

09 Oct 1970

## An Experiment in Low Cost Housing in Stillwater, Oklahoma

William H. J. Cleverly

Phillip G. Manke

Follow this and additional works at: <https://scholarsmine.mst.edu/islchp>



Part of the [Civil Engineering Commons](#)

---

### Recommended Citation

Cleverly, William H. J. and Manke, Phillip G., "An Experiment in Low Cost Housing in Stillwater, Oklahoma" (1970). *International Symposia on Low Cost Housing Problems*. 30.

<https://scholarsmine.mst.edu/islchp/30>

This Article - Conference proceedings is brought to you for free and open access by Scholars' Mine. It has been accepted for inclusion in International Symposia on Low Cost Housing Problems by an authorized administrator of Scholars' Mine. This work is protected by U. S. Copyright Law. Unauthorized use including reproduction for redistribution requires the permission of the copyright holder. For more information, please contact [scholarsmine@mst.edu](mailto:scholarsmine@mst.edu).

AN EXPERIMENT IN LOW COST HOUSING

IN STILLWATER, OKLAHOMA

By

William H. J. Cleverly\*

and

Phillip G. Manks\*\*

In the Housing and Urban Development Act of 1968, Congress affirmed the national housing goal -- "a decent home and a suitable living environment for every American family" (1). This goal requires the construction or rehabilitation of an estimated 26 million housing units by the end of 1978.

Achievement of this housing goal will be a formidable task for both the Federal Government and private enterprise. Already the estimated housing unit needs are considered too low (2), and the housing industry's performance in terms of units constructed per year during the past decade (3) does not create much optimism about attaining this goal. The existing housing shortage coupled with an ever increasing population will soon lead to a crisis in the housing situation in the United States.

The obvious answer to the housing shortage is the so called "low cost" housing which has in recent years received much attention and wide publicity. While the need for this type of housing in single as well as multiple dwelling units is evident and vast sums have been expended on research investigations to develop technological breakthroughs in new housing designs, materials, and method of construction, little progress or concrete results toward reducing housing costs and alleviating the shortages can be observed. Millions of American families cannot afford to rent, let alone buy, adequate and decent housing at today's prices.

Depending upon the source of information and perhaps its social and political overtones, the causes for the housing shortage and the high cost of housing have been attributed to rising interest rates and a tight money market; the inability to realize a breakthrough in mass produced housing; soaring material and labor costs; union rules and trade practice barriers; skyrocketing land prices and unrealistic zoning requirements; restrictive building codes; and governmental agency "red tape." While most of these problem areas are common to large urban centers of population as well as smaller cities and towns, each type of community has unique problems of its own.

Much useful information relating to the above problem areas could be gained from an actual experiment in low cost housing at the community level. Such an experiment could determine the economic feasibility of low cost housing and identify the local restrictions and other contributing factors that restrain the construction of low cost housing. Large sums of money would not be necessary and private financing would provide a considerable advantage over government-sponsored operations in regard to reducing red tape and allowing more flexibility in the planning, design, and construction of such a project. Local needs would be a prime consideration in the experiment, and local people would be intimately involved in the entire procedure. This concept of studying the problems connected with low cost housing on a local basis was used in an experimental low cost housing project carried out in Stillwater, Oklahoma in 1969-70.

Stillwater is the county seat of Payne County and the home of 15,109 permanent residents and 18,891 Oklahoma State University students and their dependents. The City of Stillwater faces a crisis in housing needs similar to many cities of equivalent size and has some special housing problems resulting from its seasonal student population. Over 400 Stillwater families have annual incomes below \$2,000 and more than 40% of the permanent population has incomes below \$7,000 per year.

In the fall of 1969, the Stillwater City Planner predicted that 490 housing units would have to be built each year to meet the needs of the city's growing population. At that time, only 100-200 new housing units were being built per year and the majority of these units had construction costs ranging from \$14,000 to \$40,000. Since "construction cost" of a residence is the monies required to build the structure itself and does not include the costs of land, financing or other indirect charges, these houses are not low cost by any stretch of the imagination and the housing needs of the lower income groups are obviously being neglected.

A 1968 report of the Stillwater Housing Committee stated that housing should not be labeled "low cost" unless it was within the means of families with an annual income of less than \$4,000 (4). This was one of the primary criteria used in this experimental study.

Two contiguous improved lots, i.e., lots having sidewalks, paving and readily accessible utilities, were obtained for this project. Each of these lots were 70 ft. wide and 135 ft. deep. An additional 10 ft. wide strip was acquired from an adjacent lot owner and the resulting parcel was split into three 50 ft. frontage lots at a total land cost of \$4,500. Option agreements were used in these transactions to defer payment of the land for 120 days and save on financing costs.

In order to circumvent the high cost of the land, it was originally planned to divide each of the three lots in half and construct a "cluster development" of low cost housing units as shown in Fig. 1. This plan would have minimized the land cost per housing unit at \$750 and resulted in lot areas considerably in excess of the 2800 sq. ft. presently required for mobile homes in Stillwater. While this plan was submitted to and approved by the local office of the FHA, the present Stillwater zoning ordinances prevented its development.

Subsequent to this setback, it was decided to continue with the experimental study on a reduced scale and construct at least one low cost housing unit. The unit was constructed on-site according to a more or less conventional design that was readily adaptable to local building practices and incorporating readily available building materials. The finished unit is shown in Fig. 2.

\*Housing Consultant, Oklahoma State University  
\*\*Associate Professor, Oklahoma State University

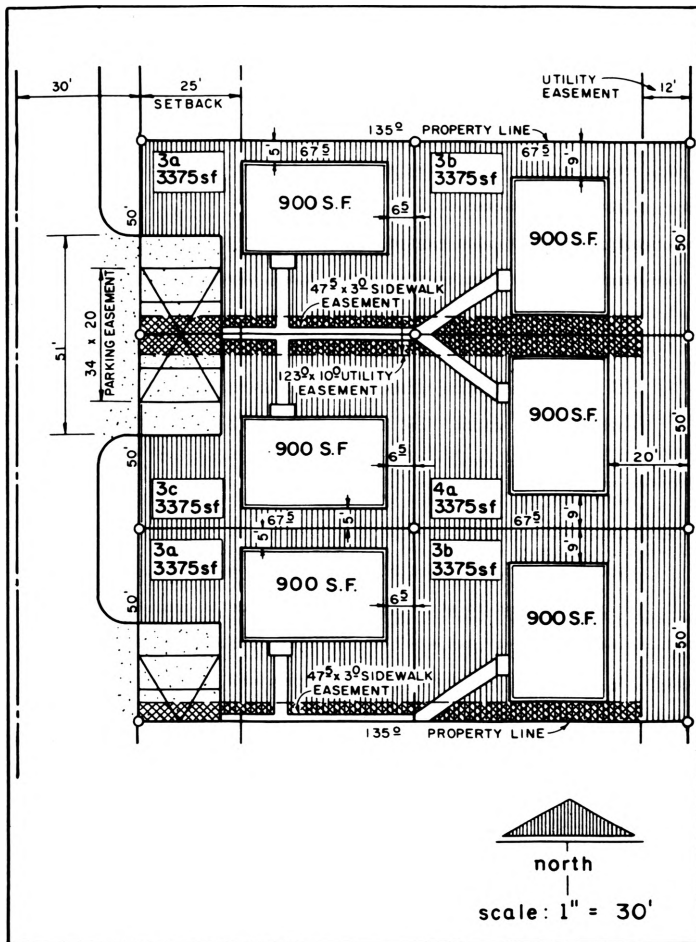


Figure 1. Proposed Cluster Development

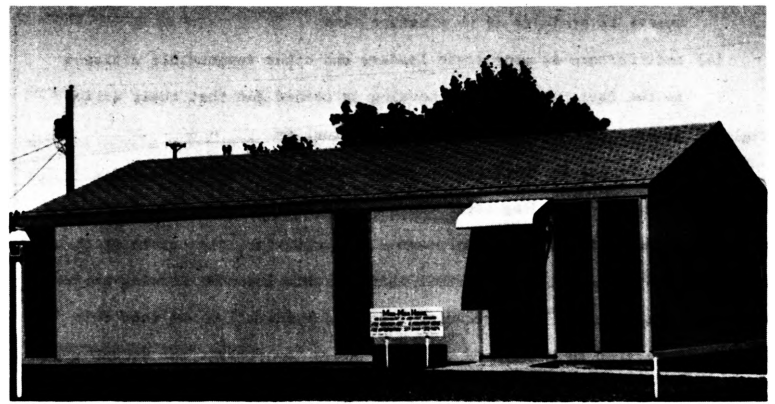


Figure 2. Completed Low Cost Housing Unit

TABLE I

SUMMARY OF COSTS FOR THE LOW COST HOUSING UNIT

Item	Net Cost	Percent
<b>Structure:</b>		
Preparation	\$ 55.62	.6
Labor	1,112.76	11.9
Material	2,473.05	26.4
Subcontractors	2,350.36	25.1
Subtotal	\$ 5,991.79	64.0
<b>Other:</b>		
Land	\$ 1,620.00	17.1
Overhead	280.27	3.0
Sales Expenses	210.55	2.2
Financing Expenses	409.00	4.4
Profit	868.39	9.3
Subtotal	\$ 3,388.21	36.0
<b>TOTAL COST</b>	<b>\$ 9,380.00</b>	<b>100.0</b>

This low cost unit was designed and constructed in accordance with the U.S. Department of Housing and Urban Development "Minimum Property Standards for Low Cost Housing." This assured that the unit would be eligible for a mortgage under the provisions of Section 203(b) of the National Housing Act. An FHA-insured mortgage was determined to provide the most favorable and versatile form of permanent financing for a prospective low income buyer.

The constructed housing unit contains in excess of 900 sq. ft. of floor space. The unit is wood paneled throughout and fully insulated with a forced air central heating system. It is equipped with a new gas range and hood, 11.6 cu. ft. refrigerator and connections for a washer and dryer. The Federal Housing Administration has appraised the value of this unit at \$11,000 and it is eligible for an FHA-insured mortgage of \$10,650.

Table I is a summary of costs for the housing unit and shows the percentage that each major item contributed to the total cost. The structure for this low cost, three-bedroom unit was built at a cost of \$5,991.79 or \$6.66 per sq. ft. A profit of \$868.39 was included in the total cost to illustrate that the unit was economically practical from the builder's standpoint. If several such units were constructed at the same time, the increased efficiency of a larger operation and reduced material costs from buying in larger quantities could substantially increase the builder's profit without increasing the cost of the unit to the buyer. The expected profit is low, but the very nature of this type of housing precludes excessive profits.

The projected selling price of \$9,380 indicated that this unit was also economically practical from the standpoint of purchase by a low income family. With a FHA-insured mortgage on this housing unit, such a family could purchase it for a down payment of approximately \$280 and total monthly payments of \$83.26. This monthly payment includes principal and interest, mortgage insurance premium, fire insurance, and taxes. A purchaser who was eligible for government subsidy assistance under Section 235 of the National Housing Act could pay a total monthly payment as low as \$43.13. These monthly payments are well within the financial capabilities of low income families in the Stillwater area, and in many cases are less than what these families are paying in rent for substandard and inadequate housing.

Restraining influences of all the previously mentioned problem areas, i.e., high interest rates and land prices, high labor and material costs, unrealistic zoning requirements, restrictive building codes, government "red tape", etc. were encountered in varying degrees during the conduct of this experimental low cost housing project. While many of these problems must be solved on the national level, individual communities can do a great deal towards mitigating some of these problems and implementing low cost housing locally.

Some of the more troublesome problems that inhibited this project were:

- (1) limited availability and high cost of suitable land,
- (2) zoning and other city statutory requirements,
- (3) lack of interest on the part of qualified local builders to

engage in projects of this nature, and

- (4) indifference of many civic leaders and other responsible citizens to the fact that low cost housing is needed and that their action is necessary to make such housing a reality.

While there was an abundance of suitable land in Stillwater, i.e., vacant but improved building sites conveniently located with regard to shopping areas, schools, and other community facilities, the owners of this property were reluctant to sell their land for this low cost housing project at a reasonable price. The predominant reason, apparently, was that this land is considered an investment holding. Under the present tax structure, the owners were content to retain their vacant lots and speculate on higher profits from future sales.

The City of Stillwater could encourage low cost housing by easing present restrictive zoning requirements to permit "cluster developments" of single family housing units in selected locations as has been suggested. Land densities commensurate with the purposes of low cost housing would provide land at a lower unit cost than that now available. In addition to encouraging the development of vacant land the City, possibly through its Metropolitan Area Planning Commission, could plan and control the location of such developments so as to blend low income families into various partially developed areas of the community and prevent the furtherance of ghetto conditions which now exist.

Recognizing that adequate housing for low income citizens is partially a community responsibility, civic leaders and other interested and responsible individuals such as realtors, residential contractors, materials suppliers, lawyers, architects, engineers, etc., could establish a nonprofit corporation or similar type organization to guide low income families in the procedural requirements and construction operations of building or helping to build their own homes. The provisions of Section 235 of the National Housing Act allow a low income family purchasing a home with a FHA-insured mortgage to contribute the full value of their labor in the construction of the unit toward the required down payment or to reduce the mortgage, or both.

Such an organization staffed with knowledgeable personnel could assist and guide a low income family through every phase of constructing a low cost housing unit, i.e., location of a suitable building site, application for financing, selection of house plans, ordering materials, and construction of the unit with their own labor utilized as extensively as possible under the supervision of skilled tradesmen.

This organization might also engage in the following:

- a) Design of low cost housing units, i.e., development of a series of house plans having similar characteristics but different architectural features,
- b) Set up prefabricating plants to build sections of these houses, i.e., walls, roof trusses, etc., at a central location which could employ low income or jobless personnel as "on-the-job trainees,"
- c) Establish a cooperative facility to purchase construction materials in large quantities with correspondingly lower unit costs, and to store these materials until needed.

This experimental project has demonstrated that Stillwater, Oklahoma has the material, financial, and human resources required to provide their own much needed low cost housing without direct assistance from the Federal Government. However, community action is necessary to remove some of the existing major restraints and to mobilize these resources.

#### REFERENCES

- (1) U. S. Department of Housing and Urban Development. Housing and Urban Development Act of 1968. Public Law 90-448. August 15, 1968.
- (2) . "As Housing Shortages Grow," U.S. News and World Report, LKVII, No. 15, (October 13, 1969), 84-86.
- (3) Wilcke, Gerd. "Economists Scrutinize '68 Housing Act Goals," The Arizona Republic, March 23, 1969.
- (4) "Stillwater, Oklahoma, City Commission Housing Committee Report," July 22, 1968. (mimeographed).