CHAPTER 10

HOUSING AND NEIGHBORHOOD CONDITIONS

Theodore E. Downing and Olivia Villegas

What do variations in housing and in neighborhood environments reveal about the quality of life of Douglasites? This question is important to government officials, public representatives, and community members who wish to improve the quality of life in the community. To act, they need information about the specific problems which require their attention. This chapter illustrates a methodology designed by the Public Health Service and the Bureau of Ethnic Research which provides a comprehensive view of the relationship of a community's housing and neighborhood environments to socioeconomic conditions and attitudes.

Environmental Surveys

Those who are active in community affairs know that for any specific problem, the information available may be unintelligible, out of date, or tangentially related to the decision maker's interest. One source of information which many communities have is the housing and environmental survey. Environmental surveys consist of mapping and evaluation of characteristics which provide needed information on the quality of housing and related factors.

In the early fifties, the Center for Disease Control of the U.S. Public Health Service designed a survey technique to locate danger zones for communicable diseases by mapping the environmental conditions of a city's

IN Thomas Weaver and Theodore E. Downing, The Douglas Report, 1975. Tucson: Bureau of Ethnic Research, University of Arizona.

housing and neighborhoods. Sometimes conducted from an automobile, this survey became known as the "windshield survey" among some Public Health Service employees. In 1965, a task force from the Public Health Service Bureau of Community and Environmental Management revised the windshield survey. They sensed that the survey might provide a community with more information than only the potential danger zones for communicable diseases. Might not the revised survey also provide the city with a snapshot of socioeconomic conditions and a reflection of community attitudes?

The NEEDS Survey

In the late 1960's, the Public Health Service survey was modified into a comprehensive system to determine the effects of the quality of an urban environment on man's health, safety, and well being. This system was called the "Neighborhood Environmental Evaluation and Decision System," or, more simply, "NEEDS" survey. Public Health Service recognized that most communities had been using a variety of techniques for gathering planning data: household surveys, street condition reports, questionnaires, and so forth. Most of these surveys provide useful information about one element of a community, but it was difficult, if not impossible, to integrate the divergent information on health, housing, attitudes and other environmental conditions into a comprehensive picture. It was hoped that a single, wide ranging survey of the physical, social, and economic environment might provide a more useful data base for planning and program design.

The present NEEDS system has three phases. NEEDS I was an exterior survey of environmental conditions conducted by walking the streets of a city and using secondary information previously collected on the urban area. NEEDS II consisted of a detailed survey of socioeconomic conditions and attitudes. NEEDS III is an integration of the two surveys into a comprehensive picture of housing and socioeconomic conditions in the area.

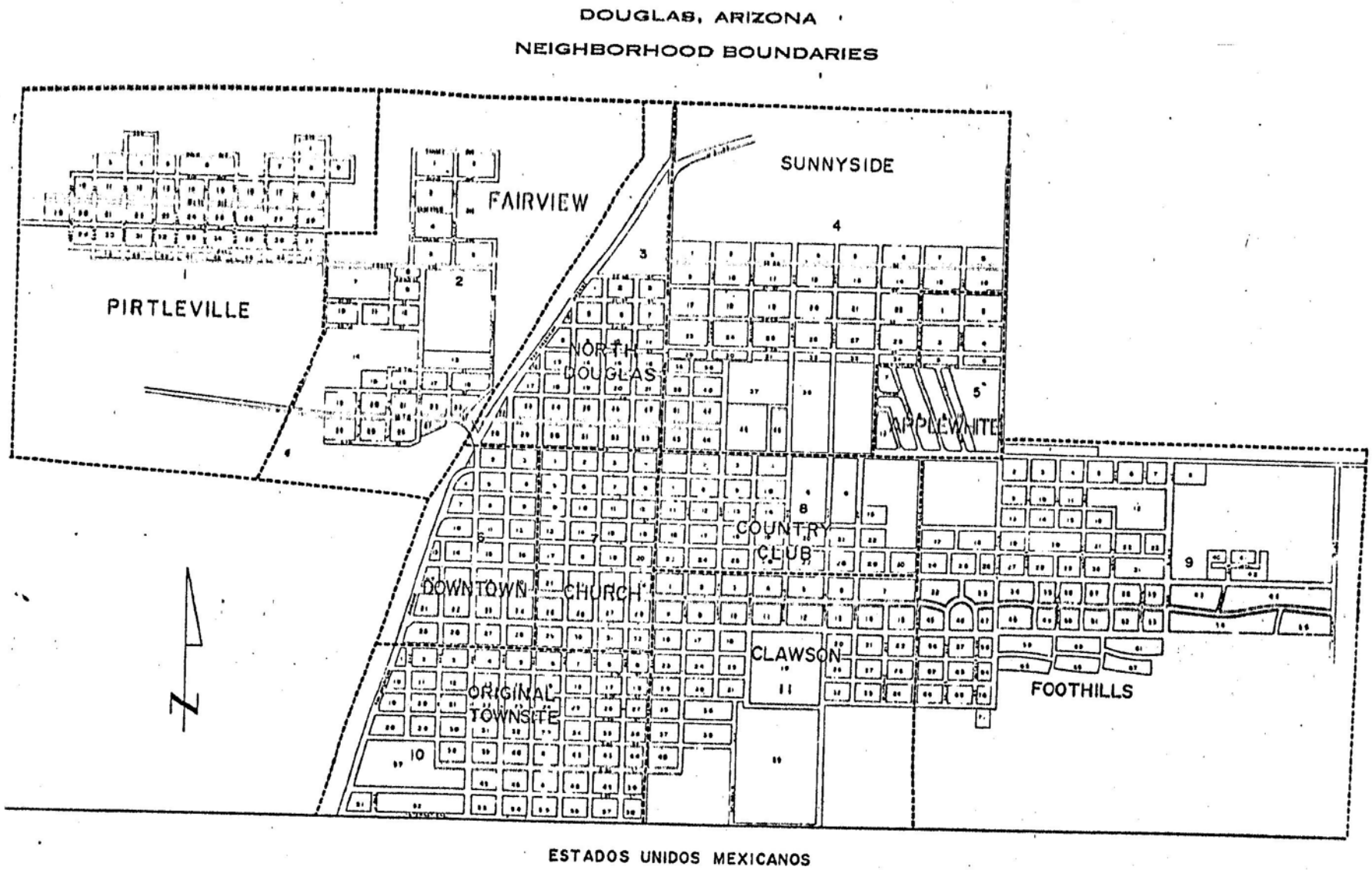
NEEDS I - Methodology

The first step of the NEEDS I survey was mapping the community. The community was divided into neighborhoods, as determined by a city agency along such logical boundaries as the easily recognized landmarks of main streets or railroads (Figure 1). Next, other information was collected from city agencies or by the field engineer on street types, street lighting, city water lines, safety hazards, air pollution, natural deficiencies, availability of shopping facilities, public transportation, availability to parks and playgrounds, and airport data (environmental stress).

This information was coded and recorded on an overlay of the base line map. For example, street lighting was based on data obtained from the city engineer's office and light meter readings taken from the darkest area of each block. Shopping facilities were defined as "necessary services for meeting daily needs," such as drugstores, laundries, and retail gorcery stores. These were located in the yellow pages of a telephone book and plotted on a city map. Circles with a radius representing 1/4, 1/2 and one mile were drawn around each business to determine the accessability of different areas of Douglas to these services. The same procedure was used for making

Figure 1

Neighborhood Boundaries as Defined by NEEDS I Survey



a map of recreational facilities in the city. For the purpose of this survey, areas had to meet the following criteria to be considered a park or playground:

1. be sanctioned by the city recreation department,
2. be free,
3. may be public or private; indoor or outdoor, and
4. may be seasonal or year round

If the recreational facility covered more than one block in area, these radii should be extended to include the distance from the midpoint to the edge of the facility. Environmental stress was determined by plotting the exact locations of runways, flight paths, and the aircraft operations information for each airport.

In the sidewalk survey, data was recorded for each premise and block in the community. In order to limit the time and work spent in the field, as much of the information as was known was recorded on the forms in the office. The neighborhood, block, and census tract numbers and the environmental information previously coded on the maps were recorded on the block analysis form. (See Appendix III at the end of this chapter.) Population density figures were calculated by the NEEDS I survey team from U.S. Census data. The instructions for arriving at these figures were as follows:

1. A copy of the U.S. Census of Housing was obtained.
2. Number and census tract was selected to correspond to the block for which the density is being determined.
3. The population and occupied housing units for the block was selected. If block data was not given, the density was calculated from population and occupied housing unit information for the entire Census Tract.

4. The total block population was divided by the total occupied housing units. This value was recorded on the mark-sense form.

The main task in the Stage I of NEEDS took place in the field, where data on every block and premise in the community was recorded. The field worker began with a block analysis form, which he checked to see if the neighborhood, block, census tract numbers, and street names have been recorded in the office. He walked around the block starting at the northeast corner making a small sketch of the block in the diagram space provided on the form. He indicated all premises, premise lines, street addresses and assigned each premise a number. As the field worker walked around the block a second time, he also evaluated the following conditions of pavement, curbs and gutters, sidewalks, offstreet loading, onstreet parking, and street width. The fieldworker also evaluated each block for environmental stress: noise, odors, vibrations, glare and various safety hazards. Street pavement was marked as "absent," or "inadequate" if the surface hindered travel under normal conditions or if the driver must reduce speed because of surface roughness. Curbs and gutters were also marked as "absent," or "inadequate" when 1) missing on a portion of the frontage and 2) were in a state of disrepair such that they were unable to serve intended functions under normal conditions. Sidewalk condition, offstreet parking, and the remaining conditions were evaluated in a similar manner.

Following this, the field worker evaluated each premise on the block. For each premise, the field worker also listed number of stories, and "for sale"signs. Land use of the premise was noted as either "residential," "commercial," "industrial," "public," or "vacant." The number of dwelling

units on the premise was estimated by counting the number of mailboxes, doorbells, or gas, light and water meters.

A large portion of the premise analysis consisted of an assessment of the following items of main structure: roof, paint, chimneys and cornices, outside walls, doors and windows, outside porches and stairs, foundation, and other conditions. Main structure evaluations included "condemned," "outside well," "pit privy," "faulty fire escapes," and "lacks electricity."

The premise was assessed on the basis of the following items: unacceptable fence or retaining wall, abandoned motor vehicles, rubbish accumulations, uncollectable discards, refuse storage, landscaping, and other premise conditions. A wall or fence was considered unacceptable if it was in need of repairs. A vehicle was considered abandoned if it had an expired or no license. Rubbish was defined as non-decomposible solid wastes excluding ashes. Uncollectable discards were large or non-disposable items. Under the refuse storage category, it was determined whether approved refuse containers are present. Refuse was defined as all putresible and non-putresible solids, including garbage, rubbish, ashes, and dead animals. Under the category landscaping, the general condition of the yard was assessed. Other premise conditions evaluated include the following: livestock, poultry, rodents, mosquitos, abandoned refrigerators, overflowing septic tank, flies, excessive animals, safety hazards, and other insects or pests.

Finally, the evaluator recorded information on any auxiliary structures on the premises, such as storage sheds, outhouses, and detached garages. Auxiliary structures were rated as "good," "fair," or "poor" on the basis of a composite assessment of roof, walls, paint, foundation, doors and windows.

NEEDS I - Analysis

After the survey was completed, the information was keypunched and processed by a computer programmer to provide a weighted profile of Douglas neighborhoods. The information was grouped into ten general categories for composing the neighborhood profiles. The neighborhoods were rated according to a system of points which were assigned to each of the categories. In general, these values were considered to be average values per premises. In the original NEEDS Stage I, a table listed the "maximum possible penalty points" for each category. It was determined after the survey had been completed and analyzed in Douglas that a separate table should be set up since the maximum possible penalty points in some of the categories were lower than for other communities. The environmental quality categories and their maximum penalty points for Douglas appear in Table 1.

This information was used by Public Health Service to compare environmental conditions in Douglas. Since there is no public transportation in Douglas, all neighborhoods received an equal penalty and this variable was effectively excluded from further analysis. For reasons uncertain to us, natural deficiencies and availability of playgrounds and parks were also excluded from the NEEDS I analysis in Douglas. With these exceptions, penalty points were assigned to houses, premises, blocks and neighborhoods, and it became possible to obtain a numerical rating of any level of analysis and compare it to a similar level. Neighborhoods could be compared with neighborhoods, blocks with blocks, and houses with houses.

NEEDS I Results[1]

The NEEDS I survey provided a general overview of the environmental conditions in Douglas. Neighborhoods differed in degree of population

Table 1

Environmental Quality Categories
and Their Maximum Penalty Points

Category	Maximum Possible Penalty Points
Population crowding	138
Housing conditions - Main structure	234
Housing conditions - Auxiliary structure	24
Premise conditions	150
Environmental stresses	274
Street deficiencies	122
Natural deficiencies	5
Availability of transportation	5
Availability of shopping	3
Availability of parks and playgrounds	3
	1,082

crowding, conditions of main structure and premises, environmental stress and street conditions (Table 2.).

Population crowding referred to the ratio of total population to the amount of living space in a block. Overall, population crowding appeared to be a problem isolated to a few specific areas of Douglas (Figure 2). The most severe crowding occurred in Fairview, a neighborhood west of the railroad tracks and north of the Bisbee-Douglas highway, western Pirtleville, and the public housing area in the west-central portion of Sunnyside neighborhood. The lowest levels of population crowding were in central and southwestern Douglas, including the more affluent neighborhoods of Church, Clawson, Country Club, Applewhite, and the Foothills.

Housing condition referred to the exterior condition of the main structure of a premise. Like population crowding, housing conditions appeared to be most seriously deficient in northwestern Douglas and improved toward the southeastern corner of Douglas, corresponding to an increasing value of houses (Figure 3). Pirtleville and North Douglas had the most serious housing problem as revealed by the exterior evaluation. The Original Townsite, Downtown and Fairview had housing near the average for Douglas, with Sunnyside, Church, Country Club and Clawson receiving a better than average evaluation. The Foothills and Applewhite neighborhoods with more recent home developments, were evaluated as neighborhoods having the least serious housing problems.

Assessment of environmental stress involved an evaluation of blocks and neighborhoods by the relative degree of air pollution, odor, safety hazards, noise, vibration and glare. Heavy weighting was assigned to air

Table 2

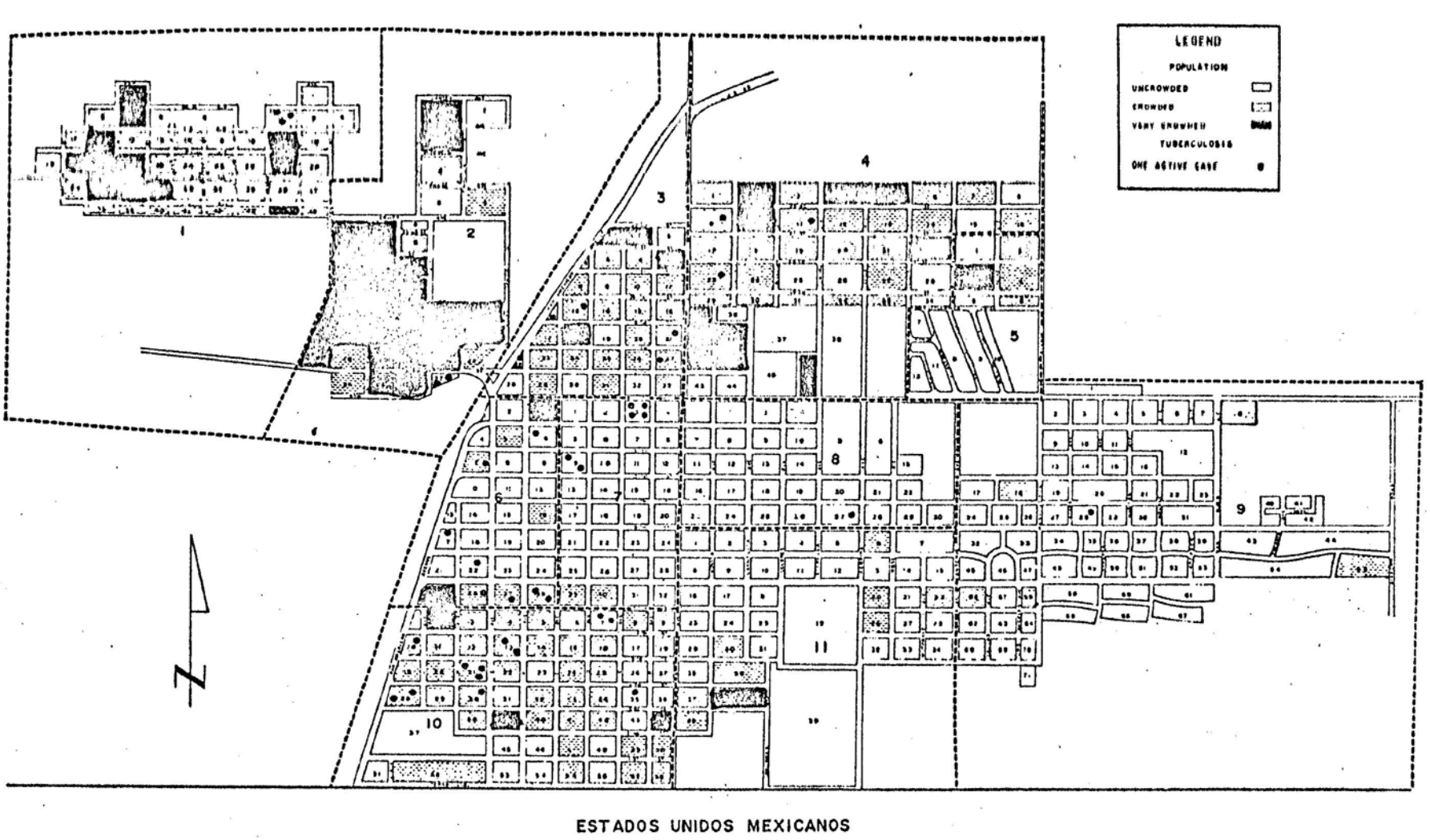
Percent of Maximum Possible Penalty Points Attained by Each Neighborhood

Neighborhood	Population Crowding	Houses (Main Structure)	Auxiliary Structure	Premises Cond.	Envir. Stresses	Street Def.	Availability of Shopping Facilities	Overall severity of environmental problems, 1 = highest level
Pirtleville	44	13	25	21	9	39	95	2
Fairview	61	5	25	16	12	35	52	1
North Douglas	36	10	18	15	13	20	51	4
Sunnyside	48	3	17	11	10	25	60	5
Applewhite	13	0	3	6	10	25	42	9
Downtown	31	5	16	10	20	23	0	3
Church	8	2	12	8	13	17	28	8
Country Club	10	1	7	5	11	14	37	11
Foothills	4	0	6	6	8	29	51	10
Original Townsite	36	5	20	18	11	15	38	6
Clawson	14	2	9	9	11	22	34	7

*From Douglas NEEDS Survey, Oct. 1970, p. 30

Figure 2

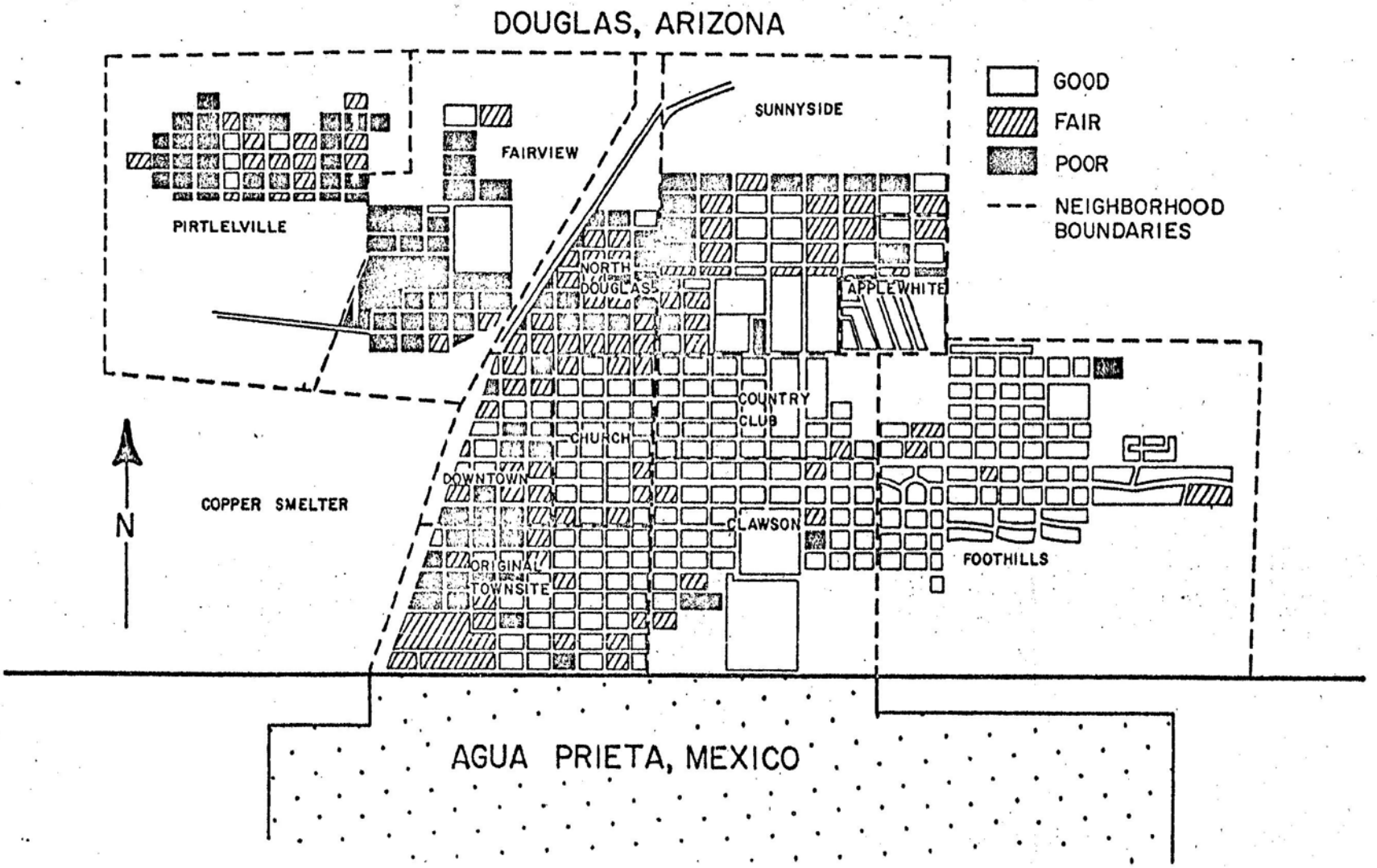
NEEDS I Survey Results on Population Crowding



Source: Douglas NEEDS Survey, October, 1970, p. 10

Figure 3

Overall Penalty Points for Housing Conditions



pollution and safety hazards such as traffic accidents, scattered strands of barbed wire holes and uneven sidewalks. The NEEDS I results showed the Downtown area to be the neighborhood with most serious problems of environmental stress, as might be expected in any small city. Otherwise, the degree of environmental stress was uniformly low throughout the city with the exception of Pirtleville and the Foothills.

In terms of overall environmental conditions, Pirtleville and Fairview proved to be the neighborhoods with most serious environmental problems followed closely by Downtown, North Douglas, Sunnyside and the Original Townsite, all of which have environmental conditions worse than the city average. The remaining neighborhoods proved better than average.

NEEDS II

The NEEDS I environmental survey gave a detailed picture of the physical environment. Without further analysis, this information provided Douglas with an inexpensive data base to assist in establishing community goals and plans. But did the environmental survey tell the city about social welfare and socioeconomic patterns? If it is assumed that the environmental conditions reflect the socioeconomic conditions and attitudes of people, then it could be assumed that the NEEDS I survey did reflect social welfare. Many community developments, urban renewal, and other governmental activities indicate that many people believe this assumption is true. However, the designers of the NEEDS survey did not assume they were describing social welfare with an environmental survey. Instead, they considered the association between environmental conditions and socioeconomic

conditions to be problematic -- worthy of a more detailed investigation. Thus, Public Health Service decided to compare the environmental NEEDS I survey to a social and economic survey, called NEEDS II. This study was to be designed to discover what the people were doing who were living in the physical environment which had just been described. In the summer of 1972, the Bureau of Ethnic Research at the University of Arizona was awarded a Public Health Service contract to design and conduct the NEEDS II social survey of Douglas, Arizona.

NEEDS II - Methodology

The Bureau drew a five percent sample of Douglas households. The sample was weighted for proportionate representation of the variations in 1) housing conditions discovered by the NEEDS I survey and 2) population size of census tracts. (A technical description of the sampling and interviewing procedure is in the appendix of this report).

The survey questionnaire specified several dimensions of social and economic relations. The following characteristics were chosen as indicators of the socioeconomic condition of a household: the number of 1) people living in a house, 2) working adults, 3) rooms, 4) cars owned by its occupants, 5) years the occupants of the house have been residents of Douglas, and 6) relatives the occupants of a house have in Agua Prieta. In addition, economic conditions included 7) total income of the household members, 8) per capita expenditures of the household members and 9) per capita expenditures of the household for food, housing, loan payments, cigarettes, liquors and snacks, utilities,

car payments, health expenses, recreations and hobbies, domestic help and child care, donations to churches and charities, and support for other family members not living in the household.

Furthermore, we wished to compare the socioeconomic conditions of neighborhoods to the NEEDS I environmental survey. To achieve this goal, we rank ordered the Douglas neighborhoods along 23 different dimensions. Most of this information represented an aggretation of data for each neighborhood, data which was collected in the NEEDS II social survey. Other data sources included the arrest records collected by Gartell in her study of law enforcement in Douglas, data supplied by the Public Health Service on veneral disease rates, case load data on Aid to Dependent Children and data from the U.S. Census. All 23 of these dimensions, including their definitions and data sources are described in Appendix I.

Satisfaction Indices

We also measured respondent's attitudes about their community, neighborhood, and house. An overall measure of the respondent's personal satisfaction with his or her environment was measured by a cummulative index. The more residents tended to agree with a list of statements, the more satisfied they were with their personal environment (Table 3). Thus, a person's source on the personal satisfaction index could range from a high score of "12," indicating strong satisfaction, to a low of " 0," indicating high dissatisfaction, i.e., disagreement with every statement.

This approach could be biased because the wording of the question might have influenced the response of the informant. To reduce the possibility

Table 3

Components of Satisfaction with Personal Environment Index

	Weight
My relatives help me when I get in trouble.	1
My opinions on what this town needs are listened to.	1
I would rather live in Douglas than Agua Prieta.	1
I prefer living in Douglas rather than a larger town.	1
People with my background in this town are not discriminated against.	1
I trust local community leaders.	1
I find it easy to get credit or loans when I need them.	1
The smelter's smoke doesn't effect my health.	1
If the smelter, closes, I will probably stay in this town.	1
I would like to become more involved in community affairs.	1
Crime is not a problem in Douglas.	1
The city is doing enough for my neighborhood.	1
Index Maximum =	12
Index Minimum =	0

of bias, survey questions were administered to half the sample using a positive wording and half using negative statements. Then, a statistical test was used to eliminate questions in which the positive or negative wording changed the response patterns to the question. The list on Table 3 represents only those questions surviving the test for word bias.

A neighborhood satisfaction index was developed to measure the respondent's satisfaction with community services received in the neighborhood. Neighborhood was defined by the interviewer as the area within two or three blocks of the respondent's dwelling. Respondent's were asked to rate community services as adequate, inadequate and they were given the option of offering no opinion. Those feeling the greatest dissatisfaction with these services were given lower scores, depending on how many of the services they felt were inadequate. The list of the 18 services is presented in Table 4.

The personal satisfaction index and neighborhood satisfaction index were then combined to create a third index which we call the general satisfaction index - this index provides an overall measure of the respondent's feelings about his or her personal and community environments.

In addition to three attitudinal indices, the Bureau asked numerous questions of the respondents to discover the perception of the quality of their housing. We hoped these questions would reveal whether the respondent's opinions of his household and neighborhood environment coincided with that of the Public Health Service evaluations. Several of these attitudinal questions were aggregated to form profiles of opinion for the 11 Douglas

Table 4

Neighborhood Satisfaction Index

	Weight
Playgrounds and parks	1
Schools	1
Street maintenance	1
Flood and water control	
Housing inspection	1
Fire protection	1
Police protection	1
Street lighting	1
Water, light and power service	1
Trash and garbage collection	1
Dog control	1
Telephone service	1
Services for elderly	1
Recreation for adults	1
Recreation for teenagers	1
Recreation for children	1
Grocery stores	1
Neighborhood zoning laws	1
Index Maximum	= 18
Index Minimum	= 0

neighborhoods. A complete listing of the socioeconomic variables and their definitions is provided in Appendix II of this chapter.

Results

Attitudes

Did the NEEDS I evaluation of the condition of a house correspond to the occupant's evaluation? The Bureau asked respondents "in general, how do you feel about your housing? Would you say it is adequate or inadequate?" Eight out of ten respondents stated that their housing was adequate, suggesting that most Douglasites do not consider housing a major problem. This observation was supported by responses to another question: "Does this place seem large enough for your family?" Once again, eight out of ten respondents felt their house was large enough. The respondent's evaluations tended to agree with that of the NEEDS I surveyors. Statistically, those living in housing which the Public Health Service survey had evaluated as "poor" were more likely to agree that their housing was inadequate and too small for their families than people in houses which had been evaluated as "good."

However, caution must be taken not to assume that the exterior Public Health Service survey can indicate the occupant's evaluation of his house. The NEEDS I evaluation system is relative, that is, it compares houses in a community with one another and a proportion of houses will always be ranked in the lowest category, poor housing. Inspection of Tables 5a and 5b reveal that many houses which Public Health Service rated "fair" and "poor" had occupant's who felt the dwellings were adequate and large enough

Table 5a

Respondents' Feelings About Their Housing Compared to NEEDS I Survey

PUBLIC HEALTH SERVICE EVALUATION	OCCUPANT'S EVALUATION House is: Adequate? Yes	No
Good	67	7
Fair	30	6
Poor	22	16

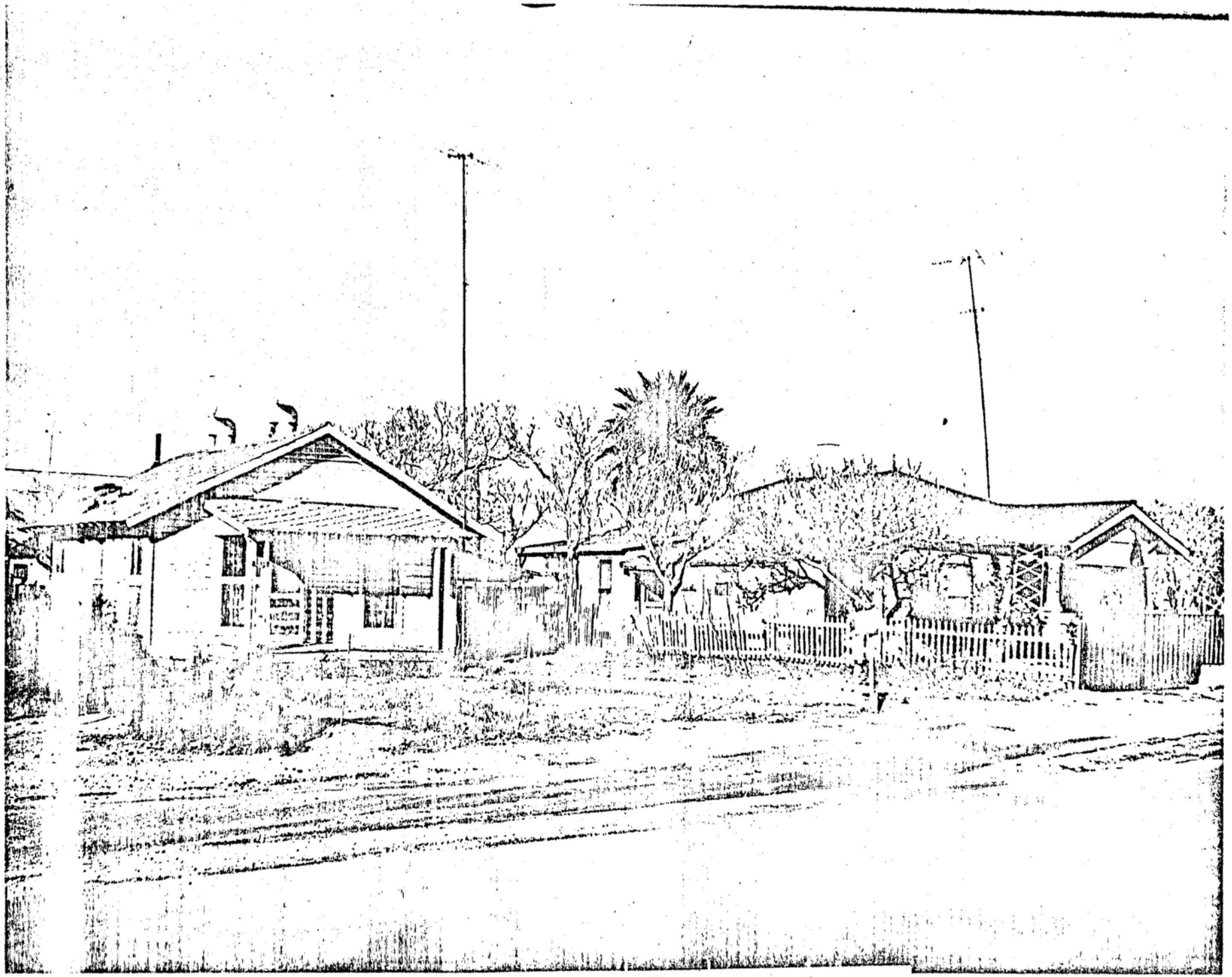
N=148
Raw Chi Square = 17.2 Significance = .0002

Table 5b

Respondents' Feelings About Their Housing Compared to NEEDS I Survey

		OCCUPANT'S EVALUATION House is: Large Enough?	
		Yes	No
PUBLIC HEALTH SERVICE EVALUATION	Good	55	5
	Fair	31	7
	Poor	34	17

N = 149
Raw Chi Square = 11.0 Significance = .004



Pan 3 #5 Homes on 19th St. in Sunnyside

Plus X-15 #18. House on International Ave. across from border and ditch.

for their needs. In other words, "an objective," system for determining if occupants perceive a house as substandard can only be made by a direct social survey of the occupant's attitudes about the house.

This general satisfaction with housing was also apparent with responses to queries about interior conditions. Although over 28 percent of the households felt their houses needed repairs, most of these repairs were minor maintenance problems such as painting, drains backing up, or lack of closet space. Table 6 lists the frequency of interior problems reported by occupants and does not suggest that any occupants perceive glaring structural or environmental difficulties with their homes.

Comparing the frequencies of interior problems in different neighborhoods failed to reveal any statistically significant relationship between neighborhoods, as defined by NEEDS I, and interior problems. However, the feeling that some repairs were needed did show a significant difference across neighborhoods (Figure 4). Most people feeling house repairs were needed lived in Downtown, North Douglas, Original Townsite, Sunnyside or Applewhite. The ordering of feelings about house repair did not correspond to the NEEDS I evaluation of houses needing exterior repair. For example, the neighborhood with the fewest exterior problems, Applewhite, as rated by the NEEDS I survey, was where more people felt their houses needed repairs than the neighborhood, Pirtleville, that was given the worst rating by the Public Health Service survey.

Overall Happiness

This pattern of general satisfaction of the Douglasites with their environment was strongly apparent in other responses. Most Douglasites

Table 6

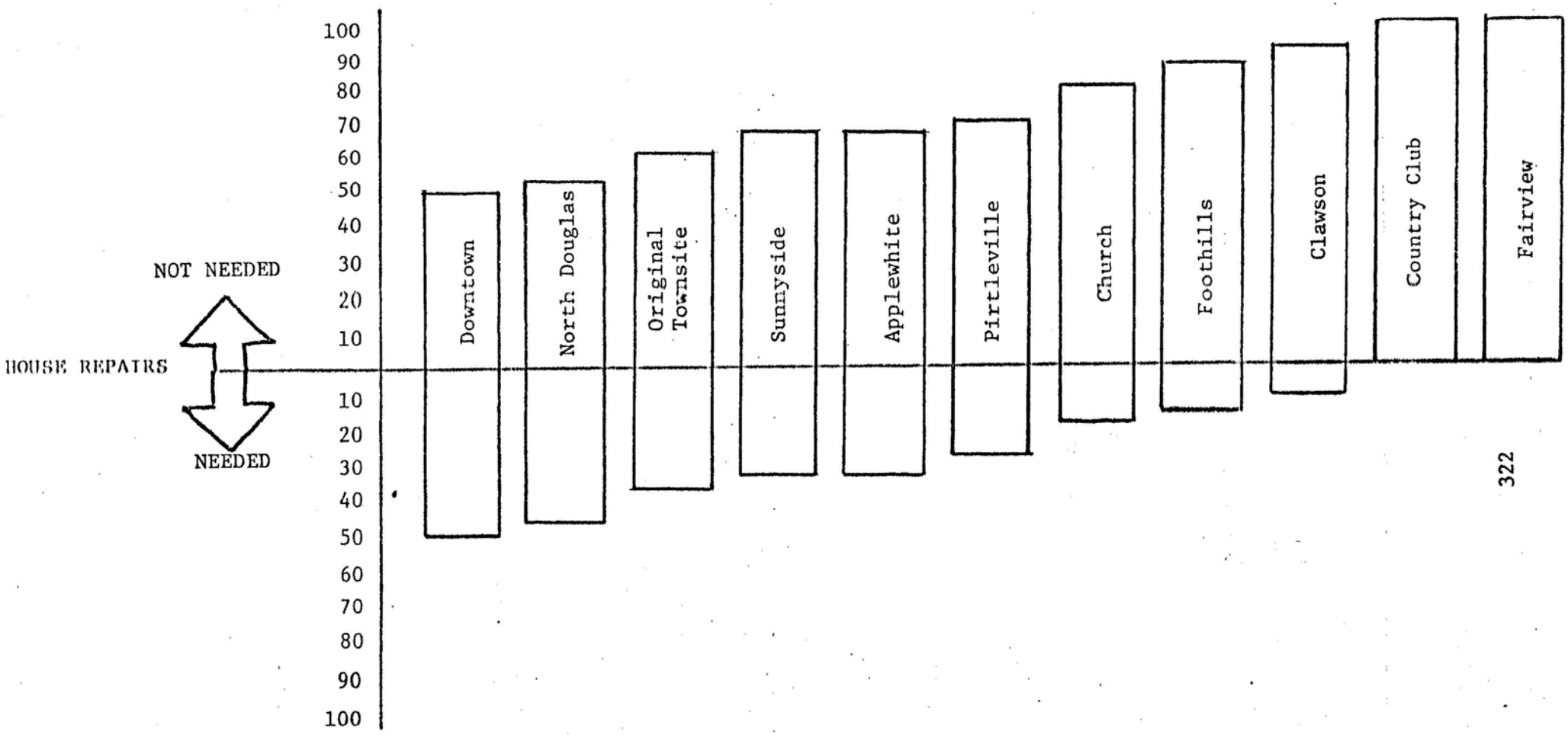
Interior Problems of Houses Reported by Occupants (Percent)

Problem	Frequency of Problem	
	Have	Don't Have
Fuses blowing or circuit breakers overloading	10	90
Broken fences	12	88
Drains backing up	11	89
Septic tank or cesspool trouble	1	99
Plumbing leaks	9	91
Roof leaks	10	90
Overall house repairs needed	28	72
Painting needed	37	63
House too cold in winter	13	87
House too hot in summer	14	86
Not enough hot water	5	95
Furniture old or lacking	10	90
Not enough closet space	20	80
Odors inside house	3	97
Noise inside house	3	97
Lack of privacy inside house	6	94
None of above	26	74

N = 174 Households

Figure 4

Occupant's Opinion About House Repairs



		Downtown	North Douglas	Original Townsite	Sunnyside	Applewhite	Pirtleville	Church	Foothills	Clawson	Country Club	Fairview
NEEDS I SURVEY	Rank of Neighborhood house Condition	3	2	3	4	7	1	5	7	5	6	3
	Rank of Neighborhood Premise Condition	6	4	2	5	9	1	8	9	7	10	3

NOTE: The lower the ranking, the worse the condition.

preferred Douglas to a larger town (80 percent yes, 18 percent no, and 2 percent undecided) and planned to remain in Douglas even if its economic mainstay, the copper smelter, cloesd (70 percent yes, 22 percent no, and 8 percent undecided). Likewise, only a very small percentage of the respondents desired to move to another town (21 percent) or move to another neighborhood inside Douglas (25 percent). But, the general level of satisfaction was most apparent in the responses people gave to how adequate they felt community services were in their neighborhood (Table 7). Those issues which were the main concern of residents were mostly related to recreational activities, street conditions, and dog control. All major community services, such as the schools, fire protection, police protection, utilities and garbage and trash collection received very high public esteem.

For those issues such as dog control, street maintenance, and recreation for teenagers, the feelings of public dissatisfaction did not cluster in particular neighborhoods, but seemed to be a general concern of people throughout the community. The concern about inadequate police protection, however, did cluster in five specific neighborhoods, including Pirtleville, Sunnyside and Fairview. As the accompanying chapter on law enforcement points out, these areas are not part of the incorporated area of Douglas and are under the jurisdiction of the country rather than the city. The two neighborhoods within Douglas proper which show any concern about the adequacy of police protection were both areas of the highest frequency of offenses, Downtown and the Original Townsite (Figure 5).

Table 7

Opinions About Neighborhood Services

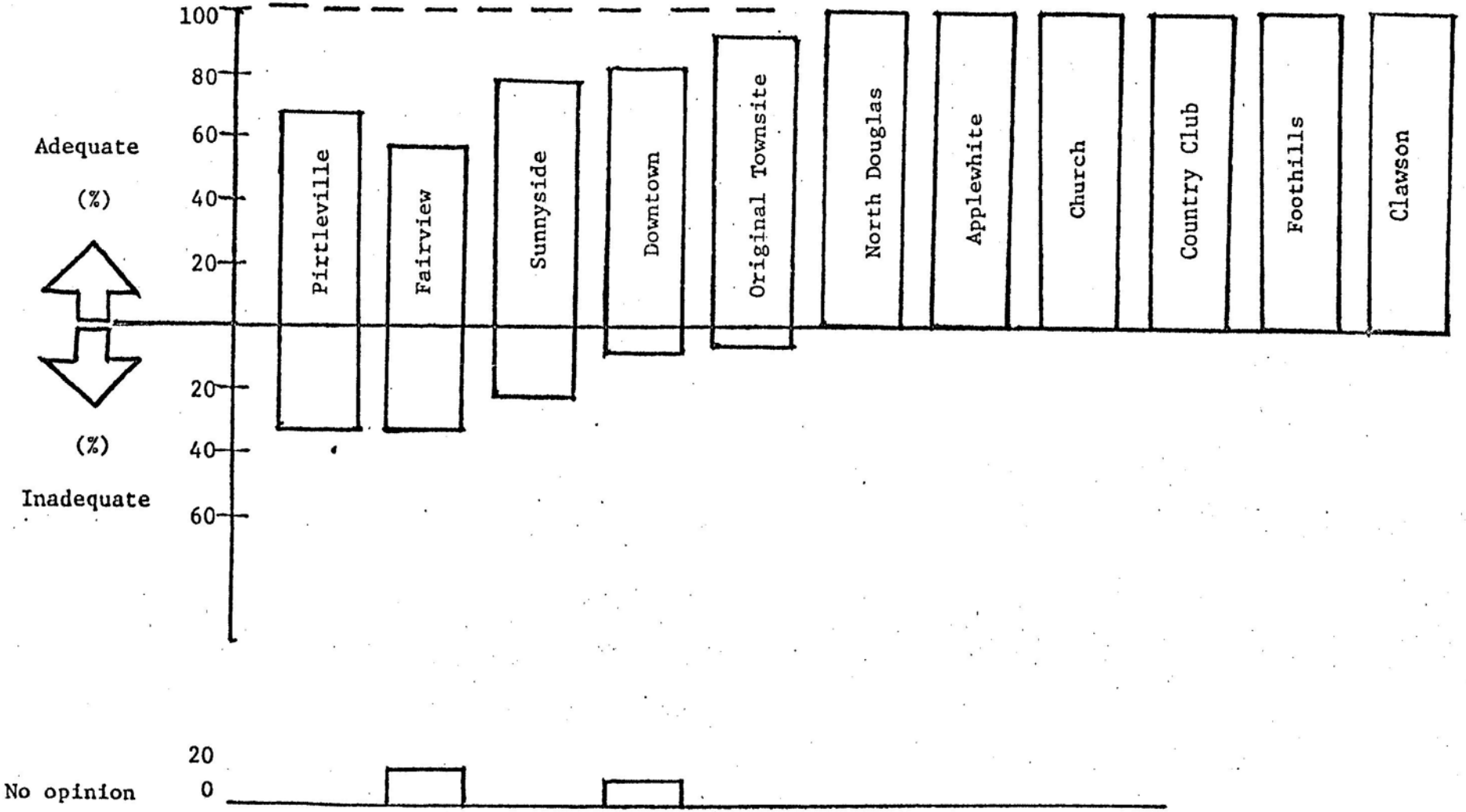
	Item	Percent Stating Services Were: Adequate	Inadequate	No Opinion
	Playgrounds and parks	56	34	10
	Schools	79	13	8
	Street maintenance	48	49	3
	Flood and water control	70	20	10
	Housing inspection	49	26	25
	Fire protection	88	6	6
*	Police protection	90	9	1
	Street lighting	78	20	2
	Water, light and power service	87	12	1
	Trash and garbage collection	78	22	0
	Dog control	55	43	2
	Telephone service	85	3	12
	Services for elderly	35	30	35
*	Recreation for adults	38	48	14
	Recreation for teenagers	36	51	13
*	Recreation for children	46	41	13
*	Grocery stores	82	15	3
	Neighborhood zoning laws	53	13	34

N=170

For *these items there was significant difference in the distribution of opinions between neighborhoods.

Figure 5

Feelings of Different Neighborhoods about Police Protection



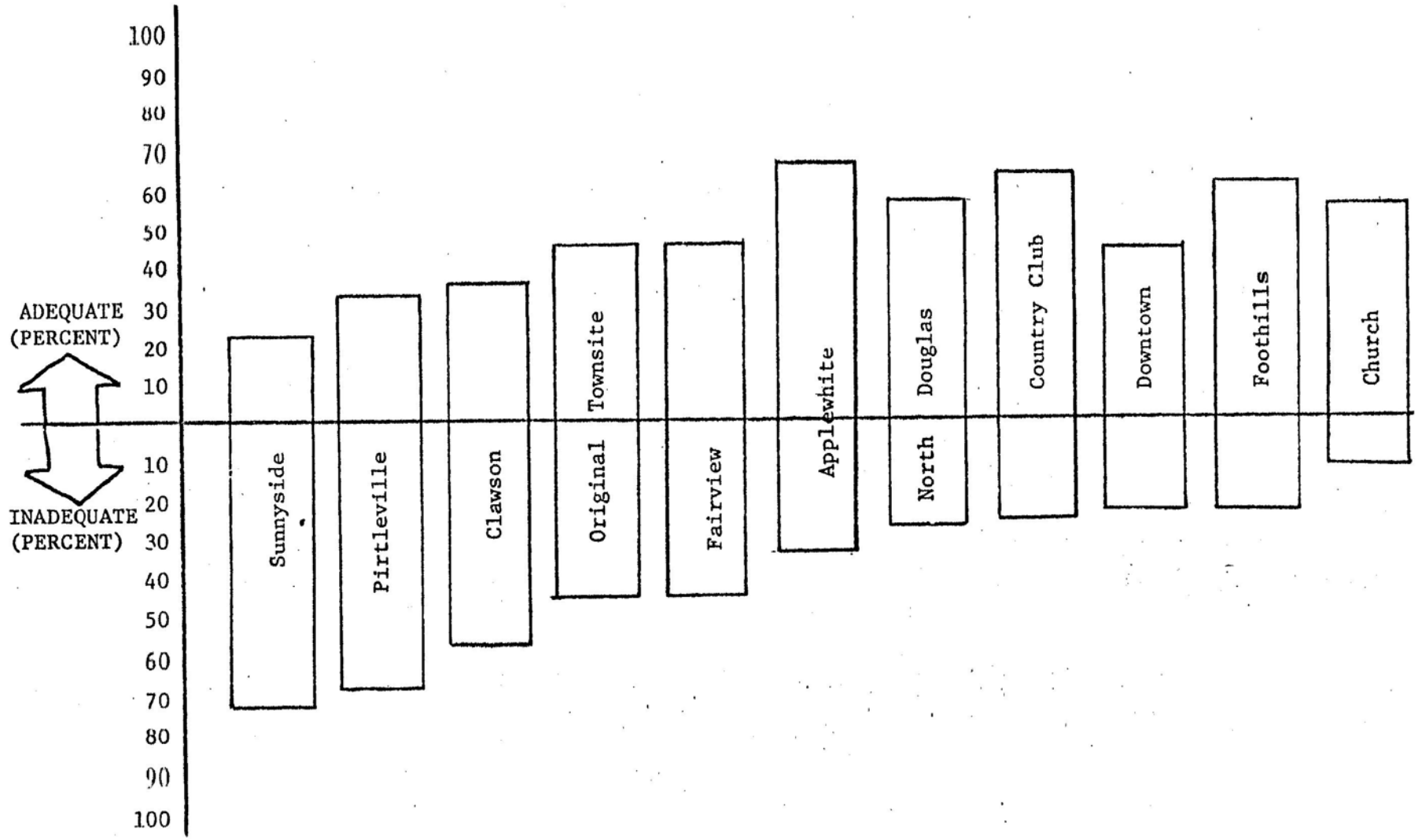
Recreation for adults and children also received considerable attention by the respondents and was of more concern to some neighborhoods than others (Figures 6 and 8). Neighborhoods showing heavy concern for recreational activity included Sunnyside, Fariview, Pirtleville, Clawson, the Original Townsite and Downtown, although the issue was considered serious by at least a quarter of all the neighborhoods. Further survey work is necessary to ascertain exactly what kind of recreation the Douglas people desire.

Although the majority of Douglasites are relatively content with their environment (see Figure 7), a minority showed a reasonably high level of discontentment with their personal environment and community services. Although more complicated tests would be necessary to completely analyze the spatial distribution of those which ranked high and low on our satisfaction indices, a mapping of those respondents who ranked the highest and lowest on the indices shows that discontented persons do not cluster in any particular neighborhood or part of Douglas, nor do people with the fewest dissatisfactions cluster in certain areas (Figure 8). More detailed tests were conducted to determine if discontented persons lived in housing which was rated poor by the NEEDS I survey and vice versa. All such tests proved negative and we must conclude that the environmental dimensions measured by the NEEDS I survey do not reveal either the individual or the neighborhood most likely to have negative or positive attitudes about housing conditions in the neighborhood or community.

Perhaps the most elaborate test the Bureau performed to test the relationship of the NEEDS I neighborhood evaluation and peoples attitudes

Figure 6

Feelings of Different Neighborhoods About Recreation for Children



No Opinion (Percent)	6	0	7	11	11	0	15	9	33	13	33

Figure 7

Distribution of Highly Satisfied and Dissatisfied People

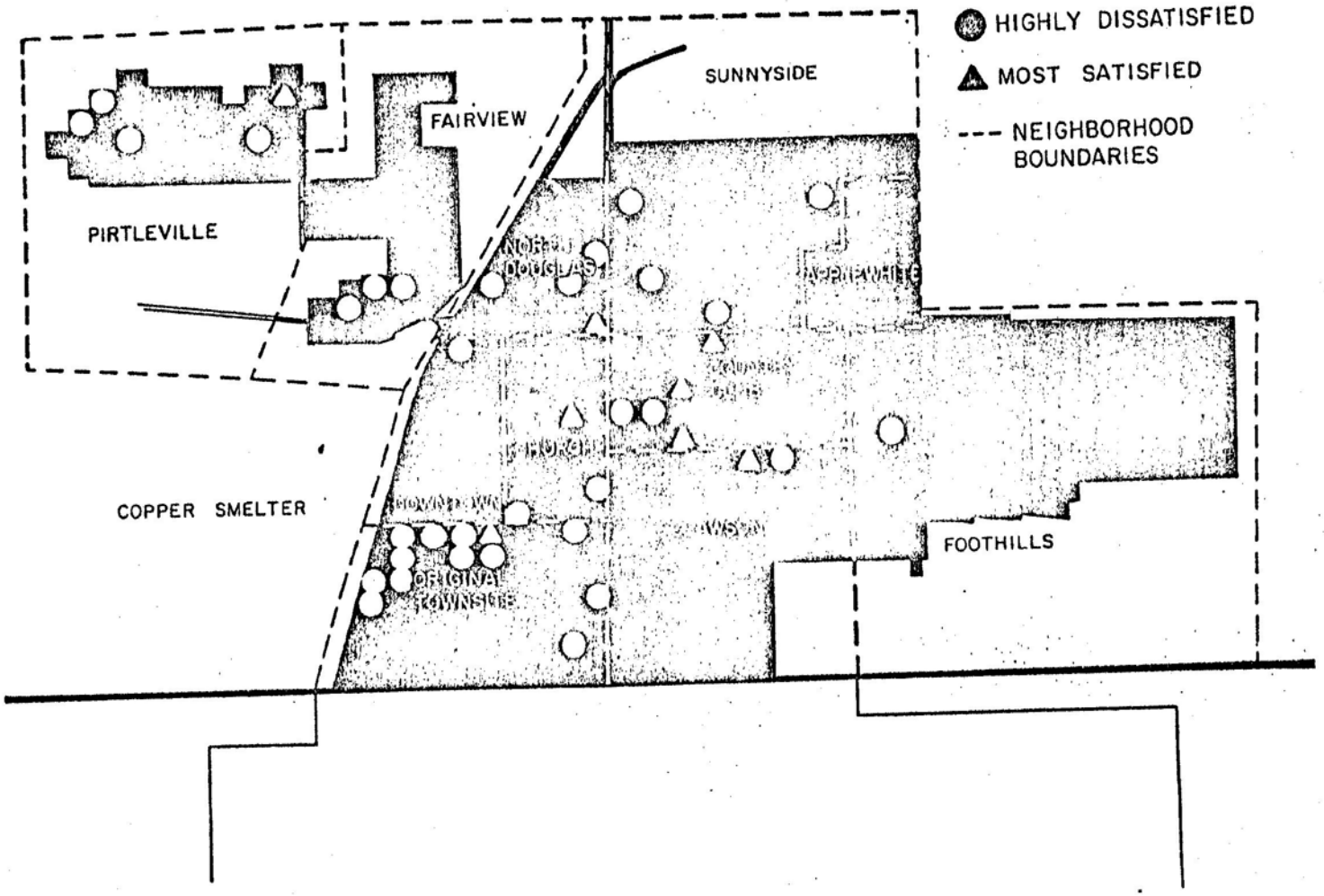
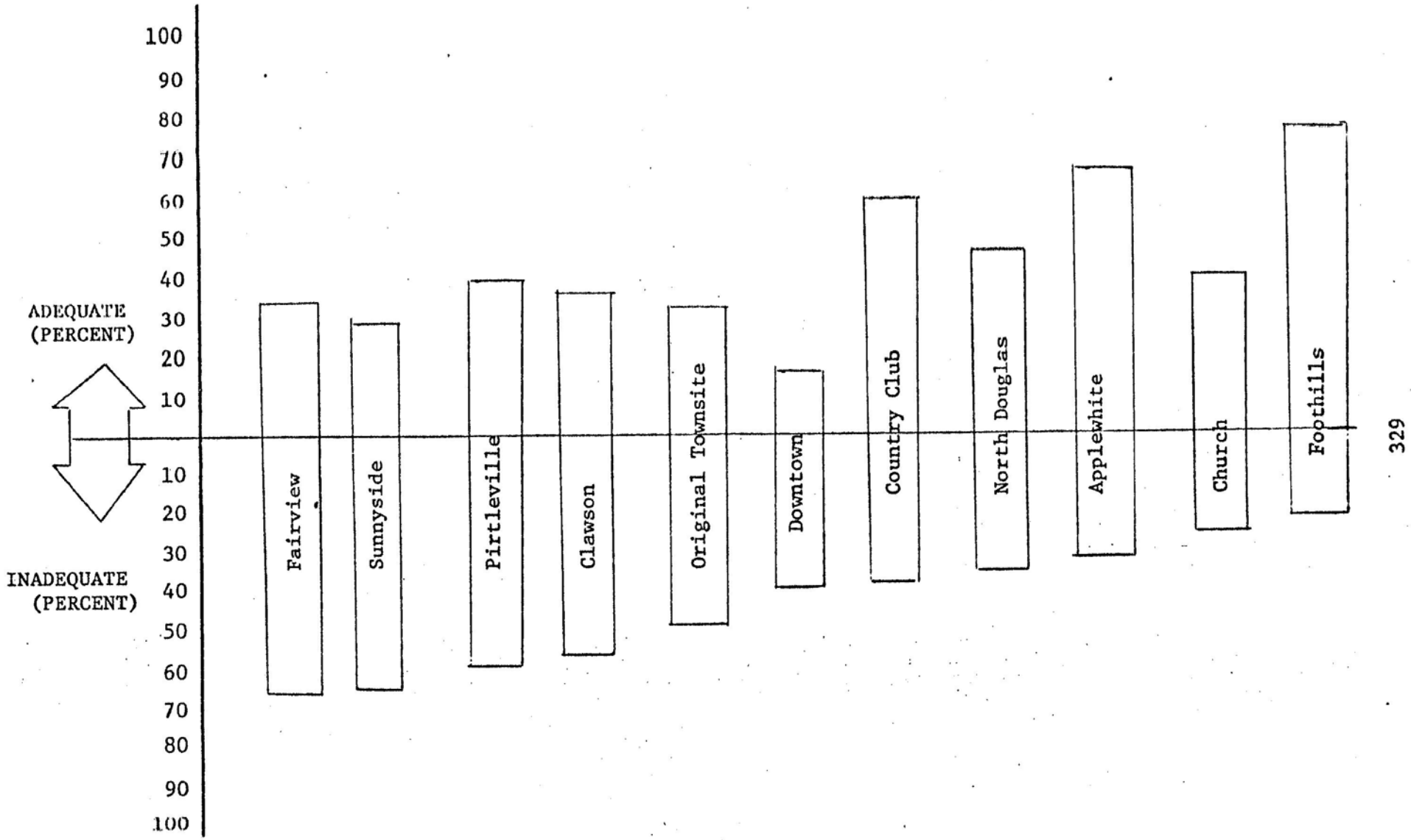


Figure 8

Feelings of Different Neighborhoods About Recreation for Adults



No Opinion (Percent)	0	6	0	7	17	41	0	16	0	34	0

was a comparison of neighborhoods which were rank ordered on each of the environmental measures used in the NEEDS I survey according to the attitude questions used in the socioeconomic survey neighborhood satisfaction indices (18 questions). Fourteen of these attitudes were related to at least one of the NEEDS I environmental measures (Table 8). Overall penalty points corresponded in a significant way with feelings of inadequate police protection and inadequate adult recreation. That is, neighborhoods which received high overall penalty points were also likely to be neighborhoods in which a greater percentage of the people complained about police protection and adult recreation. House and premise penalty points show a significant relation to feelings about inadequacy of playgrounds, police protection, housing insepction, street lighting, adult recreation, lack of grocery stores and traffic accidents. Ironically, the feelings toward inadequate street conditions proved the reverse of what some would expect -- those areas where housing was believed most environmentally sound by the Public Health Service evalutors were also areas where the most complaints were registered about street conditions. Street condition was also one of the environmental conditions which was separately evaluated by Public Health Service, but the Public Health Service evaluation turned out to be unrelated to any of the attitudes expressed by residents, including feelings about the need for street repairs.

The condition of auxiliary structures shows a positive relation to higher frequencies of complaints about playgrounds, police protection, housing inspection, street lighting, adult recreation.

Table 8
Comparison of NEEDS II Attitude Survey to NEEDS I
Evaluation of Neighborhoods*

NEEDS II Feelings About Problems With:

NEEDS I Environmental Condition	Complaints About Flies	Playgrounds	Streets	Police Protection	Housing Inspection	Street Lighting	Elderly Services	Adult Recreation	Child Recreation	Grocery Stores	Shopping Centers	Zoning Laws	Traffic Accidents	Smells
Overall Penalty Points	0	0	0	+	0	0	0	+	0	0	0	0	0	+
House	0	+	-	+	0	0	0	0	0	0	+	0	+	0
Auxiliary Structure	0	+	0	+	+	+	0	+	0	+	+	0	+	+
Premise	0	+	0	+	0	0	0	0	0	0	+	0	0	0
Stress	-	0	0	0	0	0	-	0	0	0	0	0	0	0
Streets	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shopping	0	0	0	0	0	0	0	0	0	0	0	+	0	0
Population Crowding**	0	+	0	+	0	+	0	+	+	+	+	0	0	+

*Pearson's rank order correlation is significant at $\geq$ .01 level. If "+," it is positive; "-" it is negative; and "0" indicates no relation.

**Population Crowding is derived from U.S. Census material, not collected by NEEDS I environmental survey.

grocery stores, shopping centers, traffic accidents and smells. In this way, the presence of auxiliary structures offers a better indicator of high levels of dissatisfaction with neighborhood services than do any of the other Public Health Service environmental indices. Environmental stress, streets and shopping center evaluations proved the least useful in predicting areas of community dissatisfaction. In sum, none of the Public Health Service environmental dimensions were highly related to attitudes.

Population density proved a better indicator of high dissatisfaction than any other environmental measures. In Douglas, areas of highest population density were also areas showing greatest concern about inadequate playgrounds, police protection, street lighting, adult and child recreation, grocery stores and shopping centers and services for the elderly. Thus, the best method the Bureau can suggest for concentrating program efforts to reach the greatest number of people who are dissatisfied is to concentrate programs in areas of the heaviest population density within the town. Further investigation might clarify the policy implications of such a strategy for public investment.

Satisfaction, Ethnicity, and Poverty

Neither satisfaction with personal environment nor satisfaction with neighborhood services was related to income. Rich, poor, and in-between all seem to have unrelated levels of satisfaction and dissatisfaction (Tables 9a and 9b). Anglos in Douglas, however, were definitely more likely to be satisfied with their personal and neighborhood environment than were Mexican Americans (Tables 10a and 10b). This indicates that either the Mexican American community feels most neglected by community services in their neighborhood

Table 9a

Income and Satisfaction: General Satisfaction

SATISFACTION	INCOME: Less Than $10,000 Per Year	INCOME: Greater Than $10,000 Per Year
High	62 (55%)	31 (69%)
Low	51 (45%)	14 (31%)
Total	113 (100%)	45 (100%)

Chi-Square = 2.06 No Significant Relation

Table 9b

Safisfaction with Personal Environment

SATISFACTION	INCOME: Less Than $10,000 Per Year	INCOME: Greater Than $10,000 Per Year
High	86 (76%)	35 (78%)
Low	27 (24%)	10 (22%)
Total	113 (100%)	45 (100%)

Chi-Square = .00025 No Significant Relation

Table 10a

Ethnicity and Satisfaction: General Satisfaction

SATISFACTION	ETHNICITY: Anglo	ETHNICITY: Mexican Heritage
High	43 (80%)	51 (52%)
Low	11 (20%)	48 (48%)
Total	54 (100%)	99 (100%)

Chi-Square = 10.5 Sig. $\leq$ .0001, N = 153 Respondents

Table 10b

Safisfaction with Personal Environment

SATISFACTION	ETHNICITY: Anglo	ETHNICITY: Mexican Heritage
High	49 (91%)	71 (72%)
Low	5 (9%)	28 (28%)
Total	54 (100%)	99 (100%)

Chi-Square = 6.39, Sig. $\leq$ .01, N = 153 Respondents

or that they are more likely to be critical of community services. The high proportion of "no opinion" answers by persons of Mexican heritage erodes the latter interpretation and we must conclude that the perceived environment of the person of Mexican heritage is less pleasant and supportive of individual and neighborhood wants than that of Anglos.

Ethnicity and Housing Evaluation

Earlier in this report, we noted the strong correspondence of ethnicity to poverty, that is, the bottom of the Douglas income category is overly packed with people of Mexican heritage. Comparing the objective measures of housing conditions to the ethnicity of occupant revealed that Mexican Americans are more likely to live in substandard dwellings than their Anglo counterparts (Table 11). Thus, the housing problems, as viewed by the NEEDS I survey technique cluster among those classified as being of Mexican heritage.

Further investigations revealed that the occupant's place of birth was also related to the condition of his premise, but not his house. Since the distinction between the premise condition and house condition is primarily that of a yard excluding the main structure, this finding may be interpreted as indicating the relationship of a person's birth place to the environmental condition of the yard. Those people born in Mexico tended to have a disproportionately larger share of their yards in substandard conditions, while those born outside Douglas in other parts of the United States had yards in better physical condition. The people born in Agua Prieta and Douglas occupy an intermediate

Table 11

Housing Condition and Ethnicity

HOUSING CONDITION (From NEEDS I Survey)	ETHNICITY: Anglo	ETHNICITY: Mexican Heritage
Good	34 (63%)	28 (28%)
Fair	11 (20%)	27 (27%)
Poor	9 (17%)	44 (45%)
Total	54 (100%)	99 (100%)

Chi-Square = 18.8 Significance $\leq$ .0001 N = 153 Respondents

position, their premise conditions being poorer than would be expected if they were born in the United States but in a little better condition than the yard of their neighbors from the interior parts of Mexico (Table 12).

Neighborhood Environment and Socioeconomic Conditions

The Public Health Service NEEDS I Survey hardly proved indicative of the socioeconomic conditions of neighborhoods. Eleven Douglas neighborhoods were ranked by the Public Health Service environmental scales previously listed on Table 1. These same neighborhoods were then ranked by 23 socioeconomic indicators and the rank orderings compared for any possible associations. Out of 414 possible relations between the environmental scales and socioeconomic measures, only 14 significant relations were found, all listed in Table 13. To summarize: overall penalty points and penalty points for housing in a neighborhood indicate areas of town with high case loads of Aid to Dependent Children, venereal disease, and low numbers of honor students. Venereal disease rates are also statistically associated with poor yard and auxillary building condition. But, the most revealing association is between all four of these environmental scales (overall penalty points, house, premise and auxillary building condition) and the size of the monthly rent or mortgage payment. What this says is that areas with more people more heavily in debt for housing were given higher ratings by NEEDS I evaluators. This might be suggestive that the NEEDS I survey was actually measuring economic status but several more direct indicators of economic status, such as income, failed to be significantly related to the Public Health Service neighborhood evaluation.

Table 12

Place of Birth and Yard Conditions in Douglas

YARD CONDITION	Place of Birth: Other U.S.	Douglas Agua Prieta	Other Mexico
Good	39 (57%)	13 (28%)	13 (25%)
Fair	16 (23%)	12 (26%)	18 (35%)
Poor	14 (20%)	22 (46%)	21 (40%)
Total	69 (100%)	47 (100%)	52 (100%)

N=168
Raw Chi-Square = 17.85 at 4 degrees of freedom. Sig. $\geq$ .01

Table 13
Comparison of Socio-Economic Survey To
NEEDS I Evaluation of Neighborhoods*

NEEDS I Environmental Condition	Number of Honor Students	Aid To Dependent Children	Venereal Disease	Unemployment Rates	Crime Indices	Size of Rent or Mortgage Payment
Overall	-	+	+	0	0	-
House	-	+	+	0	0	-
Auxiliary Structure	0	0	+	0	0	-
Premise	0	0	+	0	0	-
Stress	0	0	0	+	+	0
Streets	0	0	0	0	0	0
Shopping	0	0	0	0	0	0
Population Crowding**	0	0	0	0	0	0

*Pearson's rank order correlation is significant at $\geq$ .01 level. If"+," it is positive; "-" it is negative; and "0" indicates no relation.

**Population Crowding data derived from U.S. Census materials not collected by NEEDS I environmental survey.

The NEEDS I environmental scale to evaluate stress also turned in a dismal preformance when related to the socioeconomic survey. Areas of high unemployment and crime were positively related to stress, but other variables which might be expected to be related were not. These unrelated variables included problems with pests in the neighborhood, school dropouts, TB rates, nervousness, health status, and percentage in the neighborhood complaining about problems with flies (Table 14).

A Quandary and Further Tests

This lack of association between neighborhood conditions as measured by the NEEDS I technique and the socioeconomic survey may be given several interpretations. One would be that the exterior condition of a neighborhood tells very little about the people living in that neighborhood. In response, one might argue that the internal heterogeneity of Douglas neighborhoods was too great for any pattern to emerge. That is, neighborhoods were not significant units for environmental analysis. If this is true and there is a relationship between environmental conditions and socioeconomic indices, then a more direct test would be a comparison of housing and socioeconomic conditions on a house by house basis. Fortunately, we had the NEEDS I evaluation of each house and premise where we conducted an interview. Thus, we were able to compare the penalty points assigned the house and premise with numerous social and economic indicators, ignoring the concept of neighborhoods altogether. Table 15 lists 22 variables compared to the NEEDS I evaluation of houses. Not one of these variables had any significant relationship to the environmental rating of the house.

Table 14

Indicators Unrelated to All of the NEEDS I Environmental Indicators*

Incidence of renting vs. owning

Incidence of relatives in Agua Prieta

Degree of problems with pests in the neighborhood

School dropouts

TB (rates per 1,000 population over three years)

Unemployment (rates per 1,000 population over three years)

Chest problems (percentages of each neighborhood reporting problem)

Nervousness (percentage of people responding in a neighborhood with self-defined nervous problems)

Health Status (percentage of people in a neighborhood reporting they were not sick within the past year)

Mean number of rooms in the house of each neighborhood

Absolute indebtedness as measured by monthly loan repayments

Percentage of neighborhood saying they have problems with flies

*Rejection of null hypothesis based on significance test of .01 or less using Kendall: tau and N-11 neighborhoods.

Table 15

Socioeconomic Indicators That Were Unrelated to Housing Condition*

Adults per household

Working adults per household

People per household

Rooms per household

Years' residence in Douglas

Relatives in Agua Prieta

Cars per household

Interior condition as evaluated by occupant

Pest problems as evaluated by occupant

Income of all members of the household

Per Capita expenditures on:

- Food
- Housing (rent or mortgage, including insurance)
- Loan payments
- Cigarettes, liquors and snacks
- Utilities (including phone)
- Car payments
- Health expenses (dentist, doctors, hospital bills, and insurance)
- Educational expenses
- Recreation and hobbies
- Domestic help and child care
- Donations to church and charities
- Support to other family members not in this household

*Unrelated means the null hypothesis was accepted at .05 level for Pearson's r coefficient of correlation (N = 151-154).

These negative results may be interpreted as a challenge to the utility of the NEEDS I housing survey technique for discovering socio-economic conditions or as a demonstration that environmental surveys must be supplemented by social surveys if a picture of the general welfare of the community is desired.

However, since the social survey had shown that Anglos live in better housing than peoples of Mexican heritage and knowing the strong impact that ethnicity had on other analyses in the Douglas project, we wondered if the lack of an association between housing and social conditions might result from a patterned difference between the two ethnic groups. Splitting the sample into two groups, Anglos and peoples of Mexican heritage, we found that a poor exterior on an Anglo house indicates a poor interior ($r = .54$, $N = 52$) and problems with household pests ($r = .36$, $N = 52$). Furthermore, Anglos living in houses in poor conditions spent less, per capita, on recreation and donations to churches or charities than Anglos in better housing ($r = .326$, $N = 47$ in both cases). There was also a siginficant correlation between poor housing and larger families ($r = .36$, $N = 52$).

In sharp contrast, the exterior conditions of houses occupied by persons of Mexican heritage reveal nothing about their social situation including the interior conditions of the houses, strongly suggesting that Douglasites of Mexican heritage follow a housing pattern common to Mexico in which the inhabitant avoids overt display of his social and economic station to outsiders. Subjective reactions of the interviewers supported this impression. Houses were sometimes in excellent repair and well furnished on the inside, but delapidated on the outside.

Ironically, the number of operative cars owned by a household tells more about the social condition of peoples of Mexican heritage than the

exterior conditions of their houses: the greater the number of operative cars, the larger the family, its total income, and length of residence in Douglas.

Implications for NEEDS Technique

The comparison of the NEEDS I environmental survey with the NEEDS II socioeconomic survey supports the validity of the overall NEEDS approach. The two surveys are necessary for a holistic, comprehensive evaluation of the quality of life in a community. The Bureau was surprised how little could be discovered about the socioeconomic conditions and attitudes of people from an objective environmental survey, however, after the lack of correspondence is known, it should be obvious what is happening.

The quality of a house, neighborhood or an entire community can be evaluated in many ways. The NEEDS I environmental survey evaluated Douglas from a physical viewpoint, comparing the conditions to objective traits common to all structures — roofs, painting, auxiliary structure conditions, etc. The occupant, in contrast, may evaluate his house using other criteria including qualities which he does not share with other home owners in his neighborhood or community. The house or neighborhood environmental condition is only one component of the occupant's evaluation. And there are other viewpoints — neighbors, health inspectors, firemen, dog catchers, border patrolmen and others will each evaluate these same environments in different ways. The NEEDS II social survey allowed us to see that, overall, the occupants of Douglas housing are highly satisfied with their personal and neighborhood environments. We discovered happiness, and

exterior conditions of their houses: the greater the number of operative cars, the larger the family, its total income, and length of residence in Douglas.

Implications for NEEDS Technique

The comparison of the NEEDS I environmental survey with the NEEDS II soceioeconomic survey supports the validity of the overall NEEDS approach. The two surveys are necessary for a holistic, comprehensive evaluation of the quality of life in a community. The Bureau was surprised how little could be discovered about the socioeconomic conditions and attitudes of people from an objective environmental survey, however, after the lack of correspondence is known, it should be obvious what is happening.

The quality of a house, neighborhood or an entire community can be evaluated in many ways. The NEEDS I environmental survey evaluated Douglas from a physical viewpoint, comparing the conditions to objective traits common to all structures -- roofs, painting, auxiliary structure conditions, etc. The occupant, in contrast, may evaluate his house using other criteria including qualities which he does not share with other home owners in his neighborhood or community. The house or neighborhood environmental condition is only one component of the occupant's evaluation. And there are other viewpoints -- neighbors, health inspectors, firemen, dog catchers, border patrolmen and others will each evaluate these same environments in different ways. The NEEDS II social survey allowed us to see that, overall, the occupants of Douglas housing are highly satisfied with their personal and neighborhood environments. We discovered happiness, and

like good news, this is not of great interest to those who make a living solving other people's problems.

Douglasites are concerned about improving the quality of their lives and this involves solutions to what might seem some rather mundane problems -- dog control, recreation for children, teenagers and adults and the like. But, the people have spoken -- through this survey. Who will listen?

Footnote

1. A detailed summary of the environmental survey has already been published and presented to Douglas city officials. However, the general conclusions merit repeating in this report since the Public Health Service publication has received only limited distribution.

Appendix I

Neighborhood Socioeconomic Characteristics Used in Housing Chapter

Variable	Source
Incidence of renting (percentage of renting versus owning)	Question 54 of Bureau Social Survey
Incidence of relatives in Agua Prieta (percentage of within neighborhood)	Question 141
Degree of pest problems (percentage)	Question 74-83 combined
Dropouts (actual number)	Chapter 7
Honor students (actual number)	Chapter 7
Aid to dependent children (rates per 1,000 population for 3 years)	Public Health Service Records of 1969-71 counts
TB (rates per 1,000 population over 3 years)	Public Health Service Records of 1969-71 counts
VD (rates per 1,000 population over 3 years)	Public Health Service Records of 1969-71 counts
Unemployment (rates/1,000 population over 3 years)	Public Health Service Records of 1969-71 counts
Chest problems (percentage of people responding in neighborhood with problem - excluded no response)	Question 161-173 combined
Nervousness (Percentage of people responding in a neighborhood with a problem)	Question 206-213 combined
Health status (percentage of people responding in each neighborhood that they have never been sick)	Question 224
Adult criminals arrested	Arrest records
Arrest location of adult criminals	Arrest records
Crimes location for adult offenses	Arrest records
Adult criminal's home neighborhood	Arrest records
Adult criminal's arrest location	Arrest records
Juvenile criminal's neighborhood	Arrest records

Variable	Source
Presence of household problems (percentage reporting some problem in each neighborhood)	Question 72
Mean number of rooms in houses of each neighborhood	Question 52
Mean number of dollars on rent or mortgage payment per month	Question 529
Mean dollars spent on loan repayments per month	Question 534
Problem with flies (percentage experiencing this in in each neighborhood)	Question 76

Appendix II

Neighborhood Attitude Characteristics

Variable	Source
Degree to which relatives help out (percentage experiencing help in a neighborhood)	Question 389
Degree to which opinions are ignored (percentage stating this opinion in each neighborhood)	Question 391
Preference to live in Douglas (percentage stating this opinion in each neighborhood)	Question 394
City is not doing enough for neighborhood (percentage stating this opinion in each neighborhood)	Question 407
Playgrounds inadequate (percentage stating facilities inadequate in their neighborhood)	Question 540
Dissatisfaction with schools (percentage stating facilities inadequate in their neighborhood)	Question 541
Street maintainence inadequate (percentage stating facilities inadequate in their neighborhood)	Question 542
Flood control inadequate (percentage stating facilities inadequate in their neighborhood)	Question 543
Housing inspection inadequate (percentage stating services inadequate in their neighborhood)	Question 544
Desires to move elsewhere in Douglas (percentage of total neighborhood)	Question 142
Desires to leave Douglas (percentage of total neighborhood)	Question 144
Police protection inadequate (percentage stating services inadequate in their neighborhood)	Question 546
Street lighting inadequate (percentage stating facilities inadequate in their neighborhood)	Question 547
Inadequate trash collection (percentage stating these service inadequate in their neighborhood)	Question 549
Inadequate dog control (percentage stating these services inadequate in neighborhood)	Question 550

Variable	Source
Inadequate services for elderly (percentage stating these services inadequate in their neighborhood)	Question 552
Inadequate recreation for adults (percentage stating these facilities inadequate in neighborhood)	Question 553
Inadequate recreation for teenagers (percentage stating facilities inadequate in neighborhood)	Question 554
Inadequate recreation for children (percentage stating facilities inadequate in neighborhood)	Question 555
Inadequate grocery stores (percentage stating facilities inadequate in neighborhood)	Question 556
Inadequate zoning laws (percentage stating these services inadequate in neighborhood)	Question 557
Inadequate public health service (percentage stating these services inadequate in community)	Question 559
Inadequate welfare services (percentage stating these services inadequate in community)	Question 560
Inadequate day care (percentage stating these services inadequate in community)	Question 561
Inadequate shopping centers (percentage stating these facilities inadequate in community)	Question 562
Inadequate employment services (percentage feeling these services inadequate in community)	Question 563
Inadequate legal services (percentage feeling these services inadequate in community)	Question 564
Inadequage public housing (percentage feeling these facilities inadequate in community)	Question 565
Inadequate food stamps (percentage feeling these services inadequate in the community)	Question 566
Vandalism problem (percentage of neighborhood feeling it is a problem)	Question 568
Burglary (percentage of neighborhood feeling it is a problem)	Question 569

Variable	Source
Drug misuse (percentage of neighborhood feeling it is a problem)	Question 572
Drunkenness (percentage of neighborhood feeling it is a problem)	Question 573
Fighting (percentage of neighborhood feeling it is a problem)	Question 574
Traffic accidents (percentage of neighborhood feeling it is problem)	Question 575
Traffic noise (percentage of neighborhood feeling it is a problem)	Question 576
Noisy animals (percentage of neighborhood feeling it is a problem)	Question 577
Noisy neighbors (percentage of neighborhood feeling this is a problem)	Question 578
Odors and smells (percentage of neighborhood feeling this is a problem)	Question 580
Air pollution (percentage of a neighborhood feeling this is a problem)	Question 582

 SAMPLE SURVEY FORMS

NEIGHBORHOOD ENVIRONMENTAL EVALUATION AND DECISION SYSTEM

BLOCK ANALYSIS (SIDE ONE)

FORM APPROVED
BUDGET BUREAU NO. 85-R0044

NEIGHBORHOOD NUMBER

:1: :2: :3: :4: TENS :5: :6: :7: :8: :9:
:0: :1: :2: :3: :4: UNITS :5: :6: :7: :8: :9:

BLOCK NUMBER

:1: :2: :3: :4: HUNDREDS :5: :6: :7: :8: :9:
:0: :1: :2: :3: :4: TENS :5: :6: :7: :8: :9:
:0: :1: :2: :3: :4: UNITS :5: :6: :7: :8: :9:

STREET NAME (WRITE IN NAME)	STREET NUMBER (FROM DIRECTORY)	CODED STREET NUMBER
1. ______ NORTH FRONTAGE	______	:1: :2: :3: :4: HUNDREDS :5: :6: :7: :8: :9: :0: :1: :2: :3: :4: TENS :5: :6: :7: :8: :9: :0: :1: :2: :3: :4: UNITS :5: :6: :7: :8: :9:
2. ______ EAST FRONTAGE	______	:1: :2: :3: :4: HUNDREDS :5: :6: :7: :8: :9: :0: :1: :2: :3: :4: TENS :5: :6: :7: :8: :9: :0: :1: :2: :3: :4: UNITS :5: :6: :7: :8: :9:
3. ______ SOUTH FRONTAGE	______	:1: :2: :3: :4: HUNDREDS :5: :6: :7: :8: :9: :0: :1: :2: :3: :4: TENS :5: :6: :7: :8: :9: :0: :1: :2: :3: :4: UNITS :5: :6: :7: :8: :9:
4. ______ WEST FRONTAGE	______	:1: :2: :3: :4: HUNDREDS :5: :6: :7: :8: :9: :0: :1: :2: :3: :4: TENS :5: :6: :7: :8: :9: :0: :1: :2: :3: :4: UNITS :5: :6: :7: :8: :9:

CENSUS TRACT NUMBER

:1: :2: :3: :4: HUNDREDS :5: :6: :7: :8: :9:
:0: :1: :2: :3: :4: TENS :5: :6: :7: :8: :9:
:0: :1: :2: :3: :4: UNITS :5: :6: :7: :8: :9:
PART :1: :2: :3: :4: :5: :6: :7: :8: :9:

NUMBER PREMISES ON BLOCK

:1: :2: :3: :4: TENS :5: :6: :7: :8: :9:
:0: :1: :2: :3: :4: UNITS :5: :6: :7: :8: :9:

ADDITIONAL COMMENTS

______
______
______

SKETCH DIAGRAM OF BLOCK IN SPACE BELOW

NORTH

WEST

EAST

SOUTH

NEIGHBORHOOD ENVIRONMENTAL EVALUATION AND DECISION SYSTEM
BLOCK ANALYSIS (SIDE TWO)

NEIGHBORHOOD NUMBER

:1: :2: :3: :4: TENS :5: :6: :7: :8: :9:

:0: :1: :2: :3: :4: UNITS :5: :6: :7: :8: :9:

BLOCK NUMBER

:1: :2: :3: :4: HUNDREDS :5: :6: :7: :8: :9:

:0: :1: :2: :3: :4: TENS :5: :6: :7: :8: :9:

:0: :1: :2: :3: :4: UNITS :5: :6: :7: :8: :9:

DENSITY

:1: :2: :3: :4: UNITS :5: :6: :7: :8: :9:

:0: :1: :2: :3: :4: (1/10) :5: :6: :7: :8: :9:

:0: :1: :2: :3: :4: (1/100) :5: :6: :7: :8: :9:

SHADED AREA FOR CATEGORY CHECKS

STREET ANALYSIS	FRONTAGE 1	FRONTAGE 2	FRONTAGE 3	FRONTAGE 4
TYPE OF STREET	LOCAL ===== OTHER =====	LOCAL ===== OTHER =====	LOCAL ===== OTHER =====	LOCAL ===== OTHER =====
STREET PAVEMENT CONDITION	ABSENT ===== INADEQUATE =====	ABSENT ===== INADEQUATE =====	ABSENT ===== INADEQUATE =====	ABSENT ===== INADEQUATE =====
CURBS AND GUTTERS	ABSENT ===== INADEQUATE =====	ABSENT ===== INADEQUATE =====	ABSENT ===== INADEQUATE =====	ABSENT ===== INADEQUATE =====
SIDEWALK CONDITION	ABSENT ===== INADEQUATE =====	ABSENT ===== INADEQUATE =====	ABSENT ===== INADEQUATE =====	ABSENT ===== INADEQUATE =====
STREET LIGHTING	ABSENT ===== INADEQUATE =====	ABSENT ===== INADEQUATE =====	ABSENT ===== INADEQUATE =====	ABSENT ===== INADEQUATE =====
OFFSTREET LOADING	ABSENT ===== INADEQUATE =====	ABSENT ===== INADEQUATE =====	ABSENT ===== INADEQUATE =====	ABSENT ===== INADEQUATE =====
ONSTREET PARKING	INADEQUATE =====	INADEQUATE =====	INADEQUATE =====	INADEQUATE =====
CITY WATER LINES	ABSENT =====	ABSENT =====	ABSENT =====	ABSENT =====
STREET WIDTH	INADEQUATE =====	INADEQUATE =====	INADEQUATE =====	INADEQUATE =====

ENVIRONMENTAL STRESSES	FRONTAGE 1	FRONTAGE 2	FRONTAGE 3	FRONTAGE 4
NOISE	MOD ===== CONS ===== EXT =====	MOD ===== CONS ===== EXT =====	MOD ===== CONS ===== EXT =====	MOD ===== CONS ===== EXT =====
VIBRATION	MOD ===== CONS ===== EXT =====	MOD ===== CONS ===== EXT =====	MOD ===== CONS ===== EXT =====	MOD ===== CONS ===== EXT =====
GLARE	MOD ===== CONS ===== EXT =====	MOD ===== CONS ===== EXT =====	MOD ===== CONS ===== EXT =====	MOD ===== CONS ===== EXT =====
ODOR	MOD ===== CONS ===== EXT =====	MOD ===== CONS ===== EXT =====	MOD ===== CONS ===== EXT =====	MOD ===== CONS ===== EXT =====
SAFETY HAZARDS	MOD ===== CONS ===== EXT =====	MOD ===== CONS ===== EXT =====	MOD ===== CONS ===== EXT =====	MOD ===== CONS ===== EXT =====
AIR POLLUTION LEVEL	MODERATE =====	CONSIDERABLE =====		EXTREME =====

NATURAL DEFICIENCIES

BLOCK SUBJECT TO FREQUENT FLOODING =====

BLOCK WITHIN 2,000 FEET OF STAGNANT AND/OR POLLUTED BODY OF WATER. =====

SEVERE TOPOGRAPHY ON THE BLOCK =====

BLOCK WITHIN 1,000 FEET OF STAGNANT AND/OR POLLUTED BODY OF WATER. =====

MODERATE TOPOGRAPHY ON THE BLOCK. =====

AVAILABILITY OF SHOPPING FACILITIES

SHOPPING FACILITIES LOCATED WITHIN ¼ MILE OF BLOCK (No Penalty). =====

SHOPPING FACILITIES LOCATED MORE THAN ¼ MILE, BUT LESS THAN ½ MILE OF BLOCK. =====

SHOPPING FACILITIES LOCATED AT 1 MILE OR BEYOND. =====

SHOPPING FACILITIES LOCATED MORE THAN ½ MILE, BUT LESS THAN 1 MILE OF BLOCK. =====

AVAILABILITY OF PUBLIC TRANSPORTATION

LOCATED WITHIN ¼ MILE (No Penalty). =====

LOCATED OVER ¼ MILE OR NOT AVAILABLE. =====

FREQUENCY OF SERVICE IS 2 BUSSES PER HOUR. =====

LOCATED WITHIN ¼ TO ½ MILE OF BLOCK. =====

FREQUENCY OF SERVICE GREATER THAN 2 BUSSES PER HOUR (No Penalty) =====

FREQUENCY OF SERVICE IS 1 BUS PER HOUR OR LESS. =====

AVAILABILITY TO PARKS AND PLAYGROUNDS

PARK OR PLAYGROUND LOCATED WITHIN ¼ MILE OF BLOCK (No Penalty) =====

PARK OR PLAYGROUND LOCATED MORE THAN ¼ MILE, BUT LESS THAN ½ MILE OF BLOCK =====

PARK OR PLAYGROUND LOCATED AT ½ MILE OR BEYOND. =====

AIRCRAFT STRESSES

DESCRIBE CONDITION _____

SELECT PENALTY POINTS FROM TABLE

:1: :2: :3: :4: TENS :5: :6: :7: :8: :9:

:0: :1: :2: :3: :4: UNITS :5: :6: :7: :8: :9:

NEIGHBORHOOD ENVIRONMENTAL EVALUATION AND DECISION SYSTEM
EXTERIOR PREMISE ANALYSIS (SIDE ONE)

FORM APPROVED
BUDGET BUREAU NO. 85-R0044

NEIGHBORHOOD NUMBER

PREMISE NUMBER

CENSUS TRACT

PART

ADDRESS

FRONTAGE

WRITE IN STREET ADDRESS

BLOCK NUMBER

STUDY CODE NUMBER

WORKER NUMBER

DATE

BUILDING IDENTIFICATION

NUMBER OF STORIES

HALF STORY

SHADED AREA FOR CATEGORY CHECKS

TYPE SURFACE MATERIAL: MASONRY WOOD STUCCO OTHER

FOR SALE SIGN OBSERVED (MARK ONLY IF YES)

PRESENT LAND USE: RESIDENTIAL COMMERCIAL INDUSTRIAL PUBLIC VACANT (Lot or Non-Residential)

IF MULTIPLE USE, WHAT PERCENTAGE OF TOTAL FLOOR AREA IS RESIDENTIAL? _____ %

NUMBER OCCUPIED DWELLING UNITS

VACANT DWELLING UNITS

NUMBER OF ON-PREMISE PARKING SPACES

MAIN STRUCTURE

ROOF: LOOSE OR MISSING MATERIALS SAGGING

PAINT: NEGLECTED

CHIMNEYS AND CORNICES: CRACKS, ROTTED OR MISSING MATERIAL LEANING

OUTSIDE WALLS: LOOSE OR MISSING MATERIAL ROTTED OR OPEN CRACKS LEANING

DOORS AND WINDOWS: BREAKS, CRACKS IN PANES LOOSE OR ROTTING OF FRAMES SCREENS (MISSING, OR TORN)

OUTSIDE PORCHES & STAIRS: ROTTED, MISSING OR BROKEN MATERIALS, OPEN CRACKS SAGGING

FOUNDATION: LOOSE OR MISSING MATERIAL OPEN CRACKS (LARGER THAN PENCIL WIDTH) SAGGING OR LEANING

OTHER: CONDEMNED OUTSIDE WELL OR CISTERN PIT PRIVY FAULTY FIRE ESCAPES LACKS ELECTRICITY

SPECIAL COMMUNITY PROB.

(ECA-49-1-M-7-69)

IBM M61389

NEIGHBORHOOD ENVIRONMENTAL EVALUATION AND DECISION SYSTEM
EXTERIOR PREMISE ANALYSIS (SIDE TWO)

NEIGHBORHOOD NUMBER

0 1 2 3 4 TENS 5 6 7 8 9

0 1 2 3 4 UNITS 5 6 7 8 9

BLOCK NUMBER

1 2 3 4 HUNDREDS 6 6 7 8 9

0 1 2 3 4 TENS 5 6 7 8 9

0 1 2 3 4 UNITS 5 6 7 8 9

PREMISE NUMBER

1 2 3 4 TENS 5 6 7 8 9

0 1 2 3 4 UNITS 5 6 7 8 9

SHADED AREA FOR CATEGORY CHECK

PREMISE CONDITIONS

UNACCEPTABLE FENCE OR RETAINING WALL (NEEDS REPAIRS OR IS UNSIGHTLY): =====

ABANDONED MOTOR VEHICLES: (MARK ONE, ONLY) ONE ===== TWO OR THREE ===== MORE THAN THREE =====

RUBBISH ACCUMULATIONS: (MARK ONE, ONLY)
- ACCUMULATION DETRACTS FROM THE PREMISE =====
- ACCUMULATION DETRACTS FROM PREMISE AND ADJACENT PROPERTY =====
- ACCUMULATION DETRACTS FROM ENTIRE BLOCK FRONTAGE =====

UNCOLLECTABLE DISCARDS: (MARK ONE, ONLY) ONE ===== TWO OR THREE ===== MORE THAN THREE =====

REFUSE STORAGE:
- LIDS NOT TIGHT FITTING OR ABSENT =====
- TYPE CONTAINER USED NOT PROPER OR IS ABSENT =====
- PUTRESCIBLE REFUSE ON THE GROUND =====

LANDSCAPING (MARK ONE, ONLY): NEGLECTED ===== NEEDS MAINTENANCE =====

OTHER:
- LIVESTOCK =====
- POULTRY =====
- RODENTS =====
- MOSQUITOES =====
- ABANDONED REFRIGERATOR (WITH DOORS ON) =====
- OVERFLOWING SEPTIC TANK =====
- FLIES =====
- EXCESSIVE ANIMALS =====
- SAFETY HAZARD =====
- OTHER INSECTS OR PESTS =====

AUXILIARY STRUCTURE CONDITION: (MARK NUMBER OF EACH TYPE)

GOOD 1 2 3 4 5 6 7 8 9

FAIR 1 2 3 4 5 6 7 8 9

POOR 1 2 3 4 5 6 7 8 9

DIMENSIONS (IN FEET)

LOT WIDTH

1 2 3 4 THOUSANDS 5 6 7 8 CALC

0 1 2 3 4 HUNDREDS 5 6 7 8 9

0 1 2 3 4 TENS 5 6 7 8 9

0 1 2 3 4 UNITS 5 6 7 8 9

LOT LENGTH

0 1 2 3 4 THOUSANDS 5 6 7 8 9

0 1 2 3 4 HUNDREDS 5 6 7 8 9

0 1 2 3 4 TENS 5 6 7 8 9

0 1 2 3 4 UNITS 5 6 7 8 9

MAIN STRUCTURE WIDTH

SHADE IF NO MAIN STR. 1 2 3 4 THOUSANDS 5 6 7 8 CALC

0 1 2 3 4 HUNDREDS 5 6 7 8 9

0 1 2 3 4 TENS 5 6 7 8 9

0 1 2 3 4 UNITS 5 6 7 8 9

MAIN STRUCTURE LENGTH

0 1 2 3 4 THOUSANDS 5 6 7 8 9

0 1 2 3 4 HUNDREDS 5 6 7 8 9

0 1 2 3 4 TENS 5 6 7 8 9

0 1 2 3 4 UNITS 5 6 7 8 9

AUXILIARY STRUCTURE WIDTH

0 1 2 3 4 THOUSANDS 5 6 7 8 CALC

0 1 2 3 4 HUNDREDS 5 6 7 8 9

0 1 2 3 4 TENS 5 6 7 8 9

0 1 2 3 4 UNITS 5 6 7 8 9

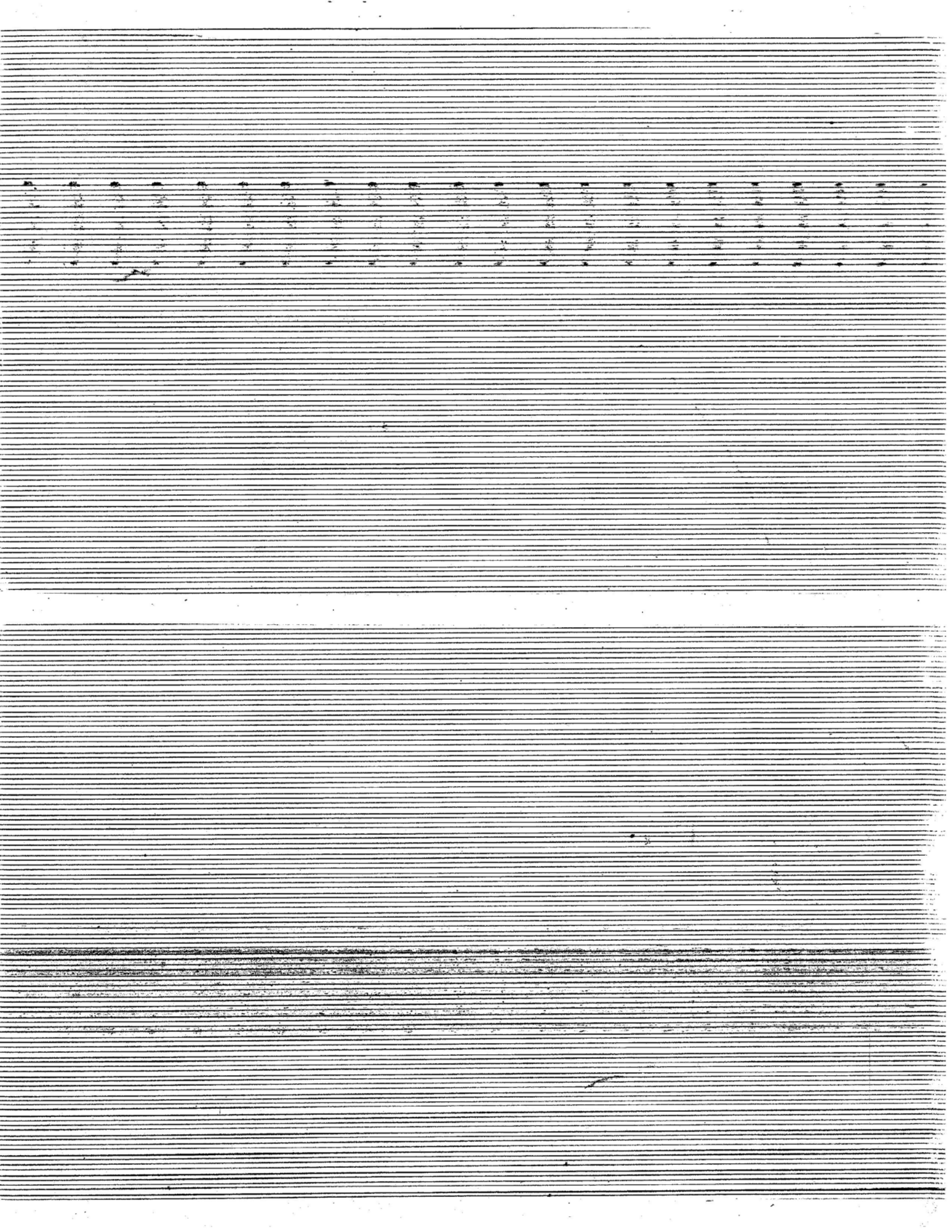
AUXILIARY STRUCTURE LENGTH

0 1 2 3 4 HUNDREDS 5 6 7 8 9

0 1 2 3 4 TENS 5 6 7 8 9

0 1 2 3 4 UNITS 5 6 7 8 9

IBM H61334



4. The total block population was divided by the total occupied housing units. This value was recorded on the mark-sense form.

The main task in the Stage I of NEEDS took place in the field, where data on every block and premise in the community was recorded. The field worker began with a block analysis form, which he checked to see if the neighborhood, block, census tract numbers, and street names have been recorded in the office. He walked around the block starting at the northeast corner making a small sketch of the block in the diagram space provided on the form. He indicated all premises, premise lines, street addresses and assigned each premise a number. As the field worker walked around the block a second time, he also evaluated the following conditions of pavement, curbs and gutters, sidewalks, offstreet loading, onstreet parking, and street width. The fieldworker also evaluated each block for environmental stress: noise, odors, vibrations, glare and various safety hazards. Street pavement was marked as "absent," or "inadequate" if the surface hindered travel under normal conditions or if the driver must reduce speed because of surface roughness. Curbs and gutters were also marked as "absent," or "inadequate" when 1) missing on a portion of the frontage and 2) were in a state of disrepair such that they were unable to serve intended functions under normal conditions. Sidewalk condition, offstreet parking, and the remaining conditions were evaluated in a similar manner.

Following this, the field worker evaluated each premise on the block. For each premise, the field worker also listed number of stories, and "for sale"signs. Land use of the premise was noted as either "residential," "commercial," "industrial," "public," or "vacant." The number of dwelling

a map of recreational facilities in the city. For the purpose of this survey, areas had to meet the following criteria to be considered a park or playground:

1. be sanctioned by the city recreation department,
2. be free,
3. may be public or private; indoor or outdoor, and
4. may be seasonal or year round

If the recreational facility covered more than one block in area, these radii should be extended to include the distance from the midpoint to the edge of the facility. Environmental stress was determined by plotting the exact locations of runways, flight paths, and the aircraft operations information for each airport.

In the sidewalk survey, data was recorded for each premise and block in the community. In order to limit the time and work spent in the field, as much of the information as was known was recorded on the forms in the office. The neighborhood, block, and census tract numbers and the environmental information previously coded on the maps were recorded on the block analysis form.. (See Appendix III at the end of this chapter.) Population density figures were calculated by the NEEDS I survey team from U.S. Census data. The instructions for arriving at these figures were as follows:

1. A copy of the U.S. Census of Housing was obtained.
2. Number and census tract was selected to correspond to the block for which the density is being determined.
3. The population and occupied housing units for the block was selected. If block data was not given, the density was calculated from population and occupied housing unit information for the entire Census Tract.