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EVALUATION OF THE URBAN HOMESTEADING DEMONSTRATION PROGRAM

FINAL REPORT

Volume III

THE REHABILITATION OF URBAN HOMESTEADS

by:

Anthony J. Blackburn

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Prepared for:

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Prepared by:

Urban Systems Research & Engineering, Inc.
36 Boylston Street
Cambridge, Massachusetts 02138

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Chapter I
INTRODUCTION

The Federal Urban Homesteading Program, authorized by Section 810 of the Housing and Community Development Act of 1974, began operations in the Fall of 1975. Between November 1975 and April 1976, urban homesteading agreements were executed with twenty-three cities which had been selected by the U.S. Department of Housing and Urban Development to participate in an Urban Homesteading Demonstration Program. These cities are now completing, or have completed, three years of urban homesteading activity under these agreements. In the Summer of 1976, a comprehensive longitudinal evaluation of the Urban Homesteading Demonstration Program in the 23 original Demonstration Cities was initiated. This report, which deals specifically with issues relating to the rehabilitation of the urban homestead properties, is one of a series of reports issuing from the evaluation of the Urban Homesteading Demonstration.

It is important to be familiar with the mechanics of urban homesteading, and of the Federal Urban Homesteading Demonstration Program, before examining those issues which are specific to the rehabilitation of urban homesteads. In implementing Section 810 of the Housing and Community Development Act of 1974, the Department of Housing and Urban Development designed a Demonstration Program in which cities would be selected to participate on the basis of competitive applications. In August 1975, sixty-one

cities submitted applications and in October 1975, HUD announced that 23 cities had been selected to participate. Under the terms of their subsequent agreements with HUD, each Demonstration City would be allowed to select properties from the HUD inventory of vacant one- to four-family properties, providing that these properties were located within designated neighborhood boundaries identified in the urban homesteading agreement. In return, each Demonstration City committed to convey these properties "for no substantial consideration" to individuals selected to become urban homesteaders. In selecting the homesteaders, the Demonstration Cities would have to consider both the applicants' "need" for housing and their "capacity to carry out the needed repairs." The homesteaders would receive title to the property conditioned on their performance of the necessary rehabilitation and on their use of the property as their principal residence for a minimum of three years.

The Federal Urban Homesteading Demonstration Program intentionally gave the participating cities considerable latitude in the design of their local urban homesteading programs. There were no restrictions on the value of the individual properties chosen, cities were free to interpret the "need" and "capacity" criteria for the selection of urban homesteaders in the light of local objectives, and alternative approaches to financing the rehabilitation of urban homesteads were encouraged. Furthermore, cities were free to choose widely varying approaches to the planning and management of urban homestead rehabilitation. To a very significant extent, the 23 Demonstration Cities exercised this freedom and developed different, and sometimes sharply contrasting, approaches to the conduct of local urban homestading efforts.

The ways which local government agencies designed and implemented urban homesteading programs in the 23 original Demonstra-

tion Cities have been described in The Urban Homesteading Catalogue[1] and in the first and second Annual Reports of the Urban Homesteading Demonstration[2]. These reports have dealt, in varying degrees of detail, with the basic components of any urban homesteading program: the selection of properties, the selection of homesteaders, financing urban homestead repairs, the planning and management of rehabilitation and the general administration and organization of the local urban homesteading programs. Of particular interest for the readers of this report are the findings to date on the approaches which cities have followed in planning and managing the rehabilitation of the urban homestead properties.

In characterizing the approaches which the Demonstration Cities have adopted to the planning and management of rehabilitation, it is useful to consider each program in terms of the following basic issues which each local program must address:

- What standards will be applied to the rehabilitation work? In particular, does the city attempt to impose standards of rehabilitation which are more stringent than local housing codes?
- What is the extent of the homesteader's involvement in deciding what work should be done and who should do the work? Is the homesteader allowed to contribute to the work write-up and is he or she allowed to select the contractor?
- Are homesteaders allowed or encouraged to undertake significant tasks in the rehabilitation of their properties? Under what conditions is self-help work permitted?

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[1] The Urban Homesteading Catalogue, U.S. Department of Housing and Urban Development, Office of Policy Development and Research, 3 volumes, August 1977.

[2] Evaluation of the Urban Homesteading Demonstration Program: First Annual Report, U.S. Department of Housing and Urban Development, Office of Policy Development and Research, October 1977; Evaluation of the Urban Homesteading Demonstration Program: Second Annual Report, U.S. Department of Housing and Urban Development, Office of Policy and Development Research, September 1978.

- What schedule of work is imposed on contractors and/or homesteaders in the performance of the work? What work must be performed prior to occupancy?
- What arrangements are made for monitoring work in progress, for certification and progress payments and for providing technical assistance to homesteaders?

In attempting to characterize the Demonstration Cities in terms of their approach to the planning and management of rehabilitation, an earlier report of the project identified what appeared to be three natural groupings of the Demonstration Cities.[1]

> "The first group of cities emphasizes high standards of rehabilitation quality, rapid completion of repairs and a high degree of local program control over the specification and performance of work. These cities have opted for a tight control of rehabilitation by local program staff, minimizing both the input of homesteaders in planning and the possibilities for self-help (Jersey City, Kansas City, New York City, Freeport, Decatur).
>
> The second group of cities emphasizes less stringent standards for rehabilitation, greater participation of homesteaders in work planning and contractor selection, and a controlled use of sweat equity (Atlanta, Tacoma, Oakland, Rockford, Islip, Cincinnati, Columbus, Boston, Dallas, Milwaukee, Philadelphia, Chicago, Minneapolis).
>
> The third group requires less stringent standards of rehabilitation, encourages significant involvement of homesteaders in work planning, generally places more reliance on homesteaders for contractor selection, and encourages the use of sweat equity (South Bend, Wilmington, Baltimore, Gary, Indianapolis)."

In describing the approaches adopted at the outset of the Demonstration to the planning and management of homestead repairs, reliance was placed on information provided directly by local homesteading program staff. These local officials described the way in which properties were selected, cost estimates and work

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[1] See Evaluation of the Urban Homesteading Demonstration Program: First Annual Report. U.S. Department of Housing and Urban Development, October 1977, pp. 34-36.

write-ups prepared, contractors chosen and rehabilitation monitored in each of the Demonstration Cities. This source of information, while useful for characterizing and distinguishing between local approaches to the planning and management of homestead rehabilitation, provides only limited insights into the actual experience of rehabilitation. It does not, for example, permit detailed description of the kinds of work which were performed, the costs of rehabilitation incurred by homesteaders, the extent and cost-effectiveness of homesteader self-help efforts, the quality of the resulting workmanship and materials and the characteristics of the properties before and after repair. This is information of considerable interest to individuals and organizations concerned with the rehabilitation of one- to four-family properties, particularly properties which have been vacant and foreclosed for significant periods of time.

Urban homesteading represents one of a number of alternative approaches to the problems presented by residential property foreclosures. Under urban homesteading, the responsibility for carrying out the needed repairs to properties is placed on the homesteader who has varying degrees of discretion in the determination of what work should be done on the property and who should do that work. Failure of the homesteader to carry out the repairs will mean that his or her title to the property must be surrendered.

These features are typically not present in other methods of property disposition commonly used by HUD. Cash "as-is" sales of foreclosed properties do not require that repairs will be carried out to meet locally-determined housing standards or that the purchaser will reside in the property. Repair and sell programs, or other disposition methods which transfer the obligation to rehabilitate the property to a public agency or other non-profit sponsor, remove from the ultimate owner-occupant the responsibility for planning, financing, and carrying out the needed repairs. The effectiveness of urban homesteading as a

method of disposition depends to a larger degree, therefore, on the success with which homesteaders manage to carry out the rehabilitation of their properties.

To assess the effectiveness of urban homesteading as a means of rehabilitating one- to four-family properties, detailed information on the rehabilitation of these properties was acquired during the first two years of the evaluation. Inspections of approximately 400 urban homestead properties, distributed across the 23 Demonstration Cities, were performed by licensed architects. These inspections were scheduled for each property at, or close to, the point in time at which the rehabilitation work was complete, or substantially complete.

Data were collected on: the physical characteristics of the property, the tasks performed during rehabilitation; the division of work between homesteaders and contractors; the cost of contracted repairs; the inputs of homesteader labor by task and trade; and on the quality of workmanship and on the choice of materials. A highly structured reporting format was used to achieve data comparability across properties and cities. The data from these inspections constitute the basis of this report on the experience of rehabilitation in the Urban Homesteading Demonstration Program.

To describe the experience of rehabilitation in the Urban Homesteading Program, it is necessary not only to examine the costs, timing and nature of the rehabilitation work, but also to describe the characteristics and condition of the properties, both before and after repair. Rehabilitation can then be viewed as a process which accepts as inputs FHA foreclosed 1-4 family properties, typically in serious disrepair, and which produces as outputs repaired urban homesteads meeting all the necessary requirements of local housing codes.

This view of rehabilitation as a process leads naturally to the presentation of the subject matter of this report in

terms of: (1) inputs (the unrepaired properties); (2) process (the nature, extent, cost and division of the rehabilitation work); and (3) outputs (the repaired properties). Within each of these stages, it is possible to examine the differences between local programs and to examine the effect of local program choice (i.e., the amount of permitted self-help rehabilitation) on the outcomes at later stages in the process (i.e., the quality of workmanship in the repaired properties). This model of input-process-output provides the organizing framework for the report.

The four chapters of the report which follow include one (Chapter II) which describes the inputs, two (Chapters III and IV) which describe the process, and one (Chapter V) which describes the outputs. The final chapter (Chapter VI) consolidates and summarizes the basic findings of the report on the experience of rehabilitation under urban homesteading. The Chapters are as follows:

- Chapter II - The Urban Homesteading Properties. This chapter describes the way in which the sample of properties was selected and presents the distribution of the sample across cities and by the length of rehabilitation. The properties are described in terms of dwelling unit type, age, size and structural characteristics. Data on the repair cost estimates, market value estimates and "810 values" of the sampled properties are discussed.
- Chapter III - The Rehabilitation Work. The types of repair and improvement activity carried out on the homestead properties are described by means of a classification of tasks into larger groups. The costs of rehabilitation are broken down by major categories of activity. Actual costs are compared between cities and inter-city differences are analyzed in the light of previous classification of cities in terms of their approach to rehabilitation. The time required to complete rehabilitation is analyzed in terms of the size of the job and the amount of self-help.
- Chapter IV - Self-Help Contributions to the Repair of Homesteads. This chapter describes the kind of tasks undertaken by homesteaders, presents estimates of the number of hours which homesteaders spent on each kind of activity and calculates the savings

which were achieved through self-help efforts for each category of labor or trade. The effect of each local program's approach to self-help is examined and estimates of the total contribution of self-help, or "sweat equity," are analyzed.

- Chapter V - Rehabilitation and Housing Quality. The quality of workmanship and of materials is assessed by major task groups and comparisons are made between the quality of contracted vs. self-help work and materials. A set of tests developed for the purpose of this analysis is used to describe the finished products (repaired homestead properties) in terms of frequently used measures of housing quality.
- Chapter VI - Summary of Findings. The major findings of the report on property selection, rehabilitation costs, self-help, the quality of workmanship and materials, and the effectiveness of alternative approaches to the rehabilitation of urban homesteads are presented and described.

It is hoped that these findings will be of interest to housing professionals generally concerned with the rehabilitation and maintenance of the residential housing stock and, in particular, to those wishing to understand more about the experience of rehabilitation in urban homesteading programs.

Chapter II

THE URBAN HOMESTEADING PROPERTIES

This chapter is primarily intended to provide a context for the analysis of data collected during the inspections of homestead properties. It begins with a description of the universe of properties from which the sample of inspected properties was drawn, and it explains the methods used to draw the sample. Secondly, the basic characteristics of the sampled properties (dwelling unit type, age, size and construction type) are discussed. Thirdly, information compiled by HUD property disposition staff, prior to the selection of these properties for use in local urban homesteading programs, is examined. This information, available for most, but not all, of the inspected properties includes estimated market values of the property (both "as-is" and "after repair"), repair cost estimates and "810 values." The "810 value" of a property is generally computed as its fair market value (before rehabilitation) less carrying costs, which cover taxes, interest and security expenses. In some instances, "after repair" market values are used, in which case the estimated cost of repair is deducted, along with carrying costs, to arrive at the "810 value." The "810 value" is the amount charged against a city's allocation of funds for the acquisition of properties for use in its urban homesteading program, and the proceeds are used to indemnify the FHA insurance fund. Taken together,

the information on the "inputs" to urban homesteading presented in this chapter provides a necessary context for the deatiled examination of the rehabilitation experience in Chapters III, IV, and V.

The Sample of Inspected Properties

In all, 397 urban homestead properties were inspected between December 1976 and December 1978. The properties selected for inspection were all drawn from the set of properties acquired through the use of the "first-round allocations" made to the 23 original Demonstration Cities. These first-round allocations refer to the dollar amounts allocated to the Demonstration Cities at the time they entered into Urban Homesteading agreements for the first time. The aggregate amount of the first-round allocation was $4.89 million. Most of the 23 Demonstration Cities used up their first-round allocations quite rapidly and most have by now received three additional allocations of Section 810 funds.[1] However, although the first-round allocations were typically exhausted some time ago, many of these properties have not yet been fully rehabilitated.

By April 1, 1978, 1,861 properties had been conveyed by HUD to local urban homesteading programs. These accounted for approximately $9.4 million of the $16.9 million of the first, second, third and fourth-round allocations made to the original 23 Demonstration Cities by that date. Of these 1,861 properties, rehabilitation had been started on 1,173 properties and had been completed on only 564 properties, of which 505 were properties acquired through the use of the first-round allocations. These 505 "first-round" properties constituted the

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[1] The status of the Section 810 allocations as of the summer of 1978 is summarized in Evaluation of the Urban Homesteading Demonstration Program, Second Annual Report, U.S. Department of Housing and Urban Development, Office of Policy Development and Research, September 1978.

universe from which the sample of 397 properties to be inspected was drawn.

In drawing the sample of 397 properties for inspections, two criteria were employed. Firstly, it was considered desirable to achieve adequate representation of all the Demonstration Cities. Secondly, it was recognized that, by sampling properties as soon as rehabilitation was complete and stopping as soon as the desired number of inspections was achieved, there would be a systematic bias in favor of those properties in which rehabilitation was completed rapidly. The sample was designed to avoid this outcome.

The issue of sampling did not, in fact, arise until the summer of 1977 when it became apparent that the unit cost of inspecting would preclude a 100% sample of all first-round homesteads, then estimated to be around 1,000 properties. At the time that this became apparent, approximately 250 properties had already been inspected and these were distributed across 17 of the Demonstration Cities. The sampling issue then related to the rules which would be applied in the selection of the remaining properties for inspections, so that each city would be represented as adequately as possible and so that there would be sufficient representation of the "slower" properties.

The resulting sample accounted for almost 80% of all the properties available for inspection. The breakdown by city, together with the within-city sampling rates, is presented in Table II-1. It will be apparent that efforts were made to sample a higher percentage of properties in cities with relatively few available properties. The overall pattern, with its high average sampling rates and the existence of only two cities with sampling rates below 50%, provides reasonably strong assurance of the generalizability of the findings to the 505 first-round properties which had been completed by April 1, 1978.[1]

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[1]The 397 records completed contain some instances where values for some variables are missing. This means that, for certain analyses, the actual sample size is smaller than 397. This has been noted in the tables, where applicable.

Table II-1

SAMPLE SIZES AND AVAILABLE FIRST-ROUND COMPLETED PROPERTIES BY CITY

City	Sample Size	Properties Available	Sampling Rate
Atlanta	16	36	0.44
Baltimore	3	3	1.00
Boston	4	4	1.00
Chicago	19	26	0.73
Cincinnati	8	8	1.00
Columbus	8	8	1.00
Dallas	53	53	1.00
Decatur	18	27	0.67
Freeport	11	12	0.92
Gary	28	28	1.00
Indianapolis	28	30	0.93
Islip	12	14	0.86
Jersey City	5	5	1.00
Kansas City	13	28	0.46
Milwaukee	11	11	1.00
Minneapolis	14	27	0.52
New York City	4	4	1.00
Oakland	22	33	0.67
Philadelphia	26	41	0.63
Rockford	46	48	0.96
South Bend	17	18	0.94
Tacoma	17	17	1.00
Wilmington	14	24	0.58
TOTAL	397	505	0.79

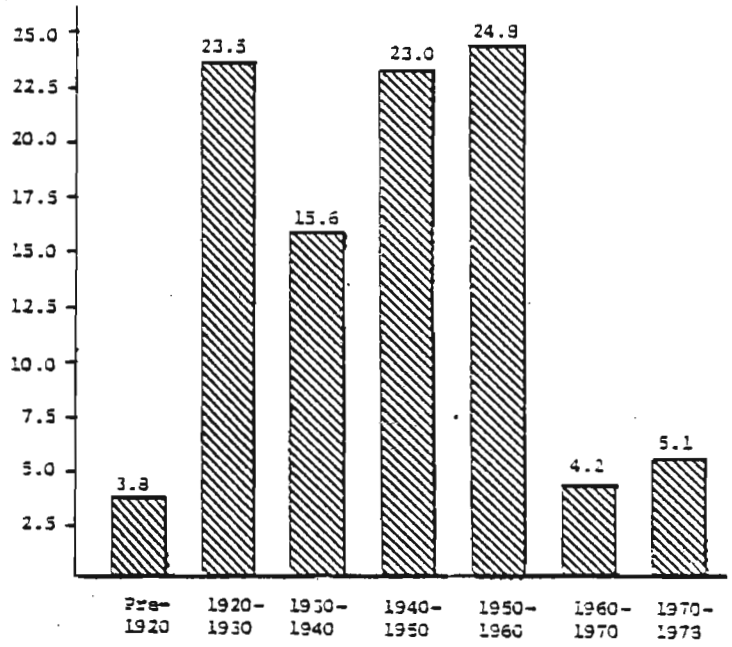
Characteristics of the Urban Homestead Properties

The urban homestead properties are all, by the definition of the program, vacant 1-4 family properties which had arrived in the HUD inventory by reason of the owner's default on an FHA-insured mortgage. To provide a more complete description of these properties, it is useful to review key characteristics which were recorded during the inspection.

The median year of construction of the homestead properties was 1943 (Figure II-1). Slightly over one-third of the properties were built after 1950 and slightly less than 10% of the properties were built after 1960. If we compare this distribution to the distribution of the age of all properties reported in the Annual Housing Survey for 1976, we see that whereas 42.9% of the sampled urban homestead properties were constructed before

Figure II-1

FREQUENCY DISTRIBUTION OF AGE OF SAMPLED HOMESTEAD PROPERTIES
(397 properties)



1939, 44.1% of the Annual Housing Survey central city properties fall into this category.[1] The urban homestead properties are quite comparable as a group to central city properties in the Annual Housing Survey SMSAs.

There are a number of available measures of the size of the urban homestead properties. These include the number of bedrooms, the number of rooms of all kinds, the area of floor space and the size of the lot. The distributions of each of these indices across the 397 sampled properties are presented in Figure II-2.

The median number of habitable rooms of the sampled urban homestead properties is 4.4, compared to the median of 4.7 rooms per central city dwelling unit and 5.7 rooms per central city owner-occupied dwelling unit in the Annual Housing Survey cities.[2] Mean living area and lot size for the urban homesteading properties were 1,479 square feet and 9,785 square feet, respectively. Taken as a group, the urban homesteading units tended to be somewhat smaller than the average of all units in the AHS central cities and, judged in terms of living area and lot size, very few of them could be considered to be particularly large.

HUD Estimates of Rehabilitation Costs and Market Values of the Urban Homestead Properties

The urban homestead properties were all inspected by HUD property disposition staff at the time of acquisition by HUD and before the properties were conveyed to the Demonstration Cities. On the basis of these inspections, independent estimates were developed by HUD of the cost of repairs to each property and of the market value of the property both "as-is" and after repair. Because these estimates were developed through inspec-

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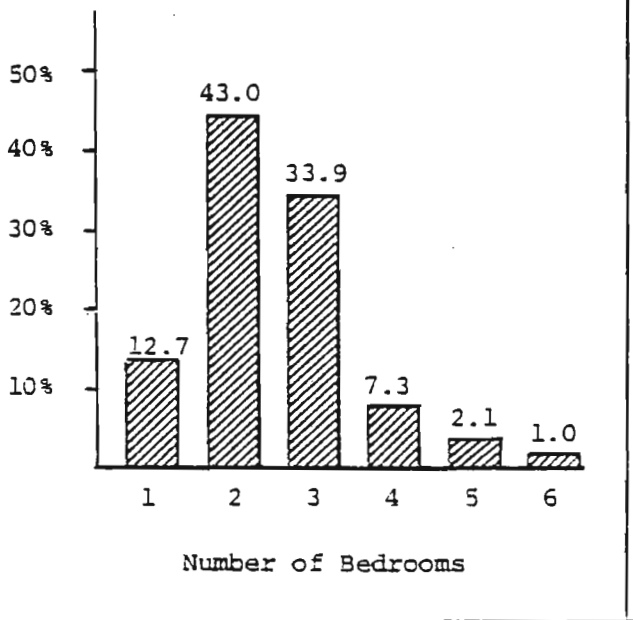
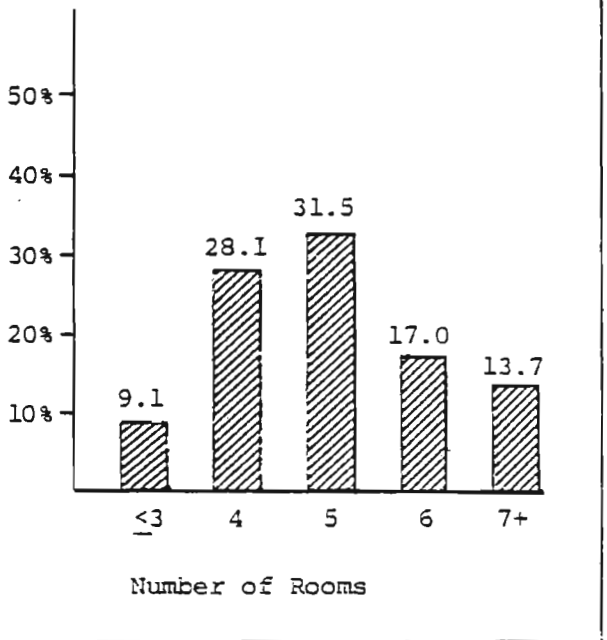
[1] Annual Housing Survey: 1976. United States & Regions Part A, General Housing Characteristics, Series H-150-74A.

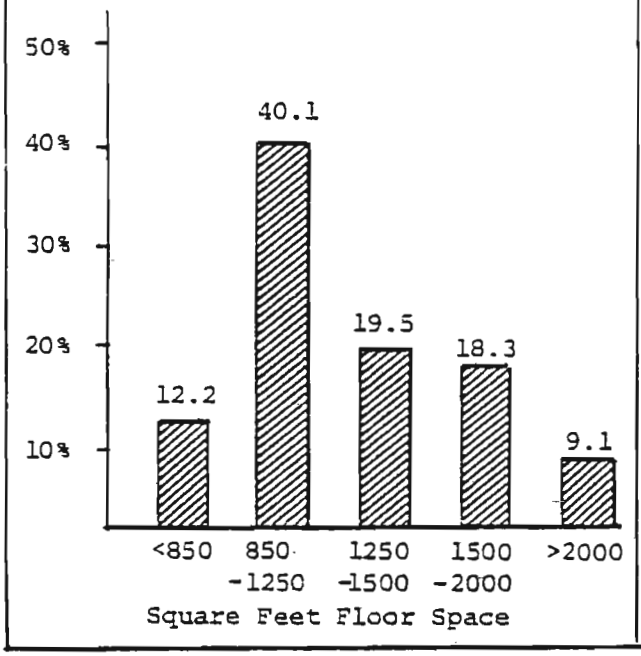
[2] Op. cit.

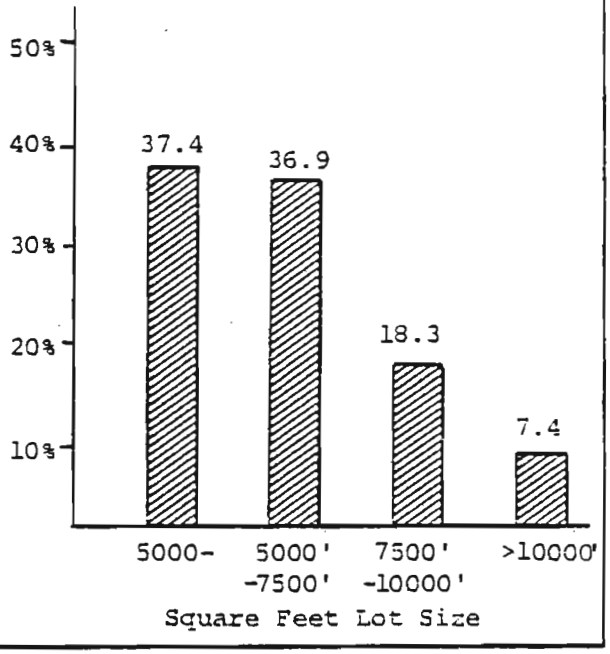
Figure II-2

DISTRIBUTIONS OF SELECTED INDICES
OF THE SIZE OF THE URBAN HOMESTEAD PROPERTIES
(397 properties)









tions of the property prior to conveyance and because they were all prepared by HUD property disposition staff using a common set of rules and procedures, they provide independent information on the value and condition of the sampled urban homestead properties.

The information on HUD market value and repair cost estimates is provided by the Closing Statements (HUD-9596) and by the Amendment to Schedule A of Broker Contract (HUD-9516). These forms were sent by HUD property disposition staff to HUD Central Office urban homesteading staff at the time of closing. Unfortunately, the coverage of these forms and the completeness of the information is somewhat lacking so that the information is not available for each of the inspected properties. Nevertheless, in view of its contribution to our knowledge of the condition of the properties before rehabilitation, the partial information is reported here.

A necessary component of the property disposition process is an estimate of the cost of repairing each property acquired from the HUD inventory. These estimates are available only for 139 of the 397 homestead properties on which inspections were performed. The average HUD repair cost estimate for these 139 properties was $6,547, which can be compared with $10,334 that homesteaders actually paid to contractors for the repair of the same properties. Adding to the labor figure the contributions which homesteaders themselves made through application of their own labor and through the direct purchase of materials, the estimated actual cost of rehabilitation on these properties by homesteaders (as if all the work had been done by contractors) is $15,823. This amount is almost two and one-half times the average HUD estimate of the repair costs on the same properties. There is not a single city in which the HUD repair cost estimates exceed the value of the actual repairs to the property made by the homesteaders. The average HUD repair cost estimates, actual contractor costs and actual contractor costs plus the

value of self-help work are presented for those cities where the HUD data are available in Table II-2.

It is evident from those data that the level of repairs contemplated by HUD is considerably less than the level of repairs either mandated by local urban homesteading programs or desired by urban homesteaders. There are a number of instances, to be sure, where the HUD repair cost estimate and the estimated value of the actual rehabilitation work performed are within $2,000 of one another (Dallas, Gary, Wilmington), but these are also the programs with the lowest actual rehabilitation cost. More common are instances in which the estimated city mean value of the actual rehabilitation work performed exceeds the comparable HUD estimate by over $10,000 (Boston, Chicago, Decatur, Jersey City, Oakland and Philadelphia).

It is possible to speculate on the reasons for these substantial differences between the repair cost estimates developed by HUD and the actual costs incurred by urban homesteaders in the rehabilitation of their properties. One possible explanation is that HUD property disposition staff attempt to limit repairs to the minimum requirements of local housing codes for occupancy leaving to the purchaser the choice of undertaking further improvements. Alternatively, the HUD repair cost estimates are not based on the assumption of more modest repairs, in which case they may simply be in error. This is unlikely, however, given the substantial experience which HUD property disposition staff have had in the repair of properties in recent years and in the absence of any obvious incentives to understate repair costs. It appears probable, therefore, that the HUD repair cost estimates are based on a much more modest level of contemplated repairs.

It might appear from a casual scrutiny of these numbers that there is little apparent relationship between the HUD repair cost estimates on the one hand and the actual rehabilita-

Table II-2

HUD REPAIR COST ESTIMATES, ACTUAL PAYMENTS TO CONTRACTORS AND TOTAL VALUE OF ACTUAL REHABILITATION WORK BY CITY (MEAN VALUES PER PROPERTY)

	Sample Size	HUD Repair Cost Estimates	Actual Payments to Contractors	Total Value of Actual Rehab
Atlanta	6	4,738	8,134	14,686
Boston	4	12,636	20,538	28,878
Chicago	18	3,758	10,706	16,848
Dallas	18	3,089	2,095	4,505
Decatur	6	7,723	14,242	29,777
Freeport	1	6,475	8,500	9,734
Gary	9	4,500	2,643	5,885
Islip	12	6,975	11,650	12,823
Jersey City	5	21,296	45,840	46,996
Kansas City	10	3,499	8,565	10,860
Minneapolis	9	14,096	14,214	20,157
New York City	4	12,351	13,020	18,790
Oakland	14	5,990	12,445	17,142
Philadelphia	19	6,217	13,806	19,212
South Bend	1	580	-0-	6,937
Wilmington	3	3,500	2,083	4,933
TOTAL	139	6,547	10,334	15,823

tion costs on the other hand. This is not the case. The correlation coefficient between the mean HUD repair cost estimates by city and the mean total value of actual rehabilitation by city is +0.85, convincing evidence that the observed differences reflect a systematic tendency for actual urban homesteading repair costs to vary with the corresponding HUD estimates.

In addition to information on estimated repair costs, the HUD Property Disposition documentation provides estimates of the market value of the urban homestead properties. These estimates are provided in some cases on a "cash as-is" basis and in some cases on an "after repair" basis. These estimates provide some direct evidence of the worth of the properties conveyed to urban homesteaders under the Section 810 program.

There are a number of statistics which shed light on the value of the urban homestead properties both before and after repair. In reviewing these, it is useful to begin with the cash "as-is" and "810" values of the properties. The difference between the two is explained by the carrying costs of the property which are typically deducted from the "as-is" value to arrive at the "810 value."[1] The "810 value" is then used as the amount by which each city's dollar allocation of properties is reduced on conveyance by HUD to the city. In Table II-3, the "as-is" and "810 values" are presented together with the differences between the two sets of numbers.

For the 218 properties for which the data are available from the Area Office files, the overall average "as-is" value of the homestead properties was $8,877. These mean values included four cities with average values below $6,000 (Boston, Dallas, Jersey City and Kansas City) and three cities with

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[1] In some cases, the "810 value" is arrived at by deducting estimated repair costs plus carrying costs from the estimated market value after repair. In these cases, the difference between the "810 value" and "as-is" value may be negative. (See Table II-3 for some instances of this.)

Table II-3

MEAN "AS-IS" VALUES AND "810 VALUES" BY CITY

City	Sample Size	"As-Is Value"	"810 Value"	Difference
Atlanta	14	10,543	5,353	5,190
Boston	4	4,800	4,799	1
Chicago	13	12,962	7,600	5,362
Cincinnati	7	7,443	6,168	1,275
Columbus	7	8,500	6,423	2,077
Dallas	29	5,543	1,844	3,699
Decatur	14	10,057	4,555	5,502
Freeport	10	13,830	10,573	3,257
Gary	21	11,024	4,407	6,617
Islip	12	13,000	9,861	3,139
Jersey City	5	4,400	2,860	1,540
Kansas City	10	5,450	6,482	(1,032)
Milwaukee	1	6,424	6,424	0
Minneapolis	14	6,804	5,691	1,113
New York City	4	10,125	7,130	2,995
Oakland	13	9,805	7,675	2,130
Philadelphia	25	8,164	2,640	5,524
South Bend	11	7,136	4,199	2,937
Wilmington	4	8,075	8,824	(749)
TOTAL	218	8,877	5,302	3,575

average values above $12,000 (Chicago, Freeport and Islip). The "carrying cost" adjustments had the effect of reducing the mean "810" value to $5,302, some $3,575 below the mean "as-is" value. It is no accident that the two cities with the lowest mean "810 values" (Dallas and Philadelphia) are also the two cities with the largest number of sampled properties; low "810 values" permit a local urban homesteading program to acquire more properties from a given dollar allocation.

For many of the properties, the HUD Property Disposition forms also include an estimate of the market value of the property after the repairs have been completed. It is interesting to compare the HUD after-repair estimates with the homesteader's own estimate of the property's value after repair, remembering that the cost of the actual repairs is significantly higher than the HUD estimates in each of the Demonstration Cities. In Table II-4, the differences between the homesteaders' and HUD's after-repair market value estimates are presented for the 141 properties for which all these data were available.

As Table II-4 shows, the homesteaders typically value their properties at about $8,500 higher than the comparable HUD after-repair market value estimates. At the same time, the homesteaders have expended just over $9,000 on rehabilitation work, both contracted and self-help, in excess of the HUD repair cost estimates (Table II-2). To a large extent, therefore, the differences between the HUD and homesteader market value estimates appear to be explained by differences in their assumptions about the extent and cost of the repairs performed on the properties.

To investigate the relationship between the homesteader after-repair market value estimates and the HUD after-repair market value estimates, a regression of homesteader market value estimate on the HUD market value estimate and the difference between actual and HUD-estimated repair costs was run. The results of this regression were:

Table II-4

DIFFERENCES BETWEEN HUD AND HOMESTEADERS' MEAN AFTER-REPAIR MARKET VALUE ESTIMATES BY CITY

City	Sample Size	Market Value Difference Homesteader Minus HUD Estimates
Atlanta	6	2,500
Boston	1	12,000
Chicago	16	7,500
Dallas	13	3,627
Decatur	15	8,170
Freeport	5	8,400
Gary	19	13,005
Islip	12	4,250
Jersey City	3	26,667
Kansas City	10	9,560
New York City	4	9,750
Oakland	8	7,356
Philadelphia	23	10,681
South Bend	12	6,252
Wilmington	4	5,025
TOTAL	141	8,435

$$Y = \underset{(3046)}{3304} + \underset{(0.158)}{1.175}X_1 + \underset{(0.07)}{0.17}(X_2 - X_3)$$

RSQ: 0.39

where

$Y \sim$ Homesteader estimate of the after-repair market value

$X_1 \sim$ HUD estimate of the after-repair market value

$X_2 \sim$ Estimated value of actual repairs to property

$X_3 \sim$ HUD repair cost estimate

These results indicate that the additional improvements made by the homesteaders are statistically significant contributors to the difference in the homesteader and HUD market value estimates. Each additional dollar of investment, however, contributes only modestly to the homesteader estimate of the property's value. The principal source of variation between the homesteaders' valuations of their property and the HUD market value estimates appears to be the greater optimism of the homesteaders, as reflected in the constant term and in the 17% premium on the HUD market value coefficient. Evidently some part of this premium may reflect general property value appreciation between the dates at which the two valuations were made.

In this chapter, we have described the sample of properties which were inspected. The characteristics of the homestead properties in terms of age and indices of size were presented and discussed. The information prepared by HUD property disposition staff on the estimated repair costs and market values of the homestead properties before they were selected for use in local urban homesteading programs was also examined. Together these data provide a reasonably comprehensive picture of the urban homestead properties before the rehabilitation work began. In the next chapter, we examine data on the nature and extent of the actual repairs performed on these properties.

Chapter III

REHABILITATION WORK ON THE URBAN HOMESTEAD PROPERTIES

During the inspections of the 397 sampled urban homestead properties, a record was made of all new work performed during the course of the rehabilitation. The instrument used in the conduct of the inspections listed, on a room-by-room basis, all possible items which could have been repaired or replaced.[1] These items were checked when there was evidence that they had been included in the rehabilitation work and, at the same time, they were classified according to whether the work had been performed by a contractor or by the homesteader. Additional information on the quality of the workmanship and the choice of materials was also recorded on an item-by-item basis for each room in the building.

These records provide the basis for a detailed description of the actual work performed during the course of urban homesteading rehabilitation. This is the subject of this chapter. The information on the quality of workmanship and materials is presented and examined in Chapter V.

In order to understand the scope and limitations of the data which are used to describe the actual work performed on the urban homestead properties, it is important to remember that the inspections were carried out after the rehabilitation work was substantially complete. It was possible, especially with the aid of the homesteader, to identify instances of new work

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[1] The inspection instrument is included as Appendix A to this report.

on the properties, but it was not possible to identify the extent of the work, as measured by labor hours and material costs for most of the completed tasks, especially those performed by contractors. To remedy this, a separate set of data was collected from the homesteader on his or her own labor hours and material costs. The allocation of contractor charges to particular tasks or types of work can only be done using statistical methods, however, since the homesteader was typically not familiar with the breakdown of contractor charges by tasks or types of work.

To describe the work performed on the urban homestead properties it is convenient to group work tasks into ten broad categories (Table III-1). The alternative, which is to report on individual tasks in terms of their frequency of occurrence, is not appealing because there are so many possible tasks and the actual effort which is committed to any one task is likely to vary quite sharply from one property to another.

Table III-1

CATEGORIES OF NEW WORK USED TO DESCRIBE REHABILITATION

1.	Plaster & Drywall	6.	Installation of Appliances
2.	Interior Finishes	7.	Plumbing & Fixtures
3.	Roofing & Siding	8.	Site Work & Secondary Structures
4.	Structural Alterations	9.	HVAC & Insulation
5.	Finish Carpentry	10.	Electrical Services & Fixtures

It is important to understand that the tasks and task categories used in the remainder of this chapter refer to a classification of the current physical attributes of the dwelling into two categories: included in the rehabilitation work and not included in the rehabilitation work. Because this classification is based on the current physical attributes of the dwelling, it excludes all work which involved the destruction or removal of the previously existing fabric of the building. Apart from demolition work, which is treated explicitly in the analysis of self-help in the next chapter, all other rehabilitation tasks are included in the analysis of this chapter.

Breakdown of Rehabilitation By Work Category

The rehabilitation audit instrument identified 161 possible items of work or tasks which could have been performed during the course of rehabilitation. On average, 36.3 tasks were performed on each of the urban homestead properties. Across all the properties, a total of 14,404 tasks were identified and recorded. In Table III-2, the breakdown of these tasks into the ten task categories is presented. The percentages of the tasks within each category which were performed by a contractor, by the homesteader or by the two working together are also presented.

Examination of the first three columns of Table III-2 indicates that work related to interior finishes accounted for the largest number of separately identifiable tasks. This category accounted for over a quarter of all the tasks performed. However, because tasks may vary in average costs or self-help effort from one Task Category to another, this does not mean that Interior Finishes accounted for over a quarter of the total costs of rehabilitation. Only two other Task Categories (Structural Alterations & Replacements and Installation of Appliances) accounted for more than 10% of the total of all tasks performed.

Table III-2

BREAKDOWN OF WORK BY TASK CATEGORIES

Task Category	Number of Tasks Performed	Mean Number Per Property	% of All Tasks Performed	Tasks Performed as % of Total Possible	% Performed by		
					Contractor	Home-steader	Joint
Plaster & Drywall	1,398	3.5	9.7	14.7	61.3	36.0	2.7
Interior Finishes	4,120	10.4	28.6	25.9	50.1	46.8	3.0
Roofing & Siding	421	1.1	2.9	9.6	79.6	19.2	0.7
Structural Alterations & Replacements	1,784	4.5	12.4	15.5	69.4	25.4	5.0
Finish Carpentry	1,211	3.1	8.4	27.8	73.6	24.3	2.0
Appliance Installation	1,520	3.8	10.6	42.6	20.8	74.8	3.7
Plumbing & Fixtures	1,385	3.5	9.6	34.9	77.3	21.1	1.3
Site Work & Secondary Structures	1,116	2.8	7.7	17.6	59.8	36.7	3.3
HVAC & Insulation	557	1.4	3.9	23.4	67.3	29.8	2.3
Electrical Services & Fixtures	892	2.2	6.2	44.9	73.8	21.9	4.2
TOTAL	14,404	36.3	100.0	22.5	58.8	37.9	3.0

In the fourth column of Table III-2, the percentage of all possible tasks performed is presented. These statistics give a sense of the comprehensiveness of rehabilitation work in the aggregate (22.5%) and within each task category. The percentages presented in this column of the table are calculated as the ratio of the total number of tasks performed within each task category and the maximum possible number of tasks which could have been performed within the task category. Thus, in the "Plaster & Drywall" task category, there were a total of 24 possible tasks which could have been performed on any one property. The mean number of tasks actually performed in this category was 3.52 which is 14.7% of the maximum number of possible tasks within the category. Examination of the percentage of all possible tasks performed, presented in Column 4 of Table III-2, indicates that the task categories with the most complete coverage of new work activities were: Electrical Services & Fixtures (44.9%), Appliance Installation (42.6%), Plumbing &

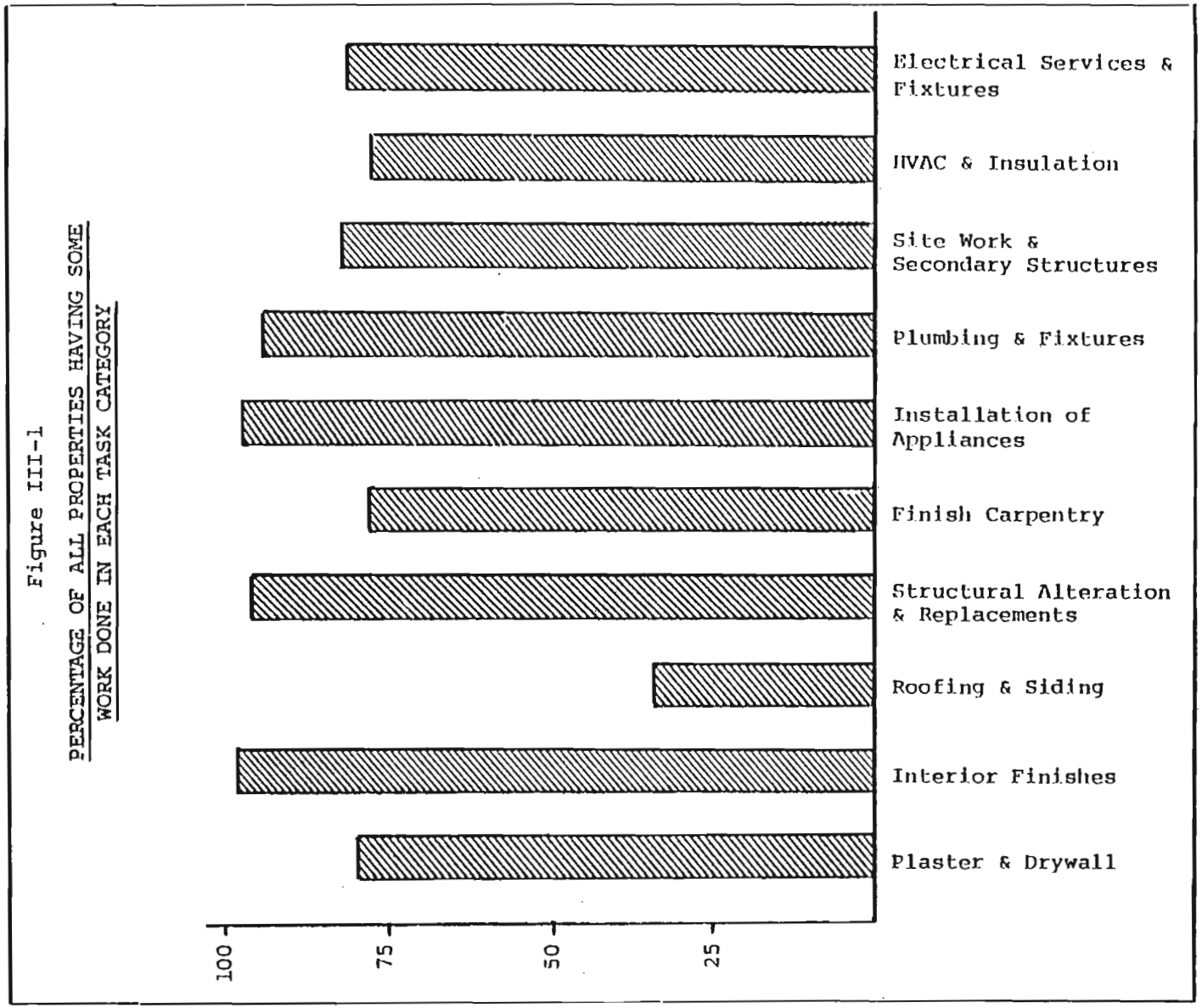
Fixtures (34.9%). In each of these categories between one-half and one-third of all the items which might need repair and replacement were, in fact, repaired or replaced. At the other end of the range, the Task Categories in which the relatively fewest number of items required repair or replacement were Roofing & Siding (9.6%), Plaster & Drywall (14.7%) and Structural Alterations & Repairs (15.5%). In each of these task categories, fewer than one-sixth of all possible items had been repaired or replaced during rehabilitation.

The last three columns of Table III-2 indicate the percentage of all tasks performed by a contractor, by the homesteader or by both a contractor and the homesteader working in conjunction. Overall, 58.8% of all tasks were performed by contractors, with the task categories having the highest frequency of contractor work being Roofing & Siding (79.6%), Plumbing & Fixtures (77.3%), Electrical Service & Fixtures (73.8%), and Finish Carpentry (73.6%). At the other extreme is Appliance Installation (20.8%), which was mainly performed by homesteaders. This division of labor between contractors and homesteaders evidently reflects the different skill requirements of different task groups.

Another way to examine the rehabilitation work on the urban homestead properties is to enumerate the number, or percentage of properties, that had some work done in each of the ten task categories. In Figure III-1, the percentage of all sampled properties having one or more tasks undertaken within each of the task categories is presented. It is apparent from examination of Figure III-1 that very few properties were in such good repair that they required no work in the major task categories. In nine of the ten categories, over three-quarters of the properties required at least some work to be performed and in four of the ten categories, less than one in ten properties needed no repair work to be performed.

Figure III-1

PERCENTAGE OF ALL PROPERTIES HAVING SOME WORK DONE IN EACH TASK CATEGORY



Analysis of Contractor Costs by Task Category

The distribution of the number of tasks performed by contractors within each task category provides an impressionistic, rather than statistical, description of the contracted work effort on the urban homestead properties. The individual tasks whose frequency is reported within each task category are by no means comparable in terms of the average effort, or contract cost, which went into their performance. The fact that one task category accounted for twice as many tasks performed as another task category does not mean that twice the effort went into the first category as into the second, because the average cost per task may be very different between the two groups.

Homesteaders were able to provide information on the aggregate cost of contracted work and to identify those tasks which were performed by the contractor; but, information on the breakdown of contractor bills between tasks or task categories was not available from the homesteader at the time of inspection. Direct estimates of the labor and materials costs of each contracted task could not be made during the on-site inspection, because the condition of the property prior to repair was unknown. The only means of assessing the breakdown of contractor work between tasks is, therefore, through statistical analysis of the relationship between the total contract cost on the one hand and the frequency of tasks performed within each category on the other hand.

As a first step in the statistical analysis of task frequency and costs, a simple regression of contract costs on the number of tasks of all kinds performed on each property was carried out. The resulting regression equation was:

$$\text{Contract Costs} = \underset{(423.0)}{66.64} + \underset{(14.7)}{343.5}\ (\text{Number of Tasks})$$

RSQ: 0.59

The remarkable precision of the coefficient on the number of tasks, the small size and insignificance of the intercept and the excellent fit of the regression to cross-sectional data all contribute to a highly convincing result. The interpretation of the slope coefficient ($343.50) is the average cost per contracted task.

To analyze the breakdown of contract costs by Task Category, an analogous multiple regression of total contract costs on the number of tasks performed in each task category was performed. The form of the regression equation was:

$$\text{Contract Costs} = \beta_o + \sum_i \beta_i n_i$$

In this equation n_i corresponds to the number of tasks performed within the i^{th} task category. In the first regression, two of the Task Category slope coefficients proved negative and insignificant; these, and another highly insignificant coefficient, were dropped in the second regression. The Task Category slope coefficients in both regressions (Table III-3) are interpreted as the average cost for tasks within that category.

The regression results suggest that the Plaster & Drywall and Interior Finish tasks are typically less expensive than those requiring more professional skills (Structural Alterations, Finish Carpentry, Plumbing, HVAC and Electrical). Among these tasks, the electrical work is estimated to be the most expensive, at around $1,000 per task. The intercept is negative in both regressions, but highly insignificant. The addition of between 6 and 9 coefficients only improves the multiple correlation coefficient from 0.59 in the simple regression in which

Table III-3

REGRESSIONS OF CONTRACT COSTS ON
FREQUENCY OF TASKS BY TASK CATEGORY

Variable	Regression I	Regression II
Constant	-262.2 (456.8)	-327.1 (452.9)
Plaster & Drywall	166.1 (128.5)	183.0 (127.3)
Interior Finishes	119.1 (747.0)	99.7 (73.2)
Roofing & Siding	-462.7 (336.6)	-
Structural Alterations	660.7 (152.0)	609.4 (145.9)
Finish Carpentry	615.8 (196.9)	583.8 (186.1)
Appliance Installation	-122.9 (259.0)	-
Plumbing & Fixtures	513.8 (190.1)	519.7 (187.8)
Site Work	27.5 (160.1)	-
HVAC & Insulation	672.0 (305.6)	624.8 (303.0)
Electrical Service	1015.0 (256.6)	988.6 (252.4)
RSQ (d.f.)	0.62 (377)	0.62 (380)

all tasks are pooled to 0.62 when tasks are disaggregated into Task Categories.

The extremely modest increase in the multiple correlation coefficient between the regression with tasks aggregated across task categories and the regression with tasks disaggregated into 10 separate task categories is quite surprising. This undoubtedly reflects the very "soft" nature of the definition of individual tasks and the large variance in the level of costs per task within the Task Categories. On the other hand, the variance in the mean cost per task between Task Categories is rather small with over half the coefficients in Regression II lying within an interval of $105 ($519.70-$624.80). In situations where the "within" category variances are much larger than the "between" category variances, the addition of categorical dummies will not contribute greatly to the fit of the regression.

The regression coefficients, when combined with the actual number of tasks performed within each Task Category, can be used to estimate the breakdown of contractor costs between categories. The breakdown is necessarily inexact because of the intercept term and the existence, or omission, of Task Categories with negative and insignificant coefficients. Using the coefficients from the second regression and the mean number of contracted tasks performed for each of the seven categories included in the regression, the breakdown of contractor dollar costs can be calculated (Table III-4).

Table III-4

ESTIMATED BREAKDOWN OF CONTRACTOR DOLLAR COSTS (7 TASK CATEGORIES)

Task Category	Mean # of Tasks/ Property	Mean Cost/ Task	Estimated Cost per Property	Estimated % of Total Costs
Plaster & Drywall	2.16	183.0	$ 395	5.1%
Interior Finishes	5.20	99.7	519	6.7
Structural Alterations	3.12	609.4	1,901	24.5
Finish Carpentry	2.24	583.8	1,308	16.8
Plumbing & Fixtures	2.70	519.7	1,403	18.1
HVAC & Insulation	0.94	624.8	587	7.6
Electrical Service	1.66	988.6	1,641	21.2
Total	18.02	-	$7,754	100%

Structural Alterations and Electrical Service repairs and replacements together are estimated to account for almost 46% of contractor costs. Interior Finishes and Plaster/Drywall, although accounting for 46% of all the tasks performed within the seven categories, account for only 12% of the dollar costs of contractor rehabilitation. The remaining 88% of contractor costs appears to fall into the task categories which require construction skills that are typically not possessed by homesteaders. This suggests that opportunities for further substitution of self-help labor for contracted rehabilitation may be quite limited.

Analysis of Homesteader Purchased Material Costs by Task Category

In addition to payments to contractors, homesteaders also incur cash obligations for materials which they purchase directly. It is possible, using multiple regression methods as before, to examine the breakdown of the directly purchased materials by Task Category. To carry out this analysis, total costs for materials purchased by the homesteader were regressed on the number of tasks performed within each task category, both by the homesteader and by the homesteader and the contractor jointly. The form of the regression is:

$$\text{Purchased Materials Cost} = \beta_o + \sum_{ij}\sum \beta_{ij} n_{ij}$$

where n_{ij} denotes the number of tasks performed either by the homesteader or by the homesteader and the contractor jointly ($i = 1,2$) in the j^{th} Task Category. The regression results are presented in Table III-5.

The coefficients of the regression of direct materials purchases on the number of self-help and joint tasks by task category are not particularly reliable, as evidenced by the standard errors. The regression equation as a whole achieves a reasonably good fit to the data, the intercept is very close

Table III-5

REGRESSION COEFFICIENTS: DIRECT MATERIALS PURCHASES ON THE NUMBER OF TASKS PERFORMED BY TASK CATEGORY (HOMESTEADER & JOINT)

Task Category	Homesteader	Homesteader & Contractor
Constant	-3.48 (116.0)	
Plaster & Drywall	62.9* (28.0)	0.7 (82.4)
Interior Finishes	37.8* (14.8)	54.4 (43.7)
Roofing & Siding	8.2 (111.4)	181.7 (371.3)
Structural Alterations	100.6* (43.1)	121.2 (81.8)
Finish Carpentry	148.9* (50.4)	667.4* (182.4)
Appliance Installation	14.3 (36.1)	-28.6 (91.4)
Plumbing & Fixtures	9.6 (49.7)	399.4* (174.2)
Site Work	116.5* (45.1)	220.7 (127.7)
HVAC & Insulation	248.9* (77.3)	637.3* (229.7)
Electrical Service	34.0 (67.2)	79.8 (133.0)
RSQ: 0.51		

*Denotes significance at 99% level.

to zero and without any constraints, only one of the twenty slope coefficients is negative. The coefficients can be used to estimate the percentage of total direct material purchases accounted for by each Task Category (Table III-6).

Use of the regression coefficients to estimate the percentages of direct material purchases for each of the major task categories shows Interior Finishes and Finish Carpentry together accounting for over 40% of the total cost of materials purchased directly by the homesteader. At the other extreme, the Roofing & Siding, Plumbing & Fixtures and Electrical Service Task Categories together account for less than five percent of homesteader cash outlays for materials.

The Time Required to Complete Rehabilitation

For seventy-three percent of the sampled properties, rehabilitation had been started in 1976 and the remaining 27% were started in 1977. Sixty-one percent were first occupied in 1976, 36% in 1977, and the remaining 3% in 1978. On average, three months elapsed from the time rehabilitation was begun until the homesteader moved into the property. Typically, rehabilitation continued for a significant period of time after occupancy.

Of the sampled properties, 11% had rehabilitation completed by the end of 1976, 80% were completed by the end of 1977, and, by the end of 1978 all but 1% of the sampled properties were fully repaired.[1] The average length of time to complete rehabilitation was 11.5 months (Figure III-2).

The distribution of the length of time to complete rehabilitation is of some interest. More than a third of the properties are accounted for by the two highest frequencies (0-3 months

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[1] An effort was made to inspect only properties on which rehabilitation was fully completed. Notwithstanding this effort, 4 properties were found to be not completed at the time of the inspection.

Table III-6

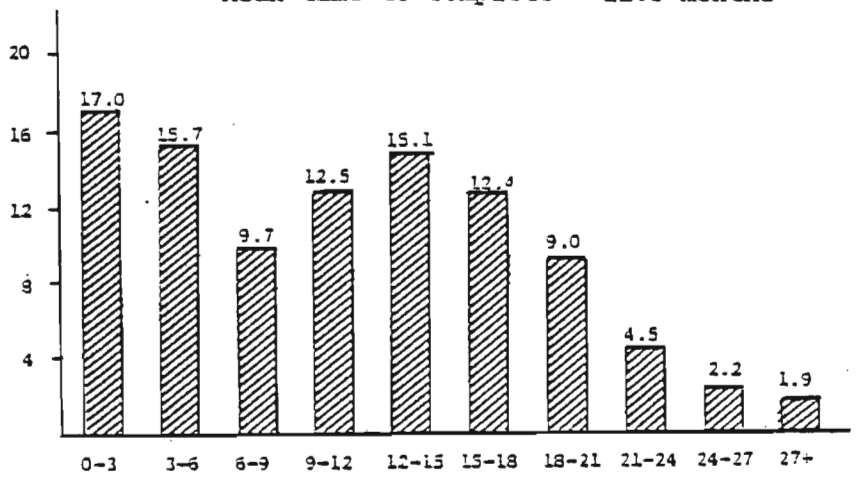
ESTIMATED BREAKDOWN OF DIRECT MATERIAL PURCHASES (10 TASK CATEGORIES)

Task Category	(1) Mean # of Homesteader Tasks	(2) Average Cost per Task (β_{1j})	(3) Mean # of Joint Tasks	(4) Average Cost per Task (β_{2j})	(5) Estimated Cost: (1)x(2)+(3)x(4)	(6) Percentage of Total
Plaster & Drywall	1.27	$ 62.90	0.10	$ 0.70	$ 79.95	8.4%
Interior Finishes	4.85	37.80	0.31	54.40	200.19	21.1
Roofing & Siding	0.20	0.20	0.01	181.70	3.46	0.3
Structural Alterations	1.14	100.60	0.22	121.20	141.34	14.8
Finish Carpentry	0.74	140.90	0.11	667.40	183.59	19.3
Appliance Installation	2.86	14.30	0.14	(28.60)	36.85	3.8
Plumbing & Fixtures	0.73	9.60	0.04	339.40	17.50	1.8
Site Work	1.03	116.50	0.09	220.70	139.85	14.7
HVAC & Insulation	0.42	240.90	0.03	637.30	123.66	13.0
Electrical Service	0.49	34.00	0.09	79.00	23.84	2.5
TOTAL	13.75		1.09		$950.31	100.0%

Figure III-2

DISTRIBUTION OF THE LENGTH OF TIME TO COMPLETE REHABILITATION
(397 properties)

Mean time to complete = 11.5 months



and 3-6 months); thereafter the distribution assumes a more "normal" appearance with the next highest frequency occurring in the interval 12-15 months. One property in six required more than 18 months to complete rehabilitation; this should be viewed in the light of the Section 810 requirement that rehabilitation be completed within 18 months of occupancy of the property.[1] Evidently, a significant amount of rehabilitation

[1]The dates of the beginning and completion of rehabilitation on individual properties were provided by staff of the local urban homesteading programs. It is possible that local programs may have interpreted "beginning" and "completion" in different ways. In particular, some programs may have considered "completion" as the condition of being substantially complete and some may have considered them as completed only when the final inspection had been performed. This possible source of error is inherent in the nature of the data collection procedures.

was performed prior to occupancy. Homesteaders reported that, prior to occupancy, electricity was turned on in 89% of the properties, exterior work was completed in 47% of the properties, work on interior walls and ceilings had been completed in 49% of the properties, and landscaping work was completed on 31% of the properties.

Analysis of the determinants of the length of time required to complete rehabilitation is clearly of interest in terms of the light it sheds on alternative approaches to the management of urban homestead rehabilitation. The average number of months required to complete rehabilitation is shown in Table III-7 for each city, together with the sample sizes and standard deviations. It is apparent, both from casual scrutiny and from the multiple correlation coefficient ($R^2 = 0.39$), that there is significant variation in the speed with which rehabilitation is completed in different cities.[1]

The variation in the average length of time required to complete rehabilitation can be explained in part by the prior classification of cities in terms of the "degree of control" they exercise over the rehabilitation process.[2] The first group of cities, which were expected to exercise the most control over the rehabilitation process and to push for rapid completion of repairs, average 7.1 months to complete rehabilitation -- almost 4½ months faster than the average of all properties in the sample. The second group of cities, which were believed to allow for more sweat equity and homesteader involvement, averaged 11.2 months to complete rehabilitation. The third group of cities, which were believed to exercise the least stringent control, averaged almost exactly one year to complete repairs on their urban homestead properties. These findings provide some support for the validity of the classification of cities

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[1] The multiple correlation coefficient in Tables III-7 and III-8 is the same as the R^2 generated by a regression of the dependent variable on the 22 city dummies and corresponds to the proportion of the total variance "explained" by the city classification.

[2] See Chapter I, page 4.

Table III-7

MEAN TIME REQUIRED TO
COMPLETE REHABILITATION BY CITY

City	Sample Size	Mean Time to Complete Rehab (Months)	Standard Error
Atlanta	13	5.2	1.6
Baltimore	2	5.0	4.0
Boston	3	3.7	3.3
Chicago	19	14.8	1.3
Cincinnati	6	13.0	2.3
Columbus	8	14.6	2.0
Dallas	43	14.6	0.9
Decatur	13	3.6	1.6
Freeport	9	8.8	1.9
Gary	28	11.8	1.0
Indianapolis	24	16.9	1.2
Islip	9	15.8	1.9
Jersey City	5	7.0	2.5
Kansas City	12	8.9	1.6
Milwaukee	11	16.4	1.7
Minneapolis	14	16.0	1.5
New York City	4	7.0	2.8
Oakland	19	2.9	1.3
Philadelphia	25	12.9	1.1
Rockford	30	10.6	1.0
South Bend	17	15.8	1.4
Tacoma	14	4.4	1.5
Wilmington	14	10.7	1.5
TOTAL	342	11.5	0.4

$R^2 = 0.39$

Table III-8

MEAN RATES OF CONTRACT COST EXPENDITURES BY CITY

City	Contract Costs/ Time to Complete Rehab (Months)	Standard Error
Atlanta	$3,538	$461
Baltimore	$2,282	$1,129
Boston	$5,464	$922
Chicago	$ 999	$366
Cincinnati	$1,030	$714
Columbus	$1,075	$565
Dallas	$ 233	$278
Decatur	$4,061	$443
Freeport	$2,663	$604
Gary	$ 152	$313
Indianapolis	$ 260	$349
Islip	$ 661	$565
Jersey City	$9,352	$799
Kansas City	$1,251	$461
Milwaukee	$ 545	$532
Minneapolis	$1,424	$427
New York City	$3,168	$799
Oakland	$4,841	$376
Philadelphia	$2,081	$326
Rockford	$1,129	$297
South Bend	$ 193	$412
Tacoma	$ 979	$482
Wilmington	$1,908	$443
TOTAL	$1,575	$386

RSQ 0.54

in terms of the degree of control exercised over the rehabilitation process.

A natural extension of this analysis is to examine the effect of the size of the job on the time required to complete rehabilitation. By dividing the total contractor cost on each job by the length of time required to complete the work, the average "rate" of contracted work per month per property can be estimated. Averages for each city of these "rates" of performance are presented in Table III-8. Notice that the city classificatory variables "explain" 54% of the variance in these "rates" of performance across properties.

The model implicit in this analysis of "rates" of performance is of the form:

$$t = \frac{1}{\mu_i} \cdot c$$

where μ_i denotes the city-specific constant "rate" of performance, measured in contract dollars expended per month, and c and t denote, respectively, contractor costs and time required to complete rehabilitation. A further variant on this model can be used to examine the influence of self-help work on the time required to complete rehabilitation. In this variant, the ratio of self help value(s) to contractor costs is introduced in a way which allows it to modify the effect of contracted costs on the length of time required to complete rehabilitation.

$$t = \frac{1}{\mu_i}\left(\frac{s}{c}\right)^{-\lambda} \cdot c$$

This relationship was estimated by regressing the logarithm of (c/t) on the city dummies (δ_i) and the logarithm of the ratio (s/c):

$$Ln\left(\frac{c}{t}\right) = \alpha + \lambda Ln\left(\frac{s}{c}\right) + \Sigma \mu_i \delta_i$$

The estimated coefficients and standard deviations are presented in Table III-9. The regression equation demonstrates a remarkable

goodness of fit, with a multiple correlation coefficient of 0.785. The city dummies, which reflect differences from the rate of contracted cost expenditure in Wilmington, whose dummy variable is suppressed, clearly indicate significant inter-city variations. Lastly, the effect of increases in the ratio of self-help to contracted costs (λ) is highly significant and of the appropriate sign. It indicates an elasticity of -0.56 between the rate at which costs are incurred and the ratio of self-help to contracted value. In other words, doubling the ratio of self-help to contracted work will, holding contractor costs constant, increase the time to complete the work by 56%.

Table III-9

REGRESSION COEFFICIENTS & STANDARD ERRORS

REGRESSION EQUATION $Ln(c/t) = \alpha + \lambda Ln(s/c) + \sum_i \mu_i \delta_i$

$\alpha = 5.76$ (0.26)

$\lambda = -0.56$ (0.03)

City Dummies (Wilmington Suppressed)

Atlanta	0.28 (0.37)	Islip	-1.05 (0.43)
Baltimore	0.08 (0.71)	Jersey City	-0.19 (0.55)
Boston	1.71 (0.59)	Kansas City	-0.23 (0.37)
Chicago	-0.04 (0.33)	Milwaukee	-0.46 (0.41)
Cincinnati	0.18 (0.48)	Minneapolis	0.11 (0.36)
Columbus	-0.61 (0.41)	New York City	1.15 (0.53)
Dallas	-1.40 (0.30)	Oakland	1.08 (0.34)
Decatur	0.59 (0.37)	Philadelphia	0.21 (0.32)
Freeport	0.28 (0.43)	Rockford	-0.43 (0.31)
Gary	-1.09 (0.32)	South Bend	-0.77 (0.36)
Indianapolis	-1.14 (0.33)	Tacoma	-0.09 (0.38)

RSQ = 0.78

Chapter IV

HOMESTEADER SELF-HELP CONTRIBUTIONS

One of the particular features of urban homesteading is that it provides a means for individuals to help themselves through direct contributions of their labor and skills to the rehabilitation of their new properties. These self-help efforts, often referred to as investments of "sweat equity," are only possible when title passes to the new owner before the repairs are complete. Under these circumstances, the homesteader may be able, through his or her own efforts, to effect significant reductions in the cost of rehabilitation and, consequently, in the amount of debt they must incur to repair the property. In addition to the financial benefits which may be acquired through self-help efforts, the direct involvement of the homesteader in the rehabilitation work may serve to increase the homesteaders' attachment to the property and lead to better maintenance practices after the initial repairs are completed.

From the perspective of the local government agency responsible for urban homesteading, self-help may appear to be a mixed blessing. Reductions in the cost of rehabilitation are obviously desirable. However, the management of self-help rehabilitation can be difficult and demanding and the danger does exist that homesteaders may be unrealistic in their assessment of the time and skills required to carry out their part of the rehabili-

tation effort. Consequently, many of the Demonstration Cities have been reluctant to allow homesteaders to make all the decisions themselves. In particular, many of the Demonstration Cities have made sure that work on mechanical systems be performed by licensed tradesmen and that homesteaders demonstrate that they have the necessary skills and time to perform the work to which they wish to commit themselves. In some cases, cities have executed written self-help construction contracts with homesteaders, have conducted skill tests, have provided training in construction methods and have provided regular technical assistance to the homesteaders during the course of the work. Information on the approaches adopted by individual programs to the planning and management of the self-help component of rehabilitation has been provided in earlier reports of the project.[1]

Descriptions of the differences in approach adopted by local urban homesteading programs tell us little about the extent and nature of self-help rehabilitation in the Demonstration. To fill this need, the inspections of homestead properties collected information in considerable detail on the work which homesteaders undertook themselves, materials which they acquired directly rather than through contractors, the hours of work which they or their friends and family put into the repair of their properties and the costs of the materials which they acquired. To support estimates of the value of the homesteaders' contributions, separate computations were made of the additional dollar costs which they would have incurred if the work had been fully contracted out and the homesteaders had not invested their own time and effort in the properties. In presenting this information, we begin with a descriptive account of the self-

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[1] The Urban Homesteading Catalogue, Volume I, pp. 87-109. U.S. Department of Housing and Urban Development, August 1977.

help work performed by homesteaders. Subsequently, we examine the variation in the extent of self-help between cities, and examine the dollar return to self-help labor in different construction trade categories.

The Extent and Nature of Self-Help Work in the Demonstration

Information on the work performed by homesteaders and on the materials which they acquired directly, rather than through contractors, was collected during the course of the home inspections. Each job performed by the homesteader was recorded together with the hours which the homesteader spent on the job and the costs and quantities of purchased materials.[1]

The homesteaders, their families and friends spent an average of 297 hours on the rehabilitation of the homestead properties, or 7½ weeks of 40 hour work weeks. In addition, homesteaders purchased an average of $834 worth of materials for use in the rehabilitation of the homestead property. The distribution of the number of self-help hours and the costs of materials purchased by the homesteaders are presented in Figures IV-1 and IV-2.

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[1]The "jobs" which were recorded for the self-help work do not correspond to the "tasks" used to describe the extent and nature of rehabilitation work in the last chapter. These self-help "jobs" include demolition work, as well as the replacement and repair of components of the building and they were not recorded by means of pre-defined categories.

Figure IV-1

DISTRIBUTION OF SELF-HELP HOURS

(Mean = 297 hours)

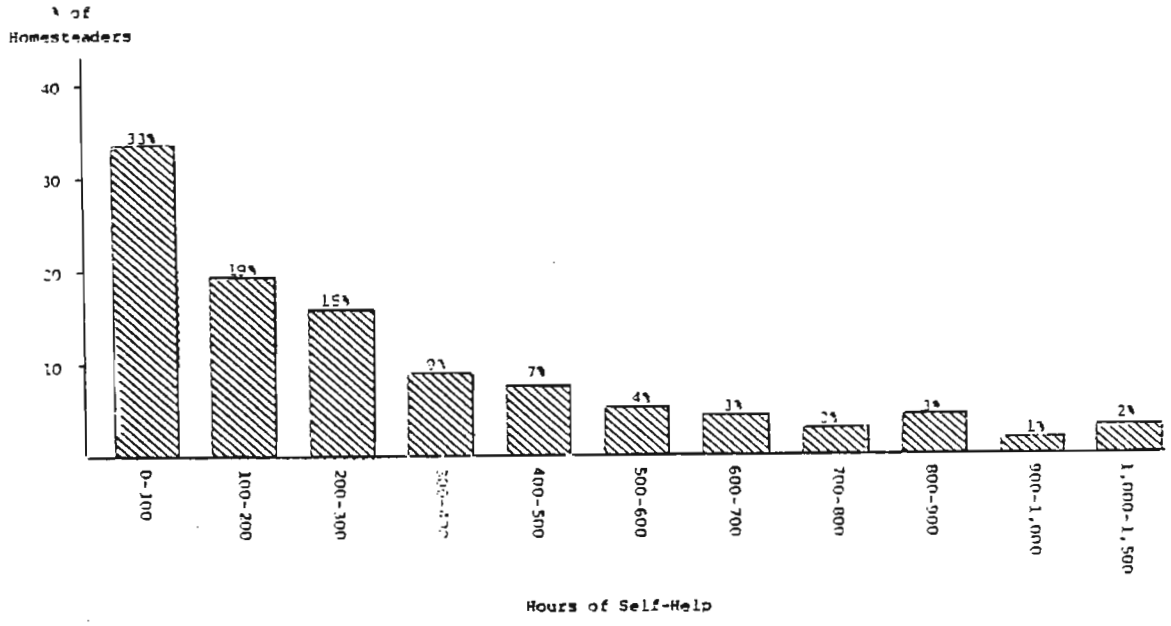
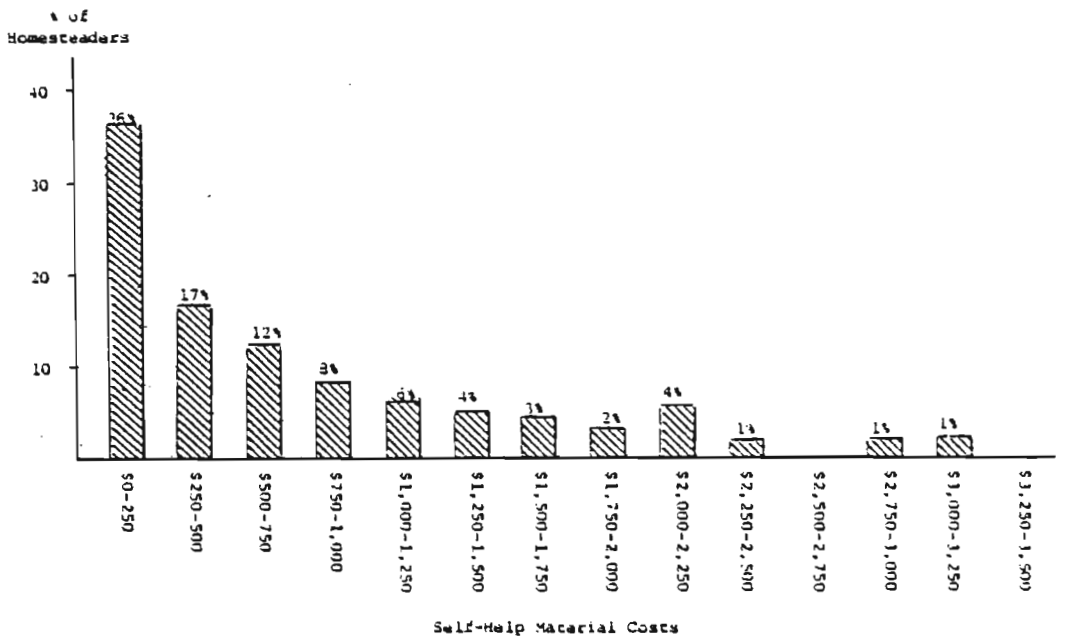


Figure IV-2

DISTRIBUTION OF SELF-HELP MATERIAL COSTS

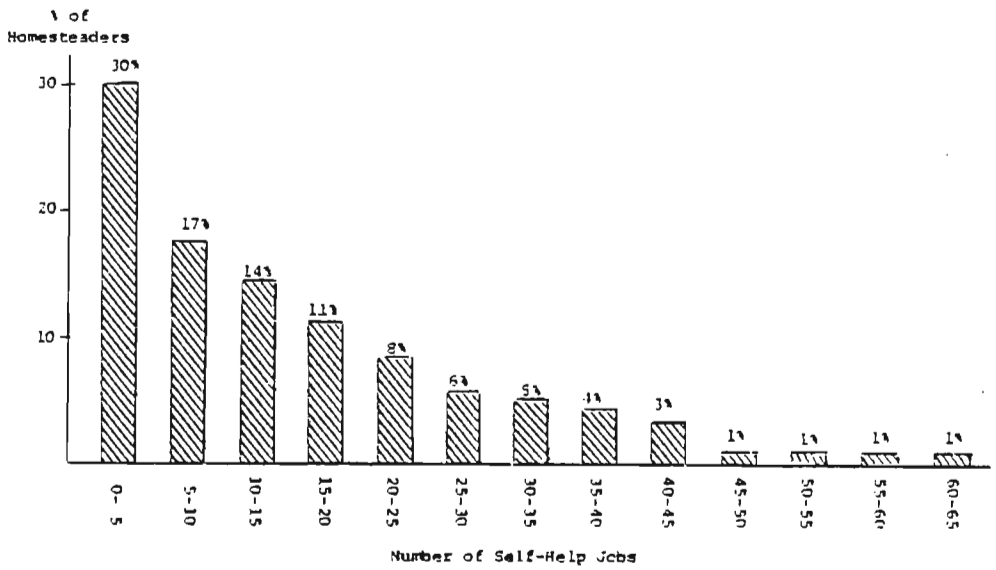
(Mean = $834)



The number of hours spent and the aggregate materials costs incurred by each homesteader were calculated as the sum of hours and material costs for each job which the homesteader performed. The total number of jobs performed across all 397 properties was 6,224, or an average of 15.7 jobs per property. The distribution of the number of jobs performed by the homesteader is shown in Figure IV-3.

Figure IV-3

DISTRIBUTION OF NUMBER OF SELF-HELP JOBS
(Mean = 15.7 jobs)



To provide a better understanding of the types of work which the homesteaders undertook on their own behalf, the jobs which they performed were organized into 16 separate categories of activity. The distribution of the self-help hours across these categories is shown in Table IV-1.

Table IV-1

DISTRIBUTION OF SELF-HELP HOURS AND MATERIALS PURCHASED BY THE HOMESTEADER BY JOB CATEGORY

Job Category	Average Hours (% of Total Hours)	Average Number of Jobs (% of all Jobs)
Demolition	91 (31)	2.3 (15)
Site Work	21 (07)	1.0 (07)
Concrete	1 (01)	0.1 (01)
Masonry	4 (01)	0.1 (01)
Carpentry	24 (08)	1.5 (10)
Metal Work	0 (00)	0.0 (00)
Thermal & Moisture Protection	10 (03)	0.5 (04)
Doors & Windows	18 (06)	1.6 (10)
Finishes	105 (35)	5.6 (36)
Specialties	3 (01)	0.6 (04)
Mechanical	13 (04)	1.1 (07)
Electrical	6 (02)	1.1 (07)
TOTAL	297 (100)	15.7 (100)

This distribution of self-help hours provides an interesting characterization of the types of work undertaken by the homesteaders. Demolition and site work between them account for 38% of all the hours which homesteaders spent on the rehabilitation of their properties. Work on finishes of various kinds accounted for a further 35% of homesteader self-help hours. On average, homesteaders spent only 6% of their time on the mechanical and electrical systems of the building and very modest amounts of effort on concrete, masonry, metal work and carpentry. These statistics make it clear that homesteaders concentrated their efforts heavily on the lower-skill jobs, and that these jobs provided opportunities for the homesteaders to contribute quite significant amounts of time to the rehabilitation of their

properties. On average, homesteaders reported just under 16 separately identifiable jobs which they had performed on their properties. Of these, work on finishes was most frequent, accounting for over a third of all jobs performed.

A more useful measure of the contribution of self-help to the rehabilitation of urban homesteads is provided by estimates of the amount of contractor costs which were avoided through self-help activities. The equivalent contractor cost for each job performed by a homesteader was estimated on the basis of contractor labor and materials costs plus contractor's overhead, profit and contingency fees. This was done using unit costs for labor and materials for each of the jobs identified as having been performed by the homesteader.[1] These unit costs were adjusted to reflect inter-city differences in labor and materials costs, and inflation factors were also included. By this means, it was possible to estimate, for each job performed by a homesteader, what the job would have cost if it had been fully contracted out.

The average amount of savings in contractor costs which was achieved by self-help activities was estimated to be $2,063 per property. This was made up of two parts: (1) savings attributable to self-help labor (i.e., contractor cost avoided): $1,716 per property; (2) net savings attributable to direct material purchases by the homesteader (i.e., the amount contractors would have charged for materials purchased directly by the homesteader ($1,181) less the costs actually incurred by the homesteader ($834): a savings of $347 per property. The distributions of contractor costs avoided per property, for labor costs, material costs and in the aggregate, are presented in Figures IV-4 through IV-6.

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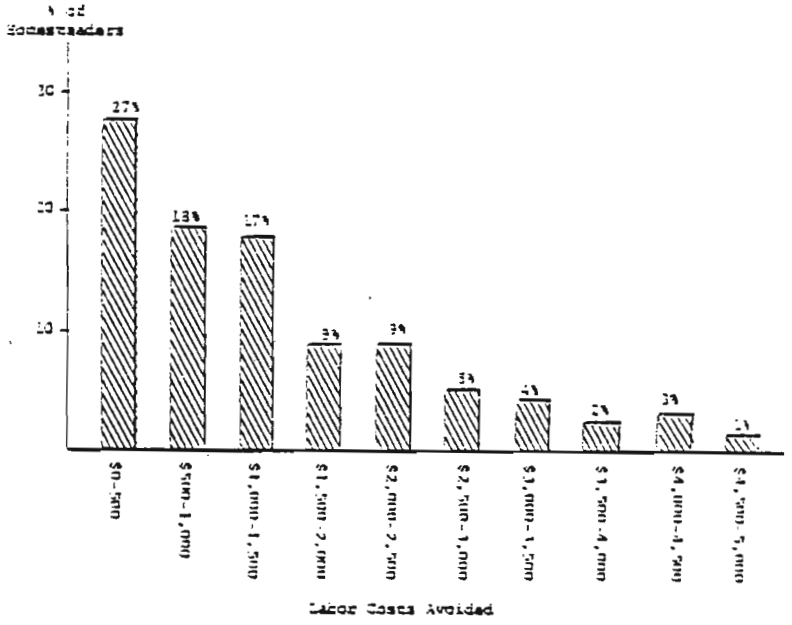
[1]Both labor and materials unit costs were derived from Building Construction Cost Data 1976, R.S. Means Co., Duxbury, Mass. Adjustments to reflect the size of jobs and use of non-union labor were performed under subcontract by the Ehrenkrantz Group and are documented in "Cost Guide Book - Urban Homesteading", The Ehrenkrantz Group, New York, September 1977. For more detail, see footnote on page 61.

Figure IV-4

DISTRIBUTION OF AVOIDED CONTRACTOR LABOR COSTS*

(Mean = $1,716)

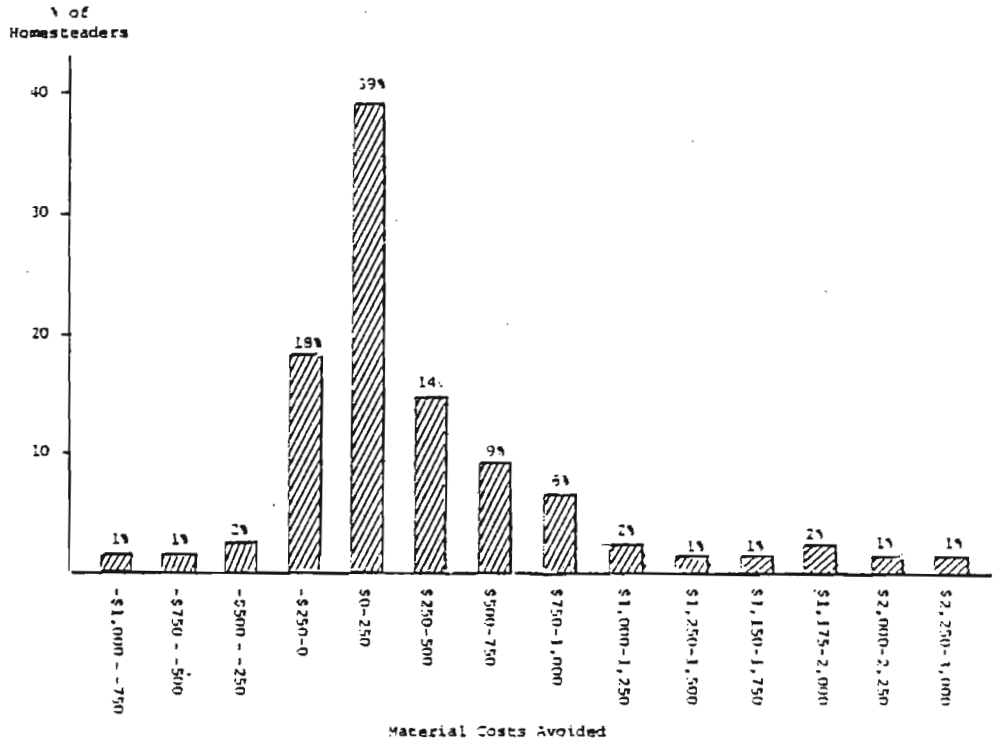


*Note: Based on estimated values for 155 homesteaders ranging from zero to $5,000.

Figure IV-5

DISTRIBUTION OF MATERIAL COST SAVINGS*

(Mean = $347)

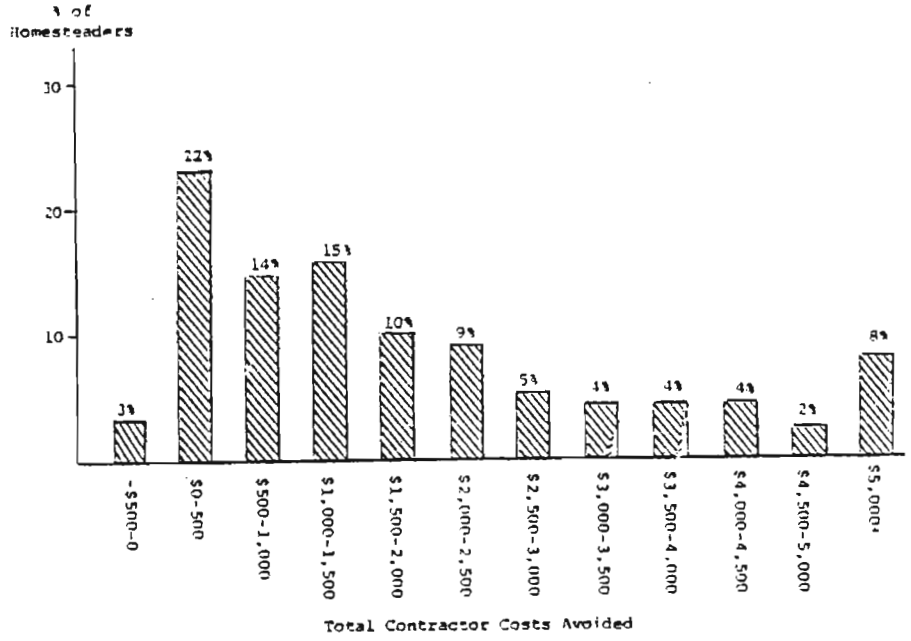


*Note: Based on 379 estimated values ranging from -$1,000 to $2,500.

Figure IV-6

DISTRIBUTION OF AVOIDED CONTRACTOR TOTAL COSTS

(Mean = $2,063)



The extent of the self-help contributions of homesteaders is also usefully examined through comparisons with the extent of contracted rehabilitation. The average amount of payments to contractors per property was $7,691.[1] The average savings in contractor costs achieved through the application of self-help across all 397 properties, including both labor and purchased materials, was $2,897 per property. The total rehabilitation cost per property, if there had been no self-help, is $10,610.[1] If we express the self-help contribution as a percentage of the total market, or contract cost, value of rehabilitation, we can conclude that self-help contributions accounted for approximately 27% of the total value of rehabilitation work performed.

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[1]This number is computed as the average of contractor costs over 388, not 397 properties, because there were 9 missing values of the payments to contractor variable.

The percentage contribution of self-help can also be calculated on a property-by-property basis by dividing the value of the self-help contribution by the actual contracted costs plus the value of self-help for each property. The resulting distribution is "U" shaped, a somewhat surprising result (Figure IV-7). The greatest frequencies of properties are found at the extreme ends of the range; over a quarter of the properties had a less than 10% self-help contribution, while almost one property in six had a self-help contribution in excess of 90%. In the middle range, between 10% and 90% self-help contributions, the 10% intervals show much lower frequencies.

The "U" shaped distribution of the percentage of self-help indicates a fairly strong tendency towards an "all or nothing" approach to self-help. Individuals appear to either do very little (over 40% of the properties had less than a fifth of the work performed by homesteaders) or they undertake the bulk of the work (over one in four of the homesteaders performed more than 70% of the rehabilitation themselves). This tendency towards the extremes implies that there is a very low frequency of homesteaders at and around the 39% self-help ratio which is the mean of the distribution.

Inter-City Variations in Self-Help Contributions

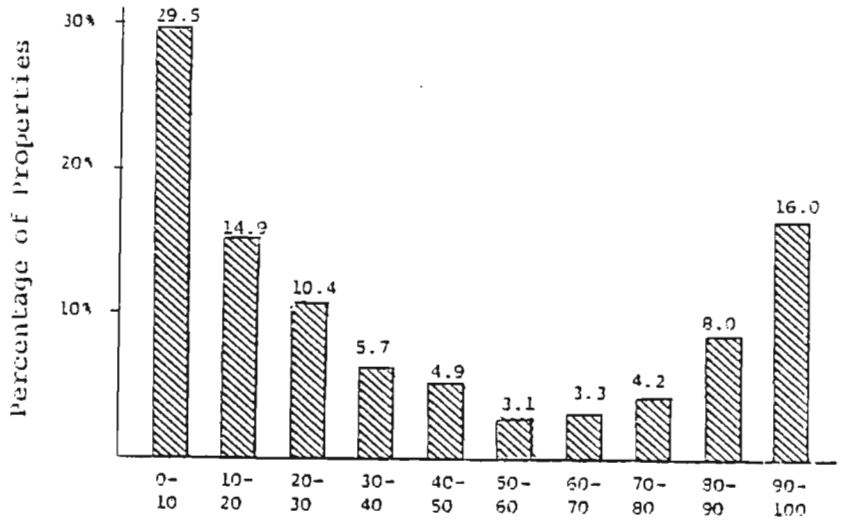
Reference has already been made to the differences between local urban homesteading programs in their approaches to the planning and management of rehabilitation. One aspect of these local variations is the extent to which homesteaders have been encouraged or permitted to undertake self-help work. Some evidence of these variations was provided by descriptions of local program approaches to the rehabilitation of urban homesteads based upon interviews with local officials. These interviews do not, however, provide us with a statistical basis for determining how cities have differed in the amount of self-help work actually undertaken by homesteaders.

Figure IV-7

DISTRIBUTION OF THE PERCENTAGE OF SELF-HELP BY PROPERTY

(Mean = 39%)

(Median = 27%)



In Table IV-2, the average contract costs, value of self-help, total rehabilitation value (sum of contract costs and self-help value), and percentage of self-help (value of self-help divided by total rehabilitation value) are presented. On a city-by-city basis, the variations in the percentage of self-help are quite striking. The range extends from 2% in the Jersey City program to 74% in the Islip program.

Computations of self-help percentages for each property permit us to examine the validity of the classifications of Demonstration Cities in terms of their approach to rehabilitation made before the actual inspections of properties were performed. In the First Annual Report of the Urban Homesteading Demonstration, published in October 1977, the Demonstration Cities were classified into 3 groups. The first group of cities (Jersey

Table IV-2

AVERAGE CONTRACT COSTS, SELF-HELP VALUES, REHAB VALUES AND SELF-HELP % BY CITY*

City	Contract Costs	Value of Self-Help	Total Rehab Value	Percentage of Self-Help
Atlanta	9,393	1,032	10,425	0.10
Baltimore	13,544	837	14,381	0.06
Boston	19,417	6,240	26,292	0.24
Chicago	10,806	4,137	14,942	0.28
Cincinnati	12,166	3,664	15,830	0.23
Columbus	9,574	2,288	11,862	0.19
Dallas	1,708	2,407	4,118	0.58
Decatur	13,590	707	14,297	0.05
Freeport	12,338	2,116	14,540	0.15
Gary	1,607	3,683	5,290	0.70
Indianapolis	3,712	2,294	6,018	0.38
Islip	2,301	6,484	8,785	0.74
Jersey City	45,840	1,072	46,912	0.02
Kansas City	9,023	2,140	11,163	0.19
Milwaukee	2,027	5,486	7,513	0.73
Minneapolis	12,274	6,590	18,864	0.35
New York City	13,020	5,021	18,041	0.28
Oakland	12,114	1,692	13,848	0.12
Philadelphia	15,010	4,170	19,300	0.22
Rockford	7,338	1,361	8,707	0.16
South Bend	2,550	5,216	7,766	0.67
Tacoma	2,045	1,565	3,610	0.43
Wilmington	8,579	2,977	11,556	0.26
TOTAL	7,691	2,897	10,610	0.27

*In some instances, rows do not add across due to missing observations on contract costs. The average rehabilitation value and contract costs are based on 388 observations while self-help values are based on 397 observations.

City, Kansas City, New York City, Freeport and Decatur) were believed to be least inclined to permit or encourage self-help rehabilitation efforts. The third group (South Bend, Wilmington, Baltimore, Gary and Indianapolis) were believed to be most likely to permit and encourage self-help rehabilitation efforts. The remaining cities lay in the middle of the range, permitting self-help efforts but maintaining a modicum of city control and supervision. To test the validity of this classification, regressions of the self-help percentage of each property were run on dummy variables representing the first group (most stringent attitude to self-help) and the third group (least stringent attitude to self-help). The resulting regression equation was:

$$P_t = 0.37 - 0.23\delta_{1t} + 0.23\delta_{3t} \quad \text{RSQ: } 0.16$$
$$(0.02)\ (0.05)\qquad (0.04)$$

where P_t denotes the self-help percentage of the t^{th} property and δ_{1t}, δ_{3t} are dummies for the first and third groups of cities respectively. These results suggest that the original classification scheme has some validity, since membership of the first group (most stringent) reduces the mean self-help percentage by 23 % and membership of the third group increases the mean self-help percentage by 21%. In both cases the coefficients are significant at the 99% level. Inspection of the city means (Table IV-2) suggests, however, that some cities do not fit the classification. In particular, Baltimore, a member of the least stringent group, has the second to least self-help percentage of all cities.

Further insights into the variation of self-help by city-group can be obtained through regressions of total contract costs, value of self-help and total rehabilitation value (contract costs plus self-help value) on the city-group dummies. The results of these regressions are presented in Table IV-3.

Table IV-3

Dependent Variable	Regression Coefficients (standard errors) Constant	Group 1 Dummy (most stringent)	Group 3 Dummy (least stringent)	RSQ
1. Contract Costs	7,542 (480)	7,915 (1,198)	-3,572 (912)	0.17
2. Self-Help Value	2,992 (212)	-1,250 (528)	397 (416)	0.02
3. Total Rehab Value (1 + 2)	10,533 (514)	6,664 (1,284)	-3,175 (1,009)	0.11

Of interest here is the relative lack of explanatory power of the city group dummies in the self-help value regression. Only one coefficient is significant and the dummy variables contribute almost nothing to the explanation of the variation in self-help value between properties. By contrast, the city group dummies work rather well in the explanation of contract cost variation between properties. The Demonstration Cities with the highest contract costs (and the highest rehabilitation values) are typically those cities which have the most stringent approach to self-help. Conversely, those which are most amenable to self-help typically are smaller jobs and have much less contract work performed.

These results suggest an interesting interpretation of the earlier classification of cities in terms of their approach to the management of rehabilitation. The differences which exist in the degree of control which cities maintain over the rehabilitation process only partially reflect differences in their attitudes towards self-help. Rather, it appears that the overall size of

the job, and the amount which will have to be contracted out, is the decisive factor in a city's approach to rehabilitation. Cities which undertake large rehabilitation jobs typically elect to maintain a high level of control and cities which undertake smaller rehabilitation jobs allow the homesteader much more freedom to plan and manage the work. The average rehabilitation value for the Group 1 Cities is $17,197, for the Group 2 Cities it is $10,533, and for the Group 3 Cities it is only $7,358. The magnitude and statistical significance of these differences provide strong support for the validity of the initial groupings, albeit subject to a somewhat modified interpretation.

Another source of information on the alternative approaches adopted by the Demonstration Cities to the management of self-help efforts is provided by homesteaders' answers to questions about their freedom of choice during the rehabilitation of their properties. The homesteaders were asked three broad questions relating to their freedom of choice:

(1) Did the homestead agency give you a choice in deciding what repairs would be made?

(2) From the work list were you allowed to select any tasks to do yourself?

(3) If any work was contracted, were you allowed to select the contractor?

The answers to these questions have been tabulated in the aggregate and by city (Table IV-4).

Examination of these results reveals that the Demonstration Cities adopted quite different approaches to the role of the homesteader in the planning and management of rehabilitation.

Table IV-4

HOMESTEADERS' PERCEIVED FREEDOM OF CHOICE DURING REHABILITATION BY CITY

City	Sample Size	Percentage With Freedom to Choose Which Repairs to Make	Percentage With Freedom to Select Tasks to Do Themselves	Percentage With Freedom to Select the Contractor
Atlanta	16	69	44	63
Baltimore	3	67	67	100
Boston	4	50	75	100
Chicago	19	58	100	74
Cincinnati	8	25	100	87
Columbus	8	63	63	100
Dallas	53	26	91	60
Decatur	18	78	22	11
Freeport	11	36	55	0
Gary	28	34	82	97
Indianapolis	28	47	93	61
Islip	12	58	100	67
Jersey City	5	100	40	0
Kansas City	13	38	93	100
Milwaukee	11	0	82	73
Minneapolis	14	50	93	100
New York City	4	100	75	75
Oakland	22	55	59	59
Philadelphia	26	46	93	100
Rockford	46	24	83	74
South Bend	17	24	94	88
Tacoma	17	47	77	24
Wilmington	14	71	86	64
TOTAL	397	41	80	68

It is evident from the fact that less than half of the homesteaders believed that they were free to choose what repairs would be made, that the homestead agency maintained a fairly stringent control over the work write-up. There is, however, considerable variation between cities in responses to this question. None of Milwaukee's 11 homesteaders and only 1 of Gary's 28 homesteaders felt that they had freedom to choose what repairs would be made. At the other extreme, all of the homesteaders in Jersey City and New York City felt that they had freedom to choose what repairs to make on their property.

In their answers to the question on the freedom to select tasks to do themselves, the homesteaders were more in agreement. In only 7 of the 23 Demonstration Cities did less than 75% of the homesteaders believe they had such freedom. These seven cities were Atlanta, Baltimore, Columbus, Decatur, Freeport, Jersey City and Oakland. In Chicago, Cincinnati and Islip, accounting for 39 homesteaders in the sample between them, all the respondents felt that they were given freedom to select tasks to do themselves.

To examine whether the homesteader's perception of his or her freedom to undertake self-help work actually influenced the percentage of the work undertaken by the homesteader, the correlation coefficient of the city-by-city percentages of actual self-help (Table IV-2), and the city-by-city percentages of perceived freedom to do self-help was computed. The value of the correlation coefficient was +0.36, suggesting that there is some association between the city's policy on self-help and the actual amount of self-help work performed.

There is considerable variation between cities in the homesteaders' perception of their freedom to select the contractor, although it is perhaps somewhat surprising that there are 15 cities where the homesteaders are not in agreement among themselves on whether or not they were free to select the contractor. In Freeport and Jersey City, none of the homesteaders

felt they were free to select the contractor and only 2 of Decatur's 18 homesteaders felt they had this choice. At the other extreme, there were 6 cities (Baltimore, Boston, Columbus, Kansas City, Minneapolis, and Philadelphia) where all the respondents stated that they were given the freedom to select the contractor, and only 1 of Gary's 28 homesteaders felt that he or she did not have this choice.

The Rate of Return to Self-Help Efforts

Urban homesteaders who commit themselves to work on their new properties and to purchase materials for use in the rehabilitation effort presumably do so to save money in contractor bills. By reducing the amount of dollar costs which they incur to repair these properties, the urban homesteaders avoid current cash obligations or the need to borrow money. The relationship between the savings achieved on the one hand and measures of the homesteader's input on the other hand is one of considerable interest for the light it sheds on the rate of return to self-help efforts.

The data collected during inspections of the urban homestead properties provide a means of assessing the rates of return to self-help efforts. For each job, or task, which was performed by a homesteader, information was collected on the number of hours of homesteader labor and the cost of materials purchased by the homesteader. At the same time, estimates of the quantity of materials used for each task were developed and these were then used to develop estimates of what the job, or task, would have cost if it had been done by a contractor.[1]

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[1]The development of estimates of what the self-help tasks would have cost if they had been performed by a contractor was a rather elaborate exercise. Each self-help task was coded and the quantity of materials recorded. For each task, labor costs were estimated by multiplying the materials quantity by a

(footnote continued on next page)

homesteaders were most active. For the two most active trades, the average savings per hour (Laborer, $5.00 and Painter, $5.32) were both below the average across all trades of $5.78/hour. Conversely, the trades with the highest hourly rate of savings were typically more highly skilled and accounted for a relatively small number of hours. These include: Masonry ($9.09/hour), Tile Setter ($8.77/hour), Steam Fitter ($8.49/hour), and Electrician ($8.43/hour). This pattern indicates that those homesteaders who undertook the higher skill tasks were sufficiently competent to take advantage of the greater opportunities for cost saving in the higher skill and higher pay trades.

On the whole, as the standard deviations indicate, average hourly savings were estimated with a reasonable degree of precision. The average hourly savings across all trades, estimated to be $5.78/hour, has a 95% confidence interval of $\pm$49 cents. It is interesting to compare this estimate with the average hourly earnings of the homesteaders. The mean average hourly earnings from work for the 397 homesteaders whose properties were included in this sample was $5.44/hour. This is quite close to the average estimated savings per hour achieved by homesteaders through self-help efforts. To the extent that the homesteaders do not find self-help work to be significantly more pleasant or unpleasant than their regular work, and adjusting for the marginal effect of income taxes and social security contributions, economic theory suggests that average hourly earnings and average hourly savings from self-help efforts should indeed resemble each other quite closely.

Chapter V

REHABILITATION AND HOUSING QUALITY

Urban homesteading provides an alternative means of arranging for the repair of residential properties which have been foreclosed and which are typically in rather poor condition. Unlike programs in which a public agency or non-profit sponsor assumes responsibility for the rehabilitation of the property, urban homesteading provides the future occupant with a significant role in the planning, management and performance of the repair work. Unlike the traditional "as-is" property disposition programs in which the government maintains negligible control over the extent and quality of rehabilitation, urban homesteading mandates inspections of the quality and adequacy of repairs as a condition of title. In a sense, urban homesteading can be viewed as an attempt to secure the advantages of both approaches; under homesteading, the government both delegates the responsibility for repairs and regulates the quality of the resulting product.

From this perspective, the quality of the rehabilitation performed on urban homesteads is of crucial interest in the evaluation of the program. No one doubts that it is possible to give away real property which has value. What is open to empirical investigation is the effectiveness of the rehabilitation process which takes place after the homesteader has received conditional title to the property.

In the preceding chapters, the characteristics of the homestead properties before conveyance have been examined, the extent and nature of the rehabilitation effort has been described and the scope and mix of self-help activities have been analyzed. In this chapter, we turn to the issues of quality, both in terms of the specific rehabilitation work performed and also in terms of the quality of the resulting products.

Quality of Workmanship and the Choice of Materials

During the course of the inspection of the urban homestead properties, all instances of new work on the property were noted and classified according to whether the work was performed by a contractor, by the homesteader, or by both working together. These records of new work made use of the 161 possible tasks which were used in Chapter III to provide descriptions of the nature and extent of the rehabilitation work performed on the urban homestead properties. At the same time that instances of new work were noted, the quality of the repair or replacement in terms of workmanship and the choice of materials was also rated by the inspector. These ratings of the quality of the rehabilitation work provide the basis for the analysis of this section.

Each instance of "new work" was classified into one of four possible groups for both workmanship and materials:

> Above Standard: Craft quality workmanship or materials that are better than those typically used in the home building industry.
>
> Standard: Good quality trade or professional level workmanship and materials that are typical in the home building industry.

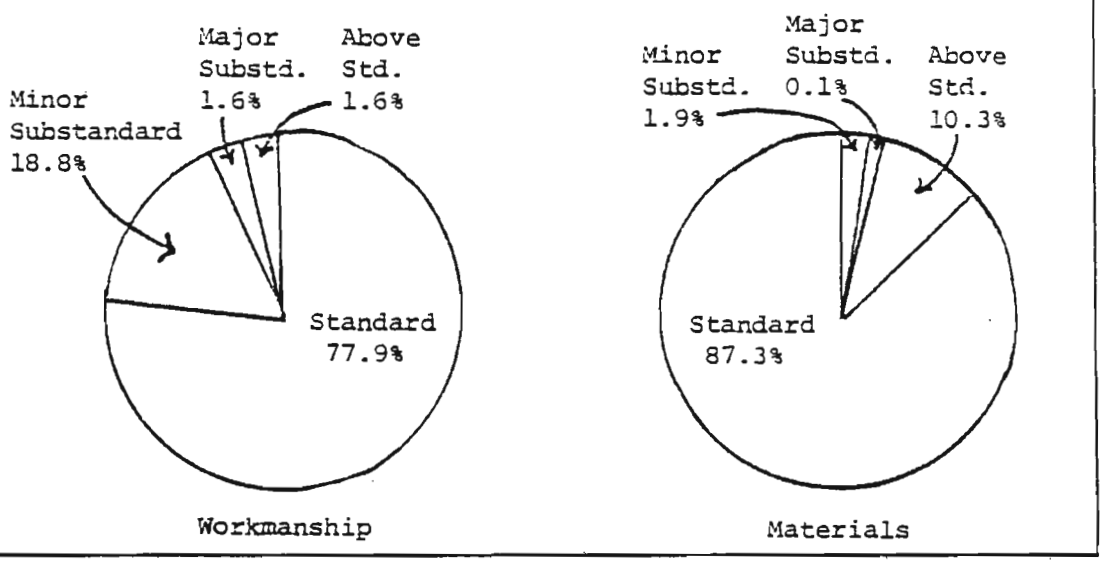
Minor Substandard: Noticeably defective workmanship or materials which should be corrected but which do not need replacement.

Major Substandard: Unacceptable workmanship requiring repair or very poor materials; workmanship which will wear out quickly or is susceptible to damage.

These standards were described in more detail in the instructions for field staff, together with examples of the specific types of conditions or materials which would fall into each category. The intent was to use conventional home construction standards to assess the quality of rehabilitation.

The distribution of quality ratings for tasks involving new work is shown in Figure V-1.

Figure V-1



It is clear that, with respect to the choice of materials, there is very little cause for concern over quality. Only 2% of all the new work tasks were found to be below standard in the choice of materials and only one-tenth of one percent of the new work tasks were classified as major substandard. In contrast, over 10% of all the new work items were rated "Above Standard" in terms of the quality of materials employed. The quality of

workmanship is more variable. Almost 80% of all the new work tasks were rated at or above standard quality in terms of workmanship, but 18.8% of the new work items revealed minor deficiencies. A further 1.6% of the new work items were judged to be major substandard in terms of workmanship.

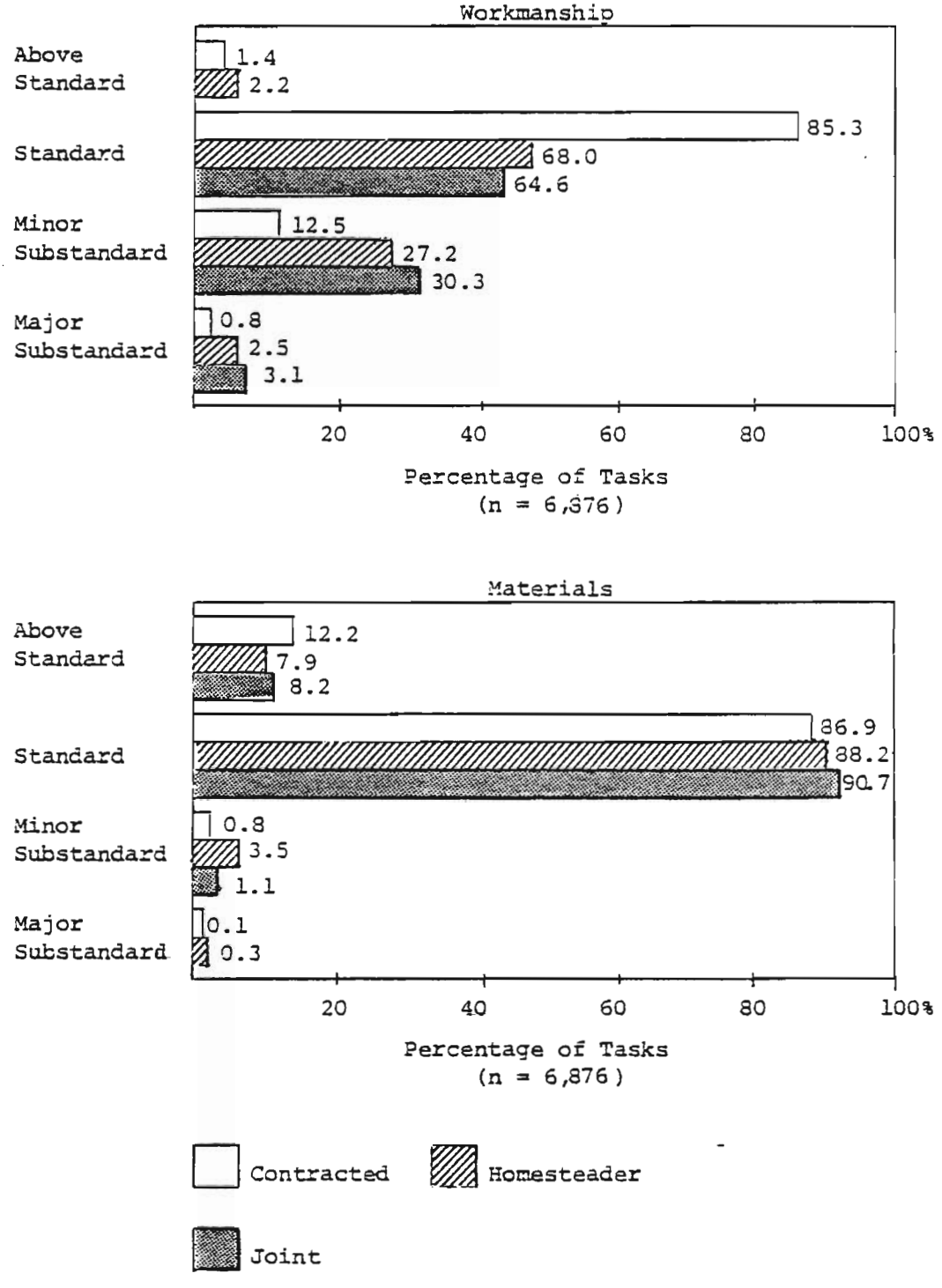
The implications of these overall findings are reasonably encouraging. A very small percentage of the new work was rated so poorly as to require replacement. The incidence of minor substandard workmanship is reasonably high (18.8%), but none of these items were judged to require replacement. To the extent that the objective of the rehabilitation effort is to produce good quality housing, it is clear that this objective has been largely realized.

The significant level of homesteader self-help effort in the Demonstration permits an examination of the extent to which the use of self-help leads to reduced quality in workmanship and the choice of materials. Many of the Demonstration Cities were clearly concerned about this possibility and designed their programs so that a careful watch could be kept over the quality of rehabilitation work performed by the homesteaders. The distributions of the quality of workmanship and materials for tasks performed by contractors, by homesteaders and by both contractors and homesteaders working jointly (Figure V-2), provides evidence on this issue.

It is apparent that the self-help activities have contributed substantially to the incidence of minor substandard workmanship. One in eight of the tasks performed by contractors were judged to have minor deficiencies, but more than one in four of the tasks performed by homesteaders or by homesteaders and contractors working together were judged to be minor substandard in terms of workmanship. Similarly, the incidence of major substandard workmanship, although fairly low for all groups, was more than three times higher for homesteaders than

Figure V-2

DISTRIBUTION OF QUALITY RATINGS FOR CONTRACTED AND SELF-HELP TASKS



for contractors. In view of the very large sample sizes, the differences between the quality ratings for homesteader and contractor workmanship are statistically very significant. When contractor and homesteader tasks are contrasted on the quality of materials employed, the differences are much more modest. Over 99% of all the contracted tasks were judged to have used standard or above standard materials, whereas over 96% of all the tasks performed by homesteaders were also judged to have used standard or above standard materials.

The incidence of deficiencies in the quality of workmanship varies quite significantly between the Task Group categories. As shown in Table V-1, Plaster & Drywall work had by far the highest incidence of minor substandard workmanship (35.4%); Interior Finishes (16.4%) and Roofing & Siding (13.1%) are next, and Structural Alterations (7.0%) and Finish Carpentry (9.8%) have the lowest incidence of minor defects.

Table V-1

QUALITY RATINGS BY TASK GROUP CATEGORY

	Plaster & Drywall	Interior Finishes	Roofing & Siding	Structural Alterations	Finish Carpentry
Above Standard	1.7	1.9	0.4	0.5	1.3
Standard	61.4	80.1	84.2	91.8	87.0
Minor Substandard	35.4	16.4	13.1	7.0	9.8
Major Substandard	1.4	1.6	2.1	0.9	1.9
Number of Tasks	1,389	4,073	412	524	478

Comparisons of the quality of workmanship and materials have now been made between contracted and self-help tasks and between Task Group categories. A third comparison, between cities, is also of interest in the light of the differences in the approach to the management of rehabilitation between local programs.

There is significant variation between cities in the percentage of tasks which meet each of the four standards of workmanship (Table V-2). In seven cities (Atlanta, Decatur, Jersey City, Minneapolis, Rockford, South Bend and Tacoma), over 90% of all the tasks performed were found to be of standard or above standard quality workmanship. At the other end of the range, in three cities (Chicago, Gary and New York), less than 60% of the tasks were found to be of standard or above standard quality workmanship.

It is interesting to note that there seems to be little correspondence between the earlier groupings of Demonstration Cities in terms of their approach to rehabilitation and the incidence of standard and substandard workmanship. Of the seven cities with over 90% standard or above standard workmanship, two (Decatur and Jersey City) were drawn from the first group, four (Atlanta, Minneapolis, Rockford and Tacoma) were drawn from the second group, and one (South Bend) was drawn from the third group. Similarly, of the three cities with fewer than 60% of the tasks achieving standard quality of workmanship, one was drawn from the first group (New York), one was drawn from the second group (Chicago) and one was drawn from the third group (Gary). These findings suggest that the "degree of control" exercised by the city over the rehabilitation process, which is largely mirrored in the groupings, is not closely related to the incidence of standard workmanship. Furthermore, despite the higher incidence of substandard workmanship among the self-help tasks, the seven cities with over 90% of standard workmanship include three (Minneapolis, South Bend and Tacoma) in which the number of self-help tasks exceeded the number of

Table V-2

DISTRIBUTION OF QUALITY RATINGS
FOR WORKMANSHIP BY CITY

City	No. of Tasks	% Above Standard	% Standard	% Minor Substandard	% Major Substandard
Atlanta	345	0.6	90.1	7.5	1.7
Baltimore	79	0.0	72.2	27.8	0.0
Boston	114	0.0	79.8	20.2	0.0
Chicago	374	0.0	44.4	42.8	12.8
Cincinnati	156	0.0	87.8	12.2	0.0
Columbus	128	0.0	71.1	28.9	0.0
Dallas	576	1.9	71.4	24.1	2.6
Decatur	401	3.2	88.3	8.5	0.0
Freeport	190	1.6	66.8	30.0	1.6
Gary	315	0.6	57.5	41.0	0.9
Indianapolis	417	10.3	74.6	14.4	0.7
Islip	172	1.2	75.6	17.4	5.8
Jersey City	158	0.0	95.6	4.4	0.0
Kansas City	238	0.0	78.2	21.8	0.0
Milwaukee	173	0.0	78.2	21.8	0.0
Minneapolis	337	1.2	90.2	8.6	0.0
New York City	111	0.0	51.4	44.1	4.5
Oakland	479	0.0	77.4	21.9	0.6
Philadelphia	643	0.3	79.9	19.0	0.8
Rockford	702	0.7	72.0	7.1	0.1
South Bend	329	7.3	83.9	8.8	0.0
Tacoma	118	1.7	92.3	3.4	2.5
Wilmington	321	0.3	74.4	24.0	1.3
TOTAL	6,876	1.6	77.9	18.8	1.6

contracted tasks. Conversely, two of the cities (Chicago and New York) with less than 60% standard workmanship, had more tasks performed by contractors than by homesteaders.

Similar city-by-city quality distributions for materials are presented in Table V-3. The variation between cities is much more modest for materials choice than for workmanship. Only two cities (Dallas and Gary) have more than 5% of the new work tasks rated substandard in terms of materials choice, which does not appear to be a problem in general for the homesteading cities. There is more variation at the upper end of the scale with a significant number of cities with rather high incidence of above standard materials choice. Eleven of the twenty-three cities have more than 10% of all new work tasks performed using above standard materials, and in two instances (Jersey City and Oakland) over 20% of all new work tasks were rated above standard in the choice of materials. Once again, no apparent relationship, positive or negative, exists between the extent of self-help and the incidence of above standard materials.

Those who regard urban homesteading as an experiment in the management of rehabilitation must draw their own conclusions from these data on the quality of workmanship and the choice of materials experienced in the Demonstration. There are, unfortunately, no comparable data from other programs against which these results can be juxtaposed. Considered simply against the implicit standards used to rate the work on the urban homesteading properties, it would appear that the relatively high incidence of minor substandard workmanship is the most likely area of concern. Comparing the overall incidence of minor deficiencies between contractors and homesteaders, it would appear that self-help is the underlying reason for the 20% rate of minor substandard workmanship. However, examination of the data on a city-by-city basis suggests that at least some cities have been able to achieve much lower rates of substandard workmanship

Table V-3

DISTRIBUTION OF QUALITY RATINGS
FOR MATERIALS BY CITY

City	No. of Tasks	% Above Standard	% Standard	% Minor Substandard	% Major Substandard
Atlanta	345	10.4	88.4	1.2	0.0
Baltimore	79	2.5	97.5	0.0	0.0
Boston	114	11.4	88.6	0.0	0.0
Chicago	374	4.0	94.9	1.1	0.0
Cincinnati	156	12.2	87.8	0.0	0.0
Columbus	128	4.7	95.3	0.0	0.0
Dallas	576	8.8	82.5	8.3	0.3
Decatur	401	13.2	86.2	0.5	0.0
Freeport	190	6.8	92.1	1.1	0.0
Gary	312	3.2	89.5	6.7	0.6
Indianapolis	417	12.7	85.6	1.7	0.0
Islip	172	5.8	93.0	1.2	0.0
Jersey City	158	30.4	69.0	0.6	0.0
Kansas City	238	11.7	87.4	0.8	0.0
Milwaukee	173	2.9	93.0	2.3	1.7
Minneapolis	337	14.8	84.6	0.6	0.0
New York City	111	8.1	91.0	0.9	0.0
Oakland	479	20.3	78.7	1.0	0.0
Philadelphia	643	7.5	92.2	0.3	0.0
Rockford	702	4.8	93.9	1.1	0.1
South Bend	329	16.7	82.0	1.2	0.0
Tacoma	118	1.7	94.9	1.7	1.7
Wilmington	321	11.8	85.4	1.9	0.9
TOTAL	6,876	10.3	87.3	1.9	0.1

by homesteaders. In Cincinnati, Dallas, Milwaukee, Philadelphia, South Bend and Tacoma, the percentage of self-help tasks meeting or surpassing the standard quality of workmanship was higher than the percentage of contracted tasks meeting the same standards across the sample as a whole. Each of these cities seems to have managed the self-help component of rehabilitation without significant dilution of the quality of workmanship. In some cities, for example, Chicago and New York City, the incidence of minor deficiencies in workmanship were high both for contractors and for homesteaders, indicating a possible need for more stringent monitoring of all phases of the rehabilitation work. In general, however, the fact that less than 2% of all new work required replacement indicates that the objectives of the rehabilitation program have been quite fully realized.

Measurement of Housing Products

Assessment of the quality of rehabilitation work performed on the urban homesteading properties, although of considerable interest in assessing homesteading as a method of housing rehabilitation, provides very little sense of the quality of the end-product -- the rehabilitated dwelling. For a variety of reasons, knowledge of the end-product of any housing rehabilitation or construction program is of considerable interest. In the first place, HUD has traditionally imposed standards (minimum property standards and minimum design standards) on all newly-constructed or renovated properties receiving FHA mortgage insurance commitments; those standards indicate the government's ongoing interest in the quality of residential properties, especially those receiving assistance from the federal government. Secondly, since urban homesteaders are committing themselves to the repair and ownership of FHA properties, with the encouragement of local public agencies, it is highly desirable to know more about the quality of housing services which they

receive when the rehabilitation is complete.

To meet these objectives, information collected during the inspections has been subjected to a battery of tests to determine the percentage of the rehabilitated properties meeting each of a number of sets of standards. In this section, the standards applied are described and the results of applying these standards are presented and discussed.

Primary Space Quality Indicators

The first stage in the assessment of the overall quality of the urban homestead properties focused on indicators of the adequacy of spaces within each building. To develop these indicators, space standards promulgated by various public agencies were examined. The HUD Minimum Design Standards for Rehabilitation for Residential Properties (4940.4, September 1973) or MDSR were felt to be the appropriate guide for establishing "standard threshold of quality." With regard to space, however, the MDSR essentially delegates the establishment of minimum requirements to "proper authority," provided that "each living unit (is provided) with space necessary for suitable living, sleeping, cooking and dining accommodations, storage laundry and sanitary facilities; also, provides space of such size and dimensions so as to permit placement of furniture and essential equipment" (MDSR (4.2) a.1). Generalizations of what "proper authority" would actually enforce in each of the demonstration programs needed to be made for these purposes. Several routes to establishing these generalizations are available:

- The use of the space standard guides provided by the MDSR which recognize some of the possible discrepancies between new space standards and the actual space characteristics of an existing "old" stock.
- The use of Operation Breakthrough space guidelines (HUD Transmittal of Request for Proposal

No. H-55-69 "Operation Breakthrough-Application of Improved Housing Systems Concepts for Large Volume Production," June 1969, see Attachment I, p. 1-37.) These guidelines are based on concepts of room furnishability and combination of rooms, and only specify minimum dimension by activity and related furniture and equipment needs.

- The HUD Minimum Property Standards for Single Family Housing (1973), including Revision No. 5, 1977, specifically address new construction and are partially used in the MDSR regarding the "new subdivision of space." These standards now incorporate space dimensional guidelines spelled out in the Operation Breakthrough document with respect to the furnishability requirement.
- Various national or regional codes such as the Uniform Building Code (UBC), the National Building Code (NBC), the Basic Building Code (BBC), the Southern Building Code (SBC).

Many assumptions had to be made to simplify the various complex requirements made by these regulations. For example, none of these sets of standards or guidelines actually establishes minimum dwelling size relative to the number of occupants or to the number of bedrooms, but they do list the basic activities required -- i.e., living, dining, cooking, sleeping and storage. Furthermore, requirements for minimum habitable room size vary between different sets of standards or guidelines referenced above. A detailed review of the procedures and assumptions used in this analysis is provided in Appendix B of this report.

The distribution of the urban homesteading properties across the four levels of primary space quality for each of six building types is presented in Table V-4. Almost 80% of the urban homestead properties meet or exceed the standard level of the space indicators, with 18.5% being above standard. Of those that fall short of the standard level, most fall into the sub-standard, rather than the minimum, level of the space standard. The highest incidence of properties failing to meet the standard level occurs in the larger (4+ bedroom) properties, where less than two-thirds of the properties meet the standard or above-standard levels. Controlling for the number of bedrooms, there is evidence that the properties with 2 floors typically meet the space standards more frequently than those with only one floor.

Table V-4

DISTRIBUTION OF PROPERTIES BY SPACE STANDARD AND PROPERTY MODEL

Property / Space Standard \ Model	A 2 Bedrooms 1 Floor	B 2 Bedrooms 2 Floors	C 3 Bedrooms 1 Floor	D 3 Bedrooms 2 Floors	E 4 Bedrooms 1 Floor	F 4 Bedrooms 2 Floors	TOTAL
Above Standard	5.8%	3.6%	15.7%	21.1%	28.6%	47.6%	18.5%
Standard	70.6%	82.1%	68.7%	64.4%	28.6%	19.0%	60.5%
Minimum	12.6%	7.1%	3.6%	0 %	0 %	1.6%	5.4%
Substandard	10.9%	7.1%	12.0%	14.4%	42.8%	31.7%	15.6%
TOTAL	100 %	100 %	100 %	100 %	100 %	100 %	100 %
n	119	28	83	90	7	63	390

Service Quality Indicators

Service quality indicators were developed for both plumbing and electrical systems. The conditions which were imposed for each property to meet the specified levels of the service quality indicators are presented in Appendix B.

It should be noted that the quality indicators used here for plumbing are substantially lower than those used in MDSR. The principal reasons for this difference are the limitations on the amount of time available for the inspection and an effort to reduce the MDSR requirements to further adapt to the conditions of the housing stock without, however, compromising health and safety requirements.

These electrical service quality indicators apply to all properties regardless of type or size. The MDSR standard requirements regarding electrical services are less specific than the ones used here -- the MDSR relying on stringent electrical codes at the local level.

The number of properties meeting each level of the Service Quality indicators are shown in Table V-5. The results are quite varied, but probably typical of properties of the same vintage as the urban homesteads. In general, the properties do rather well against the plumbing standards for kitchens and they do quite poorly on the plumbing standards for bathrooms and on electrical service. On both the primary and secondary standards for bathroom plumbing and on the electrical service standard, barely half of the properties meet the requirements of the standard level.

Considering the overall results of the Measurement of Housing Products, using space and service standards, it is apparent that many of the rehabilitated homestead properties fall short of HUD's standards for rehabilitated properties (MDSR). These properties have, however, been rehabilitated to standards imposed and enforced by local urban homesteading officials and, in many cases, they have also been inspected by city building

inspectors and/or city housing inspectors. The fact that many of the properties meet local standards but fail to meet MDSR clearly indicates that MDSR are more stringent than the local standards as applied to urban homesteads.

The issue raised by this disparity is whether local standards are too lax or federal standards are too strict. In the end, resolution of this issue depends on the extent to which homesteaders, having satisfied local standards, will have to undertake subsequent repairs which could have been avoided by more thorough rehabilitation in the first place. Alternatively, the cost of rehabilitating to lower local standards may be paid for in a lower resale value for the property. This is an issue which cannot be resolved on the basis of the data provided by a one-time inspection of each property. What is apparent from this report is that the costs of rehabilitating even to local standards are very substantial. If these standards are still inadequate to maintain the physical and economic viability of the property, the economic rationale for rehabilitation may be called into question.

Table V-5

FREQUENCY OF PROPERTIES MEETING SERVICE QUALITY INDICATOR LEVELS

Service / Indicators / Quality Rating	Plumbing				Electrical Service
	Primary Indicators		Secondary Indicators		
	Bathroom	Kitchen	Bathroom	Kitchen	
Above Standard	0.8%	18.9%	11.6%	1.8%	N.A.
Standard	25.9%	68.0%	35.0%	49.6%	24.2%
Minimum	12.3%	N.A.	N.A.	45.6%	11.8%
Not meeting lowest standard	61.0%	13.1%	53.4%	3.0%	64.0%

Chapter VI

SUMMARY OF FINDINGS

Inspection of rehabilitated urban homestead properties was included in the research plan for the Urban Homesteading evaluation study because little was known at the outset of the Demonstration about the process and nature of rehabilitation under urban homesteading. This lack of knowledge reflected the absence of any systematic data collection efforts during the earlier, locally-initiated urban homesteading programs and, indeed, the essential absence of information of any kind about the rehabilitation of single-family properties, under either public or private auspices.

The range of uncertainty about the likely experience of rehabilitation in the Urban Homesteading Demonstration was quite comprehensive. Major issues included:

- What would be the mix and condition of properties selected for use in local urban homesteading programs?
- What would be the nature and extent of the rehabilitation performed on the selected properties? What would the rehabilitation cost the homesteaders?
- What would be the extent of homesteader participation in the planning and execution of the work? What kinds of tasks would homesteaders perform themselves? How much would self-help save in terms of contractor costs avoided?
- How long would the rehabilitation take to complete and how would this vary with the size of the job and with the amount of self-help?

- What level of quality would the repaired properties attain? In terms of workmanship? In terms of materials choice? In terms of established space and service quality guidelines?
- How would cities approach the planning and management of the rehabilitation of urban homesteads? How do different approaches work in terms of the costs, timing and quality of the rehabilitation process?

The inspections of the urban homestead properties, combined with information provided by urban homesteaders and by local program officials, have provided a means of addressing these issues and of assessing the overall effectiveness of rehabilitation in the Urban Homesteading Demonstration. The principal conclusions of the analysis are:

- Nature and condition of the properties selected for use in urban homesteading properties. The properties selected by local programs from the available HUD inventory resemble the central city single-family housing stock quite closely in terms of age, but tend to be somewhat smaller than the average central city dwelling unit and substantially smaller than the average central city owner-occupied dwelling unit. The average repair costs on a subsample of 139 of these properties were estimated by HUD property disposition staff to be approximately $6,500.
- The actual cost of urban homesteading rehabilitation. The actual costs of rehabilitation for the full sample of 397 inspected properties, including the market value of the homesteaders' self-help contributions, was estimated to be approximately $12,400. This is substantially higher than the repair costs estimated by HUD property disposition staff, and the difference is even larger when comparisons are made on the 139 properties for which HUD repair cost estimates were available. This finding suggests strongly that the extent of rehabilitation under urban homesteading is considerably greater than in the HUD "repair and sell" program.
- The extent and nature of the rehabilitation work. Over 75% of all the properties required work in each of the following major categories: Electrical Service, HVAC and Insulation, Plumbing, Finish Carpentry,

Structural Alterations & Replacements, Interior Finishes, Plaster & Drywall, and Site Work. Of the total costs of work performed by contractors, it is estimated that 41% was attributable to structural alterations/repairs and finish carpentry, while a further 39% was accounted for by electrical service and plumbing repairs. Less than 12% of the contracted work went to interior finishes and plaster/drywall work.

- The extent of homesteader self-help in the Demonstration. It is estimated that homesteaders contributed an average of 27% of the total value of the rehabilitation work on the sample of inspected properties. This includes both direct purchases of materials and the value of their labor measured in terms of the reduction in contractor costs resulting from self-help efforts. The variation across properties in the percentage of self-help is quite striking with one in every four properties having less than 10% self-help and one in every six properties having over 90% self-help.

- The nature and value of self-help contributions. Homesteaders and their families and friends contributed an average of 297 hours of work on their properties, of which almost 73% was spent on demolition, site work and interior finishes, activities typically requiring the lower-paid construction trades of painter and laborer. The average estimated savings in contractor bills was approximately $3,000 per property and the average return to the homesteader was estimated to be $5.78 per hour across all trades. In addition, homesteaders purchased an average of $834 worth of materials per property directly rather than through contractors and thereby achieved further additional savings of approximately $350 per property.

- The quality of workmanship and the choice of materials. The overall findings of the study on the quality of workmanship and the choice of materials were reassuring. Eighty percent of all the tasks performed met or exceeded good quality trade or professional standards of workmanship and almost 98% of all materials chosen met or exceeded typical home building standards. There was a significant difference in the incidence of substandard workmanship between homesteaders (29.7%) and contractors (13.3%), but some cities with a high percentage of self-help were still able to achieve very high rates of standard and above-standard workmanship. This suggests strongly that the management of rehabilitation is more important than the extent of self-help in deter-

mining the overall quality of rehabilitation.

- The measurement of urban homesteads against current space and service quality standards. Application of current space and service quality standards to older properties, such as the urban homesteads, provides a set of indicators of the quality of the "products" of the urban homesteading process. The properties do much better when measured against conventional space requirements (79% standards or above standard) than when measured against current service quality standards (less than 40% of the properties meet minimum standards for bathroom plumbing and electrical service). These findings clearly raise the issue of whether HUD's standards for rehabilitated properties (MDSR) are not overly stringent, given the substantial expenditures incurred on the rehabilitation of properties, many of which do not meet these standards.

The findings of the study reported above support an overall assessment of the rehabilitation experience under urban homesteading. They do not, however, provide direct guidance to local urban homesteading officials wishing to select the best approach to the planning and management of rehabilitation. In the remainder of this summary chapter, the findings will be examined for the evidence they shed on the effectiveness of alternative approaches to the management of urban homestead rehabilitation.

One way to bring together the results of previous chapters of this report is to classify each of the Demonstration Cities in terms of their experience and performance along the major dimensions of program choice and rehabilitation outcome. It is clear that there are many ways by which this can be accomplished, with progressively finer and finer gradations of distinction. It is also clear, however, that the sample size of 23 Demonstration Cities cannot support too fine a classificatory system. The approach followed here adopts a classification system based on 3 variables: (1) percentage self-help (2 levels: mean percentage of self-help value to total value greater or less than 36%); (2) the quality of workmanship (2 levels:

average percentage of standard or above standard workmanship greater or less than 78%); (3) speed of rehabilitation (2 levels: time to complete rehabilitation greater or less than 11 months). In each case, the cut-off which divides each class into two groups was selected to approximate the median of the distribution. The resulting classification of Demonstration Cities is presented in Figure VI-1.

Figure VI-1

THREE-WAY CLASSIFICATION OF DEMONSTRATION CITIES BY MEAN SELF-HELP PERCENTAGE, QUALITY OF WORKMANSHIP & SPEED OF REHABILITATION

		Quality of Workmanship (% Above Standard & Standard)				TOTALS
		≥78%		<78%		
		Time to Complete Rehab				
		>11 months	<11 months	>11 months	<11 months	
Mean % Self-Help	≥36%	Tacoma	Minneapolis Indianapolis Milwaukee South Bend	Oakland	Chicago Columbus Dallas Gary Islip	11
	<36%	Atlanta Boston Decatur Jersey City Kansas City	Cincinnati Philadelphia	Baltimore Freeport New York City Rockford Wilmington		12
	TOTALS	6	6	6	5	23

The classification which results is instructive. In the first place, the almost identical distribution of the totals in the bottom row of Figure VI-1 indicates that there is no relationship between the average speed of rehabilitation and the average quality of rehabilitation across the sample. Cities which carry out their rehabilitation programs on a fast schedule are just as likely, or unlikely, to produce good quality workmanship as those which perform the work more slowly. Secondly, there is no evidence that cities which permit and encourage self-help do much worse than cities which use less self-help in terms of the quality of the resulting product. The 2-way classification of cities by percentage of self-help and quality of workmanship (Figure VI-2), shows that there is no systematic tendency for cities with a high percentage of self-help to produce lower quality work. This is surprising given the earlier evidence that work performed by homesteaders typically has a higher incidence of deficiencies than work performed by contractors.[1] The explanation must necessarily be found in the tendency of both homesteaders and contractors to perform better than average quality work when there is a higher percentage of self-help.

Figure VI-2

TWO-WAY CLASSIFICATION OF CITIES (NUMBER)
BY MEAN % SELF-HELP & QUALITY OF WORKMANSHIP

		Quality of Workmanship (% Standard or Above Standard)		
		≥78%	<78%	
Mean % Self-Help	≥36%	5	6	11
	<36%	7	5	12
TOTALS		12	11	23

[1] See Chapter V, page 69.

The third two-way interaction in Figure VI-3 is between the percentage of self-help and the speed of rehabilitation. In this case there is a dramatic and convincing negative association between the two variables (Figure VI-3).

Figure VI-3

TWO-WAY CLASSIFICATION OF CITIES (NUMBER)
BY MEAN % OF SELF-HELP &
TIME TO COMPLETE REHABILITATION

		Time to Complete Rehabilitation		
		≤11 months	>11 months	
Mean % Self-Help	≥36%	2	9	11
	<36%	10	2	12
	TOTALS	12	11	23

Only 2 of the 11 cities with over 36% self-help averaged less than 11 months to complete rehabilitation. Conversely, 10 of the 12 cities with less than 36% self-help took less than 11 months on average to complete rehabilitation. This is one of the major findings of the comparison of the Demonstration Cities in terms of their approach to urban homesteading.

It could be argued that the classification of the Demonstration Cities in terms of their approach to urban homesteading should also include a measure of the scale of the rehabilitation jobs they undertake. Accordingly, Figure VI-1 has been augmented to include a classification of the cities by the average size of the rehabilitation jobs undertaken (2 levels: rehabilitation value greater or less than $14,000. The new classification (Figure VI-4) illustrates the tendency, discussed earlier,[1] for cities with larger jobs to have lower percentages of self-help,

[1]See Chapter IV, pages 57-58.

Figure VI-4

FOUR-WAY CLASSIFICATION OF DEMONSTRATION CITIES BY REHABILITATION VALUE, SELF-HELP PERCENTAGE, QUALITY OF WORKMANSHIP & SPEED OF REHABILITATION

Rehabilitation Value	Mean % Self-Help	Quality of Workmanship (% Standard & Above Standard) ≥78% — Time to Complete Rehab ≤11 months	Quality of Workmanship (% Standard & Above Standard) ≥78% — Time to Complete Rehab >11 months	Quality of Workmanship (% Standard & Above Standard) <78% — Time to Complete Rehab ≤11 months	Quality of Workmanship (% Standard & Above Standard) <78% — Time to Complete Rehab >11 months	
≥$14K	≥36%		Minneapolis	Oakland	Chicago Columbus	4
	<36%	Boston Decatur Jersey City	Cincinnati Philadelphia	Baltimore Freeport New York City		8
<$14K	≥36%	Tacoma	Indianapolis Milwaukee South Bend		Dallas Gary Islip	7
	<36%	Atlanta Kansas City		Rockford Wilmington		4
TOTAL		6	6	6	5	23

as illustrated by the row totals in the right-hand column of Figure VI-4. However, the mean size of the job does not appear to be correlated with the quality of workmanship, or, except through the mediating influence of self-help, with the time required to complete rehabilitation.

The classification of the Demonstration Cities in terms of the major dimensions of program design and performance supports to some degree the original groupings reported in Chapter I of this report, and developed before the property inspections were carried out. There are 6 Demonstration Cities which undertake larger than average jobs, have less than average self-help percentages and complete the work in under 11 months. These are Boston, Decatur, Jersey City, Baltimore, Freeport, and New York City. Four of these cities were among the five cities included

in the group which "emphasized high standards of rehabilitation quality, rapid completion of repairs and a high degree of local program control over the specification and performance of work." The grouping seems clearly appropriate, but the emphasis on high quality work is questionable, since only 3 of the 6 cities exceeded the median rate of standard and above standard workmanship.

Four cities (Atlanta, Kansas City, Rockford and Wilmington) resemble these six in all respects except for the average size of the rehabilitation jobs undertaken. Each of these cities had lower than average participation of homesteaders and each achieved relatively rapid completion of rehabilitation. Like the first six, however, these four include cities distributed equally both above and below the median quality levels. If we pool these two groups, separated only by the size of the jobs undertaken, they represent one basic model of urban homesteading rehabilitation: modest homesteader involvement and rapid completion of repairs.

At the other extreme are those cities which permit or encourage self-help and which complete repairs more slowly. These include Minneapolis, Indianapolis, Milwaukee, South Bend, Chicago, Columbus, Dallas, Gary, and Islip. Two-thirds of these cities undertook jobs which averaged less than $14,000 in rehabilitation value (unlike the low self-help, fast repair programs which tended to undertake the larger jobs). Once again, these programs are almost equally divided by the median of the quality of workmanship. Three of the five cities originally classified into the group which "encourages the use of sweat equity" are among the cities which encourage self-help and which complete repairs more slowly. Taken together, these 9 Demonstration Cities constitute another model of the way to approach urban homesteading.

The four cities which remain are those in which the time penalty for heavy reliance on self-help is not paid (Tacoma and Oakland) or where the time dividend for limited use of self-help is not received (Cincinnati and Philadelphia). The relative in-

frequency of these examples suggests that these do not represent typically available choices for cities undertaking urban homesteading programs.

It is clear that several distinct approaches to the planning and management of urban homestead rehabilitation have been adopted by cities participating in the Urban Homesteading Demonstration. The basic trade-off is between the percentage of the work performed by the homesteader, with its implications for cost reduction, and the time required to complete rehabilitation. Cities which have undertaken the larger rehabilitation jobs have typically favored an approach which relies relatively less on self-help and which insures that the properties are repaired quite quickly. Cities which select properties needing fewer repairs have tended to rely more heavily on self-help and the work has tended to take somewhat longer to complete. The findings of the report also indicate that it is the management of the program, whether oriented towards large jobs or small jobs, self-help or contracted work, rapid or less rapid completion of repairs, which determines the quality of the workmanship which goes into the repairs. This finding clearly indicates that high quality workmanship and cost reduction through sweat equity are compatible objectives in an urban homesteading program.

Appendix A

REHAB AUDIT INSTRUMENT

ARCHITECTURAL AUDIT

PREPARED BY:

THE EHRENKRANTZ GROUP
19 West 44th Street
New York, New York

March 15, 1977

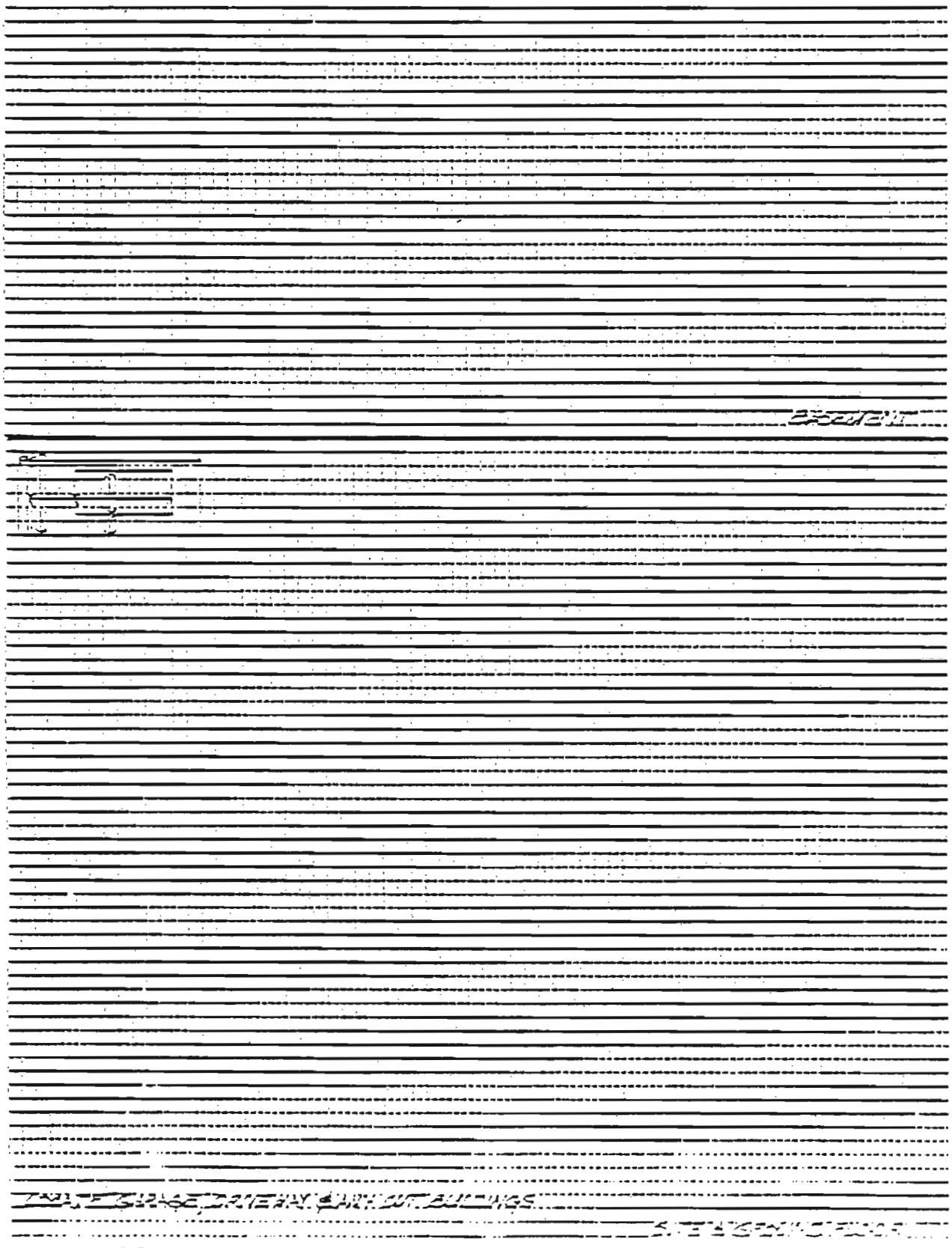
URBAN HOMESTEADING

DATE	
CITY	
STREET ADDRESS	
HOMESTEADER'S NAME	PHONE
AUDITOR	

BLDG. I.D. NO.

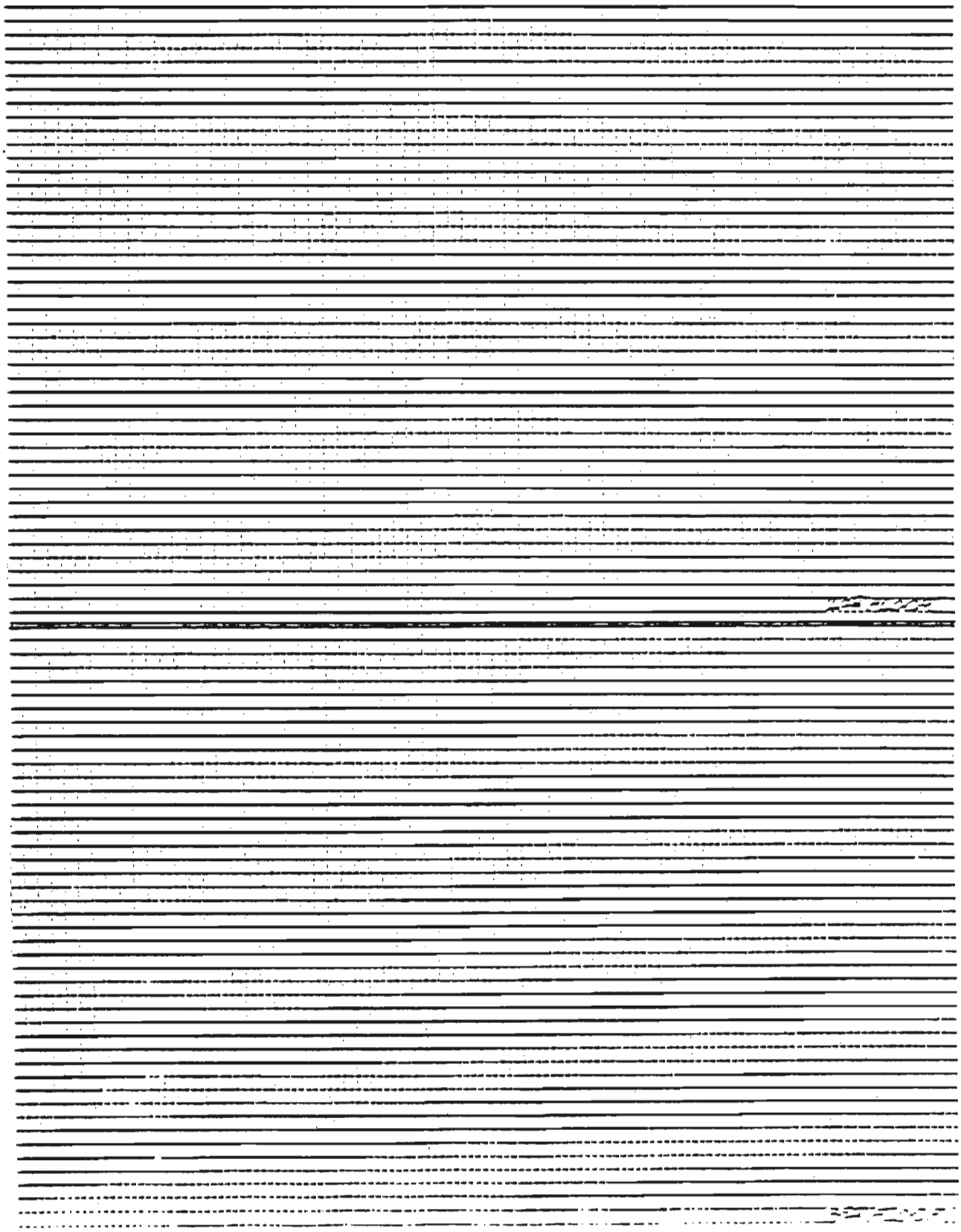
SLCG. I.D. NO.

ROUGH PLANS AND DIMENSIONS



BLDG. I.D. NO.

ROUGH PLANS AND DIMENSIONS (cont.)



01 OVERALL INFORMATION (SHEET 1 of 1)

BLDG ID NO

01	Date of Interview	MO.	DAY	'97

01	Age	1 (Pre 1920)	2 1920's	3 1930's	4 1940's	5 1950's	6 1960's	7 1970's	
02	Floors (Excluding Bsm't. and Attic)	1	2	3	4	5	6	7	
03	No. of Split Levels	0	1	2	3	4	5	6	
04	No. of Dwelling Units	1	2	3	4	5	6	7	
05	No. of Rooms Regularly Used for Sleeping	1	2	3	4	5	6	7	

ENTRANCES

01	No. Entrances	1	2	3	4	5
02	Amenities (Check All That Apply)	Vestibule at Main Entry	Mud Room (main or second entry)	Basement Entrance	Visual Control	Privacy
	Defects	Ext. Door Missing				

STAIRS

01	Main (Appropriated)	Straight Run	Split	Winders	1-Way Switch
02	Basement	Straight Run	Split	Winders	1-Way Switch
03	Attic	Straight Run	Split	Winders	Fixed or Drop Ladder

No.	01 ITEM	EXISTING: Standard	EXISTING: Minor Sub-stand.	EXISTING: Major Sub-stand.	FACTORS: Minor Sub-stand.		FACTORS: Major Sub-stand.	NEW			NEW: Workmanship	NEW: Materials	NEW: Factors: Above Std. Materials
01	MAIN STAIR										1 2 3 4	1 2 3 4	
.1	WOOD	0	0	0	WORN SLOPPY WORK TOO STEEP DEFLECTION	SLOPED TREAD CRACKED OPEN RISER [illegible]	LOOSE, MISSING PIECES MAJOR DEFL.				1 2 3 4	1 2 3 4	HARDWOODS NATURAL FINISH
.2	METAL	0	0	0	NOISY	SLOPED TREAD UNEVENNESS					1 2 3 4	1 2 3 4	
.3	OTHER	0	0	0							1 2 3 4	1 2 3 4	
A.	FINISH	0	0	0	POOR FINISH (PEELING BLISTERING) WORN CARPET	NO EDGE STRIPS THREADBARE CARPET	LOOSE CARPET				1 2 3 4	1 2 3 4	
B.	HANDRAIL	0	0	0		NOT ENOUGH EXTENSION	POOR HEIGHT LOOSE SPLINTERED MISSING				1 2 3 4	1 2 3 4	DESIGNED OAK, NEWEL POST, ETC.
02	ATTIC STAIR	0	0	0	WORN NOISY SLOPPY WORK	SLOPED TREAD CRACKED DEFLECTION	LOOSE, MISSING PIECES SPLINTERED RAIL MAJOR DEFL.				1 2 3 4	1 2 3 4	CARPET DESIGNED MAIN STAIR QUALITY
03	BASEMENT STAIR	0	0	0	WORN NOISY SLOPPY WORK	SLOPED TREAD CRACKED DEFLECTION	LOOSE, MISSING PIECES SPLINTERED RAIL MAJOR DEFL.				1 2 3 4	1 2 3 4	CARPET DESIGNED MAIN STAIR QUALITY

[illegible]
[illegible]
LIVING SPACES (SHEET 1 OF 2)

BLDG ID NO

FIREPLACES

01	No. of Fireplaces	0	1	2	3 38
02	Location	Living Room 39	Other 40		
03	Type	Masonry 41	Free-standing 42	Wall-mounted 43	W/Screen, Mantle/ Surround 44
04	Defects	Non-working 45	Doesn't Draw 46	Non-fireproof Hearth 47	

LIVING SPACES

30	Any Special Features or Defects in Living Area?	

ITEM NO.	ITEM	LIVING	LIVING/DINING	DINING	OTHER
31	Room Length	FT 49-51	FT 52-54	FT 55-57	FT 58-60
32	Room Width	FT 61-63	FT 64-66	FT 67-69	FT 70-72
33	Alcove Area	SF [illegible]	SF [illegible]	SF [illegible]	SF [illegible]
34.1	Predominant Ceil'g Hgt	FT [illegible]	FT [illegible]	FT [illegible]	FT [illegible]
.2	% Headroom Under 4'0"	0%	0%	0%	0%
35.1	Total Window Area	SF [illegible]	SF [illegible]	SF [illegible]	SF [illegible]
.2	Operable Window Area	SF [illegible]	SF [illegible]	SF [illegible]	SF [illegible]
36	Storage (Including Storage in Vestibule)	SF [illegible]	SF [illegible]	SF [illegible]	SF [illegible]
37.1	Adequate Outlets	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO
.2	Switches	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO
.3	A/C Outlet	1 YES 2 NO 3 NX	1 YES 2 NO 3 NX	1 YES 2 NO 3 NX	1 YES 2 NO 3 NX
38.1	Heating Element	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO
.2	Thermostat	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO
.3	A/C Element	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO
39	Is Room A New Addition (Done in Phase Work)	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO

LIVING SPACES PLANNING CONSIDERATIONS

10	% of Living Area Needed for Circulation	1 Less Than 15%	2 Over 15%
11	Can Living Area Be Expanded in Future	1 YES	2 NO
12	Can Eating Space Be Expanded in Future	1 YES	2 NO
13	Is It Possible To Expand Dining Surface for Occasional Use?	1 YES	2 NO

LIVING SPACES FINISHES (SHEET 2 OF 4)

BLDG ID NO

No.	ITEM (02)	EXISTING % Standard	EXISTING % Minor Sub-stand.	EXISTING % Major Sub-stand.	FACTORS Minor Sub-stand.	FACTORS Major Sub-stand.	NEW New Work	NEW Contractor	NEW Remodel	NEW Workmanship (Above Std / Std / Minor Substd / Major Substd)	NEW Materials (Above Std / Std / Minor Substd / Major Substd)	NEW Factors Above Std. Materials
01	WALL	0	0	0						1 2 3 4	1 2 3 4	
.1	PLASTER	0	0	0	MARRED UNEVEN CRACKS	CRACKS SOFT SURFACE NOT SECURE [illegible]				1 2 3 4	1 2 3 4	
.2	GYP. BOARD	0	0	0	MARRED DAMAGED POOR SPACKLE CRACKED [illegible]	HOLES CRACKS				1 2 3 4	1 2 3 4	
.3	PATCH ON PLASTER OR GYP. BD.	0	0	0	UNEVEN SURFACE SUNKEN	SURROUNDING PL. NOT SECURE				1 2 3 4	1 2 3 4	
A.	PANELING	0	0	0	MARRED NAIL HOLES NOT FLUSH ROUGH EDGES POOR MATERIAL	CAPPED BUCKLING LOOSE				1 2 3 4	1 2 3 4	TONGUE & GROOVE BOARD [illegible]
B.	PAPER	0	0	0	LOOSE UNMATCHED NON-UNIFORM COLOR STAINED CROOKED SEAM	CAPPED PEELING				1 2 3 4	1 2 3 4	HIGH QUALITY PAPER FLOCKED [illegible]
C.	PAINT	0	0	0	ROLLER MARKS HOLIDAYS STAINED [illegible] OF PAINT OVER PAPER DRIPS SHADED	BLISTERING PEELING ALLIGATORING				1 2 3 4	1 2 3 4	
D.	OTHERS	0	0	0						1 2 3 4	1 2 3 4	
02	FLOOR	0	0	0						1 2 3 4	1 2 3 4	
.1	WOODSTRIP	0	0	0	STAINED MARRED PAINTED [illegible] CAPPED	SPLINTERY CRACKED GOUGED [illegible]				1 2 3 4	1 2 3 4	HARDWOOD PATTERNED PLUGGED NAILS
.2	CARPET	0	0	0	STAINED, BURNED LOW FACE WT. [illegible] POOR FIT POOR SEAMING NO PADDING	THREAD BARE LOOSE MISSING CPT. [illegible]				1 2 3 4	1 2 3 4	HIGH FACE-WEIGHT
.3	PARQUET	0	0	0	MARRED WORN PAINTED LOOSE, UNEVEN [illegible]	CAPPED				1 2 3 4	1 2 3 4	HARDWOOD
.4	RESILIENT TILE & SHEET	0	0	0	PAINT ON MARRED WORN IMPROPER PREP. [illegible]	CAPPED, LOOSE POOR FIT [illegible]				1 2 3 4	1 2 3 4	VINYL [illegible]
A.	CLEAR FINISH	0	0	0	DIRT IN FINISH DISCOLORED PAINT ON MARRED WORN [illegible]	ALLIGATORING PEELING				1 2 3 4	1 2 3 4	URETHANE
B.	PAINT	0	0	0	DIRT IN FINISH MARRED WORN [illegible]	PEELING ALLIGATORING [illegible]				1 2 3 4	1 2 3 4	
C.	BASE	0	0	0	POOR INSTALL. [illegible]	MISSING				1 2 3 4	1 2 3 4	CLEAR FIN. WOOD
03	CEILING	0	0	0						1 2 3 4	1 2 3 4	
.1	PLASTER	0	0	0	MARRED UNEVEN CRACKED	SOFT SURFACE NOT SECURE HOLES/ [illegible]				1 2 3 4	1 2 3 4	
.2	GYP. BOARD	0	0	0	MARRED DAMAGED POOR SPACKLE CRACKED [illegible]	BULGING HOLES				1 2 3 4	1 2 3 4	
.3	PATCH ON PLASTER OR GYP. BD.	0	0	0	SURFACE UNEVEN PATCH SUNKEN	NOT SECURE				1 2 3 4	1 2 3 4	
.4	WOOD CEILING	0	0	0	STAINED MARRED PAINTED OVER KNOTHOLES	CRACKED OR CAPPED [illegible]				1 2 3 4	1 2 3 4	SLATTED COFFERED
A.	PAINT	0	0	0	ROLLER MARKS HOLIDAYS STAINED DRIPS SHADED SCUFF	BLISTERING PEELING ALLIGATORING				1 2 3 4	1 2 3 4	TEXTURED
B.	TILE, HUNG-	0	0	0	MARRED STAINED NOT ALIGNED POOR FIT NOT LEVEL	MISSING				1 2 3 4	1 2 3 4	
C.	TILE, GLUE-ON	0	0	0	MARRED STAINED POOR FIT CRACKED	LOOSE, NOT SECURE MISSING				1 2 3 4	1 2 3 4	
.4	STORAGE	0	0	0	POOR HARDWARE DOORS CATCHES ASKEW NO DOOR	FLIMSY CONSTR. SPLIT WOOD CAPPED [illegible]				1 2 3 4	1 2 3 4	QUALITY HARDWARE SPEC. TRIM

BLDG ID NO

HALLWAYS & BEDROOMS (SHEET 1 OF 2)

HALLWAYS

ITEM NO.	ITEM	HALLWAYS - FIRST FLOOR	HALLWAYS - SECOND FLOOR	HALLWAYS - THIRD FLOOR
01	MINIMUM PASSAGE WIDTH	FT	FT	FT
02	TOTAL AREA	SF	SF	SF
03	CLOSET STORAGE	SF	SF	SF
04	LIGHT FIXTURE	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO
	THERMOSTAT	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO

BEDROOMS

ITEM NO.	ITEM	BEDROOM 1	BEDROOM 2	BEDROOM 3	BEDROOM 4
05	ROOM LENGTH	FT	FT	FT	FT
06	ROOM WIDTH	FT	FT	FT	FT
07	ALCOVE AREA	SF	SF	SF	SF
08.1	CEILING HEIGHT	FT	FT	FT	FT
.2	CEILING AREA HEADROOM LESS THAN 5'-0"	0 %	0 %	0 %	0 %
09.1	TOTAL WINDOW AREA	SF	SF	SF	SF
.2	OPERABLE WINDOW AREA	SF	SF	SF	SF
10	STORAGE	SF	SF	SF	SF
11.1	ADEQUATE OUTLETS	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO
.2	SWITCHES	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO
.3	AIR CONDITIONING OUTLET	1 YES 2 NO 3 NA	1 YES 2 NO 3 NA	1 YES 2 NO 3 NA	1 YES 2 NO 3 NA
12.1	HEATING ELEMENT	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO
.2	THERMOSTAT	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO
.3	AIR CONDITIONING	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO
13	A NEW ADDITION	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO

BEDROOM PLANNING CONSIDERATIONS

14	CAN YOU EXIT BEDROOM WITHOUT GOING THRU KITCHEN	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO
15	IS WINDOW SILL LESS THAN 3' FROM GRADE TO EXIT SURFACE	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO
16	ACCESSIBLE FROM MAIN CIRCULATION	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO	1 YES 2 NO

BLDG ID NO

	No.	33 ITEM	EXISTING % Standard	% Minor Sub-stand.	% Major Sub-stand.	FACTORS Minor Sub-stand.		Major Sub-stand.	NEW New Work	Contractor	Homeowner	Workmanship (Above Std. / Std. / Minor Substd. / Major Substd.)	Materials (Above Std. / Std. / Minor Substd. / Major Substd.)	Factors Above Std. Materials
( )	01	WALL	0	0	0							1 2 3 4	1 2 3 4	
7) 1	.1	PLASTER	0	0	0	[illegible]	[illegible] CRACKS	SOFT SURFACE NOT SECURE HOLES				1 2 3 4	1 2 3 4	
2	.2	GYP. BOARD	0	0	0	MARRED ABRADED	POOR SPACKLE CRACKED JOINTS OBV.	HOLES CRACKS				1 2 3 4	1 2 3 4	
3	.3	PATCH IN PLASTER OR GYP. BD.	0	0	0	UNEVEN SURFACE	SUNKEN	SURROUNDING PL. NOT SECURE				1 2 3 4	1 2 3 4	
4	A.	PANELING	0	0	0	MARRED NAIL HOLES	NOT FLUSH ROUGH EDGES POOR MATERIAL	CAPPED BUCKLING LOOSE				1 2 3 4	1 2 3 4	TONGUE & GROOVE BOARD BOARD & BATTEN
5	B.	PAPER	0	0	0	LUMPY UNMATCHED NON-UNIFORM COLOR	STAINED CROOKED SEAM	CAPPED PEELING				1 2 3 4	1 2 3 4	HIGH QUALITY PAPER FLOCKED VINYL
6	C.	PAINT	0	0	0	ROLLER MARKS HOLIDAYS STAINED DIRT IN PAINT	OVER PAPER DRIPS SHADED	BLISTERING PEELING ALLIGATORING				1 2 3 4	1 2 3 4	
8) 7	D.	OTHERS	0	0	0							1 2 3 4	1 2 3 4	
2	02	FLOOR	0	0	0							1 2 3 4	1 2 3 4	
3	.1	WOODSTRIP	0	0	0	STAINED MARRED PAINTED NAIL HOLES	CUPPED	SPLINTERY CRACKED GOUGED KNOTHOLES				1 2 3 4	1 2 3 4	HARDWOOD PATTERNED PLUGGED NAILS
) 6	.2	CARPET	0	0	0	STAINED, BURNED LOW FACE WT. NO EDGE STRIPS	POOR FIT POOR SEAMING NO PADDING	[illegible] LOOSE MISSING OPT. [illegible]				1 2 3 4	1 2 3 4	HIGH FACE-WEIGHT
5	.3	PARQUET	0	0	0	MARRED WORN PAINTED	LOOSE, UNEVEN PLYWOOD	CUPPED				1 2 3 4	1 2 3 4	HARDWOOD
6	.4	RESILIENT TILE & SHEET	0	0	0	PAINT ON MARRED WORN	IMPROPER PREP. NOT ALIGNED	CUPPED, LOOSE POOR FIT BUCKLING				1 2 3 4	1 2 3 4	VINYL VINYL CUSHION
3) 1	A.	CLEAR FINISH	0	0	0	DIRT IN FINISH DISCOLORED	PAINT ON MARRED WORN HOLIDAYS	ALLIGATORING PEELING				1 2 3 4	1 2 3 4	URETHANE
2	B.	PAINT	0	0	0	DIRT IN FINISH	MARRED WORN HOLIDAYS	PEELING ALLIGATORING [illegible]				1 2 3 4	1 2 3 4	
3	C.	BASE	0	0	0	POOR INSTALL. LOOSE		MISSING				1 2 3 4	1 2 3 4	CLEAR FIN. WOOD
4	03	CEILING	0	0	0							1 2 3 4	1 2 3 4	
5	.1	PLASTER	0	0	0	MARRED	UNEVEN CRACKED	SOFT SURFACE NOT SECURE HOLES/ CRACKED				1 2 3 4	1 2 3 4	
6.	.2	GYP. BOARD	0	0	0	MARRED ABRADED	POOR SPACKLE CRACKED POOR INSTALL.	BULGING HOLES				1 2 3 4	1 2 3 4	
3] 1	.3	PATCH IN PLASTER OR GYP. BD.	0	0	0	SURFACE UNEVEN	PATCH SUNKEN	NOT SECURE				1 2 3 4	1 2 3 4	
2	.4	WOOD CEILING	0	0	0	STAINED MARRED PAINTED OVER	KNOTHOLES	CRACKED OR CAPPED GOUGED				1 2 3 4	1 2 3 4	SLATTED COFFERED
3	A.	PAINT	0	0	0	ROLLER MARKS HOLIDAYS STAINED	DRIPS SHADED SCUFF	BLISTERING PEELING ALLIGATORING				1 2 3 4	1 2 3 4	TEXTURED
4	B.	CEIL. TILE	0	0	0	MARRED STAINED	NOT ALIGNED POOR FIT NOT LEVEL	MISSING				1 2 3 4	1 2 3 4	
5	C.	CEIL. GLUE-ON	0	0	0	MARRED STAINED	POOR FIT CRACKED	LOOSE, NOT SECURE MISSING				1 2 3 4	1 2 3 4	
6	04	STORAGE	0	0	0	POOR HARDWARE DOORS	[illegible] ASKEW NO DOOR	FLIMSY CONSTR. SPLIT WOOD CAPPED [illegible]				1 2 3 4	1 2 3 4	[illegible]

A-9

BLDG ID NO

KITCHEN (SHEET 1 OF 4)

ITEM NO.	ITEM	KITCHEN #1		KITCHEN #2	
31.1	ROOM LENGTH	FT	41-43	FT	[illegible]
31.2	ROOM WIDTH	FT	47-49	FT	[illegible]
32	ALCOVE AREA	SF	53-55	SF	56-58
33.1	PREDOMINANT CEILING HEIGHT	FT	59-61	FT	62-64
.2	CEILING WITH HEADROOM LESS THAN 6'-0"	0 %	[illegible]	0 %	[illegible]
34.1	TOTAL WINDOW AREA	SF	67-69	SF	70-72
.2	OPERABLE WINDOW AREA	SF	[illegible]	SF	[illegible]
35.1	COUNTER TOP LENGTH	LF	7-11	LF	12-14
.2	CABINET AND SHELVING LENGTH	LF	15-17	LF	18-20
.3	CLOSET STORAGE	SF	[illegible]	SF	[illegible]
36.1	ADEQUATE OUTLETS (AT LEAST ONE PER COUNTERTOP)	1 YES / 2 NO	[illegible]	1 YES / 2 NO	[illegible]
.2	SWITCHES	1 YES / 2 NO	[illegible]	1 YES / 2 NO	[illegible]
37.1	HEATING ELEMENT	1 YES / 2 NO	[illegible]	1 YES / 2 NO	[illegible]
.2	THERMOSTAT	1 YES / 2 NO	[illegible]	1 YES / 2 NO	[illegible]
.3	MECHANICAL VENTILATION	1 YES / 2 NO	[illegible]	1 YES / 2 NO	[illegible]
38	WAS KITCHEN EQUIPMENT PREVIOUSLY REPLACED?	1 YES / 2 NO	[illegible]	1 YES / 2 NO	[illegible]
39	EAT-IN-KITCHEN	1 YES / 2 NO	[illegible]	1 YES / 2 NO	[illegible]

39	PLANNING (MARK EACH APPROPRIATE ITEM)	ON EXT. WALL	ON SAME LEVEL AS EATING	ADJACENT TO EATING	ACCESS. TO DRIVEWAY OR WALK	ACCESS TO EXT. EATING	EXPANDABLE EATING
40	FIRE SAFETY (MARK EACH APPROPRIATE ITEM)		OPEN EATING @ RANGE	COMBUST MAT'L @ RANGE			

A-10

BLDG ID NO

KITCHEN (SHEET 2 OF 4)

No.	04 ITEM	EXISTING % Standard	EXISTING % Minor Sub-stand.	EXISTING % Major Sub-stand.	FACTORS Minor Sub-stand.		FACTORS Major Sub-stand.	NEW How Work	NEW Contractor	NEW Alternate	NEW Workmanship (Above Std. / Std. / Minor Substd. / Major Substd.)	NEW Materials (Above Std. / Std. / Minor Substd. / Major Substd.)	NEW Factors Above Std. Materials
01	WALL	0	0	0							1 2 3 4	1 2 3 4	
.1	PLASTER	0	0	0	MARRED	UNEVEN CRACKS	CRACKS SOFT SURFACE NOT SECURE HOLES				1 2 3 4	1 2 3 4	
.2	GYP. BOARD	0	0	0	MARRED ABRADED	POOR SPACKLE CRACKS JOINTS [illegible]	HOLES CRACKS				1 2 3 4	1 2 3 4	
.3	PATCH IN PLASTER OR GYP. BD.	0	0	0	UNEVEN SURFACE	SUNKEN	SURROUNDING PLASTER NOT SECURE				1 2 3 4	1 2 3 4	
A.	TILE	0	0	0	[illegible] DISCOLORED PLASTIC, METAL	CRACKED UNEVEN NOT ALIGNED	BAD JOINTS, GROUTING MISS., PIECES LOOSE				1 2 3 4	1 2 3 4	CERAMIC MUD
B.	PAPER	0	0	0	UNMATCHED NON-UNIFORM COLOR	STAINED CROOKED SEAM LUMPY	GAPPED PEELING				1 2 3 4	1 2 3 4	VINYL
C.	PAINT	0	0	0	ROLLER MARKS HOLIDAYS STAINED	OVERPAPER DRIPS [illegible]	BLISTERING PEELING ALLIGATORING				1 2 3 4	1 2 3 4	GLOSS
D.	PANELING	0	0	0	MARRED NAIL HOLES	NOT FLUSH ROUGH EDGES	GAPPED BUCKLING DELAMINATING [illegible]				1 2 3 4	1 2 3 4	TONGUE & GROOVE BD. BD. & BATTEN
E.	OTHER	0	0	0							1 2 3 4	1 2 3 4	
02	FLOOR	0	0	0							1 2 3 4	1 2 3 4	
.1	CERAMIC/STONE TILE	0	0	0	CRAZED DISCOLORED WORN	CRACKED UNEVEN NOT ALIGNED	BAD JOINTS MISSING PIECES LOOSE				1 2 3 4	1 2 3 4	CERAMIC MUD
.2	RESILIENT TILE/SHEET	0	0	0	MARRED WORN PAINT ON	IMPROPER PREP., NOT ALIGNED	GAPPED LOOSE POOR FIT				1 2 3 4	1 2 3 4	VINYL VINYL CUSHION
.3	CARPET	0	0	0	STAINED, BURNED, LOW FACE WT. NO EDGE STRIPS	POOR SEAMING POOR FIT NO PADDING	THREAD BARE LOOSE, MISSING CARPET TILES				1 2 3 4	1 2 3 4	HIGH FACE WEIGHT
.4	WOOD	0	0	0	STAINED MARRED NAIL HOLES	GAPPED	SPLINTERY CRACKED GOUGED [illegible]				1 2 3 4	1 2 3 4	HARDWOOD PATTERNED
A.	PAINT/CLEAR FINISH	0	0	0	DIRT IN FINISH DISCOLORED PAINT ON	MARRED WORN HOLIDAYS	PEELING ALLIGATORING [illegible]				1 2 3 4	1 2 3 4	URETHANE
B.	BASE	0	0	0	POOR INSTALL. LOOSE		MISSING				1 2 3 4	1 2 3 4	CLEAR FIN. WOOD
03	CEILING	0	0	0							1 2 3 4	1 2 3 4	
.1	PLASTER	0	0	0	MARRED	UNEVEN CRACKED	SOFT SURFACE NOT SECURE HOLES, CRACKED				1 2 3 4	1 2 3 4	
.2	GYP. BD.	0	0	0	MARRED ABRADED	POOR SPACKLE CRACKED POOR INSTALL.	BULGING HOLES				1 2 3 4	1 2 3 4	
.3	PATCH IN PLASTER OR GYP. BD.	0	0	0	SURFACE UNEVEN	PATCH SUNKEN	NOT SECURE				1 2 3 4	1 2 3 4	
A.	PAINT	0	0	0	ROLLER MARKS HOLIDAYS STAINED	DRIPS [illegible] LUMPY	BLISTERING PEELING ALLIGATORING				1 2 3 4	1 2 3 4	TEXTURED
B.	TILE, HUNG	0	0	0	MARRED STAINED	NOT ALIGNED POOR FIT NOT LEVEL	MISSING				1 2 3 4	1 2 3 4	
C.	TILE, GLUE-ON	0	0	0	MARRED STAINED	POOR FIT CRACKED	[illegible] LOOSE NOT SEC. MISSING				1 2 3 4	1 2 3 4	
		0	0	0							1 2 3 4	1 2 3 4	
		0	0	0							1 2 3 4	1 2 3 4	

A-11

BLDG ID NO

31.1	[illegible]	PRESENT	47				
.2	SIZE/ENERGY	4' & LESS	48	OVER 4'	49	GAS	50	[illegible]	51	
.3	FEATURES	SINK	52	RANGE TOP	53	OVEN	54	REFRIGERATOR	55	STORAGE	56
.4	DEFECTS	OLD	57	MARRED	58	OTHER	59				
32.1	STOVE/OVEN/RANGE TOP	PRESENT	60								
.2	TYPE	FREE-STANDING	61	SET OR BUILT IN	62	SINGLE WALL OVEN	63	DOUBLE WALL OVEN	64	RANGE TOP	65
.3	ENERGY	GAS RANGE	66	ELECTRIC RANGE	67	GAS OVEN	68	ELECTRIC OVEN	69		
.4	RANGE SURFACE	SMOOTH SURFACE	70	LESS THAN 4 BURNERS	71	4 BURNERS	72	MORE THAN 4 BURNERS	73	GRILL	74
.5	FEATURES	EXTRA CONTROLS	75	GLASS DOOR	76	SELF-CLEANING	77				
.6	MATERIAL DEFECTS	OLD	9	MARRED	10	MISSING	11				
.7	WORKMANSHIP DEFECTS	ASSOC	12								
33.1	RANGE HOOD	PRESENT	13								
.2	FEATURES	FAN	14	GREASE FILTER	15	LIGHT	16	VENTED	17		
.3	MATERIAL DEFECTS	MARRED DENTED	18								
.4	WORKMANSHIP DEFECTS	ASSOC	19								
34.1	REFRIGERATOR/FREEZER	PRESENT	20								
.2	SIZE	LESS THAN 12 CF	21	MORE THAN 12 CF	22						
.3	FEATURES	FROST FREE	23	2 DOOR	24	DELUXE	25				
.4	MATERIAL DEFECTS	OLD	26	MARRED DENTED	27	SMALL FREEZER	28				
35.1	FREEZER	PRESENT	29								
.2	MATERIAL DEFECTS	OLD	30	MARRED DENTED	31						
36.1	DISHWASHER	PRESENT	32								
.2	FEATURES	EXTRA CONTROLS	33								
.3	MATERIAL DEFECTS	OLD	34	MARRED DENTED	35	PORCELLE	36				
37	CONTACTOR	PRESENT	37								
38	EXHAUST FAN	PRESENT	38								
39.1	SINK	PRESENT	39								
.2	TYPE	SINGLE	40	DOUBLE	41	SELF RIM	42	SEPARATE RIM	43	UNDERMAL	44
.3	FINISH	STAINLESS	45	PORCELAIN	46	EPOXY	47	STONE	48		
.4	FEATURES	SINGLE LEVER	49	GARBAGE DISPOSAL	50	SPRAY	51				
.5	MATERIAL DEFECTS	DENTED CHIPPED	52	MARS PORCELAIN	53						
.6	WORKMANSHIP DEFECTS	IMPROPER TRIM	54								

A-12

BLDG ID NO

[illegible] (CONT.)

10.1	TOP CABINETS/SHELVES	PRESENT				
.2	TYPE	CABINETS	OPEN SHELVES			
.3	MATERIAL	SOLID WOOD	PLASTIC LAMINATE	VENEER ON COMPOSITION BOARD	METAL	GLASS
.4	FEATURES	DELUXE HARDWARE	INTEGRAL BACK			
.5	MATERIAL DEFECTS	DOOR PROBLEM	MARRED	PAINT-ON-METAL POOR FINISH CONTACT PAPER	UNFINISHED INT.	
.6	WORK DEFECTS	SLOPPY WORKMANSHIP				
11.1	BOTTOM CABINETS	PRESENT				
.2	TYPE	CABINETS	OPEN SHELVES			
.3	MATERIAL	SOLID WOOD	PLASTIC LAMINATE	VENEER ON COMPOSITION BOARD	METAL	
.4	FEATURES	DELUXE HARDWARE	INTEGRAL BACK			
.5	MATERIAL DEFECTS	DOOR PROBLEM	MARRED	POOR FINISH PAINT-ON-METAL CONTACT PAPER	UNFINISHED INT.	
.6	WORKMANSHIP DEFECTS	SLOPPY WORKMANSHIP				
12.1	FULL HEIGHT CABINETS	PRESENT				
.2	TYPE	CABINETS	OPEN SHELVES			
.3	MATERIAL	SOLID WOOD	PLASTIC LAMINATE	VENEER ON COMPOSITION BOARD	METAL	
.4	FEATURES	DELUXE HARDWARE	INTEGRAL BACK			
.5	MATERIAL DEFECTS	DOOR PROBLEM	MARRED	PAINT-ON-METAL POOR FINISH CONTACT PAPER	UNFINISHED INT.	
.6	WORKMANSHIP DEFECTS	SLOPPY WORKMANSHIP				
13.1	COUNTER TOP	PRESENT				
.2	MATERIAL	PLASTIC LAMINATE	CERAMIC TILE	RESILIENT	WOOD	METAL
.3	FEATURES	SEAMLESS	INTEGRAL BACK-SPLASH	SUPERIOR QUALITY SURFACE		
.4	MATERIAL DEFECTS	MARRED CHIPPED	BURNED	NOT LEVEL		
.5	WORKMANSHIP DEFECTS	OPEN JOINTS	ASKEW	DELAMINATION		
14.1	PANTRY STORAGE	WALK THROUGH	WALK-IN	CLOSET		

15	ANY SPECIAL DEFECTS OR FEATURES?	

TheEhrenkrantzGroup

A-13

BLDG ID NO

ITEM NO.	ITEM	SUITE #1	#2	#3
01	ROOM LENGTH	FT 17-19	FT 32-34	FT 53-55
02	ROOM WIDTH	FT 15-16	FT 29-31	FT 50-52
03.1	PREDOMINANT CEILING HEIGHT	FT 45-47	FT 68-70	FT 71-73
.2	% SKYLIGHTS UNDER 5' - 0"	0 % 74	0 % 75	0 % 76
04.1	TOTAL WINDOW AREA	SF 8-11	SF 12-14	SF 15-17
.2	OPENABLE WINDOW AREA	SF 19-20	SF 21-22	SF 24-25
05	CLOSET STORAGE	SF 7-78	SF 09-10	SF 11-12
06.1	ADEQUATE OUTLETS (INCLUDING ONE NEAR SINK)	1 YES 2 NO 11	1 YES 2 NO 14	1 YES 2 NO 15
.2	FIXTURES	1 YES 2 NO 26	1 YES 2 NO 27	1 YES 2 NO 28
07.1	HEATING ELEMENT	1 YES 2 NO 39	1 YES 2 NO 40	1 YES 2 NO 41
.2	THERMOSTAT	1 YES 2 NO 42	1 YES 2 NO 43	1 YES 2 NO 44
.3	MECHANICAL VENTILATION	1 YES 2 NO 45	1 YES 2 NO 46	1 YES 2 NO 47
08	FULL BATH	1 YES 2 NO 48	1 YES 2 NO 49	1 YES 2 NO 50
09	WAS BATH PREVIOUSLY RENOVATED?	1 YES 2 NO 51	1 YES 2 NO 52	1 YES 2 NO 53
10	NEW ADDITION?	1 YES 2 NO 54	1 YES 2 NO 55	1 YES 2 NO 56

SUITE PLANNING CONSIDERATIONS

11	SUITE LOCATED NEAR BEDROOMS	1 YES 2 NO 57	1 YES 2 NO 58	1 YES 2 NO 59
12	SUITE LOCATION	1 Low fl. 2 UPSTAIRS 60	1 Low fl. 2 UPSTAIRS 61	1 Low fl. 2 UPSTAIRS 62
13	SUITE ACCESSIBLE WITHOUT GOING THROUGH OTHER BEDROOM	1 YES 2 NO 63	1 YES 2 NO 64	1 YES 2 NO 65
14	LOCATED NEAR LIVING/DINING	1 YES 2 NO 66	1 YES 2 NO 67	1 YES 2 NO 68

BLDG ID NO

BATH FINISHES (SHEET 2 OF 3)

No.	05 ITEM	EXISTING S_3 Standard	EXISTING S_3 Minor Sub-stand.	EXISTING S_3 Major Sub-stand.	FACTORS Minor Sub-stand.	FACTORS Major Sub-stand.	NEW New Work	NEW Contractor	NEW Automatic	NEW Workmanship (Above Std / Std / Minor Substd / Major Substd)	NEW Materials (Above Std / Std / Minor Substd / Major Substd)	NEW Factors Above Std. Materials
01	WALL	O	O	O						1 2 3 4	1 2 3 4	
.1	PLASTER	O	O	O	MARKED / UNEVEN / CRACKS	SOFT SURFACE / NOT SECURE / HOLES, CRACKS				1 2 3 4	1 2 3 4	
.2	GYP. BOARD	O	O	O	MARKED / ABRADED / POOR SPACKLE / CRACKS / JOINTS UNEV.	HOLES / CRACKS				1 2 3 4	1 2 3 4	
.3	PATCH IN PLASTER OR GYP. BD.	O	O	O	UNEVEN SURFACE / SUNKEN	SURROUNDING PLASTER NOT SECURE				1 2 3 4	1 2 3 4	
A.	TILE	O	O	O	CRAZED / DISCOLORED / PLASTIC, METAL / CRACKED / UNEVEN / NOT ALIGNED	BAD JOINTS GROUTING / MISS. PIECES / LOOSE				1 2 3 4	1 2 3 4	CERAMIC [illegible]
B.	PAPER	O	O	O	UNMATCHED / NON-UNIFORM COLOR / STAINED / CROOKED SEAM / SCUFF	GAPPED / UNPROTECTED / PEELING				1 2 3 4	1 2 3 4	VINYL
C.	PAINT	O	O	O	ROLLER MARKS / HOLIDAYS / STAINED / OVER PAPER / DRIPS / SHADED / DIRT	BLISTERING / PEELING / ALLIGATORING				1 2 3 4	1 2 3 4	GLOSS
D.	PANELING	O	O	O	MARKED / NAIL HOLES / NOT PLUMB / ROUGH EDGES / DELAMINATING	GAPPED / BUCKLING				1 2 3 4	1 2 3 4	TONGUE & GROOVE BD., BD. & BATTEN
E.	OTHER	O	O	O						1 2 3 4	1 2 3 4	
02	FLOOR	O	O	O						1 2 3 4	1 2 3 4	
.1	CERAMIC/STONE TILE	O	O	O	CRAZED / DISCOLORED / PLASTIC, METAL / CRACKED / UNEVEN / NOT ALIGNED	BAD JOINTS / MISS. PIECES / LOOSE				1 2 3 4	1 2 3 4	CERAMIC [illegible]
.2	RESILIENT TILE/SHEET	O	O	O	MARKED / WORN / PAINT ON / IMPROPER PREP. / NOT ALIGNED	GAPPED LOOSE / POOR FIT				1 2 3 4	1 2 3 4	VINYL / VINYL CUSHION
.3	CARPET	O	O	O	STAINED, BURNED / LOW FACE WT. / NO EDGE STRIPS / POOR SEAMING / POOR FIT / NO PADDING	THREADBARE / LOOSE / MISS. CPT TILE				1 2 3 4	1 2 3 4	HIGH FACE WEIGHT
.4	WOOD	O	O	O	STAINED / MARKED / NAIL HOLES / GAPPED	SPLINTERY / CRACKED / GOUGED / MISS'G KNOTS				1 2 3 4	1 2 3 4	HARDWOOD / PATTERNED / PEGGED NAILS
A.	PAINT/CLEAR FINISH	O	O	O	DIRT IN FINISH / DISCOLORED / PAINT ON / MARKED / WORN / HOLIDAYS	PEELING / ALLIGATORING / "RUG OUTLINE"				1 2 3 4	1 2 3 4	URETHANE
B.	BASE	O	O	O	POOR INSTALL. / LOOSE	MISSING				1 2 3 4	1 2 3 4	CLEAR FIN. WOOD
03	CEILING	O	O	O						1 2 3 4	1 2 3 4	
.1	PLASTER	O	O	O	MARKED / UNEVEN / CRACKED	SOFT SURFACE / NOT SECURE / HOLES, CRACKED				1 2 3 4	1 2 3 4	
.2	GYP. BD.	O	O	O	MARKED / ABRADED / POOR SPACKLE / CRACKED / POOR INSTALL.	BULGING / HOLES				1 2 3 4	1 2 3 4	
.3	PATCH IN PLASTER OR GYP. BD.	O	O	O	SURFACE UNEVEN / PATCH SUNKEN	NOT SECURE				1 2 3 4	1 2 3 4	
A.	PAINT	O	O	O	ROLLER MARKS / HOLIDAYS / STAINED / DRIPS / SHADED / SCUFF	BLISTERING / PEELING / ALLIGATORING				1 2 3 4	1 2 3 4	TEXTURED
B.	TILE, HUNG	O	O	O	MARKED / STAINED / NOT ALIGNED / POOR FIT / NOT LEVEL	MISSING				1 2 3 4	1 2 3 4	
C.	TILE, GLUE-ON	O	O	O	MARKED / STAINED / POOR FIT / CRACKED	CERAMIC / NOT SECURE / MISSING				1 2 3 4	1 2 3 4	
		O	O	O						1 2 3 4	1 2 3 4	
04	STORAGE	O	O	O	POOR HARDWARE, LOOSE / GUTTERS / ASKEW ON DOOR	FLIMSY CONSTR. / SPLIT WOOD / GAPPED / HOLES				1 2 3 4	1 2 3 4	QUALITY HARDWARE / SPECIAL [illegible]

BLDG. ID NO.

BATH EQUIPMENT (SHEET 1 OF 2)

31.1	TUB	PRESENT 49				
.2	Type	Integral 77	Recess 77	Surface 78	Free-Standing 79	
.3	Finish	Fiberglass 74	Porcelain 75			
.4	Fixtures	Single Temp. Control 9	Grab Bars 77	Integral Plug 78	Glass Doors 79	Shower Head 80
.5	Material Defects	Dented Chipped 76	Surface Lost 78	Old 74		
.6	Workmanship Defects	Poor Caulking 77	Uneven Panels 78	Dripping Faucets 79	Poor Tile 80	
32.1	SEPARATE SHOWER	PRESENT 77				
.2	Type	Built In 76	FREESTANDING 77			
.3	Finish	Terrazzo 74	Tile 75	Steel 76	Fiberglass 77	
.4	Fixtures	Single Temp. Control Lever 72	Grab Bars 78	Glass Doors 79	Curtain Rod 80	
.5	Material Defects	Rusty 77	Abraded, Dented 77	Pitted Concrete, 74	Old 75	
.6	Workmanship Defects	Improper Install. 76	Rocks 77	Drips 78		
33.1	WATER CLOSET	PRESENT 70				
.2	Type	Flushometer 40	Tank 41			
.3	Finish/Fixtures/Amenities	Elongated Bowl 37	Quiet Flush 37			
.4	Material Defects	Broken or Miss'g. Seat 33	Cracked Toilet 34	Broken or Miss'g. Tank Top 36	Old 37	
.5	Workmanship Defects	Rocks 38	Askew 39	Tank Running 40	Leaks 41	
34.1	LAVATORY	PRESENT 72				
.2	Type	Integral with Vanity 77	Wall-Hgd. No Enclosure 73	Free-standing No Enclosure 77		
.3	Finish	Epoxy 76	Porcelain 77	Stainless Steel 78		
.4	Fixtures/Amenities	Single Lever 78	Double Faucet Single Spigot 80	Double Spigot 81	Integral Plug 82	Large Basin 83
.5	Material Defects	Marred, Chipped 84	Surface Lost 85	Old 86		
.6	Workmanship Defects	Rocks 87	Poor Fit 88	Askew 89	Leaks 90	Drip'g. Faucet 91
35.1	MEDICINE CABINET	PRESENT 72				
.2	Type	Recessed 77	Surface 78	1 Door 79	2 Door 80	
.3	Condition	Not Secure 76	Cracked Mirror Impaired 77	Rusty 78	Old 79	Integral Light 80
36	EXTRA FACILITIES	Enclosed Shower in Basement 75	Open Shower in Basement 76	Outdoor Shower 77		

37	Any special defects or features?	77

BLDG ID NO

A-16

ATTIC/BASEMENT/LAUNDRY SHEET 1 OF 21

#	ITEM	ATTIC	BASEMENT	LAUNDRY
31.1	Predominant Ceil. Hgt.	FT 13-16	FT 21-23	FT 24-26
.2	% Headroom Under 6'0"	0 % 27	0 % 28	0 % 29
32.1	Finished Floor	0 % 30	0 % 31	0 % 32
.2	Finished Walls, Ceil'g	0 % 33	0 % 34	0 % 35
33.1	Windows?	1 YES 2 NO 36	1 YES 2 NO 37	1 YES 2 NO 38
.2	Windows Operable?	1 YES 2 NO 39	1 YES 2 NO 40	1 YES 2 NO 41
34.1	Adequate Outlets?	1 YES 2 NO 42	1 YES 2 NO 43	1 YES 2 NO 44
.2	Switch at Entrance?	1 YES 2 NO 45	1 YES 2 NO 46	1 YES 2 NO 47
.3	Light Fixtures?	1 YES 2 NO 48	1 YES 2 NO 49	1 YES 2 NO 50
35.1	Heating Element	1 YES 2 NO 51	1 YES 2 NO 52	1 YES 2 NO 53
.2	Mech. Ventilation	1 YES 2 NO 54	1 YES 2 NO 55	1 YES 2 NO 56
36	Can It Be Made Habitable	1 YES 2 NO 57	1 YES 2 NO 58	1 YES 2 NO 59
37	Finished (and Recorded Elsewhere)	1 YES 2 NO 60	1 YES 2 NO 61	1 YES 2 NO 62
38	Is it Accessible?	1 YES 2 NO 63		

FOUNDATION/SPACE

23	Basement	0 NONE	1 Full	2 50 - 100%	3 Less than 50 [illegible]
29	Crawl Space	0 NONE	1 Full	2 50 - 100%	3 Less than 50 [illegible]
30	1st Floor Slab on Grade	0 NONE	1 Full	2 50 - 100%	3 Less than 50 [illegible]

ROOMS OR PARTIAL FINISHES

No.	ITEM	EXISTING: 0/3 Standard	EXISTING: 0/3 Minor Sub-stand.	EXISTING: 0/3 Major Sub-stand.	FACTORS: Minor Sub-stand.	FACTORS: Major Sub-stand.	NEW: [illegible]	NEW: [illegible]	NEW: [illegible]	NEW: Workmanship (Above Std. / Std. / Above Subst'd / Major Subst'd)	NEW: Materials (Above Std. / Std. / Above Subst'd / Major Subst'd)	NEW: Factors: Above Std. Materials
1 [illegible]	ATTIC FINISHES	0	0	0	UNEVEN, MARRED, [illegible]; CRACKS	SOILED/CRACKS, LOOSE, DECAY, FLIMSY				1 2 3 4	1 2 3 4	[illegible]
2 [illegible]	BSMT. FINISHES	0	0	0	UNEVEN, MARRED, [illegible]; CRACKS	SOILED/CRACKS, LOOSE, DECAY, FLIMSY				1 2 3 4	1 2 3 4	[illegible]
3 [illegible]	LAUNDRY FINISHES	0	0	0	UNEVEN, MARRED, [illegible]; CRACKS	SOILED/CRACKS, LOOSE, DECAY, FLIMSY				1 2 3 4	1 2 3 4	

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BLDG ID NO

ATTIC/BASEMENT/LAUNDRY (SHEET 2 OF 3)

31.1	ROOF INSULATION	FULL 67	PARTIAL 68	NONE 69	OK 70	
.2	LOCATION	ABOVE SHEATHING 71	BETWEEN RAFTERS 72	ATTIC FLOOR 73		
.3	TYPE	RIGID 74	BATT 75	LOOSE FILL 76	FOAM IN PLACE 77	
.4	THICKNESS	2" 9	4" 10	6" 11	8" 12	
32.1	BASEMENT INSULATION	FULL 13	PARTIAL 14	NONE 15		
.2	LOCATION	CEILING 16	WALLS 17			
.3	TYPE	RIGID 18	BATT 19			
.4	THICKNESS	2" 20	4" 21	6" 22		

LAUNDRY EQUIPMENT

31.1	WASHER	PRESENT 23	HOOK-UP 24			
.2	MATERIAL DEFECTS	MARRED DENTED 25	RUSTY 26	OLD 27	POOR DRAIN 28	
32.1	DRYER	PRESENT 29	HOOK-UP 30			
.2	TYPE	GAS 31	ELECTRIC 32			
.3	MATERIAL DEFECTS	MARRED DENTED 33	RUSTY 34	OLD 35	NOT VENTED TO EXTERIOR 36	
.4	WORKMANSHIP DEFECTS	37				
33.1	LAUNDRY SINK	PRESENT 38				
.2	TYPE	STONE 39	METAL 40	PLASTIC OR FIBERGLASS 41	PORCELAIN ON CAST IRON 42	PORCELAIN ON STEEL 43
.3	MATERIAL DEFECTS	MARRED CHIPPED 44				
.4	WORKMANSHIP DEFECTS	ROCKS 45	DRIPS 46	LEAKS UNDER SINK 47		
34	ADDITIONAL FEATURES	CLOTHES LINE 48	FOLDING TABLE 49	STORAGE-LINEN/ETC 50		

35	SPECIAL FEATURES OR DEFECTS	51

17. [illegible]

BLDG ID NO

MECHANICAL EQUIPMENT (PAGE 1 OF 2)

01	HEATING	NEW SYSTEM	32	SYSTEM EXISTING	33						
.1	PLANT LOCATION	BASEMENT	34	MAIN FLOOR	35	UPPER FLOOR	36				
.2	ENERGY	OIL	37	GAS	38	ELECTRIC	39				
.3	TYPE	HOT WATER	40	STEAM 1 PIPE	41	STEAM 2 PIPE	42	FORCED AIR	43	GRAVITY AIR	44
.4	TERMINAL HEATING FEATURES	MODERN ENCLOSURE	47	ADJUSTABLE VALVES	48						
.5	MATERIAL DEFECTS	DAMAGED ENCLOSURE	57	UNEVEN HEAT	58	NOISY TRANSMISSION	59	EXPOSED FUEL ELEMENT	60		
.6	WORKMANSHIP DEFECTS	NOISY	67	LEAKS	68	DIRTY WALL	69	GAS ODOR/GAS LEAKS	70		
02.1	AIR CONDITIONER	PRESENT	77								
.2	LOCATION	CENTRAL	9	THRU-WALL	10	ATTACHMENT PROBLEMS	11				
03.1	CENTRAL HUMIDIFIER	PRESENT	12								
04	ELECTRICAL SERVICE										
.1	PANEL	FUSE	13	CIRCUIT BRKR.	14						
.2	VOLTAGE OK	110 V.	15	220 V.	16	UNDER 60 AMPS	17	60-100 AMPS	18	OVER 100 AMPS	19
.3	WIRING	PLASTIC SHEATH	20	FABRIC SHEATH	21	BX	22	KNOB & TUBE	23	EXPOSED PIPE	24
.4	MATERIAL DEFECTS	BLOW FUSES A LOT	25								
.5	WORKMANSHIP DEFECTS	EXPOSED CONDUCTORS IN FINISHED SPACE	26								
05.1	HOT WATER HEATER	PRESENT	27								
.2	TYPE	SEPARATE	28	INTEGRATED W/HEATING	29						
.3	FUEL	OIL	30	GAS	31	ELECTRICITY	32				
.4	SIZE	30 GAL. OR LESS	33	31-40 GAL.	34	41-70 GAL.	35	OVER 70 GAL.	36		
.5	MATERIAL DEFECTS	OLD	37	LEAKS	38						
.6	WORKMANSHIP DEFECTS					PILOT LIGHT GOES OUT FREQUENTLY	39				
06	PIPING										
.1	MATERIAL	COPPER	40	BRASS	41	GALVANIZED	42	INSULATION	43		
.2	MATERIAL DEFECTS	POOR PRESSURE	44								
.3	WORKMANSHIP DEFECTS	LEAKS	45	NOISES	46						
07.1	SUMP PUMP	PRESENT	47								
08.1	STRUCTURE	PRESENT	48								
.2	LOCATION	ENTIRE BLDG.	49	UNDER STAIRS	50	KITCHEN	51				

59 SPECIAL FEATURES OR DEFECTS 60

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BLDG ID NO

7.
DOORS & WINDOWS (PAGE 1 OF 1)

01	EXTERIOR DOORS										
.1	TYPE	SOLID WOOD	13	PANEL	14	METAL	15	HOLLOW-CORE WOOD	16		
.2	HARDWARE/FEATURES	DOOR BELL	17	PEEP HOLE	18	DEAD BOLT	19	PLASTIC	20	DECORATIVE HARDWARE	21
.3	WEATHER STRIPPING	METAL & FOAM	42	FOAM TAPE	43	FELT STRIP	44	METAL	45	AWNING	46
.4	MATERIAL DEFECTS	CRACKED OR SPLIT SAGGING	47	DELAMINATED	48	POOR FINISH WARPED, DENTED	49	ROTTED FOAM	50	DENTED FRAME	51
.5	WORKMANSHIP DEFECTS	LOOSE HARDWARE	22	EDGES IMPROP. SET	23	BAT FILMS	24	FRAMES NOT SQUARE	25		CLR 26
02	STORM/SCREEN DOORS	PRESENT	9								
.1	TYPE	WOOD SCREEN	10	WOOD STORM	11	METAL SCREEN	12	METAL STORM	13	COMB. STORM/SCREEN	14
.2	MATERIAL DEFECTS	STRETCH	15	GLASS CRACKED	16	BROKEN SCREEN	17	MANUAL CHANGE-OVER	18	NO WEATHER-STRIPPING	19
.3	WORKMANSHIP DEFECTS	POOR FIT	20	LOOSE HARDWARE	21	EDGES IMPROP SET	22				
03	INTERIOR DOORS										
.1	TYPE	SOLID WOOD	23	PANEL	24	METAL	25	HOLLOW-CORE WOOD	26		
.2	HARDWARE/FEATURES	CLASTIC	27	PRIVACY LOCKS	28	SPECIAL HOLDING	29	DECORATIVE KNOBS	30	PANIC KNOBS	31
.3	MATERIAL DEFECTS	CRACKED OR SPLIT	32	SAGGING	33	POOR FINISH WARPED, DENTED	34	PAINTED HARDWARE	35		
.4	WORKMANSHIP DEFECTS	BAT FILMS	36	EDGES IMPROP SET	37	LOOSE HARDWARE	38	FRAMES NOT SQUARE	39	TOO MUCH PAINT ON FRAME	40
04	WINDOWS										
.1	TYPE	DOUBLE-HUNG	41	CASEMENT	42	PROJECTING	43	SLIDING	44	CASEMENT	45
.2	MATERIAL	ALUMINUM	46	STEEL	47	WOOD	48				
.3	GLAZING	SINGLE	49	DOUBLE OR MORE	50	STAINED GLASS	51				
.4	HARDWARE/FEATURES	CRANK-OPERATED	52	SIDE LATCH AT DOOR	53	DEAD LOCKS	54	SPECIAL HOLDING	55	CASEMENT TRANSOMS	56
.5	SHADING DEVICES	AWNINGS	57	SHUTTERS	58	LOUVERS	59	PROTECTIVE SCREENS	60	DRAPES, SHADES	61
.6	MATERIAL DEFECTS	SEPARATING	62	BROKEN CORD OR CHAIN	63	AIR INFILTRATION CHKD WEATHERSTRIPPING	64	GLAZING MISSING	65	ROT PAST	66
.7	WORKMANSHIP DEFECTS	STICKING - PAINTED SHUT	67	LOOSE PANELING	68	POOR FAILURE	69	PAINT ON GLASS	70	POOR FINISH	71
05	STORM/SCREEN WINDOWS	PRESENT	72								
.1	TYPE	WOOD SCREEN	73	METAL SCREEN	74	WOOD STORM	75	METAL STORM	76	COMB. STORM/SCREEN	
.2	MATERIAL DEFECT	GLASS CRACKED	9	BROKEN SCREEN	10	MANUAL CHANGE-OVER	11	DAMAGED FRAME	12		CLR 13

06	SPECIAL FEATURES OR DEFECTS	77

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BLDG ID NO

VI. EXTERIOR FINISHES (1 of 3)

ROOFING

No.	ITEM (07)	EXISTING: % Standard	EXISTING: % Minor Sub-stand.	EXISTING: % Major Sub-stand.	FACTORS: Minor Sub-stand.	FACTORS: Major Sub-stand.	NEW: Non-Materials (Above Std. / Std. / Minus Substd. / Major Substd.)	NEW: Materials (Above Std. / Std. / Minus Substd. / Major Substd.)	NEW: Factors – Above Std. Materials
01	ROOFING (PITCHED)								
.1	TILE, SLATE	0	0	0	MOLD TAR STAIN PATCHES LOOK	ASKEW WORN TILE	SAGGING ROOF MISSING PIECES	1 2 3 4	1 2 3 4	
.2	WOOD SHINGLES	0	0	0	TAR STAIN PATCHED	ASKEW MOLD	ROT SAGGING ROOF MISSING PIECES	1 2 3 4	1 2 3 4	
.3	ASPHALT SHINGLES	0	0	0	UNEVEN PATCHED TAR STAIN	WORN MOLD	CURLED DETERIORATED SAGGING ROOF	1 2 3 4	1 2 3 4	
.4	ROLLED ROOFING	0	0	0	UNEVEN MESSY JOINTS	WORN PATCHED	DETERIORATED SAGGING ROOF	1 2 3 4	1 2 3 4	
02	ROOFING (FLAT)								
.1	BUILT-UP	0	0	0	UNEVEN TAR PATCHES	OLD BUBBLES	DETERIORATED CRACKS LEAKS	1 2 3 4	1 2 3 4	
03	METAL FLASHING	0	0	0	UNEVEN TOO THIN		DETERIORATED [illegible] PIPE [illegible]	1 2 3 4	1 2 3 4	COPPER
04	GUTTERS	0	0	0	UNSIGHTLY RUST	DEBRIS FILLED POORLY INSTALLED	SAGGING SEPARATED LEAKING	1 2 3 4	1 2 3 4	COPPER
05	LEADERS	0	0	0	DENTED RUST	SPILLS IN GROUND NO SPLASH BLOCK	SEPARATED EROSION	1 2 3 4	1 2 3 4	COPPER PIPED (UNLESS CODE [illegible])
06	CHIMNEY								
.1	BRICK	0	0	0	UNEVEN	WORN BRICK POROUS	OUT OF PLUMB CRACKED OPEN JOINTS	1 2 3 4	1 2 3 4	
.2	METAL	0	0	0	OIL CANNED	RUSTED DENTED OUT OF PLUMB	DETERIORATED	1 2 3 4	1 2 3 4	
.3	OTHER	0	0	0				1 2 3 4	1 2 3 4	
07	ROOF EDGE TRIM								
.1	WOOD	0	0	0	MARRED MOLD	NOT FLUSH CRACKED SPLIT	ROT BROKEN MISSING	1 2 3 4	1 2 3 4	REDWOOD CEDAR
.2	PAINT	0	0	0	HOLIDAYS STAINED OLD PAINT	CHIPS CRACKED NOT STRIPPED	BLISTERING PEELING ALLIGATORING	1 2 3 4	1 2 3 4	
		0	0	0				1 2 3 4	1 2 3 4	
		0	0	0				1 2 3 4	1 2 3 4	
		0	0	0				1 2 3 4	1 2 3 4	
		0	0	0				1 2 3 4	1 2 3 4	
		0	0	0				1 2 3 4	1 2 3 4	
		0	0	0				1 2 3 4	1 2 3 4	
		0	0	0				1 2 3 4	1 2 3 4	
		0	0	0				1 2 3 4	1 2 3 4	

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72 [illegible] (2 of 3)

[illegible]

BLDG ID NO

	No.	ITEM	EXISTING: Standard	EXISTING: Minor Sub-stand.	EXISTING: Major Sub-stand.	FACTORS: Minor Sub-stand.	FACTORS: Major Sub-stand.	NEW: New Work	NEW: Contracted	NEW: Homeowner	NEW: Work remaining (Above Std / Std / Minor Substd / Major Substd)	NEW: Materials (Above Std / Std / Minor Substd / Major Substd)	NEW: Factors — Above Std. Materials
	01	SURFACE MATERIAL	0	0	0						1 2 3 4	1 2 3 4	
1	.1	BRICK	0	0	0	PAINT ON / POOR PATCH / UNEVEN / [illegible]	SPALLING / MOLD / DAMP	CRACKS / OPEN JOINTS / NOT FLUSH				1 2 3 4	1 2 3 4	
2	.2	STUCCO	0	0	0	OBVIOUS PATCH / MOLD / DISCOLORATION	POROUS / DAMP / MARRED	CRACKS / LOOSE				1 2 3 4	1 2 3 4	
3	.3	ALUM/VINYL SIDING	0	0	0	DENTED / MARRED	NOT LEVEL	SEPARATED / EXPOSED METAL EDGE				1 2 3 4	1 2 3 4	
4	.4	WOOD SHINGLES CLAPBOARD	0	0	0	NOT LEVEL OR EVEN / MOLD	CRACKED OR SPLIT	ROT				1 2 3 4	1 2 3 4	
5	.5	WOOD SIDING (PLYWOOD)	0	0	0	STAINED / MARRED / MOLD	NOT FLUSH / CRACKED / SPLIT	DELAMINATING / ROT				1 2 3 4	1 2 3 4	REAL WOOD- REDWOOD, CEDAR, ETC.
6	.6	ASBESTOS SHINGLES	0	0	0	OBVIOUS PATCH / OUT OF COLOR	UNEVEN / NOT LEVEL	BROKEN				1 2 3 4	1 2 3 4	
1	.7	ASPHALT SHEATHING	0	0	0	MARRED / PATCHED	SCALING / PEELING	DETERIORATED				1 2 3 4	1 2 3 4	
2	.8	OTHER	0	0	0							1 2 3 4	1 2 3 4	
3	02	FINISH	0	0	0							1 2 3 4	1 2 3 4	
4	.1	PAINT	0	0	0	HOLIDAYS / STAINED / DIRT / OLD PAINT	DRIPS / MARRED / SCRAPED / NOT STRIPPED	BLISTERING / PEELING / ALLIGATORING				1 2 3 4	1 2 3 4	
5	.2	CLEAR	0	0	0	DIRT IN FINISH / DISCOLORED / HOLIDAYS	MARRED / WORN / PAINT ON					1 2 3 4	1 2 3 4	
	03	TRIM	0	0	0							1 2 3 4	1 2 3 4	
	.1	WOOD	0	0	0	MARRED / NOT FLUSH	CRACKED / SPLIT	ROT / BROKEN / MISSING				1 2 3 4	1 2 3 4	RED WOOD CEDAR
2	.2	METAL	0	0	0	DENTED / BENT		RUSTED / DETERIORATED				1 2 3 4	1 2 3 4	
3	.3	PAINT	0	0	0	HOLIDAYS / STAINED / OLD PAINT	DRIPS / SCRAPED / STRIPPED	BLISTERING / PEELING / ALLIGATORING				1 2 3 4	1 2 3 4	
4	.3	CLEAR FINISH	0	0	0	DIRT IN FINISH / DISCOLORED / HOLIDAYS	MARRED / WORN / PAINT ON					1 2 3 4	1 2 3 4	
			0	0	0							1 2 3 4	1 2 3 4	
			0	0	0							1 2 3 4	1 2 3 4	
			0	0	0							1 2 3 4	1 2 3 4	
			0	0	0							1 2 3 4	1 2 3 4	
			0	0	0							1 2 3 4	1 2 3 4	
			0	0	0							1 2 3 4	1 2 3 4	
			0	0	0							1 2 3 4	1 2 3 4	
			0	0	0							1 2 3 4	1 2 3 4	

Need - need new card

BLDG ID NO

EXTERIOR - STAIRS & PORCHES (2 of 3)

	No	09 ITEM	EXISTING % Standard	% Minor Sub-stand.	% Major Sub-stand.	FACTORS Minor Sub-stand.		FACTORS Major Sub-stand.	NEW New Work	Conditions	[illegible]	Workmanship	Materials	Factors Above Std. Materials
	01	EXTERIOR STAIRS	0	0	0							1 2 3 4	1 2 3 4	
1	.1	CONCRETE	0	0	0	SPALLING CRACKED		NOT LEVEL, UNEVEN SETTLED DETERIORATED				1 2 3 4	1 2 3 4	
2	.2	MASONRY	0	0	0	CRACKED OPEN JOINTS		NOT LEVEL UNEVEN SETTLED [illegible]				1 2 3 4	1 2 3 4	
3	.3	WOOD	0	0	0	PEELED PAINT	DEFLECTION SLOPPY CARPENTRY	NOT LEVEL, UNEVEN ROT				1 2 3 4	1 2 3 4	
4	.4	HANDRAIL	0	0	0	PEELED PAINT	RUSTY	LOOSE SPLINTERY ROT MISSING				1 2 3 4	1 2 3 4	
5			0	0	0							1 2 3 4	1 2 3 4	

01	ENCLOSED PORCHES OR BALCONIES (check all that apply)					
.1	LOCATION	GROUND LEVEL 14	UPPER LEVEL 15			
		FRONT OF HOUSE 16	SIDE PORCH 17	SIDE PORCH 18	BACK PORCH 19	
.2	TOTAL AREA	100 SF or LESS 20	100-200 SF 21	200-300 SF 22	300-400 SF 23	OVER 400 SF 24
.3	MATERIAL	MASONRY 25	CONCRETE 26	WOOD 27	METAL 28	
.4	ENCLOSURE	CONTINUOUS WINDOWS 29	FIXED GLASS 30	OPERABLE GLASS 31	SCREENS 32	SHUTTERS OR BLINDS 33
.5	FLOOR SURFACE	MASONRY 34	CONCRETE 35	WOOD 36	OTHER 37	
.6	AMENITIES	INSULATION 38	HEAT 39	ELECTRICAL SUPPLY 40	LIGHT 41	
.7	STRUCTURAL DEFECTS	SAGGING STRUCTURE 42	NOT ON FOUNDATION 43	NOT LEVEL, SETTLED 44	FOUNDATION CRACKED, [illegible] 45	UNSTABLE, NOT [illegible] 46
.8	MATERIAL DEFECTS	FLOOR WARPED SPLINTERED [illegible] 47	ROT 48	CRACKED WOOD 49	RUST 50	FRAME ROT 51
		MISSING, TORN DAMAGED SCREENS 52	MISSING OR CRACKED GLASS 53			
.9	WORKMANSHIP DEFECTS	WINDOWS NOT PLUMB 54	JOINT IN FINISH 55	PEELING, BLISTERING ALLIGATORING PAINT [illegible]		
02	OPEN TERRACES, BALCONIES, PORCHES (check all that apply)					
.1	LOCATION	GROUND LEVEL 57	UPPER LEVEL 58			
		FRONT OF HOUSE 59	SIDE PORCH 60	SIDE PORCH 61	BACK PORCH 62	
.2	TOTAL AREA	100 SF or Less 63	100-200 SF 64	200-300 SF 65	300-400 SF 66	OVER 400 SF 67
.3	MATERIAL	MASONRY 68	CONCRETE 69	WOOD [illegible]	METAL [illegible]	
.4	FLOOR SURFACE	MASONRY [illegible]	CONCRETE [illegible]	WOOD 74	BITUMINOUS [illegible]	OTHER [illegible]
.5	RAILING	MASONRY 9	CONCRETE 10	WOOD 11	METAL 12	
.6	AMENITIES	ROOF 13	PARTIAL SIDE WALLS 14	DRAINAGE (including [illegible])	ELECTRICAL SUPPLY 16	LIGHT 17
.7	STRUCTURAL DEFECTS	SAGGING STRUCTURE [illegible]	NOT ON FOUNDATION [illegible]	NOT LEVEL, [illegible] [illegible]	FOUNDATION [illegible] [illegible]	UNSTABLE, NOT [illegible] [illegible]
.8	MATERIAL DEFECTS	FLOOR WARPED [illegible] SPALLED, CRACKED [illegible]	ROT [illegible]	CRACKED WOOD OR MASONRY [illegible]	RUST [illegible]	RAIL LOOSE MISSING [illegible]
.9	WORKMANSHIP DEFECTS	WINDOWS NOT PLUMB [illegible]	JOINT IN FINISH [illegible]	PEELING, BLISTERING [illegible]		

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SLOG ID NO

Item

01	YARD				
.1	PLANTING	GRASS 31	GROUND COVER 32	DIRT 33	
.2	SHRUBS	EVERGREEN MIXED 34	EVERGREEN LEAF 35	DECIDUOUS 36	FLOWERED BUSHES 37
.3	TREES	LARGE (OVER 25') 38	EVERGREEN 39	DECIDUOUS 40	
.4	DEFECTS	DEAD GRASS 41	DIRT PATCHES 42	DEAD TREE 43	EROSION 44
02	FENCES	PRESENT 45			
.1	TYPE	WOODEN 46	METAL 47	WIRE CHAINLINK 48	WOOD & WIRE 49
.2	DEFECTS	DILAPIDATED 50			
03	DRIVEWAY	PRESENT 51			
.1	TYPE	CONCRETE 52	ASPHALT 53	GRAVEL 54	
.2	DEFECTS	NOT CONFINED 55	CRACKED 56	DETERIORATED 57	
04	WALKS	PRESENT 58			
.1	TYPE	CONCRETE 59	ASPHALT 60	GRAVEL 61	STEPPING STONE 62
.2	DEFECTS	NOT CONFINED 63	CRACKED 64	DETERIORATED 65	UNEVEN SURFACE 66
05	EXTERIOR AMENITIES	COVERED (LESS THAN TERRACE HOUSE) 67	PAVED TERR. OR PATIO 68	OTHER 69	
06	EXTERIOR SERVICES	WATER SUPPLY 70	ELECTRICAL SUPPLY	EXTERIOR LIGHTING	

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BLOCK ID NO

VII SITE AND BUILDING DESCRIPTION (2 of 3)

GARAGES & EXTERIOR STRUCTURES — SCORE 77

ITEM NO.	ITEM	GARAGE OR CARPORT		EXT. STRUCT. #1		EXT. STRUCT. #2		OTHER	
01.1	DETACHED	1 YES	2 NO 4	1 YES	2 NO 5	1 YES	2 NO 6	1 YES	2 NO 7
.2	ATTACHED	1 YES	2 NO 8	1 YES	2 NO 10	1 YES	2 NO 11	1 YES	2 NO 12
02.1	FULLY ENCLOSED	1 YES	2 NO 13	1 YES	2 NO 14	1 YES	2 NO 15	1 YES	2 NO 16
.2	ROOF & PARTIAL WALLS	1 YES	2 NO 17	1 YES	2 NO 18	1 YES	2 NO 19	1 YES	2 NO 20
.3	ROOF ONLY	1 YES	2 NO 21	1 YES	2 NO 22	1 YES	2 NO 23	1 YES	2 NO 24
03.1	NO. OF CARS	0 1 2	25	0 1 2	26	0 1 2	27	0 1 2	28
.2	CARS: STORAGE	1 YES	2 NO 29	1 YES	2 NO 30	1 YES	2 NO 31	1 YES	2 NO 32
.3	WORKSHOP	1 YES	2 NO 33	1 YES	2 NO 34	1 YES	2 NO 35	1 YES	2 NO 36
04.1	SERVICES: ELECTRICITY	1 YES	2 NO 37	1 YES	2 NO 38	1 YES	2 NO 39	1 YES	2 NO 40
.2	LIGHTING	1 YES	2 NO 41	1 YES	2 NO 42	1 YES	2 NO 43	1 YES	2 NO 44
.3	WATER	1 YES	2 NO 45	1 YES	2 NO 46	1 YES	2 NO 47	1 YES	2 NO 48
.4	HEAT	1 YES	2 NO 49	1 YES	2 NO 50	1 YES	2 NO 51	1 YES	2 NO 52
05.1	FINISHED (EXTERIOR SURFACES)	0 %	53	0 %	54	0 %	55	0 %	56
.2	COMPLETED OR EST.	0 %	57	0 %	58	0 %	59	0 %	60

BLDG # NO

YES SIDE AND EXTERIOR STRUCTURES (1 of 2)

GARAGE OR CARPORT		SIDE 31					
31	WALL						
.1	STRUCTURAL TYPE	WOOD 32	MASONRY 33	METAL 34			
.2	DEFECTS	POOR WORKMANSHIP 35	DETERIORATED RUST-ROT 36	OUT OF FOUNDATION 37	OTHER 38		
.3	SURFACE	BRICK 39	STUCCO 40	WOOD 41	ALUM./VINYL SIDING 42	ASBESTOS 43	
.4	DEFECTS	POOR WORKMANSHIP 44	DETERIORATED 45	ROTTING 46	POOR PATCH 47		
.5	FINISH	NATURAL 48	PAINT 49				
.6	DEFECTS	POOR WORKMANSHIP 50	DETERIORATED 51	OTHER 52			
32	ROOF						
.1	STRUCTURAL TYPE	WOOD 53	METAL 54	FIBERGLASS 55			
.2	DEFECTS	POOR WORKMANSHIP 56	DETERIORATED RUSTED 57	SAGGING 58	OTHER 59		
.3	SURFACE	WOOD SHINGLE 60	ASPHALT SHINGLE 61	ROLLED ROOFING 62	BUILT-UP 63		
.4	DEFECTS	POOR WORKMANSHIP 64	DETERIORATED 65	POOR PATCH 66	OTHER 67		
33	SIDE DOOR	PRESENT 68					
.1	DEFECTS	BROKEN GLASS 69	ROTTED DILAPIDATED 70	WARPED DEFORMED 71	OTHER 72		
34	WINDOWS	PRESENT 73					
.1	DEFECTS	BROKEN GLASS 74	DILAPIDATED 75	OTHER 76			
35	GARAGE DOOR						
.1	TYPE	OVERHEAD 77	SWING 78				
.2	ACCESSORIES	RADIO CONTROL 79	OTHER 80				
.3	DEFECTS	BROKEN GLASS 81	DILAPIDATED 82	NOT LOCKABLE 83	WARPED DEFORMED 84	OTHER 85	

OTHER EXTERIOR STRUCTURES		SIDE 86					
01	WALL						
.1	STRUCTURAL TYPE	WOOD 87	MASONRY 88	METAL 89			
.2	DEFECTS	POOR WORKMANSHIP 90	DETERIORATED RUST ROT 91	OUT OF FOUNDATION 92	OTHER 93		
.3	SURFACE	BRICK 94	STUCCO 95	WOOD 96	ALUM/VINYL SIDING 97	ASBESTOS 98	
.4	DEFECTS	POOR WORKMANSHIP 99	DETERIORATED 100	POOR PATCH 101	OTHER 102		
.5	FINISH	NATURAL 103	PAINT 104				
.6	DEFECTS	POOR WORKMANSHIP 105	DETERIORATED 106	OTHER 107			
02	ROOF						
.1	STRUCTURAL TYPE	WOOD 108	METAL 109	FIBERGLASS 110			
.2	DEFECTS	POOR WORKMANSHIP 111	DETERIORATED RUSTED 112	SAGGING 113	OTHER 114		
.3	SURFACE	WOOD SHINGLE 115	ASPHALT SHINGLE 116	ROLLED ROOFING 117	BUILT-UP 118		
.4	DEFECTS	POOR WORKMANSHIP 119	DETERIORATED 120	POOR PATCH 121	OTHER 122		
03	DOOR						
.1	DEFECTS	BROKEN GLASS 123	ROTTED OR 124	WARPED DEFORMED 125	OTHER 126		
04	WINDOWS						
.1	DEFECTS	BROKEN GLASS 127	ROTTED OR DILAPIDATED 128	OTHER 129			

BLDG ID NO

CONSTRUCTION TYPE

No.	ID ITEM	EXISTING % Standard	% Minor Sub-stand.	% Major Sub-stand.	FACTORS Minor Sub-stand.		FACTORS Major Sub-stand.	NEW New Work	Contract	[illegible]	Workmanship (Above Std. / Std. / Minor Substd. / Major Substd.)	Materials (Above Std. / Std. / Minor Substd. / Major Substd.)	Factors Above Std. Materials
01	FOUNDATION	0	0	0							1 2 3 4	1 2 3 4	
.1	CONCRETE	0	0	0	DAMP MOISTURE STAIN	SPALLING UNEVEN HONEYCOMBS	STRUCTURE CRACKED OPEN JOINTS NOT PLUMB				1 2 3 4	1 2 3 4	
.2	BLOCK	0	0	0	DAMP MOISTURE STAIN	UNEVEN POROUS CHIPPED	STRUCT. CRACKING OPEN JOINTS NOT PLUMB				1 2 3 4	1 2 3 4	
.3	BRICK	0	0	0	DAMP MOISTURE STAINS CHALKY	UNEVEN POROUS CHIPPED	STRUCT. CRACKING OPEN JOINTS NOT PLUMB				1 2 3 4	1 2 3 4	
.4	STONE	0	0	0	DAMP MOISTURE STAIN	UNEVEN FLAKEY CHIPPED	STRUCT. CRACKING OPEN JOINTS NOT PLUMB				1 2 3 4	1 2 3 4	
.5	OTHER	0	0	0							1 2 3 4	1 2 3 4	
02	EXTERIOR WALL	0	0	0							1 2 3 4	1 2 3 4	
.1	MASONRY	0	0	0	DAMP MOISTURE STAIN CHALKY	BAD JOINTS UNEVEN CHIPPED	STRUCTURE CRACKING OPEN JOINT NOT PLUMB				1 2 3 4	1 2 3 4	
.2	STUD	0	0	0	EVIDENCE OF MOISTURE	NOT EVEN OR PLUMB	SAGGING NOT ON FOUNDATION				1 2 3 4	1 2 3 4	
.3	OTHER	0	0	0							1 2 3 4	1 2 3 4	
03	INTERIOR WALL	0	0	0							1 2 3 4	1 2 3 4	
.1	MASONRY	0	0	0	UNEVEN NOT PLUMB BAD JOINTS		STRUCTURE CRACKS OPEN JOINTS				1 2 3 4	1 2 3 4	
.2	STUD	0	0	0	UNEVEN		NOT PLUMB				1 2 3 4	1 2 3 4	
.3	OTHER	0	0	0							1 2 3 4	1 2 3 4	
04	GROUND FLOOR	0	0	0							1 2 3 4	1 2 3 4	
.1	CONCRETE	0	0	0	SPALLING TOOL MARKS UNEVEN	MOISTURE STAIN	CRACKED AGGREGATE EXPOSED				1 2 3 4	1 2 3 4	
.2	WOOD FRAMING	0	0	0	MOISTURE UNEVEN	DEFLECTION SPLIT	NOT LEVEL DEFLECTION POOR SUPPORT DECAY				1 2 3 4	1 2 3 4	
.3	OTHER	0	0	0							1 2 3 4	1 2 3 4	
05	OTHER FLOORS	0	0	0							1 2 3 4	1 2 3 4	
.1	WOOD FRAMING	0	0	0	UNEVEN	DEFLECTION	NOT LEVEL DEFLECTION				1 2 3 4	1 2 3 4	
.2	OTHER	0	0	0							1 2 3 4	1 2 3 4	
06	ROOF	0	0	0							1 2 3 4	1 2 3 4	
.1	WOOD FRAMING	0	0	0	DECAY UNEVEN	SPLIT	DECAY SAGGING				1 2 3 4	1 2 3 4	
.2	CONCRETE	0	0	0	SPALLING	MOISTURE CRACKS					1 2 3 4	1 2 3 4	
.3	OTHER	0	0	0							1 2 3 4	1 2 3 4	

BLDG ID NO

31.1	WALL INSULATION	PRESENT	20							
32	FLOORING									
.1	FEATURES	CONCEALED		SPECIAL FEATURES		LOOSE TRACK		INDIRECT LIGHTING		
.2	MATERIAL DEFECTS	BARE JOISTS	23	BARE JOISTS IN SUPPORT AREA	24					
.3	WORKMANSHIP DEFECTS	LOOSE FIXTURES	25							
33	SWITCHES/OUTLETS									
.1	FEATURES	3-WAY	26	DIMMER	27	FLUSH STYLE IN KITCHEN	28	GROUNDED OUTLETS	29	
.2	MATERIAL DEFECTS	PLATES MISSING	30							
.3	WORKMANSHIP DEFECTS	LOOSE OR ASSEM PLATE	31			POOR PLASTER	32			
4.1	ALARMS	PRESENT	33							
.2	TYPE	FIRE	34	BURGLER	35					
5.1	INTERCOM	PRESENT	36							

		ABOVE STANDARD	STANDARD		MINOR SUB-STANDARD		MAJOR SUB-STANDARD	
30	OVERALL QUALITY	1	2	3	4	5	6	7
31	SPACES							
.1	LIVING	1	2	3	4	5	6	7
.2	SLEEPING	1	2	3	4	5	6	7
.3	SERVICE & STORAGE	1	2	3	4	5	6	7
32	PLUMBING	1	2	3	4	5	6	7
33	SERVICES							
.1	ENERGY	1	2	3	4	5	6	7
.2	PLUMBING & ELECTRIC	1	2	3	4	5	6	7
34	CONSTRUCTION & MATERIAL							
.1	STRUCTURE	1	2	3	4	5	6	7
.2	EXTERIOR FINISHES	1	2	3	4	5	6	7
.3	INTERIOR FINISHES	1	2	3	4	5	6	7
35	SITE							
.1	GARAGE & EXT. STRUCTURES NONE	1	2	3	4	5	6	7
.2	YARD	1	2	3	4	5	6	7

A-28

BLOG ID NO

IV. REHABILITATION

COST

31	TOTAL ESTIMATED COST OF REHABILITATION (CONTRACTOR & HOMESTEADER) AGENCY ESTIMATE	$		OK	
32	ACTUAL COST OF REHABILITATION BY CONTRACTOR	$		OK	
33	ACTUAL COST OF REHABILITATION BY HOMESTEADER	$		OK	
34	SOURCE OF INFORMATION	HOMESTEADER	DOCUMENTS	LOCAL COORDINATOR	OK

SCHEDULE

35	REHAB STARTING DATE (MONTH, YEAR)		1977		OK
36	DATE OF OCCUPANCY (MONTH, YEAR)	9-10	1977		OK
37	EXPECTED REHAB COMPLETION DATE (MONTH, DATE)		1977		OK

CARD 10

STATUS OF CONSTRUCTION

	ITEM OR TASK	COMPLETE AT CONTRACT	INCOMPLETE AT CONTRACT, NOW COMPLETE	INCOMPLETE NOW
.1	ELECTRICITY AND WATER TURNED ON	1	2	3
.2	PLUMBING FIXTURES	1	2	3
.3	GAS FIXTURES OPERATION	1	2	3
.4	HEATING FIXTURES OPERATION	1	2	3
.5	HEATING OPERATION	1	2	3
.6	WALL AND CEILING FINISHES	1	2	3
.7	FLOOR FINISHES	1	2	3
.8	ALL DOORS AND WINDOWS (including screens if installed)	1	2	3
.9	LANDSCAPING, SITE WORK, EXTERIOR STRUCTURES	1	2	3

BLDG ID.NO

REHABILITATION

HOMESTEADER TIME

31 FOR THE HOMESTEADER, AND ALL OTHER PEOPLE WHO WORKED ON THE HOME, RECORD THE AVERAGE NUMBER OF HOURS PER WEEK, AND THE TOTAL NUMBER OF WEEKS SPENT ON THE HOME.

.1	AVERAGE HOURS PER WEEK (HOMESTEADER)		25-27
.2	NUMBER OF OTHER PEOPLE WORKING ON HOUSE		28-29
.3	AVERAGE HOURS PER WEEK (ALL OTHERS)		30-32
.4	TOTAL NO. OF WEEKS (DURATION OF HOMESTEAD WORK)		33-35

32	DID THE HOMESTEAD AGENCY GIVE YOU A CHOICE IN DECIDING WHAT REPAIRS WOULD BE MADE?	1 YES	2 NO	3 DK	4 NA	39
33	FROM THE WORK LIST WERE YOU ALLOWED TO SELECT ANY TASKS TO DO YOURSELF?	1 YES	2 NO	3 DK	4 NA	40
34	IF ANY WORK WAS CONTRACTED, WERE YOU ALLOWED TO SELECT THE CONTRACTOR?	1 YES	2 NO	3 DK	4 NA	41

35	WERE THERE ANY TASKS THAT YOU WANTED TO DO BUT WERE NOT ALLOWED TO ?			
.1	DAMAGED SIDING OR MASONRY	1 YES	2 NO	42
.2	STRUCTURAL WORK (INCLUDING WALLS, FLOORS, ROOF)	1 YES	2 NO	43
.3	ROOFING	1 YES	2 NO	44
.4	DOORS & WINDOWS	1 YES	2 NO	45
.5	HEATING SYSTEM	1 YES	2 NO	46
.6	PLUMBING	1 YES	2 NO	47
.7	KITCHEN CABINETS OR APPLIANCES	1 YES	2 NO	48
.8	FLOOR COVERINGS	1 YES	2 NO	49
.9	ELECTRICAL WORK	1 YES	2 NO	50
.10	PAINTING AND/OR PAINTING	1 YES	2 NO	51

36	WERE YOU ALLOWED TO CHOOSE THE FOLLOWING ITEMS OR MATERIALS, IF NEW:			
.1	EXTERIOR WALL (SURFACE OR COLOR)	1 YES	2 NO	52
.2	ROOFING (MATERIAL OR COLOR)	1 YES	2 NO	53
.3	EXTERIOR WALL FIXTURES	1 YES	2 NO	54
.4	FLOORING MATERIALS	1 YES	2 NO	55
.5	KITCHEN APPLIANCES	1 YES	2 NO	56
.6	KITCHEN CABINETS	1 YES	2 NO	57
.7	PLUMBING FIXTURES	1 YES	2 NO	58
.8	HEATING SYSTEM	1 YES	2 NO	59

37.1	WHAT IS THE WORKING CONDITION OF THE HEATING SYSTEM?	1 GOOD	2 FAIR	3 POOR	4 NOT WORKING	5 NOT HERE LAST VISITED				60
.2	DO YOU USE SUPPLEMENTARY HEATING?	1 BEDROOMS 61	2 LIVING ROOM 62	3 EATING AREA 63	4 BATH 64	5 BASEMENT 65				
.3	WHAT TEMPERATURE DO YOU KEEP THE THERMOSTAT AT DURING THE DAY	1 UNDER 60	2 60-64	3 65-69	4 70-74	5 OVER 75				66

REHABILITATION

SLOG ID: MO

01	ARE YOU SATISFIED WITH THE IMPROVEMENTS TO THE HOUSE?	1 YES	2 NO	47
02	DID YOU HAVE ANY PROBLEMS WITH:			
.1	QUALITY OF YOUR WORKMANSHIP?	1 YES	2 NO	48
.2	QUALITY OF YOUR MATERIALS	1 YES	2 NO	49
.3	QUALITY OF CONTRACTOR WORKMANSHIP?	1 YES	2 NO	50
.4	QUALITY OF CONTRACTOR MATERIALS	1 YES	2 NO	51
.5	AMOUNT OF WORK DONE BY YOU	1 YES	2 NO	52
.6	UNSATISFACTORY WORK	1 YES	2 NO	53
.7	YOUR TASKS TOO DIFFICULT OR TOO LONG	1 YES	2 NO	54
.8	CONTRACTOR DELAYS	1 YES	2 NO	55

03	DID YOU HAVE ANY PRIOR CONSTRUCTION EXPERIENCE?	1 YES	2 NO	56
04	WAS ANY CONSTRUCTION TRAINING OR PROFESSIONAL HELP AVAILABLE?	1 YES	2 NO	57
05	HAVE YOU BEEN IN CONTACT WITH OTHER HOMESTEADERS DOING SIMILAR WORK?	1 YES	2 NO	58
06	ARE YOU PLANNING ANY OPTIONAL REPAIRS?	1 YES	2 NO	59
07	MORE OPTIONAL REPAIRS PLANNED			60

CARD 2

08 ARE THERE ANY PROBLEMS WITH:

.1	WALLS	1 YES	2 NO	9
.2	CEILINGS	1 YES	2 NO	10
.3	FLOORS	1 YES	2 NO	11
.4	THE PLUMBING SYSTEM	1 YES	2 NO	12
.5	THE ELECTRICAL SYSTEM	1 YES	2 NO	13
.6	THE ROOF	1 YES	2 NO	14
.7	EXTERIOR PAINT OR SIDING	1 YES	2 NO	15

09 HOW DO YOU FEEL ABOUT QUALITY:

.1	BATHROOM EQUIPMENT	1 GOOD	2 FAIR-BAD	3 NONE	16
.2	KITCHEN EQUIPMENT	1 GOOD	2 FAIR-BAD	3 NONE	17

10 HOW DO YOU FEEL ABOUT PLANNING:

.1	STORAGE (QUANTITY, LOCATION)	1 GOOD	2 FAIR-BAD	3 NONE	18
.2	BATHROOMS (LAYOUT, LOCATION, STORAGE)	1 GOOD	2 FAIR-BAD	3 NONE	19
.3	KITCHEN (LAYOUT, LOCATION)	1 GOOD	2 FAIR-BAD	3 NONE	20
.4	NATURAL LIGHT IN THE HOUSE	1 GOOD	2 FAIR-BAD	3 NONE	21
.5	NATURAL VENTILATION	1 GOOD	2 FAIR-BAD	3 NONE	22
.6	ROOM SIZES	1 GOOD	2 FAIR-BAD	3 NONE	23
.7	PARKING	1 GOOD	2 FAIR-BAD	3 NONE	24

BLOG ID NO

WORK - EQUIPMENT (NOTE: "USED" EQUIPMENT UNDER "NEW WORK")

NO	ITEM	New Work	Contractor	Homeowner
01	LIVING SPACES P. 4			
.1	FIREPLACE	25	26	27
.2	FIREPLACE	28	29	30
.3	FIREPLACE	31	32	33
02	KITCHEN P. 10 & 11			
.1	STOVE/OVEN/RANGE TOP	[illegible]	15	16
.2	RANGE HOOD	17	18	19
.3	REFRIG./FREEZER	40	41	42
.4	FREEZER	43	44	45
.5	DISHWASHER	[illegible]	47	48
.6	COMPACTOR	49	50	51
.7	EXHAUST FAN	52	53	54
.8	SINK	55	56	57
.9	TOP CAB./SHELVES	58	59	60
.10	BOTTOM CABINETS	61	62	63
.11	FULL HT. CABINETS	64	65	66
03	BATH P. 14			
.1	TUB	67	68	69
.2	SEPARATE SHOWER	70	71	72
.3	WC	73	74	75
.4	LAVATORY	9	10	11
.5	VANITY	12	13	14
.6	MED. CABINET	15	16	17
04	ATTIC, BASM'T, LAUND. P. 16			
.1	ROOF INSULATION	18	19	20
.2	BSMT. INSULATION	21	22	23
.3	LAUND. WASHER	24	25	26
.4	LAUND. DRYER	27	28	29
.5	LAUND. SINK	30	31	32
05	MECH. EQUIP. P. 17			
.1	HEATING	33	34	35
.2	AIR CONDITIONING	36	37	38
.3	CENTRAL VACUUM	39	40	41
.4	ELEC. SERVICES (PANEL	42	43	44
.5	HOT WATER HEATER	45	46	47
.6	PIPING	48	49	50
.7	SUMP PUMP	51	52	53
.8	SPRINKLER	54	55	56
.9	WIRING	57	58	59

NO	ITEM	New Work	Contractor	Homeowner
06	DOORS & WINDOWS P. 18			
.1	EXTERIOR DOORS	50	51	52
.2	STORM/SCREEN DRS.	53	54	55
.3	INTERIOR DOORS	44	57	58
.4	WINDOWS	9	10	11
.5	STORM/SCREEN WIND.	[illegible]	[illegible]	[illegible]
07	SITE P. 22			
.1	PLANTING	[illegible]	13	[illegible]
.2	FENCES	18	19	20
.3	DRIVEWAY	[illegible]	[illegible]	[illegible]
.4	WALKS	23	24	[illegible]
.5	EXT. AMENITIES	27	28	29
.6	EXT. SERVICES	30	31	32
.7	SITE DRAINAGE	[illegible]	[illegible]	[illegible]
08	GARAGE/CARPORT P. 24			
.1	WALL	36	37	38
.2	ROOF	39	40	[illegible]
.3	SIDE DOOR	42	[illegible]	[illegible]
.4	WINDOWS	[illegible]	[illegible]	[illegible]
.5	GARAGE DOOR	[illegible]	[illegible]	[illegible]
09	OTHER EXT. STRUCT. P. 26			
.1	WALL	51	52	[illegible]
.2	ROOF	[illegible]	[illegible]	[illegible]
.3	SIDE DOOR	[illegible]	[illegible]	[illegible]
.4	WINDOWS	[illegible]	[illegible]	[illegible]
10	GENERAL CONST. P. 28			
.1	INSULATION	[illegible]	[illegible]	[illegible]
.2	LIGHTING	[illegible]	[illegible]	[illegible]
.3	SWITCHES/OUTLETS	[illegible]	[illegible]	[illegible]
.4	ALARMS	[illegible]	[illegible]	[illegible]
.5	INTERCOM	[illegible]	[illegible]	[illegible]

CARD 23

CARD 22

NOTES
COMPLETE HOMESTEADER TASKS COLUMN BY REFERRING TO FIXTURE SHEETS PAGES [illegible] AND NEW WORK EQUIPMENT SHEET [illegible] AND LISTING BELOW EACH ITEM CHECKED IN HOMESTEADER COLUMN. ALSO REFER TO CHECKLIST SENT TO HOMESTEADER.

BLDG ID NO

[illegible]

	HOMESTEADER TASKS	TASK CODE	NOT DONE	OP-TION	ACTUAL HOURS	ACTUAL MATERIAL COSTS	MATERIAL QUANTITY	UNIT
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								

[illegible]
EQUIPMENT SHEET 7.10 AND LISTED BELOW EACH ITEM CHECKED IN HOMESTEADER COLUMN. ALSO REFER TO CHECKLIST SENT TO HOMESTEADER.

BLDG ID NO

(FOR ANY INFORMATION NOT SHOWN BY HOMESTEADER SEE [illegible])

	HOMESTEADER TASKS	TASK CODE	NOT DONE	OPTIONAL	ACTUAL HOURS	ACTUAL MATERIAL COSTS	MATERIAL QUANTITY	UNIT
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								

BLDG ID. NO

HOUSE ROOM SUMMARY

01.1	STREET TO SIDE OF FRONT YARD							FT.	9-12
.2	AVERAGE LOT WIDTH (ALONG STREET)							FT.	12-14
.3	AVERAGE LOT LENGTH							FT.	14-16
.4	SMALLEST SIDE YARD WIDTH							FT.	16-18
.5	BACK YARD (HOUSE TO LOT LINE)							FT.	18-20
02.1	HOUSE WIDTH (ALONG STREET) 1ST FLOOR							FT.	20-22
.2	HOUSE LENGTH, 1ST FLOOR							FT.	22-24
.3	HOUSE WIDTH (ALONG STREET) 2ND FLOOR					SLOPED 10		FT.	24-26
.4	HOUSE LENGTH, 2ND FLOOR					SLOPED 11		FT.	26-28
03.1	HOMESTEADER'S FEELINGS ABOUT AGENCY	1 GOOD	2 SO - SO	3 POOR					29
.2	RAPPORT WITH HOMESTEADER	1 GOOD	2 SO - SO	3 POOR					30
04	LOT SIZE (SF)	1 UNDER 5000	2 5000- 7500	3 7500- 10,000	4 OVER 10,000				31
05.1	DWELLING SIZE (GROSS HABITABLE SF)	1 UNDER 450	2 450- 850	3 850- 1250	4 1250- 1500	5 1500- 1750	6 1750- 2000	7 OVER 2000	32
.2	ATTIC OR ATTIC (WITH HEADROOM) AREA EXPANDABLE TO HABITABLE ROOM (SF)	1 0	2 UNDER 100	3 100- 200	4 200- 400	5 400- 600	6 600- 1000	7 OVER 1000	33
.3	BASEMENT AREA EXPANDABLE TO HABITABLE ROOM	1 0	2 UNDER 100	3 100- 200	4 200- 400	5 400- 600	6 600- 1000	7 OVER 1000	34
06.1	NO. OF HABITABLE ROOMS (EXCLUDING KITCHEN, BATHS, SPACES UNDER 55 SF)	1	2	3	4	5	6	7	35
.2	NO. OF BEDROOMS	1	2	3	4	5			36
.3	NO. OF BATHS & ½ BATHS	1	2	3	4	5			37
.4	NO. OF KITCHENS/KITCHENETTES	1	2	3	4	5			38
07.1	HEATING FUEL	1 GAS	2 ELEC.	3 OIL					39
.2	HEATING UNIT	1 HOT AIR	2 HOT H2O	3 STEAM					40
08	OUTDOOR SPACE	PORCH 50	PATIO 51	DECK 52	BALCONY 53				
09	FOUNDATION	BASEMENT 54	CRAWL SPACE 55	1ST FLOOR ON SLAB 56					
10	ATTIC	ACCESSIBLE 57	INACCESSIBLE 58	NON 59					
11	PARKING	GOOD 60	AVERAGE 61	POOR 62					
12	PROBLEMS WITH ACCESS	SNOW 63	MUD OR RAIN 64	STEEP-TYPE ACCESS 65	INCOMPLETE HOUSE 66	HOUSE NOT IN THIS PROGRAM 67			

Appendix B

STANDARDS APPLIED IN THE MEASUREMENT OF HOUSING PRODUCTS (CHAPTER V)

B.1 Space Standards

Four principal indicators were chosen to control the various space quality levels:

(1) The total area of the house to insure that all basic activities can indeed be carried out.

(2) The number and minimum area of those "key rooms" of the house (living, dining and/or sleeping).

(3) The number of baths relative to the number of bedrooms.

(4) The area of the principal bath.

Specific assumptions with respect to areas and combined areas computations are as follows:

(1) The total area of the house, to insure that all basic activities could indeed be carried out. These areas are computed on the basis of the number of rooms and related services. Each house will have one primary or master bedroom and the number of secondary bedrooms corresponding to the model. Each will have one, one and a half, or two baths, again depending on the model. A combination living, dining kitchen is used in all cases in an attempt to use lowest possible square footages. Storage is provided at 4 sq. ft. per person, approximately. For each typical house, these areas are aggregated to yield a net total square footage and 10% is added to give the gross area taking into account wall thicknesses and circulation space. Room sizes for bedrooms, living, dining and kitchen areas are the minima given by the MDSR and the HUD Minimum Property Stan-

dards for One and Two Family Dwellings, 1973 including Revision 5, April 1977. The MDSR-based areas constitute the minimum level and the HUD MPS the standard level. The above standard level is obtained by adding 10% to all areas given by the HUD MPS.

Two bedroom dwellings are assumed to house 4 occupants, three bedrooms 5 to 6, and four plus bedrooms more than 6 occupants. It should be noted that secondary bedroom standards which are geared towards single occupancy have been used for double occupancy here, on the assumption that they were "adequate" for children.

EXAMPLE OF TOTAL AREA COMPUTATION
FOR THREE BEDROOM HOUSE

	Min.	Std.	Above Std.
Master Bedroom	110	120	132
Bedroom	70	80	88
Bedroom	70	80	88
LV/DN/K	250	300	330
Bath	33	33	36
Storage	20	20	22
	533 sq. ft.	633 sq. ft.	696 sq. ft.
10%	55	63	70
TOTAL	608 sq. ft.	696 sq. ft.	766 sq. ft.

For the two story models, 35 sq. ft. are added to to the stairs, and one half bath is added for convenient use of the dwellings, with the exception of the substandard and minimum dwelling sites of the two bedroom model.

(2) The number and corresponding minimum area of "key rooms" in the house are meant to insure that a spacious house overall not be chopped up into miniscule and unfurnishable rooms.

Each dwelling is controlled to have at least as many bedrooms as the model stipulates to be secondary bedrooms with corresponding minimum dimensions. Each should also have at least two rooms of the mini-

mum size required for the master bedroom. Thus, in the two-bedroom model, the dimensions of three rooms are controlled. Four and five room dimensions are controlled in the three and four-bedroom dwellings, respectively. This approach does not verify the dimension of rooms by specific use, but rather, it assumes minimum standrads for specific use rooms and verifies that a minimum number of rooms in the dwelling be within these limits.

(3) Minimum areas for complete bathrooms are checked to be at least 33 sq. ft. At least one and one-half baths are required for all above-standard units and for most two-story units. They are also required for all four plus bedroom units. Half-baths are assumed at 12 sq. ft.

It is clear that there can be many different ways in which space standards of the properties can be analyzed and the quality thresholds established. The position taken here is that established government standards must be the basis upon which the evaluation is carried out. At the same time, however, the quality thresholds must be responsive to both the expected variety in tastes and needs of the homesteaders and to the fact that the housing stock concerned is existing and dates primarily of pre-war times.

The primary space indicators which were developed distinguish, as already mentioned, between properties on the basis of the number of rooms which can be used as bedrooms and the number of stories or floor-levels in the property. This classification leads to six separately identifiable models (A-F) to each of which the space standards are applied.

Table B-1

MODELS USED IN APPLYING SPACE STANDARDS

MODEL	A	2 BR	1 Floor
	B		2 Floors
	C	3 BR	1 Floor
	D		2 Floors
	E	4+ BR	1 Floor
	F		2 Floors

The total area of the house in sq. ft., the number of habitable rooms, excluding kitchen, the respective minimum sizes of the habitable rooms, the number of baths and the area of baths in sq. ft. for each model, are used in developing the space quality indicators.

Properties were screened in the following manner:

- Each property was initially classified within one of the given models according to the number of bedrooms and the number of stories.
- The number of baths was scanned for appropriateness to the model. If inappropriate, the property was classified downwards, in most cases, to the model that has a lesser number of bedrooms.
- The total area of the house was computed by adding all habitable and service rooms recorded in the audit, including separate storage areas and a 15% increase for circulation and wall thicknesses.
- The number and respective square footages of habitable rooms (excluding kitchens) was checked for appropriateness. If inappropriate, the property is classified downwards to the lower square footage for the total and the step is reiterated.

The space standards which were then applied are those indicated in Tables B-2, B-3, and B-4, for each of the 6 models.

Table B-2

	Model A					Model B				
	Total Area SF	Rm Count		Baths		Total Area SF	Rm Count		Baths	
		#	SF	#	SF		#	SF	#	SF
Substandard	<494	NA	NA	NA	NA	<529	NA	NA	NA	NA
Minimum	≥494	≥1 ≥2	≥ 70 ≥110	≥1	≥33	≥529	≥1 ≥2	≥ 70 ≥110	≥1	≥33
Standard	≥570	≥1 ≥2	≥ 80 ≥120	≥1	≥33	≥605	≥1 ≥2	≥ 80 ≥120	≥1	≥33
Above Standard	≥628	≥1 ≥2	≥ 90 ≥130	≥1½	NA	≥663	≥1 ≥2	≥ 90 ≥130	≥1½	NA

The resulting estimates of savings, or "self-help value," have already been used to describe the extent of the self-help effort.

The average savings per hour of homesteader self-help labor might be expected to vary with the construction trade skills required. To examine this variation, homesteader hours were disaggregated into 17 categories of labor, or trades. The distribution of the number of hours by trade, the average savings per hour of homesteader labor and the corresponding standard errors of estimate are presented in Table IV-3.

Examination of the trade breakdown of hours and of average hourly savings is of some interest. Over 75% of the homesteader hours were accounted for by three trades: Laborer (34.5%), Painter (22.3%), and Carpenter (19.4%). No other trade accounted for more than 4.2% of the homesteader hours. The two tasks with the largest number of hours, Laborer and Painter which between them accounted for 56.8% of all the self-help hours, are both relatively low-skill activities.

The distribution of average dollar savings per hour of homesteader labor shows considerable stability. The extremes of the range are provided by Metal-worker ($2.44/hour) and Laborer/Mason ($10.41/hour), but between them these two trades accounted for only a half of one percent of the total homesteader hours. Of the 17 trades, 14 show average hourly savings of between $4.50 - $8.50 per hour. Typically, it appears that the savings per hour are lower for the lower-skill trades in which

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[1](continued from previous page)
"modified labor cost per unit"; similarly, materials costs were estimated by multiplying the materials quantity by a "modified materials cost per unit." The labor and materials unit costs were based on the R.S. Means data (Building Construction Cost Data 1976) and adjusted for job size, productivity differences, non-union labor, regional variations and inflation. In addition, overhead, builder's profit and contingency factors were applied.

Table IV-5

DISTRIBUTION OF HOURS AND SAVINGS
PER HOUR BY TRADE

Trade	% of Total Homesteader Hours	Average $ Savings Per Hour	Standard Deviation
Carpenter	19.4	6.25	0.41
Electrician	2.5	8.43	0.98
Fence Erector	0.5	7.97	1.14
Glazer	1.9	7.13	1.28
Laborer	34.5	5.00	0.53
Mason	2.6	9.09	1.38
Metal Worker	0.1	2.44	1.05
Plumber	4.2	7.02	0.74
Painter	22.3	5.32	0.28
Paper Hanger	2.0	4.49	0.79
Plasterer	3.2	4.96	0.70
Roofer	1.7	5.03	0.62
Sheet Metal Worker	0.3	6.96	1.40
Steam Fitter	1.0	8.49	2.46
Tile Layer	2.5	5.26	0.53
Tile Setter	0.8	8.77	1.12
Laborer/Mason	0.4	10.41	2.06
TOTAL	100.0	5.78	0.25

Table B-3

	Model C					Model D				
	Total Area SF	Rm Count		Baths		Total	Rm Count		Baths	
		#	SF	#	SF		#	SF	#	SF
Substandard	<608	NA	NA	NA	NA	<643	NA	NA	NA	NA
Minimum	≥608	≥2 ≥2	≥ 70 ≥110	≥1	≥33	≥643	≥2 ≥2	≥ 70 ≥110	≥1	≥33
Standard	≥695	≥2 ≥2	≥ 80 ≥120	≥1	≥33	≥730	≥2 ≥2	≥ 80 ≥120	≥1½	NA
Above Standard	≥765	≥2 ≥2	≥ 90 ≥130	≥1½	NA	≥795	≥2 ≥2	≥ 90 ≥130	≥1½	NA

Table B-4

	Model E					Model F				
	Total Area SF	Rm Count		Baths		Total Area SF	Rm Count		Baths	
		#	SF	#	SF		#	SF	#	SF
Substandard	<703	NA	NA	NA	NA	<738	NA	NA	NA	NA
Minimum	≥705	≥3 ≥2	≥ 70 ≥110	≥1½	NA	≥738	≥3 ≥2	≥ 70 ≥110	≥1½	NA
Standard	≥835	≥3 ≥2	≥ 80 ≥120	≥1½	NA	≥870	≥3 ≥2	≥ 80 ≥120	≥1½	NA
Above Standard	≥919	≥4 ≥2	≥ 90 ≥140	≥1½	NA	≥954	≥4 ≥2	≥ 90 ≥140	≥1½	NA

B.2 Service Quality Indicators

The service quality indicators used in the measurement of Housing Products include both Primary and Secondary level indicators for bathroom and kitchen plumbing as well as indicators for electrical service quality. The scoring system used for each of these components is presented in Tables B-5 through B-7.

Table B-5

PRIMARY QUALITY INDICATORS FOR PLUMBING

		Cumulative Measure
	BATH:	
Minimum	1. Existence of at least one complete bathroom (MDSR (4-2)-f) 2. Existence of water heater with a minimum capacity of 30 gal. for one and one and a half baths and 50 gal. for two baths (MDSR (9-6)a) 3. No material or workmanship defects in piping (MDSR (9-5)). 4. No material or workmanship defects in tub, shower, sink and WC (MDSR (4-2)f) 5. No material or workmanship defects in hot water heater (MDSR (9-6)).	Yes on items 1 to 5
Standard	6. Existence of at least one combination tub/shower. 7. Existence of at least one medicine cabinet (MDSR (4-2)f)	Yes on items 6 and 7
Above Standard	8. Single level lavatory and single temperature control tub 9. Existence of separate tub and shower if there are two or more baths	Yes on at least one of items 8 and 9
	KITCHEN (double for two kitchens):	
Standard	1. Existence of at least one kitchen with stove, oven, sink, and refrigerator or a unit kitchen (MDSR (4-2)e). 2. No material or workmanship defects in unit kitchen, stove/oven/range top, range hood, sink (MDSR (4-2)e).	Yes on items 1 and 2
Above Standard	3. Double sink or dishwasher 4. Stainless steel sink or self-rimmed sink 5. Existence of fan 6. Existence of compactor 7. Existence of dishwasher 8. Existence of freezer	Yes on 50% of items

Table B-6

SECONDARY QUALITY INDICATORS FOR PLUMBING

		Cumulative Measure
	BATH:	
Standard	1. In case of tub, must be integral, recess or better. 2. In case of shower, curtain rod or better.	Yes on items 1 and 2
Above Standard	3. In case or tub, must be porcelain or better. 4. In case of shower, must have tile, steel or terrazo base. 5. Lavatory is integral with vanity. 6. Single temperature control lever. 7. Medicine cabinet is recessed. 8. Existence of washer and dryer.	Yes on 75% of items 3 to 8
	KITCHEN:	
Minimum	1. Existence of top and bottom cabinets. 2. Existence of countertop.	Yes on items 1 to 2
Standard	3. Stove must have 4 burners or better. 4. Sink must be double. 5. Top and bottom cabinets must be cabinets. 6. Countertop can have any finished surface except resilient.	Yes on items 3 to 6
Above Standard	7. Stove must be set in or drop in. 8. Existence of range hood. 9. Sink must be porcelain or stainless. 10. Top and bottom cabinets may be any, except shelves or open or metal, must have integral back. 11. Countertop must have integral backsplash or be stainless.	

Table B-7

	ELECTRICAL SERVICE	Cumulative Measure
Minimum	1. Electrical service: at least fuses. 2. No knob and tub wiring. 3. Capacity under 60 amps. 4. Adequate number of outlets in 80% of living and sleeping spaces. 5. Adequate number of outlets in kitchen and baths. 6. Switches in all spaces -- living, sleeping, kitchen and bath. 7. Outdoor lighting. 8. No material or workmanship defects in electrical service.	Yes to items 1 to 8
Standard	9. Electrical services: circuit breakers. 10. Capacity over 60 amps. 11. Adequate number of outlets in 100% of living and sleeping spaces. 12. Outlets and switches for garage and other outdoor structures.	Yes to items 9 to 12