

By Donald MacDonald, FAIA



HOME  
SWEET  
HOME

# THE FADING AMERICAN DREAM

**Shelter for the homeless poor  
is just a part of the housing crisis;  
high rents and even higher mortgage payments  
are creating a middle-income poor as well.**

Last June the Neighborhood Investment Corporation, a non-profit organization funded by Congress, issued a report on affordable housing which estimates that by the year 2003 more than 18 million Americans will be homeless or on the brink of homelessness if present trends continue.

"A growing number of families [will pay] a disproportionate share of their already modest incomes for housing," the report states, "and [there will be] a steadily increasing displacement of lower-income renters, resulting in families relegated to substandard housing, doubled up with other households, or forced into outright homelessness."

The essential reason is that the number of people with incomes at or below the poverty level is expected to increase by about 40 percent while the number of low-cost housing units will decrease by about 25 percent.

But the dwindling supply of low-rental units for the poor is only a part of the housing crisis in the United States. In addition, millions of middle-income people are rent-poor or mortgage-poor. It is not uncommon in many cities to pay one-third, one-half, or even more of net income for rent. According to a report in the *Los Angeles Times*, the average new homeowner's mortgage consumes 44 percent of his income.

Aside from the heavy burden on these people and the dread fact that they are faced with disaster if they lose their jobs or their incomes are reduced, the economy of the country as a whole suffers. They have little or nothing left over to spend on nonessentials, and many finance their needs with high-interest consumer credit, with the result that they have a dim prospect of extricating themselves from debt.

Clearly, the housing crisis is developing rapidly into a national catastrophe. The basic solutions are political and economic, of course. Government, on various levels, has to provide much more assistance for the construction, rental and purchase of housing. The assistance should be not only for people with poverty-level incomes but also for middle-income families, especially those who want to purchase new

homes. Economic and social reforms are needed to reverse the increase in the number of the poor. All indications are, however, that these solutions will be a long time in coming, if they come at all.

In the meantime, there is a great deal we architects can do to increase the supply of affordable housing and make it easier for the government to develop a workable assistance program. We can design housing that is less expensive to build, and with our designs, we can put pressure on regulatory agencies and their legislative sires to modify code requirements that make construction so costly. To succeed, we are going to have to re-examine—and force the bureaucrats to re-examine—some of our long-cherished ideas about acceptable standards for housing and ways to build.

The first change we have to make is in our concept of livable space. Over the years, as we have torn down old buildings and put up new ones, we have conveniently convinced ourselves — or let ourselves be convinced—that we have to allot a certain amount of space for each person and for each activity.

We accept as gospel that there has to be a bedroom for every two people, that a bedroom should be at least 80 square feet or so in size, that there has to be "living" space, that there should be a bathroom for every two or three people, that ceilings must be at least 7.5 feet high in most rooms. We do not question zoning laws that set the minimum residential lot size at one-fourth or one-third acre.

We have developed a mythology of space—a middle-class mythology. We assume that what people would like to have is what they have to have, whether or not they can afford it. The result is that a great many people have no space at all.

The cost of housing can be reduced greatly if we reverse our traditional way of thinking. We should not start a design of affordable housing by asking ourselves how we can build least expensively to meet certain space requirements. We should start by asking ourselves what is the maximum amount of space we can provide for someone who can pay a certain rent or a certain amount of mortgage.

If it means we have to lower the ceiling and reduce the size of the bedroom to meet the budget, that is what we do. A 7-foot, or even 6.5-foot, ceiling is ample as long as there is adequate ventilation. A 64-square-foot bedroom easily will accommodate a double bed and a dresser. With the new space-saver beds, even less space is required.

In fact, bedrooms in the traditional sense can be eliminated entirely, or the number can be reduced, if we get away from the idea that space has to be assigned to a function. As everyone who has lived in a studio apartment knows, a living room can be turned into a bedroom easily enough. Extend the concept to what would ordinarily be a multi-room unit occupied by a family with children. With a series of partitions, perhaps suspended from tracks on the ceiling, a single room can be used as living space during the day, divided into bedrooms at night.

The same principle can be applied to a small house or one floor of a two-story house. (Fig. 1, Page 12.) For a family it affords great flexibility—an instant guest room, additional bedrooms as the family grows, rooms of different sizes for children of different ages, or an area that can be a so-called family room during the day and bedrooms at night.

The architect's task is to design space to maximize the potential for division. We also should urge furniture manufacturers to focus more on designs for sofa-beds, chair-beds and tables that can be used for various purposes. Single-purpose furniture is as wasteful as single-purpose rooms.

One of the major obstacles to the construction of affordable homes is the minimum lot size set by zoning laws for most residential areas. What this does, obviously, is limit the number of homes that can be built in a neighborhood. Other zoning laws determine the size of the house, the materials to be used, the landscaping — all to maintain a certain standard that excludes people who cannot afford the standard. The effect is that we build fewer houses than we could, and the houses tend to be expensive. In a country that is supposed to be a democracy, we are preventing people with modest incomes from obtaining homes of their own.

If we are to build homes that are

©1987 Magnus Stark



Fig. 1 — Hermann/Steiner Street, San Francisco, CA: This interior view illustrates the multiplicity of use of a 2nd floor in a town house. The photograph (taken from the kitchen area, which can be seen in the mirror on the wall) shows a dining area, sleeping loft, exercise area, living room, fireplace, outside deck on the left and a large skylight at the roof.



Fig. 2 — The architectural sketch of the Hermann Street development illustrates the placement of four houses on a 4,000-square-foot lot (zoned multi-family), each detached home occupying 1,000 square feet. Each house has its own parking space and its own rear yard. The floor plan is one of two available: type 2 is a one-bedroom design, substituting a garage for the second ground floor bedroom.

inexpensive enough to resuscitate the American dream of home ownership, we must make provision in zoning laws for cottage development on lots no larger than 800 to 1,000 feet. (Fig. 2, Fig. 3.) They could be interspersed with larger lots; in fact, they probably should be to foster democratic mutual-ity among the different economic levels of the population.

Residents of the neighborhoods no doubt will oppose vigorously such a revolutionary change. But attractive cottage designs, which fit in with or complement larger homes in the neighborhood, would help overcome resistance. In any case, people who live comfortably in suburbia and the posh neighborhoods of our cities should give serious thought to the consequences of confining large numbers of people to economic ghettos. The excluded and disenfranchised have no investment in political stability.

Another advantage of cottage design is the opportunity it affords to build horizontally instead of vertically on lots zoned for multi-unit housing. (Fig. 4a and 4b.) Although fewer units can be built on the lot, each can actually cost less because of the elimination of such vertical construction costs as foundations, elevators and fire escapes, use of less expensive materials for frames and walls and lower labor costs.

In San Francisco more than 50 houses like these were eagerly bought as soon as they went on the market. (Fig. 5, Page 14.) Two or three stories, compactly built and with small yards, they sold for half or less than the lowest cost of houses on the market in the city at the time and about the same as the average one-bedroom condominium.

In addition to re-evaluating space requirements, we architects also must persuade the bureaucrats to bring order and common sense to the labyrinth of fire, health and building codes. On the surface and viewed individually, many of the code provisions appear to be justified, or at least worthy. Who can argue that we should conserve energy, prevent fire damage, reduce health hazards and ensure the structural safety of buildings under a wide range of loads? But there are so many of them, and the corpus grows

year by year, with the result that it is virtually impossible to build affordable housing. When we balance risks and costs, when we weigh probabilities against possibilities, when we consider ideals of security in terms of the urgent need for housing, what are the priorities?

For example, we must ask ourselves and ask the regulatory agencies:

—Do we always have to have double walls with insulation and double-glazed windows to save energy, particularly in a climate as mild as California's?

—Under what conditions are fire sprinklers and one-hour fire-resistant walls necessary even though they greatly increase construction cost?

—Which is more important to health — a hallway between the bathroom and the kitchen or not having a bathroom or kitchen at all?

—Must all stairways be designed in the expectation that they will be climbed by people with heart conditions, despite the fact that to do so costs more for the required space?

—What are reasonable fiber-stress re-

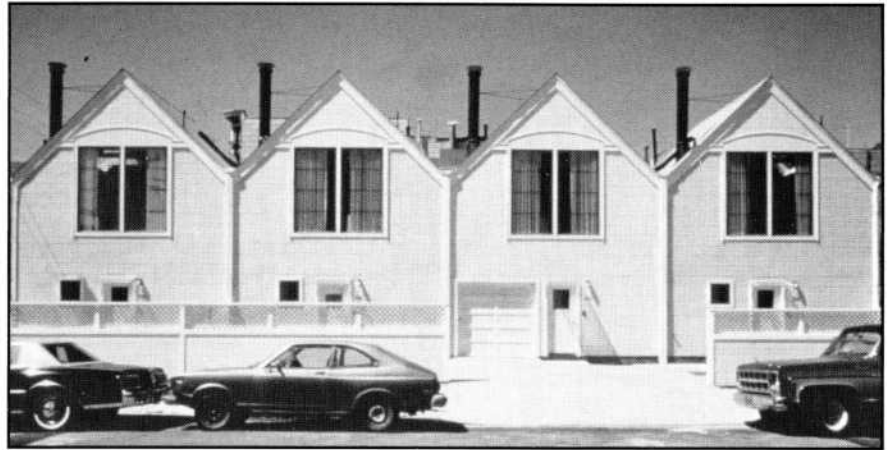


Fig. 3 — A photograph of the Hermann Street cottages shows the exterior facade of the detached dwellings, each on its 1,000-foot-lot, detailed in Fig. 1 and 2.

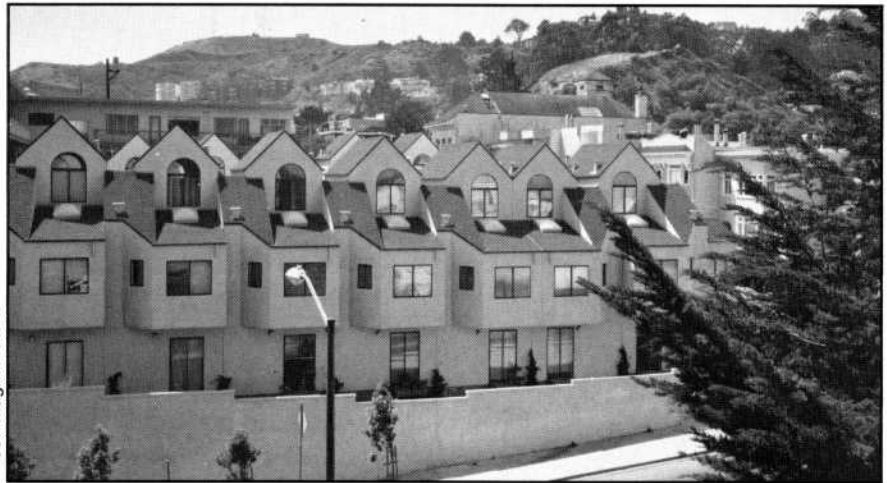


Fig. 4a

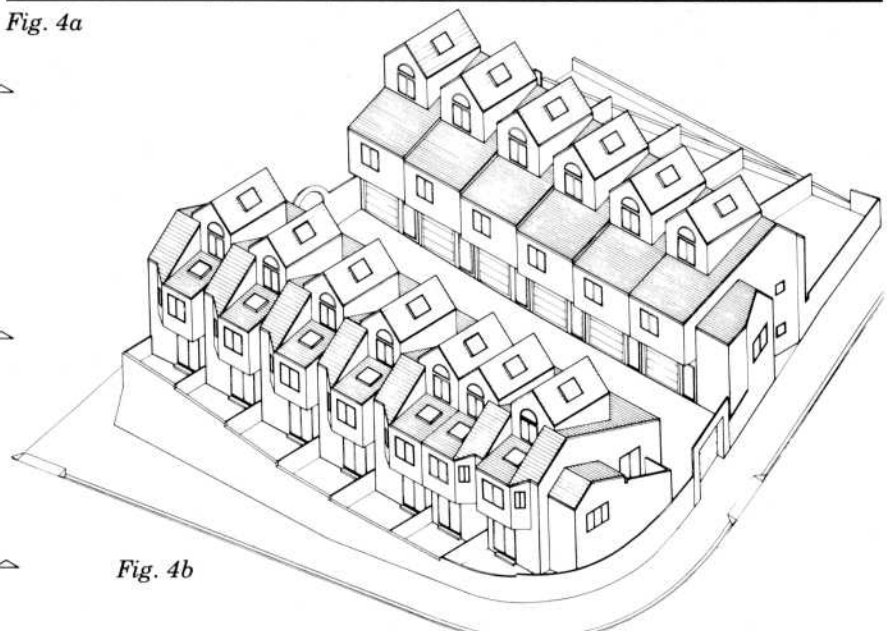
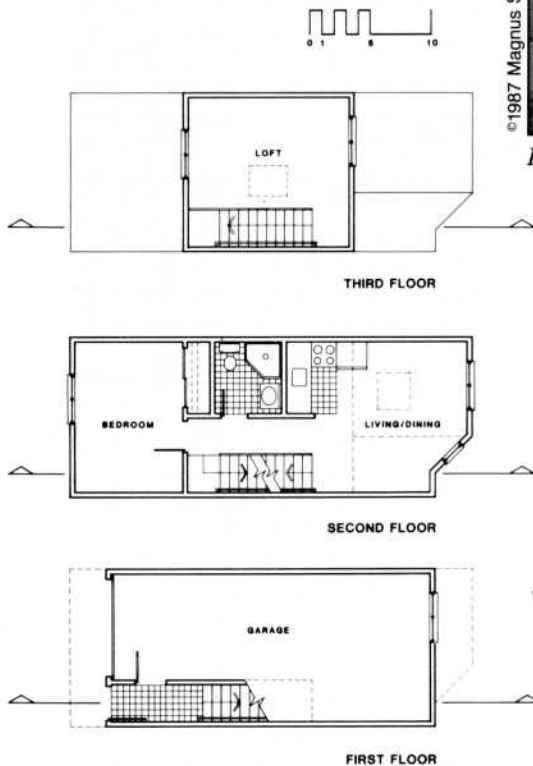


Fig. 4b

Fig. 4a and 4b — The 17th & Clayton Streets project in San Francisco, shown in the photograph above and layout and multi-functional floor plan sketches below, moves horizontally

along the ground with slender detached houses. Construction of a vertical building at the same density would have been economically infeasible.

©1987 Magnus Stark



Fig. 5 — 170 Guerrero Street in San Francisco is a typical 10-unit complex of detached affordable housing. The courtyard, shown in the exterior photograph at top, is used for automobiles and pedestrians alike, thus combining functions to reduce costs. The layout of the project and a typical floor plan is illustrated below.

quirements in wood construction, based on sound engineering for realistic loads, not on what the lumber interests say?

The point is that each \$10,000 added to the cost of a house by code restrictions eliminates a large group of buyers. It is time for some candid and honest discussion to determine how much energy conservation and safety we can provide for the amount of money people can afford.


The critical question, however, might not be what we talk about but to whom we talk. For every code, there is a different regulatory agency; for every agency, there are different procedures; for each procedure, there are stipulations and modifications; and on top of all this, there are planning departments and review boards and pressure groups.

The time has come to put our collective architectural foot down, to say like Melville's Bartleby the scrivener, "I would prefer not to." We have to insist that the bureaucrats bring order out of the chaos they have created. We must demand that they do so immediately, because if they do not, and if they refuse to talk to us sensibly, catastrophe cannot be averted.

The objection will inevitably be raised that by reducing space and paring the codes we are proposing inferior housing for the poor, that we are depriving them of the comfort and safety enjoyed by the rich, that we are perpetuating injustice. Perhaps that is true to some extent. But is that really the point of view of the people who are homeless, or of families who are forced to share apartments with relatives, or of young couples who yearn hopelessly for a house of their own?

In San Francisco one of the newspapers received an indignant letter complaining that 32-square-foot camper-like shelters designed for homeless people who slept in the street were nothing but "dog houses." (See Fig. 6, Page 15.) But for the people who occupied them, they were welcome havens from the rain and fog, assailants and the police; they provided some comfort and warmth, and most important for some, privacy. Were they to wait for a leaden-foot city administration to build more commodious shelters, they would probably be con-

demned to live in misery the rest of their lives. And in fact, many did not want the kind of shelters that were being proposed — barracks or the like, where they would be searched and disciplined and, if the do-gooders had their way, reformed. In tiny plywood shelters, without electricity or running water and warmed only by body heat, they had their dignity.

What does a 7.5-foot ceiling mean to a person who has no roof over his head? What does an 80-square-foot bedroom mean to a person who sleeps huddled in a doorway? What does energy conservation mean to a person who is cold? What do fire sprinklers mean to someone who cooks over a bonfire? Space and safety are measured by need, not by abstract ideals. It is the responsibility of the architectural profession to do all it can to make sure the need is met. 



**ABOUT THE AUTHOR:** Canadian-born Donald MacDonald chose to study architecture at OU because the influence of its former director, the late Bruce Goff, still pervaded the program. Widely acclaimed for his affordable, multi-use designs, MacDonald has been called “the most boldly creative” practitioner in all of architecture by OU Architecture Dean Raymond Yeh. The 1962 graduate serves on the College of Architecture Board of Visitors and the OU Centennial Commission and is active in the effort to endow the Bruce Goff Chair in Architecture.



*Fig. 6 — San Franciscan Donald MacDonald's highly imaginative (and controversial) “City Sleeper” in the 165 Page Street parking lot of its designer's office building illustrates the minimal space that a human being can use as a permanent residence. The City Sleeper's first occupant, George Coleman, lived here for seven months before his death of alcohol poisoning at the age of 42.*

### THE CITY SLEEPER

When OU-trained architect Donald MacDonald emerged from his newly constructed office building to find two of San Francisco's street people curled up against the wall asleep, he did what most property owners would do. He called the police. When the derelicts kept returning to the spot night after night, MacDonald did what few others would have done. He sat down and talked to them. Then he went to his drawing board and enlisted in the crusade to shelter the homeless.

The resulting “City Sleeper” has brought international attention—and considerable controversy — to this highly creative and innovative advocate of affordable housing. Such worldwide publications as *People*, *Time*, *The London Observer* and *Der Spiegel* have spotlighted the two prototype sleepers he built at his own expense (about \$800 each, including labor) in his building's parking lot be-

neath a freeway ramp. City authorities were less enthusiastic; the California Department of Transportation, which leases the lot to MacDonald, filed a lawsuit against him.

Built of plywood and caulked for waterproofing, the 8x4x4-foot sleeper rests 18 inches above the ground on four inverted car jacks, adjustable for leveling. A vertically hinged “front door” can be raised to form a canopy against the sun or rain with additional air circulation from side vents and a sliding glass window with a bug screen. A four-inch foam mattress serves as both sleeping surface and insulator for the 32-square-foot box, which also contains a small built-in clothing locker and storage shelf. Heating is unnecessary, especially in the mild California climate, with body heat sufficient to warm the interior. Thicker walls and insulation could be added to combat colder winters.