

THE USE OF TEMPORARY MOBILE OR MODULAR
RELOCATION HOUSING IN URBAN RENEWAL PROGRAMS

A THESIS

Presented to

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Studies and Research

By

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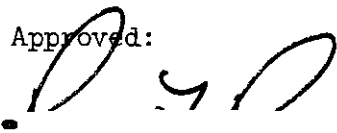
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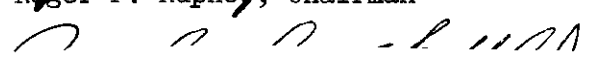
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CHAPTER I

INTRODUCTION

Cities undertaking urban renewal or "slum clearance" activities have frequently experienced two basic problems in carrying out renewal work. First, there has been a chronic lack of standard low income housing in which to rehouse families and individuals displaced by renewal. This lack of relocation housing has prevented cities from undertaking some renewal projects and it has significantly delayed urban renewal in most cities. Delays have occurred, even though new low income housing was in the planning or construction stage, because the new housing was not available at the time clearance activities were to take place. This problem has become more pressing recently as Federal requirements for relocation have become more stringent.

Second, there has been increasing criticism of urban renewal for the disruption of residential communities associated with the process. Older areas of the city with established economic, social, and political functions have been disrupted, or even destroyed, as a consequence of renewing the city as a whole. In some instances, social questions have been raised as in the frequently heard comment that "urban renewal is negro removal."

As a consequence of these two problems, urban renewal officials and the public in general have sought means to prevent urban renewal from being delayed due to lack of relocation housing. They have also

sought means to prevent or minimize the social disruption associated with the urban renewal process. Temporary housing, the use of mobile or modular housing units to temporarily house displacees, has been one attempt at solving these problems.

Temporary housing can help solve the relocation resources problem by making standard dwelling units available to urban renewal displacees. Displacees can be relocated from their existing units to temporary housing. They can then be permanently relocated when standard permanent housing becomes available. Meanwhile, the urban renewal program can move forward.

Temporary housing can also help solve the community disruption problem. It can be used to temporarily house displacees who subsequently return to their old neighborhood which has been revitalized through urban renewal.

Temporary housing has been tried on only a limited basis in a few localities. To the author's knowledge, temporary housing for urban renewal displacees is, or has been, in use in only six locations in the United States: Atlanta, Georgia, Camden, New Jersey, Chicago, Illinois, East Chicago, Indiana, the town of Greenburgh, New York, and New York, New York.

The program in Atlanta consists of 263 units divided among four Neighborhood Development Program (NDP) areas (1). This program originated with the installation of 60 modular temporary housing units in the Bedford Pine NDP area and subsequently added 203 mobile home units. Fifty of the mobile home units were added to the 60 modular units in Bedford Pine, and the remaining 153 were installed in the Model Cities,

Edgewood, and Vine City NDP areas.

In Camden, New Jersey, the local renewal agency began use of mobile homes as temporary housing in the spring of 1970. The program is relatively small consisting of only 18 units (2).

In Chicago, Illinois, 21 mobile home units were used to temporarily house families whose apartment units were undergoing rehabilitation. The project was located in the Lawndale section of the city and involved a total of 135 families living in multi-family structures (3).

The Department of Redevelopment of the City of East Chicago, Indiana has operated a temporary housing program since October 1970. The program is made up of 69 double-wide mobile homes used primarily to house large families. The units are located on five separate sites (4).

The town of Greenburgh, New York, has installed 22 mobile home temporary housing units to house displacees from the Fairview-Manhattan Park Urban Renewal Project. These units have been in operation since July of 1969 (5).

New York City, presently has in operation 57 mobile home units for temporary housing. These units are providing temporary relocation resources for the Marcus Garvey Urban Renewal Project in the Brownsville section of Brooklyn. The units have been in operation since July, 1971 (6).

Temporary housing programs also have been or are being considered in Norfolk, Virginia (7), Washington, D. C. (8); Decatur, Illinois (9); Newark, New Jersey (10); and Nashville, Tennessee (11). Undoubtedly,

many other cities have at least considered this type of program, but have chosen directly, or by a "no action" decision, not to develop temporary housing. The cities listed above are only those in which the author is aware that temporary housing has been considered.

Methodology

The development of this thesis proceeded along two parallel paths. One segment of the development involved gathering of information on temporary housing from published sources as well as through interviews with public officials responsible for, or interested in, temporary housing. This segment included interviews with public officials both in cities where temporary housing was in operation and in cities where temporary housing had been considered but not actually developed. Interviews were conducted with officials in the town of Greenburgh, New York, and in New York, New York, where temporary housing was developed. Interviews were also held with officials in two cities which dropped proposals for temporary housing: Washington, D.C. and Norfolk, Virginia.

The second segment of the research involved the author's day-to-day experience, as a staff planner, with the temporary housing program developed in Atlanta by the Atlanta Housing Authority. Atlanta had the first temporary housing program in the country, and presently has the largest such program. Because the author is most familiar with that program, a significant portion of the thesis is based on the Atlanta experience. However, as a consequence of the research into the other programs listed above, the author believes that a "case study" approach has been avoided. Consequently, the recommendations and conclusions

reached should have general applicability.

Terminology

Several terms are used throughout this thesis which require clarification or definition. These are presented below with their meaning as used subsequently in the thesis.

Temporary Housing

The term temporary housing includes mobile or modular housing units used as interim housing for urban renewal displacees. These housing units are intended for use as dwellings only until the displacees have been relocated to permanent housing at another location. The land on which the units are located is assumed to be planned for some other long term use.

Mobile or Modular Housing Units

Mobile or modular housing units are dwelling units which can be removed, intact or in sections, from their foundation or base and can be subsequently reinstalled at another location.

Urban Renewal

This term is used in the generic sense to include all types of urban renewal or redevelopment programs which involve land acquisition, relocation, demolition, and rehabilitation activity. The programs studied were all Federally funded. However, the temporary housing concept could be applied to any renewal type activities regardless of funding. The term "urban renewal" includes federal Neighborhood Development Programs (NDP).

Local Public Agency (LPA)

This term originated as the Federal Government's designation for the recipient of Federal urban renewal funds. It is used in this thesis (and generally in the renewal field) to designate the local agency responsible for carrying out renewal programs. In this thesis it is used interchangeably with "renewal agency."

Scope of Thesis

This thesis has a two-fold purpose. First, it is written as a discussion and description of temporary housing programs as the author has experienced and studied them. Second, it is written as a guide to communities which might choose to investigate and/or develop temporary housing as a component of an urban renewal program. These two facets of the paper are developed primarily by presenting factual information on various renewal agencies' experience with temporary housing and by presenting recommendations for research or action to be taken in investigating or developing temporary housing.

Four of the remaining five chapters of this thesis deal with the necessary background analyses and development processes involved in planning and developing temporary housing. Each chapter provides specific recommendations for studies to be conducted, decisions to be made, or factors to be considered in developing temporary housing.

Chapter II presents a procedure by which the LPA can forecast long term general demand for temporary housing. Also presented are detailed projection procedures to be applied to each individual renewal project undertaken by the renewal agency. The basic procedures suggested

involve a careful comparison of projected displacement with projected relocation housing resources.

Chapter III outlines a series of background studies the LPA should conduct to establish the exact type of program to be conducted and its potential cost. Specific topics discussed are: unit selection, site selection, site design, site engineering, unit installation and inspection, regulation of the development, unit operation policies, and costs and financing. Where applicable, criteria or standards for units, sites, or other development components are presented.

The fourth chapter suggests several alternatives to temporary housing which the LPA should explore before committing itself to such a program. These alternatives include project delay or staging, temporary rehabilitation, temporary rent supplement, and permanent housing production. Costs per unit per month are estimated for the temporary rehabilitation and temporary rent supplement alternatives to provide comparisons with temporary housing costs.

Chapter V suggests procedures for scheduling background studies and scheduling development of temporary housing. In addition potential problems and solutions regarding community involvement and overall program coordination are discussed.

The final chapter presents a brief summary of the thesis. In addition, overall conclusions are offered.

CHAPTER II

DETERMINING DEMAND FOR TEMPORARY HOUSING

For cities considering the development of a temporary relocation housing program, the first step should be a full exploration of the demand for temporary housing. Potentially, a demand will exist whenever displacement from urban renewal exceeds the supply of relocation housing available and affordable to families or individuals displaced. However, this potential demand must be carefully analysed to determine if it justifies development of a temporary housing program (12).

Demand analysis involves a two part process. First, overall demand for an extended time period should be determined. Second, assuming an overall demand exists, a project by project analysis should be made to determine the temporary housing requirements of each area to receive urban renewal treatment.

Overall Demand Analyses

This analysis requires a general forecast, over a ten year period, of the volume of displacement in the locality compared to the volume of replacement housing available. This forecast will necessarily be an approximation. The variations in housing construction activity, federal program funding, and political decision making, all of which affect urban renewal and the housing resources supply, preclude detailed or very accurate projections of relocation problems over a ten year period. However, these projections can indicate if a sufficient demand

will exist over a period of time long enough to amortize the temporary housing units and to justify the effort and expense of establishing the program.

Long range forecasts of displacement and resources may be available as part of a city's overall renewal and housing planning program, for example, from Federal Community Renewal Program (CRP) reports. However, the LPA may have to make its own estimates if suitable data does not already exist.

Relocation Housing Demand

Displacement analysis requires an approximate forecast of the ten year displacement of families and individuals in the overall city. This analysis should include general identification of potential clearance areas, potential rehabilitation areas, potential code enforcement areas, and any other known sources of displacement such as highway construction. Based on structural conditions in these areas and available population data, rough numerical projections of the displacement and consequent relocation housing required by renewal of these areas can be made. These projections should include numbers of displacees and some measure of family size and income.

These projected displacement figures should then be allocated by two year periods over the ten year forecast period. This allocation should be based on several factors including

1. available local funds
2. available federal or state funds
3. priority ranking among the various projected action areas

These projected displacement estimates should then be compared

to available resource estimates to determine if any long term imbalance between displacement and resources will exist.

Relocation Resources

Resources analysis requires a projection of the housing units estimated to become available to the displacees identified in the displacement analysis. This analysis should include two year period projections of housing units to be available through vacancies, production of new subsidized units, and production of new private market units. (Only private market units affordable to potential displacees should be considered.) These projections can be based on overall city housing studies such as the previously mentioned CRP reports, or on city or regional economic or "population and housing" studies.

As with displacement, these resources forecasts will be very rough approximations. They will depend on assumptions as to subsidy program funding and vacancy levels. However, the need at this point is only to determine if a continuing shortage of relocation housing will occur. If it will occur, then a long term justification may exist for establishing a temporary housing program. If no long range relocation problem exists, a temporary housing program is probably not feasible, even if subsequent analysis of individual renewal projects indicates a potential use for temporary housing. A suggested chart form for forecasting long term demand is shown in Figure 1.

Project Demand Analysis

If an overall continuing demand for temporary housing is indicated, the next step for the renewal agency is analysing the temporary

LONG TERM TEMPORARY HOUSING DEMAND FORECAST

Period	Forecast Number of Families Displaced by Income Level Converted to Housing Expenditure ¹			Forecast Number of Relocation Housing Units by Monthly Pay- ment level ²		Deficit or Surplus by Payment Level	
	\$ Annual Income	\$ Housing Expenditure	Number of Families	\$Payment Level	Number of Units	\$Payment Level	Number of Families
1974- 1975	0-2500	0-50		0-50		0-50	
	2500-5000	50-100		50-100		50-100	
	5000-10,000	100-200		100-200		100-200	
	10,000 +	200 +		200 +		200 +	
1976- 1977	0-2500	0-50		0-50		0-50	
	2500-5000	50-100		50-100		50-100	
	5000-10,000	100-200		100-200		100-200	
	10,000 +	200 +		200 +		200 +	
1978- 1979	0-2500	0-50		0-50		0-50	
	2500-5000	50-100		50-100		50-100	
	5000-10,000	100-200		100-200		100-200	
	10,000 +	200 +		200 +		200 +	
1980- 1981	0-2500	0-50		0-50		0-50	
	2500-5000	50-100		50-100		50-100	
	5000-10,000	100-200		100-200		100-200	
	10,000 +	200 +		200 +		200 +	
1982- 1983	0-2500	0-50		0-50		0-50	
	2500-5000	50-100		50-100		50-100	
	5000-10,000	100-200		100-200		100-200	
	10,000 +	200 +		200 +		200 +	

1 Use formula of annual income x .25 ÷ 12 = housing expenditure (round off)

2 Payment level is mortgage payment-monthly rental.

Figure I. Suggested Long Term Temporary Housing Demand Forecast Chart

housing demand for each project currently in planning or execution. This analysis requires detailed projections of relocation housing demand and relocation housing resources for each project. Both demand and resources (supply) should be projected in specific schedules. These schedules will indicate any imbalance between demand and resources and thus any potential demand for temporary housing. This potential demand for temporary housing should then be set out in a specific temporary housing demand schedule.

As with the overall demand analysis above, project demand analysis will require some "guesstimates" of timing of project funding and other factors. However, the LPA should try to specify displacement and available housing resources as accurately as possible. The specific factors involved in relocation housing demand projections, relocation housing supply projections, and consequent temporary housing demand, are discussed below.

Project Relocation Housing Demand

At the project level, the LPA should determine the number of housing units by type, cost, and location, which will be needed to rehouse all displacees from the project. The first step in this process is identifying all sources of displacement such as clearance by the LPA, code enforcement clearance, rehabilitation temporary displacement (while work is being carried out). Once all sources of displacement are identified, the renewal agency should project the characteristics of the rehousing required by all families to be displaced according to housing type, cost and location. This data should be arranged in a chart form relocation housing requirements schedule.

Housing Type and Cost. These two factors must be considered together. A detailed listing of the characteristics of all displacees should be drawn up. Data on housing type should include the number of bedrooms required and tenure (ownership or rental). Data on housing cost should indicate the monthly rental or mortgage payment displacees can afford.

The data necessary for these projections should be available from general project planning and relocation planning studies. For example all Federal projects require completion of Form HUD 6122 which contains these data.

If the data are not available, specific surveys should be conducted to obtain them. Affordable monthly rental or mortgage payments can then be roughly computed at 25 percent of monthly income. (See the section on "rental rates" in Chapter III for more detail on this calculation.) To determine the number of bedrooms required the LPA should use the following guidelines (13):

1. Infants may be included in bedroom with parents (generally an infant is considered to be a child under 2 years of age).
2. Children of opposite sex up to school age (usually 5 years of age) may occupy the same bedroom.
3. Two persons of the same sex may occupy the same bedroom.

These guidelines result in the following guide for matching number of persons in the family with the number of bedrooms required (14):

Maximum Number in Family	Number of Bedrooms
3 (1 infant)	1
5	2
7	3
9	4
11	5
13	6

Location. Accurate data on where displacees desire to relocate is one of the most important factors in temporary housing demand. Displacees may want to relocate within the project area (assuming the renewal plan calls for residential reuse), they may want to move away from the project area, or they may have no particular preference.

Displacees wanting to remain in the area may have a strong attachment to their neighborhood. The neighborhood may meet many of their physical and social needs. Their friends or relatives may live nearby and their neighbors give help in times of crisis. The function of the neighborhood in meeting these needs is especially important in lower income areas where limited economic resources and limited mobility almost require that such needs be met close to home (15).

Attachment to a neighborhood may be broadened into a sense of identity with the neighborhood. It may also include a sense of community and be represented by various organized groups.

For example, this strong attachment to the neighborhood was primarily responsible for the beginning of temporary housing in Atlanta's Bedford Pine Project.

When this project was announced, there was concern among the residents about the disruption of their neighborhood. A survey was made within the area and approximately 70 percent of the people who lived there preferred remaining in the neighborhood to being relocated by the Housing Authority to other areas of the City. (16)

Community preservation interests were also responsible for proposals to develop temporary housing in Washington, D. C. (17) and Norfolk, Virginia (18)(19).

For displacees who want to maintain their ties with the community, temporary housing can be an effective means to that end. Families can move to temporary housing and subsequently move back to newly constructed or rehabilitated housing in their old neighborhood.

Other displacees will want to relocate outside the renewal area, or must relocate elsewhere because the renewal plan may not include housing they can afford (an increasingly rare case). Those who want to move out may be "upwardly mobile" and therefore see renewal (and its accompanying financial relocation benefits) as an opportunity to move to a "better" neighborhood.

More relocatees in Federally financed projects may move into this classification as a result of passage of the Uniform Real Property Acquisition and Relocation Policy Act of 1970 (PL 91-646). This Act significantly increased the financial assistance (and therefore rehousing choices) available to displacees (20).

These types of displacees represent a potential demand for temporary housing on a "way station" basis. Depending on the availability of relocation housing outside the project area (discussed below), temporary housing may be required for an interim period until suitable rental or sales relocation housing is available.

Accurate data on locational preferences can be obtained through surveys of potential displacees. Once clearance, rehabilitation or code enforcement areas are identified, a specific "population" exists which

can be accurately surveyed to determine relocation preferences.

Rehousing Needs Schedule. Once displacees and the characteristics of the rehousing they require are identified, projected displacement should be set up in a schedule by quarterly periods. The schedule should show the number and rehousing needs of all families and individuals to be displaced within each period.

This schedule should be based on the LPA's overall execution plan for the project. The execution plan should indicate the particular dates by which various tracts of project land (disposition parcels) must be acquired, cleared, and sold. These dates will be based on "internal" input in terms of staff capacity and funds available, as well as "external" input from other public or private agencies which may be dependent on the renewal agency for land. For example, the renewal program might be providing land for a public facility such as a new school which must be under construction by a given date.

Once these dates are established the LPA should schedule the relocation of families on various tracts to be complete in advance of the date for sale of each tract. How far in advance will depend on what other activities must be completed after relocation but before land marketing, such as grading or utilities work. Also some "slack" time should be allowed for delays in acquisition or other problems.

By establishing this type of schedule the LPA will have a clear means of comparing relocation housing demand to housing resources available. Any imbalance between the two indicates a potential demand for temporary housing.

A sample schedule of the type suggested is shown in Figure 2.

REHOUSING REQUIREMENTS FOR PROJECTED DISPLACED
FOR THE QUARTERLY PERIOD
_____ to _____

Family Monthly Housing Expenditure ¹ \$	ONE BEDROOM				TWO BEDROOMS				THREE BEDROOMS				FOUR OR MORE BEDROOMS			
	Inside Project		Outside Project		Inside Project		Outside Project		Inside Project		Outside Project		Inside Project		Outside Project	
	Sales	Rental	Sales	Rental	Sales	Rental	Sales	Rental	Sales	Rental	Sales	Rental	Sales	Rental	Sales	Rental
0 - 25																
26 - 50																
51 - 75																
76 - 100																
101 - 125																
126 - 150																
150 - 200																
200 +																

1 Use formula: $\text{annual income} \times .25 \div 12 = \text{housing expenditure (round off)}$

Figure 2. Suggested Relocation Housing Requirements Schedule

Project Relocation Resources

The next step in projecting temporary housing demand requires projecting the number and type of housing units anticipated to be available to displacees during each quarterly period. Data developed should be arranged in the same categories as data gathered on displacees; that is sources of housing supply should be listed and units projected by type and cost, and location. These items should then be formulated into a rehousing resources schedule corresponding to the rehousing requirements schedule discussed above.

The projection of available housing units over the displacement period may be a difficult job beyond the normal capacity of the LPA staff. Consequently the LPA might obtain help from local realtors, local planning agencies, area or regional planning staffs, U. S. Department of Housing and Urban Development personnel or from market consultants hired for the specific purpose of projecting housing resources. Even if some expense is involved, this type of resources projection is necessary both for overall relocation planning needs and evaluation of the need for temporary housing.

Sources of Housing Supply. Two sources of relocation housing are available: vacancies in existing units and newly constructed or rehabilitated dwellings. The LPA should establish and project vacancy rates among the various price and type units which will be required by displacees. Existing vacancy rates should be adjusted to reflect any anticipated changes in the housing market. For example, opening of major new employment centers may increase demand for existing housing and lower the vacancy rate until new units are produced to meet the

demand.

Sources of new construction include private market units and subsidized units. Rising construction and land costs have tended to place new privately constructed or rehabilitated units above the price range of most urban renewal displacees. Therefore most new or rehabilitated housing available to displacees will consist of subsidized units. New or rehabilitated units should be identified along with sales price or rental rate, and projected completion dates.

Housing Type and Cost. As with displacement the number of bedrooms and sales or rental information should be gathered on housing resources. This data should then be classified according to sales price (expressed as monthly mortgage payment) or rental cost. These cost figures should be arranged in the same dollar categories used to determine housing demand.

Location. The location of anticipated vacancies and newly constructed or rehabilitated units should be specified as either within the project or outside it. The LPA should have a clear picture of projected units within the project based on the renewal plan. These units may be very important in terms of meeting displacee desires to relocate within the neighborhood as discussed above.

Units to be available outside the project should also be identified. These can then be compared to potential demand from project displacement.

Rehousing Resources Scheduling. Once projected rehousing resources are established, these resources should be set up in a quarterly schedule similar to that set up for rehousing needs. The

schedule would indicate the housing cost, size, location, and whether rental or sales units. A sample schedule is shown in Figure 3.

Project Temporary Housing Demand

Potential temporary housing demand occurs at any point where projected relocation housing demand exceeds the projected rehousing available. By comparing the rehousing needs schedule with the rehousing resources schedule, shortages of relocation housing can be identified by type, size, and cost of the units involved. Also comparison of these schedules will indicate the probable length of the demand for any given project.

The LPA should compare the relocation housing demand schedule with the resources schedule and establish a third schedule which indicates temporary housing demand by specific unit type, cost, and size. A sample temporary housing demand schedule is shown in Figure 4.

Once such a demand schedule is set up the "totals" figures of the demand schedule can be used to project a temporary housing program of a given number of units for a given period of time for each project. The LPA might elect to develop a program to meet all or part (or none) of the temporary housing demand with mobile or modular units. This determination should be based on costs, other factors discussed in Chapter III, and available alternatives as discussed in Chapter IV.

REHOUSING RESOURCES PROJECTED TO BE AVAILABLE
FOR THE QUARTERLY PERIOD
_____ to _____

Monthly Housing Cost (Monthly Rent or Mortgage Payment) \$	ONE BEDROOM				TWO BEDROOMS				THREE BEDROOMS				FOUR OR MORE BEDROOMS			
	Inside Project		Outside Project		Inside Project		Outside Project		Inside Project		Outside Project		Inside Project		Outside Project	
	Sales	Rental	Sales	Rental	Sales	Rental	Sales	Rental	Sales	Rental	Sales	Rental	Sales	Rental	Sales	Rental
0 - 25																
26 - 50																
51 - 75																
76 - 100																
101 - 125																
126 - 150																
150 - 200																
200 +																

Figure 3. Suggested Relocation Housing Resources Schedule

PROJECTED TEMPORARY HOUSING DEMAND
FOR THE QUARTERLY PERIOD
_____ to _____

\$ Monthly Housing Cost (Rent or Mortgage Payment)	ONE BEDROOM				TWO BEDROOM				THREE BEDROOM				FOUR OR MORE BEDROOM				Total Units
	Inside Project		Outside Project		Inside Project		Outside Project		Inside Project		Outside Project		Inside Project		Outside Project		
	Sales	Rental	Sales	Rental	Sales	Rental	Sales	Rental	Sales	Rental	Sales	Rental	Sales	Rental	Sales	Rental	
0 - 25																	
26 - 50																	
51 - 75																	
76 - 100																	
101 - 125																	
126 - 150																	
150 - 200																	
200 +																	
Total Units																	

Figure 4. Suggested Temporary Housing Demand Schedule

CHAPTER III

DEVELOPING TEMPORARY HOUSING

If sufficient demand for temporary housing has been established, the LPA should examine all of the aspects involved in developing temporary housing to meet all or part of that demand. This examination includes the number and type of units to be used, the selection, design, and engineering of sites for the units, installation of units, and regulations applying to the units and the sites. Also to be considered are operation of the units and cost and financing for the temporary housing program.

The sections below set out the analysis needed and development recommendations for each of these factors. Each factor should be examined in relation to the demand schedules previously established by the LPA.

Unit Selection

Six considerations are important in the selection of units: number of units, size, durability, availability, and ease of installation and removal. From analysis of these factors the LPA should be able to clearly specify the character of units to be used in its temporary housing program. In developing specifications for the units, the LPA should consider using the services of a local architect who is familiar with mobile homes, local building codes, zoning regulations, climate, and topography.

Number of Units

The renewal agency should base the number of units to be purchased on the demand schedule. Enough units should be purchased to meet the highest quarterly demand figure on the schedule which appears consistently over the life of the project. For example, if a demand for 50 units is projected for all except three quarterly periods, the LPA should purchase 50 units even if in one other period a demand for 75 units is indicated. Any excess demand can be accommodated through one of the alternatives discussed in Chapter IV.

The renewal agency should also consider purchasing ten percent more units than the demand schedule "base figure" calls for. These extra units might be necessary to house various hardship or emergency cases. For example, families may be displaced through fire damage, land lord eviction, or emergency code enforcement. These families may look to the LPA for assistance in finding immediate rehousing.

The renewal agency might have no legal obligation to provide rehousing for these cases. However, community relations considerations suggest that the LPA provide this type housing if possible.

Unit Size

Determining the size of temporary housing units needed requires consideration of both the number of bedrooms and floor area available in the unit. Both factors should later be evaluated against cost and availability considerations.

Number of Bedrooms. The number of bedrooms required in the selected temporary housing units should be determined by using the temporary housing demand schedule previously developed by the LPA.

Using this schedule, the LPA should determine how many bedrooms the displaced families will require in their temporary housing units. For example, the schedule might show that for a given project, a total of 100 families will require three bedroom units and 50 families will require four bedroom units. Based on this data, the LPA can then select mobile or modular units from models available (see "Availability" below). If the demand for temporary housing is for primarily one type unit (three bedroom for example) the LPA should consider purchasing all units of that type. Smaller families would have extra space and larger families might be accommodated by purchasing one of the commercially available "add-a-room" modules for mobile homes.

The programs examined for this study have used primarily three bedroom units. For example, Atlanta's program involving a total of 263 units consisted of 50 two bedroom units, 179 three bedroom units, and only 34 four bedroom units. In the other programs studied, 93 of the 168 units (for which data on the number of bedrooms was available), were three bedroom units. The remaining 75 units were four bedroom (21), (22), (23), (24). See Figures 5 and 6 for floor plans of typical three bedroom and four bedroom mobile home units.

Floor Area. In addition to determining the number of bedrooms for the temporary housing units, the LPA should establish the necessary floor area for units of varying bedroom sizes. This floor area requirement should be based on the number of persons per family for the potential temporary housing occupants. (Data on number of persons per family should be available from the research done to prepare the temporary housing demand schedule discussed in Chapter II).

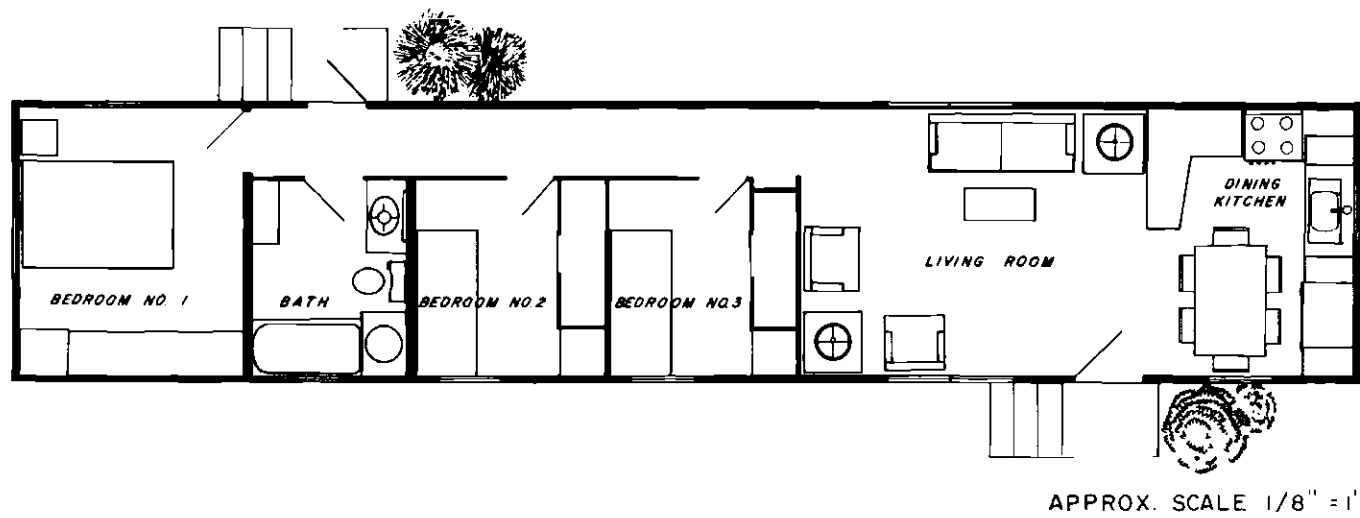


Figure 5. Floor Plan of Typical Three Bedroom Mobile Home Unit (25)

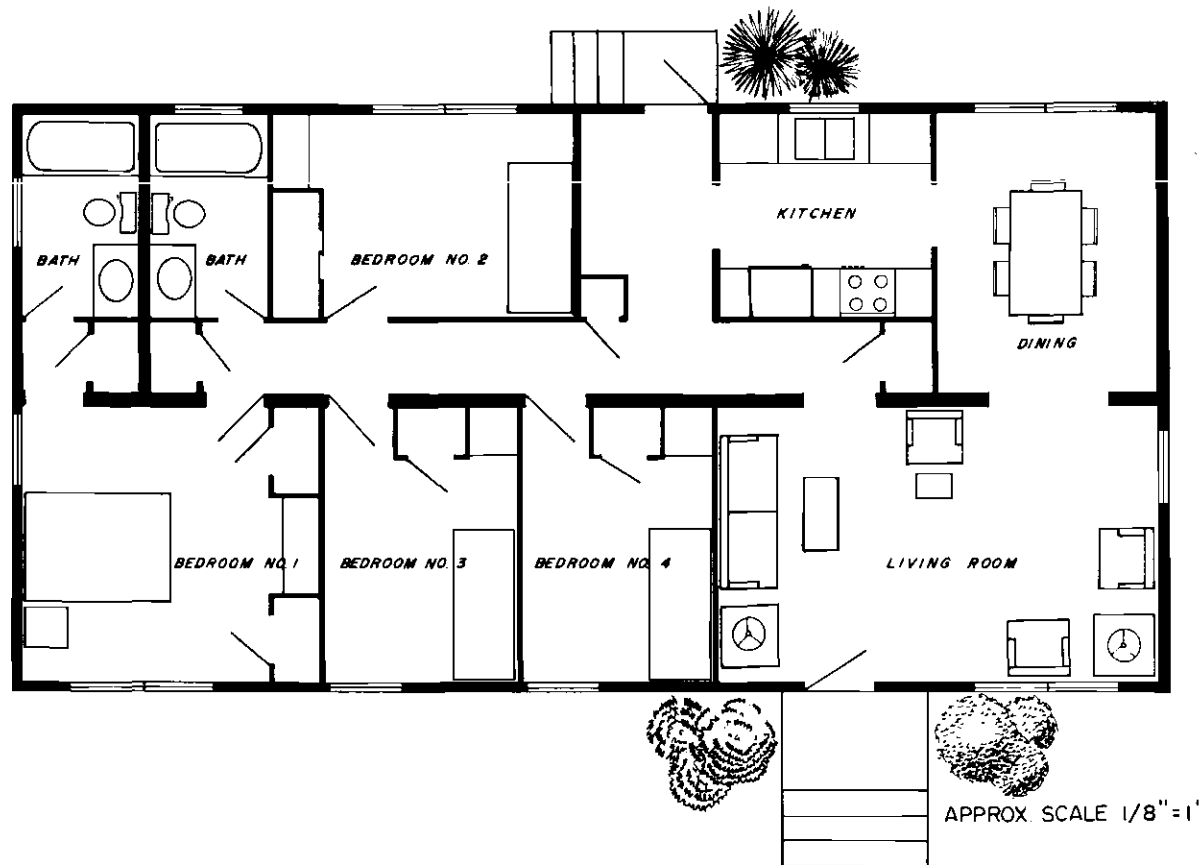


Figure 6. Floor Plan of Typical Four Bedroom
"Double Wide" Mobile Home Unit (26)

In establishing floor area requirements, the LPA should be aware that most production line mobile homes are designed for use by families smaller than those typically displaced by urban renewal programs. Typical private market mobile home families have an average of three persons (27), (28), (29). In contrast many families displaced by urban renewal have five or six persons. In Atlanta, for example, the average family size for temporary housing occupants was 4.28 persons (30). Therefore, the LPA should be careful to allow adequate space per person and not overcrowd the units.

Based on Atlanta's experience, and analysis of published standards (31), (32), a minimum standard of 135 square feet per person seems appropriate. This standard would provide considerably less space per person than typical private ~~market~~ mobile home conditions such as a three person family in a 684 square feet (12' x 57') mobile home -- averaging 228 square feet per person. However, the standard would be considerably above space levels of 87 to 107 square feet per person, levels at which one study found psycopathology rates doubled (34). It would also avoid what the author considers questionable practices such as the East Chicago, Indiana program where up to 16 persons were placed in 1,152 square feet double wide mobile homes -- 72 square feet per person (34).

Using the 135 square feet per person standard, a typical three bedroom (684 square feet) mobile home unit could be used for families up to five persons. A typical double wide four bedroom unit (1152 square feet) could be used for families of up to eight persons.

Quality and Durability

Two basic objectives should be considered in determining the quality and durability of units. First, the units should adequately provide for the health, safety, and comfort of the persons to be housed. Second, the units should be sufficiently durable to avoid excessive maintenance costs to the LPA.

To achieve these objectives, the renewal agency should consider the quality of basic construction items including body and frame, plumbing system, heating system, and electrical system. Also to be considered are finishing items such as floor coverings, door and window hardware and cabinet work.

Guidelines and suggestions for selecting units of proper quality are outlined below. However, these guidelines are general ones. Therefore the LPA should obtain advice from an architect who is familiar with mobile home construction and local codes (see "Regulations" below) before writing detailed specifications or choosing particular units.

Basic Construction Items. For these items, the LPA's basic choice is between production line mobile homes and custom built units meeting higher construction standards.

The basic industry standard for mobile home construction is the American National Standards Institute (ANSI) Standards for Mobile Homes (1969 latest edition). All mobile home units used for temporary housing should meet this standard. It specifies requirements for body and frame construction, heating, plumbing and electrical systems, and such other items as wind resistance.

Although limited information is available, mobile homes built to

this standard and used for temporary housing seemed to have proven "adequately durable" (35). This standard is probably adequate for units planned for five years use (36). Using such standard units for such short term programs is also probably necessary to avoid the increased costs incurred to purchase specially constructed units.

For programs anticipated to last more than five years, the LPA should consider using higher standards than the ANSI Standards for Mobile Homes. Such higher standards will significantly raise unit prices. This cost increase partially results from using more expensive (more durable) materials. However, the main increase occurs because the manufacturer has to modify his production process and, in effect, custom build the unit to meet LPA specifications. Thus the increased cost might be proportionately more than the increased durability. In Atlanta all units were built to meet city building codes rather than ANSI Standards. This type construction raised the cost of the units to more than fifty percent above costs for standard units (37).

However, these cost increases might be justified by the longer period of service required. Also the higher cost can be amortized over a longer period, perhaps resulting in equal or lower yearly cost. The Atlanta units were estimated to be serviceable for up to ten years depending upon the characteristics of the families occupying them (38).

If the LPA selects more durable units, the recently published Proposed BOCA Industrialized Dwelling Code (Draft January 1974) is a useful guide (39). It specifies minimum thicknesses of materials, minimum spacing of joists and studs, minimum room sizes, and generally

is more detailed than the ANSI Standards.

Finishing Items. Evidence from the Atlanta program and the Camden program (40) indicates that even for short term use, (five years or less) the LPA should specify finishing items above normal mobile home standards. Although more durable finishing items will be more expensive, they should reduce maintenance costs significantly. Also the increased cost will be roughly equal to the increased durability because no change in the production process will be required as in basic construction changes.

Specific items which required extraordinary maintenance in either the Atlanta or Camden programs included:

- (1) furniture
- (2) floor coverings
- (3) draperies
- (4) door hardware
- (5) door screens or door glass
- (6) window screens and glass
- (7) hot water heaters

The LPA should work with an architect and the unit supplier to develop materials specifications which will insure that these items do not require excessive maintenance. For example, extra thick glass, specially treated glass, or a substitute product such as Plexiglas might be used in door windows.

Availability

The units selected must be of a type which can be supplied to the LPA and installed within the LPA's time schedule for development.

Generally, availability will depend on the type of unit selected and the production and delivery capacity of the manufacturer.

Type of Unit. If a very short lead time is available, then the LPA might choose a "production line" model of either a mobile or modular housing manufacturer. These units can usually be supplied rapidly. For example, in the 1972 disaster relief program following hurricane Agnes, production line mobile homes were delivered twenty-one days after the order was placed (41). If a greater lead time is available, there is more potential for selecting custom made or custom designed units which meet the LPA's particular needs.

Also, the LPA can reduce availability problems by using only one type of unit which can be ordered from the manufacturer only as needed. This solution might require an LPA decision to meet only a portion of the projected temporary housing demand with mobile or modular units. For example, if only three bedroom mobile homes were ordered, families of six or more persons would have to be housed in other units (see Chapter IV, Alternatives to Temporary Housing).

Generally, it appears that the more fully developed manufacturing and delivery systems for mobile homes make them more readily available than modular units. In the six temporary housing programs studied, 387 (87 percent) of the 447 units used were mobile homes. Thus, it would appear that these units were more readily available than modular units. However, in any particular situation a modular unit manufacturer may be able to supply modular units in the same or less time than mobile home units could be made available.

For mobile home units, the twelve foot "single wide" unit appears to be more readily available than the double wide type or the fourteen foot wide type. In 1970, for example, 78.6 percent of mobile homes produced were the twelve foot type while only 8.1 percent were the fourteen foot type (42). The remaining 12.5 percent were double wide, triple wide, or sixteen foot, expandable units (43).

Production Capacity. The plant capacity of the manufacturer affects his ability to deliver the units required by the date needed. The LPA should be certain that the manufacturer has sufficient plant capacity, and a low enough "back log" of orders to deliver the units when needed. This factor may become especially important where a manufacturer must modify his production procedures to meet the specifications of the LPA. The manufacturer will have little incentive, other than higher price, to drop his normal orders to fill a small special order from the LPA.

Ease of Installation and Removal

Units selected should not only be available readily but must also be capable of relatively simple installation and removal. The LPA should be certain that it has on hand, or can obtain through contract with the manufacturer or third parties, the necessary staff and equipment to install the units. Modular units may require the use of cranes or hoists to set the units. As an example, installation of the sixty units of modular housing used in Atlanta's temporary housing program required use of a crane. Also, specialized techniques may be required to join sections of modular units or the two independent sections of "double wide" mobile homes.

Ease or removal of the units (the counterpart of installation) should also be considered. The same factors mentioned above which apply to installation apply to removal. However, these factors will assume an added importance if the LPA plans to use the units in a program which requires frequent moving of the units from site to site.

Problems of installation and removal appear less severe for mobile homes than for modular units. Personnel familiar with mobile home installation are generally more available and less equipment is involved. However, in one single situation, modular unit installation might be less trouble-some than mobile home installation.

Site Selection

Along with selecting units the LPA must select the sites to be used for temporary housing. This process should identify specific sites for the number of temporary housing units the LPA plans to develop. Three considerations are important in identifying and selecting sites: general location, physical site characteristics, and land availability.

General Location

The prime consideration for general location is relating the sites to the demand schedule discussed in Chapter II. If the demand for temporary housing is the result of an effort to preserve the renewal community and preserve local friendship ties, then the LPA should select sites within the renewal area to achieve that objective. In Atlanta's program, for example, preserving neighborhood ties was a prime objective

and all units were located within or directly adjacent to the renewal project area. If, however, community preservation is not a prime purpose, and most displacees are willing to relocate to other areas, then an area outside the project area is acceptable. Use of land outside the project area may also be necessary if land is not available within the renewal area.

In addition, the LPA should consider the surrounding uses and supporting facilities available to any proposed site. Temporary housing is basically a low to medium density residential land use. It should be located adjacent to the usual land uses considered compatible with residential uses, e.g. other residential uses or parks. Also, it should be served with the usual array of supporting facilities such as schools, churches, and convenience commercial uses. Since many of the occupants will be low income, availability to day care centers and community or social service centers is also important.

Third, the site should be served with adequate transportation, i.e. have good bus, transit, and automobile access. Again, because of the low income of many occupants, who consequently do not own automobiles, good bus or transit access is very important. If a temporary housing development is to be of significant size, bus companies should be requested to revise routes or schedules to serve the development (44).

Fourth, sites should be selected which will not compound an existing limited housing resource problem by their use for temporary housing. That is, sites should require the demolition of little, if any, permanent housing to develop temporary units. Also, use of the sites for temporary housing should not tie up land which could be

developed for permanent housing. These considerations led the Atlanta Housing Authority to select land designated for commercial, institutional, or other non-residential uses for all but one of its temporary housing sites. Sites used for the Greenburgh, New York, temporary housing program were also selected partially on the consideration that they not delay project execution (45).

Physical Site Characteristics

Four physical aspects of potential sites affect their suitability for temporary housing: general topography, soil and subsoil conditions, utility service, and size. Each of these factors is discussed below.

General Topography. The sites should be relatively flat or with moderate slope. Excessive slope makes installation of units difficult and requires grading costs which are not justified for a temporary use. In some cases, however, major site work may be planned for making the land suitable for its permanent reuse. In these situations, site work might be scheduled early enough in the project to make the site useable for temporary housing, as well as for its permanent use under the renewal plan.

Subsoil Conditions. Soil and subsoil quality should be generally of the type acceptable for residential use. Excessive rock or soils with poor load bearing quality should be avoided. The shallow foundations or "pads" for mobile homes or modular units minimize the complications with subsoil conditions. However, beyond reasonable soil condition limits, installation cost increases unjustifiably. Also, poor drainage soils may create problems and should be avoided.

Utility Service. Adequate utility service is required for any site selected. Water, sewer, electric, telephone, and gas service are normally necessary. However, if the units selected are of a "total electric" variety or operate on LP gas stored in tanks, the requirement for gas service can be avoided. All of the Atlanta temporary housing units are "total electric" units.

Size. Site size is also a consideration. For minimum cost of installation, site improvements, and operation, larger sites which can accommodate thirty or more units are preferable. However, sites of this size may be difficult to obtain as discussed below under "Land Availability". Atlanta's temporary housing was located on sites averaging 7-8 units with the largest site housing 26 units.

For sites that are developed within the renewal area, excessive size may defeat the goal of keeping temporary housing and its occupants integrated into the neighborhood. The program in Greenburgh, New York, deliberately used small sites of two to four units in order to maintain the existing residential character of the area (46). However, this program involved a total of only twenty-two units. For larger programs, such small sites might not be feasible.

Land Availability

The term "site selection" implies that the LPA will have many alternative sites from which to select. In fact, the problem may be the opposite. That is, the LPA might have to search out sites from a very limited supply of available land. This problem may be especially severe if the land for temporary housing must be within the renewal area and/or many units must be located. For example, long delays

occurred in Atlanta's development of temporary housing at least partially because acceptable sites for the units could not be found.

Suggested below are several potential sources of land for temporary housing use. Not all sources will be applicable to a given city but each is worth exploration.

Vacant Land. Vacant land which is designated for permanent non-residential use can be utilized for temporary housing. Unfortunately, vacant land is usually scarce in renewal areas.

Closed Streets. Streets, rights-of-way, or easements can also be used as temporary housing sites. Because of original poor planning and platting, many renewal areas contain streets or sections of streets which serve no real purpose for moving traffic or serving adjacent land uses. These streets are often designated to be closed in the final renewal plan. If closing is carried out early, the abandoned right of way can be used for temporary housing. Also, large underground utility easements may cross the renewal area. This land might be used for temporary housing. For example, most of the Atlanta Housing Authority's sixty units of modular temporary housing are located on a large sewer easement in the Bedford Pine Neighborhood Development Program area.

Dual Use. A double use of land is also a possibility. Many cities contain large open areas in park, recreation, or educational uses. Often development and operation of temporary housing on one portion of these sites would not seriously compromise the primary use. This dual use situation is most practical in situations where relatively short term temporary housing use is anticipated. In Atlanta, one section of a partially developed city park was used to locate temporary

housing units.

Cleared Non-Residential Land. The renewal process might be scheduled to clear dilapidated commercial structures early in the execution stage to provide land for temporary housing for persons to be displaced in the later stages of execution. If locations outside the renewal area are acceptable to displacees, cleared non-residential land in a different urban renewal area might be used.

Site Design

Concepts and approaches to residential site design, as well as the characteristics of sites to be developed, vary too greatly to permit a complete discussion of site design in this thesis. The factors discussed below are those which have particular applicability to temporary housing programs, including community orientation, density, site amenities and design experimentation.

For additional information and standards on site design, the LPA should consult such publications as Environmental Health Guide for Mobilehome Communities (47) and Mobile Home Park Development Standards (48). In addition the LPA should consider obtaining the services of a qualified landscape architect to develop site designs.

Figures 7 and 8 show typical temporary housing site plans as used in Atlanta.

Community Orientation

If a temporary housing site is to be developed to maintain residents' ties with the surrounding community it should be designed with an "outward orientation". That is, walkways and front door

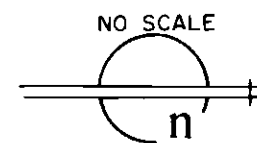
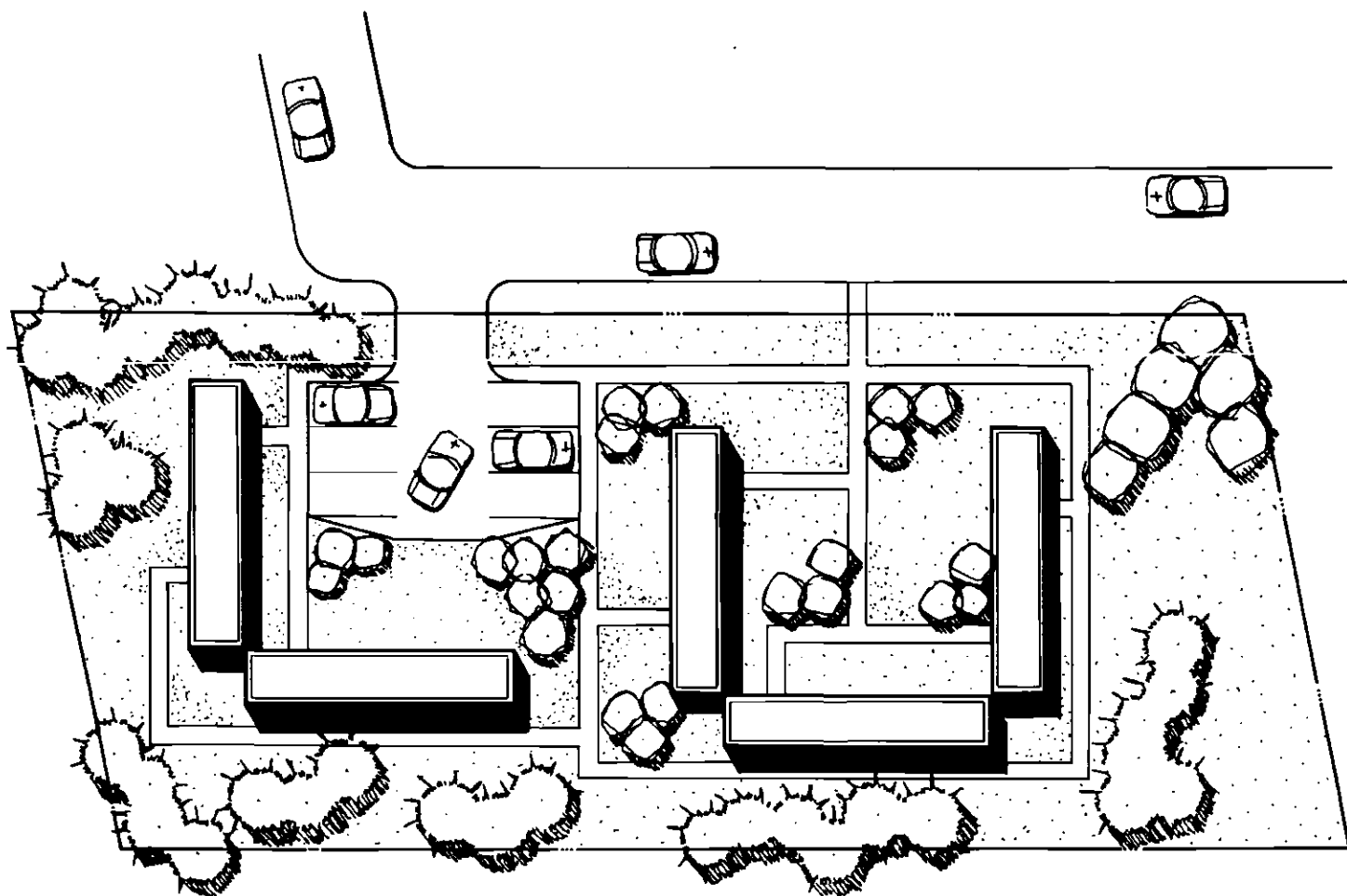


Figure 7. Typical Temporary Housing Site Plan

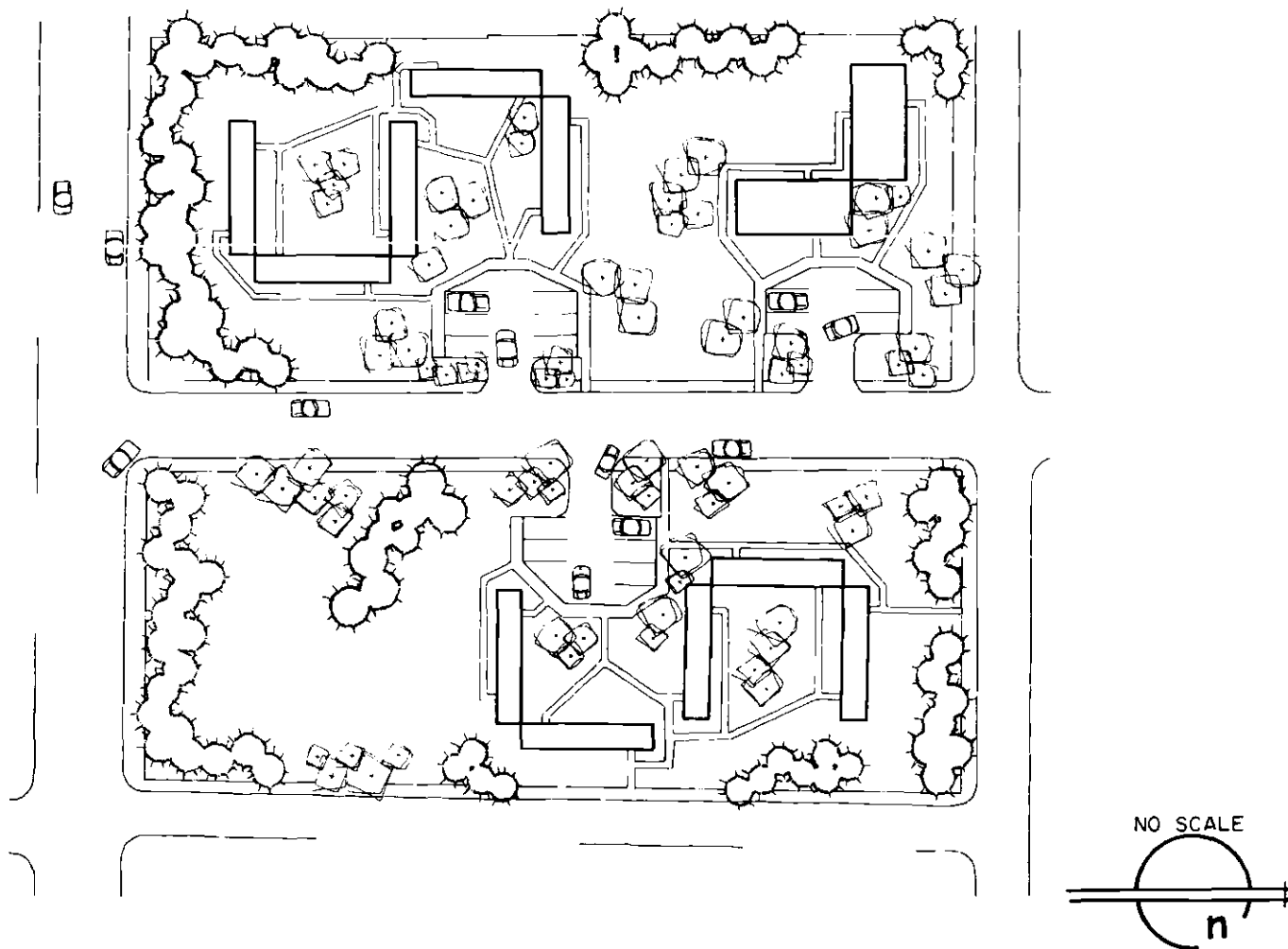


Figure 8. Typical Temporary Housing Site Plan

openings should be oriented toward the public street rather than towards closed interior courts. Play areas should be located to permit children from off the site easy access.

Density

Sites should be developed at relatively low densities with ten units per acre probably a maximum. Lower densities of six to eight units per acre are preferable.

Typical new private mobile home parks (with the previously mentioned average of three persons per family) are being developed at six to twelve units per acre (49). Therefore, six to eight units per acre seems appropriate for temporary housing with generally larger families.

In Atlanta's program, density ranged from 5.2 to 12.3 units per acre with most sites in the six to nine units per acre range. The New York City Marcus Garvey Urban Renewal Area site was developed at 13 units per acre (50) while the Camden, New Jersey program was developed at seven units per acre (51).

Amenities

The LPA must determine the level and type of site amenities to be provided. These include such items as walkways, parking, landscaping, shrubbery, and on-site recreation facilities. The type of amenities provided might vary with available funds and land and with the planned period of site use.

In deciding the level of amenities to be provided, the LPA should consider the impact upon community feelings or potential community opposition to the program. Design amenities such as full landscaping

and shrubbery which might not be justified "economically" might be justified from a community acceptance standpoint. (See comments on community opposition in Chapter V).

The Greenburgh, New York units were developed with minimal site amenities such as gravel (as opposed to paved) walkways and parking areas, and very limited shrubbery and landscaping. This choice was based on an anticipated use period of two years (52).

Atlanta, in contrast, developed sites with full amenities including paved parking areas with curbs and paved sidewalks, along with adequate landscaping and shrubbery. Parking spaces were provided at the City of Atlanta Zoning Ordinance specified one and one half spaces per unit. (The low income and consequent low incidence of car ownership among tenants proved this amount of parking to be excessive.)

Site Design Experimentation

The LPA might consider temporary housing for possible experimentation or innovation in site design. Many theories or concepts have been advanced as to the desirability of various design schemes or approaches and their effects upon occupants. However, developers or architects have been reluctant to experiment with site design because they generally must "live with" the results of their experiment -- good or bad -- for twenty or more years.

Temporary housing provides an opportunity to try different designs for a limited cost. In addition, the continual contact of occupants with social service workers and project managers provides a good opportunity for close observation and evaluation of design consequences (53).

Site Engineering and Improvements

Site engineering requires the design and layout of utility systems, parking areas, drives, unit pads, and site grading. It "translates" the site design into working drawings which are used to develop the sites for the temporary housing units. The LPA must determine whether it will use in-house staff or a consulting engineer to prepare engineering drawings and specifications. In making this choice, the renewal agency should consider the availability and capabilities of its own staff engineers in relation to their other duties. These factors should be balanced against the cost of using an outside firm.

The LPA must also choose between designing and bidding site improvements separately or bidding them as a "package" with supply and installation of the units. As with installation (discussed below) a package approach appears superior because it minimizes the number of parties involved.

Unit Installation and Inspection

Along with selecting units and sites, the LPA must develop procedures to insure proper installation and inspection of units prior to occupancy.

Installation

Installation of the temporary housing units by the unit supplier is generally preferable. The supplier has both the personnel and equipment necessary to install the units, as well as experience in proper installation techniques. Supplier installation also simplifies the installation process for the LPA by reducing the number of persons involved

in the installation work, leaving out third parties. Also, supplier installation maintains the supplier's responsibility for any damage to units prior to final inspection and acceptance. If force account or third party work is used, the supplier can maintain that unacceptable units were damaged by the installation procedures.

Force account installation is an available alternative if the LPA has the necessary personnel and equipment. Although most of the Atlanta temporary housing units were installed by the supplier, some units were installed by LPA crews. The problem cited above concerning responsibility for damaged units occurred in several instances. The supplier maintained that LPA crews caused some of the damage uncovered in final inspection and that correction was not his responsibility.

Third party contracts were not used for original installation of units. However, Atlanta used a third party contract to relocate eight units. Results were satisfactory although costs were high, almost \$3000 per unit including site improvement work on the new site.

Inspections

During development the LPA must inspect the units and sites to insure that they are constructed according to plans and are ready for occupancy.

Basic inspection of the units should be completed at the factory by the agency responsible for certifying the units as meeting applicable standards. For example, if units meeting the ANSI Standards for Mobile Homes are selected, the units will be inspected at the factory and should bear a seal indicating approval.

The LPA's main responsibility for original construction inspection

will be to insure that any local officials who must inspect the units during construction visit the factory to observe assembly procedures. In addition, the LPA must ensure that the manufacturer provides local officials with any necessary test data or certifications required to meet local requirements.

If the LPA has utilized an architect to design the units or develop specifications, he should be assigned responsibility for verifying that tests have been completed, that units are properly constructed, and that local officials have completed all necessary inspections. Otherwise, these duties should be assigned to LPA staff responsible for unit selection.

The LPA must also carry out final field inspection of the units. Even though basic inspection of the units has been completed at the factory, Atlanta's experience indicates three special areas which should be checked after installation. First the LPA should carefully check any items where transportation or installation of units might have damaged items which were originally properly constructed or installed. For example, light fixtures should be checked for tightness to fixture bars, and plumbing and bathroom fixtures (especially commodes) should be checked for leaks at seals or joints.

Second, the LPA should carefully check any construction or equipment items where the specifications call for different items than the manufacturer's normal standards. The supplier may inadvertantly or deliberately install the normal item even though the specifications call for a higher standard. Atlanta's mobile home units, for example, were constructed with hot water heaters of standard mobile home quality

instead of the more durable models specified. These heaters subsequently became the LPA's second most frequent source of maintenance problems.

As with factory inspections, the final field inspections should be carried out by the architect who developed the unit specifications or the LPA staff member responsible for unit selection.

Third, all sites should be carefully checked for completion of contracted site work. All sites should be checked to ensure that construction debris and refuse are removed from the property.

Regulation

Mobile home or modular housing development is generally controlled by two types of regulations: local building codes and zoning ordinances. (In addition, states usually have laws or regulations governing the width of units to be moved on state highways.)

These regulations may present obstacles to or problems for temporary housing development. The obstacles or problems will occur primarily because most building codes and zoning ordinances are designed to control permanent, conventionally constructed housing development, not temporary development.

The LPA should identify and analyse all state laws, local building codes and zoning ordinances which apply to the program planned. Specific provisions of these regulations which will create problems for temporary housing should be listed. Specific procedures should then be developed for avoiding compliance with regulations which are inappropriate to the temporary housing program. The LPA should consider

retaining an architect familiar with both local codes and ordinances and mobile home and modular housing construction to assist in this analysis and development of these procedures. If an architect is used to design or select units, the same one should be used for this analysis.

The sections below indicate the specific types of problems which building codes and zoning ordinances present for temporary housing programs and suggest procedures for circumventing code provisions. Using this information as a guide the LPA should analyse the local regulations and discuss potential problems and solutions with the officials responsible for regulation enforcement. (See the section on "Coordination" in Chapter V for more information on discussions with local officials.)

Building Codes

Building codes generally are adopted in entirety, or adapted for local use, from one of the nationally developed codes such as the Southern Standard Building Code. They regulate the plumbing, electrical, heating, ventilating systems and structural characteristics of dwelling units. They are designed to regulate permanent, conventionally constructed structures. For temporary housing development, they present two problems: increased costs, and potential delay.

Increased Costs. Building codes generally require higher grade or more durable materials and construction techniques than are necessary for short term use structures. For example, many building codes prohibit the use of plastic (PVC) pipe in household plumbing systems. This prohibition is based partly on the contention that plastic pipe does not have the proven long term durability of other materials such as copper. For a mobile home with a maximum projected "program life"

of ten years, long term durability is not a great concern. Use of copper pipe which is more expensive than PVC pipe results in an unnecessary higher cost.

Also, standard mobile homes, and modular units often do not conform to all aspects of local building codes. Therefore, to meet local codes, the housing manufacturer has to modify his production process and produce a "custom built" unit for the LPA. The cost of this modification, will be reflected in a higher price for units. For example, mobile home units used in Atlanta met almost all requirements of the building code including such requirements as copper pipe. Consequently, as noted above, costs were over 50 percent higher than for "production line" mobile homes (54).

Delay. Production delay may also result from the need to modify the units to meet building codes. The manufacturer must procure different materials, revise his construction process to use them, and possibly hire or retrain employees to work with the special materials or techniques. All these factors may result in considerable delay between actual placing of an order for units and delivery.

If the mobile or modular unit manufacturer has a continuing supply of orders for his standard units, there will be little incentive (other than higher price) to rush to complete a special order from the LPA.

Zoning Ordinances

Zoning ordinances may prevent the use of mobile homes and force the use of modular units even when mobile homes might be more suitable. Restriction to certain districts, e.g. commercial areas, may prevent

installation in desirable locations. For example, if temporary housing is to provide a satisfactory residential environment and help to preserve the community, it should be located in or adjacent to residential areas. However, many zoning ordinances prohibit use of mobile homes in regular residential areas.

New York City's temporary housing program provides an example of zoning ordinance problems. A proposal to install one hundred units of temporary housing in the Arverne Bay area was stopped because the New York City Board of Estimate refused to approved changes in the zoning ordinance necessary to permit mobile homes (55). The 56 units which were subsequently installed in the Brownsville section were developed only by utilizing the New York State Urban Development Corporation which is a state corporation having power to override all local codes and ordinances (56).

Also, the scarcity of available land, discussed above, may force the LPA to use small or irregularly shaped sites. Zoning ordinance regulations can make effective use of these sites difficult. Normal set-back, yard, parking, or density requirements may severely limit the number of units which can be placed on a site, or prevent use of some sites.

For example, in Norfolk, Virginia, the City Zoning Ordinance permits mobile homes, but only in a Community Trailer Park District. District regulations require a minimum site size of five acres. This requirement, along with other strict zoning regulations, was one of the factors which caused the Norfolk Redevelopment and Housing Authority to drop a proposal to use temporary housing (57).

Another example of inappropriate district regulations was the parking requirement for Atlanta's temporary housing. The units were installed in accordance with district requirements that one and one half (1-1/2) parking spaces per unit be provided. Most of the parking was unused because few of the low income residents owned automobiles.

Circumventing Building Codes and Zoning Ordinances

If the LPA's analysis of the building code and zoning ordinance indicates the need to by-pass certain requirements, the LPA must develop specific procedures to avoid compliance with all or part of the applicable regulations. Three techniques for by-passing code and ordinance restrictions are discussed below. These include waivers and variances, special standards or zones, and plan approval. These approaches may be used singly or in combination -- plan approval as a condition for a waiver, for example.

In seeking variations from code standards, the LPA should observe two precautions. First, the LPA should insure that the units, as installed, do not jeopardize the health, safety, or comfort of the occupants. Even if codes are partially or completely waived, the renewal agency should maintain high "livability" standards in unit selection and site design. The first concern should be the protection of the temporary housing residents.

Second, for the protection of the LPA, the agency should be certain that it is proceeding legally. This procedure will reduce the possibility of lawsuits or other actions if persons residing in the units are injured. Where code requirements are to be by-passed, the LPA should check with an attorney before development begins to insure

that the "by-pass" procedures are legal under state and local law.

Waivers or Variances. Waivers or variances are grants of permission to deviate from the regulations in a given code or ordinance. Waivers are a general release from code requirements (providing maximum flexibility for a temporary housing program). Variances, in contrast, grant relief only from specific items in a code.

A code waiver for a temporary housing program is a formal or informal recognition that the temporary housing units are not subject to the various provisions of the local codes. Informal waivers might constitute an unwritten understanding that officials charged with enforcing a code will ignore non-compliance by the temporary housing units. This approach was used to by-pass some of the building code and zoning ordinance provisions for the Atlanta temporary housing program. However, the author does not recommend it. Its use establishes an undesirable precedent of the LPA ignoring the law, and it creates a potential for liability litigation in injury cases. It also creates the potential for other types of litigation as a means of stopping the temporary housing program.

Formal waivers consist of a resolution or ordinance passed by a local governing body granting the LPA permission for non-compliance with codes and ordinances. Since many zoning or building codes provide for demonstrations or tests of new techniques or materials, the formal waiver might be based on the understanding that the temporary housing program constituted a demonstration or test. The resolution or ordinance would normally commit the governing body to " . . . grant such variances from the building, housing, zoning and other codes and regulations as

may be necessary to permit construction, alteration, and occupancy . . ."

(58) of the temporary housing units.

Variances are normally granted through a procedure established within the code or ordinance from which the variance is sought. Application is made to a board of appeal or board of adjustment which then holds a hearing on the application and approves or disapproves the request. Variances are granted for reduction or removal of certain code provisions, e.g. reducing the required number of parking spaces from ten to five, for a given property.

Zoning ordinances normally require a showing of hardship or practical difficulty before a variance is granted. Hardship or practical difficulty for the temporary housing program might be shown as a result of problems with a particular site, or as a result of unnecessary costs for temporary development (e.g. paved parking areas).

A variance must be obtained for each individual code item not complied with. Therefore, variances provide considerably less development flexibility than waivers which eliminate all code requirements. Consequently, variances are useful primarily for temporary housing programs which must by-pass only a few code or ordinance requirements.

Special Standards or Zones. This technique requires development of building standards, zone district regulations, or other regulations which apply exclusively or directly to temporary housing. These regulations are then adopted as part of the local regulations as necessary.

For building codes, this process may be carried out by modifying sections of the existing codes as they pertain to mobile or modular units. Modifications can be carried out by actually rewriting the

code or by adopting through reference a set of recognized standards such as the American National Standards Institute Standards for Mobile Homes.

To deal with zoning district problems, creation of a special district is possible. Mobile or modular temporary units can be included as a permitted use in this district with its regulations such as setbacks and densities written to provide optimum development conditions for a temporary housing program. Land for temporary housing use can then be rezoned to this temporary district. The LPA might develop these standards itself or as in the case of building codes, utilize previously prepared "model" ordinances such as the ordinance contained in Environmental Health Guide for Mobile Home Communities.

Before suggesting an ordinance for adoption the LPA should be certain to modify, if necessary, any model ordinance to fit the specific units and sites the LPA proposes to use. For example, the set back provision of the ordinance should be checked to insure that they will permit reasonable utilization of the sites the LPA has available. Otherwise the LPA may be forced to obtain numerous variances from its own "model" ordinance.

The special district approach to zoning problems was proposed in the New York City temporary housing program. However, the proposed district regulations were never adopted (59).

The special standard or district approach has the advantage that it provides standards or regulations clearly appropriate to the development to which they apply. If well prepared, these regulations will avoid the "artificial" constraints placed on temporary development

by permanent regulations.

There are, however, at least three disadvantages to the special standards approach. First, development and adoption of the standards may be time consuming and cause program delay. Much time may be required to research and/or write the standards and obtain agreement from all concerned on each item in the standards. Delay may also result from the public notice time requirements for changes in zoning or building codes.

Second, proposing changes in permanent codes for mobile or modular dwelling units may result in unnecessary community opposition. Residents of the locality may feel that these changes in the ordinance will open the way to later changes to permit permanent mobile or modular units. They may then oppose the temporary housing program on that basis. A change in local regulations to permit permanent mobile or modular development might be desirable. However, the author does not believe that a temporary housing program is the "place to fight that battle."

Third, a change in a permanent ordinance to serve the purposes of a temporary program is somewhat inappropriate. For example, land to be used for temporary housing might have to be rezoned to a "temporary housing" district. Subsequently, the land would then have to be "re-rezoned" to a district appropriate to its planned permanent reuse. In the author's opinion, frequent rezonings of this type tend to weaken the overall application of a zoning ordinance.

Plan Approval. Utilizing this approach, plans for a temporary housing development are submitted to a legislative (e.g. city council)

or administrative (e.g. planning department) body for review and approval. Plans may be approved even though they do not conform in all respects to the requirements of a given code or ordinance.

Procedures for this approach may already exist in the code or ordinance for which non-compliance is necessary. For example, many zoning ordinances contain provisions for "planned unit development" or "special use permits" which could provide a vehicle to permit temporary housing development.

If not already established these procedures might be added to an ordinance. Temporary housing could be designated as a permitted interim use in certain districts and could be allowed to deviate from district regulations and building code provisions contingent upon site plan and unit specification approval.

Plan approval procedures can also be utilized outside ordinances as a condition for a waiver from ordinance regulations. Special standards can also be used, in that plans would be approved or waivers granted only after an outside agency certified that the units or site plan met certain standards.

Plan approval has the advantage of permitting flexibility in unit and site design while retaining sufficient review procedures to insure quality and livability. At least one official interviewed felt it was a productive approach to dealing with code problems (60). A plan approval resolution specifically for temporary housing was prepared for Atlanta's modular temporary housing units. It was submitted to the Board of Aldermen for adoption but was never acted upon. Apparently, no action was taken because the units had already been

installed with only minor deviations from the Building Code.

Unit Operation

Prior to unit occupancy, the LPA must develop policies and procedures for occupying and operating the temporary housing units. The LPA should consider each of the aspects of unit operation discussed below including occupancy priorities, rental rates, management, maintenance, and supporting services. In all cases where policies are established, these should be written and distributed to appropriate personnel such as managers or maintenance staff.

Occupancy Priorities

The purpose of temporary housing is to provide relocation housing to those identified as requiring it in setting up the demand schedule discussed in Chapter II. Therefore, the LPA should establish a clear policy giving occupancy priority to families living on sites scheduled for first clearance in carrying out the project. Of these families, those living in the worst housing should be relocated first.

Other families, particularly those in very bad housing, may want to move to temporary housing as soon as it is available. However, if these moves are permitted, the temporary housing units may be filled when the LPA needs them to carry out scheduled clearance.

If units are available, second priority occupancy should be assigned to families scheduled for later LPA displacement. These families will have to be relocated eventually so their early use of temporary housing will not hinder project execution.

Third priority should be assigned to code enforcement cases,

rehabilitation displacements, and other project displacement not directly related to LPA land assembly. Fourth priority should be assigned to "hardship" or emergency cases, but only hardship cases from renewal areas should be eligible for temporary housing.

Two of the suggested policies above -- first priority for renewal displacees and only hardship cases from renewal areas -- were set by the U. S. Department of Housing and Urban Development Region Three Office for Atlanta's temporary housing program (61). A similar policy establishing first priority for renewal displacees was established for the Greenburgh Urban Renewal Commission's temporary housing program (62).

Establishing clear policies such as those above will ensure that temporary housing serves its basic purpose of expediting execution of the renewal project. It will also simplify administration and permit easier decision making if policy exceptions become necessary. For example, early in Atlanta's program, the lack of a clear occupancy policy created confusion and some "ill will" when a few hardship case families were rejected, then accepted, for temporary housing occupancy.

Rental Rates

Rental rates should be established to be within the ability of displacees to afford the units. Since most occupants will have relatively low incomes, the basic program rent levels should be determined using the 25 percent of income figure used in establishing the demand schedule.

For establishing individual tenant rents the LPA should use a "public housing" type rental formula which uses a 25 percent of income base. The formula then adjusts income to account for dependent children

and other factors. In detail, the formula works as follows:

$$\begin{aligned}
 & \text{gross annual income} \\
 & - \text{social security income} \\
 & - \text{child care payments (if any)} \\
 & = \text{net annual income} \\
 & - \$300 \text{ for each minor child} \\
 & = \text{rental annual income} \\
 & \div 12 \text{ months} \\
 & = \text{rental monthly income} \\
 & \times 25 \text{ percent} \\
 & = \text{monthly rent (63)}
 \end{aligned}$$

This type formula will ensure that the units will be affordable to displacees. In practice it should not be applied rigidly. If warranted, other factors should be considered in determining rent. For example, in Atlanta this basic formula was used but adjustments were made for families with exceptional medical expenses or other hardship factors (64). In addition, Atlanta established a maximum rent of \$95 per month for any family.

In the New York City temporary housing program, the public housing rent schedule was used to determine temporary housing rent, (65) and the public housing rent schedule was considered for use in a proposed temporary housing program in Washington, D. C. (66). In the Greenburgh, New York case rents were continued at "the amount paid to remain in the previous dwelling purchased by the LPA" (67). (This rent is generally based on a public housing type formula with hardship

adjustments.)

In general, it is desirable to include all utility charges except telephone in the basic rent. This procedure eliminates collection problems, billing problems, and frequent connecting and disconnecting problems. These problems could become especially difficult in "high turnover" programs.

Management and Maintenance

The LPA must also establish procedures for unit management and maintenance including collecting rent, receiving and processing tenant maintenance requests, routine maintenance such as lawn care or painting, and handling complaints. Three types of management and maintenance arrangement are possible.

First, the LPA staff can accept the responsibility for day to day operation of the units. LPA social service personnel provide social services, and LPA property management and maintenance staffs are responsible for rental collection and upkeep of the units. Any skills required which are not available on the LPA staff are provided by a services contract. For example, a renewal neighborhood maintenance service can be used for landscaping work; a system which worked reasonably well in Atlanta.

Locating the responsibility for operation with the LPA is most feasible where the LPA has a relatively large renewal operation. In this situation the agency would already have available most or all of the staff needed to operate the units. In Atlanta, where the LPA operated the units, the renewal program had eight projects in active execution and consequently had a large maintenance and management staff.

Starting a maintenance and management operation "from scratch" merely to serve temporary housing would probably prove uneconomical unless the program were unusually large.

If the LPA does not wish to assume operational responsibility for temporary housing, a local public housing authority can operate the units. This alternative was used in the New York City temporary housing program (63).

In most situations, a public housing authority has available the management and maintenance personnel to operate temporary housing units. The authority has maintenance procedures, rent schedules, and management practices which have already proved workable in a community and can be adapted to temporary housing. Public housing authority social services personnel can be assigned to clients in temporary housing. As with LPA operation, any services which are not available from the housing authority staff can be obtained on a services contract basis.

Using a public housing authority for operation of the units might be particularly advantageous if the LPA is organizationally part of a local public housing authority. The organizational and coordination problems encountered would be minimized under this arrangement.

Operation by a central relocation agency is a third alternative. None of the operating temporary housing programs investigated by the author were run by a central relocation agency. This alternative is suggested here only as a possibility for other cities. Operation by a central relocation agency would offer the advantage of maximum flexibility in the use of the units to serve all types of relocation needs.

If the relocation agency operated on a metropolitan or city wide basis, units could be owned by the relocation agency and then leased to and operated for the various LPA's in an area as needed. This one agency would become thoroughly familiar with all aspects of temporary housing operation and could provide efficient service to the units' tenants.

Supporting Services (69)

Operation of temporary housing involves more than meeting the needs of the residents for shelter. As a minimum it should involve the continuation of all supporting services which were available to residents prior to relocation to temporary housing. Ideally, it should involve a full range of supporting services directed to the social, economic, and physical needs of the residents.

Temporary housing, with adequate auxilliary services, can provide a "controlled living environment" for aiding families with social, health, job, or other problems. By providing a transitional residence, temporary housing may provide a unique opportunity to resolve these problems and achieve satisfactory permanent relocation.

As mentioned under "Site Selection", meeting some supporting service needs can be facilitated through the site selection process. Locations for temporary housing should provide for easy access to schools, recreation facilities and other services.

If these services are not available to residents, provisions should be made for obtaining them. The LPA should assess the need for social and supporting services and make sure they are provided. This assessment should include input from the residents who are to occupy

the units. Day care, social services and counseling, and health care services are particularly important to low income families.

Existing programs at the Federal, state, or local level may adequately serve the needs of temporary housing residents. For example, the Greenburgh, New York, temporary housing is served by the Westchester County social and health service programs. This LPA provides no additional social service programs (70). The LPA might facilitate access to already available services through arranging for shuttle bus service, car pools, or addition of stops on regular bus lines to improve transportation to needed services.

In other situations, the LPA might augment the supporting services available by providing services aimed directly at the needs of temporary housing residents. One or two units might be used for a day care center, a community building, a coin operated laundry (as in Atlanta's Bedford-Pine units) or a cooperative grocery store (71). These facilities might be staffed or operated by existing social service agencies utilizing free space provided by the LPA or in some instances (such as the laundry or coop grocery) run by the residents themselves. In addition, the LPA might consider establishing a "branch office" of its existing project site office as was done in the Bedford-Pine Project in Atlanta.

"Branch office" personnel or regular LPA social service staff could be utilized to provide homemaking services to the temporary housing residents. Residents of the temporary housing may be unfamiliar with the operation of the stove, electrical system, or other equipment in a mobile or modular unit. Home orientation or homemaking instruction

will help avoid maintenance problems. Experience in Atlanta, Greenburgh, New York, and East Chicago, Indiana, has indicated that many "maintenance" problems are actually the result of "poor housekeeping" on the part of the tenants (72) or the failure of the LPA to provide orientation assistance to tenants (73).

Costs and Financing

After selecting units, selecting and designing sites, and establishing operating policies, the LPA must study the cost of developing and operating the temporary housing program. Since these costs will probably greatly exceed any potential income from the program, sources of program funding and subsidy must also be explored.

The sections below discuss the two types of cost (or income) involved in setting up and operating a program. These include development costs and operating costs. Also discussed are the need for program financing and potential financing sources.

Finally a prototype "program budget" for a 100 unit temporary housing program is presented. This budget is based on 100 units operated in four separate project areas over a five year period.

Projected program costs and revenues are based on both actual temporary housing program costs incurred in Atlanta and other programs, and on costs for mobile home park development. The cost figures are for programs and developments during 1970 through 1971. Therefore they should be adjusted accordingly for inflationary and other cost (or revenue) changes when used to project future program costs. In each case the LPA should develop its own prototype budget to estimate

program costs.

Development Costs

Development costs consist of expenses to obtain and install the housing units, acquire or lease sites, improve the sites, relocate units as necessary, and administer the development program. Subtracted from these costs is any revenue from resale of units at the end of the program.

Unit Costs. These costs vary with the type and quality of unit selected as discussed under "Unit Selection". However, typical mobile or modular housing unit costs can be used for program planning. In general a typical production line three bedroom 12' x 60' mobile home (684 square feet) might cost \$6200 (about \$9.00 per square foot) and a typical four bedroom double wide mobile home might cost \$9500 (about \$8.25 per square foot) (74).

Modular units are generally estimated to cost 15-25 percent more than mobile homes (75). Therefore a typical three bedroom modular unit of 684 square feet might cost \$7440 and a comparable four bedroom unit might cost \$11,400. If these units are to be furnished by the LPA (rather than by the tenant) additional costs should be budgeted for furniture because modular units (unlike mobile homes) are generally supplied without furniture.

Unit Installation. Along with purchasing units the LPA must examine the costs of installation or relocation of units. These costs will vary depending on the distance of the sites to be used from the point of purchase or original installation. Atlanta's program incurred installation costs of about \$900 per unit. However, \$500 per unit is

probably a more typical installation cost (76).

Site Acquisition or Lease Costs. Normally, the LPA will place temporary housing on land purchased through the renewal program and designated for eventual resale. Or, units might be placed on closed streets, parks, or other "free" sites as discussed under "Site Selection." Therefore, no land purchase costs would be directly chargeable to the temporary housing program.

However, in some instances, the LPA might lease or purchase sites specifically for temporary housing. If so the LPA should estimate these costs using appropriate local land value or land leasing figures. In Atlanta, for example, the renewal agency leased two temporary housing sites. One six unit site averaged \$20 per unit per month while another twenty unit site cost \$15 per unit per month.

Site Improvement Costs. Along with acquiring or leasing sites, the LPA must consider the cost of improving the sites for temporary housing use. Included are expenses for grading, landscaping, on-site placement and connection of utility lines, and construction of walks, drives, parking areas, and pads for mobile home or modular units. Part of these costs will be for engineering and site design, either "in-house" or by contract.

These costs vary according to density, site size, and the level of site amenities the LPA chooses. They are also affected by soil condition and topography. For cost analysis, an average figure of \$3200 per unit is workable. This figure is based on costs incurred in Atlanta (average of \$3232 per unit) and on examination of typical site improvement costs for mobile home parks (77).

Development Administration Costs. For programs over 100 units, the LPA should consider assigning one staff person full time for development supervision and coordination (see Chapter V). Programs over 250 units probably require two staff supervisors. Assuming a \$15,000 average annual salary per person, this cost would range from \$150 to \$120 per unit or slightly over one percent of development cost.

Unit Salvage Value. Any potential income from eventual resale of units should be budgeted as reducing program development costs. However, experience in Atlanta, and the rapid depreciation rates for mobile homes in general, indicate that resale value will be very low. In Atlanta, for example, units originally purchased for \$6600 depreciated about 85 percent in four years and were sold for only about \$990 when the program was closed out. Mobile homes in general depreciate at least 50 percent in five years (78) and are considered to have zero value in fifteen years (79).

Operating Costs

Operating costs for temporary housing include maintenance expenses, utilities, insurance, and administration costs. To some extent these expenditures will be offset by rental income from the housing units. The renewal agency should examine each of these expenditure and income factors to determine approximate program costs.

Maintenance Costs. These costs will be incurred for routine maintenance such as repairing faulty refrigerators, replacing broken windows, painting, and cleaning units between tenants. As mentioned in "Unit Selection" these costs will vary with the quality of the unit selected.

For program budgeting, these costs can be estimated at \$25 per unit per month. This figure is based on analysis of Atlanta's program cost.

In addition to unit maintenance, money must be allocated for lawn and grounds care. Based on Atlanta's costs, \$12 per month per unit (for growing season months only) should be allocated. This figure is in line with costs shown in other studies of lawn and grounds maintenance costs on a nationwide basis (80).

Utilities Cost. If included in tenant rent (as previously recommended) these costs must be considered in program budgeting. They will vary considerably based on climate. The programs in Atlanta and Camden, New Jersey probably represent a reasonable range of utilities costs and should serve as a useful guide to budgeting. Also, the LPA should consult local utility companies or agencies for help in budgeting utility costs.

Atlanta costs (mild winters) averaged \$30 per month for all utilities. Electricity for the total electric units averaged \$25 per month. The Atlanta units, however, were not air conditioned. Camden costs (cold winters) averaged \$65 to \$90 per month for electricity for all electric units. However, these costs included electricity for air conditioning and washer-dryer units (81).

Insurance Costs. No program costs were available for insurance on temporary housing units. However, typical mobile home insurance cost averages \$11 per month (82) and this figure can be used in budgeting.

Management Costs. These costs vary depending upon who operates the units. If LPA project staff operate the units, approximately 10 percent of project staff costs might be allocated to temporary housing, based on Atlanta's program experience. However, if management is provided on a contract basis the negotiated contract costs should be used for budgeting.

Rental Income. Income from tenants' rent payments will offset some of the expenditures listed above. However, because tenants have low incomes, rental income probably will not equal the cost of program operation.

In Atlanta, rental income averaged about \$40 per unit per month. Rental income in the East Chicago, Indiana program was considerably higher, averaging \$100 per month. However, this rent charge included a standard \$30 per month utility charge regardless of tenant income (83).

In budgeting rental income the LPA should use the housing cost figures from the demand schedule to project anticipated rent. Since this schedule is based on surveyed incomes of anticipated tenants, it should be reasonably accurate for budgeting purposes.

Program Financing

As the cost figures above and in Figures 9, 10 and 11 below indicate, income from the temporary housing program cannot be expected to cover even the operating costs of the program, much less the development costs. Some form of "subsidy" is necessary to undertake a temporary housing program. Therefore, the LPA should investigate potential funding sources at the Federal, state, and local level.

All of the programs studied involved some form of Federal subsidy.

Federal urban renewal regulations designate temporary housing costs as "eligible project expenditures". Thus the cost of temporary housing is, in effect, shared on a two-thirds Federal, one-third local, basis. Eligible costs include the purchase or lease of units, maintenance, utilities, and management, to the extent that these expenditures are not met by rental income (84).

Other potential sources of financing include proposed Federal "community development" programs, state community development or housing programs, and foundation grants (usually for demonstration type programs). Also, available local general funds might be used.

Prototype Development Budget

The following three Figures (9, 10 and 11) present a prototype program budget for a 100 unit temporary housing program. This budget shows how the various cost factors discussed above might combine in developing a temporary housing program. The LPA should prepare a similar budget to obtain a clear picture of the costs involved in its planned temporary housing program.

The budget presented assumes a 100 unit program developed over one year and operated for five years. During the course of the program 35 units are relocated from Project A to Project D.

The budget, and especially the average overall cost per unit per month figure in Figure 11, re-emphasize the need to be sure the LPA has sufficient long term demand for temporary housing to (as discussed in Chapter II) to amortize the cost of the units. Based on 5 year operation cost per unit per month averages slightly over \$190 -- expensive housing for temporary purposes. However, using the same

Unit Purchase: 3 Bedroom Mobile Homes

100 Units @ \$6200	\$620,000
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Original Installation

35 Units (Project A) @ \$500	\$ 17,500
40 Units (Project B) @ \$500	\$ 20,000
25 Units (Project C) @ \$500	\$ 12,500

Relocation

35 Units to Project D @ \$500	\$ 17,500
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Site Lease

12 Units (Project A) for 9 months @ \$20/unit/month	\$ 2,160
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Site Improvements, Original

100 Units @ \$3,000	\$300,000
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Site Improvements, Relocated Units

35 Units @ \$3,000	\$105,000
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Development Administration

One Temporary Housing Development Coordinator for 1 year @ \$15,000	\$ 15,000
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Unit Salvage Value

100 Units @ \$500	\$ 50,000
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NET DEVELOPMENT COST	\$1,059,660
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Average Development Cost Per Unit, 100 Units	=	\$ 10,596
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Average Development Cost Per Unit Per Month, 60 months	=	\$ 176.60
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Figure 9. Prototype Development Budget 100 Unit
Temporary Housing Program. Five Year
Operation

EXPENDITURESMaintenance

General: 100 Units @ \$25/month x 60 months	\$150,000
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Grounds: 100 @ \$12/month x 30 months	36,000
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Utilities

100 Units @ \$30/month x 60 months	\$180,000
------------------------------------	-----------

Insurance

100 Units @ \$11/month x 60 months	\$ 66,000
------------------------------------	-----------

Management

3 Project Directors @ \$15,000/yr.	\$ 45,000
------------------------------------	-----------

3 Admin. Assistants @ \$10,000/yr.	30,000
------------------------------------	--------

3 Clerk typists @ \$ 6,000/yr.	18,000
--------------------------------	--------

<u>\$31,000</u>	<u>\$ 93,000</u>
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@ 10 percent = \$9300/yr. x 5 yrs.	\$ 46,500
------------------------------------	-----------

<u>TOTAL: 100 Units for 5 years</u>	<u>\$478,500</u>
-------------------------------------	------------------

Average per unit	\$ 4,785
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Average per unit per month	\$ 79.75
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INCOME

Rental Income 100 Units @ \$65/month x 60 months	<u>\$390,000</u>
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NET PROGRAM OPERATING COST

<u>5 YEARS</u>	<u>\$ 88,500</u>
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Average per unit 100 units	\$ 885
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Average per unit per month, 60 months	\$ 14.75
---------------------------------------	----------

Figure 10. Prototype Operating Budget 100 Unit
Temporary Housing Program. Five Year
Operation

NET DEVELOPMENT COST		\$1,059,660
NET OPERATION COST		88,500
		<hr/>
<u>TOTAL PROGRAM COST</u>		\$1,148,160
		<hr/> <hr/>
Average Program Cost per Unit, 100 Units	=	\$ 11,481.60
Average Program Cost per Unit per Month Over 60 months	=	\$ 191.35

Figure 11. Prototype Overall Program Budget
100 Unit Temporary Housing Pro-
gram. Five Year Operation

unit costs for a ten year operating period results in an average overall cost per unit per month of about \$110.

This ten year figure assumes zero salvage value after ten years and 50 percent higher maintenance and operating costs in the second five years of program operation. Even, using these adjustments for cost increases, the cost per unit per month to the LPA is approximately 42 percent lower for the ten year program versus the five year program.

CHAPTER IV

ALTERNATIVES TO TEMPORARY HOUSING

Along with analysing the components of temporary housing development, the LPA should examine one or more alternatives to temporary housing. This analysis should take place after the demand studies discussed in Chapter II and the development studies (particularly cost analysis) discussed in Chapter III are reasonably complete. In this way the LPA will have a basis for comparing a temporary housing program with other means of meeting the demand for interim relocation housing.

At least four other ways exist for the LPA to solve its problems of rehousing urban renewal displacees. These include project delay or staging, temporary rehabilitation, temporary rent supplement, and permanent housing production. Each of these alternative solutions, with its limitations, is discussed below.

Project Delay or Staging

If permanent relocation housing is not available, the LPA may choose to simply wait until such housing becomes available. For example, if new low income public housing is scheduled for completion within six months, the LPA might choose to delay project execution until the new units are available.

In analysing this alternative the LPA should carefully compare the relocation resources and relocation housing demand schedules to determine the number of units scheduled to become available (and dates

of, availability) in relation to LPA displacement. If "excess" rehousing resources are to be available within the near future (six months to one year) project delay might be a feasible alternative. For example, the schedules may show a demand for 100 units of relocation housing in the first six months of project execution and only 50 units of relocation housing available for that period, indicating a "demand" for 50 temporary housing units. However, the schedules for the next six months might show only 50 families to be displaced but 100 permanent housing units to become available. Thus the renewal agency could avoid temporary housing by delaying displacement for six months.

A variation of simple delay is project staging. In this alternative, new housing planned for the project is started under construction on available vacant land and displacees are relocated to this completed housing before the land they occupy is cleared. Another alternative is clearing non-residential land first (thus having no residential displacement). The non-residential land is then converted to residential use for permanent new housing for the displacees.

These two alternatives -- delay or project staging -- might not be acceptable for a number of reasons. First, the previously discussed LPA project execution schedule may require that cleared residential land be available by a specific date. For example, land may be required for completion of a key section of a highway system or to meet the construction schedule for some other public facility. Second, political or financial constraints may dictate that a project be started or finished by a given date. Third, the land occupied by housing to be cleared might be the only land available or suitable for construction of new

housing, thus eliminating staging as a solution.

Temporary Rehabilitation

A second alternative is temporary rehabilitation of vacant housing units. These units might be vacant units owned by the LPA and scheduled for clearance, or abandoned units, or other structures whose owners plan eventual demolition.

In this type program the LPA first acquires or leases the units (if it does not already own them). Then the LPA corrects any critical structural defects or items that create health or safety problems. The exact standards to which the units are rehabilitated should be agreed on among the LPA, the city code inspectors, and the renewal community. The units are not necessarily repaired to strict compliance with the city housing or building code but are made habitable for short term occupancy by renewal displacees. Displacees are then housed in the repaired units until permanent housing is available.

In examining this alternative the LPA must determine if it owns or can lease a suitable stock of vacant units. Also the agency must determine the standards to which units will be rehabilitated and the approximate cost of the work.

A temporary rehabilitation program has been carried out in Washington, D. C. as an alternative to use of mobile or modular units for temporary housing. Approximately 75 units were rehabilitated using community resident labor where possible. The average rehabilitation cost ranged from \$1500 to \$2000 per unit (85).

An Atlanta Model Cities "fix up" program carried out the same

type "critical items only" repair work as that discussed above.

Although the units were not used for temporary housing, the costs of the program are similar to those that would be required for temporary rehabilitation. These costs averaged \$2400 per unit with a range of \$800 to \$3300 per unit (86).

The temporary rehabilitation program has one major disadvantage. The program spends money on structures which will ultimately be demolished. However, for short term programs, the loss from temporary rehabilitation might be less than the loss resulting from the rapid depreciation of mobile or modular units. For example, a \$2500 per unit rehabilitation cost, combined with the same net maintenance and operating costs as a temporary housing program would result in a \$56.42 per unit per month total cost for a five year program.

Temporary Rent Supplement

Relocation housing is usually in short supply because the housing market in a city does not provide standard housing at a level which displacees can afford. Housing units are physically available, but they are beyond the economic reach of the displacees. Consequently, displacees might be temporarily rehoused by the LPA temporarily subsidizing their rent payments. Payments could be subsidized for the difference between market rent and the displacees ability to pay (for example, a maximum rent payment of twenty-five percent of adjusted income). Such a program would make a wide variety of permanent housing units temporarily available to displacees.

In examining this alternative the renewal agency should compare

the rents affordable to prospective temporary housing occupants (based on the demand schedule) with the rents charged for available moderately priced private market rental units. The difference between these two rents represents the amount of temporary subsidy required by the LPA.

A temporary rent supplement program may not be desirable if there is a very limited supply of moderately priced housing available in the community. The LPA might "tighten the market" causing increased rents and reduced availability of housing to families who can just barely afford a standard unit. Also, the moderately priced units might not be available at locations desired by displacees; in the renewal area for example.

A temporary rent supplement program was proposed in Washington, D. C. This program projected an annual subsidy cost of \$1300 to \$2150 per family per year (87). A prime cost reduction occurs through eliminating all LPA management and maintenance costs and elimination of capital investment in units.

When expressed in terms of cost per unit per month, these costs compare favorably with mobile or modular program costs. The \$1300 per year subsidy averages \$108 per month while the \$2150 per year cost averages \$179 per month. As discussed in the previous chapter, costs for a five year temporary housing program would average \$191 per unit per month and those for a ten year program would be roughly \$111 per unit per month. Therefore, an LPA considering a short term (five years or less) temporary housing program should be certain to consider a temporary rent supplement program.

Permanent Housing Production

One final alternative available is increased effort to produce new permanent housing. Since the need for temporary housing is the result of an inadequate permanent housing supply, the LPA should examine the potential for eliminating the permanent low cost housing shortage, and thus eliminating the need for temporary housing.

This alternative approach is strongly suggested by two factors. First, the cost of producing and operating temporary housing is high. The total program cost suggested in Chapter III of \$11,481 per unit (excluding land) represents a major portion (over 60 percent) of the typical production cost for new permanent housing. It probably equals or exceeds the cost for major rehabilitation of substandard multi-family structures in most cities. For example, construction costs for complete "gut" rehabilitation in HUD's nationwide "Project Rehab" multi-family rehabilitation program ranged from a maximum of \$17,000 per unit in New York City to \$4000 per unit in Seattle, Washington (88). If such substantial funds are to be invested in producing housing, it seems appropriate that they produce long term results rather than only temporary units.

Second, many of the problems which must be overcome to develop temporary housing; for example, zoning ordinance changes and community opposition, are similar to those which must be solved to expand the supply of permanent low cost housing. The skills and resources necessary to solve these problems for temporary housing are also those required to solve the problems of permanent housing. It appears potentially more productive to devote these skills and resources to

permanent solutions rather than temporary ones. Any community which will have a "temporary" relocation resource shortage for the ten year period needed to make a temporary housing program economically feasible has, in effect, a permanent problem.

In considering this alternative, the renewal agency should conduct an analysis of the major constraints to low cost housing production and the effectiveness of local low cost housing production programs. If most of the constraints are local problems such as lack of staff, zoning constraints, or lack of community support for low cost housing production, a renewed effort at permanent housing production might be a workable alternative to temporary housing. However, if the primary constraints are the result of inadequate state or Federal legislation or funding, then this alternative might not be workable.

If the LPA's decision is to concentrate its efforts on permanent housing production, this effort should be combined with one of the other alternatives to temporary housing discussed above. If temporary housing is being considered as a solution to a simple shortage of relocation housing (and not necessarily for community preservation purposes) project delay or staging might be the desirable alternative to combine with permanent housing re-emphasis.

However, if community preservation is an objective, such other alternatives as temporary rent supplement or temporary rehabilitation, using units in the renewal area, should be considered. Use of the permanent housing production alternative with one or more other alternatives seems especially appropriate for community preservation efforts. It keeps the LPA's attention focused on the real requirement for long

term community preservation -- new permanent low cost housing.

Without the timely production of new permanent housing the neighborhood cannot be preserved. For example, in the Vine City Urban Redevelopment Area in Atlanta, temporary housing units were first occupied in the spring of 1971. Three years later, in the spring of 1974, construction of the first new permanent housing had still not begun. During this period many families moved into temporary housing, grew tired of waiting for new housing, and subsequently moved elsewhere permanently. No doubt other families never moved into temporary housing because they saw little hope of ever moving into the planned permanent housing. Similar problems occurred in other Atlanta projects. A clearer LPA focus on permanent housing might have eliminated some of this delay and resulted in production of new permanent housing in time to actually preserve the community.

CHAPTER V

DEVELOPMENT SCHEDULING AND ADMINISTRATION

Developing temporary housing is a complex process. It requires careful timing and scheduling to insure that the temporary housing units will be available when they are needed. It also requires full utilization of community input and the coordination of all parts of the development process.

Without adequate scheduling, community input, and coordination the program is almost certain to "bog down". In Atlanta for example, inadequate scheduling and coordination resulted in severe program delay and extensive public criticism of the LPA (89). In the Atlanta program family displacement began before units were selected and ordered. Also, units were purchased and delivered by the contractor before adequate sites were selected and acquired or leased. Consequently, the units had to be stored in an open field for several months, with associated costs, while sites were obtained, designed, and improved. During this period many displacees from the renewal program, who might have used the temporary housing to remain in the neighborhood, moved away permanently.

Outlined below are the four major areas the LPA should focus on in administration and scheduling of a temporary housing program. Each section contains specific recommendations for the type activities to be conducted and the sequence of activities. These areas include: background

analysis scheduling, development scheduling, community involvement, and overall coordination.

Background Analysis Scheduling

The various background studies described in Chapter II (Determining Demand) and Chapter III (Developing Temporary Housing) serve two purposes. First they provide clear information for renewal executives on which to base a decision to develop, or not develop, a temporary housing program. Second they provide guidance and direction in carrying out the program if a decision is made to develop temporary housing.

For scheduling purposes the decision making information function of these studies is the more important. Without adequate background information on such items as demand, availability of sites, type of units, and program costs, the LPA cannot make an intelligent decision to develop or not develop a program. To obtain this information by the date needed the renewal agency must consider both the sequence and timing of the background studies.

Sequence of Studies

Studies should be scheduled in a logical order so that information from earlier analysis can be used as input to later studies. Each background study, and its place in the overall sequence is discussed briefly below. This information is also presented graphically in the chart in Figure 12.

Demand Analysis. (See Chapter II.) This study must be the first completed since it will determine if there is a need for the program. It will require input from the overall renewal relocation

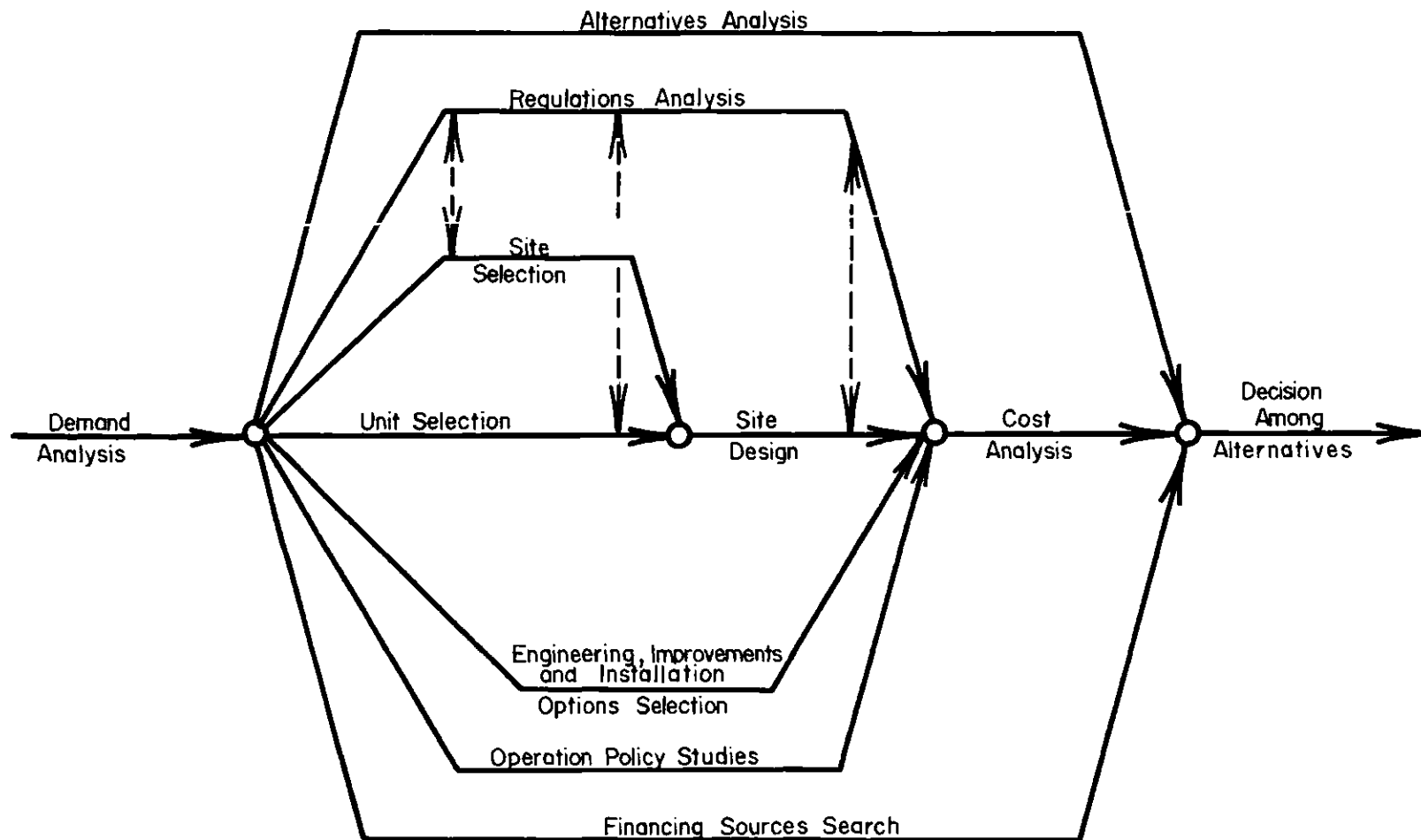


Figure 12. Background Study Activities Diagram

planning process. In turn, it will provide input directly or indirectly to all other background studies. This study is the basis for the first major decision to develop or to not develop a program; if insufficient demand exists no program should be developed.

Site Selection. (See Chapter III.) This process can begin as soon as demand is determined. It requires demand analysis input to determine the number of units which must be developed and the locations at which they are desired. The site selection process, in turn provides input to the site design, regulations analysis, and operation policy studies, as well as to the cost analysis study.

Unit Selection. (See Chapter III.) Unit selection is based directly on the demand analysis for such items as unit sizes, number of units and durability. Once units are selected, this information provides the basis for site design and cost analysis, as well as for regulation analysis.

Regulations Analysis. (See Chapter III.) This study can begin as soon as demand is established and before unit selection, site selection and site design are complete. However, before this study is complete it requires input from the unit selection, site selection, and site design studies. This input is necessary to determine which regulations, if any, will require variances, waivers, or other non-compliance to develop the program. Also, if the regulations study uncovers any particularly strict regulations which cannot be avoided, this information might be "fed back" into the unit or site selection studies and the site design process to ensure that these regulations are met. The regulation analysis should be completed by the time site design is

completed.

Unit Installation, Site Engineering, and Installation Options Studies. (See Chapter III.) These studies occur concurrently with unit selection and site design. They should be complete by the time site design ends.

Operation Policy Studies. (See Chapter III.) These studies can begin as soon as demand is established. They require input from the demand study for determining rent levels, supporting services to be provided and other items. The policies established will subsequently be used as input to the program cost analysis.

Cost Analysis. (See Chapter III.) This analysis will require input from all of the studies discussed above. Completion of each of those studies is required to develop accurate cost projections. The cost analysis, in turn will form one major factor in the decision to develop or not develop a program.

Financing Sources Search. (See Chapter III.) The LPA contemplating a temporary housing program should begin a search for potential financing sources as soon as demand is established. This process can continue concurrently with all the previously discussed studies. It should be completed by the time cost analysis is finished. In addition, some preliminary input from the cost analysis study may be necessary toward the end of the financing sources search. This input will help specify the amount of financing needed. This study provides another major basis for a "go-no go" decision on the program. If adequate financing cannot be obtained the program must be dropped or an alternative chosen.

Alternatives Analysis. (See Chapter IV.) As with the financing sources search, this study should begin as soon as demand is established. The study requires input from the demand schedule. It should be completed by the time cost analysis is completed. It forms another major factor in the decision to develop or not develop temporary housing by specifying available alternatives and their cost.

Timing of Studies

The specific time required to complete each background study depends upon too many variables for the author to provide general guidance. The LPA should use the chart in Figure 12 as a "Critical Path" diagram to determine the overall background analysis time necessary (90). To determine this overall time, the LPA should develop its own reasonable estimate of the time required to complete each study and list that time on the respective arrows of the diagram. Following the diagram to determine which activities must be completed before others can start, the LPA should determine the minimum amount of time required to complete all studies.

The starting date for the studies should then be determined by a process of "backing up from" the target date by which the LPA expects to need temporary housing units. (This target date is taken from the demand schedule.) First, the LPA should establish a starting date for development by backing up from the target date far enough to allow adequate development time (see next section). Then the LPA should determine the starting date for background analysis by backing up from the established date for the start of development far enough to allow time to complete the background analysis work.

Development Scheduling

Similar to background analysis scheduling, development scheduling involves arranging development activities in a logical sequence so that all activities can be completed by the time the units are to be occupied. Both the sequence of activities and required timing are discussed below.

Sequence of Development Activities

Each part of the development process must be scheduled so as not to delay later parts of the process. For example, site acquisition or lease must be completed before site improvement work can begin. The scheduling diagram in Figure 13 indicates graphically the logical sequence of development activities. The reasoning behind the diagram is presented below.

Site Acquisition of Lease. (See Chapter III.) Gaining control of the temporary housing sites is one of four activities which should begin as soon as the LPA decides to develop temporary housing. The process may be time consuming due to property purchase negotiations or negotiations for leases. The LPA must have the sites acquired or leased (and any necessary relocation completed) before site improvement work can begin.

Approval of Site Regulations. (See Chapter III.) The LPA should begin processing for any variances, waivers, or plan approvals for sites as soon as the development decision is made. This processing may take extended periods of time for public hearings or "red tape." The processing should be complete and all necessary approvals obtained before site engineering begins. Otherwise, changes in unit locations, landscaping or other improvements which result from the plan approval

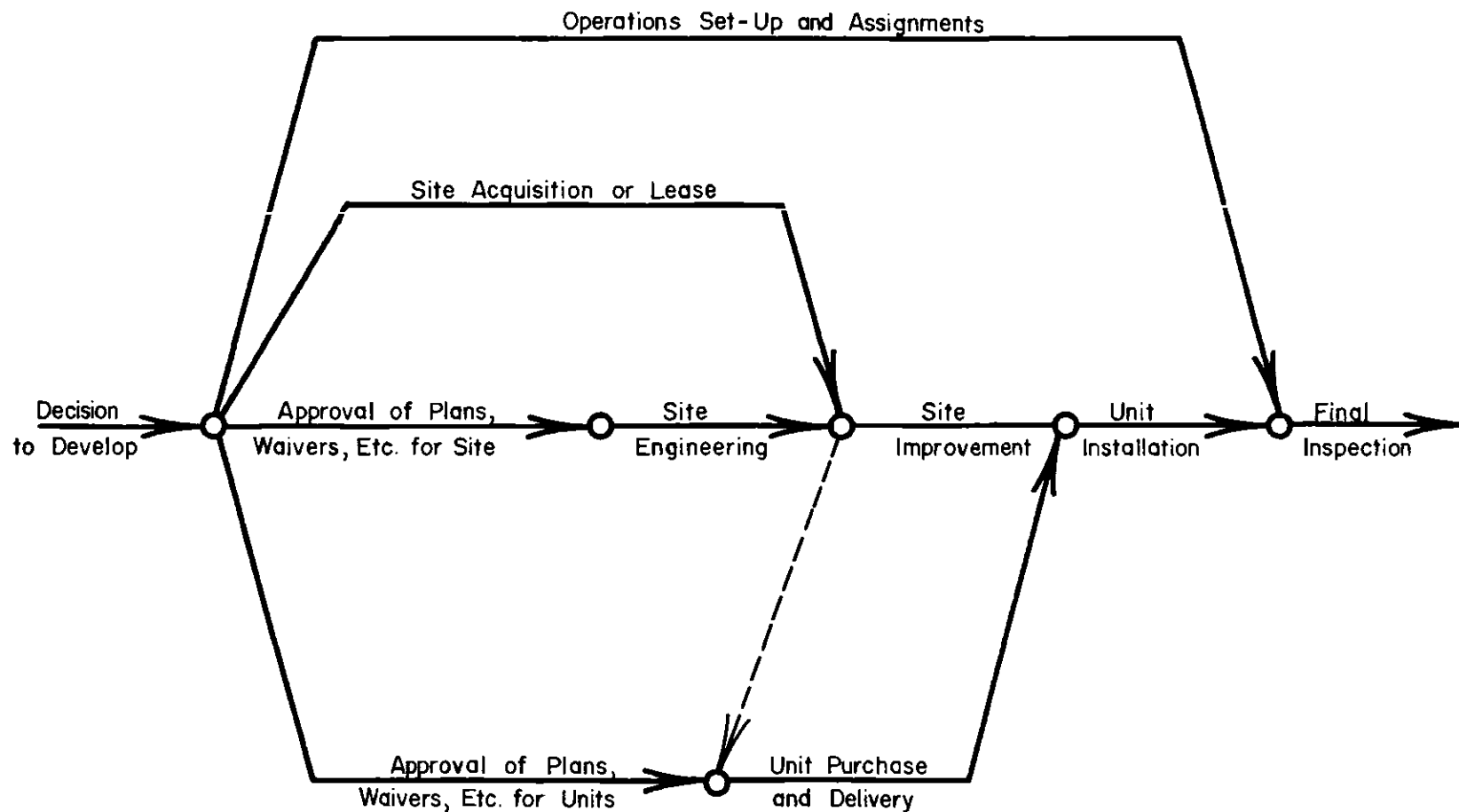


Figure 13. Development Activities Diagram

process or failure to obtain variances will cause unnecessary expense for changes in engineering plans.

Approval of Unit Regulations. (See Chapter III.) As with site regulations, the LPA should seek approval of variances, specifications, or waivers of regulations applying to units at the start of development. All approvals should be obtained before a contract for unit purchase is signed. Otherwise the renewal agency might commit itself to buy units which it cannot legally install and occupy.

Operations Set-up. (See Chapter III.) As soon as development begins, the LPA can begin arranging for the operation of units. This process involves selecting and assigning staff to handle administration, rent collection, maintenance and other aspects of operation. If staff are not to be used for operation, the LPA must negotiate contracts for these services. All operations set up work should be complete by the start of final inspection of the units.

Site Engineering. (See Chapter III.) After all regulations applying to the site, or all site plans are approved, the LPA can begin site engineering work to design utility lines, grading work and other site improvements. This work must be completed before actual construction of these improvements can begin.

Site Improvement. (See Chapter III.) If site improvement work is to be done by the LPA, it can begin as soon as site engineering is complete. However, if site work and improvements are to be part of a "package deal" for purchase and installation of the units, it cannot begin until bids are received and a contract is let for the units. In either case site improvements must be completed before actual

installation of units takes place.

Unit Purchase and Manufacture. The LPA must advertize for bids on the units and allow time for the winning bidder to manufacture (or deliver) the units. If site improvements are to be included in the purchase contract, then bidding, purchase, and manufacture cannot take place until site engineering is complete. However, if the LPA designs and constructs site improvements separately, purchase and manufacture (delivery) can take place as soon as all regulations governing the units are approved.

Installation. (See Chapter III.) Units cannot be installed until they have been purchased and delivered, and until site improvements are complete. If the LPA is constructing the site improvements it should schedule installation to start after that work is complete. If the supplier is installing the units he can establish his own schedule for installation so long as the overall date for occupancy of units is met.

Final Inspection. (See Chapter III.) By final inspection, all development work should be complete. All operations arrangements should be complete; and all necessary staff assigned (or contracts signed) to operate the units as soon as they are accepted.

Timing of Development

As with the timing of background studies, the time required for each step in the development process will vary too greatly among LPA's to be projected in a general way. For example, an LPA may have already acquired several large vacant sites which can be developed in complete compliance with zoning regulations. Therefore no time would be required

for site acquisition or regulations approval. Other LPA's might have to allow several months for these activities.

For determining development time, the LPA should use Figure 13 in the same way Figure 12 was employed for background studies. A reasonable time estimate should be developed for each activity and the shortest possible total of times determined. The LPA should then determine starting dates for various jobs by "backing up" from the date temporary housing units will be needed.

In assigning times to activities the LPA should consider two constraints. First, where LPA staff time is required, sufficient time should be allowed to prevent staff neglect of other duties in order to develop temporary housing. Second, if outside contractors are used for various jobs, they will probably have minimum time periods for certain types of contracts. The actual work for the LPA might only require a short time -- ten days for example. However, because contractors usually have several jobs going at once, they will not guarantee to complete the work in such a short time period. For example, many engineering firms will not accept a contract for less than 60 days completion time and many site improvements contractors will not accept contracts shorter than 90 days.

Community Involvement

Throughout the entire process of planning, developing, and operating temporary housing, the renewal agency should maintain full community involvement. Experience with renewal programs in general, and temporary housing programs in particular, indicates that full

community involvement can insure a more successful program and can avoid much potential opposition. The sections below point out the need for community involvement and then suggest particular procedures for obtaining that involvement.

The Need for Involvement

The need for community involvement is two-fold. First, community involvement can result in a program which more fully serves the needs of the occupants of temporary housing units and the renewal community. Residents can point out community or occupant needs which the LPA might otherwise not consider. For example, the Atlanta Housing Authority originally planned to purchase its mobile home units with no furniture, assuming that occupants of the units would use their existing furniture. Residents quickly pointed out most families to be displaced had large "old fashioned" household furnishings such as beds and dressers. These bulky items would not fit in the small living and sleeping rooms of a mobile home. The LPA subsequently ordered furnished mobile homes and stored the families' permanent furniture. The coin operated laundry (mentioned in Chapter III) set up in one of Atlanta's Bedford Pine units also was originally proposed by community residents.

Second, without community involvement, the LPA might incur significant community opposition to a temporary housing program. Opposition to a temporary housing program may arise from at least two general areas of community attitude: from negative attitudes toward mobile or modular housing or its occupants, and from general negative attitudes toward, or frustration with, the urban renewal program. Each of these attitudes, or both, might be held by the community at large,

the residents in an area proposed for temporary housing development, or the residents of the overall renewal area.

Attitudes toward Mobile or Modular Housing and its Occupants.

Some negative feeling toward mobile or modular housing exists in most communities. This feeling is usually stronger against mobile homes, but it can also be directed against modular housing. Dislike of mobile homes or "trailers" can be based on several causes.

First, community attitudes characterize mobile homes and their occupants as "transients", "low rents" or other such terms. This feeling may be based partly on previous community experience with mobile homes and on class bias.

Mobile homes have traditionally been occupied by lower income groups who had few roots in the community. Consequently, a bias developed against mobile home occupants. However, this bias has continued into a time when many "middle" and even "upper" income Americans have chosen to live in mobile homes. In a temporary housing program the low economic and social status of most urban renewal displacees tends to reinforce this original negative attitude toward mobile homes.

For example, this attitude was responsible for the following testimony at a New York City public hearing on a proposed temporary housing program: "With one stroke you will create Shantytown, U.S.A." (91); [temporary housing would result in] "stigmatizing the Rockaways as a welfare colony" [permitting] "any Tom, Dick, or Harry to come and squat on the beach" (92).

Secondly, a community may have had previous problems or "bad experiences" with mobile homes. This problem may occur in areas where

mobile homes development has gone largely unregulated. Community feelings may be based on a realistic negative reaction to many of the early "trailer camps" which were clearly lacking in proper controls or land use planning. This problem may then reinforce the socio-economic class attitudes discussed above.

In Norfolk, Virginia, for example, a proposal to develop temporary housing was dropped, partially because it became apparent that this type of community feeling would prevent necessary changes in the zoning ordinance. Norfolk had experienced the full effect of early "trailer camps" put up quickly and shoddily to meet the need for housing surrounding the numerous U. S. Navy installations in the area (93).

Third, attitudes toward mobile or modular units may be a result of labor union fears of job loss or pay reduction as a result of reduced on-site labor requirements of mobile or modular units. This problem was mentioned as occurring in the Town of Greenburgh, New York, temporary housing program (94).

General Attitudes toward the Renewal Program. In many communities, overall attitudes toward urban renewal may be negative. These attitudes may be the result of misunderstanding of renewal and its capabilities and objectives. They may also be the result of built up resentment by residents affected by renewal. These residents may not have participated in, been consulted about, or benefited from, the locality's urban renewal process. In addition, there may be feelings of frustration at urban renewal's slow progress in producing new development, especially housing. In any or all of these instances, the negative feelings toward renewal may become focused on the issue of temporary housing.

Because direct citizen involvement in all aspects of government has increased, residents of renewal areas now expect to be consulted and to provide input on all decisions which affect their communities. Without adequate consultation with the community, a strong possibility exists for negative community response. Where community opposition receives official support, it can effectively stop a program. Testimony from New York City's hearings on temporary housing illustrates this problem.

A councilman from an area proposed for temporary housing summed up local community feeling as follows:

I was never consulted nor did I have any knowledge of this plan. . . . This is a typical arrogant approach by the Housing Authority and the City Planning Commission to carry out whatever plans they decide on in violation of community wishes and local officials' interests (95).

This testimony was in response to an announcement that the temporary units were to be installed in the Brownsville (New York) area despite the New York City Board of Estimate's refusal to approve the necessary changes in the Zoning Ordinance. (The units were installed by the New York State Urban Development Corporation which has power to override local zoning ordinances.) It is significant that installation of the units in this situation resulted in the planting of a live hand grenade under the first unit installed (96). Also, the units were originally boycotted by the community so that although they were installed in July of 1971, in April of 1972 only thirty of the fifty-seven units were occupied (97).

Second, as a consequence of the complexity of the renewal process and the size of its task, urban renewal has proved to be a slow process,

especially in the area of developing new permanent housing which is affordable by renewal area residents. These two factors can combine to result in feelings of frustration by renewal area residents and a belief that they will never see new permanent housing.

This study revealed many statements from Atlanta renewal area residents such as "Lets talk about permanent housing" or "at the rate we're going, the temporary housing will become permanent". Also, some of the resident opposition raised to New York City's temporary housing was based on "years of disappointment and resentment of City action in this community", and the fear that the housing shortage in the city was such that the temporary housing would become permanent (98). Residents pointed out that the last of the "temporary" housing Quonset huts put up in New York for housing during WW II were not removed until 1951 (99).

Thus, temporary housing may be seen by the community as a diversion of effort away from the basic goal of producing permanent housing. To the extent this view is held, it may result in opposition to a temporary housing program.

Involvement Procedures

This thesis assumes that, as a consequence of Federal and or state requirements, any operating renewal agency will have established some program of citizen participation and public relations. The overall character of these programs will have a significant effect on the attitudes of the community toward any particular part of the renewal program. Improvement of an overall program of community participation is a subject beyond the scope of this thesis. However, improvement in

the overall program should help avoid opposition to temporary housing.

Regarding temporary housing specifically, the community participation process should involve a sincere effort to involve in the planning and implementation of the program all persons affected. Only through such "extensive groundwork with the local community" can acceptance of the program be accomplished (100).

The involvement process should include three separate steps. First, the LPA should identify all groups and persons affected by the temporary housing program. These include, as a minimum, residents of the renewal community, the specific displacees for whom temporary housing is planned, and residents of areas surrounding temporary housing sites. Clearly defining the boundaries of areas "surrounding proposed temporary housing sites" may be difficult. As a minimum, the LPA should involve any organized groups in the area, and the residents in all dwellings having "visual frontage" on the proposed sites.

Other groups concerned might include "better housing" groups, labor unions, or manufactured housing associations. In all cases the LPA should attempt to identify not just groups potentially opposed to the program but also those who favor it.

Second, the renewal agency should provide all concerned groups or individuals with accurate information on the proposed program. Providing such information will enable them to form valid opinions and judgements about temporary housing. Groups and individuals must be provided with adequate information on all aspects of the program. Information provided should include the type and number of units planned, the proposed and alternative locations, the time period the units will be in

use, as well as procedures for renting a unit, rental levels, and priorities for occupancy. Also, information should be provided on available alternatives to temporary housing.

The required information can be provided through printed materials, slide presentations, and field trips to similar units. One or more units might be installed on a demonstration basis. Although such a demonstration would be expensive, it might be justified to give community groups a full picture of the units proposed (101).

The renewal agency must provide this information (and obtain input) in the early stages of program planning, starting with demand analysis and running through unit and site selection, operational policy studies and other background studies. Unless the LPA involves citizens at the start -- before major decisions are made -- citizen groups can be expected to oppose and/or misunderstand the program.

Third, the LPA should obtain and utilize both direct and indirect input. Direct input can be received through meetings with representatives of persons or groups affected, or through "at large" meetings with the residents of an area. Within the renewal area, meetings will be necessary with any established citizen groups such as the Federally required Project Area Committee (PAC). Formal input from the potential occupants of the temporary housing can also be obtained through surveys as discussed in Chapter II.

Indirect input can be obtained through project staff day-to-day contact with renewal area residents. Other sources of informal contact include "walking tours" of the affected areas, discussions with social service workers in the area, or newspaper articles about reaction to

the proposed program.

Citizen input can affect a wide range of program decisions depending on the interest of the citizens. In Atlanta for example, citizens assisted in selection of units, exterior unit colors, and sites. In one instance in Atlanta, citizen action successfully blocked planned use of two temporary housing sites which were unacceptable to the community. The sites were dropped even though engineering drawings for them had already been completed. This last example re-emphasizes the need to involve community groups from the earliest stages of the program.

Coordination

Coordination problems are normal for almost any aspect of a renewal program. Any program which seeks to renew physically, and to some degree socially, large areas of a city will have difficulty working with the various agencies and groups whose cooperation is required. Temporary housing, however, presents some unique coordination problems.

Basically, the problems arise from two sources: the multiplicity of agencies and groups involved and the fact that temporary housing, as a new program, may present problems with which these groups are unfamiliar. First, the cooperation of many agencies, companies and groups is required to establish a temporary housing program. As a minimum, included are the LPA itself with its various branches or department, the City Planning Department or Zoning Department, the Building Inspection Department, various utility companies (public or private), social service agencies,

private contractors or suppliers and, as mentioned above, citizen groups.

Coordination of these various groups or agencies is not easy. Reviews or approvals, where required, take time and effort because each program change or revision in plans has to be worked back and forth through a network of agencies or persons. Each of these firms or agencies has its own perspective on each of the problems involved and these perspectives may be quite different. For example, zoning administrators might be concerned that the temporary housing provide the full number of parking spaces required by the zoning ordinance. At the same time, social service personnel might be seeking to improve bus service to the units because most tenants do not own cars.

Atlanta's program experienced numerous coordination problems ranging from difficulty obtaining building permits to insuring that the units were connected to working sewer lines. The complexity, confusion, and delay involved brought the LPA extensive public criticism (102).

Second, to compound the complexities above, many of the agencies involved may be dealing with problems with which they are unfamiliar. Building inspectors, for example, may not have much experience in dealing with mobile or modular units. They may be overly cautious or uncertain of how to apply standards to dwellings or construction techniques not usually dealt with. If extensive variances from the zoning ordinance are required (see Chapter III), zoning officials may be hesitant to recommend them, because they are accustomed to making decisions for permanent development.

Citizen groups, both renewal area groups and others, may be

unfamiliar with mobile homes or might have typical "middle class" prejudices against them. Overcoming all of these problems can take much time, effort and education.

At least three approaches are available for solving coordination problems. These include providing full information to all parties concerned with temporary housing, involving top level officials from all agencies, and centralizing the administrative responsibility for temporary housing. Taken together, these approaches can reduce coordination problems significantly.

Providing Information

Because temporary housing involves unfamiliar problems for most agencies, it is essential that each agency concerned be provided full information on why, how, when, and where, the LPA plans to develop temporary housing. This information should be provided far enough in advance to permit concerned agencies adequate time to understand and evaluate it before making decisions. During the development of Atlanta's temporary housing, delays frequently occurred because agencies or groups whose concurrence was required simply refused to make decisions based on inadequate information provided only a short time before a decision was requested.

Information on all aspects of the program should be provided to all agencies involved in the program, even if it appears that a particular item of information is not directly related to the function of a particular agency. It seems apparent that any given agency can better coordinate its efforts with other agencies if each has a full knowledge of what the other is doing. Information should also be sent to all

persons in an agency who are involved with temporary housing. Data sent only to a department head can frequently take several days to "filter down" to the appropriate staff person assigned to temporary housing.

Involving Top Level Officials

As with any program, support "from the top" will aid coordination of temporary housing development efforts. Staff personnel will be more willing to make rapid decisions on unfamiliar temporary housing problems if they realize their agency head is committed to development of the program. For example, in Atlanta's program, review of site plans and granting of building permits was moving slowly until adverse newspaper publicity resulted in an order from the Mayor to "cut the red tape" (103). Adequate prior involvement of the Mayor might have eliminated this problem.

Top officials, both elected and appointed, can be involved through briefing sessions held specifically for them, through written information distributed by the LPA, and through informal discussions with officials and their staff.

Centralized Administration

Temporary housing is a program which affects, and is affected by, all aspects of the renewal program. To coordinate this type of program, authority and responsibility for it should be centralized in a location having decision making authority and a full overview of the renewal program.

Decision making authority is necessary because there must ultimately be only one source of both information and decision making.

Coordination is possible only if all agencies operate on one set of "facts" and look to one source for decisions.

Authority and responsibility should be located with an office having an overview of the renewal program to insure that the temporary housing program remains flexible and responsive to the needs of the overall renewal program rather than becoming an end unto itself.

The location having both decision making authority and a full renewal overview may vary depending upon the administrative set up of an LPA. However, in most agencies, the appropriate location for temporary housing responsibility is the office of the director of renewal.

Depending on the director's workload and the size of the temporary housing program, the director might exercise this responsibility directly, or delegate it. This delegation could take the form of appointing a staff member who works directly with the director of renewal as "temporary housing coordinator". In the Greenburgh, New York program responsibility for the program was assigned to the assistant to the director (104). This arrangement apparently produced satisfactory results.

The Atlanta Housing Authority designated a "temporary housing coordinator". However, the person so designated was not directly assigned to the office of the Director of Redevelopment, but remained functionally part of the Planning and Engineering Branch. In the author's opinion, assignment to the Director of Redevelopment would have been a more functional arrangement. With the arrangement as it was, numerous problems occurred as the result of inadequate coordination between the Director's office and the temporary housing coordinator.

CHAPTER VI

SUMMARY AND CONCLUSIONS

This thesis has presented a discussion of, and guide to development for, programs to temporarily relocate urban renewal displacees in mobile or modular housing units. Planning and implementation of such programs consists of a three phase process. The first phase requires a thorough analysis of the demand for temporary housing in both overall program terms and on a project by project basis. Demand analysis is primarily a process of comparing the relocation housing requirements of families to be displaced with the relocation housing resources which are expected to be available to those families. Temporary deficiencies in the required supply of relocation housing represent potential demand for temporary housing. The thesis suggests specific techniques for carrying out demand analysis.

The second phase of the temporary housing development process involves a series of background studies and decisions which specify how the program might be carried out and at what cost. These studies include:

1. Unit selection
2. Site selection
3. Site design
4. Site engineering
5. Installation and inspection

6. Regulation
7. Unit operation
8. Costs and financing
9. Alternatives to temporary housing

The thesis provides recommendations on factors to be considered in conducting each of these background studies. It also provides guidance for LPA's in arriving at decisions on each aspect of the program and evaluating alternatives to temporary housing. Examples are: size recommendations for temporary housing units, site selection criteria, means of avoiding inappropriate zoning regulations, and procedures for developing a prototype program budget.

Phase three of the temporary housing development process consists of careful scheduling, coordination, and community involvement during actual development of the housing for occupancy by displacees. The thesis provides guidance on scheduling and timing of the background studies and on scheduling and timing of implementation of the temporary housing program. Also, suggestions are provided on ways to involve community groups in the development process and ways to coordinate all parts of the development process.

Temporary housing as discussed in this thesis is one of several effective, if temporary, solutions to the problem of the lack of low cost permanent relocation housing resources. Temporary housing can provide needed temporary relocation resources. Many of the problems experienced with the temporary housing programs examined were the result of inadequate fore-thought and program planning. This conclusion seems particularly appropriate in the case of Atlanta's program.

However, the research completed for this thesis, and the author's personal experience with temporary housing lead to a second conclusion: the LPA should fully explore all feasible alternatives to temporary housing before undertaking a program. The alternative of devoting the time and resources available for temporary housing to permanent housing production represents a prime alternative. This conclusion is suggested by several factors.

First, as the section on costs and financing indicates, temporary housing is expensive. Production of temporary housing requires investment of resources equal to over one half the cost of new housing construction and equal to almost the full cost of major rehabilitation. Justifying that level of investment in temporary housing is difficult.

Second, because the depreciation on mobile homes is rapid (over 80% value loss in four years in Atlanta) the high program costs become feasible only if the units are amortized over ten or more years. An LPA must have demand for the units for that long a period before the program begins to work economically. For shorter periods, such alternatives as temporary rent supplement become more economical.

However, a community that has a demand for "temporary" relocation housing for ten years has, in fact, a permanent relocation housing shortage which ought to be solved on a permanent basis. If there is sufficient long term demand for the program, then there is a long term need to produce more permanent housing.

Third, the resources and skills required to develop temporary housing and solve its various problems, e.g. with zoning ordinances, are also those resources and skills required to solve the problems of

permanent housing. The author believes that it is more logical to devote those skills and resources to permanent solutions rather than to temporary ones.

The author recognizes that many of the obstacles to producing additional permanent low cost housing are beyond the jurisdiction or problem solving ability of the LPA. Many of the obstacles exist because the society as a whole does not have a commitment -- backed up by resources -- to permanent low income housing production. However that lack of commitment cannot be overcome by an attempt to solve temporarily -- through temporary housing -- a problem which must ultimately be confronted and solved permanently.

A third conclusion also seems warranted: If community preservation is a primary renewal program objective, and if alternatives such as temporary rent supplement or temporary rehabilitation cannot achieve community preservation, then temporary housing may be a preferable, if more costly, alternative. For example, units might be available for a temporary rent supplement program which might be less expensive than a temporary housing program. However, if these units are not within the renewal neighborhood, community preservation cannot be achieved through a rent supplement program. In such situations the LPA might choose to develop temporary housing, even though it would cost more than temporary rent supplement. The choice would be to maximize a social value over an economic value. However, such a choice should be made only if the permanent housing production necessary for long run community preservation is assured. Without production of permanent housing, preservation of the community is not possible.

Finally, temporary housing appears to offer significant potential for site design experimentation. Although this potential has not as yet been utilized, it remains available. Carefully designed and controlled site design experiments and evaluation might justify temporary housing development where other interim relocation alternatives were less costly. Resulting improved site design information and techniques could fully justify the additional cost involved. Similar to community preservation situations, such an approach would balance social values against purely economic considerations.

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7. Letter from Stanley C. Ayer, Temporary Housing Coordinator, Atlanta Housing Authority, to Robert Kincaid, Norfolk Redevelopment and Housing Authority, June 22, 1971.
8. Interview with Roy Priest, Special Assistant to the Executive Director, Washington, D. C. Redevelopment Land Agency, Washington, D. C., December 21, 1971.
9. Letter from Dennis Reeder, student of Architecture, University of Illinois to City of Atlanta, March 25, 1970.
10. Conversation with Hugh R. Hill, Assistant Executive Director, Relocation and Social Services, Housing Authority of the City of Newark, Spring 1972.
11. Alfred N. Raby, "Edgehill Urban Renewal Project; The Use of Mobile Homes as Interim Housing for the Displaced" (Unpublished Master's Thesis, Graduate School of Planning, University of Tennessee, Knoxville, 1969), p. 4.
12. In preparing this chapter, the author assumed that the renewal agency would be operating a reasonably detailed and comprehensive

execution planning and relocation planning program. For many LPA's, this assumption is not valid. In fact, adequate execution planning, and particularly relocation planning are largely neglected in many LPA's. For those LPA's which lack adequate planning programs, analysis of temporary housing demand represents one place to start such an effort.

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16. Temporary Housing -- Its Purpose and History (Unpublished informational report, The Atlanta Housing Authority, 1971), pp. 1-2.
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18. Interview with Robert Podd and Brian Watts, Research Division, Norfolk Redevelopment and Housing Authority, Norfolk, Virginia, December 20, 1971.
19. Personal interview with Brian Bergin, Norfolk, Virginia, Model Cities Agency, August 1972.
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40. Gibson, p. 50.
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65. Kihss, July 12, 1971.
66. Priest, December 21, 1971.
67. Sweeney, interview, March 16, 1972.
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72. Sweeney interview, March 16, 1972.
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