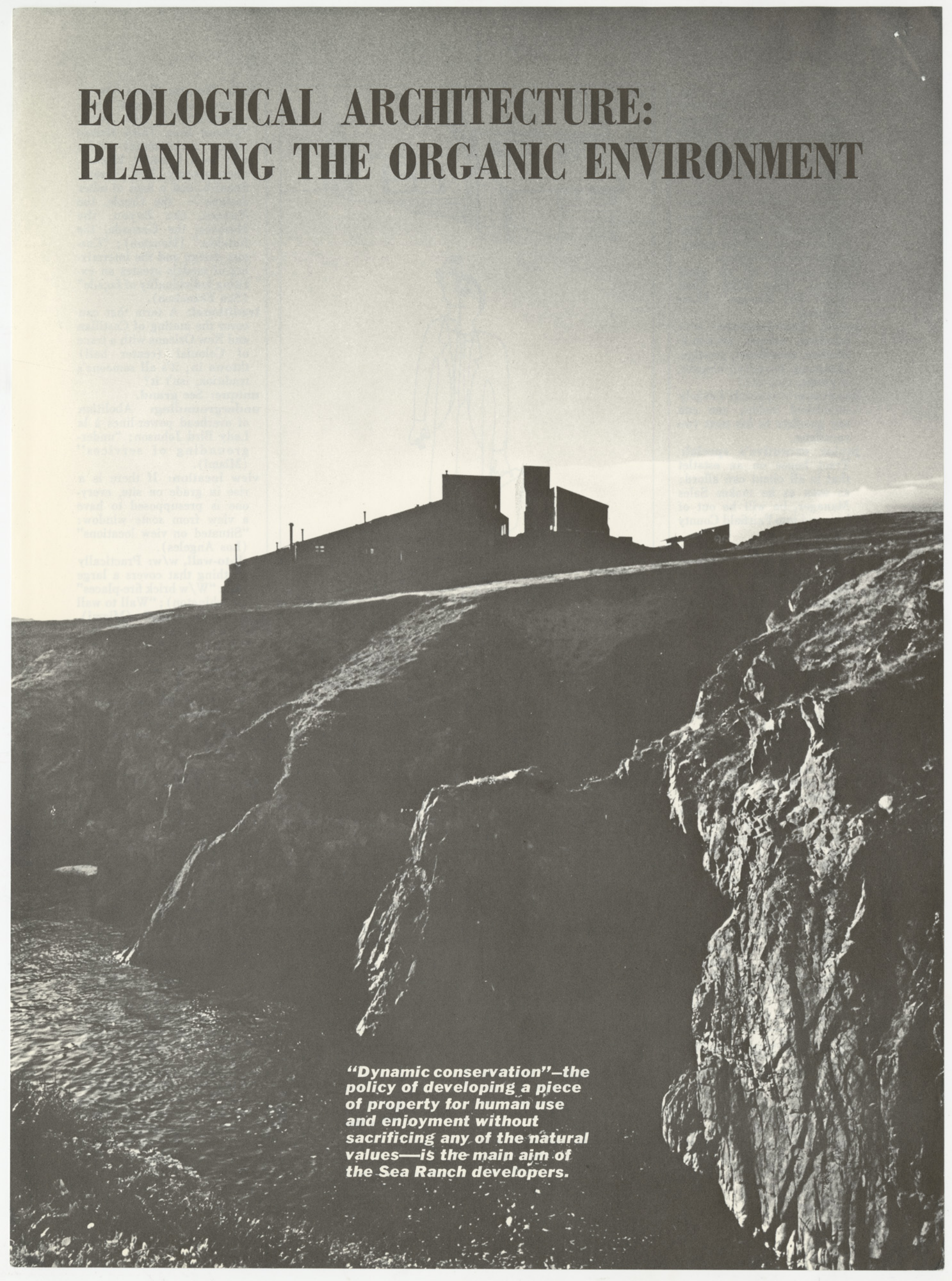


ECOLOGICAL ARCHITECTURE: PLANNING THE ORGANIC ENVIRONMENT



“Dynamic conservation”—the policy of developing a piece of property for human use and enjoyment without sacrificing any of the natural values—is the main aim of the Sea Ranch developers.

From the basic premise of preserving as much of the natural environment as possible, a West Coast developer has sparked an ecological approach to architecture and planning that has resulted in "organic," highly regional structures, a long-range commitment to land management, and a community of "second homes" that captures the illusive quality of natural beauty. The philosophy of design was a growing one, evolving slowly from deliberations on the part of the client's architectural director, Al Boeke; the landscape architects, Lawrence Halprin & Associates; the architects, Joseph Esherick & Associates, and Moore, Lyndon, Turnbull & Whitaker. Between them, they have evolved a community that requires a re-adjustment of suburban living habits, of suburban real-estate techniques, and introduces a broader concept of land ownership, use and stewardship. The story of Sea Ranch is one of a slow education between client, geologist, architect, real estate salesman, and the public.—MD

The site, which is about three-and-a-half hours traveling time from San Francisco, is a spectacular stretch of sea coast—14 miles long, with a flat field rising to low hills crowned by thick forests.

It was not what Al Boeke, architect and Vice-President of Planning for Oceanic Properties (a division of Castle & Cooke) had been looking for: It was not land of the type of urban development characteristic of the company. But it was a splendid site for a "second-home" vacation community; it could be a long-term, real-estate investment; and it could be developed *properly*. Moreover, it was a beautiful piece of property that was going begging. The state, which had thought of buying it for a park, had withdrawn the offer. Zoning laws permitted anything and everything in the area, and, if left to the typical West Coast developer, it would be chopped up in short order. The challenge was to preserve the character of the land while putting a relatively dense development on it; building was to enhance the property, not destroy it.

For Boeke, the position of corporate architect is the only way of accomplishing good planning of any scale to make an



Al Boeke

impression. "I could work 40 or 50 years as a private architect in L.A. and my work would be swallowed up by the city. . . . If you are not actually a business partner of the 'client,' it is harder to find out the basic facts about the company, what its motives are, how much money it makes, what is really possible. If you're not on the inside, it is more difficult to remotivate the company. What the state of building needs is more Robert Simons, rather than individual architects."

Boeke's role at Sea Ranch is that of design manager rather than architect. After deciding on the purchase of the land, he assembled a team of experts in advertising, public relations, and real estate and law. Lawrence Halprin & Associates were retained as landscape planners; Joseph Esherick & Associates, and Moore, Lyndon, Turnbull & Whitaker followed at a later date to design model houses and a condominium. During the first six to eight months of meetings, the real-estate company tried to anticipate the needs of the area, and the feasibility of the project. An interesting sidelight on the proceedings at this point was the conflict that arose between the real-estate company, which wanted instant recreational facilities, and Oceanic Properties, which felt these were not that essential to the initial development and sale of the land. To a certain extent, it was a conflict in values between a suburban, country-club-oriented sales agency, and a more unconventional nature-oriented developer. The conflict ended with Boeke setting up his own real-estate division that had its own sales force. As it is, the Boeke team itself sometimes has difficulty understanding the more unique aspects of the development; the sale of the conventional lot is more familiar and compatible to them than, say, the more difficult task of introducing the public to the notion of living in a condominium apartment in the middle of a countryside.

The development goal is to provide as much free land as possible. The property was to be purchased over a period of seven years, while developing and selling enough to meet the land payments and at the same time keeping two-thirds of it as open space. This contrasts with the typical development project, which usually plans to meet cost after two years and make a high profit—10 to 25 per cent after taxes. This either pushes plot prices sky high, or, more commonly, the development is reduced in quality, land is bought in small parcels that are subdivided *ad infinitum* to extract the most profit. A large, well-endowed corporation can afford one or two real estate projects, among a portfolio of 10, which can be slow on returns.



In relation to Waipio, a new Hawaiian town, and Hamilton, a new town in San José, Sea Ranch is the "sleeper" of Oceanic Properties.

However, it turned out to be a sleeper in the true sense of the word. At Sea Ranch, Boeke took several real estate risks: Considerable capital was invested in a condominium unit and model homes, and in developing and preserving the natural landscape. The potential buyer was presented with a rather special natural environment, and a few stringent restrictions on exterior design that Boeke insisted on, in spite of considerable timidity on the part of Oceanic's management. Would it sell? Fortunately, the first increment went splendidly. The company expected to sell 100 lots the first year, yet it sold almost that many in eight months. The condominiums went on the market in July 1965; by December of that year, all but two had been sold. The project is well underway, and a new condominium is planned, together with a hotel.

Boeke's success has in large part been due to his choice of planner and architects, Halprin, Esherick, and Moore; their basic understanding of the land and the environment; and Boeke's sensitive direction and balance between the necessities of the market, the personal direction of each architect, and the project's goals.

Boeke functioned as that most necessary mediator between the architect and the businessman. At times he was the educator, at times, the educated. Out of his desire to preserve the quality of the land, he emerged with a project that has several unusual features, some of which may have startled even him. Out of a desire for a dense town-house type of development, he emerged with Moore's exciting condominium structure. Out of the Halprin office came not only a landscaping planning job, but a more profound understanding of the land, a deeper analysis of the ecology than he had originally anticipated. And out of these studies have come an organic approach to planning that is not only aesthetically involved with the landscape, but ecologically involved as well, and demands a long-range commitment to land management.

"If you can learn the history of a land over a hundred years, the knowledge can tell you what processes are at work in the region—both constructive and destructive. From these, you can learn how to use the land, how to plan a development; where to locate buildings, roads and plantings. You do not necessarily have to conform to the processes at work, but at least, if you choose to go against them, you are in a better position to estimate the consequences and the costs."

DICK REYNOLDS, GEOLOGIST FOR
LAWRENCE HALPRIN & ASSOCIATES

Site Planning:

Lawrence Halprin & Associates,
Landscape Architects.

Man is usually bumptious enough to presume that he is independent of his environment: that he can control it, air-condition it, heat it, decorate it, and generally bend it to his will. The planning of Sea Ranch was not a landscaping job in the more traditional sense; it was not a matter of decorative design, but of broad environmental planning that used the natural features of the landscape as its base. It is a bare beginning in ecological planning.

The *Columbia Encyclopedia's* statement on ecology is the following:

"Ecology: Scientific study of plants and animals in relation to their natural environment. Ecology is concerned with such problems as anatomical and physiological adaptations of living things to environmental conditions (e.g., amount of moisture, light, temperature, wind, and kind of soil), interrelations in plant and animal communities, and succession. By succession is meant the series of stages leading to the ultimate establishment of a climax community or climax area. A climax community is mature and relatively stable representing the final stage of development of the existing climatic conditions of a particular region . . . succession is well observed where plant and animal life begin to inhabit land previously bare."

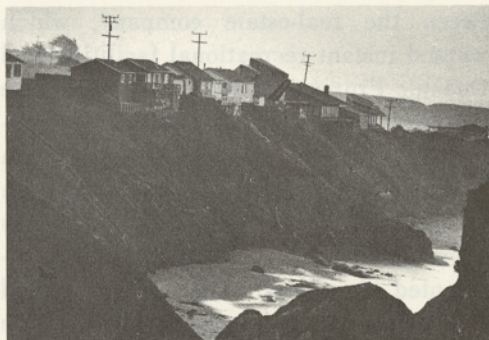
The land at Sea Ranch was not virgin: It had a history of logging, agriculture, and grazing. Hedgerows had been planted in the fields to cut the wind, sheep had eaten their favorite grasses at the edge of the bluffs and contributed their share of erosion; recently, the forest had been so carefully protected against fire, it had

grown into a massive tangle of second growth that choked out the larger trees.

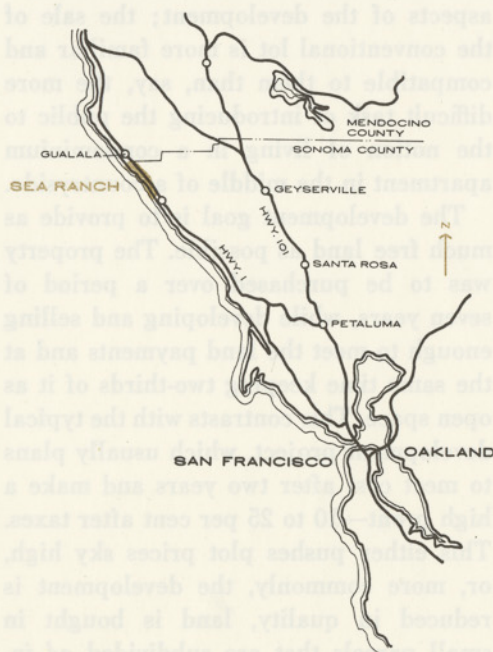
The most salient characteristics of the land, then, were the long cyprus hedgerows and the fields, forest, and a strong wind from the Northwest, and relatively cool climate.

The task of the Halprin office was to introduce heavy population densities to the land, and make it habitable for a summer, resort population. The master plan for 5000 acres called for condominium sites, single-family house lots, a restaurant, recreation area, airport, golf course, village center and a hotel.

Given the requirements of preserving the quality of the land and coping with the elements, there were only two or three alternative locations to development of the land: in the woods, crotches of the hills, or along the cyprus hedgerows. However, by taking into account the climatic factors, the sun, wind, and topography, the architecture could be fashioned to provide its own protection on the more exposed portions of the land; the Halprin studies contributed heavily to the devel-



Typical development down coast from Sea Ranch.



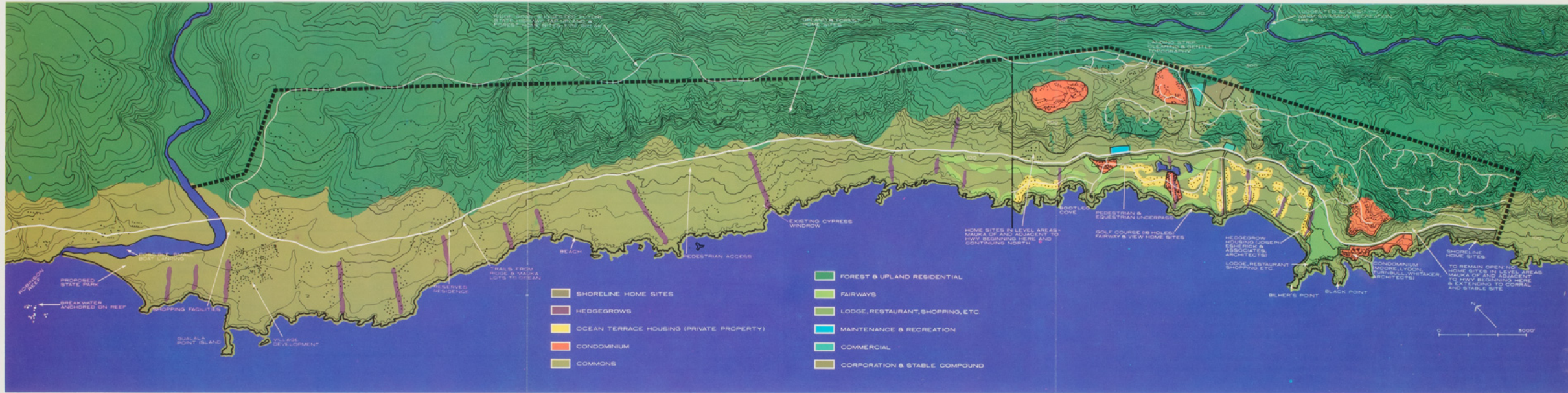
opment of the condominium and housing units.

From the point of view of long-range, real-estate values, it was undesirable to string the development along the coastline, hogging the oceanfront. Rather than paralleling the shoreline, the hedgerows provided an excellent backbone for a perpendicular development. Here, housing could be more or less tucked into the natural framework, and care was taken not to mar the unforested slopes of the lower hillside by housing or severe road cuts. The tendency to begin the development on the low-lying terrace still reflects, however, a remnant of the developer's habit of rushing to exploit the shorefront. The forest area, which lies above, was not considered seriously in the initial phases of the development, but, as it turns out, this might have been an ideal place to start: Dense housing could be placed in the woods, where it is protected from the elements, and from sight, and the exposed terrace could be left in a natural state, providing excellent views. Presumably, forest property would not be as attractive as ocean sites, but, as it is, the forest lots have sold remarkably well. They afford greater privacy, and some have breath-taking vistas, far better than those available to some shore squatters.

Recognizing somewhat belatedly the value of developing the forest property first, Oceanic has decided to place the second condominium in the woods rather than on the ocean terrace as it was originally planned.

During the planning stage, Dick Reynolds undertook a series of soil tests. These had not been requested by the client, but they did lead to several interesting refinements in the general plan and have been the basis for agricultural and planting programs.

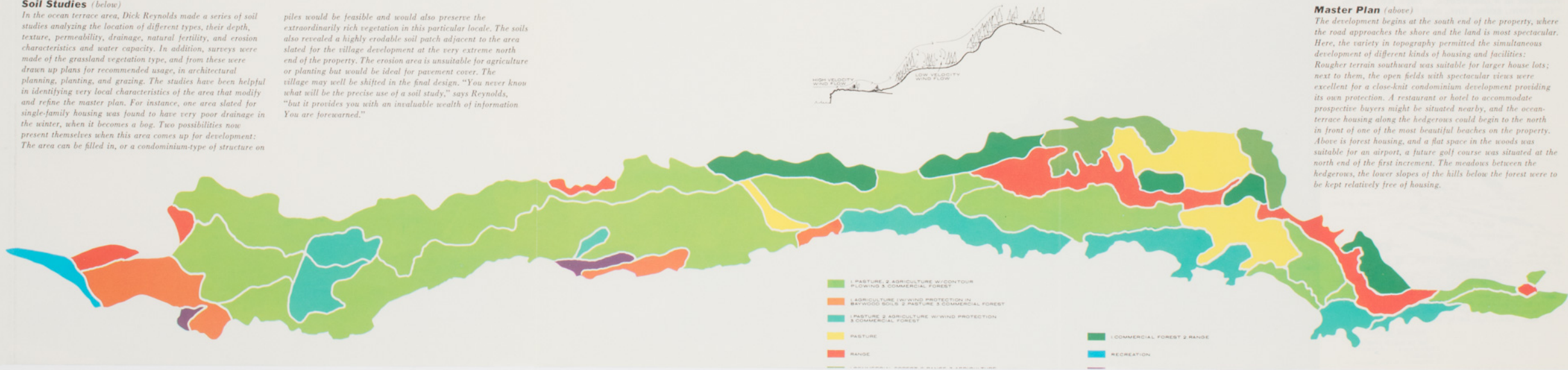
The approach of the Halprin office has led to system of land planning that implies a long-range involvement with the property. "You cannot just create a situation and leave it," says Reynolds. "You can plan it so that it requires the least amount of care, but it still needs continuing attention. To preserve the hedgerows, for instance, additional plantings are needed; to preserve the open fields from brush and erosion, mowing, grazing, or burning needs to be done at regular intervals. The sheep grazing needs to be programmed throughout the area; the forest needs regular clearing. The cluster system and open-space plan permits easier care of the land, but it needs long-term attention." In recognition of this, Oceanic has recently decided to employ a range manager.



Soil Studies (below)

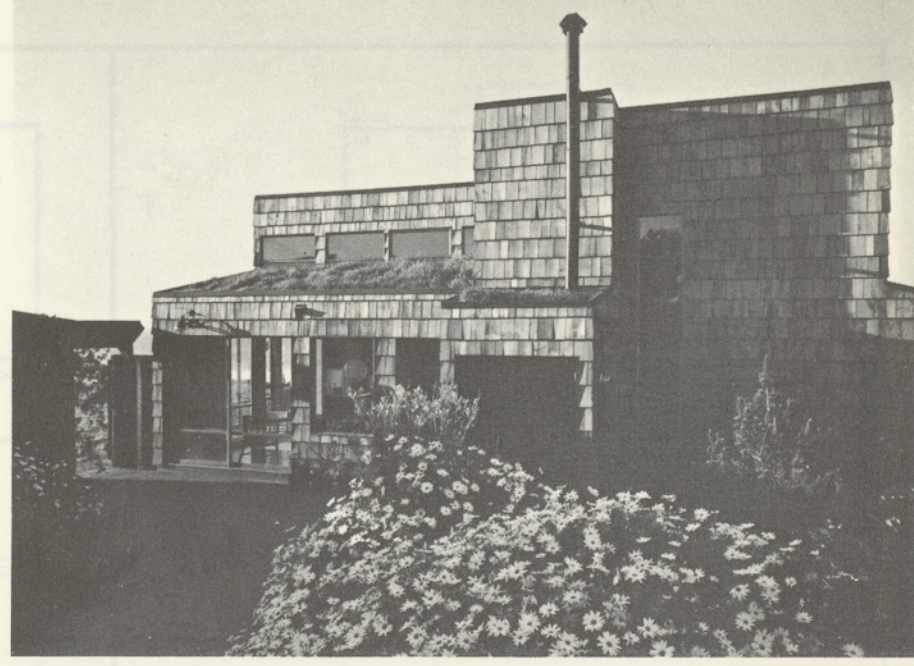
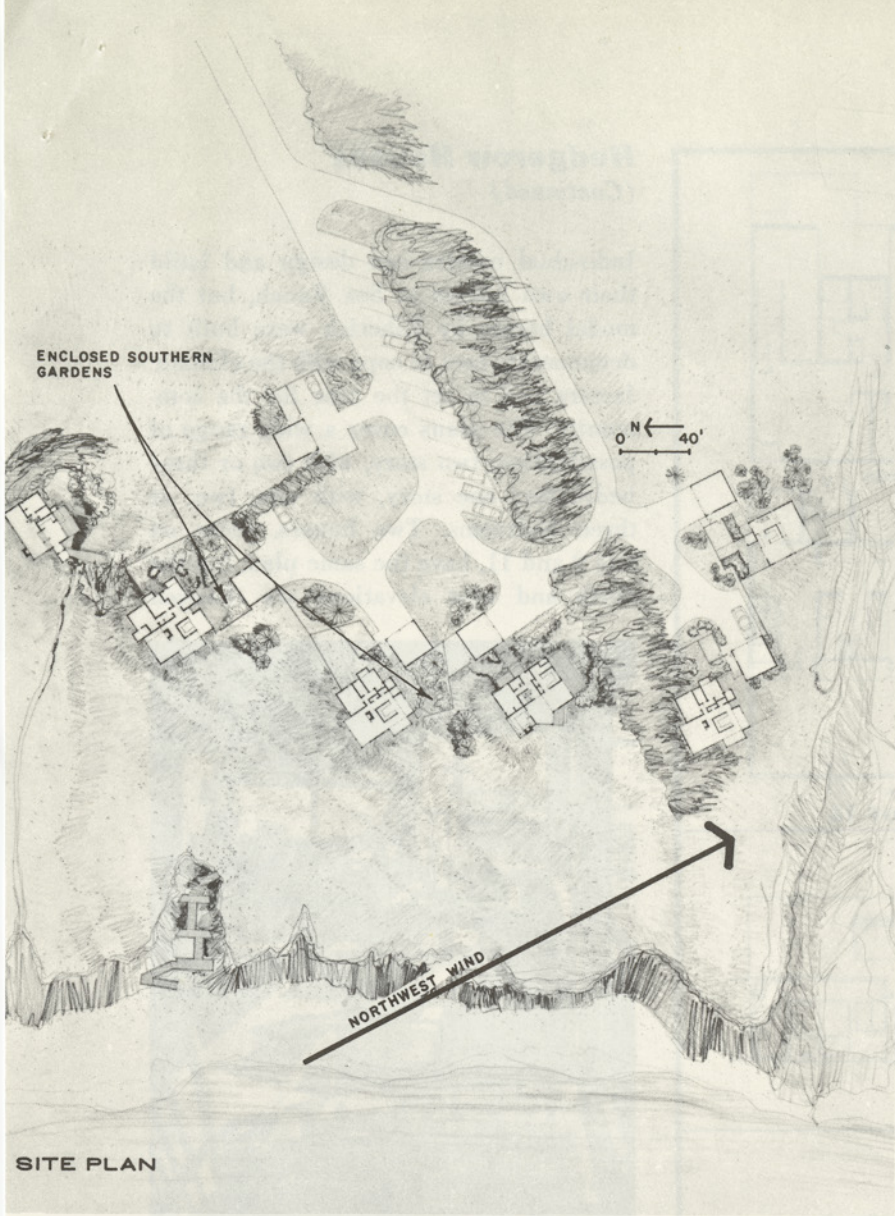
In the ocean terrace area, Dick Reynolds made a series of soil studies analyzing the location of different types, their depth, texture, permeability, drainage, natural fertility, and erosion characteristics and water capacity. In addition, surveys were made of the grassland vegetation type, and from these were drawn up plans for recommended usage, in architectural planning, planting, and grazing. The studies have been helpful in identifying very local characteristics of the area that modify and refine the master plan. For instance, one area slated for single-family housing was found to have very poor drainage in the winter, when it becomes a bog. Two possibilities now present themselves when this area comes up for development: The area can be filled in, or a condominium-type of structure on

piles would be feasible and would also preserve the extraordinarily rich vegetation in this particular locale. The soils also revealed a highly erodable soil patch adjacent to the area slated for the village development at the very extreme north end of the property. The erosion area is unsuitable for agriculture or planting but would be ideal for pavement cover. The village may well be shifted in the final design. "You never know what will be the precise use of a soil study," says Reynolds, "but it provides you with an invaluable wealth of information You are forewarned."



Master Plan (above)

The development begins at the south end of the property, where the road approaches the shore and the land is most spectacular. Here, the variety in topography permitted the simultaneous development of different kinds of housing and facilities: Rougher terrain southward was suitable for larger house lots; next to them, the open fields with spectacular views were excellent for a close-knit condominium development providing its own protection. A restaurant or hotel to accommodate prospective buyers might be situated nearby, and the ocean-terrace housing along the hedgerow could begin to the north in front of one of the most beautiful beaches on the property. Above is forest housing, and a flat space in the woods was suitable for an airport, a future golf course was situated at the north end of the first increment. The meadows between the hedgerows, the lower slopes of the hills below the forest were to be kept relatively free of housing.

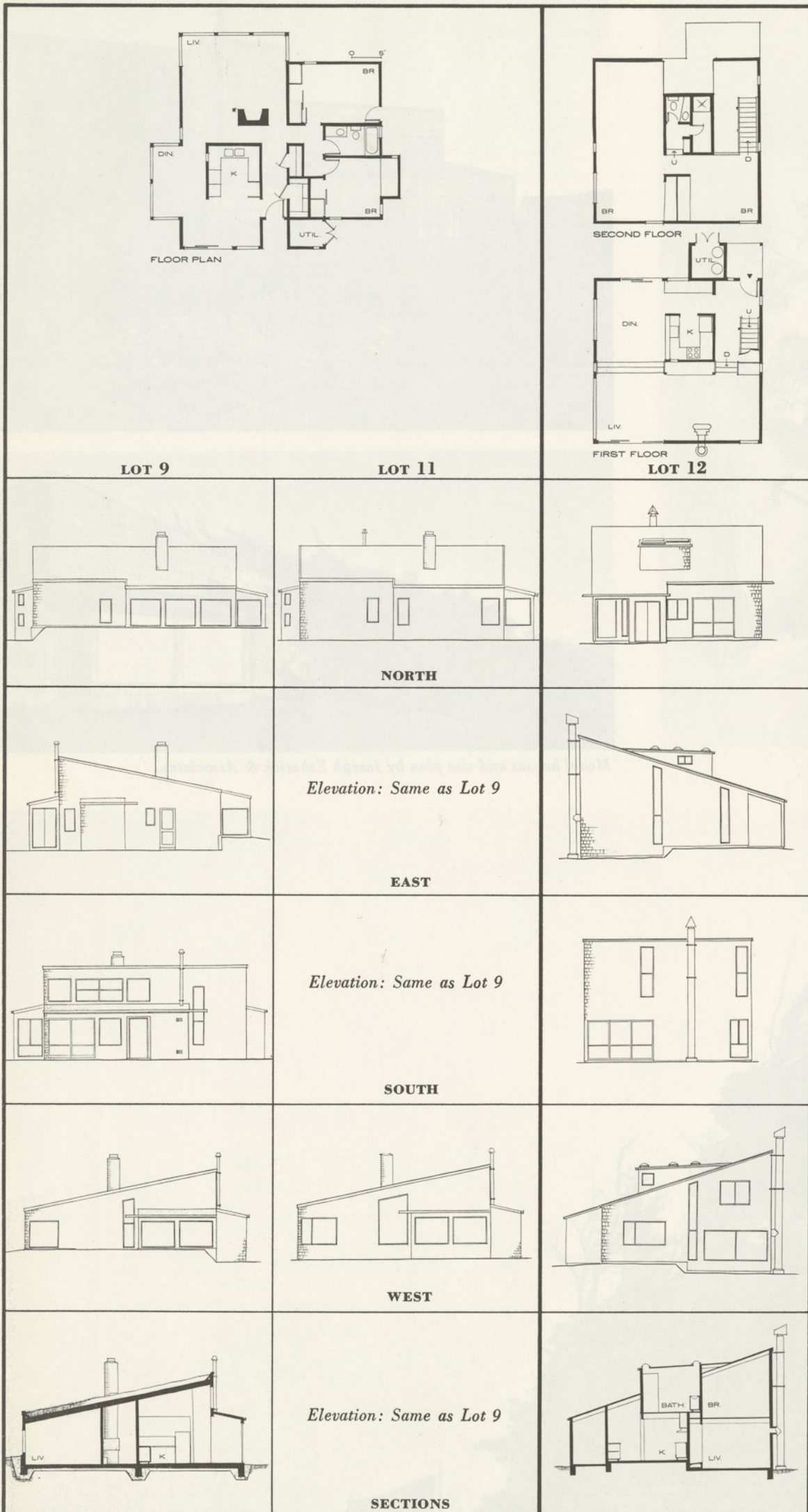


Model houses and site plan by Joseph Esherick & Associates.



Hedgerow Houses
(Continued)

Individual owners can design and build their own houses at Sea Ranch, but the model homes by Esherick were built to demonstrate how to cope with the climatic factors and to set the tone for the community. The plans cover a wide range of possibilities: two story, with two or three bedrooms; one story, with one, two, or three bedrooms. Two houses, those on lots 9 and 11, have the same plan, but the north and west elevations are changed



slightly to suit the different views of each site.

On the inside, Esherick wanted the houses to be quiet and sheltered; planning was to be fairly conventional. "Living patterns don't change that much from town to country," says Esherick. "Adult and children cycles still conflict; privacy is still important." Unlike the Moore condominium units, which are more open, the model houses have regular bedrooms with doors. The only unusual features are some cell-like bedrooms for the children, and two back-to-back baths for the price of one, and the interior is left rough and unfinished. The Esherick houses are just conventional enough to deceive the suburban housewife. One buyer who has just moved in, has painted the walls aquamarine and covered the rough wooden floor with fake stone-imprinted linoleum. "How am I going to keep those rough boards clean," she complained. "And look at those windows. None of them are the same size. How am I expected to go out and buy shades in a department store for those crazy shapes." The shades that came with the house were made of rustic sail-cloth fabric. "But they had seams in them," she continued, "not down the middle, mind you, but somewhere, anywhere, irregular-like."

Design Restrictions

beauty of the area, the corporation has drawn up a series of restrictions to control the character of the buildings and preserve the open land spaces.

All plans from houses must be submitted to a design committee for approval. (The committee consists of three members, one of whom must be an architect.) A list of design restrictions have been drawn up limiting some of the architectural characteristics: for instance, all exterior finishes must be natural; no reflective materials are permitted; and the color range is carefully controlled to shades of brown through gray and subtle greens. No metal fences are permitted, except possibly for a tennis court area, etc.

The land itself is divided into three categories: private; private restricted; and common. To assure that the commons are preserved, the deed is set up so that the owner of a private lot becomes a member of the landowners' association, through which he has a share in the common lands. He has a right to vote on how these are used, but his share is not negotiable, the land cannot be partitioned, and his share is transferred if he sells his property to the next owner. Under present land laws, these conditions are not fully assurable; property rights are such in this country that the individual has practically inalienable rights to his land: The

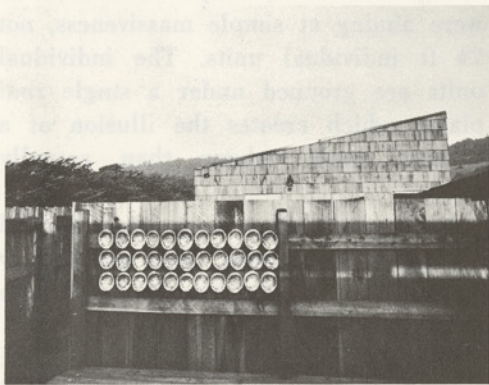
legality of the association might be questioned.

One of the difficulties in selling land at Sea Ranch lay in persuading the owners that they were paying not for a lot of particular dimensions, but that lots were priced according to location, view, and ease of building. Moreover, they were also buying into a share of adjoining common land. To help sales somewhat, a private-restricted area was drawn up on the outside of the lot. It belongs to the owner, but he cannot build upon it or plant any type of vegetation not indigenous to the area. All planting not native to the area must go on inside the garden wall, in the private area of the lot.

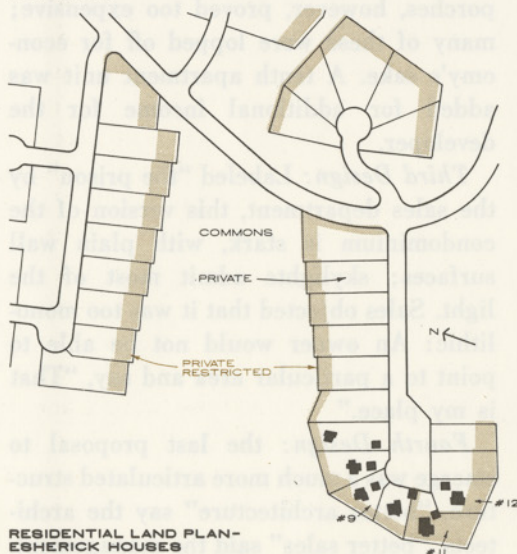
All these provisions are intended to assure that the natural landscape comes sharply up to the building or fence line, and that the commons be indistinguishable from the private, restricted area. No park or lawn will destroy the character of the land.

Boeke had considerable difficulty in persuading management that the restrictions would not inhibit sales. He felt they were imperative to preserving the character of the land. They are flexible enough not to restrict any brilliant architectural design, yet at the same time they provide a framework governing the over-all appearance of the community.

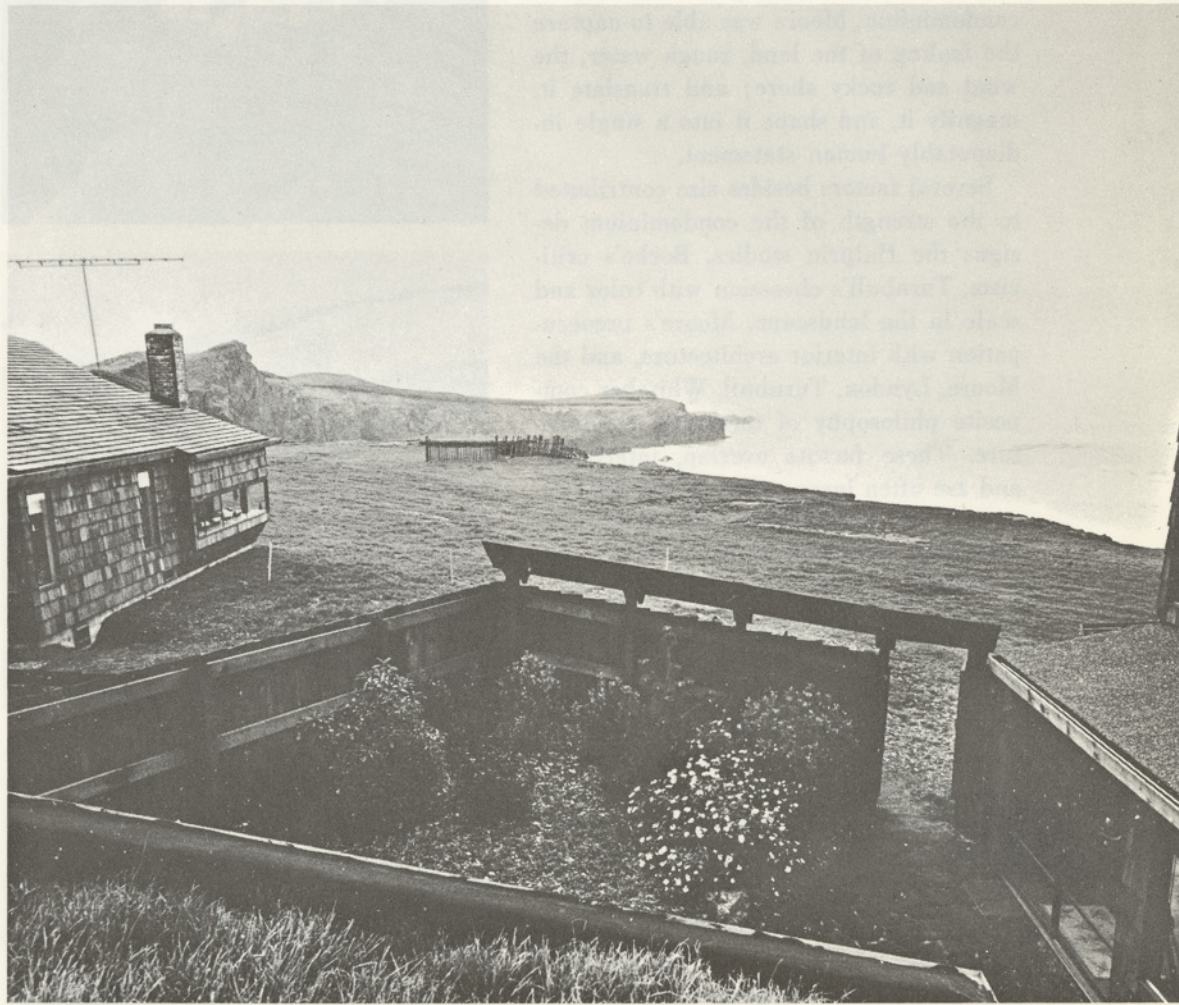
The suburban housewife's comments on the preceding page are interesting because they highlight one of the difficulties the Sea Ranch project faces in future years. Till now, the project has been under the control of a small group of architects. As houses go up, however, the tone of the development might go the way of all suburbia. The process of acclimatization may be slow for a population that is basically urban, recreation-oriented, and not accustomed to appreciating the peculiarly erratic qualities of a natural environment. To help guide the project toward its goal of preserving the natural



Whimsical murals and plantings inside garden walls.



RESIDENTIAL LAND PLAN-
ESHERICK HOUSES



"When you make a place, you know it. It is identifiable and has a life of its own."

WILLIAM TURNBULL

"The principal proposition underlying our work is that the first purpose of architecture is territorial, that the architect sets out the perceptual stimuli with which the observer creates an image of place."

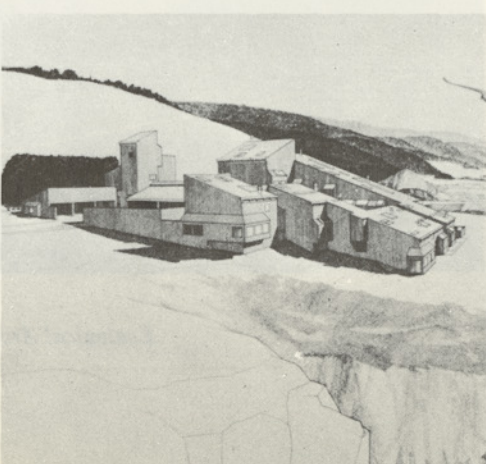
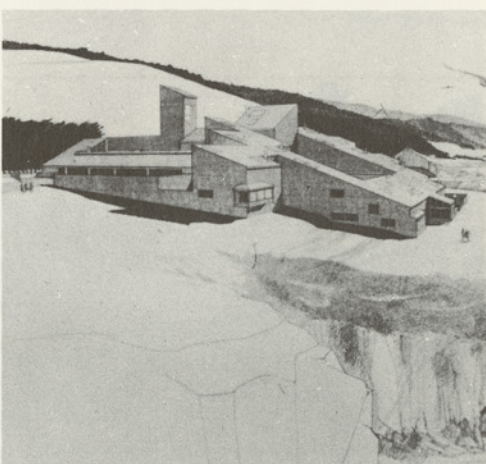
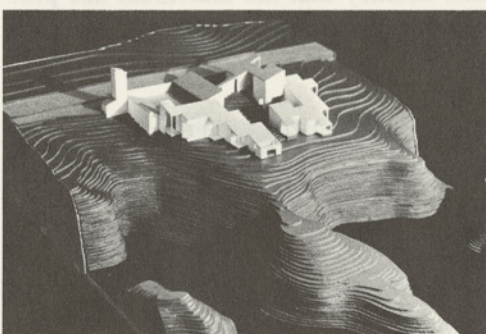
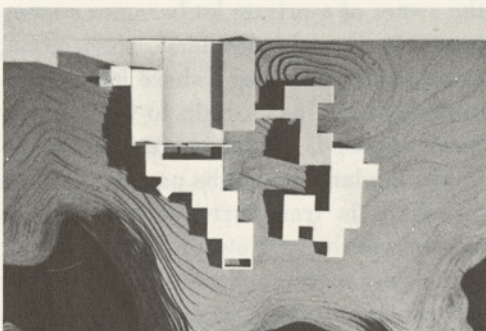
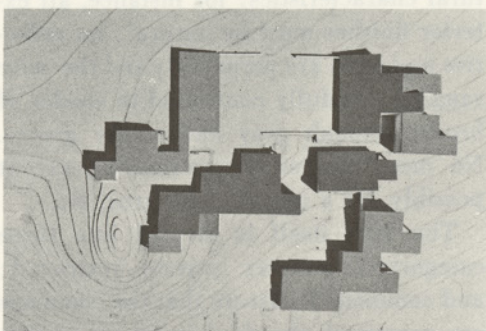
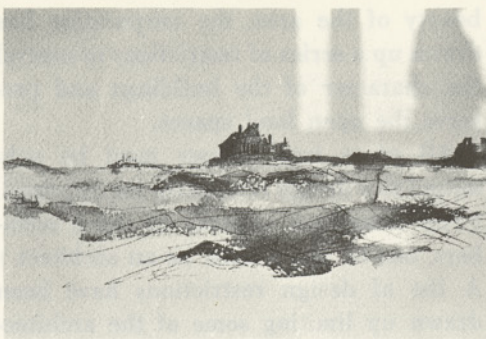
DONLYN LYNDON

Condominium:

Moore, Lyndon, Turnbull, Whitaker, Architects.

The site chosen for the condominium was a grassy, windswept field bordering a rocky shore where the waves break high against the cliffs. It is a place at once barren, rugged, and grand. Because of the scale of the condominium project, Moore was able to make an architectural statement in keeping with the scale of the particular site; Esherick, limited to the design of small individual houses, made architecture recede into the landscape; if carried one step further, they might well have been built underground. With the condominium, Moore was able to capture the feeling of the land, rough water, the wind and rocky shore; and translate it, magnify it, and shape it into a single indisputably human statement.

Several factors besides size contributed to the strength of the condominium design: the Halprin studies, Boeke's criticism, Turnbull's obsession with color and scale in the landscape, Moore's preoccupation with interior architecture, and the Moore, Lyndon, Turnbull, Whitaker composite philosophy of territorial architecture. These factors overlap, intertwine, and are often inseparable in the development of the design. Although all of these represent individual points of view, each contributes to the principal philosophy of design—the definition of a particular place: be it the buyer's desire to identify his unit within a structure, Turnbull's desire to identify the color and scale of the building with the site, Moore's precise definition of interior and exterior places, or Lyndon's more intellectual description of the scientific, intuitive data gathered from a particular place. Although sometimes in conflict, most of the "arguments" contributed to the same cause, and strengthened the design as it evolved.



Preliminary Designs

Siting: the first task confronting the Moore office was to locate several condominiums on the assigned site. To do this, the designers used a box of sugar cubes that later, quite arbitrarily, became the module for the individual dwelling unit within the condominium structure. The cubes were arranged on a model of the site to fulfill the following requirements. Each unit was to have:

- (1) A distinctive ocean view. The conventional picture-window with views directly out to sea was considered undesirable. Vistas down the coastline were preferred.
- (2) Direct accessibility to the site.
- (3) Southern exposure (preferred).
- (4) Protection from the wind by the total arrangement of units.
- (5) Screening from roads by walls or trees.

The units were grouped in clusters, fitted to the contours of the land but held together by an axial path down the middle.

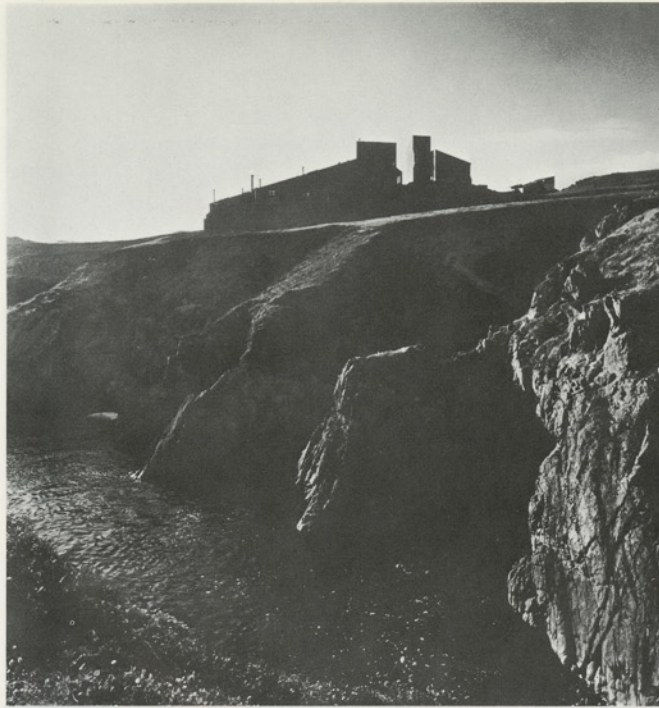
First Design: The program for the first condominium called for nine dwelling units. Boeke was thinking in terms of townhouses. "But," says Turnbull, "we were aiming at simple massiveness, not 24 ft individual units. The individual units are grouped under a single roof plane, which creates the illusion of a greater single volume than actually exists."

In the first design, they are positioned around central court, but not tightly enough to provide enough protection from the wind.

Second Design: Here, the interior court is more sheltered, and the units pulled together more tightly. The numerous porches, however, proved too expensive; many of these were lopped off for economy's sake. A tenth apartment unit was added for additional income for the developer.

Third Design: Labeled "the prison" by the sales department, this version of the condominium is stark, with plain wall surfaces; skylights admit most of the light. Sales objected that it was too monolithic: An owner would not be able to point to a particular area and say, "That is my place."

Fourth Design: the last proposal to emerge was a much more articulated structure, "better architecture" say the architects, "better sales" said the management.



The Controlling Image

"We aimed at simple massiveness. Nobody can afford to build grandeur anymore—a Newport mansion. But a barn, for example, is big, massive, simple, as if it belonged in the landscape. It

improves the site. The condominium borrows this quality from the old logging structures in the area, and the barns, which fulfilled a need in the simplest of terms."

WILLIAM TURNBULL



"Color and size are important factors in this landscape: Any unnatural tones stand out with jarring magnitude from the light brown grasses; any configuration—barn, cow or houses—seems large in the flat field."

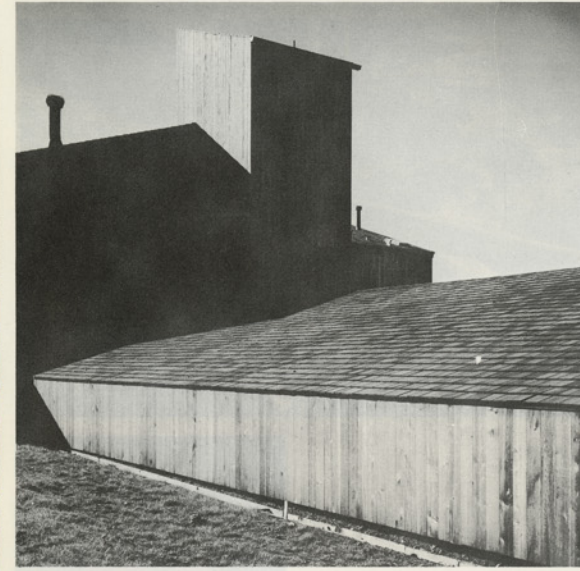
WILLIAM TURNBULL



To create an image of place, "the architect particularizes. He selects an appropriate temperature range and builds devices for maintaining it, controls the intensity and

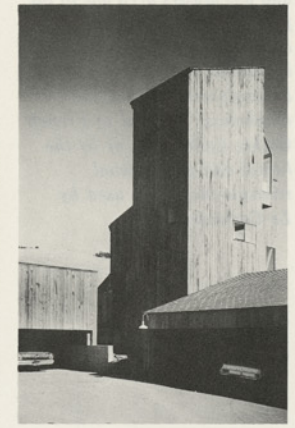
direction of light, discriminates specialized activity patterns, organizes movement, and subjects the building process to a clarifying pattern."

DONLYN LYNDON



"... By directing all these factors to a controlling image, he builds the opportunity for people to know where they are—in space, in time and in the order of things."

DONLYN LYNDON



"... He gives them something to be in."

DONLYN LYNDON



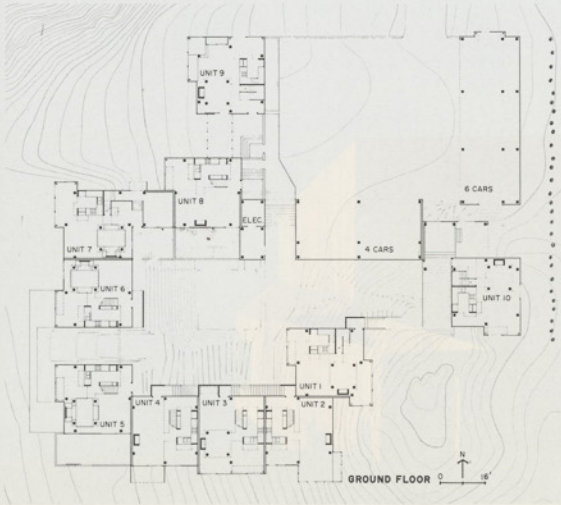
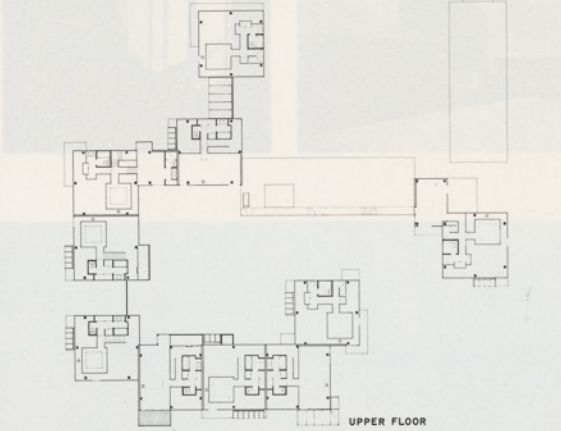


Layers of Enclosure

"Our work has for some time been concerned with establishing several degrees of 'inside,' marking first a place in the landscape, then progressively segregating places outdoors and in, so that the user-observer can be continually aware of his location in a structured scheme . . .



"...The distinction, therefore, between an 'inside' and an 'outside' is the very basis of all architecture, and the modulation from one to the other is and has always been one of the primary elements of the architect's art—whether by the hierarchic concentricity of Peking's walled cities, the diaphanous reversal of French Gothic Cathedrals, or by the literal and phenomenal transparency often used by Le Corbusier.



"For the Sea Ranch, we envisioned, at the outset, a quite closed and distinct main space with a controlled supplementary volume in which one could sit at the edge of the windy and spectacular coast."

DONLYN LYNDON



At the condominium, the sequence of spaces proceeds from the wild landscape to the glass edge of the porches, from the glass edge to the solid walls of the structure, and from the borders of the rooms to the limits of the four-poster.



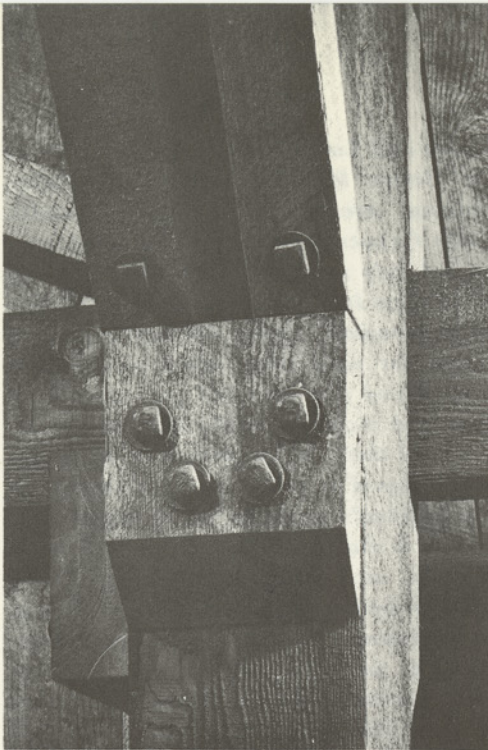
"None of us ever entirely outgrows the love of the doll's house, or, usually in vicarious form, the love of squatting under the table. Camping and sailing are two adult forms of play analogous to the 'my house' pretences of a child. In both, there is the fascination of the miniature shelter which excludes the elements by only a narrow margin and intensifies the sense of security in a hostile world."

FROM *Heavenly Mansions*,
BY JOHN SUMMERSON

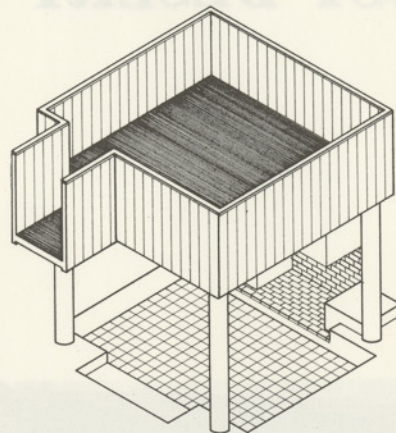
The giant piece of furniture designed by Moore for the interior of each condominium unit is an intensification of interior space, a house within a house.

Moore's idea was to create a slightly different environment from that fashioned by suburban regimentation. A holiday is to be a festival, a tent, a gathering. With this in mind, few of the bedrooms are proper "rooms," but resemble tents pitched on top of a giant four-poster; kitchens are tucked into the space under the legs.

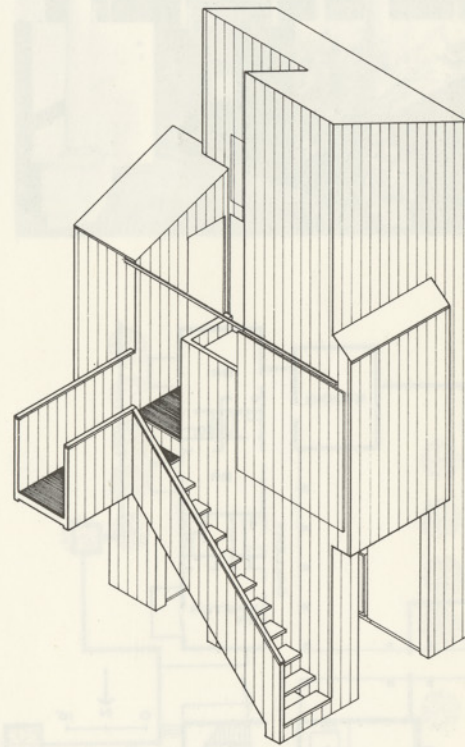
The arrangement may call for a special kind of buyer: a bachelor, or a childless couple, since many families have objected to the lack of privacy. The condominium in progress at the moment will have more conventional layouts with at least one space closed off. However, for many prospective buyers, the condominium may simply require a period of adjustment, a time to get accustomed to the irregularity of it, to recall the irrational pleasures of nook, cranny, and tent. As Lyndon put it, in *World Architecture 2*: "In working we do not reject games, postures, or the apparently arbitrary fancies and associations of those for whom we build, but rather seek to fashion from these a sensible order that will extend our own, and our users', ability to perceive and assimilate the delights and complexities of an untheoretical world."



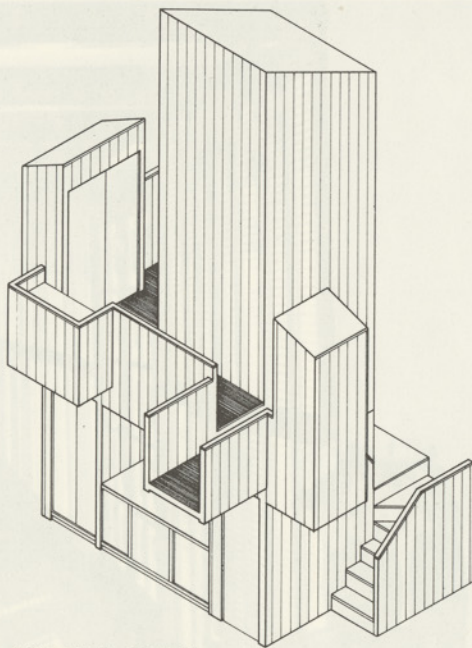
The condominium is a heavy timber construction: 10" x 10" columns, 4" x 10" girts. Diagonal bracing was developed by Patrick Morreau. Mathew Silvia, the builder, figured out an ingenious fastening system (above), using a circular metal plate to join the bracing members to the wall. Cost per sq ft was high, due to large amount of air space used.



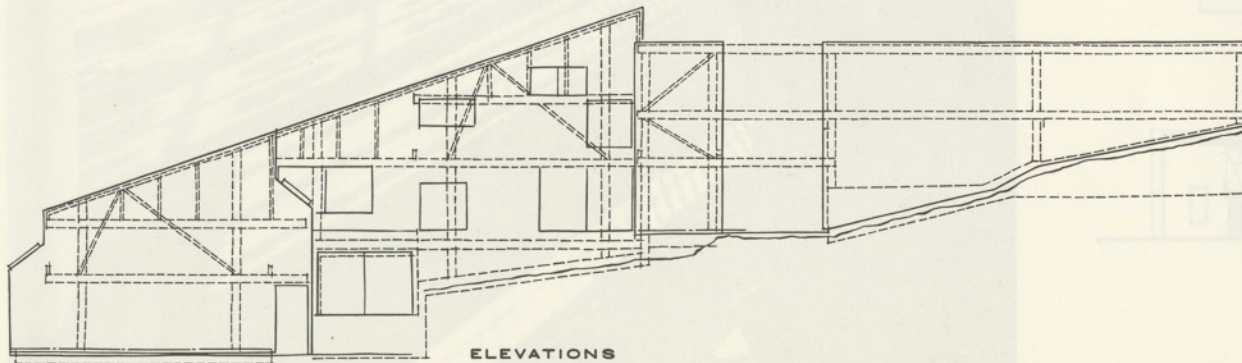
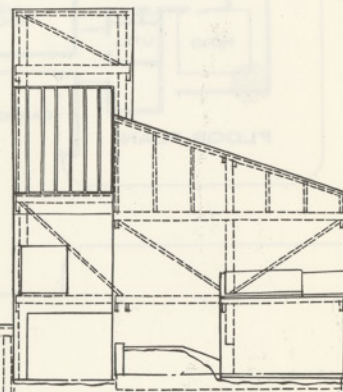
FOUR POSTER



KITCHEN / BATH
(TYPE B)



KITCHEN / BATH
(TYPE A)



ELEVATIONS

0 10