3-1944


Allan A. Twichell

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DOES BAYSIDE NEED REBUILDING?

A Study of Housing Conditions in a Problem Area of Portland, Maine

Prepared for
Portland City Planning Board
and
Portland Health Department
by
American Public Health Association Committee on Hygiene of Housing
Allan A. Twichell, Technical Secretary

March, Nineteen Forty-Four
New Haven 11, Connecticut
March 28, 1944

City Planning Board
City Hall
Portland 3, Maine

Gentlemen:

Transmitted herewith are findings of the housing survey conducted in the Bayside District of Portland during the latter half of 1943 as a cooperative project of your Board and the Portland Health Department, under direction of the writer serving as consultant to the Board.

The method of survey used, which is described more fully in the accompanying report, is one developed by the Committee on the Hygiene of Housing, to measure the adequacy of dwellings and of their neighborhood environment from the viewpoint of public health. The present report is offered as a guide for official planning and housing policy in the Bayside District.

Permit me to express, on behalf of our Committee, gratitude for cooperation by the Board, your consultant Arthur C. Comey, your staff, Health Officer Travis P. Burroughs, and the nurses assigned by Dr. Burroughs to the field work of this study. The unfailing helpfulness of everyone with whom we worked in Portland has made our association with this project one to be most warmly remembered.

Sincerely yours,

s/ Allan A. Twichell

Allan A. Twichell
Technical Secretary
Committee on the Hygiene of Housing
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<tr>
<td></td>
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<td>Appendix II</td>
</tr>
</tbody>
</table>
SUMMARY OF CONCLUSIONS

1. The Bayside District is, in a quite exact sense, a substandard housing area. Over half the dwelling units show at least one of those major substandard conditions which are generally recognized by responsible housing and public health authorities as warranting official remedial action. This is true both of the District as a whole and of all four areas into which it divides. A comprehensive program of housing improvement is clearly needed.

2. Conditions are distinctly worst in that part of the District which lies southwest of Wilmot Street. If a remedial program is to be based on the inadequacy of present housing it should be concentrated there.

3. The southerly half of the District subdivides readily in terms of its dwelling and environmental conditions. The blocks between Chestnut and Elm Streets—shown in Figure 1 as Area 1—are the poorest conditions of neighborhood environment, while the blocks between Chestnut and Wilmot (Area 2) are poorest for dwelling characteristics, as shown in the table on page 2. Total housing quality (dwelling and environmental conditions combined) is slightly worse in Area 2 than in Area 1.

4. The northerly half of the District, appreciably better but still poor, divides in similar fashion—in this case from east to west. The following table shows little difference in over-all housing quality between areas 3 and 4, but further analysis shows that Area 3 west of Oxford Street has distinctly poorer dwelling facilities, with somewhat better conditions of
BASE MAP

AREA NUMBERS  1

BLOCK NUMBERS  27
dwellings maintenance and less overcrowding, than Area 4.

5. The relative seriousness of the housing problem in these four areas is summarized in the following table. This gives median penalty scores of each area: first for dwelling and environmental conditions combined; next for dwelling characteristics alone; and finally for environmental conditions.* Since these are penalty scores, assigned for failure to meet reasonable contemporary standards, high figures mean poor conditions, low figures good conditions.

Penalty Score of Dwelling Unit Which is Median for:

<table>
<thead>
<tr>
<th></th>
<th>Total Housing Quality**</th>
<th>Dwelling Quality</th>
<th>Environmental Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area 1</td>
<td>130</td>
<td>58</td>
<td>79</td>
</tr>
<tr>
<td>2</td>
<td>132</td>
<td>62</td>
<td>69</td>
</tr>
<tr>
<td>3</td>
<td>107</td>
<td>47</td>
<td>56</td>
</tr>
<tr>
<td>4</td>
<td>102</td>
<td>48</td>
<td>62</td>
</tr>
</tbody>
</table>

**Dwelling conditions and environmental conditions combined.

While figures of this table show that two of the areas are clearly worse than the others, they will not convey to the reader an understanding of how bad these areas are without some reference to popular measures of housing adequacy. Of any measurement scale it must be asked, Does it measure in yards, inches, or feet? The rating scale used in this survey is such that neighborhoods of self-respecting modern housing will usually incur median penalties between 0 points and 30 to 35 points for

*For a note on the meaning of median scores, see p. 15
total housing quality. Median penalties in excess of 125 points are a clear indication of areas which need comprehensive remedial treatment, and scores beyond 175 points indicate an extreme type of slum conditions.

6. Thus, while none of the four areas in the Bayside District falls into the extreme slum classification, two of them are clearly in that level which demands attention by official bodies, and the other two are not conspicuously better. Even in the better of these areas there are of course individual dwellings and blocks which would warrant drastic corrective action.

7. Considerable percentages of dwellings in the District are characterized by substandard toilet and bathing facilities, inadequate heating installations, unsafe means of egress, rooms of substandard size, rooms without windows, and serious lack of repair, to mention only a part of the survey findings.*

8. The dwellings generally in areas 1 and 2, and numerous individual houses in the remainder of the District, show up as being of a type in which the defects probably cannot be remedied as a practical matter except by demolition and rebuilding. In other words, much of the housing in the Bayside District is fundamentally so obsolescent that it cannot be modernized without improvement so expensive or structurally so difficult as to make them economically impracticable. In the absence of any systematic improvement scheme, the housing of the Bayside District can be expected to get steadily worse.

*Exact figures on these and other points of this summary are given in the body of the report.
9. Whether or not present housing conditions have measurable ill effects on the health and well-being of Bayside residents, there is justification (under any planning program for Portland which envisions a constructive policy of fostering employment and increasing the attractiveness of the city as a place to live and work) for designating a substantial portion of the Bayside District as an area for demolition of present dwellings and for reconstruction with new housing.

10. The chief environmental defects of the District are associated with street traffic—minor streets needlessly used for commercial traffic, and dwellings set close to the street with inadequate offstreet space for children’s play—and with the lack of elementary schools, public parks and playgrounds within reasonable distance. Fortunately these defects could easily be remedied as a part of any well-planned rehousing scheme.

11. Fortunately also, the District is largely free from other types of environmental defects which act as a serious barrier to housing redevelopment in many substandard areas, such as intermixture of residence with heavy industry or substantial business establishments, serious problems of topography, inadequate drainage, incomplete public utilities, or excessive distance to transportation services.

12. Extreme overcrowding in dwellings of the District has been revealed in the present survey. This problem is ignored in the recommendations which follow, since it is assumed that overcrowding is in large part a temporary result of the war. This crowding should, however, be of major present concern to city
agencies responsible for health and safety. Crowding here is not merely a matter of too many persons per room—the crude measure usually employed in housing surveys. Since the District is characterized by a considerable percent of dwellings with unreasonably small rooms, crowding is the more serious matter of too many persons in rooms too small for even normal occupancy. While it may be impossible to abate this condition during the war, the existence of such crowding should be all the mandate needed by local enforcement agencies to insure that everything possible is done to maintain the present houses in decent repair and sanitary condition. Extreme overcrowding has been shown by authoritative studies to have a direct relation to the rate of spread of epidemic disease. Since crowding can also be a factor in increasing fire dangers, special attention should be paid to the safety of heating installations, to disrepair which may favor the start and spread of fire, and to the number and condition of exits.
RECOMMENDATIONS

1. As a reasonable program for the Bayside District, it is recommended that areas 1 and 2 be designated as a clearance zone to be largely or entirely rebuilt with one or more neighborhood housing developments. Provision of the needed playgrounds, school, and a neighborhood park should be an integral part of the plan. In Area 3 the worst structures should be earmarked for demolition or mandatory improvement, with similar action in Area 4 as needed.

2. A smaller alternate program would be to designate for clearance the blocks of areas 1 and 2 lying between Oxford Street, Cumberland Avenue, Wilmot and Elm Streets. This would remove the largest single concentration of seriously substandard dwellings and would provide a housing project site without interior through-traffic streets, but it would leave serious environmental and dwelling defects uncorrected in these two areas.

3. As a minimum program it is recommended that a substantial portion of Area 2 (perhaps excluding the three blocks between Wilmot and Pearl streets or the three blocks between Stone and Chestnut streets) be designated for clearance and rebuilding, again with emphasis on meeting the need for playground and school facilities in the District and with attention to needed spot improvement of the remaining areas.

4. The foregoing recommendations are based wholly on the relative inadequacy of present housing in the several areas
as revealed by the survey. It is recognized that from the viewpoint of the City Planning Board a wise program may be conditioned by other factors such as the cost of land acquisition, the numbers of families subject to rehousing under alternate schemes, the desirability of improving the blocks which surround present city property at the northern end of the District, or other considerations arising from the master plan. If it should be decided, for example, to develop the rudimentary playfield between Smith and Boyd streets into an adequate neighborhood park and playground, an initial program of spot clearance and general rehabilitation for Area 3 might provide an attractive corridor from the new park to Area 2 and thus offer inducement for the reconstruction of this latter area.

5. It is understood that neither Portland nor the State of Maine has any housing laws or other official regulations which constitute a reasonably comprehensive set of standards for the continued occupancy of existing dwellings. At the request of the Portland City Planning Board and Health Department, suggestions are made in this report looking toward such a set of official regulations.
CHARACTER OF THE STUDY

Purpose

In recent years the people of America have become increasingly aware of insanitary and overcrowded housing as a menace to health and to social well-being. It was fashionable ten years ago for public officials to argue that their cities had no slums, but today cities vie with one another in demonstrating their need for slum clearance and rehousing.

One factor underlying this change has been the nationwide program of slum clearance and rehousing since the middle 1930's. Another is the general recognition that if we are to maintain full employment and a high national income after the war, building construction—and in particular housing construction—offers one of the most hopeful possibilities. Whether the accumulated shortage of housing is to be filled, and urban slums replaced, by private builders or by governmental agencies, or by a combination of the two, there are few who doubt that a vast housing program is in the post-war cards. Furthermore, it is widely believed that in an era of high living standards those cities which have succeeded in replacing their substandard dwelling areas with adequate housing available to the average family will have a definite advantage in seeking to attract desirable types of industry and business. The war has greatly increased our consciousness of housing as an essential part of any community's economic plant.
Aware of these considerations, the Portland City Planning Board and Health Department undertook during the summer of 1943 to appraise the housing conditions in the Bayside District. The purpose of the survey was to determine whether this district is actually a slum of the sort which would warrant general demolition of the present housing and its replacement by one or more modern community housing developments.

The Problem of Bayside

The Bayside District is generally acknowledged to be an area of poor housing, and the City Planning Board's previous analysis of the 1940 Housing Census data had confirmed this view. In selecting the Bayside District for the present study it was recognized that at least some small areas elsewhere in the city may be worse from the standpoint of their present housing. Despite this possibility, the Bayside District was selected because it not only is a densely populated and obviously run-down neighborhood, but because it also appeared to offer good possibilities for housing reconstruction should conditions be found sufficiently bad to warrant a clearance program. Both as to location and topography the Bayside District is suitable for replanning in a unified scheme. It is also relatively free from certain factors inimical to housing redevelopment, such as heavy intermixture of business and industrial uses with residence or an excessive number of essential traffic arteries. Furthermore, the District is big enough to permit a large-scale rehousing operation even if only part of it were to be found in need of clearance. These advantages from the
viewpoint of replanning were obviously lacking in certain other districts which might have been chosen for the survey had the only criterion been the character of present housing conditions.

While it was known that the Bayside District is an area with much poor housing, it had not been possible to determine just how poor the general quality of housing is or to judge whether measures short of demolition and rebuilding would solve the problem. In order to secure objective answers to these questions, the City Planning Board and the Health Department adopted the method of housing survey which has been developed by the Committee on the Hygiene of Housing of the American Public Health Association.

The Survey Method

This survey method deals with dwelling conditions in a manner generally similar to that of other housing surveys, but it treats more fully certain conditions having health significance, such as sanitary facilities, heating equipment, natural and artificial lighting, and overcrowding. The method also includes appraisal of the physical surroundings or neighborhood environment of the dwellings---an important factor in housing adequacy which is customarily ignored in housing surveys.

Both the dwelling characteristics and environmental conditions are rated by a system of scores which has been developed and tested by surveys in six other eastern cities. Under this scoring system penalty points are assigned for each condition that fails to meet a reasonable contemporary standard. Dwelling penalty scores are charged to each dwelling unit for deficiencies
of its physical facilities or maintenance and for overcrowded occupancy. Each dwelling unit carries also the environmental penalty score of the block in which it lies. This environmental rating takes into account such factors as crowding of land by buildings, intermixture of residence with industrial and business uses, and availability of schools, parks, and public utilities.

The penalty for each deficiency is graded according to the seriousness of that deficiency as a threat to health or safety or the extent to which it may impair comfort or general livability. These scores have been determined by members of the Committee on the Hygiene of Housing and other experienced workers in the fields of housing, public health, and planning. For example, a score up to 30 points may be assigned to a condition which offers a major threat to health or safety, such as overcrowding at the ratio of 4 persons per room or a single means of egress from a tenement structure. A penalty of 15 points is charged to a toilet located outside the dwelling structure. Lesser deficiencies such as closets lacking in part of the rooms of a dwelling unit may be scored from 2 to 5 points. Similar variations occur in the scores for environmental conditions, depending on their seriousness. Thus, a penalty of 0 points for any dwelling and its environment indicates housing conditions which are excellent from the viewpoint of official agencies such as public health and building departments, and total penalty scores up to 25 or 35 points may indicate a combination of minor deficiencies which do not basically impair the livability of a house or neighborhood. Scores in excess of 125 points, however, clearly cannot be incurred under this scale except where there
is such a multiplicity of basically substandard conditions as to violate the fundamentals of decent living.

Results of the survey are made available for interpretation by the following steps:

1) The dwelling penalty score of each dwelling unit is obtained by totalling the subscores for all deficiency items of that unit and of the structure which contains it.

2) Environmental penalty scores are computed by blocks rather than by dwelling units, with some items (such as exposure to traffic hazard) varying from one street frontage of the block to another. Each dwelling unit is charged with the environmental score of the block frontage on which it lies.

3) Total housing quality is expressed for each dwelling unit by adding its dwelling score to its environmental score. The term "housing quality" is used only when dwelling scores and environmental scores have been thus combined, for it is the Committee's conviction that dwelling characteristics alone do not reflect the over-all housing problem.

The findings are graded also according to the number of "basic deficiencies" present in the dwellings. A basic deficiency is a lack in dwelling facilities or a degree of overcrowding so serious that it has been widely recognized by public health and housing agencies as a) calling for a correction order by a local enforcement agency or b) justifying the removal of the affected family to other quarters if the condition is not or cannot be remedied in their present quarters. Thus, a basic deficiency is a major substandard condition in the sense that progressive city and state housing regulations acknowledge it as warranting drastic corrective action by the municipality.*

*A list of these basic deficiencies is appended to this report.
If an area has over 50% of its dwelling units with one or more basic deficiencies each, it can justly be said that the dwellings are predominantly substandard in this official sense.

This classification by point-scores and by prevalence of basic deficiencies takes the question of housing quality out of the realm of subjective judgment and opinion. It provides an objective basis for measuring total housing quality and for comparing this quality from one area to another.

The Bayside survey by the method described was initiated by the City Planning Board, whose staff conducted the field observations and made the calculations required for the environmental part of the appraisal. The Health Department, co-sponsor of the study, provided personnel of its nursing staff for field work of the dwelling survey. The staff of the Committee on the Hygiene of Housing scored the dwelling data, and the Committee's Technical Secretary served as consultant to the Planning Board in the direction and interpretation of the entire survey.

The dwelling survey covered 25% of the dwelling units in each block. These were selected in proportion to the number of one-family, two-family, and multi-family dwellings in each block by a method which insures random representation of each type of dwelling. The environmental appraisal was not done on a sampling basis, but covered all properties in the Bayside District.
GENERAL FINDINGS

The present study does not cover the entire Bayside District, but treats 35 blocks which the local sponsors of the survey believed to be representative. The City Planning Board in particular felt that this group of blocks included the most significant potentialities for future development in relation to needed recreational facilities, schools, and other features of the city planning program.

The blocks comprising the Bayside District for purposes of this study include 1,290 family accommodations or dwelling units, according to the U. S. Housing Census of 1940. The 25% sample disclosed 306 units, including 11 rooming houses. This represents a satisfactory agreement with the Census figures, since by its nature a sample survey will seldom check to exactly the intended fraction of the total number of cases. The Census does not give population by blocks, but this survey disclosed 1,346 occupants of the sample dwellings, indicating a total population of about 5,400 persons.

The indication is that little change has occurred since 1940 in the number of dwelling units available in the District. If additional families have been accommodated, this has apparently been done in the main by crowding them into existing units rather than by subdivision of ordinary dwellings into light-housekeeping units, as has been done in many other centers of war employment.
The present report is restricted to consideration of the neighborhood environment and of conditions in family dwelling units. The small number of rooming houses covered by the sample does not permit significant conclusions. If an appraisal of the rooming-house problem is desired, a special, though not necessarily large, survey should be conducted.

Eight-one percent of the dwelling units are occupied by tenants, and nineteen percent by their owners. Forty-two percent of the dwelling units are found in structures housing from three to six families each, and twelve percent in structures with seven families or more. Thirty percent of the units occur in two-family structures and only sixteen percent in single-family houses, which are generally considered the most desirable type of dwelling.

Rent was reported by all but two percent of the tenant households, and the median rent for the seventy-nine percent of units reporting was approximately $20 per month.\* Seventy-four percent of families reported their monthly income; of these the median was approximately $165 per month.

\* "Median" and "quartiles," frequently referred to in this report, should perhaps be explained. The median for any series of values is obtained by arranging the values in order from smallest to largest (in the above instance, from lowest rent to highest rent) and determining the midpoint of the series, with half the values on one side and half on the other. In most series the median will approximate the average, and can be considered as roughly interchangeable with it.

The quartiles are the quarter-points in a series of values arranged in order from smallest to largest. Twenty-five percent of the cases lie below the first quartile, fifty percent between the first and third quartiles, and twenty-five percent above the third quartile. Thus the first quartile may be construed as roughly the average of the values in the lower half of the series, the third quartile as the average of the values in the upper half.
The sizes of dwelling units and of families in the Bayside District are within the ranges usually encountered in central urban areas. Fifty-four percent of the units contain either four or five rooms, with only six percent as small as two rooms. No units of one room were reported in the dwelling sample. Although twenty-two percent of the households consisted of two persons, forty-nine percent consisted of four or five persons, and only eight percent of more than seven persons. A complete size distribution of dwelling units and households is given in the following table:

<table>
<thead>
<tr>
<th>Number of Rooms</th>
<th>Percent of Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>4</td>
<td>26</td>
</tr>
<tr>
<td>5</td>
<td>28</td>
</tr>
<tr>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Persons</th>
<th>Percent of Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>22</td>
</tr>
<tr>
<td>3</td>
<td>36</td>
</tr>
<tr>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total Quality of Housing**

In a sampling study such as the present dwelling survey (particularly where blocks are as small as some of those in the Bayside District) too much weight must not be assigned to the findings for individual blocks, and results should be interpreted chiefly for groups of blocks which show generally similar characteristics. It is for this reason that dwelling results in the present report are given primarily in terms of the four sub-areas of the District.
QUALITY PENALTY SCORE:
QUALITY OF HOUSING:

GRADE

POINTS

A 0 - 34
B 35 - 74
C 75 - 124
D 125 - 174
E > 175

WELLINGTON

WILMOT

FRANKLIN

PEARL

CORK

SPRING

CEDAR

ELM

QUALITY OF HOUSING:
DWELLING CONDITIONS AND NEIGHBORHOOD ENVIRONMENT
COMBINED

BLOCKS GRADED BY MEDIAN DWELLING UNIT SCORE
PLUS BLOCK ENVIRONMENTAL SCORE

FIG 2
Certain characteristics show clearly enough, however, on a block-to-block basis to warrant plotting them on a block map. The pattern of total housing quality (dwelling conditions and environment combined) is shown, for example, in Figure 2. This map gives the quality grade of each block in terms of the total housing penalty score for the dwelling unit which is the median for that block. The quality grades have the following significance in terms of housing quality:

- Grade A: good to excellent
- Grade B: generally acceptable
- Grade C: intermediate
- Grade D: substandard
- Grade E: slum

It will be noted that no block in the District falls into either Grade A or Grade E of the classification scheme. Fourteen of the thirty-five blocks, however, are of Grade D, which is clearly below the level of acceptable housing under contemporary standards. Since this map is based on median values, blocks of better than D grade may also contain numerous individual dwellings similar to the average of the Grade D blocks.

A gradation of housing quality, from poorest at the southwest to best at the northeast, is clearly evident. As will be shown in later figures, environmental deficiencies are pronounced in the southern end of the District, tapering off markedly to the north. Total dwelling deficiencies (including overcrowding as well as the lack of physical facilities) are more evenly spread throughout the District. Deficiencies in dwelling facilities alone, which are of primary interest in the present
study, show a definite trend from poor at the south to better at the north.

Figure 2 by itself tends to indicate that the local survey sponsors were well advised in thinking that the District may contain a potential clearance area. Before any conclusions can be drawn as to the appropriate remedial action, however, we must examine the various factors which enter into the lack of housing quality, and also the way in which these factors bear on various parts of the District.

For purposes of analysis the District has been divided into four sub-areas. These have been chosen not for uniform size, but so as to group together the blocks having generally similar housing quality. The four areas contain the following numbers of blocks and sample dwelling units:

<table>
<thead>
<tr>
<th>Area</th>
<th>Blocks</th>
<th>Sample Dwelling Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>108</td>
</tr>
<tr>
<td>3</td>
<td>12*</td>
<td>71</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>77</td>
</tr>
<tr>
<td></td>
<td>35</td>
<td>306</td>
</tr>
</tbody>
</table>

The relative quality of housing conditions in these four areas is summarized in the table below (repeated from the Summary of Conclusions), which shows the penalty score of the median dwelling unit for each area: first for dwelling and environmental conditions combined; next for dwelling characteristics alone; and finally for environmental conditions.

* Including nonresidential blocks #27 and #31.
Penalty Score of Dwelling Unit which is Median for:

<table>
<thead>
<tr>
<th>Area</th>
<th>Total Housing Quality</th>
<th>Dwelling Quality</th>
<th>Environmental Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>130</td>
<td>58</td>
<td>79</td>
</tr>
<tr>
<td>2</td>
<td>132</td>
<td>62</td>
<td>69</td>
</tr>
<tr>
<td>3</td>
<td>107</td>
<td>47</td>
<td>56</td>
</tr>
<tr>
<td>4</td>
<td>102*</td>
<td>48</td>
<td>62</td>
</tr>
</tbody>
</table>

This table, as previously noted, establishes that the two southern areas are distinctly worse for total housing quality than their northern companions. The same relation holds true for dwelling conditions and environmental characteristics considered separately.

Figure 3, giving the range of scores more fully, shows that in areas 3 and 4 the poorest one-fourth of the dwellings (those beyond the third quartile) had higher penalties for total housing quality than the medians of areas 1 and 2. The poorest fourth in areas 1 and 2, with total scores in excess of 160 and 167 points, respectively, fall in or close to the class of definite slums.

* The median dwelling penalty for any area, added to the median environmental penalty, does not necessarily give the same figure as the median penalty for these two combined. This is because the dwelling unit in any area which constitutes the median for dwelling scores may be a different unit from the one which is the median for the area in environmental scores.
BAYSIDE DISTRICT  ~ PORTLAND, ME.
HOUSING SURVEY 1943

HOUSING QUALITY BY SURVEY AREAS
RANGE OF PENALTY SCORES FOR MIDDLE 50% OF CASES, WITH SCORE AT MEDIAN.

<table>
<thead>
<tr>
<th>TOTAL HOUSING QUALITY</th>
<th>DWELLING CONDITIONS</th>
<th>NEIGHBORHOOD ENVIRONMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>(DWELLING CONDITIONS AND ENVIRONMENT COMBINED)</td>
<td>(FACILITIES, MAINTENANCE AND OCCUPANCY COMBINED)</td>
<td>(ALL FACTORS COMBINED)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PENALTY SCORE: POINTS</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
<th>110</th>
<th>120</th>
<th>130</th>
<th>140</th>
<th>150</th>
<th>160</th>
<th>170</th>
</tr>
</thead>
<tbody>
<tr>
<td>AREA 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>98</td>
<td>130</td>
<td>160</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AREA 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>106</td>
<td>132</td>
<td>167</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AREA 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>76</td>
<td>107</td>
<td>132</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AREA 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>83</td>
<td>102</td>
<td>133</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LEGEND

RANGE OF SCORES FOR MIDDLE 50% OF CASES:

PENALTY SCORE (POINTS) AT: 1ST QUARTILE MEDIAN 3RD QUARTILE

FIG. 3
Total Dwelling Quality

It has been shown in Figure 3 and elsewhere above, in terms of penalty-point scores, that dwelling conditions are poor throughout the District and definitely worst in Area 2. The following table, which indicates the distribution of basic deficiencies in each of the four areas, supports this conclusion, and shows, furthermore, that each area is definitely substandard.

<table>
<thead>
<tr>
<th>Area</th>
<th>First Quartile</th>
<th>Median</th>
<th>Third Quartile</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

The meaning of this table is as follows. Since each of the four areas has in its median dwelling unit one basic deficiency or major substandard condition, at least 50% of the units in all areas are substandard in the official sense previously defined. However, the fact that all areas show 0 basic deficiencies at the first quartile means that there are at least 25% of the units in each area which are not substandard. In these two respects all four areas are identical. Areas 1, 3 and 4 show similar quality in that each has one substandard condition in the dwelling at the third quartile, whereas Area 2 shows two basic deficiencies at this point in the range. Thus, Area 2 has at least 25% of its units with two or more major substandard conditions.
It should be noted that basic deficiencies can occur among either physical facilities or occupancy conditions of the dwelling. Areas 3 and 4, for example, are similar in that at least 50% of the dwelling units in each area show a basic deficiency, but in Area 3 the basic deficiency occurs more generally among the facilities than among the occupancy conditions. The reverse is true for Area 4.

**Dwelling Facilities**

The interpretation of dwelling quality thus far has considered the point-scores and basic deficiencies for both physical facilities of dwellings and for conditions of maintenance and overcrowding. We assume that present overcrowding in the area is at least in part a wartime phenomenon and will tend to diminish after the war. For long-range planning purposes it is therefore of primary interest to examine the dwellings of the District in terms of their physical facilities alone. Figure 4 provides part of this picture. The greatest concentration of poor dwelling facilities occurs in Area 2, with Area 1 next worst and Area 4 showing the best conditions. The relative quality of these areas is summarized in the following table:

Penalty Score for Facilities in Dwelling Unit at:

<table>
<thead>
<tr>
<th>Area</th>
<th>First Quartile</th>
<th>Median</th>
<th>Third Quartile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area 1</td>
<td>17</td>
<td>31</td>
<td>60</td>
</tr>
<tr>
<td>Area 2</td>
<td>22</td>
<td>43</td>
<td>64</td>
</tr>
<tr>
<td>Area 3</td>
<td>17</td>
<td>26</td>
<td>58</td>
</tr>
<tr>
<td>Area 4</td>
<td>13</td>
<td>24</td>
<td>43</td>
</tr>
</tbody>
</table>
BAYSIDE DISTRICT - PORTLAND, ME.
HOUSING SURVEY 1943

PENALTY SCORE:

<table>
<thead>
<tr>
<th>CLASS</th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0-9</td>
</tr>
<tr>
<td>2</td>
<td>10-19</td>
</tr>
<tr>
<td>3</td>
<td>20-29</td>
</tr>
<tr>
<td>4</td>
<td>30-49</td>
</tr>
<tr>
<td>5</td>
<td>50+</td>
</tr>
</tbody>
</table>

QUALITY OF DWELLING FACILITIES

BLOCKS GRADED BY FACILITIES SCORE OF MEDIAN DWELLING UNIT

FIG. 4
The practical nature of the housing problem in these four areas is shown more clearly by Figure 5. This gives the percent of sampled dwelling units in each area that have each important type of deficiency. These bar graphs show clearly certain earmarks of obsolescence in the dwellings throughout the area, together with the factors which make one area definitely worse than another.

Over 40% of the units in all areas lack central heating (item D). Only a token penalty of 3 points is given for this deficiency, since adequate heating can be provided by stoves or other heaters if these are well distributed in the rooms of a dwelling unit. The absence of central heating is, however, a fair index in this region of old and generally primitive housing, and the figures for this characteristic alone tend to earmark the District as obsolescent. When we consider item E, however, and find that one-fourth or one-third of the units in each area lack a reasonable distribution of their local heating units within the rooms, we have evidence not only of obsolescence but of positive inadequacy. The penalties of 8-15 points for this item are not incurred except in cases where the distribution of heating units is so poor as to give a very strong presumption of inadequate heating performance in this northern climate. Although occupants' complaints were not tabulated in this study, it has been found in other surveys that one of the chief and most fully justified tenant grievances, in dwellings so equipped for heating, is that it is impossible to keep the house reasonably warm.
### DEFICIENCY I. FACILITIES

<table>
<thead>
<tr>
<th>FACILITY</th>
<th>PENALTY SCORE: POINTS</th>
<th>AREA 1</th>
<th>AREA 2</th>
<th>AREA 3</th>
<th>AREA 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Toilet: Outside dwelling unit or shared</td>
<td>15 - 60</td>
<td>17</td>
<td>17</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>B: Installed Bath: None, outside dwelling unit, or shared</td>
<td>8 - 20</td>
<td>35</td>
<td>42</td>
<td>38</td>
<td>14</td>
</tr>
<tr>
<td>C: Piped Water: Cold only or outside dwelling unit</td>
<td>8 - 15</td>
<td>27</td>
<td>36</td>
<td>37</td>
<td>21</td>
</tr>
<tr>
<td>D: No central heating</td>
<td>3</td>
<td>43</td>
<td>56</td>
<td>61</td>
<td>43</td>
</tr>
<tr>
<td>E: Installed Heating: None in at least 1/2 of rooms</td>
<td>8 - 15</td>
<td>27</td>
<td>32</td>
<td>36</td>
<td>30</td>
</tr>
<tr>
<td>F: Windowless Rooms: 1 or more</td>
<td>8 - 30</td>
<td>8</td>
<td>10</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>G: Closets: None for at least 1/2 of rooms</td>
<td>8 - 10</td>
<td>48</td>
<td>42</td>
<td>44</td>
<td>39</td>
</tr>
<tr>
<td>H: Room Sizes: At least 1/2 of rooms substandard</td>
<td>8 - 10</td>
<td>21</td>
<td>31</td>
<td>17</td>
<td>33</td>
</tr>
<tr>
<td>I: Total room facilities (E-H combined): extreme deficiencies</td>
<td>15 - 60</td>
<td>31</td>
<td>50</td>
<td>41</td>
<td>36</td>
</tr>
<tr>
<td>J: Means of egress: Inadequate or obstructed</td>
<td>8 - 30</td>
<td>14</td>
<td>19</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>K: Public halls: Daylight inadequate</td>
<td>8 - 14</td>
<td>17</td>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### DEFICIENCY II. MAINTENANCE & OCCUPANCY

<table>
<thead>
<tr>
<th>FACILITY</th>
<th>PENALTY SCORE: POINTS</th>
<th>AREA 1</th>
<th>AREA 2</th>
<th>AREA 3</th>
<th>AREA 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>L: Physical deterioration: Class 2 or worse</td>
<td>8 - 60</td>
<td>10</td>
<td>21</td>
<td>4</td>
<td>21</td>
</tr>
<tr>
<td>M: Room crowding: 1 plus persons/rm. or 2 plus persons/bedroom</td>
<td>8 - 50</td>
<td>18</td>
<td>28</td>
<td>25</td>
<td>21</td>
</tr>
<tr>
<td>N: Area crowding: Sleeping area less than 50 sq. ft./person; standard for nonsleeping area varies with size of family</td>
<td>8 - 50</td>
<td>22</td>
<td>40</td>
<td>28</td>
<td>34</td>
</tr>
</tbody>
</table>
Windowless rooms (item F) are reported in 7% to 10% of the units in all areas. This is not a high figure, but on the other hand this is a basic defect; one which has not been permitted in new construction for many years in most communities. Some of the windowless rooms may result from subdividing original rooms to meet the wartime occupancy need, but this does not make the condition more hygienic.

Small rooms (item H) are a striking and serious defect of the District's housing. Only a moderate penalty (maximum 10 points) is assigned for this characteristic, since its actual seriousness varies considerably with the number of occupants of a dwelling at a given time. Small rooms are, however, another reliable index of poorly designed and obsolescent dwellings, and in old buildings this defect can seldom be satisfactorily corrected. It is worthy of note that the two areas which show about one-third of dwellings with half of their rooms unreasonably small are also the areas with the worst conditions of area crowding (item N). In other words, these small rooms are definitely over-occupied. The health dangers of this have already been stressed.

Lack of closets in at least one-half of the rooms (Item G) is a defect which will probably not be reflected in health or accident statistics as some of the other deficiencies may be, but it can be completely ruinous to convenient or decent housekeeping. It is certainly another excellent index of shoddily designed and obsolescent dwellings. From about two-fifths to almost one-half of the units in each area show this condition.
The emphasis on obsolescence is confirmed by item I, which shows that these poor qualities of rooms occur in combination in many houses. From 31% to 50% of the units in all areas show penalties of 15 points or over for the four items just discussed.

Deficiencies in bathing facilities (item B) are equally conclusive as an evidence of obsolescence. Three of the areas show over one-third of their dwelling units lacking acceptable modern bathing facilities.

Some wit has remarked that to the Chicago meat packers a pig is a statistic, while to the night driver a pig is a round hard object that can wreck his car. Similarly, lack of bathtubs is either merely a set of figures or—if you happen to be the housewife—it is a cold and ever-present fact that means heating water in kettles for the occasional bath in a galvanized iron tub.

Inadequate toilets are universally recognized as a health menace. In areas 1 and 2 one-sixth of the units have toilet facilities (item A) which would not meet the legal requirement of a community with modern housing regulations.

Not the least serious condition indicated by the survey is the proportion of dwellings with inadequate means of egress (item J) in areas 1 and 2. This is admittedly not an appraisal by expert fire-underwriters, and the percentages are not high, but it takes only one structure with really unsafe means of egress to account for a shocking number of fatalities in case of fire. In Area 1 the danger would seem to be further aggravated by the fact that one-sixth of the units are in
AN AVERAGE HOUSE IN AREA 2

Dwelling unit on first floor of this house incurs a penalty score of 44 points for deficiencies in facilities.*

This three-room unit offers its occupants:
no bath on the premises
no piped hot water
no laundry tub or wash basin
bedroom without installed heat.

*Facilities score at median for Area 2 is 43 points.

TYPICAL OF THE POORER HALF OF HOUSES IN AREA 2

Dwelling unit on first floor of this house incurs a penalty score of 68 points for deficiencies in facilities.*

This six-room unit offers its occupants:
no bath on the premises
no piped hot water
no laundry tub or wash basin
four rooms without installed heat
three rooms without closets.

*Facilities score at third quartile for Area 2 is 64 points.
structures which show seriously inadequate daytime lighting of public halls (item K).

In three of the areas, from one-fourth to over one-third of the units lack piped hot water. This does not mean merely the absence of continuous running hot water, such as is found in modern apartments. It means rather that these dwelling units lack any installed water heater, and consequently cannot draw hot water at the sink or in the bath tub. Truc, this is a condition generally permitted by housing regulations, but it is a real hardship for every housewife who has children to bathe, clothes and dishes to wash, and floors to scrub. Here too we have an index of an out-of-date residential area which will certainly get worse before it gets better.

In summary, much of the District's housing is clearly of a type in which it is unreasonable to expect self-respecting families willingly to live and rear their families. The worst conditions are concentrated in areas 1 and 2, but in several respects Area 3 is a close runner-up. Many of the deficiencies are of a kind that cannot be corrected except at such cost or with such basic structural changes that correction on any economic basis is highly improbable. In other words, a real cure for the housing problem in this district is not a clean-up, paint-up program or even a program of basic repairs. To a very large extent, it must be a program of clearance and rebuilding.
Dwelling unit on fourth floor incurs a penalty score of 108 points for deficiencies in facilities.

This five-room unit offers its occupants:

a firetrap structure with inadequate means of egress

toilet outside the dwelling unit and shared by two units

no bath on premises

no piped hot water

no laundry tub or wash basin

three rooms without installed heat

two rooms without closets

two rooms of substandard size

excessive stair climb from street

The environmental penalty score for the block containing this structure is 75 points, reflecting:

overcrowding of the land by buildings

intermixture of residence and business uses

location on heavy traffic street with inadequate offstreet play space

unreasonable distance and traffic hazard involved in reaching elementary schools, playgrounds and parks.
Maintenance and Occupancy

The findings of this survey are not so conclusive for the state of repair of dwellings (item L) as for facilities and overcrowding. The Committee's appraisal method provides for classifying buildings according to their physical deterioration, but it was not possible in this study to carry out these observations in full. It can be said with confidence that in at least parts of the District the percent of dwelling units with serious physical deterioration (amounting in some cases to an active threat to health or safety) is actually considerably higher than shown in Figure 5. It would seem reasonable that the building department be asked to make a follow-up of conditions under this heading.

Although the present report is not primarily concerned with overcrowding in the District, it is worthy of note that two of the areas show appreciable room crowding in one-fourth or more of their dwelling units (item M), and three of them an even higher incidence of area crowding (item N). These facts demand emphasis. The usual housing survey measures crowding only in terms of the number of persons per room, which is a relatively crude and insensitive index. The method used here determines room sizes and computes overcrowding in relation to available floor area—a more basic and much more sensitive index. In these terms the Bayside District shows up very badly. We have already seen that small room sizes are common in the District. When this fact is combined with an influx of war workers, it is hardly surprising that three of the four areas show over one-fourth of their dwelling units with a severe degree of area
overcrowding. Perhaps nothing can be done about this during
the war, but even so it must be reiterated that the likelihood
of spreading epidemic disease increases markedly in overcrowded
quarters. If it is true that crowding cannot be abated now,
perhaps this is all the warrant needed by the health, building
and fire departments to carry out their other powers with all
possible vigor during the wartime emergency.
QUALITY PENALTY SCORE:
GRADE POINTS
A ~ 0 - 24
B ~ 25 - 49
C ~ 50 - 74
D ~ 75 - 99
E ~ 100+

QUALITY OF NEIGHBORHOOD ENVIRONMENT
BLOCKS GRADED BY ENVIRONMENTAL SCORE

FIG. 6
NEIGHBORHOOD ENVIRONMENT

It has been indicated in an earlier section that the physical environment, like the dwelling conditions, is poorest in the southern part of the District, improving appreciably in the northerly areas 3 and 4. Figure 6, which gives the total environmental quality of each block in the District, sheds first light on this trend from south to north. Area 1, with all five blocks falling into quality grade D, is clearly unsatisfactory from the environmental viewpoint. Area 2, with one-third of its blocks also in grade D, would seem to present a considerable problem. All blocks but one in Area 4 fall in grade C, intermediate between generally acceptable and substandard, while Area 3 is slightly better, with only seven of its ten residential blocks in grade C.*

The indication of Figure 6 is that Area 1 is in need of radical improvement measures, and that Area 2 has some environmental conditions in need of correction. It is clear that remedial measures to be taken in areas 3 and 4 will relate more

* Blocks #27 and #31 of Area 3, being open land devoted to playground use, would obviously not be subject to penalties for certain environmental factors, such as land crowding. These two blocks can be disregarded in interpreting Figure 7.
LAND CROWDING

BLOCKS GRADED BY ENVIRONMENTAL SUB-SCORE FOR 3 FACTORS OF LAND CROWDING

<table>
<thead>
<tr>
<th>CLASS</th>
<th>PENALTY SCORE</th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>0 - 4</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>5 - 9</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>10 - 14</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>15 - 19</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>20+</td>
</tr>
</tbody>
</table>
BAYSIDE DISTRICT ~ PORTLAND, ME. HOUSING SURVEY 1943

NUISANCE FROM STREET TRAFFIC AND RAILROADS
BLOCKS GRADED BY ENVIRONMENTAL SUB-SCORE

<table>
<thead>
<tr>
<th>CLASS</th>
<th>PENALTY SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0 - 4</td>
</tr>
<tr>
<td>2</td>
<td>5 - 9</td>
</tr>
<tr>
<td>3</td>
<td>10 - 14</td>
</tr>
<tr>
<td>4</td>
<td>15 - 19</td>
</tr>
<tr>
<td>5</td>
<td>20+</td>
</tr>
</tbody>
</table>
to the dwelling conditions than to those of the environment.*

The remaining maps indicate why the environmental problem is more serious in the southern part of the District.

Figure 7 shows that while in areas 1 and 2 the land is crowded by buildings to a considerable extent, land crowding is not a major problem of the District. The relatively low land crowding penalties in Area 4 are particularly significant in view of the relatively favorable dwelling characteristics of this area discussed above. Most of Area 4 is clearly free from concentrations of buildings so crowded together as to cut off daylight, seriously impair the usability of open land, or otherwise call for building clearance.

* It may have been noted in the second table on page 18 that the median environmental penalty score is greater in each area than the median dwelling score. This perhaps requires some comment. The penalty scores for both dwelling and environmental characteristics are based primarily on the detriments to health, safety or essential livability which are involved in the various deficiencies revealed, and these two types of scores are generally comparable. The environmental scores, however, include additional weight assigned for the fact that environmental defects tend to promote progressive deterioration of residential areas through undesirable changes in land use, shrinkage of assessed values, tax delinquency, and similar factors of economic concern to city governments. Therefore, a higher median score for environmental defects than for dwelling conditions cannot always be read as meaning literally that present occupants of the area are exposed to greater health and safety hazards from environmental factors than from dwelling deficiencies.
BAYSDIE DISTRICT ~ PORTLAND, ME.
HOUSING SURVEY 1943

LACK OF SCHOOLS
AND
PUBLIC OPEN SPACES

BLOCKS GRADED BY
ENVIRONMENTAL SUB-SCORE

<table>
<thead>
<tr>
<th>CLASS</th>
<th>PENALTY SCORE</th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0 - 4</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>5 - 14</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>15 - 19</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>20 - 24</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>25+</td>
<td></td>
</tr>
</tbody>
</table>

FIG. 9
Street Traffic and Railroad Nuisance

Nuisances and hazards from street traffic and from the railroad spur are a major environmental problem of the District, as shown in Figure 8. Penalty scores for these factors are high throughout areas 1 and 2. Aside from the railroad spur's influence on the blocks bordering Lancaster Street the penalty scores under this heading are due in considerable part to commercial street traffic. On most of the minor cross streets this traffic could well be reduced or eliminated by proper planning controls.

Heavy traffic on the main north-south streets of the District contributes to these penalty scores in all four areas, but the lesser penalties in areas 3 and 4 are largely due to less cross traffic and to more adequate setback of the houses from the streets.

Any clearance and rebuilding scheme for the District would presumably consolidate the smaller blocks in areas 1 and 2. This would tend to reduce the traffic nuisance. Beyond this it would seem quite feasible to reroute commercial traffic in these areas so as to minimize the commercial traffic nuisance in the streets which remain.

It should be questioned whether the railroad spur west of Lancaster Street would be a serious detriment to residential redevelopment of areas 1 and 2. This factor can perhaps best be judged in the light of future plan for industrial development along this spur.
School and Playground Facilities

Elementary schools, public parks and playgrounds are too far from most of the District to serve it adequately according to modern standards. The classification of block scores for lack of nearby schools and public recreation spaces is shown in Figure 9. The relatively better condition of areas 3 and 4 is due both to the presence of the playground space in blocks #27 and #31, and to the fact that schools and a park east of Congress Street are within reasonable walking distance.

Except for the undeveloped playground in Area 3, Bayside residents must go outside the District, and in most cases must make several hazardous traffic crossings, to reach elementary schools, parks, playgrounds or playfields for organized sports.

In this respect, as in the others, areas 1 and 2 are the poorest served by present facilities. An earlier study made for the City Planning Board by the National Recreation Association recognized Bayside's deficiency in public open spaces, and recommended creation of a playground somewhere near the center of this District. This would help to meet the need as confirmed by the present survey. Should areas 1 and 2 be cleared and rebuilt, one general playground and additional playgrounds for small children could form an integral part of a new housing development plan.

Since existing primary schools not only lie at some distance from the District and across heavy traffic streets, but also in some cases offer less than the full range of primary grades, there would seem to be a good case for including a new elementary school in any redevelopment plan for the Bayside District.
Conclusions on the Physical Environment

While most of the District is environmentally of quality grade C or poorer, it is largely free from environmental deficiencies of those types which would preclude redevelopment into a sound and desirable residential neighborhood, or which would make the cost of property acquisition prohibitive---such as a concentration of major industrial or business uses or dense coverage of the land by substantial structures. Portland is particularly fortunate in this regard, for in many districts where slum clearance is urgently needed it is almost impossible to plan for residential rebuilding at any reasonable cost because of these two factors.

The two serious environmental problems of the District, exposure to street traffic and the absence of adequate school and recreation facilities, could and should normally be solved as an integral part of any wise development scheme.

Certain other environmental characteristics of the District have been appraised in the present study, but are not mapped or presented here because their detrimental influence proved negligible. Small business establishments are intermixed with residence to a considerable degree in various parts of the District, but many of these are retail establishments of the sort normally needed to serve the residents, and there is little really obnoxious business or industry such as characterizes many urban slum neighborhoods. The normal process of replanning the District would deal effectively with such nuisance as there may be from present nonresidential land uses, though perhaps
in replanning the border along Lancaster Street some special
attention should be paid to the industrial establishments just
beyond the District on that side.

Additional minor detriments occur in the form of poorly
surfaced streets, lack of sidewalks in certain blocks, and un-
paved or unlighted alley-type streets between a number of the
smaller blocks. While these contribute slightly to the environ-
mental penalty scores, especially in areas 1 and 2, problems of
this sort would presumably be removed in any systematic improve-
ment scheme.
NEEDED HOUSING REGULATIONS

In such an area as the Bayside District (and for that
matter in cities generally), the chief problem of housing reg-
ulation concerns the standards to be set for continued occupancy
of existing dwellings, rather than the standards for new con-
struction. New building is generally subject to the require-
ments of building codes, zoning ordinances, and other regulations
such as those of financing and insuring agencies, which tend
to obviate the flagrant abuses of the past with respect to
construction, design and equipment. These controls do not
always assure that new housing will be entirely adequate, but
at least the problem here is less serious. Furthermore, self-
interest will usually lead any organization engaged in large-
scale housing construction to provide such elements of con-
struction, design and general amenity as will assure a favorable
competitive position for the new housing during the expected
period of its economic life.*

With respect to older dwellings which remain in use,
however, there is no comparable set of safeguards. In fact,
there has been relatively little systematic thinking done in
recent decades as to what would constitute a reasonable set
of legal requirements for the maintenance and occupancy of
buildings to be continued in residential use. Even the most
progressive housing statutes and ordinances now in force
usually fail to cover important aspects of this problem.

* In this too brief disposition of the problem of new housing,
two common failings of large-scale developers should be nted
and cautioned against: unreasonably high densities of build-
ings and population, and rentals or purchase price beyond
the reach of families who need the new facilities.
The standards embodied in the survey method of the Committee on the Hygiene of Housing are not intended as the literal framework for a housing ordinance or statute, and the Committee is working toward formulation of a body of regulations for this purpose. Pending completion of this task, three suggestions seem pertinent to the question of official housing standards for Portland, as raised during the present study by the local survey sponsors.

First, the Committee's general report "The Improvement of Local Housing Regulation under the Law," furnished as a supplement to the present report, might be studied by the various city departments of Portland which are concerned with housing regulation and housing betterment. That report summarizes the weaknesses of the usual types of housing regulation, outlines the subjects which should be dealt with to insure an adequate set of regulations, and suggests how surveys of the type conducted in Bayside may be integrated with a long-range program of housing legislation and enforcement.

Second, it is suggested that the substandard dwelling conditions which are revealed by the Committee's appraisal technique* might be officially recognized in Portland and taken as the point of departure in framing a set of legal standards for continued occupancy of existing dwellings. Certain of these conditions might be recognized as grounds for mandatory correction orders or for vacating a dwelling if the corrections were not made. Other conditions in this group, while perhaps not warranting such drastic action, might justify preferred

*See list of basic deficiencies in Appendix I
status for families thus affected should they apply for accommodation in wartime or post-war housing projects.

Third, the type of appraisal conducted in the Bayside District might be extended to other problem areas of Portland, as has been suggested during the present study, by the several city departments as a cooperative part of their regular programs. Such an extension would provide the basis for systematic classification of housing quality in all problem areas and would shed further light on the types of regulation urgently needed to deal with the most widespread defects.

Within the limits of its resources, the Committee on the Hygiene of Housing would be glad to work with the city departments and other agencies of Portland with a view toward developing further the second and third of these suggestions.
APPENDIX I

Housing Appraisal Technique of Committee on the Hygiene of Housing, A.P.H.A.

BASIC DEFICIENCIES APPLICABLE IN SURVEY OF BAYSIDE DISTRICT, PORTLAND, MAINE

Facilities
1. Dwelling unit lacking two means of egress
2. Water supply outside dwelling unit
3. Toilet outside structure or shared by other dwelling units
4. Dwelling unit with no installed bathing facilities on premises
5. Dwelling unit with no electricity installed
6. Dwelling unit lacking installed heaters in 4/5 to all of rooms
7. Dwelling unit lacking outside window in any room

Occupancy
8. Dwelling unit with room-crowding as follows:
   a) 1 1/2 persons or more per room, or
   b) total number of persons in unit more than two times the number of bedrooms plus one
9. Dwelling unit with area-crowding as follows:
   a) Sleeping area per person less than 50 square feet, or
   b) Nonsleeping area per person less than standard of the Committee (variable with size of household)
Certain aspects of the Bayside District, not brought out in Mr. Twichell's report but relevant to any rehousing program, are graphically presented on the ensuing three charts. In these supplementary diagrams, the picture has been sharpened by omitting the distinctly higher grade frontages on Cumberland Avenue from Franklin Street north, and by omitting the large tracts of open land proposed for parks along Fox Street.

The present density of housing in each block is shown on Figure 10, "Dwelling Units per Acre". The densest development is towards the middle of the area between Chestnut and Franklin Streets and the least dense toward the ends, near Cedar Street and near Mayo and Smith Streets. The rather mild concordance between Figure 10 and Figure 7, "Land Crowding", is expressive of the great variation in size of dwelling units, there being many very small dwellings in various parts of Bayside.

The chart of "Assessed Value per Dwelling Unit", Figure 11, by its great range in values also reflects the great range in size of dwelling. The higher values are mostly east of Oxford Street and at the south end of the tract.

The housing planner, or replanner in this case, is particularly interested in the "Assessed Value per Acre" of land and buildings together, Figure 12. The rate for the entire area north of Franklin Street is less than for any block east
of Oxford Street and south of Franklin Street. Much more land for rehousing can be secured in this northerly portion of Bayside for a given expenditure, and at the same time fewer present occupants will need to move out to permit a beginning in a new housing program. At the same time the main survey indicates a relatively high quality of neighborhood environment for this section, - Figure 6 - thus favoring the success of such an undertaking. Whether it should be proceeded with or not should now be determined by further investigations directly aimed at this question. The main survey and this supplementary data provide the necessary background.

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Does Bayside need rebuilding