone creates dramatic effect when it doesn't fight other materials



Striated siding has texture interest; windows create a pattern



The architects like louvers, use them here for carport wall

One good tract house leads to another

Besides the profit one tract represents, it can also be a chance for future profit. For a satisfied builder is apt to come back when he buys a new tract.

For instance, a $14,650 house designed for Corbin Palms sold so well (originally planned for 70 houses; 185 additional units built and sold) that builder George Alexander had Palmer & Krisel expand the basic plan to a 1,650 sq. ft., $24,000 model for Eastwood Estates.

But this success is a two-edged sword. One of the fears a young architect might have about designing for tract builders is the possibility of being pigeon-holed as a "$12,000-house man" or "a good split-level architect."

Clients like to repeat model that sells

Palmer & Krisel admit they still have a job persuading clients to experiment. When a model sells out quickly, the builder almost invariably wants to repeat it exactly in his next tract development.

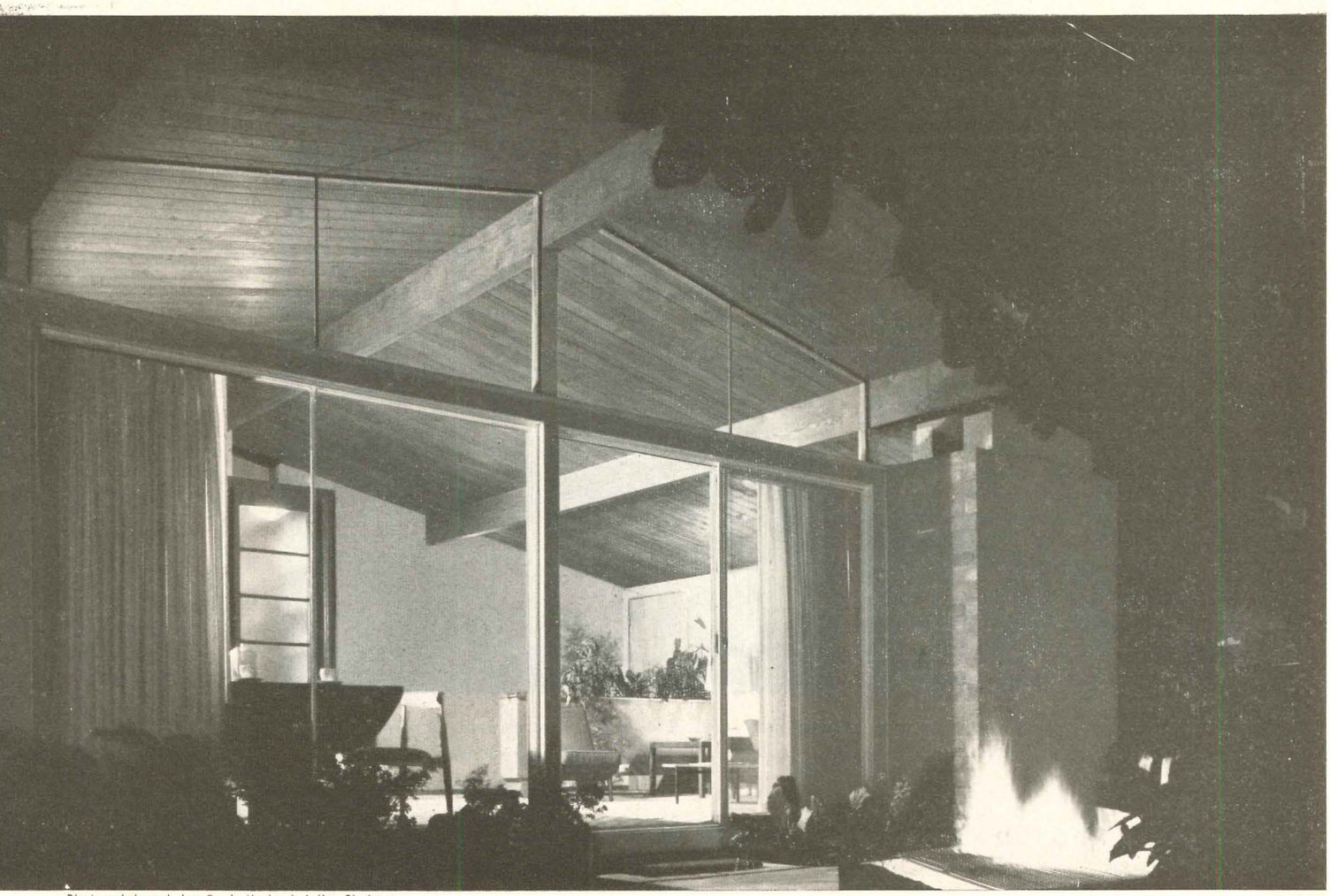
"When we can't convince him to let us try something entirely new," says Dan Palmer, "we ask him to include at least ten or 12 houses of a new design among the others. Almost always these new ones sell out first, and on the next job he doesn't have to be coaxed to try something different. No matter how popular a single model may be, we do not think it is healthy for ourselves or for the industry to keep on reproducing the same house indefinitely."

Specializing in one-family homes has, of course, limited the scope of Palmer & Krisel's work. However, they have done some office buildings, collaborated on a hospital, remodeled the Sunset Tower. And they've just finished a $250,000 apartment house project for Elwain Steinkamp in Bel Air. Sometimes a merchant builder retains them for a commercial job after he has originally worked with them on houses.

Practical experience is great asset

This narrowing of their field is balanced by the advantages of wide experience in one phase of architecture. They find specialization is a full time job. One of the reasons Palmer & Krisel talk builders' language is that they listen to builders at builder meetings and panels. They attend meetings regularly, feel it's part of their job to know what's going on in the builder field—both design wise and business wise.

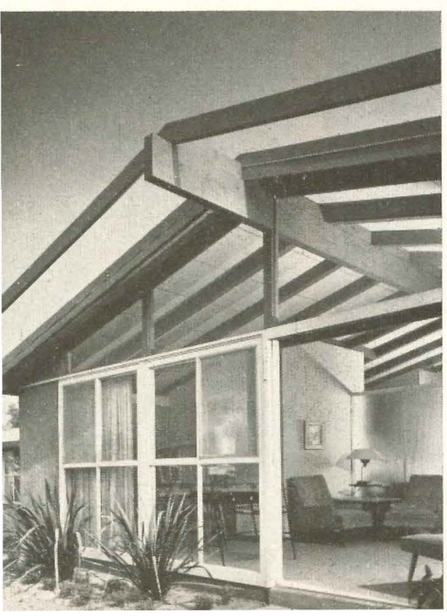
They are members of the Young Builders Council and Home Builders Institute as well as being members of The Committee for the Home Building Industry of AIA.



Photos: (above) Joe Paul; (below) Julius Shulman

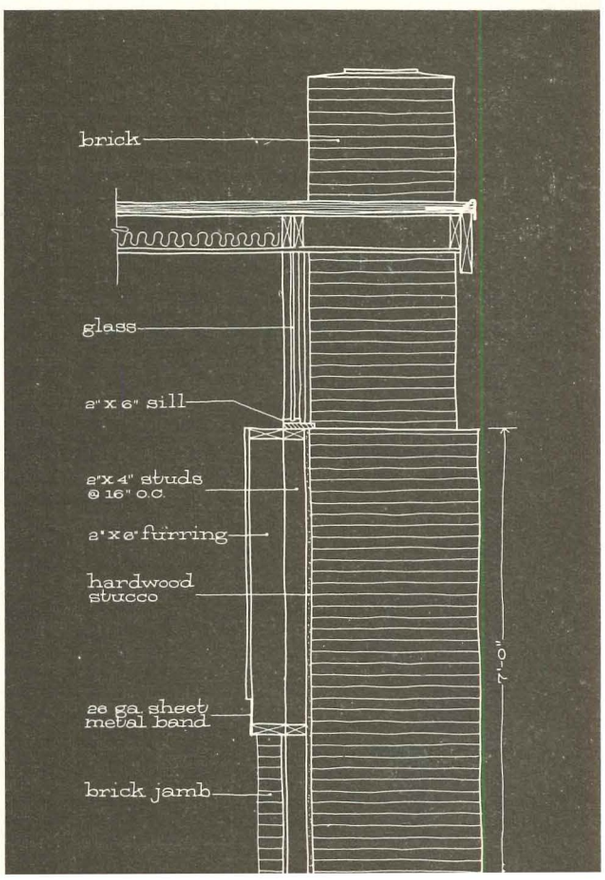
Glass gable *pleases buyers, is a result of low, even plate line (6'-10½") which architects maintain in order to keep wall panels uniform and to use standard doors.*

Glass gable ends are popular design feature

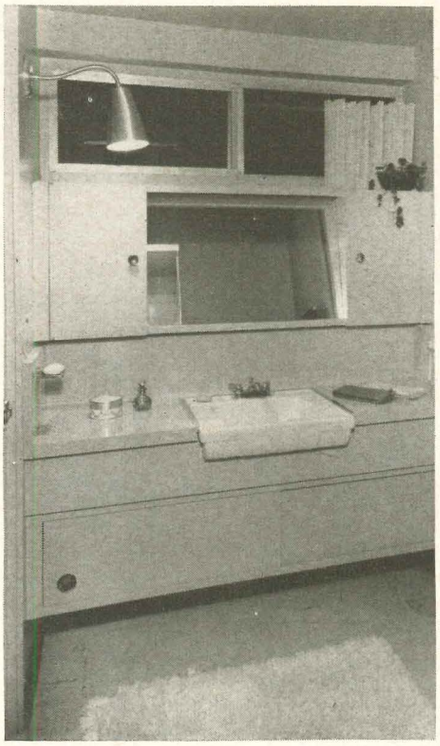


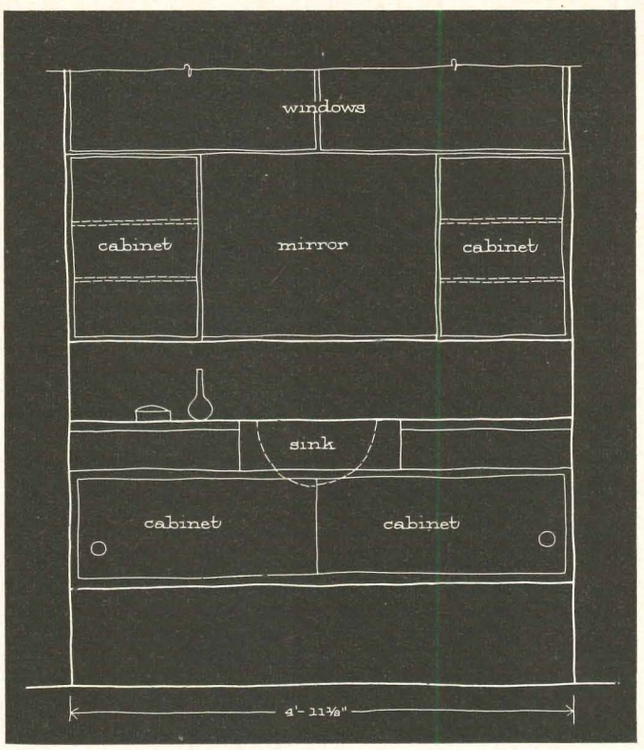
Chimney detail *shows subtle method for joining chimney, glass gable. Fireplace is conventional because of FHA regulations; prefab would be less expensive.*

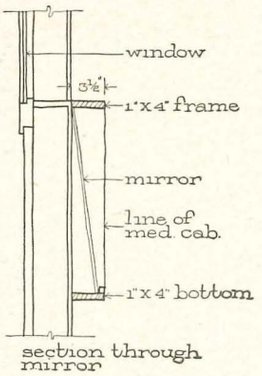
Roof beam *is not cut to fit house, but allowed to run to its full length. So overhang varies from house to house.*



Photos: Douglas M. Simmons; (lower left) Joe Paul







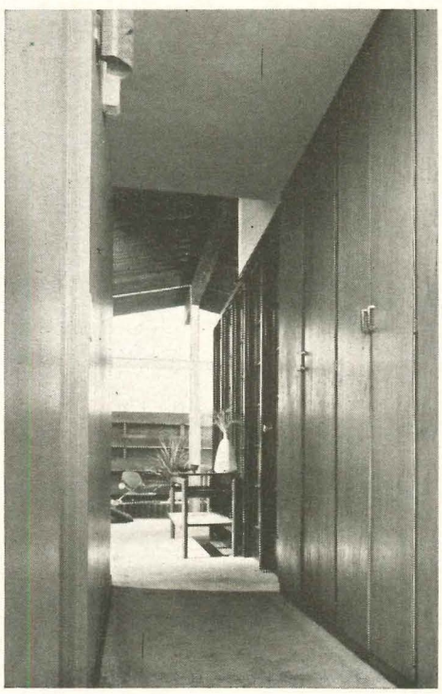
Under windows, *Palmer & Krisel tilt a low mirror to make image visible.*

Detail *shows how tilt takes advantage of natural daylight. Cabinets hold cosmetics, medicine, replace conventional cabinet.*

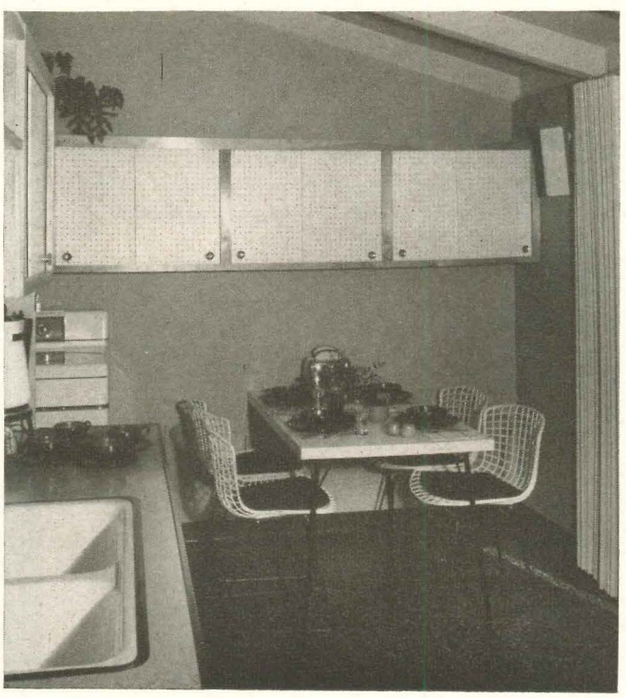
Buyers like custom-type details like these

Ideas make the difference between an exciting house and a run-of-the-mill one. So when an architect puts in ideas galore in a tract house, there is bound to be sales excitement, too. But it takes construction know-how to make sure the ideas don't run up labor costs. Here are ideas designed with production-line houses in mind.

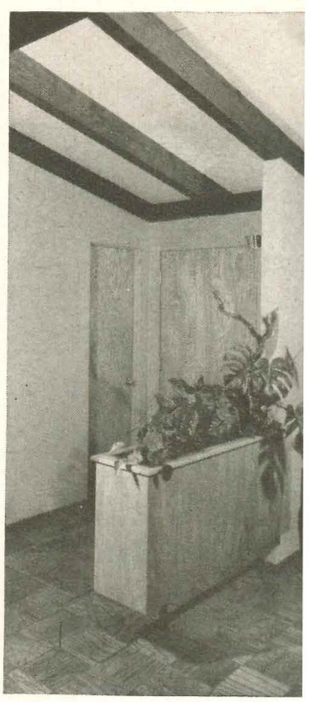
A wall of closets *is a find in a tract house. Closets are simple to construct.*

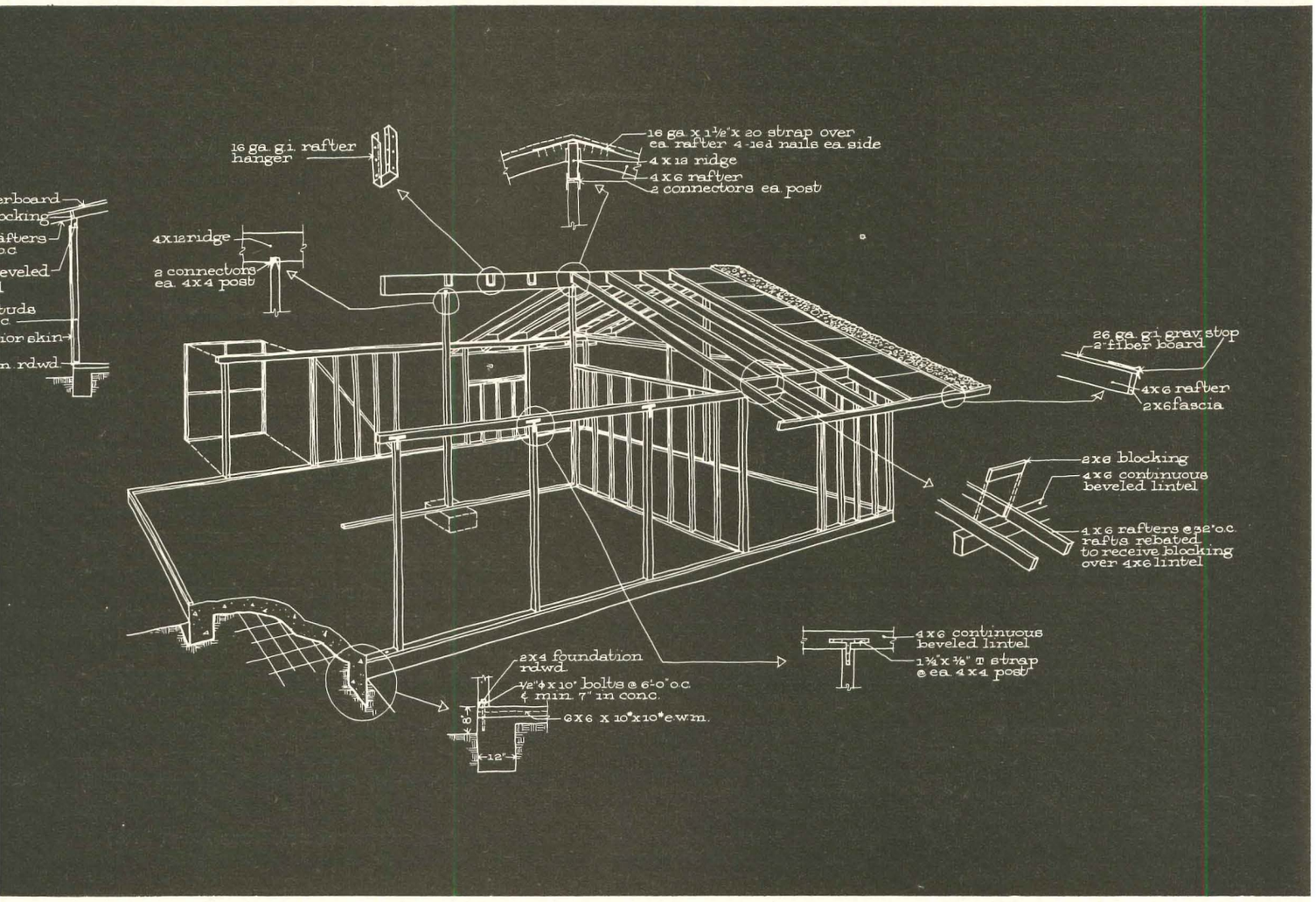


Wall cabinets *in this kitchen were designed by Palmer & Krisel to assemble quickly. They are trim, can be finished in bright color.*



Planter box *in hall is popular divider*





Sketch *is a diagram of basic Palmer & Krisel construction. Carpentry is kept to a minimum. Conventional techniques are used where changeover would mean loss for builder.*

Builders like construction shortcuts like these

These construction techniques are Palmer & Krisel trademarks:

1. **Standard perimeter.** One floor plan, with several elevations, means less work for the builder, economies in ordering.
2. **Post and lintel construction.**
3. **32" module.** They use three window sizes in an entire tract. A minimum kitchen takes three modules, a minimum bedroom four.

This isn't a perfect answer—but they feel that trying to find the perfect module is like "trying to find a ruler that will measure everything."

4. **Panelized walls.**
5. **Simplified roof.**
6. **Wiring and plumbing shortcuts.** They try to be familiar enough with laborers' routines so that wiring and plumbing routes are kept to a minimum.
7. **Reduced trim.** The headers on doors are sacrificed to speed up production—as well as to fulfill contemporary design.
8. **Economical cabinetwork.** Kitchen cabinets, closets and so forth are designed by Palmer & Krisel to lighten work. But often, a subcontractor finds the new method time consuming because it is unfamiliar. In a case like this, Palmer & Krisel indicate conventional technique on working drawings. Each saving is examined and re-examined in the light of practical conditions.

Does working with Palmer & Krisel save builders money? In construction, yes—they estimate that where conventional construction costs $7, their construction methods cost $6. But rather than save on over-all cost, these architects add house-selling features.

(continued on p. 196)

J. Alpern

WHAT ARE TODAY'S MOST POPULAR FEATURES?

Basic research pinpoints and rates

41 ideas in 29 widely publicized promotional houses

What do buyers want in a house? Most builders have to guess or play their hunches, because there are no generally accepted, standard indices to measure the most popular design and sales features.

When Designer Henry Wright and Architect Betram Bassuk were commissioned to design an air conditioned house for nationwide promotion, the sponsors asked for more than just a design for cooling. They wanted the house to include as many popular ideas and features as possible but they left it up to Wright and Bassuk to find out what those features were.

To get the answer, the designers turned to consumer magazine houses and to leading builders' exhibit models. They felt these houses were trend setters for new innovations. Here they decided were to be found the planning ideas the public is familiar with, the well-publicized features that have buyer acceptance and builder approval.

Wright and Bassuk analyzed the plans and specifications of 29 such houses, detail by detail, and tallied the score for each feature. They came up with a list of 41 ideas and from the number of times each idea was repeated in each of the houses, they got a clear picture of relative popularity.

One thing stood out: all of the 41 specific design ideas, sales features, and construction methods would work in any house. None were mutually incompatible (except a choice of roof types). More important, Wright and Bassuk found that some features, like three-plus bedrooms, are now almost a mandatory standard. Other ideas are more special, showed up in only one or two of the houses analyzed. (For comparative rankings see p. 204.)

How do you rate these ideas?

Here, in scrambled order, are the 41 items that Wright and Bassuk found in the 29 houses they analyzed. Rate them yourself and compare your opinion with the research results. Number the ideas in each of the three groups, putting them in the order of importance, as you judge it. Check your answers with the box score on page 204.

17 plan or layout features

Three-plus bedrooms ..... ___

Two-car carport or garage ..... ___

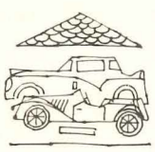
Dead-end living room ..... ___

Hobby or work space ..... ___

Exterior basement stair ..... ___

Expandable plan ..... ___

Separate laundry utility area ..... ___



Kitchen eating space ..... ___

More than one bedroom ..... ___

Patio ..... ___

Side or rear living room ..... ___

Open kitchen ..... ___

Family room ..... ___

Outdoor walls for privacy ..... ___

Central entrance ..... ___

Zoned layout ..... ___

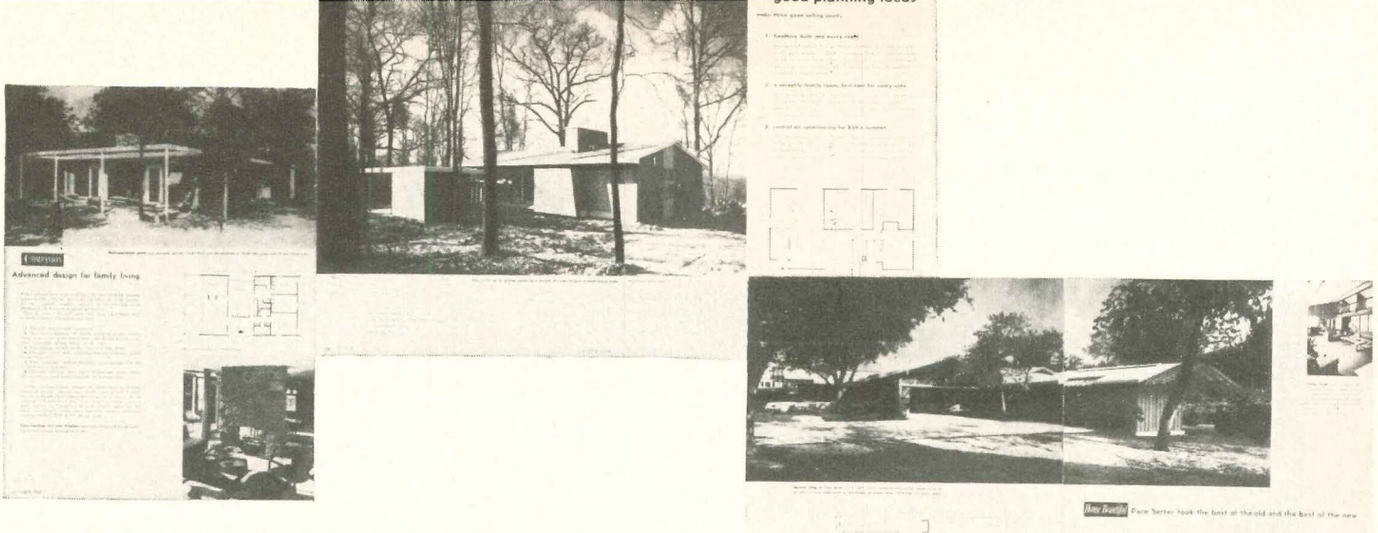
Compartmented baths ..... ___

Drawings: Fred Harsn

13 tangible sales features

High-sill bedroom windows ..... ___

Two-way fireplace ..... ___



Typical promotion *houses studied by Wright and Bassuk, shown here as originally presented in H&H.*

Research at the grass roots level

To cross-check their research findings against the opinions of working builders, the designers turned to another sampling. At January's NAHB convention, more than 40 builders were asked to rate the 41 ideas in the order of their market importance. Each of the men queried had previously indicated an interest in building the air conditioned promotion house.

Wright and Bassuk found the builders' rankings agreed closely with the exhibit house ratings for the most (and the least) popular features. But between the two extremes, there was a wide range of opinion. You'll find the complete box score on p. 204.

For the new promotion house that this research helped to plan, see the following six pages.

Barbecue facilities ____

Gable glazing ____

Master dressing room ____

Indoor dead storage ____

Outdoor storage ____

Storage walls ____

Sound conditioning ____

Inside exposed masonry ____

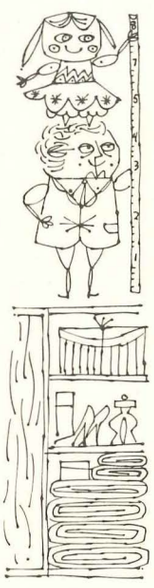
Built-in lighting ____

Cathedral ceilings ____

Built-in TV turntable ____

11 construction methods ____

Ventilating and fixed glass door frame ____



Pre-assembled storage walls ____

Standard wall height (8′ 0⅜″) ____

Standardized mechanical components ____

Cantilevered "outboard" closets ____

Jig-assembled light trusses ____

Modular construction ____

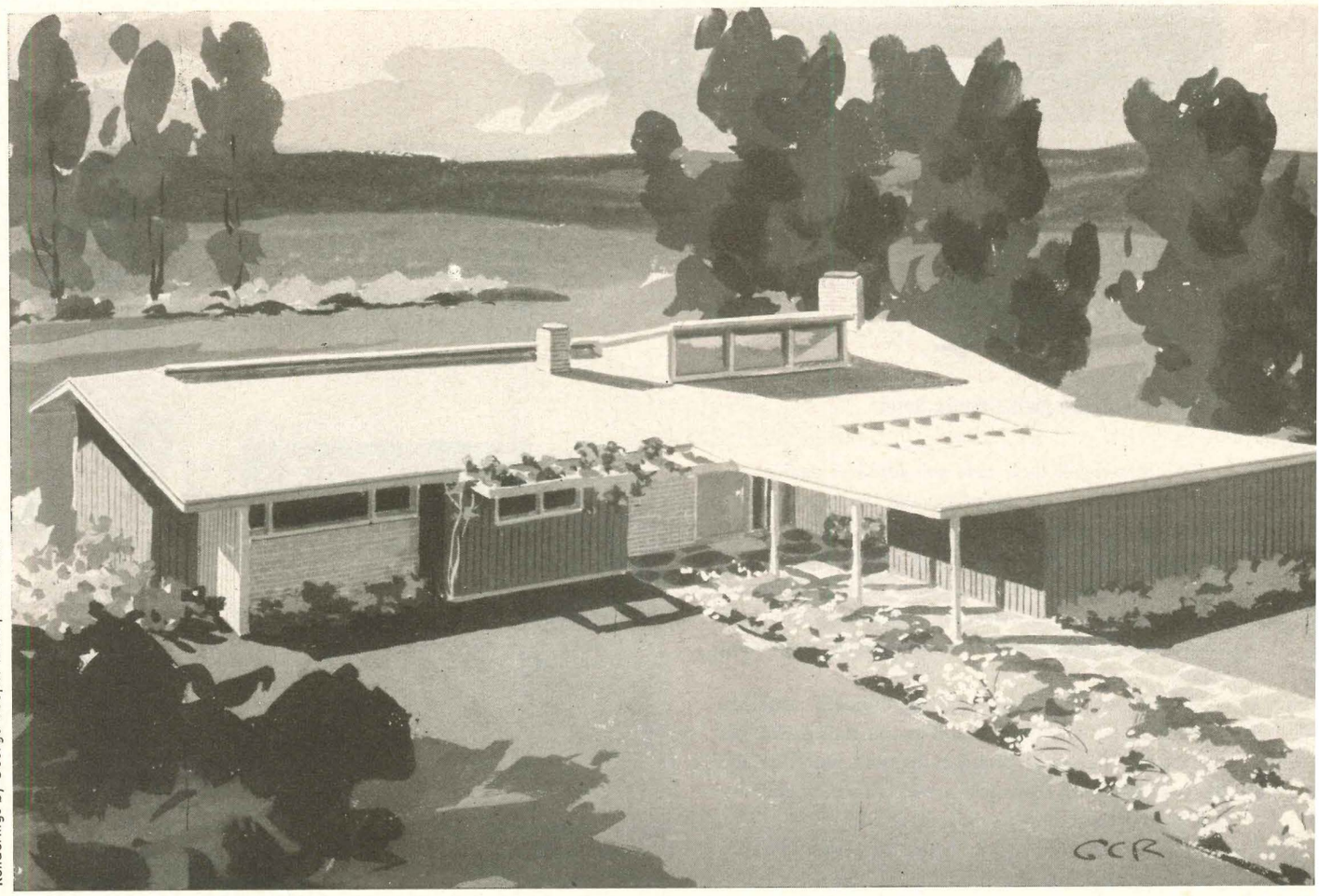
Panelized exterior ____

Panelized interior ____

Plank and beam roof ____

Window head directly under top plate ____

On page 204 you can compare your opinion against the rating by three important groups: consumer magazine houses, builders' exhibit houses, and a cross section of home builders.



Renderings by George Cooper Rudolph & Assoc.

This house was designed to show builders

HOW TO MAKE BUYERS DEMAND AIR CONDITIONING

The handsome house shown here is intended as a showcase to promote low-cost, year-round air conditioning.

Its sponsors asked Designer Henry Wright and Architect Burt Bassuk for an air-conditioned house with two big extras: top-flight design inside and out and built-in sales features that would find wide appeal and acceptance throughout the country.

Wright and Bassuk began with a basic plan of 1,460 sq. ft., added three alternate plans varying in size down to 1,220 sq. ft.

The plan is so flexible that you can site it with perfect orientation on any lot—a boon to development builders whose lots face every direction. (For details, see p. 186.)

It is so flexible that it can be built in any climate area of the US.

It is so flexible that it can change inside and out, as you can see from the plans and exteriors on the opposite page.

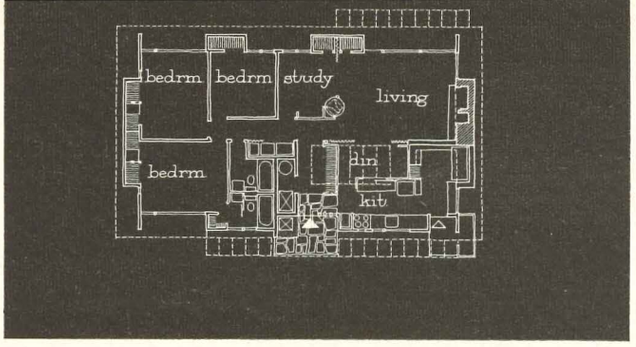
To build-in sales appeal, Wright and Bassuk culled good ideas from successful model homes and magazine promotion houses all over the country (for the ideas, see the preceding two pages).

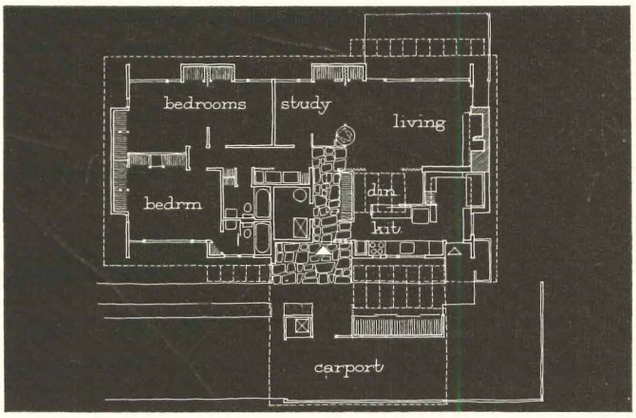
To keep down costs, Wright and Bassuk developed some new techniques of their own and adopted other construction methods that have been tried and proven by successful builders all over the country.

Because they drew from so wide a range of experience, so wide a range of popular features, so wide a range of methods, the sponsors, the Airtemp Division, Chrysler Corp. have named their model "The Composite House."

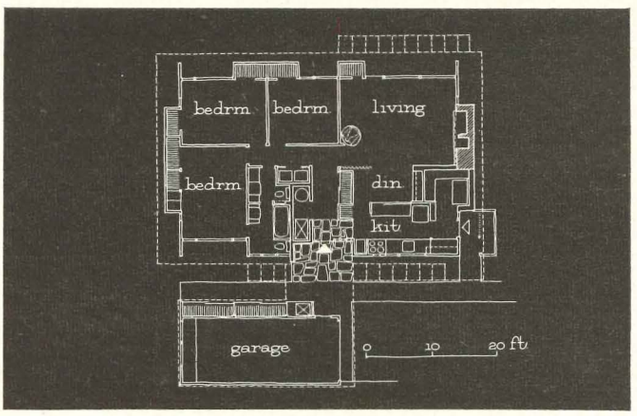
Its good looks, sales features and orientation adaptability—all present in an air conditioned house—will be promoted to builders on a nationwide basis.

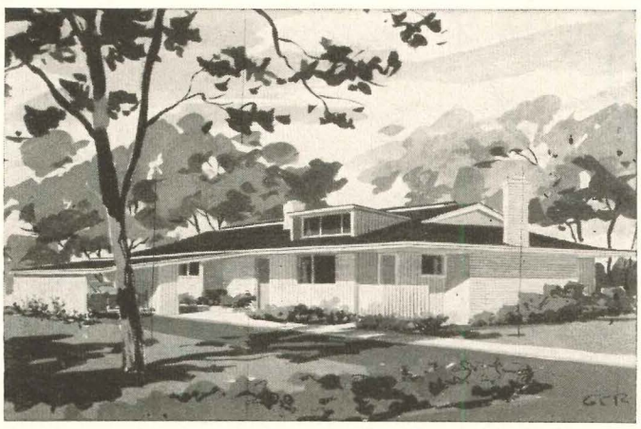
Size of basic plan can be varied to meet different needs



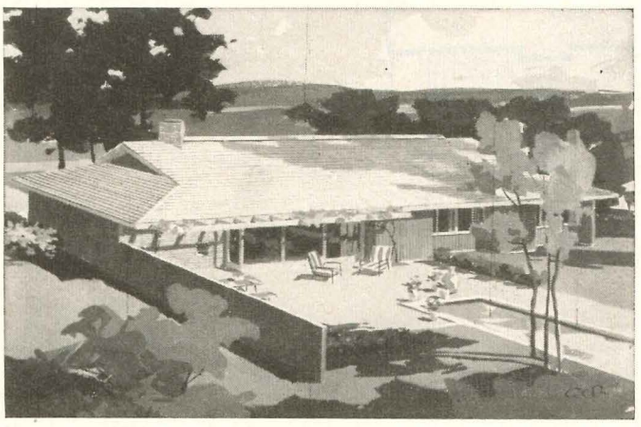


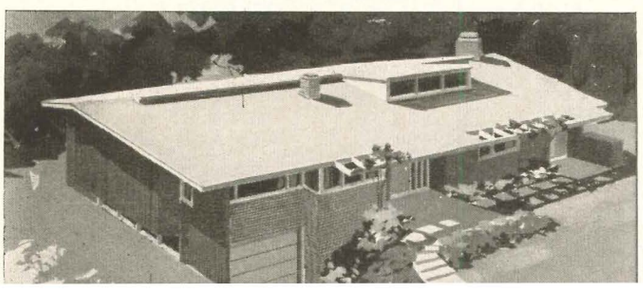
1,460 sq. ft. model *(left) spreads over basic rectangle 52′ long, 24′ wide. Outboard storage closets are added around perimeter. Second version (above) spans 48′ with same 24′ width used in all models, totals 1,350 sq. ft. Smallest plan (below) has rectangle 44′ long and is 1,220 sq. ft. Fourth model (not shown) offers 1,270 sq. ft. choice.*





These optional exteriors also fit each version of basic plan





Flexible design *permits three optional exteriors in addition to model on opposite page. Each is planned for outdoor living with a patio at the rear. Either hip roof (above) or low pitch rafter design (left) can be used. House at left is basement model with garage and downstairs family room.*

The "Composite House" can be oriented perfectly on any lot

If any one factor demands top priority for air conditioning it is orientation.

Face a house into the hot east or west sun and an oversized cooling unit will be needed to get rid of all the heat. Turn the same house to the north or south and you often need a unit only half as big. The cost comes down accordingly.

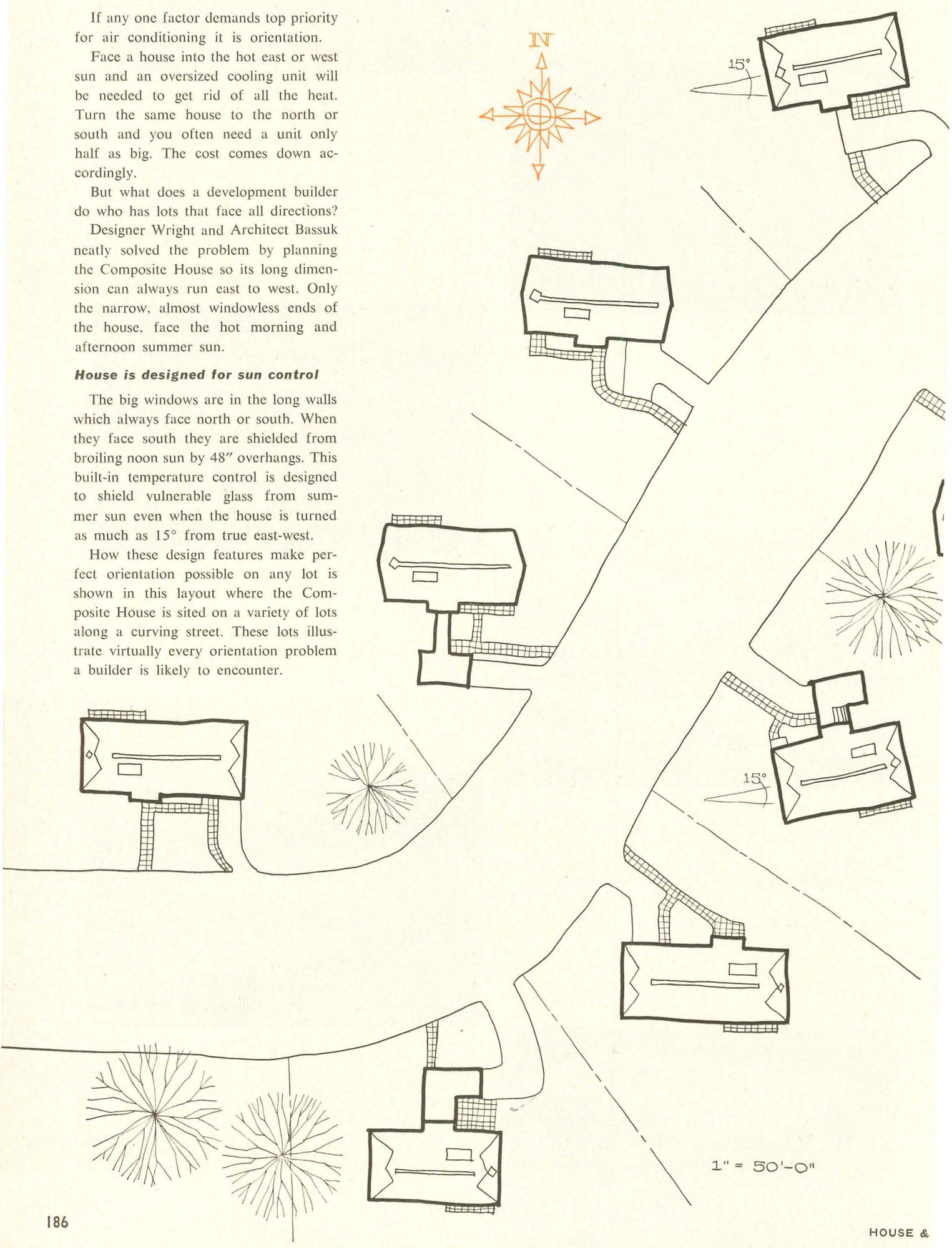
But what does a development builder do who has lots that face all directions?

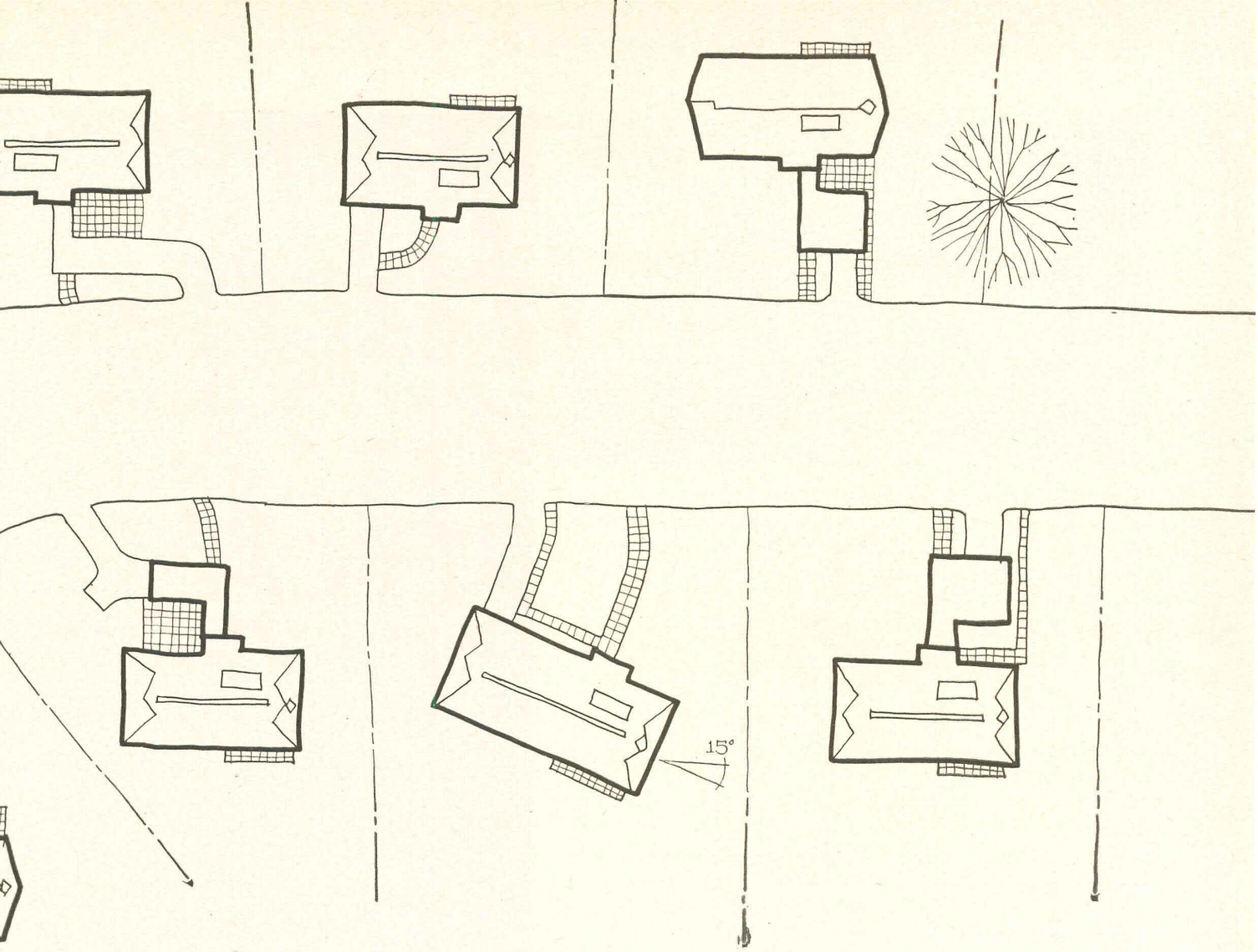
Designer Wright and Architect Bassuk neatly solved the problem by planning the Composite House so its long dimension can always run east to west. Only the narrow, almost windowless ends of the house, face the hot morning and afternoon summer sun.

House is designed for sun control

The big windows are in the long walls which always face north or south. When they face south they are shielded from broiling noon sun by 48″ overhangs. This built-in temperature control is designed to shield vulnerable glass from summer sun even when the house is turned as much as 15° from true east-west.

How these design features make perfect orientation possible on any lot is shown in this layout where the Composite House is sited on a variety of lots along a curving street. These lots illustrate virtually every orientation problem a builder is likely to encounter.





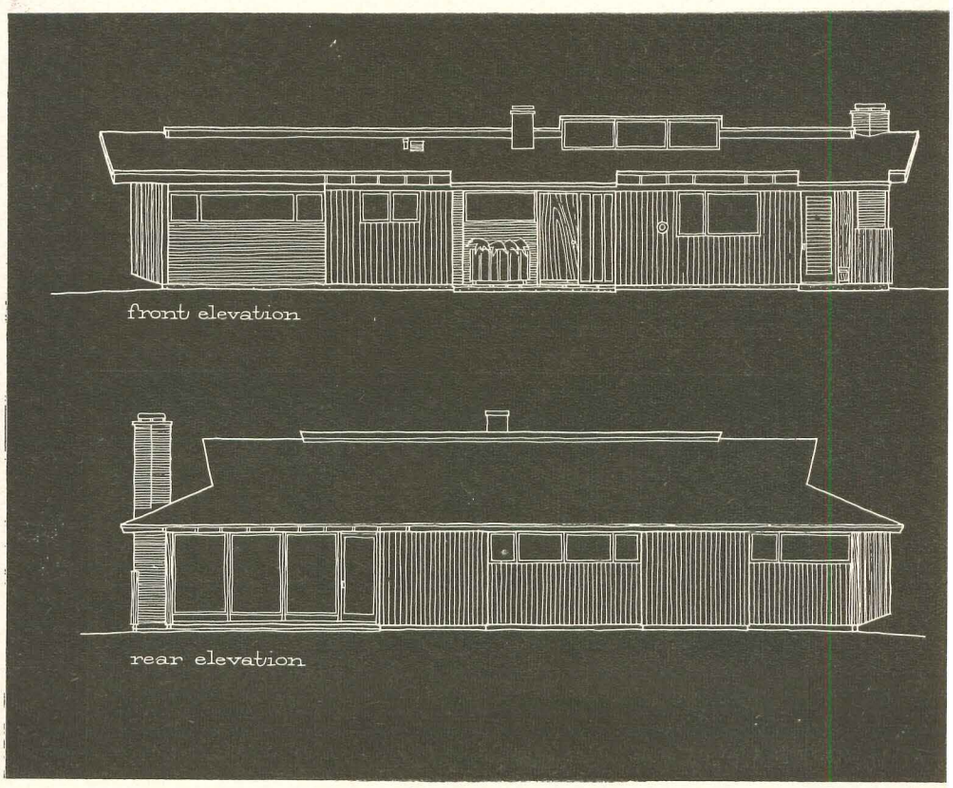
Key to the plan is the entrance door

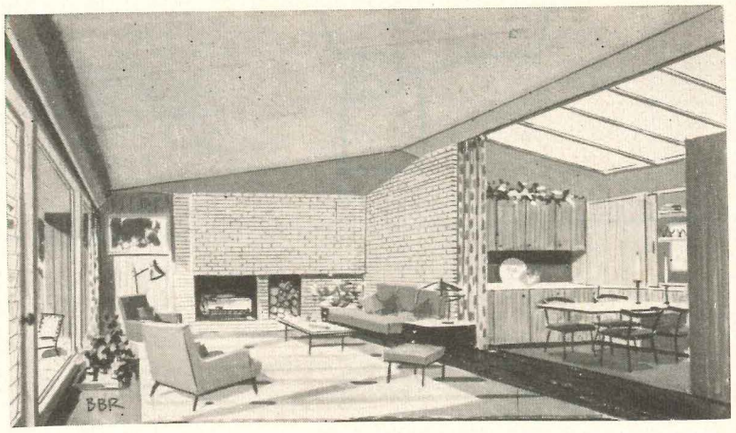
The Composite House will work on any lot chiefly because the front entrance door is located at the center of one long side (see top elevation, right).

For lots facing north or south, the entrance is to the street. For those facing east or west, the entrance works just as well at the side. Alternate locations are provided for the carport or garage, depending on the lot.

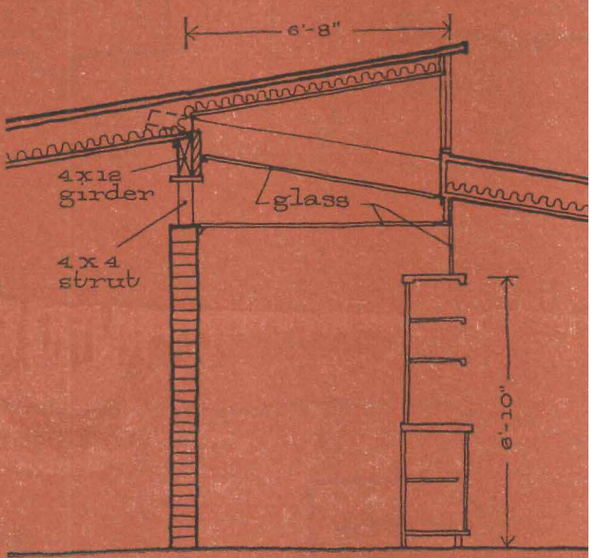
The front elevation (at top) shows how the house looks with a low-pitched 2-in-12 rafter roof. The skylight always faces the front.

The rear elevation (bottom) shows the house with a 5-in-12 truss roof, hipped at the gable ends. The floor-to-ceiling windows are positioned to open-up the rear livng area to the outside. Most of the other windows are placed rather high so they will receive maximum shading from the wide overhangs. Because the house is designed for year-round air conditioning the window locations are not arbitrarily fixed by the need for cross-ventilation.



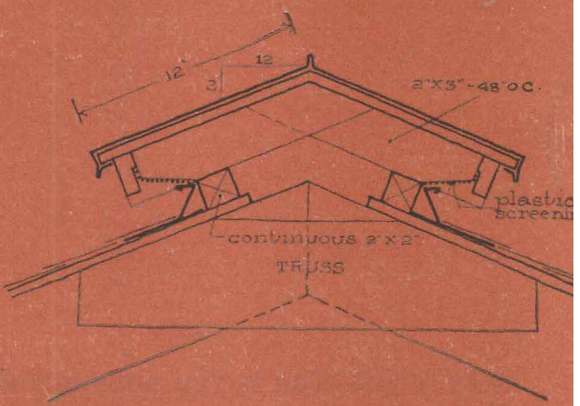


1. Sunproof skylight, *built into sloped ceiling, is shielded from direct rays of hot summer sun by exterior eyebrow and side visors, detailed in drawing at right. But plenty of light is let in to brighten house interior. Low rays of warm winter sun can also enter. Skylight is centered directly over interior dining space.*

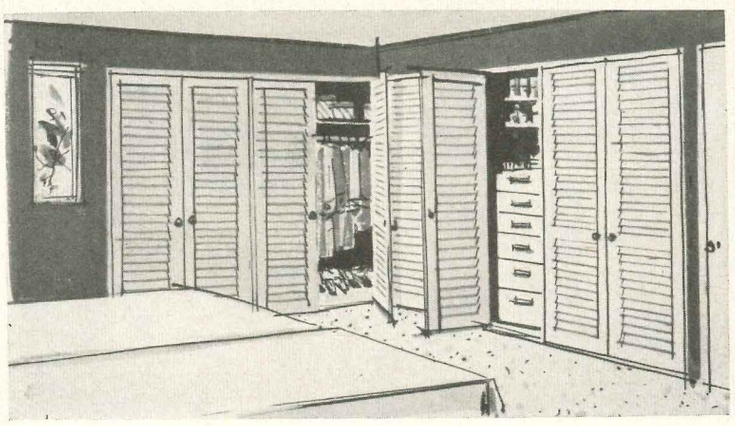


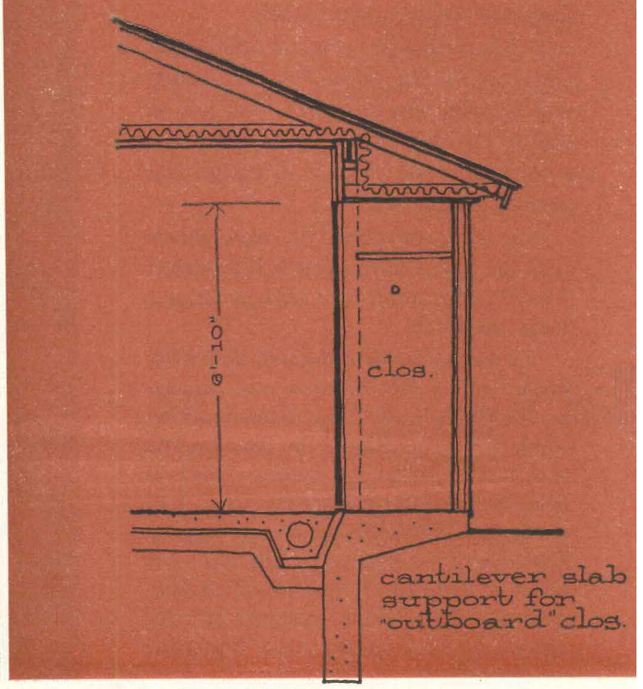
Three good ideas add extra appeal to Composite House

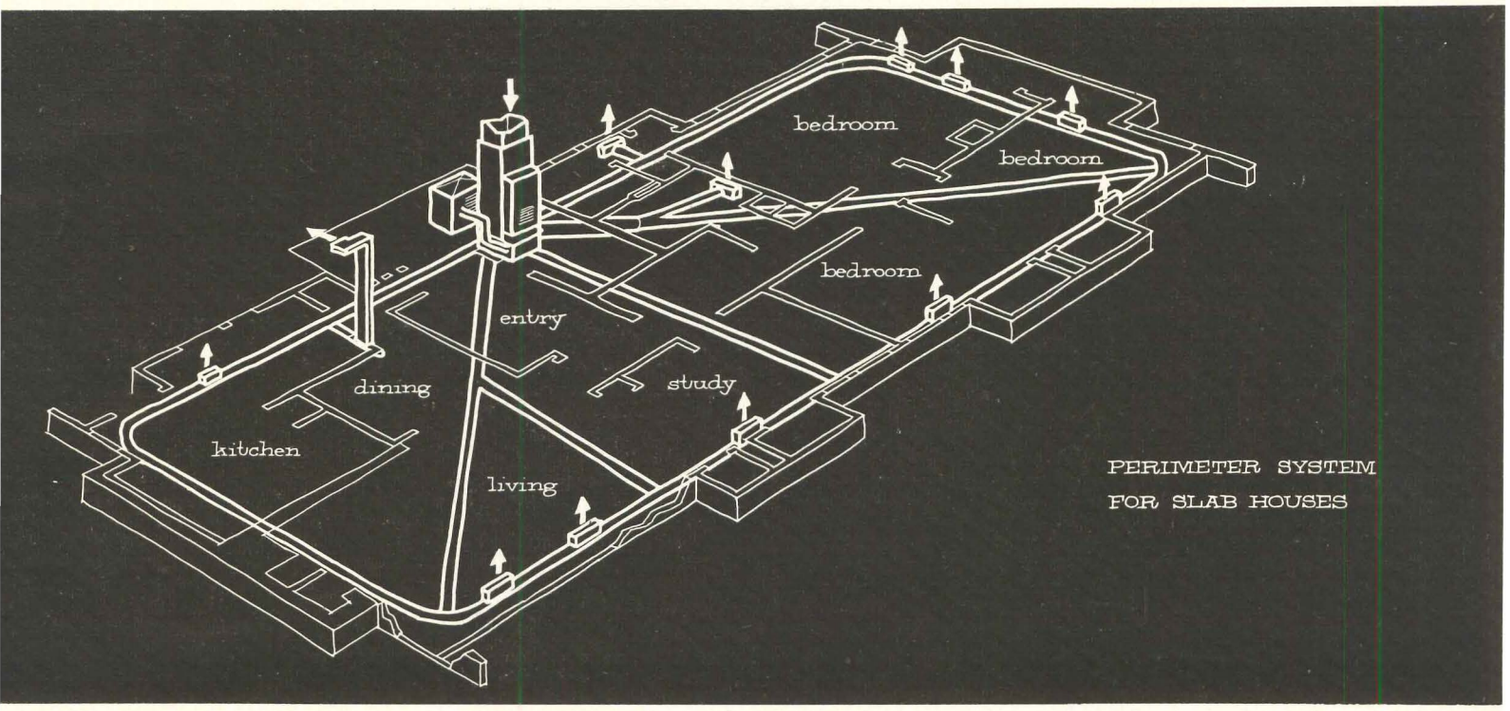
2. Ridge vents, *help cool the house by ventilating the roof—biggest single source of heat in any house. Vents let hot attic air escape, also provide ventilation urgently needed to prevent attic condensation in winter. (If ceiling is well insulated winter heat loss from vents is negligible.)*



3. Outboard storage closets *do not usurp high cost interior space, are cantilevered out from exterior walls but have interior accessibility. Closets are fabricated off-site, installed under overhangs on projections from main slab, are thus "roofed and floored at half price." Closets also serve to "insulate" large slice of outer walls from heat and cold.*







PERIMETER SYSTEM
FOR SLAB HOUSES

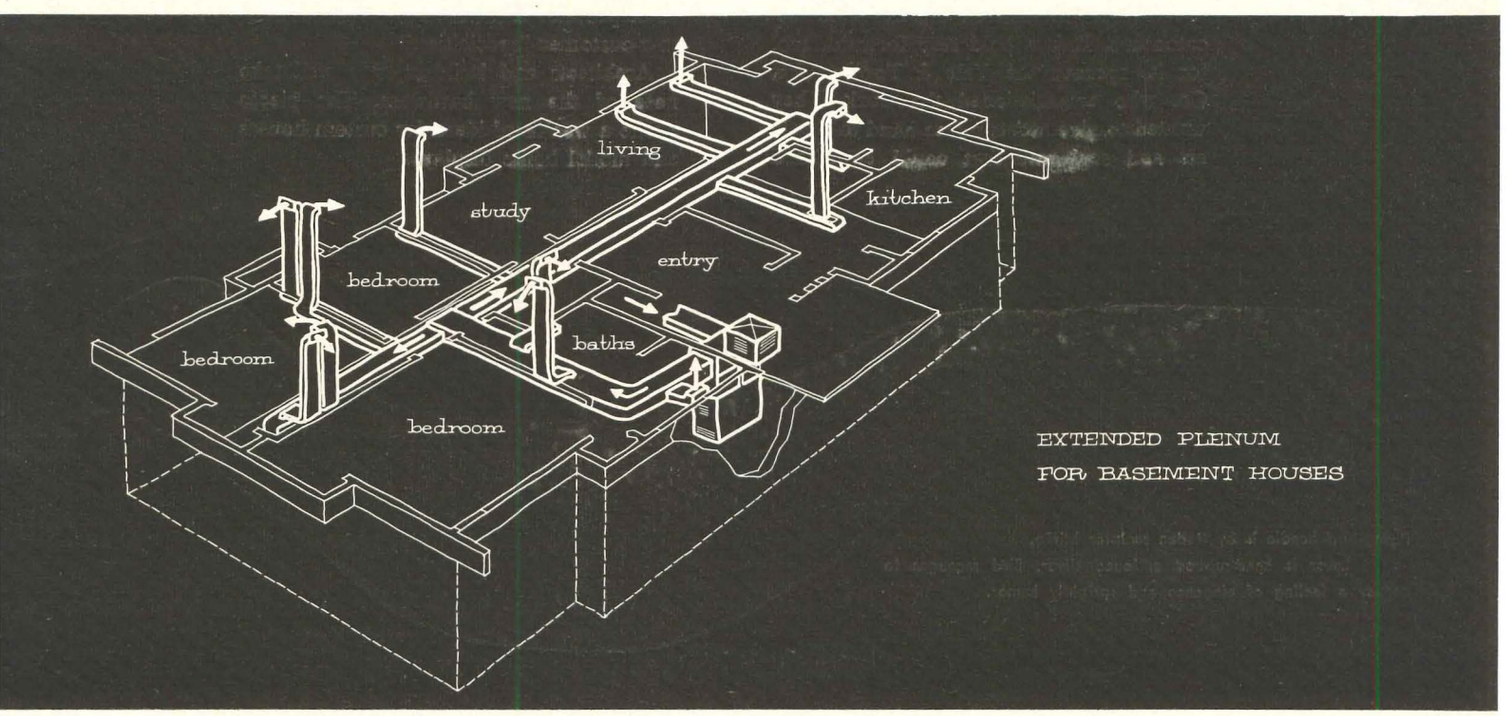
...w the air conditioning works

What kind of year round heating and cooling system will a manufacturer specify for his own house?

In effect, this is the assignment Airtemp engineers had in designing the air conditioning system for their Composite House. Moreover, the system had to be virtually foolproof to meet the varied needs of builders in every climate area.

Two basic system resulted. The one above was designed to heat and cool economically with slab construction. The drawing below shows the same equipment adapted to a basement house.

Because Wright and Bassuk designed the house so well for summer heat control, the amount of cooling capacity needed is "surprisingly low." In fact, any one of the Composite House plans can be air-conditioned with units half the size needed for many houses of similar floor area. The biggest Composite House (1,460 sq. ft.) needs only 2.2 tons of capacity. The others have lower cooling requirements, down to 1.7 tons for the smallest (1,220 sq. ft.). These figures are based on maintaining 75° indoors with 95° outdoors./ END



EXTENDED PLENUM
FOR BASEMENT HOUSES

Circular door pull, designed by Paolo De Poli, carries the outlines of a smiling face floating airily upon a background of several shades of enameled blue. Rim is outlined in bright copper.

IS THIS THE NEW LOOK FOR DOORKNOBS?

The fanciful faces, flying birds, paperweights and candy sticks on these pages are really part of a new collection of door hardware.

These pieces represent the work of a group of renowned sculptors and artists whose names—Lipchitz, Leger, Mirko, Spadini, De Poli—read like a vest pocket edition of the art world's *Who's Who*.

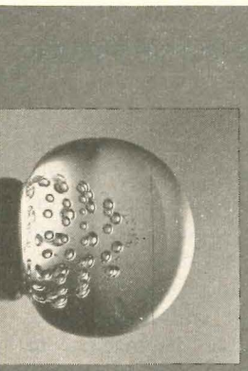
The collection is a bold step forward in the design of knobs, handles and escutcheons. It is a bold step forward, too, for its sponsor the Yale & Towne Mfg. Co. who commissioned the work. They wanted to give artists a free hand to create art and sculpture that could be turned into interesting new hardware designs.

These pieces and others similar in concept are on exhibit May 1-5 at the Wildenstein Galleries in New York, will tour the country later this year. Purpose of the show is two-fold: to display the hardware itself and to find out what architects, builders and the public think about the new designs. On the basis of what they learn, Y&T will decide which designs to mass produce and which to handle as one-to-a-customer "specialties."

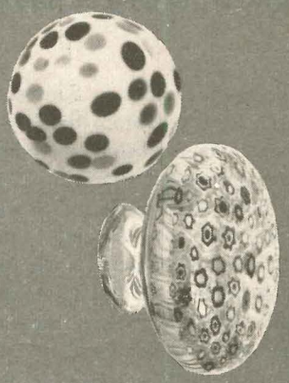
Architects and builders may well take note of the new hardware. The pieces evoke a wealth of ideas for custom houses and model home displays.

Flying-bird handle is by Italian sculptor Mirko. Lever is hand-rubbed antiqued silver. Bird manages to convey a feeling of elegance and sprightly humor.

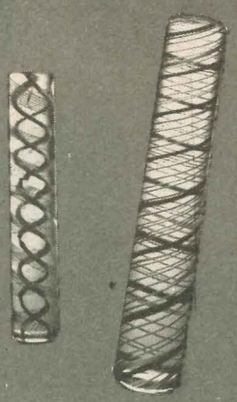
Photos: A. G. Michaelson



stal bubble knob was result collaboration by the Corning ss Co. and Y&T's Hardware ing Dept. In it, a fountain of rkling bubbles shoots up into clear smooth ball of crystal.



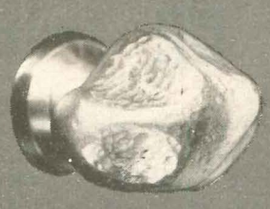
Glass doorknobs designed by Venini of Venice. The first sprinkles Dalmatian-like spots of color on a milk-glass ball. The second, a rich millefleurs design, is like a Victorian paper weight.



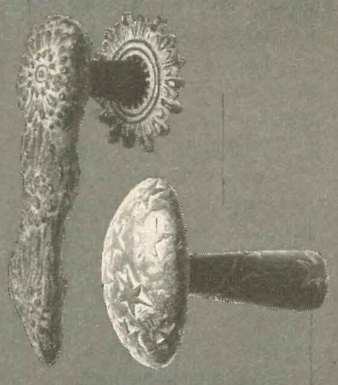
Door pulls, by Venini, look like wisps of cotton candy caught in glass. Swirled lines of color—lavender, yellow, pink and blue—meander up and down the large cylinders of Venetian glass.

Cherub-faced sun shines as a knob by the Italian sculptor Spadini. Bas relief of face is set off against a rose molded into a sun burst. Knob, rose gleam richly in gold-plated bronze.

amic knob and escutcheon by late Fernand Leger put new or and form on a door. Bold metric design is made bolder by skillful use of brilliant nge, blue, black and white.

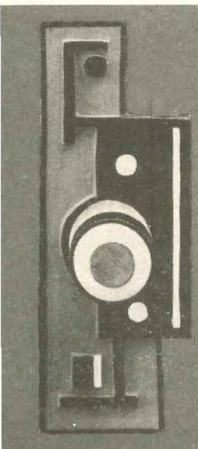


Nugget-shaped door knob plays up mass, texture. Knob is of crystal, aluminum, ceramic, gold or silver. It is particularly effective against a polished door. Design is by Van Day Truex.



Lever handle and rose in bronze are hand-rubbed to an antique finish. Surface effect is softened by flower-like design. Star flower knob has shape of a giant toadstool. Both designed by Mirko.

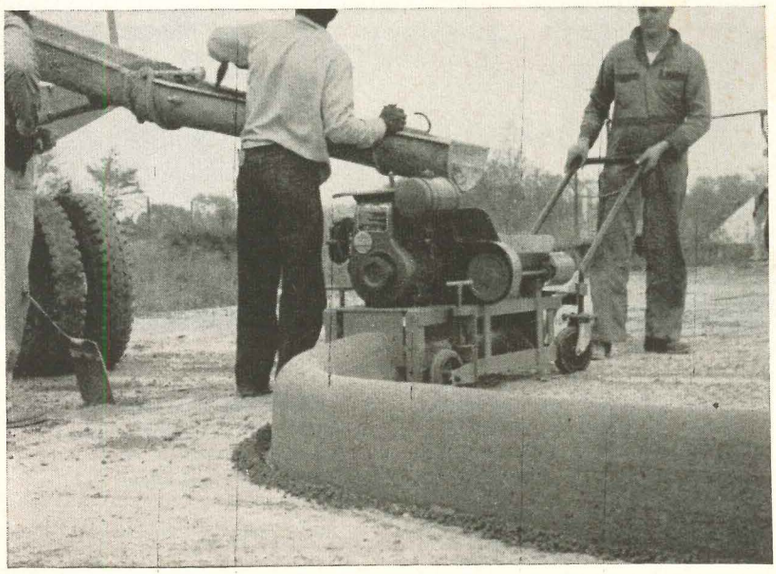
Full moon, like sun above, was created by Spadini. Droll child's face is antiqued silver, set off against a rose of scudding clouds intended to give one an impression of somnolent movement.



For New Products reviews, see p. 216

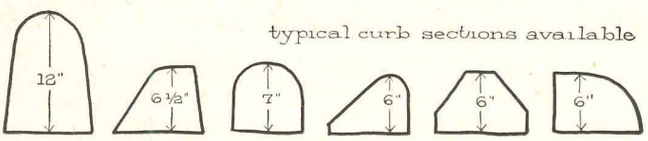
3 MORE WAYS TO BUILD BETTER FOR LESS

60 Formed curbing is squeezed out like toothpaste

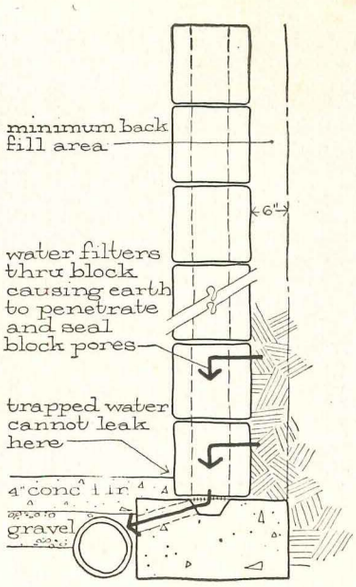


Costs for curbs in Sampson-Miller's Garden City development were cut more than 50% through the use of an automatic curb machine. Rolling on angle iron tracks, the machine extrudes curbing as it moves along, at a rate as high as 2,800 lin. ft. per day (with a five man crew).

Blacktop (or concrete) is poured into a hopper and is extruded through a worm gear into the curb mold under high pressure. Compaction pressure causes the machine to move forward, making the curb a continuous ribbon. A tack coat of emulsified asphalt laid ahead of the machine bonds the curb to the paved area. Curb costs were cut from $1 per ft. to 35¢ for straight runs and 50¢ on curves. A ton of blacktop yielded an average of 72 lin. ft. of curb.



61 Foundation channel carries off water

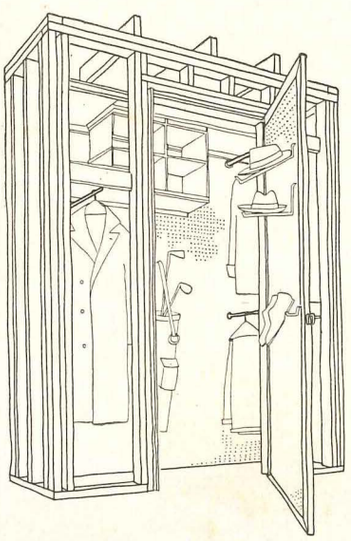


Instead of sealing off ground water with an asphaltic coating on basement walls, Builder David Augustus, of Indianapolis, lets it penetrate his hollow block walls, then drains it off before it can leak into the basement itself.

A continuous channel is patterned into the footing with outlets sloping inward to a 4″ drain tile laid around the interior perimeter of the wall. The drain, laid beneath the basement floor, leads to a sewer or sump pump.

Augustus found that water seeping into the block brings mud into the pores of the concrete block and in time effectually seals it off. To prevent careless masons from clogging the channel with mortar, Augustus uses strips of metal lath to catch any droppings.

Because backfilling is reduced to a minimum, and because he has not had a single wet basement since using the idea, Augustus figures his saving at $150-$250 per house.



62 Closet planned for efficient use

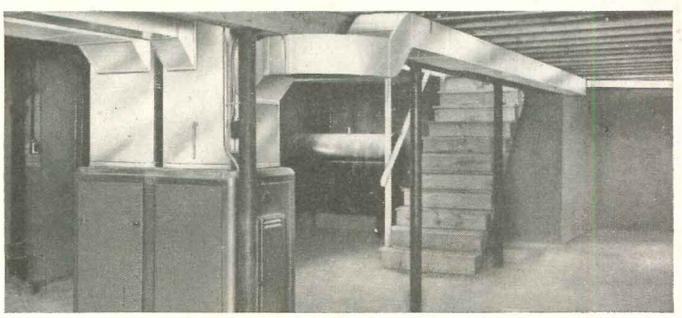
From the Masonite Corp. comes a closet planned for the builder's house, where every inch of storage space is vital. Chief aid to efficient use of the space is the location of hanger rods. Two are mounted, one above another, to accommodate short items (suit coats, skirts, trousers, etc.), on one side of the door opening. Opposite, another rod is hung shoulder high to hold coats and long dresses.

Instead of plain shelving, a pigeonholed divider made of ¼″ hardboard is mounted on the back wall to hold purses, hats, and other small items. Both wall and door back are surfaced with perforated hardboard. A wide variety of closet hardware may be used to provide for special items./END

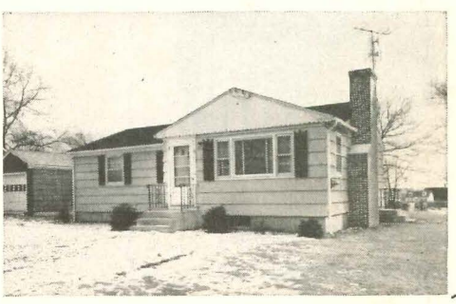
1,000 Homes "ENGINEERED FOR YEAR-ROUND AIR CONDITIONING"

. . . with Rustproof Ducts of REYNOLDS ALUMINUM

Cyril Gagne has built about 1,000 homes like those shown above in Chicopee, Mass. And they all feature rustproof *aluminum* ductwork —Duc-Pac prefabricated fittings made of Reynolds Aluminum, installed by Swett Bros. Heating & Appliance Company of Springfield.



These modestly priced homes do not now have air conditioning. But they offer a "future improvement" important to homebuyers—they are *engineered for air conditioning.* Their aluminum duct systems can handle cold air without damage from inevitable moisture condensation.



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REYNOLDS ALUMINUM

See "FRONTIER," Reynolds great dramatic series, Sundays, NBC-TV Network.

(continued from p. 183)

Here's how 29 promotion houses utilzed 41 planning, sales and construction ideas—and how a sampling of builders rate the appeal of each idea. (From the Wright and Bassuk report.)

	Consumer magazine houses											
	BH&G Five Star House, Arch't. G. B. Steinberg	BH&G Five Star House, Designer Alfred Levitt	BH&G Five Star House, Designers B. Duenke, R. Fournier	BH&G Five Star House, Arch't. H. T. Fisher Assoc.	BH&G Five Star House, Arch't. D. F. Rixman	Home For All America, Arch't. Robt. A. Little	Modified version of HFAA, Builder Joseph Peltz	BH&G Idea Home (1955)	Woman's Home Companion Home, Arch't. Geo. Nemeny	House Beautiful Pacesetter, Arch't. Harwell Harris	
Plan or layout features											
Three-plus bedrooms	X	X	X	X	X	X	X	X	X	X	X
Two-car carport or garage	X					X	X	X		X	X
Dead-end living room	X	X				X	X	X	X	X	
Hobby or work space						X		X		X	
Exterior basement stair								X			
Expandable plan						X		X			
Separate laundry/utility area	X		X		X	X	X	X	X	X	
Kitchen eating space	X	X	X			X	X	X			
More than one bathroom	X				X	X	X	X	X	X	X
Patio	X		X	X	X	X	X	X	X	X	
Side or rear living room	X	X	X	X	X	X	X	X	X	X	X
Open kitchen		X			X	X		X	X		
Family room					X	X	X	X	X	X	
Outdoor walls for privacy	X			X	X	X	X	X		X	
Central entrance	X	X		X	X	X	X		X	X	
Zoned layout						X		X	X	X	
Compartmented baths	X									X	
Tangible sales features											
High-sill bedroom windows		X					X	X			
Two-way fireplace		X					X		X		
Barbecue facilities										X	X
Gable glazing			X		X		X	X			
Master dressing room										X	
Indoor dead storage				X	X		X		X		
Outdoor storage		X	X	X	X	X	X			X	X
Storage walls			X			X	X	X			
Sound conditioning						X	X			X	
Inside exposed masonry		X									
Built-in lighting						X	X	X		X	
Cathedral ceilings			X		X	X		X		X	X
Built-in TV turntable										X	
Construction methods											
Window walls		X	X					X			
Pre-assembled storage walls			X			X					
Standard wall height (8′3⅜″)		X	X			X			X		
Standardized mechanical components											
Cantilevered "outboard" closets											
Jig-assembled light trusses											
Modular construction			X					X	X		
Panelized exterior		X	X					X	X		
Panelized interior						X	X		X		
Plank and beam roof	X			X				X	X		X
Window head directly under top plate	X	X	X	X	X	X		X	X		X

Sampling of builders

Builders' exhibit houses

Household's GE Wonder Home, Arch't. Knett & Meyers	Order of rating	New Americana Home (1955), Arch't. Rudolph Matern	NAHB Trade Secrets House (H&H)	Lu-Re-Co Model WP2-2, Small Homes Council	Wichita Research House (1954), Arch't. H. Himes	NAHB Show House (Calif.), Arch't. A. Quincy Jones	Eichler Model House, Arch't. Anshen & Allen	American Houses Model, Arch't. George Nelson	Gerholz 1954 Model, Arch't. W. K. Davis & Assoc.	Tacoma NAHB Show House, Arch't. R. B. Price	NAHB Merit Award House, Indianapolis (1955)	NAHB Merit Award House (Calif.), Arch't. E. H. Fickett	American Builder Blueprint House, Don Scholz	Mutual Construction Model Home, Portland, Ore.	Cliff May-Chris Choate 1953 Model	Byles, Weston & Rudolph Model (1953)	AIA Good Design Award (1954), Arch't. Anshen & Allen	Order of rating	Order of rating
×	1	×	×	×	×	×	×	×	×	×	×	×	×	×	×		×	1	1
	11				×		×	×		×				×		×		13	9
	9		×		×		×	×			×	×	×					11	8
	14	×	×			×								×				15	15
	17																	17	17
	16				×	×		×							×			16	16
×	6	×					×		×			×	×		×		×	9	11
	8	×	×	×	×		×		×	×		×	×	×	×			6	3
×	5	×	×		×	×	×		×	×	×	×	×		×		×	5	2
×	2	×	×		×	×	×	×		×	×	×	×		×	×	×	3	6
×	3	×	×	×	×	×	×	×		×	×	×	×	×	×	×		2	5
	12		×		×					×	×	×	×	×	×	×		7	13
	10		×		×	×	×	×		×								12	12
×	4		×		×		×		×	×	×	×	×	×	×	×	×	4	10
	7	×	×			×	×			×		×	×					10	4
	13	×				×	×			×		×			×	×		8	7
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	12														×			10	8
	6	×		×		×			×			×						5	1
	1		×	×	×	×	×	×		×	×		×	×	×	×		2	2
	4	×	×		×		×	×	×	×	×		×	×	×	×	×	1	3
	9																	12	7
	11				×													9	6
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	13																	13	11
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	8		×				×	×	×	×	×		×		×	×	×	6	9
	6		×	×					×				×	×	×	×	×	8	1
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	4		×	×	×				×		×		×		×		×	7	7
×	3		×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	1	6
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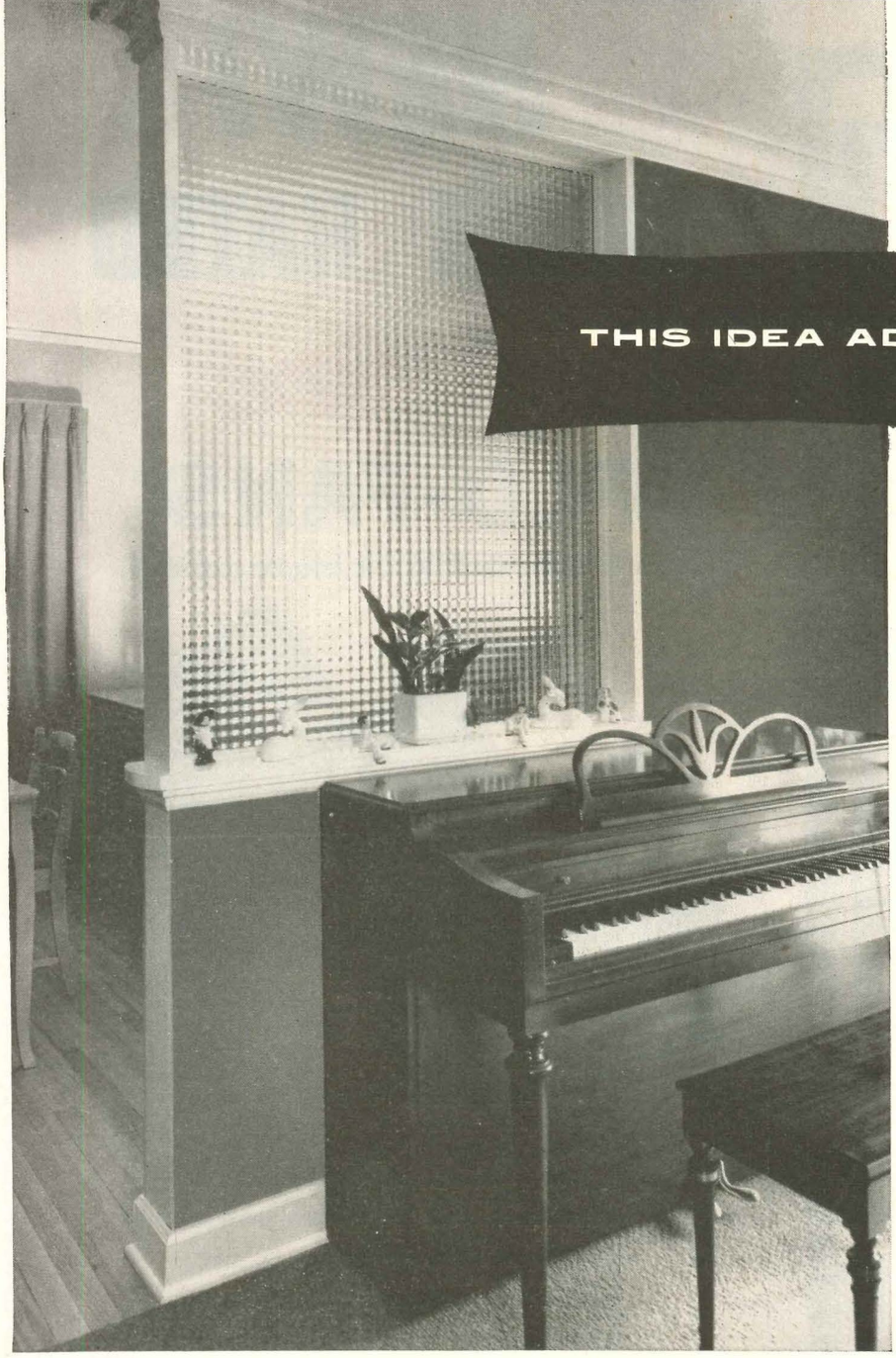

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