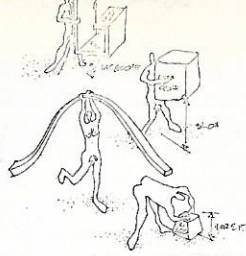


S=H



Self help housing.

BSD's involvement in self-help housing began with a study-survey for the US Department of Housing and Urban Development of the utilization and effectiveness of self-help in housing in the USA. This survey, performed with OSTI Inc. of Massachusetts, included over 25 self-help housing projects. Several distinct self-help methods were identified; these include mutual self-help, individual self-help, new construction, rehabilitation of existing units, organized or sponsored self-help, and unorganized or independent self-help. During the 60s an annual average of 163,000 owner-built houses, one-fifth of single-family dwellings built in the USA, were built through individual self-help methods. Dollar savings through self-help range from 20 to 70 per cent of the cost of equivalent contractor-built housing; the average saving is about 30 to 35 per cent.

In a second study, BSD looked at the potential application of various conventional and industrialized building technologies to self-help housing. Comparisons were made among many technologies ranging from rammed earth to prefabricated factory-made panels. A computer programme was developed and optimum building technologies were identified along with costs of other technologies for a range of financial arrangements, time availability, and local cost conditions.

One conclusion was that even more important than the type of technology used is the manner in which it is packaged, distributed and delivered to the user. Large wholesale and retail organizations could appropriately package and market building products along with advice and technical assistance in their assembly at great savings while providing increased service. If one-fifth of the single-family dwellings built each year

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are through individual self-help without any formal assistance, the number could be greatly expanded by assisting those potential self-helpers who are presently discouraged by the difficulty and arduousness of the process. Surprisingly, only five per cent of individual self-help housing receives any federal assistance.

In addition to the formalized marketing of products and building services, a non-profit housing advisory service was recommended to assist potential self-helpers in acquiring the necessary land, financing, subsidies where applicable, and legal and other prerequisites to the self-help process. This advisory service would be independent of the building products and construction services. The advisory service would operate out of revenues recovered for brokerage, counselling, and technical assistance functions. The costs would be included in the mortgage and thus spread over time. Of course, some seed money would be required to start the advisory service.

HUD sought funding to support the start of the recommended building and advisory services in their fiscal 1971 budget requests, but Congress did not fund the programmes. Money is being sought again this year in the fiscal 1972 request, and hopefully a demonstration programme will be under way within a year.

If implemented properly the large-scale marketing of self-help building packages can provide the opportunity for making available to self-helpers, contractors, new home purchasers, and housing developers alike a wider range of choices and a new mechanism for consideration of building alternatives.

The problems of designing and assembling the packages and establishing the distribution network suggest the use of an existing large organization such as Sears, the rural electric co-operatives, or an association of building products wholesalers. The costs of establishing such a distribution network and of developing the information management system require a sufficiently large market to amortize the costs over a short number of years. The support of the non-profit housing advisory service during its

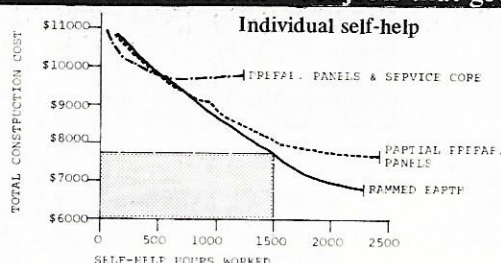
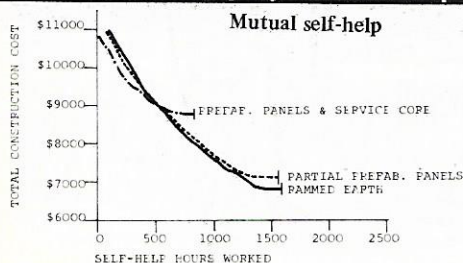
start-up phase would be greatly increased by the incentives to private enterprise to develop these mechanisms. The advisory service would not guarantee a large market by itself, but it would certainly help.

Many financial institutions are sceptical about self-help housing and resist or refuse to provide services for self-help activity. While policy statements in the National Housing Act require HUD to encourage and support individual self-help techniques, HUD has not found the vehicles increasing support of individual self-help housing beyond the 5% support level of the 60s. Some federal support has been given to sponsored mutual self-help housing efforts which are concentrated in rural and small towns across the country. Mutual self-help provides cost savings compared to equivalent contractor-built housing, but is usually dependent on government subsidies for funding administrative and technical assistance costs of the sponsoring organizations. The potential volume is limited by the availability of sponsor financial support and technical staff. The annual volume of production is only about one-thirtieth as large as individual self-help. Individual self-help is suitable for people with incomes both far lower and far higher than those of persons participating in sponsored, government-supported mutual self-help programmes. As in less developed countries, many of the poor in the USA build their own houses through a combination of hard work, savings, scrounging for materials, and help from family and friends. Although some "non-standard" dwellings are produced this way, the builder maximizes the use of his resources in solving his housing problem according to his priorities, whether they be space, amenities, minimum cost, particular location, or whatever.

A government which cannot or does not provide decent housing for all its citizens must make every effort to be supportive of such individual efforts, even though they be extra-legal or differ from the standards which have been officially adopted for government-assisted housing.

The Self-help project is an example of a systems study oriented around the technology that a man can command with his own hands. Although this might seem in opposition to our thoughts towards high technology and industrialization, the project is still mainstream in the way in which we The self-help project has an interesting link to our "hi-tech" system projects. Self-help methods are a medium

for exercising choice, in which the individual can relate to standardized products. Automobile personalization and the burgeoning auto-accessory industry show how the individual can make an impact on a highly industrialized product, and there is no reason to suppose that increasing industrialization of building will inevitably lead to monotony and individual subjugation. Projects that get us face to face with the ultimate user



The value of time spent by the self helper depends on the building technology. If 1500 hours are spent constructing a rammed earth dwelling, \$7,800 are required for materials and work contracted out.



BSD observed this Self Help Enterprises project at Visalia, California, which used prefabricated single skin panels and rationalised plumbing.



In a recent modernization project for the Housing Authority of the City and County of San Francisco, the key features are tenant involvement in planning and the co-operation of a team with skills in management, architecture, community organization, and maintenance operations. Goals of the project include reduction of crime, vandalism and the fear of crime, increased tenant satisfaction and improvement of cost-effectiveness.

The proposed innovations to increase security and reduce crime and vandalism include site circulation pattern changes that provide control by a doorman-guard. BSD is designing an entrance and control-room to allow the doorman-guard to electronically operate sliding doors. The guard will also have visual control of other key circulation points such as elevator, lobbies through the use of TV equipment. The new circulation patterns will also increase tenant contact which hopefully will heighten project consciousness and increase informal surveillance.

Innovations to increase project amenities include construction of community centres which will contain laundries and multi-purpose rooms. These facilities will also increase tenant contact while providing safe locations for activities and equipment.

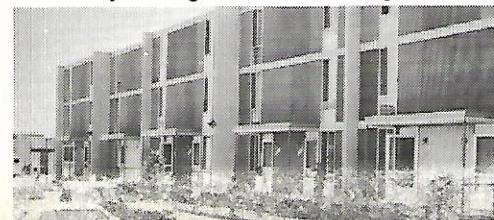
Improvement of the authority's maintenance service will improve speed of response to emergency calls, control over materials and labour, and information for planning and evaluation.

The project is now only at the beginning of the implementation stage, and it is difficult to predict the ultimate results. One of the major limitations BSD staff feel is that the scope of the programme does not address basic tenant social and economic priorities. Thus, tenants are asked to become involved in a planning process whose outcome, no matter how good, cannot significantly alter their most basic problems.

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are important to us. This is difficult to achieve in the big systems project. The work we are doing for the San Francisco Housing Authority allows us to look at architecture from the users' viewpoint. We are responding by doing what the users request - trying to get away from the usual posture of "creative interpretation" of users' wants. The design of guard-houses with closed circuit TV may be surprisingly depressing to UK readers. It is depressing, but

The role of systems designers expanded as BSD organized a rationalized traditional project in urban renewal housing, Elmwood Park. A rationalized traditional construction system of glued concrete block crosswalls, precast concrete floors, wood roofs and sandwich wall panels was developed. This system ensured that there would be no delays through cost or labour disputes.



SEATTLE

Prototype site Operation Breakthrough.

An important part of the Operation Breakthrough competition was the planning of sites chosen for erection and display of the winning 22 industrialised housing systems (see AD 8/70, p.403). Early in 1970 BSD won a contract to design one of the 9 sites, the In-City site at Seattle.

The planning problem was unusual in that the project had to end up reflecting the over-all intentions of HUD by providing a good display environment, while still being a good place to live after the visitors left, satisfying community needs and observing urban design requirements in the long term. Achieving this involved studying the user needs for the site to come up with a design/development programme, planning criteria and housing system requirements that would allow HUD to choose an appropriate Breakthrough winner for the site. At the same time the interests of local people, community, city and federal participants had to be reconciled. We were also responsible for supervising construction and site development. Once HUD had allocated a housing system to the site, BSD had also to work closely with the housing system producer on aspects of site fabrication, delivery, erection and scheduling of the housing units.

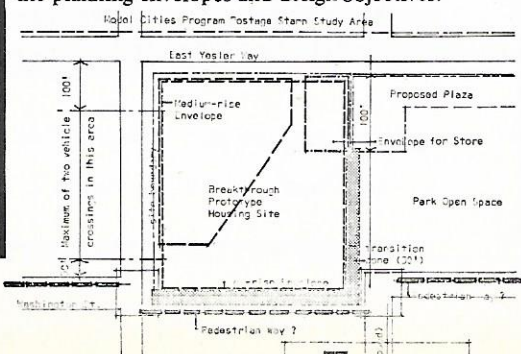
To accommodate the planning and construction requirements the site plan was laid out in "action areas", which were basic development envelopes to be observed by the housing system architect. The site plan was accompanied by a set of design objectives stating *what the design had to achieve*. These were didactic performance statements which still allowed the housing system architect a maximum of freedom. The housing system chosen for the site by HUD was the Townland building system. The response of the Townland architects to the requirements was satisfying. In their first design proposal, with the exception of

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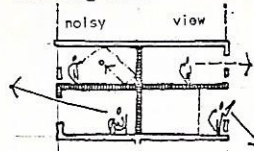
it is a realistic response at present to conditions in the city.

In San Francisco Housing, we are trying to fix up an existing environment to make it work in today's conditions. For the Operation Breakthrough site in Seattle, our planners were able to work from scratch. However, scratch in today's environment still entails many constraints of cost and attitude. Clear conceptual ideas are hard to maintain against the onslaught of the real world.

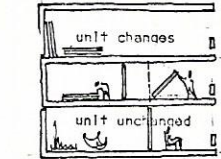
Urban development and community needs determined the planning envelopes and design objectives.



Dwelling units

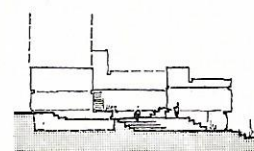


Dwellings should have visual privacy and sound insulation



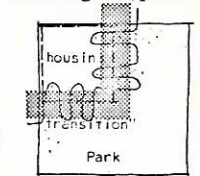
Some special alteration by the occupants should be possible

Parking

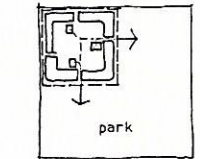


Use site slope to give direct and unobtrusive parking

Housing site/park



Provide a "feeling" of transition between the park and the housing



Maintain direct private access to the park

Parking shall be naturally lit and ventilated, accessible only to residents

details, the scheme came close to what we were trying to achieve, while remaining well within the theoretical capabilities of the housing system.

In the design development phase, while the actual design changed quite considerably in response to cost and system development constraints, our approach of providing performance statements worked well. It provided a dialectical basis for development of the project, involving both the architects and planners. HUD advised us that the more conventional master plan approach being adopted for the other 8 Breakthrough sites was tending to result in argument and delay because of a lack of performance objectives agreed between architects and planners.

Doing this planning project provided a basis for valuable in-house discussions with our Fibershell team who were designing housing units for another Breakthrough site. We were able to see both the planner's and the architect's points of view in the context of HUD's unusual objectives.

Gerry Weisbach, Arthur Goldman, Dave Sheppard

Reflection of the constraints is clearly seen in Townlands Corporation's proposals.

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