

1979

Accessibility of Public Outdoor Recreational Areas to Low Income Neighborhoods in Boston

Stephen C. Gallagher
University of Rhode Island

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Accessibility of Public Outdoor Recreational
Areas to Low Income Neighborhoods in Boston

by

Stephen C. Gallagher

A Thesis Project Submitted in Partial
Fulfillment of the Requirements for
the Degree of Master of
Community Planning

University of Rhode Island

1979

MASTER OF COMMUNITY PLANNING

RESEARCH PROJECT

of

STEPHEN C. GALLAGHER

Approved:

Research Project

Major Professor

Dr. Marcia Marsha Feld

Dr. Marcia Feld

Director

Dr. John Kupa

Dr. John Kupa

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INTRODUCTION

The urban poor are isolated in our society. They lack skills, education, and opportunities. Specifically, they lack leisure and recreational opportunities. Unlike more affluent segments of the population, the inner city poor do not have proper access to recreational areas.

There are not an adequate number of accessible recreational areas within the vicinity of low income neighborhoods. Moreover, the recreational areas which are accessible are often badly maintained and in a deteriorating condition or else are very small and have few facilities. Neighborhoods which now house low income families within the inner city were often built prior to the current understandings about open space. Recreational needs were often not considered in the initial development of these neighborhoods. The amount of open recreational space has also been diminishing over the last several years. Fiscal constraints have forced local governments to sacrifice urban open space for various public projects. Recreational space has also been sold for private development. Although such development practices are normally carried out in all sections of the city, the impact has been far greater for low income neighborhoods. Development of open space within the inner city has had a detrimental impact on the poor, since open space is in such short supply in low income neighborhoods to begin with.

The poor also lack the means to travel to recreational areas located outside of the neighborhood. Recreational planners have attempted to meet the demand for public open space through extensive purchases at the periphery of metropolitan regions where land costs are the lowest. It was thought that such a strategy would benefit the poor. However, the poor lack access to these outside park and recreation areas. Since nearly all low income families do not own automobiles, they are dependent upon public transportation for travel to areas outside of the neighborhood. Unfortunately, few recreational planners have considered access to transit systems when purchasing and developing open space for recreational use and, as a result, few of the outlying areas are accessible to the inner city poor.

It is extremely difficult for the inner city poor to take advantage of outlying city and regional parks. Moreover, it is nearly impossible for the poor to use national parks and forests, given the location of most of these areas. They are, as one author has described, "light years" away from the inner city poor.¹

This study will specifically examine the problem of recreation accessibility as it applies to eight low income neighborhoods in Boston. Three different types of recreational areas (neighborhood park and recreational areas, city wide park and recreational areas, and regional parks and recreational areas) were defined. The accessibility of

each of the three different types of recreational areas was examined separately for each of the low income neighborhoods. The results show that low income neighborhoods in Boston, much like other parts of the country, lack proper access to recreational areas.

The first three chapters will set the basic groundwork. Chapter 1 will define accessibility and establish the criteria for the measure of accessibility. Chapter 2 will define the three different types of recreational areas. Chapter 3 will identify the eight low income neighborhoods that will be evaluated in this study.

The final three chapters will examine the accessibility of the neighborhood park and recreation areas (Chapter 4), city wide park and recreation areas (Chapter 5), and regional park and recreation areas (Chapter 6) to each of the eight low income neighborhoods. There is a separate set of criteria to measure accessibility for each of the three different types of recreation areas. Each of the three recreation areas serve different needs, offer different resources and have been designed to serve a different client group.

CHAPTER 1

Definition of Accessibility and Method-
ology for the Evaluation of Accessibility

The accessibility of a recreational area refers to its proximity to the client population and to the ease in which this group is able to travel to it. In this context, the client population includes all those people for which the recreational area was designed to serve. The key elements needed to evaluate accessibility are:

1. location of the client population,
2. mobility characteristics of the client population,
3. locations and types of recreational areas,
4. travel time, distance or cost between the client population and the recreational areas and
5. locations and nature of intervening barriers.

1. Location of the Client Population

The location of the client population refers to the geographical residence of the people that the recreational area was designed to serve.

2. Mobility Characteristics of the Client Population

Accessibility is a relative term and will vary depending upon the mobility characteristics of the population. Mobility refers to the capability of a person to move from place to place. A park may be accessible to certain individuals in an area, while inaccessible to other less mobile individuals living in the same area. Mobility is a function of age (or maturity), income, and physical health.

Age- Young children and the elderly are the two least mobile age groups. Teenagers are more mobile than either the very young or the very old, but are not as mobile as working adults.

Income- The income of an individual affects his/her capability of moving freely from place to place. Transportation costs place constraints on the freedom of an individual to travel as he or she would like. For the low income family or individual, transportation costs can severely restrict freedom of movement or mobility. For example, within this society, an automobile is required for travel to many areas. However, the cost of owning an automobile is simply prohibitive to all but a few low income families. With respect to costs, the U.S. Department of Transportation reported in 1970 that the annual first year cost of owning and operating a car was \$2,060.00. The U.S. Department of Transportation reported that annual costs decline with the age of the car. By the fifth year, the cost of owning and operating a car was \$1,038.00. The costs have certainly risen since 1970. Even with these low estimates, a family of four that earns an income at the top of the current income definition of poverty (\$5,038.00) would have to spend approximately 20.6 percent of its income towards the operation of a five year old car. Allowing for the

obvious increases in the cost of owning and operating an automobile since 1970, especially with the rising cost of gasoline, it would seem virtually impossible for a low income family to own and operate a car. The poor are dependent on less expensive modes of travel.

Physical Health- Physical health and condition also have an affect on mobility. Obviously, a handicapped person does not have the same capability to travel as others.

The mobility characteristics of the client population, specifically the age, income, and physical condition of that group, will be important in determining specific accessibility criteria.

3. Locations and Types of Recreational Areas

The location of the recreation area refers to its geographical location. In the evaluation of accessibility, not only is the location of an area important, but also the type of recreational area. The evaluation of accessibility will be different depending upon the type of recreational area. Simply stated, different recreational areas serve different functions and needs and offer different resources. People are more willing to travel longer distances to an area that offers resources that can not be found closer to home. In addition, the amount of time a person will relegate to travel depends largely on the amount of time that person

expects to spend at the recreational area. Certain recreational areas have been designed to serve daily recreational needs. They would be used during after work and school hours. A person could not be expected to travel great distances to an area that would only be used for a short time. Other recreational areas have been designed for weekend or vacation use. The measure of accessibility will be based on different considerations for these types of areas.

4. Travel Time, Distance or Cost Between the Client Population and the Recreational Area.

Travel times and costs will vary depending upon the mode of travel (walk, bus, rapid transit, automobile, bicycle, etc) used. For example, it would normally take a person a much longer time to walk to an area rather than drive. Season and weather also affect travel time and cost.

5. Location and Nature of Intervening Barriers to Access

The evaluation of accessibility should allow for both physical and non-physical barriers which can impede direct access to recreational areas. Highways, railroads, industrial zones, etc. are examples of typical physical barriers. Non-physical barriers, such as crime, can also hinder access to recreational areas.

Methodology for the Evaluation of Recreation Accessibility

The methodology will be the same in evaluating the accessibility of each of the three different types of recreational areas to the low income neighborhoods. The location of both the client population and the (corresponding) recreational areas will be identified and plotted on a map. A recreation area will be termed inaccessible if it is beyond an established distance from the client population or if any other intervening barriers restrict access. Distance requirements or standards will vary according to the mobility characteristics of the client population, the type of recreational area and the mode of travel. Travel behavior guidelines, which specify different distance requirements for different age groups, modes of travel and types of recreational areas, have been formulated from specific survey data.

Traditionally, recreation planners have used space standards and requirements to assess recreational opportunity. In this study, standards are not used, other than general travel behavior guidelines, which have been based on empirical data. On the other hand, most area standards, as noted by Patrick Lavery, are often based on little more than "unsubstantiated assumptions or informed guesses."² It cannot be argued that area standards can be useful in targeting specific recreation deficiencies. When used as

general guidelines and not as "explicit directives", these standards can serve a purpose. However, no one as yet has been able to correlate any relationship between the amount of recreation space per population and the fulfillment of recreational need. These standards assume that each demographically distinct segment of the population - each different age, income, racial, ethnic, etc. group, has identical needs. These standards also neglect to take into account the quality of facilities and the type of recreational area. Herbert Gans has criticized space standards "as the quantified statements of an ideal recreation system as envisioned by suppliers". He continued by saying that standards neglect user and community goals as well as the type or quality of the recreation experience supplied and "lack sensitivity to variation in the structure and characteristics of the community".³ In a definitive study, Seymour M. Gold strongly criticized the existing use of standards. Although most planners would agree that standards are intended to be used only as guidelines, Seymour M. Gold has noted that "there have been almost no constructive attempts to challenge or change existing standards...To date, most of the conceptual effort has been directed toward rationalizing arbitrary standards."⁴ Gold continued by saying that agencies responsible for publishing standards have given little thought to defining the distinction between minimum,

maximum, desirable or optimum standards, although such terms are frequently referred to. Seymour Gold also criticized standards because of their lack of reference to time and scale dimensions. Likewise, he noted that "the concepts of political efficacy, economic feasibility and urban form or function are lacking in most considerations of standards."⁵ This indifference by most planners to the political and economic feasibility of standards was most disturbing to Gold. He noted two divergent concepts in this area, "one that makes little attempt to conceptualize the feasibility of standards and simply rationalizes this with a humble apology or by dismissing the topic because of lack of data. The second concept assumes a self-righteous stance which avoids feasibility by equating it with expertise or experience."⁶ (See Appendix for National Recreation and Park Association (NRPA) Standards).

CHAPTER 2

Definition of Recreation Areas

In this study, an outdoor recreational area has been defined as simply an area or space where recreation is carried on outdoors. Recreation in the 'classical' Marion Clawson definition means "activity (or planned inactivity) undertaken because one wants to do it."¹ Recreation differs from work, which is primarily undertaken to earn money or to provide for the necessities of life. Recreation also differs from what Marion Clawson has termed the "mechanics of life", which includes eating, sleeping, personal care and housekeeping. It is very difficult to distinguish recreation from work and the other types of activity. For example, what may be work at one time may be recreation at another time. The key to distinguishing recreation from other activities is that with recreation there is no feeling of compulsion.² Recreation is motivated from the enjoyment and satisfaction that it derives and can take many forms.

A number of different kinds of outdoor recreation areas have been identified and defined in past studies. There are a large volume and a "bewildering variety" of names for outdoor recreation areas. The name of a recreation area is generally derived in part from its physical characteristics, "its chief uses, its history, and in part upon the administering agency, and, perhaps, in large part upon historical accident."³

In this study, in order to make analysis more manageable, all outdoor recreation areas will be broken into three major categories:

1. Neighborhood Park and Recreation Areas,
2. City-Wide Park and Recreation Areas,
3. Regional Park and Recreation Areas.

This classification, with three major categories, has been patterned after the Jack L. Knetsch/Marion Clawson classification system which defined three different types of areas - 1. User oriented, 2. Resource based and 3. Intermediate (See Appendix for Clawson/Knetsch classification system). Their threefold classification has been modified to suit the particular purposes of this report.

This classification system will not be strictly interpreted since as noted by R.H. Twiss, "classification systems can lead to an over separation of activities."⁴ It will be expected that certain areas will fall into two different categories. Although not as likely, it is even possible that a particular recreational site will fall into all three different categories. This classification system will not define any space (or size) requirements for each of the three different types of recreation areas, other than to say than normally these areas will fall into a continuum from largest to smallest - Regional Parks to Neighborhood Parks.

I. Neighborhood Park and Recreation Areas

These user oriented areas are designed to meet the recreational interests and needs of the people living within the neighborhood. Most importantly, these neighborhood areas provide the recreational needs of children and the elderly. Young children and the elderly, the two least mobile client groups, are very dependent upon neighborhood areas for the fulfillment of their daily recreational needs. These two groups will also be the heaviest users of neighborhood areas since they have the most leisure time.

Neighborhood areas will include parks, playgrounds, playfields, playlots and may be designed for either passive or active use or a combination of both.*

A neighborhood area need not be situated near a major road or public transportation stop. Rather, the neighborhood area should be situated in an ideal central location so that it is accessible for people of all ages living in the neighborhood. It is essential that these areas be within walking distance for the users.

* passive recreation is non physical recreation. It is made up of activities that allow an individual or a group to listen, watch or enjoy quiet relaxation.

active recreation is more physically oriented. It is made up of activities that allow participation either by an individual or a group and that require some form of "doing"; these activities can vary from team sports to a game of golf by an individual.⁵

II. City-Wide Park and Recreation Areas

The city-wide parks will provide facilities and open space for all residents of the city. The city-wide areas are generally less intensively developed than neighborhood parks. The city-wide areas serve the general needs of a wider segment of the population.

People will generally walk further to gain access to these parks, although they should be easily accessible by public transportation.

These areas are usually larger in size than neighborhood parks or have a unique special feature or attraction. The city-wide parks will vary in the type of offerings they provide.

III. Regional Park and Recreational Areas

The regional areas serve the recreational and open space needs of the larger metropolitan region. These areas are based on the location of an outstanding resource or special feature.

CHAPTER 3

The Neighborhoods

This study will evaluate the accessibility of public outdoor recreational areas to low income neighborhoods in Boston. To define the low income neighborhoods in Boston, this study relied primarily on 1970 Census housing and population data and information found within the District Profile and Proposed 1978-1980 Neighborhood Improvement Program series which was prepared by the Boston Redevelopment Authority Neighborhood Planning Program in the summer of 1977. The District Profiles were most useful in defining neighborhood boundaries. Unlike U.S. Census tract boundaries, the District Profile neighborhood boundaries were established by resident affiliations and associations.

As a first step in determining the low income areas in Boston, this study, using the HUD definition of low and moderate income families, isolated each neighborhood which had a median family income that was 80 percent below the city median income level. To reduce the number of neighborhoods within this category and to eliminate borderline neighborhoods, it was decided to further differentiate and evaluate each of the neighborhoods according to several other indicators. The remaining neighborhoods were assessed according to the percentage of families below the poverty level, percentage of families below \$5,000, percentage of owner occupied housing units, percentage of housing units needing repairs in excess of \$1,000 and median housing

values. From this evaluation, eight neighborhoods exhibited lower overall conditions than the others.

1. Chinatown - Beach Street
2. Chinatown - South Cove
3. Lower Roxbury
4. Mission Hill Projects Area
5. D Street Projects Area
6. Columbia Point
7. Brunswick - King
8. Dudley

More recent data on rates of abandonment, demolition and deterioration would seem to indicate that these neighborhoods are continuing to decline at a much faster pace than other areas within the city (See map 1).

Map 1 The Neighborhoods



Characteristics

Chinatown/South Cove

Beach Street Neighborhood

South Cove Neighborhood

Chinatown lies within the downtown area. It is bounded by the Expressway, Essex St., Harrison Ave., Kneeland St., Tyler St., Oak St., Tremont St., and the Turnpike. The area also abuts the Tufts New England Medical Center, the Leather District, the Theater District, and the adult entertainment area. The Chinatown/South Cove district is most noted for its large number of Chinese residents. It is the fourth largest "Chinatown" in the country.

The area first experienced decline with the expansion of the Boston railroad network. The construction of the South Station terminus, the Southeast Expressway and the Massachusetts Turnpike all within the vicinity of the neighborhood further depressed land values. Today, it is estimated that 78 percent of the housing units in the district are overcrowded. In 1969, 72 percent of the housing stock was defined as dilapidated.

Demographic statistics for Chinatown are difficult to obtain since neighborhood boundaries do not correlate with

census tract boundaries and since residents are generally unwilling to participate in surveys. Chinatown also has a large number of illegal aliens. It is very difficult to estimate the number of illegal aliens. However, it is known that through a relaxation in U.S. Asian immigration laws, Chinatown has experienced a recent influx in the number of Chinese residents, especially in the number of women and children. In 1975, there were an estimated 2,800 residents living in Chinatown, 1,900 in the South Cove neighborhood and 900 in the Beach Street neighborhood. The median family income in 1970 was \$5,100 for the entire district.

Lower Roxbury

The Lower Roxbury neighborhood lies in the northern section of the Roxbury planning district. The neighborhood has been troubled by crime and has experienced a noticeable decline in its housing stock. There are a number of public low income housing projects in Lower Roxbury. The Orchard Park housing project has some of the worst conditions. The tenant population consists of 85 percent single parent families and 85 percent of households with no employed member. The Orchard Park Housing Project has the second highest crime rate in the city.

Dudley Station, a major business area within Lower Roxbury, is rapidly deteriorating.

Historically, the Dudley Station area in Roxbury has been a major transportation node and shopping area for the surrounding neighborhood. However, a loss of buying power by neighborhood residents, traffic congestion, lack of parking, security problems, storefront obsolescence, the influx of bars and nightclubs, and the decreasing attractiveness of the neighborhood in recent years, has led to a decline in the commercial viability of the Dudley area.

There are vast amounts of vacant land in Lower Roxbury. The city is in the process of developing a large industrial park in the Southwest Corridor. The MBTA Orange Line will soon be rerouted to this area.

The total population in Lower Roxbury was 8,596 in 1970. 43 percent of the population was under 18 years of age and

7 percent was over 65. The median family income in 1970 was \$4,900, with roughly 33 percent of the families in the neighborhood below the poverty level.

Mission Hill Projects Area

The Mission Hill projects area is located just south of the medical center area and the Back Bay Fens. It is bounded by Huntington Ave., Ruggles St., Columbus Ave., Alphonsus St., and Tremont St. The Mission Hill projects area contains the Mission Hill Main and Extension housing projects. These two public housing projects were completed in 1940 and 1942. The two projects have a total of 1611 units. The projects comprise one half of the structures in the area and three quarters of the units. The poor condition of the projects has certainly contributed to the overall blight in the neighborhood. The area is experiencing residential disinvestment.

The other predominant land use in the area is institutional. There are a large number of medical and educational institutional buildings within and adjoining the Mission Hill projects area.

In 1970, the population for the area was 5,138. Roughly, 33 percent of the population was under 18, with 8 percent of the population under 5. 11.1 percent of the residents in this area were over 65 years of age. The median family income in 1970 was quite low, largely due to the presence of the two housing projects. The median family income was \$4,500, which was 49.3 percent below the city median family income figure. Alarmingly, 37 percent of these families were below the poverty level in 1970.

D Street Project Area

The D Street project area is bounded by B Street, D Street, West Broadway and West Seventh Street. The housing project was built in 1949. According to the BRA district profile, "this state owned, but city maintained housing project has over the last two years been plagued with fires, crime, vandalism and destruction of vacant units and is in dire need of upgrading."² According to more recent Census housing reports, each of the 1091 dwelling units in the project area need major repairs. Industrial and warehousing operations, located to the north of the project, have served to accelerate deteriorating conditions in the area. Nearby industrial development and heavy truck traffic through residential streets has discouraged private investment in the area. Trucks have been using residential streets because access to the industrial and warehousing operations in the northern section of South Boston is quite poor. A number of traffic injuries and fatalities have been reported.

The project area had a very low median family income level (\$4,590) in 1970, well below the city level. 57.1 percent of the families had incomes of below \$5,000. In 1970, there were a total of 3539 residents living in the D street project area, a loss of 5 percent from 1960. 56 percent of the population was under 18 years of age: 13.1 per-

cent was under 5 and 8.2 percent of the population was over 65.

Columbia Point

Columbia Point is a peninsula bordered by the Expressway. The neighborhood is only three miles from downtown Boston. Columbia Point contains New England's largest public housing project. Conditions in the area are quite poor. The projects are deteriorating. To a large extent, public efforts to rehabilitate the projects have all but failed. According to the BRA, "an estimated \$15,000 per apartment or about \$25 million total is necessary to bring the project up to just minimal state sanitary code standards."³

A major shopping center, the Bayside Shopping Mall, was constructed in an effort to revive the area by sparking retail trade. The Mall is largely vacant. Potential tenants have been discouraged because of high rates of crime and vandalism. The University of Massachusetts Boston Campus lies at the other side of the peninsula and there is some light industrial development along Morrissey Boulevard.

In 1970, there were a reported 4,708 persons living in the Columbia Point Projects. In 1976, there were only 3,500 persons living in the projects. In 1970, there were a large number of young children living in the projects. 60.7 percent of the population was under 18 years of age; 13.8 percent was under 5. The number of persons over the age of 65 comprised 8 percent of the population.

The median family income was \$4,100 in 1970, the lowest of any neighborhood in the city. 61.8 percent of the families in the Point earned incomes below the poverty level. The BRA also reported that in 1975, approximately 42% of the families were on welfare. There is also a very high level of unemployment. 36 percent of all youths and 20 percent of all adults are unemployed.

Brunswick - King Neighborhood

The Brunswick-King neighborhood is bounded by Quincy Street, Blue Hill Avenue, Washington Street, and the Midland Branch of the Penn Central Railroad. The neighborhood has a deteriorating housing stock, with 45.5 percent of the units in need of major repairs. Approximately one-half of the units in the neighborhood are owner occupied. Five blocks of the neighborhood have been targets of recent urban renewal projects. The neighborhood does not have a stable population. Census data reported that only 38 percent of the residents have remained in the same dwelling over 5 years.

In 1970, the population of the neighborhood was 5,747, with 95.5 percent of the population black and 4.6 percent Hispanic or Spanish speaking. In 1970, 41.5 percent of the population was under 18; 14.1 percent was under 5, and 3.8 percent was over 65. The median family income was roughly \$5,700. 44.4 percent of the families in Brunswick-King had incomes below \$5,000 in 1970.

Dudley

The Dudley neighborhood is bounded by Massachusetts Avenue, Magazine Street, Blue Hill Avenue, Dudley Street, and the Penn Central Railroad. The housing stock within Dudley is deteriorating because of absentee ownership, disinvestment and abandonment. Abandonment is probably the major concern within Dudley. In April 1977, there were 61 vacant buildings and 834 vacant lots, amounting to 177 acres. The rate of demolition is the highest within the city.

In 1970, the total population for the neighborhood was 9,905. Roughly 44.9 percent of the population was under 18; 13.4 percent was under 5; and 4.7 percent was over 65. The median family income was \$7,000, with 38 percent of the families earning less than \$5,000. A BRA survey in 1976 indicated that 35 percent of the families living within the neighborhood were dependent upon welfare.

CHAPTER 4

Accessibility to Neighborhood Park
and
Recreation Areas

This chapter will specifically examine the accessibility of neighborhood park and recreation areas to each of the eight low income neighborhoods.

Neighborhood recreation areas have been designed to serve the daily recreational needs of the neighborhood resident. For this reason, the parks should be within close walking distance. The two major client groups using these parks will be young children and the elderly. These two groups have the most leisure time and will be the potential heavy users. These two groups are also the least mobile and are less capable of walking to recreation areas.

The neighborhoods will be evaluated separately. Each neighborhood park within the neighborhood or within a one-half mile radius from the neighborhood will be examined according to its accessibility to the major client users within the neighborhood - the children (under 13) and the elderly. Any park beyond the one-half mile radius was automatically determined as inaccessible. The one-half mile radius was not chosen arbitrarily but was based on travel behavior guidelines. Travel behavior guidelines, calculated from citizen survey data on travel behavior in Washington D.C. and Rockford, Illinois, specify that children under the age of 13 and adults over the age of 64 are only able or are only willing to travel $\frac{1}{4}$ to $\frac{1}{2}$ of a mile to a local neighborhood recreation area (see table 1).

Table 1 Travel Behavior Guidelines ¹

<u>Age</u>	<u>Primary Travel Mode to Recreation Sites</u>	<u>Travel Time & Distance</u>
less than 6	walk	10 min.; 1/4 mile
6-13	walk	10 min.; 1/2 mile
14-19	walk/bus	15 min.; 3/4 mile
20-34	car/walk/bus	15 min.; 3/4 mile
35-64	car/walk/bus	10 min.; 1/2 mile
over 64	bus/walk	10 min.; 1/4 mile

Various other studies have generally agreed that the maximum service radius for a neighborhood park is 1/2 of a mile.²

As a further measure of accessibility, the locations and nature of intervening barriers to access will be examined for each of the parks. Certain types of both physical and non-physical barriers will tend to have more of an effect upon access to neighborhood parks. This study will look specifically for these types of barriers. They include:

Physical Barriers

1. Highways and busy streets

Busy streets and highways can physically hinder access to a park, especially for young children and the elderly. Streets with heavy and fast moving traffic often do not

have an adequate number of traffic lights, crosswalks, overpasses, curb ramps, sidewalks and other such improvements that would aid pedestrians in crossing and would enhance ~~overall safety~~.

2. Rivers, streams and canals
3. Railroad lines
4. Industrial zones and other large developments that restrict access

This type of access problem is especially acute along the waterfront where large developments block access to the shoreline.

5. User time restrictions

Access is barred when the gates to a park are closed, or where a strict time curfew is enforced. School yards, and playgrounds are sometimes locked after school hours.

Non-Physical Barriers

1. User fees
2. User licenses or permits
3. Lack of Information

Inner city residents must be aware of what kind of park and recreation areas are located within their neighborhoods. If residents do not know what kind of provisions are available, then the parks will not be properly utilized.

4. Crime

Crime in a particular area may discourage residents

from using neighborhood parks.

5. Neighborhood and city boundaries

Neighborhood and city boundaries (or other administrative, political, and cultural boundaries) tend to restrict access. People are often unwilling to travel to parks or recreational sites which are situated outside of their own particular neighborhood. People generally feel more comfortable in an area that is familiar to them and less so in one that is not. This is especially true for people living in tight knit ethnic neighborhoods. They will obviously feel more secure within their own neighborhood. Neighborhood boundaries can serve as barriers to travel, especially where there are strong neighborhood affiliations or loyalties.

In the study of accessibility of neighborhood parks, park conditions are important secondary considerations. Poor conditions at a recreational area generally deter users. For this reason, each neighborhood park site was rated according to the condition of its facilities. Conditions are referred to as good, fair, poor, and unusable. Good means that all of the facilities are in adequate condition and that nothing about the park deters people from using it. Fair means that fewer than one-half of the facilities need repair or replacement. Poor means that over one-half of the facilities need repair or replacement. Where a park is unusable, conditions are extremely bad. Most all of the

facilities are in disrepair. Information on the characteristics and conditions of each of the neighborhood recreation areas within this study was obtained through site checks, from the 1977 Boston Open Space Inventory Computer printout, which was prepared by the Boston Redevelopment Authority and from the 1963 Boston Public Facilities Inventory.

Another important secondary consideration is overcrowding. There is a limit or natural carrying capacity to the number of people a recreational area can handle. The natural capacity of a site is the "number of people per day that can be accommodated without deterioration of the resource or the recreation activity."³ The changes that can take place are influenced by geology, relief, soils and vegetation cover of the area and the intensity of its recreational use.⁴ Capacity (and overcrowding) is also related to user attitudes and preferences. There is a maximum level of use that can be accommodated before participants perceive a decline in their attraction to the area. This is a very abstract and non-tangible concept because user preferences will vary from person to person and will be influenced by mood, season and weather. Capacity is also related to health and safety factors. How much activity can be accommodated before the health and safety of the participants are endangered? It can be said that capacity levels and overcrowding are a function of user site interaction and will vary according to a number of different factors such

as personal taste, the nature and type of recreation area and the natural features of the site.⁵ It is difficult to define overcrowding for a particular area. Information pertaining to capacity levels and overcrowding was not available for most of the recreation areas. The BRA District Profiles noted that certain areas were overcrowded. However, this study did not specify what constituted overcrowding. For this reason, overcrowding and capacity levels, although important to the discussion of accessibility, will not be a major consideration in this study.

COLUMBIA POINT

Accessibility to Recreation Areas Located Within the Neighborhood

There are two neighborhood park and recreation areas within Columbia Point:

1. Columbia Point Play Area
2. Boston College High School Athletic Fields

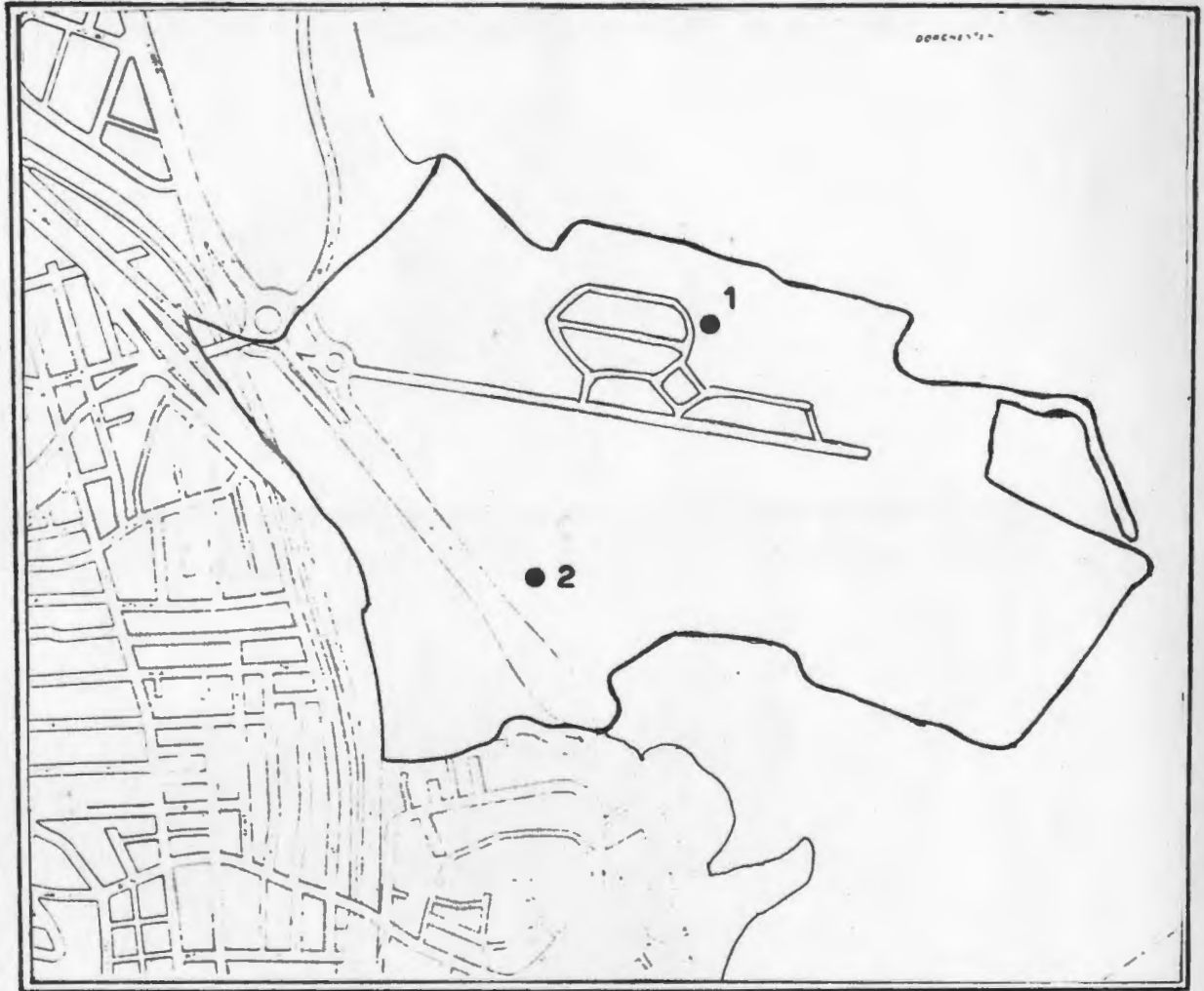
1. Columbia Point Play Area - The Columbia Point Play Area is situated on 33.29 acres of waterfront land. The area has athletic fields, play fields, playground apparatus and sitting areas. Despite recent renovations, most of the facilities are in generally poor condition. The play area has been plagued by vandalism. The area is also poorly maintained by the city. The site is littered with garbage and debris.

There are no physical barriers which limit access to the Columbia Point play area. Crime is one non-physical barrier. The incidence of crime has been rising steadily in this area.

2. Boston College High School Athletic Fields - In 1975, the city provided the school with several athletic fields. The fields have been considerably damaged by vandalism. This vandalism had been incessant and as a result, the city has not been able to properly maintain the area.

Mt. Vernon Street restricts access to the Boston College High School fields for young children. Mt. Vernon

Map 2 Columbia Point



1. Columbia Point Play Area
2. Boston College High School
Athletic Fields

has fast moving traffic and there are not enough clearly marked pedestrian crossways. According to BRA reports, this street has been the site of several "serious accidents involving children from the area."⁶

Accessibility to Recreation Areas Located Outside of the Neighborhood

It is basically impossible for the residents of Columbia Point, especially young children and the elderly, to walk to recreational parks outside of the neighborhood. The residents of Columbia Point have access to no other neighborhood recreational areas since the neighborhood is virtually separated from the rest of the city by Morrissey Boulevard and the Southeast Expressway.

MISSION HILL PROJECTS AREA**Accessibility to Recreation Areas Located Within the Neighborhood**

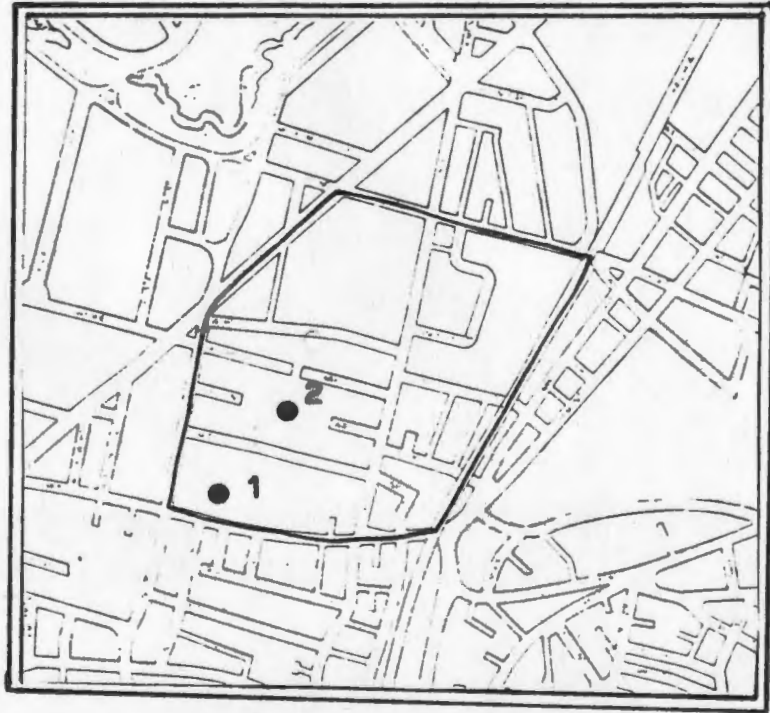
There are two neighborhood park and recreational areas within the Mission Hill Projects Area:

1. Mission Hill and Smith Street Playground
2. Perez Playground

1. Mission Hill and Smith Street Playground - The playground is located at the corner of Tremont and Smith St. The playground is situated on a relatively large 7.75 acre site. The area has two playfields and a tot lot. Because of extremely heavy use and high rates of vandalism, this playground is in relatively poor condition.

All of the residents of the Mission Hill Projects area are within a one-half mile walking distance to this site. There are no serious barriers which limit access for neighborhood residents. However, very young children living to the east of Parker Street may be restricted in their access to this playground. Parker Street has been receiving more and more institutional traffic and at times is quite congested. In fact, the medical center, Northeastern University and the other institutional buildings have been generating more institutional traffic and parking to the residential streets of this area.

Map 3 Mission Hill Projects Area



1. Mission Hill and Smith St. Playground
2. Perez Playground

2. Perez Playground - The Perez Playground is situated on the grounds of the Mission Hill Main public housing project. The Perez playground was built in 1968 as part of the City's Capital Improvement Program. Because of its central location, this playground is within a one-quarter mile walking distance for nearly all of the families living in this neighborhood. The playground is particularly accessible to tenants of the Mission Hill Main public housing project. Barker Street restricts access to some young users in the eastern portion of the neighborhood, in much the same way as it restricts access to the Mission Hill and Smith Street Playground. This playground is also heavily used and is in somewhat poor condition.

Accessibility to Recreation Areas Located Outside of the Neighborhood

Access to a number of recreational areas, located to the south and east, just outside the neighborhood but still within a one-half mile walking radius, is restricted by Tremont St. and Columbus Ave. These streets are normally quite congested with traffic throughout the day.

CHINATOWN

Accessibility of Recreation Areas Located Within the
Neighborhood

There are three neighborhood park and recreational areas within the Chinatown district.

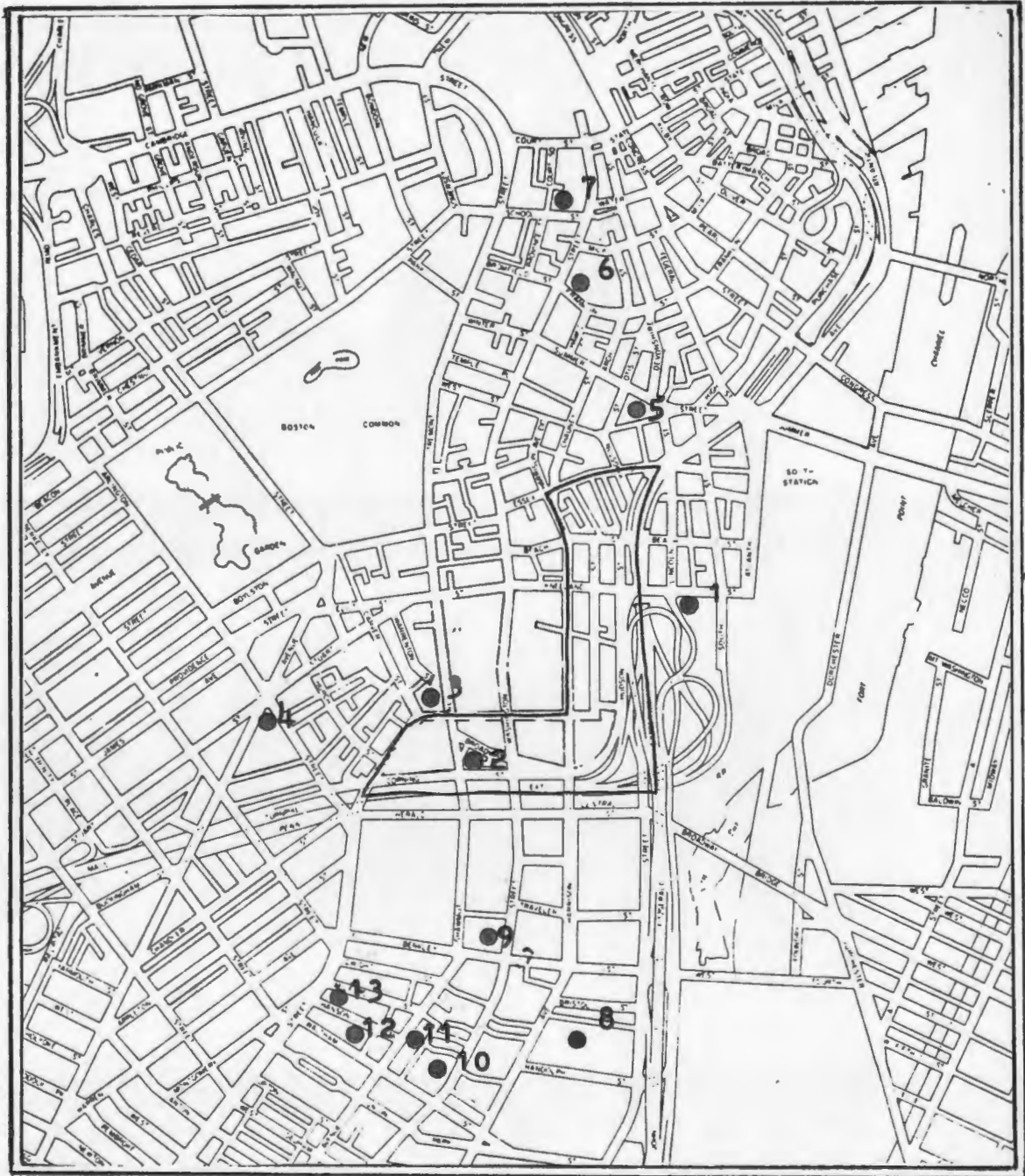
1. Pagoda Park
2. Quincy Community School
3. South Cove Plaza

1. Pagoda Park- Pagoda Park has been developed for active use. The park has several basketball courts and some play apparatus. However, this area is virtually isolated and inaccessible because it is separated from the community by the Expressway.

2. Quincy Community School - This school contains outdoor recreational facilities on its roof. The entire community is allowed and encouraged to use these facilities. The school is situated between two busy and congested streets: Washington and Shawmut. These streets are especially busy during rush hour with cars entering and leaving the downtown area. The congestion on these streets precludes young children from using the facility unless accompanied by an adult.

3. South Cove Plaza - The South Cove Plaza is an open park area which was constructed primarily for use by the tenants living in the Mass. Pike Towers, a new high rise apartment complex. Because of its location at the edge of South

Map 4 Chinatown



- | | |
|-----------------------------------|----------------------------|
| 1. Pagoda Park | 9. New Rotch Playground |
| 2. Quincy Community School | 10. Wilkes St. Play Area |
| 3. South Cove Plaza | 11. Bradford St. Play Area |
| 4. Statler Park | 12. Ringold Playground |
| 5. Charlestown Savings Bank Plaza | 13. Hanson St. Play Area |
| 6. Filene's Park | |
| 7. Boston Five Park | |
| 8. Lester Rotch Playground | |

Cove below the theater district, the plaza is not directly accessible to all residents of the community. The Tufts New England Medical Center hinders access for a majority of the residents living in the Chinatown district. Harrison, Washington and Shawmut Streets also restrict access.

Accessibility to Recreational Areas Located Outside of the Neighborhood

There are four downtown parks (Statler Park, Charlestown Savings Bank Plaza, Filene's Park and the Boston Five Park) which are situated within a one-half mile radius from the neighborhood. All of these areas are small, with the exception of the Charlestown Savings Bank Plaza, which is 8.95 acres, and were designed as passive areas to be used by local shoppers or patrons as rest spots. These areas are largely inaccessible because of the congestion in the downtown area, although most of the streets have adequate sidewalk space and numerous grade crossings. Access to these parks is also restricted by the adult entertainment area (or Combat Zone), which is particularly dangerous at night.

There are six neighborhood park and recreation areas to the south of the neighborhood, which are within a one-half mile walking distance for at least some of the residents in the South Cove neighborhood - Lester Rotch Playground, New Rotch Playground, Wilkes Street Play Area, Bradford St.

Play Area, Ringold Playground, and Hanson Street Play Area. Access might be eased into this area because of the large number of Chinese families who now live within the South End after having been displaced from Chinatown during the urban renewal development period. One park, the New Rotch Playground, an intensively developed 3.22 acre active recreation area, is situated in the Castle Square neighborhood, which is predominantly Chinese. This ethnic affiliation and association may minimize some of the fears residents might have had in travelling to an unfamiliar neighborhood. (Many of the Chinese living within Chinatown have not been properly acculturated to this country. It is estimated that 60-80 percent of the people living within the district do not even speak English. They naturally would have fears travelling to an unfamiliar neighborhood, where they are viewed as outsiders) Access is restricted by traffic along some of the streets leading to these parks. Tremont, Washington, Shawmut and Harrison Streets have particularly busy traffic, especially during rush hour. There are also not enough light crossings and sidewalks are in bad condition in certain places.

The Chinatown district does not have an adequate supply of accessible neighborhood park and recreational areas. There is not one active park site for the children within the neighborhood and congested streets preclude the use of parks in outside areas.

Since there is no immediately accessible site in which the residents may go, the children play on the sidewalks, streets and parking lots. Adults tend to congregate along the sidewalks of Beach Street. Unfortunately, the use of neighborhood streets and sidewalks is quite hazardous. Streets within Chinatown are usually very congested. Sidewalks are crowded and are littered with garbage and debris. The Hart Research Associates, Inc. conducted a survey which indicated that the people of Chinatown are very upset with the condition of local streets and sidewalks.

LOWER ROXBURY

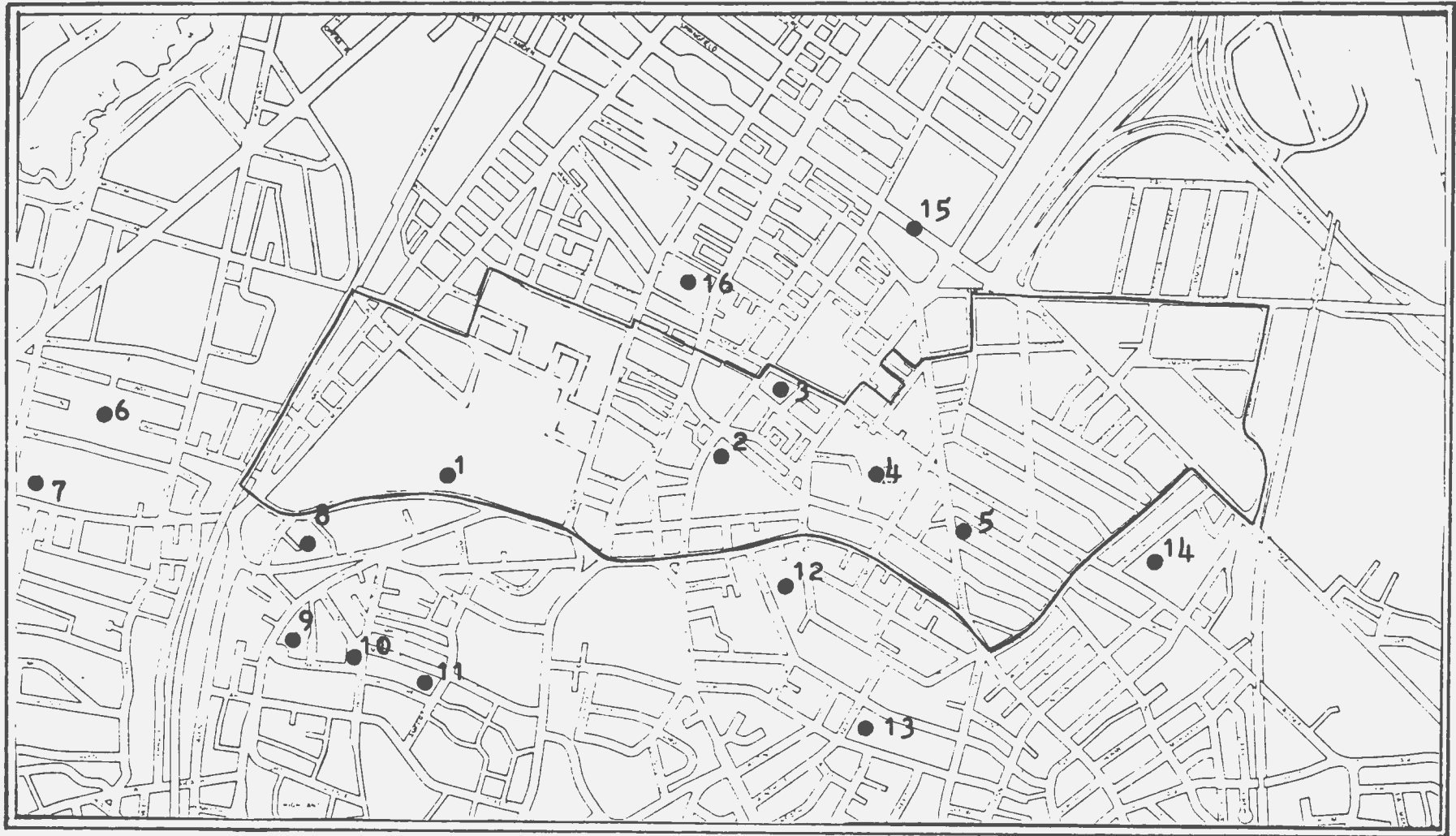
Accessibility of Recreation Areas Located Within the
Neighborhood

Because of the large size of this neighborhood, there is not one single recreational site which serves the entire community. There are five neighborhood park and recreation areas situated within the Lower Roxbury neighborhood:

1. Madison Park and High School Campus
2. Eustis Street Play Area
3. Sullivan Playground
4. Orchard Park
5. Howard Street Tot Lot

There are a number of barriers which affect park access in this neighborhood. The Dudley Station area serves as a physical barrier to pedestrian travel. In the Dudley Station vicinity, the streets are congested with traffic and there are a number of dangerous crossings. Along with commercial deterioration, this area has seen an influx in the rate of crime. There have been a number of fires, and break-ins and vandalism are very prevalent. Crime is not just isolated in the Dudley Station area. Crime has been a major problem throughout the Lower Roxbury neighborhood. The affect has been that parents are afraid to leave their young children unattended and that people in general are wary of travelling alone at night. The elderly are frequently victims.

Map 5 Lower Roxbury



1. Madison Park and High School Campus 2. Eustis Street Play Area 3. Sullivan Playground
4. Orchard Park 5. Howard St. Tot Lot 6. Perez Playground 7. Mission Hill and Smith St.
Playground 8. King St. Play Area 9. Linwood Park 10. Alvah Kittredge Park 11. Lambert
Ave. Playground 12. Mt. Pleasant Park 13. Gertrude Howe Playground 14. Edward P. Clifford
(W. Eustis) Playground 15. Massachusetts Ave. Mall 16. Derby Park

Two major streets, Washington and Hampden, which run in a north-south direction, bisect the center of the neighborhood. Other several busy streets, Columbus, Tremont, and Massachusetts Ave., also run through parts of the neighborhood.

A number of industrial firms are interspersed throughout the neighborhood. A new industrial park in the Southwest Corridor is in the process of being completed.

1. Madison Park and High School Campus - There are a few minor athletic fields at the Madison Park High School. The vocational high school and athletic fields were built as part of the Campus High Urban Renewal project. The Dudley Station - Washington Street area restricts access for those who must pass through it.

2. Eustis Street Play Area - The Eustis Street Play Area is situated on a small .23 acre site. The play area has a tot lot, other playground apparatus for slightly older children, a baseball field and a football field. The two athletic fields are in fair condition but the tot lot and playground apparatus have been vandalized and are in poor condition. The play area is accessible to all those living between Washington and Hampden Streets. Its close proximity to the Dudley Station area could also deter potential users from making use of this area.

3. Sullivan Playground - The Sullivan Playground is also in poor condition. It is accessible to all living between

Hampden and Washington Streets.

4. Orchard Park - Orchard Park is situated within one of the most deteriorating and crime ridden housing projects in the city. All of the facilities within the park have been heavily vandalized and are presently unusable. The park is directly accessible to all those living within the Orchard Park housing project. It is generally accessible to all those living between Hampden and Washington Streets, although the conditions of the park and the surrounding area may deter use.

5. Howard Street Tot Lot - The Howard Street Tot Lot is well maintained and is in good condition. There is, in addition to the tot lot facilities, a sitting area for viewing and a spray pool. Potential users living to the west of Hampden Street are discouraged from using this facility because of the busy traffic on that street. However, the city has provided a well marked crosswalk at a point just opposite the park entrance. It is generally accessible to all those living within a one-quarter mile radius east of Hampden Street.

Accessibility to Recreational Areas Located Outside of the Neighborhood

Dudley Street restricts access to a number of nearby recreational areas located to the south of the Lower Roxbury neighborhood (Perez Playground, Mission Hill and South Street Playground, King Street Play Area, Linwood

Park, Alvah Kittredge Park, Lambert Ave. Playground, Mount Pleasant Park and Gertrude Howe Playground).

All residents living east of Harrison Street are within a one half mile walking distance to the Edward P. Clifford (W. Eustis) Playground. This playground is located just outside the neighborhood, on the far side of Magazine Street. A number of industrial firms, along Magazine and Proctor Streets have hindered access to this area.

Two parks, the Massachusetts Avenue Mall and Derby Park, located to the north of the neighborhood, are within walking distance for portions of the Lower Roxbury neighborhood. The Massachusetts Avenue Mall, a 2.44 acre passive park, is cut off from the Lower Roxbury neighborhood by the Southwest Corner Industrial Park, which is situated just south of Mass. Ave. on Albany Street. Derby Park, on the other hand, is accessible to residences in the northwest corner of the neighborhood. Washington Street restricts access for potential users who live east of that street. Derby Park is a 3.11 acre, well landscaped park that has a number of facilities. On the site, there are several playfields, basketball courts and tennis courts. The park also has a large playground, with play apparatus, a spray pool and a tot lot. The park is well lit by large floodlights and is generally in good condition.

DUDLEY

Accessibility to Recreation Areas Located Within the
Neighborhood

There are four neighborhood park and recreational areas within the Dudley Neighborhood:

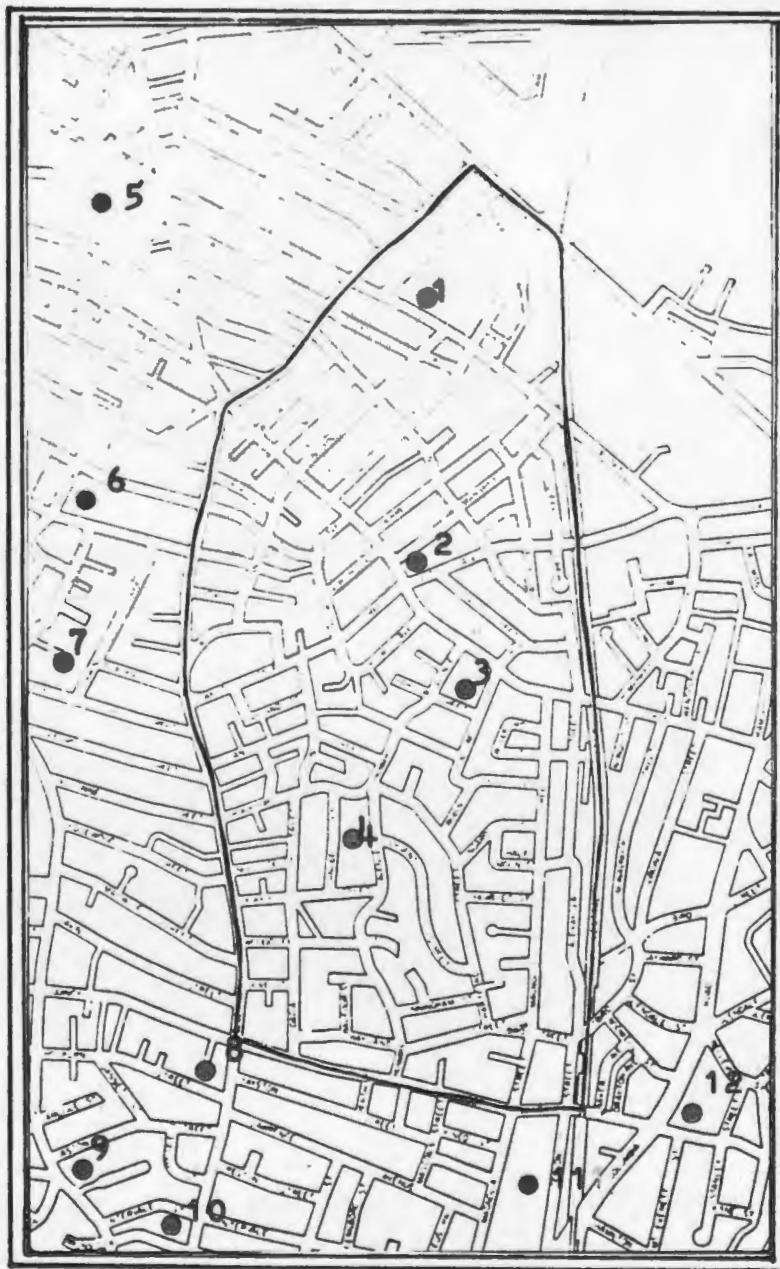
1. Edward P. Clifford Playground (W. Eustis Playground)
2. Tobin Play Area (Kiley Playground)
3. Mary Hannon Playground
4. Winthrop Park

There is one major barrier that affects the accessibility of all of the recreational areas within the neighborhood. Police statistics report that vandalism and crime are rising steadily in this neighborhood. Cars are stripped and torched nightly. Abandoned homes have been gutted and set on fire.⁸ The crime rate in this neighborhood may be the worst in the city. People, especially the elderly, are afraid to travel alone.

1. Edward P. Clifford Playground (W. Eustis Playground)-

This playground is situated at the corner of Norfolk and Proctor Streets on a 7.6 acre site. The recreational area has three softball fields, a large paved basketball court and some small play apparatus. The facilities are only in fair to poor condition. The playground is littered with debris and garbage. The playground is generally accessible to families living north of Dudley Street (Dudley

Map 6 Dudley



- | | |
|---------------------------------------|--|
| 1. Edward P. Clifford Playground | 9. Elm Hill Park |
| 2. Tobin Play Area (Kiley Playground) | 10. Brunswick-King Park |
| 3. Mary Hannon Playground | 11. Ceylon St. Playground |
| 4. Winthrop Park | 12. Quincy and Stanley Streets
Playground |
| 5. Orhard Park | |
| 6. Gertrude Howe Playground | |
| 7. Little Scobie Park | |
| 8. Quincy Street Play Area | |

Street is the only busy street that runs through the neighborhood. Most of the other residential streets do not attract that much traffic). However, industrial growth has been slowly enclosing this playground. Industrial firms are purchasing vacant lots and abandoned buildings in the immediate vicinity of this playground. As a result of this industrial speculation and growth, access to this park has been much more difficult. The two different land uses seem to be incompatible. According to Karen Harr, the neighborhood planner for this area, park attendance is dropping.

2. Tobin Play Area (Kiley Playground)- This is a small recreational area, with few facilities. It is accessible to all residents north of Dudley Street.

3. Mary Hannon Playground - The playground is situated at the corner of Howard Ave. and Folsom Street on a 1.69 acre site. The playground has one basketball court, a baseball field, and a small playground apparatus (slides, swings, etc.) The playground is in very poor condition. Most of the facilities are unusable and the area is strewn with litter and garbage. The playground is accessible to all residences situated south of Dudley Street. The playground lies immediately adjacent to a large junkyard. The junkyard has served as a barrier to access. People are also offended by the sight of the junkyard and this too has discouraged potential users.

4. Winthrop Park - Winthrop Park is a 1.57 acre area that lies adjacent to the Winthrop Elementary School at the corner of Danube and Dacia Streets. Most of the facilities at the park are either in fair or poor condition. The park has a volleyball court, one basketball court, some play apparatus and a tot lot for younger children. It is accessible to all residences situated south of Dudley St.

Accessibility to Recreation Areas Located Outside of the Neighborhood

The neighborhood is fairly well contained to the east by the Penn Central Railroad and by Blue Hill Avenue to the west. Blue Hill Ave., although not as busy as it is at a later point where it picks up traffic from Columbia, is still, nevertheless, a major barrier. There are not enough traffic lights or pedestrian crosswalks. Blue Hill Ave. restricts access to several parks which would otherwise be within walking distance (Orchard Park, Gertrude Howe Playground, Little Scobie Park, Quincy Street Play Area, Elm Hill Park, and Brunswick-King Park).

The Ceylon Street Playground is located within the Brunswick-King neighborhood and is accessible to residences situated in the southern portion of Dudley. Quincy Street hinders access to this park. However, traffic along Quincy Street is usually light.

Columbia Road, a four lane divided highway, restricts access to the Quincy and Stanley Street Playgrounds.

BRUNSWICK-KING

Accessibility to Recreational Areas Located Within the
Neighborhood

There is only one outdoor recreational area within the Brunswick-King neighborhood:

1. Ceylon Street Playground

1. Ceylon Street Playground - The playground is situated at the corner of Ceylon and Intervale Streets on a 4.035 acre site. The area has a temporary swimming pool, several athletic fields, a basketball court, two tennis courts, and a playground with slides, swings, and climbing apparatus. The overall condition of the facilities are quite poor, due to high rates of vandalism in the past few years. Overall maintainance needs to be improved. The playground is accessible to all residents living north of Columbia Road. Columbia is the only major road that intersects this neighborhood. One way streets in Brunswick-King minimize traffic congestion.

Accessibility to Recreation Areas Located Outside of the
Neighborhood

There is only one outside park which is accessible to portions of the neighborhood. Winthrop Park, is accessible to residences in the northern portion of the neighborhood. Blue Hill Ave. effectively restricts access to the Quincy Street Play Area, the Elm Hill Park and Brunswick-King

Map 7 Brunswick-King



1. Ceylon Street Playground
2. Winthrop Park
3. Quincy St. Play Area
4. Elm Hill Park
5. Brunswick-King Park
6. Ripley Playground
7. Mt. Bowdoin Green
8. Quincy and Stanley Sts. Playground

Park, all of which are located to the west of the neighborhood. The Penn Central Railroad and Columbia Road block access to Ripley Playground, Mt. Bowdoin Green and the Quincy and Stanley Streets Playground.

D STREET

Accessibility of Recreation Areas Located Within the Neighborhood

There are two neighborhood park and recreation areas within the D Street Projects Area:

1. D Street Housing Project Playground
2. Condon Community School

There are also three neighborhood parks which are located just outside the neighborhood, but still within a one-half mile walking distance for all of the residents in the D Street area. They could be considered as within the neighborhood.

3. B. Street - W. 3rd Street Playground
4. Rev. Fr. Buckley Playground
5. Sweeney Playground

There are no major barriers in this area. However, commercial and industrial activity to the north has generated more and more truck traffic through residential streets in this area. This traffic has affected park access, especially for young children and the elderly. This situation could become worse in the near future.

The Boston Marine Industrial Park, which is situated to the north of the D Street neighborhood, is expanding its industrial space. The BRA has estimated that in ten years, "2.5 times as many trucks as are currently using South Boston's streets will be heading for this industrial

Map 8 D Street Projects Area



1. D Street Housing Project Playground
2. Condon Community School
3. B Street - W. Third Street Playground
4. Rev. Fr. Buckley Playground
5. Sweeney Playground
6. Thomas Park

area."⁹ Other industrial areas, located within this same region, are also considering expanding operations.

Crime, in a less quantifiable way, also has an affect upon accessibility. Much like other low income neighborhoods in the city, the D Street neighborhood is experiencing an influx in the incidence of crime.

1. D Street Housing Project Playground - The D Street Housing Project Playground is 2.29 acres. The playground is administered by the Boston Housing Authority. There are several athletic fields, two basketball courts, a gymnasium, a swimming pool and a paved open play area at the site. All of these facilities are in fair to good condition. The tot lot, however, is in very poor condition and is unusable at the present time. The playground is situated within the center of the project area and is easily accessible to all of the people in this neighborhood.

2. Condon Community School - The Condon Community School has both indoor and outdoor recreational facilities. The Community School offers a number of different programs to people living in the area. The school is located within the project and is easily accessible.

3. B Street - W. 3rd Street Playground - The playground is situated on a small 0.28 acre site. There is a tot lot and a playground for slightly older children. All of the facilities are in good condition. The entire D Street area is well within a one-half mile walking distance to the site.

A little less than one-half of the residences in the neighborhood are within a one-quarter mile radius. Since the B Street - W. 3rd Street Playground is situated closer to the industrial activity than some of the other playgrounds, there is more traffic in the vicinity of this playground.

4. Rev. Fr. Buckley Playground - The Rev. Fr. Buckley Playground is situated on a small 0.63 acre site. There is one tot lot and other play areas on the site. The playground is accessible to the entire neighborhood. Approximately one half of the neighborhood is within a quarter-mile of the site. Some industrial firms and commercial warehouses are situated immediately north of the playground, along West First and West Second Streets.

5. Sweeney Playground - Sweeney is situated at 170 West 5th Street on a small 0.47 acre site. There is a playground, with climbing equipment, ladders and slides on the site. The playground also contains one basketball court and a wading pool. The wading pool is unusable.

Accessibility of Recreation Areas Located Outside of the Neighborhood

There is one other park (Thomas Park) which is accessible to approximately one-third of the neighborhood. Thomas Park is a 4.36 acre passive area. To gain access to this park, a resident of D. Street must cross only one major Road, Dorchester Ave., and traffic along this road is not always heavy.

CONCLUSIONS AND RECOMMENDATIONS

The accessibility of neighborhood park and recreation areas to the low income neighborhoods is quite poor. Many of the neighborhoods do not have an adequate number of accessible parks. Traffic congestion, crime and poor park conditions have especially hindered access.

There are a number of steps that should be taken to improve park accessibility within these neighborhoods.

1. The city should acquire more park space within neighborhoods such as Dudley, Brunswick - King and Chinatown, which have an especially low number of parks within walking distance. Dudley and to a lesser extent, Brunswick - King, have an abundant supply of vacant property which could be converted to park use. Acquisition would be much more difficult in Chinatown since the neighborhood is already over-congested and open space is extremely limited.
2. Efforts should be taken to divert traffic away from recreational streets in neighborhoods such as D St., Mission Hill, Lower Roxbury, which are particularly plagued with heavy traffic congestion along certain interior streets.
3. More pedestrian crosswalks, traffic lights and overpasses should be provided at all busy streets which restrict or prevent access to neighborhood parks.

4. Park maintainance should be improved, especially in neighborhoods such as Dudley, Columbia Point, Lower Roxbury and Brunswick - King. Only the D Street neighborhood has parks which are in reasonable good condition. Steps must also be taken to place a check on vandalism.
5. Crime, which has discouraged the elderly from using park areas, and which has made parents afraid to leave their young children unattended at park areas, must be stopped.

There are also two programs, which, if instituted properly, could benefit the neighborhoods by improving the accessibility of neighborhood parks:

1. Almost all of the neighborhoods could benefit from a maintainance program which would improve park conditions. The BRA has suggested that the Parks and Recreation Department or some other city agency contract responsibility of maintainance and policing of park areas to recognized community groups. By such a maintainance program, not only should park maintainance improve but community involvement with local parks should increase and a number of new jobs should be provided.¹⁰
2. A local minibus service could also improve accessibility by providing convenient low cost transportation to and from neighborhood recreation areas. A mini-

bus shuttle could greatly improve accessibility in neighborhoods such as Lower Roxbury and Chinatown, which have a number of restrictive physical barriers. This concept is not new. Elderly Shuttle Services have proved quite successful in a number of communities.

CHAPTER 5

Accessibility to City-Wide Park

and Recreational Areas

All of the city-wide parks were examined according to their accessibility to each of the neighborhoods. The criteria for the measure of accessibility to city-wide parks will be different from neighborhood parks. City-wide parks serve a larger segment of the population. Younger children and the elderly will not necessarily be the heavy users of these parks. These parks will also be heavily used by older children and adults. City-wide parks will generally be used less frequently by individual users but the actual time spent at the park per visit will tend to be longer than for neighborhood recreation areas.

The major determination of a park's accessibility will be based on two factors:

1. Is the park within a one mile walking distance?

Are there any major barriers which might restrict access? The National Recreation and Park Association travel behavior guidelines have indicated that people will, on the average, walk no more than one mile to an area of this type.

2. If the park is not within walking distance, is it accessible by public transportation? The client population, within this study, is largely dependent upon public transportation for access to any area beyond walking distance. The majority of people from these neighborhoods do not own cars. In 1970, the percentage of housing units without

cars in these neighborhoods was well above the city average.

Table 2¹ Percentage of Occupied Housing Units with no Automobile Available, 1970

City	42.1%
Chinatown/South Cove	80.7%
Mission Hill Projects Area	81.9%
Lower Roxbury	79.9%
Columbia Point	88.8%
Dudley	60.9%
Brunswick-King	61.9%

Only 42.1% of the occupied housing units within the city were without cars in 1970, while the comparative cumulative figure for the eight low income neighborhoods was well over 70.0%.

The percentage of families without automobiles may have risen since 1970. The 1977 National Urban Recreation Study reported that the percentage of families without automobiles for the city as a whole had risen to 56%.

Whether a city-wide park is accessible or not, will depend largely on the type of public transportation service offered between low income neighborhoods and city-wide parks. Service will be judged according to the directness of the route (the num-

ber of transfers), the frequency of trips and the times and days of operation.

The remaining portion of this chapter will be divided into three sections. The first section will briefly identify and discuss the city-wide parks. Section 2 will examine the walking access of city-wide parks to the low income neighborhoods and section 3 will examine the accessibility of city-wide parks to the low income neighborhoods by public transportation.

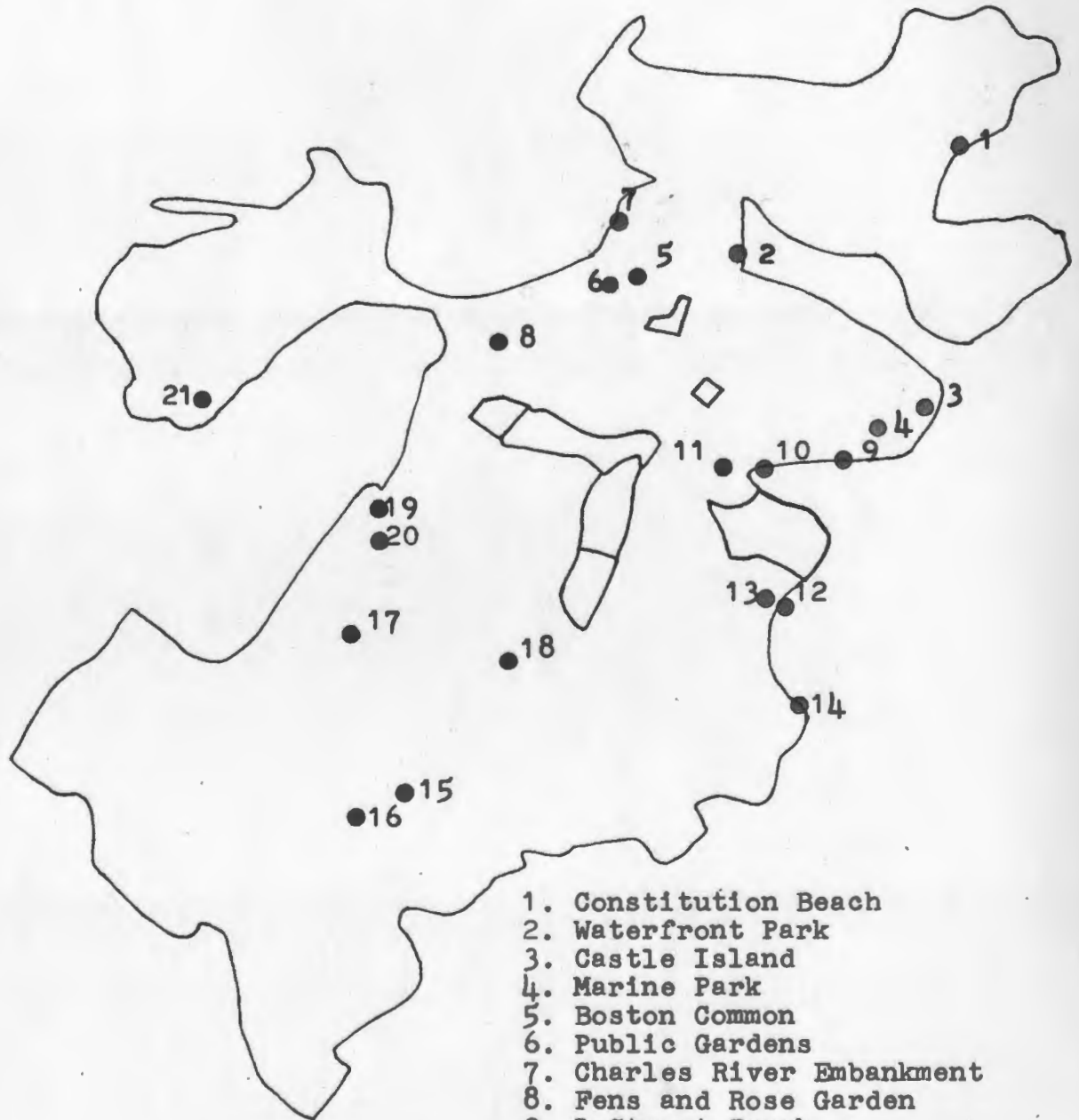
SECTION 1 THE CITY-WIDE PARKS

Twenty-one parks, parkways, recreational areas and beaches have been classified as City-Wide Park and Recreation Areas.

1. Constitution Beach 46.50 acres
2. Waterfront Park 4.40 acres
3. Castle Island 19.90 acres
4. Marine Park 17.80 acres
5. Boston Common 48.40 acres
6. Public Gardens 24.25 acres
7. Charles River Embankment 147.90 acres
8. Fens and Rose Garden 114.60 acres
9. L Street Beach 30.00 acres
10. Strandway 141.10 acres
11. Columbus Park 57.00 acres
12. Malibu Beach/Savin Hill Beach 16.80 acres
13. McConnell Park and Beach 6.70 acres
14. Tanean Beach 8.00 acres
15. George Wright Golf Course 158.48 acres
16. Stony Brook Reservation 469.50 acres
17. Arnold Arboretum 223.00 acres
18. Franklin Park
19. Olmstead Park
20. Jamaica Park
21. Chestnut Hill Park 33.50 acres

(see map 9)

Map 9 City-Wide Parks



- | | |
|---------------------------------------|------------------------|
| 1. Constitution Beach | 17. Arnold Arboretum |
| 2. Waterfront Park | 18. Franklin Park |
| 3. Castle Island | 19. Olmstead Park |
| 4. Marine Park | 20. Jamaica Park |
| 5. Boston Common | 21. Chestnut Hill Park |
| 6. Public Gardens | |
| 7. Charles River Embankment | |
| 8. Fens and Rose Garden | |
| 9. L Street Beach | |
| 10. Strandway | |
| 11. Columbus Park | |
| 12. Malibu Beach/
Savin Hill Beach | |
| 13. McConnell Park and Beach | |
| 14. Tenean Beach | |
| 15. George Wright Golf Course | |
| 16. Stony Brook Reservation | |

All of these parks are within city limits. They have been classified as city-wide parks and recreation areas because of their larger size as compared to the neighborhood parks, and/or because of their unique features or attractions. A number of these parks are part of a continuous park system called the Emerald Necklace. This park system was designed by Frederick Law Olmstead in the late 1800's. Eight major parks, Franklin Park, Arnold Arboretum, Jamaica Park, Olmstead Park, the Back Bay Fens, the Charles River Embankment, the Public Gardens and the Boston Common* are connected together by a series of parkways (the Arborway, V.F.W. Parkway, the Riverway and the Commonwealth Avenue Mall) to form a five mile continuous park corridor. Chestnut Hill Park, Castle Island and Marine Park were also originally designed by Frederick Law Olmstead. The Waterfront Park in the North End, although quite small, has recently become quite popular. Part of its attraction is due largely to its proximity to Long Wharf, the Aquarium and Quincy Market. All beaches, Constitution Beach, the Strandway, Malibu Beach/Savin Hill Beach, Tenean Beach, McConnell Beach, ~~LaStbaet~~ Beach, and the one public golf

* The Boston Common and the Public Gardens were not originally designed by Frederick Law Olmstead. They were constructed prior to when Olmstead began planning parks in the city. It was his concept to link these two parks with the rest of the parks in his system

course in the city, the George Wright Golf Course, were classified as city-wide parks, because they offer features that can not be found in any other part of the city. The two largest open space areas in the city, Arnold Arboretum and Stony Brook Reservation, are also quite unique. Arnold Arboretum is a large botanical garden with over 6000 different "specimen trees and ornamental shrubs from the North Temperate Zone around the world."² Stony Brook Reservation is a large relatively undisturbed 469.50 acre park. The park is largely wooded and contains a number of walking trails.

SECTION 2 The Walking Access of City Wide Parks to Each
of the Low Income Neighborhoods

Walking access to the city-wide parks is quite limited for almost all of the low income neighborhoods. Two of the neighborhoods, Lower Roxbury and Dudley, are not within walking distance to any city-wide parks. Most of the neighborhoods are within walking distance to no more than two city wide parks. In almost every case, access was hindered by at least one barrier.

Chinatown/South Cove

The residents of Chinatown are within a one mile walking distance to several city-wide parks - the Boston Common, the Public Gardens, Commonwealth Avenue Mall, the Charles River Embankment and Waterfront Park.

To gain access to the Boston Common, residents must walk through a congested area and must eventually cross either Tremont Street, which has three lanes of one way traffic or Boylston St., which has four lanes of two way traffic. It would be perhaps easier to take the "T". Once inside the Boston Common, access to the Public Gardens is quite easy. To get from the Boston Common to the Gardens, there is a crosswalk, walk light and ramps for wheelchairs and/or bicycles. Access from the Public Gar-

dens to the Commonwealth Avenue Mall is not that difficult. There is a walk light and crosswalk to aid the crossing of Arlington Street. Access to the Charles River Embankment and Esplanade is facilitated by several pedestrian ramps which cross over Storrow Drive. The Waterfront Park is also accessible by foot for those who are more ambitious. The Government Center is roughly one-half to three-quarters of a mile walk from the Chinatown area. Beginning at the Government Center, there is a pedestrian path ("Walk to the Sea") which leads to Waterfront Park.

In general, the residents of Chinatown have comparably good walking access to city-wide parks (when compared to other low income neighborhoods). This somewhat makes up for the extreme lack of neighborhood parks in the Chinatown area. Of course, each type of recreational area serves a different purpose and one can not be replaced by the other. With good access to city-wide parks and not to neighborhood areas, the recreational needs of the young and elderly are still not provided for.

D Street

D Street residents are within one mile walking distance to Columbus Park, the Strandway and the L Street Beach. Residents must cross several busy streets, including Columbia Road, which has four lanes of busy traffic.

Mission Hill Projects Area

The people of Mission Hill are within walking distance to the Back Bay Fens and Olmstead Park.

Access to the Back Bay Fens is hindered by the Medical Center Area and by the Boston State College and Northeastern University campuses. Residents must first cross Huntington Ave., which has four lanes and two way traffic.

Access to Olmstead Park is also hazardous. In walking to Olmstead Park from the Mission Hill Projects, one must cross the Jamaica Way, which has two way traffic and four lanes.

Lower Roxbury

There is no city-wide park within a one mile walking distance for the residents of Lower Roxbury. The Back Bay Fens is within walking distance for some residences. Access to the Fens is discouraged by a number of barriers - Tremont Street, Columbus Ave., the Penn Central Railroad and several institutional buildings.

Dudley

There are no city-wide recreational areas that are within a one mile walking distance.

Brunswick - King

The residents of Brunswick - King are within walking distance to Franklin Park. To gain access, one must cross Blue Hill Ave. near the busy Columbia - Blue Hill intersection. Both roads have four lanes and are very busy. Crime within the Franklin Park area also restricts access.

Columbia Point

The residents of Columbia Point are within walking distance to several city-wide parks. The Point residents have good access to the Strandway. Columbus Park is also readily accessible, except that Day Boulevard must be crossed and traffic along this road is at times quite heavy.

SECTION 3 THE ACCESSIBILITY OF CITY WIDE PARKS TO THE
LOW INCOME NEIGHBORHOODS BY PUBLIC TRANSPORTATION

Boston has a very expansive and inexpensive transit system. Most service is provided by the Massachusetts Bay Transit Authority (MBTA). The MBTA maintains four rapid transit lines - the Blue, Green, Orange and Red Lines - which radiate outward from the downtown area. The rapid transit system operates twenty hours each day from 5 a.m. to 1 a.m. and offers frequent and continuous service. Buses provide service to areas where the rapid transit lines do not run. Buses generally emanate from rapid transit terminals. Bus schedules vary with each route. Fares within the MBTA system are very inexpensive when compared to the rest of the nation. The basic fare for a bus and transit trip is 25 cents. Transfers between rapid transit lines are free. Free transfer is not available between buses or between rapid transit lines and buses.

Rapid transit, the orange, green, blue, and red lines is the heart of the public transportation system in Boston. Rapid transit provides the fastest and most frequent service. In addition, most all bus routes emanate from rapid transit terminals. For this reason, the type of service offered between a low income neighborhood and a city-wide park can only be determined by answering the following questions.

1. Does the city-wide park have direct access to a rapid transit terminal? If not, how frequent is the service from the park to the nearest rapid transit terminal?
2. Does the neighborhood have direct access to a rapid transit terminal? If not, how frequent is the service from the neighborhood to the nearest rapid transit terminal?

Response to Question #1

It was found that all of the parks are accessible by the public transportation system.. Rapid transit lines provide direct service to twelve of the twenty one city-wide recreation areas in Boston.(Constitution Beach, Waterfront Park, Boston Common, Public Gardens, Fens and Rose Garden, Malibu Beach/Savin Hill Beach, McConnell Park and Beach, Arnold Arboretum, Olmstead Park, Jamaica Park, Chestnut Hill Park and the Charles River Embankment).

There is not one park among the twelve parks mentioned above which is more than 100 yards from a rapid transit terminal. Three of these parks, the Public Gardens, the Boston Common and the Arnold Arboretum are accessible by more than one rapid transit line.

Buses, running from rapid transit terminals, provide fairly frequent service to the remaining nine parks (Castle Island, Marine Park, L Street Beach, Strandway, Columbus

Park, Tenean Beach, George Wright Golf Course, Stony Brook Reservation and Franklin Park).

Response to Question #2

It was determined that with the exception of Columbia Point, all of the neighborhoods are well served by public transportation. Three neighborhoods, Mission Hill, Lower Roxbury, and Chinatown, have direct access to rapid transit.

Mission Hill Projects Area

Mission Hill is well serviced by public transit. The green line (Arborway) has a stop very close to the Mission Hill Projects area.

Lower Roxbury

The Orange Line stops at Dudley Station and plans are being developed for a new terminal in the Southwest Corridor. Buses provide continuous and frequent crosstown transportation along Dudley St. These buses connect with both the green and red lines.

Chinatown/South Cove

Because of its downtown location, the Chinatown district is well serviced by the transit system. The Orange line has a stop in Chinatown at Essex Station. Residents can also reach South Station (on the red line) by walking over the depressed Central Artery Expressway.

Dudley

There is no rapid transit terminal in the Dudley neighborhood. There is one bus line that runs along Blue Hill Avenue. It can be taken north to the Dudley Station (on the orange line) or south to Franklin Park. Several bus routes run along Dudley St. and provide service to Dudley Station and to several stations on the red line (Fields Corner, Cedar Grove and Ashmont).

Columbia Point

The housing projects are served by a bus line that runs infrequently. The bus connects with the Red Line at Columbia Station and with the Orange Line at Dudley Station. A private bus carrier services the University of Massachusetts Boston Campus on a frequent basis during weekdays, but does not run on weekends.

Brunswick - King

There is no public transit connection with the Brunswick - King neighborhood. However, according to a BRA report, "the MBTA is presently studying the possibility of constructing a rapid transit terminal within the Brunswick-King neighborhood."³

A bus line running via Columbia Road connects this neighborhood with the Egleston Station (on the Orange line) and the Andrew Station (on the red line). Another bus route runs frequently along Blue Hill Ave. and connects the neighborhood with Dudley Station.

D Street Project Area

The residents can catch a bus at West Seventh Street which runs continuously between City Point and downtown. The bus stops at Broadway station, where the Red line can be picked up or a rider could continue into Essex Station and transfer to the Orange line.

CONCLUSIONS AND RECOMMENDATIONS

Most of the city wide parks are beyond walking distance for residents in these low income neighborhoods. Low income residents must rely on public transportation for access to these parks. The findings of the chapter have shown that the city-wide parks are readily accessible by public transportation to all of the low income neighborhoods, except for Columbia Point, where service is less frequent.

Although all of the city-wide parks are accessible by public transportation, there is some indication that these parks are not being properly utilized by low income residents. The Boston Parks and Recreation Dept. completed a study that reported that users of the city-wide parks within the Emerald Necklace System were mostly from the immediate vicinity of the parks. Most users walked to the parks and very few arrived by public transportation (see table 3)⁴

<u>Park</u>	<u>% Transit</u>	<u>% Walk</u>	<u>% Car</u>	<u>% Bike</u>
Boston Common	52.6	28.9	13.2	5.3
Public Garden	26.8	48.8	20.7	3.7
Back Bay Fens	8.2	68.5	19.2	4.1
Olmstead Park	2.3	64.4	18.4	14.9
Jamaica Park	1.6	62.3	26.2	9.8
Franklin Park	11.7	33.3	48.3	6.7

Since relatively few low income residents have walking access to any of these parks and since their only other means of travel is by public transportation, it would seem that these parks are not being used by the low income residents. The one exception, the Boston Common, is clearly understandable. It is the most identifiable park within Boston. Its location is known to most city residents. It is also the park which is most easily accessible by public transportation.

If there is a problem with utilization of city-wide parks by low income residents, it is most likely because;

1. the people do not know where these parks are located or do not know what type of facilities are provided at these parks and/or
2. the people are not aware of public transportation services available to them.

Lack of information about the existence and location of recreational areas has hindered access in the past and will continue to do so in the future unless some corrective measures are taken. The most noted example of an under-utilized area is the Stony Brook Reservation. The Stony Brook Reservation, although the largest park within the city, is little known and little used. Because of its accessibility to city residents, the Metropolitan Park Commission (now the MDC) predicted in 1895 that the Stony Brook Reservation would soon become one of the most popular

parks in the city. Such was never the case. The Stony Brook Reservation has seen little activity.

If the city officials truly want to improve recreational opportunities for the people, then they must first initiate a campaign that would identify all of the major parks, within the city.

It is similarly possible that low income residents are not aware of public transportation opportunities. The MBTA and the city should make information about schedules, times etc, available to lower income residents. The MBTA could also post signs with information on services to parks, beaches, etc, at transit and bus stops. The MBTA should also make bus stop locations more visible. Presently, bus stops are ill marked. Bus stop locations are usually marked by nothing more than a no parking sign with a "T" logo in the middle. Occasionally, "bus stop" is printed directly on a no parking sign as indication of a bus stop. The only identification of some bus stops is a wide red/yellow band painted on a nearby telephone pole or street lamp post.⁵

CHAPTER 6

Accessibility of Regional Park
and Recreation Areas

The regional park and recreation areas serve the recreational and open space needs of the larger metropolitan region. These areas are based on the location of an outstanding resource or special feature and may be quite a distance from the urban core. The use of areas of this type generally require more outlays of both money and time. The low income inhabitants from the neighborhoods are generally limited in their ability to make use of these areas because of their lack of discretionary income and time that may be devoted to recreational activity. Income and expenditure can be divided into that which is for subsistence and that which is discretionary. ¹ Subsistence income is the income necessary to sustain and support life. Discretionary income is the income left over after making all subsistence payments. The poor have less discretionary income and generally more of their time is devoted toward meeting basic subsistence requirements.

The poor depend on public transportation for access to regional parks. The parks were judged according to their accessibility to the inner city by public transportation. This study also examined where user park fees and time restrictions hindered access.

Only regional parks within a 30 mile radius from the center of Boston were included in this study. Following a survey of park users, Marion Clawson concluded

that people will typically travel anywhere from 20 to 50² miles for one-day recreational outings to regional parks. Mr. Clawson based his conclusions on travel by automobile and did not make any distinctions for income. The distance people will travel to regional areas will be less where travel is by public transportation. Travel by public transportation is usually less direct and takes a longer time. In addition, as mentioned previously, low income individuals have less discretionary income and less time able to devote for travel to regional areas.

The regional parks were selected, according to the definition, because of their unique features and/or large size. This study identified seventeen regional park and recreational areas.

1. Middlesex Fells Reservation
2. Lynn Woods
3. Breakheart Reservation
4. Mt. Ann Reservation and Ravenswood Park
5. Willowdale State Forest/Bradley Palmer State Park
6. Harold Parker State Forest
7. Minute Man National Park
8. Hopkinton State Park
9. Lake Cochituate State Park
10. Blue Hills Reservation
11. Ponkapoag Pond
12. Fowl Meadow Reservation
13. Wampatuck State Park

14. World's End
15. Neponset River Reservation
16. Stony Brook Reservation
17. Arnold Arboretum

(see map 10)

Information for each of these areas was obtained through site checks, from the Metropolitan Area Planning Council 1976 Regional Open Space Plan, from a 1964 survey conducted by the National Park Service, and from an Appalachian Mountain Club publication.³

Most of the regional areas are not accessible by public transportation. Public transportation does provide service to some of the areas. However, in the few cases where it is provided, public transportation is rarely direct. Transfers and scheduling are confusing and service is rarely provided directly to the park entrance. In addition, service is very often cut back or eliminated during the evenings (following the commuter rush) and weekends when recreation demands are the heaviest.

Many of these areas are quite large and recreational facilities are not always located near the park entrance, which is an additional problem. Moreover, facilities are often interspersed throughout the park and travel to and from these facilities requires an automobile. Some kind of in-park shuttle service is required for travel within

Map 10 Regional Parks



1. Middlesx Fells Reservation
2. Lynn Woods
3. Breakheart Reservation
4. Mt. Ann Reservation and Ravenswood Park
5. Willowdale State Forest/Bradley Palmer State Park
6. Harold Parker State Forest
7. Minute Man National Park
8. Hopkinton State Park
9. Lake Cochituate State Park
10. Blue Hills Reservation
11. Ponkapoag Pond
12. Fowl Meadow Reservation
13. Wampanoag State Park
14. World's End
15. Neponset River Reservation
16. Stony Brook Reservation
17. Arnold Arboretum

the park itself. This type of service has not been provided in any of these regional parks.

All of the parks, with the exception of World's End, did not close at a certain hour. Entrance fees, if charged at all, were not prohibitive.

1. Middlesex Fells Reservation - Melrose, Medford, Winchester, Stoneham

The Middlesex Fells Reservation is within 4 miles of Boston. It was one of the first reservations in the state. The reservation is presently operated by the Metropolitan District Commission (MDC). It is a very large reservation (3270 acres) and contains a zoo, walking trails, camp sites and picnic areas. The two major lakes within the reservation serve as reservoirs and are fenced off to prevent use.

Poor maintenance of park facilities limits full use of this reservation. A number of roads, which pass through the reservation, also discourage full use.

"Interior traffic circulation is presently excessive and interferes with walking and equestrian trails."⁴

I-93 divides the reservation into two sections - the western section and the eastern section. The two sections are not connected by overpasses. Both sections are accessible by public transportation, although for both sections, the bus does not stop directly at the park entrance. For the western section, the nearest bus stop

is still several hundred yards away from the park entrance. The bus stops one and one-half blocks from the eastern section park entrance.

2. Lynn Woods - Lynn

The Lynn Woods Reservation is 1400 acres in size and is owned and operated by the city of Lynn. It is situated roughly 11 miles north of Boston. The reservation is poorly maintained, with the trail system in especially bad condition. The picnic tables, walking paths and active recreation areas are not conveniently located near park entrances and are not readily accessible to those without cars.

The reservation is accessible by public transportation. However, service is not provided during evening hours or on Sundays.

3. Breakheart Reservation - Wakefield, Saugus

The Breakheart Reservation is within 10 miles of Boston. It is 600 acres and is operated by the MDC. The reservation is heavily used for hiking (or walking), bicycling, picnicking and swimming.

Although easily reached from Boston by automobile, the reservation is inaccessible by public transportation. The nearest MBTA bus stop is more than 4 miles from the park entrance.

4. Mt. Ann Reservation and Ravenswood Park - Gloucester

The Mt. Ann Reservation and Ravenswood Park adjoin

each other and are located off Route 128 in Gloucester. The Mt. Ann Reservqtion is owned and operated by the Trustees of Reservations. Ravenswood Park is owned and operated by the City of Gloucester.

Gloucester is a 1 hour, 6 minutes ride by commuter train from Boston's North Station. Local service in Gloucester is provided by the Cape Ann Regional Transit Authority. The Cape Ann Regional Transit Authority does not, however, provide service to these parks.

5. Willowdale State Forest/Bradley Palmer State Park - Ipswich, Rowley, Topsfield, Georgetown

The two parks adjoin each other and are situated 30 miles northeast of Boston. Both parks are heavily used for recreation. The Ipswich River passes through both parks.

The Boston and Maine commuter rail service provides transportation to and from Ipswich center, Monday through Saturday. However, there is no local bus service which provides transportation from Ipswich center to the Willowdale State Forest and Bradley Palmer State Park.

6. Harold Parker State Forest - North Andover, North Reading, Middleton

The Harold Parker State Forest is quite large and is administered by the Department of Environmental Management.

There is reasonable access to the site by automobile via Routes 114, 125 and I-93. The park is inaccessible by public transportation.

7. Minute Man National Park - Lexington, Lincoln, Concord

The park is administered by the National Park Service. It is roughly 750 acres. The park contains the historical 1775 battle road and Concord bridge.

Minute Man National Park may be reached by public transportation via a MBTA bus that runs from Harvard Station in Cambridge. (Harvard Station is the last stop on the red line.) The bus does not operate during the evening or on Sundays.

8. Hopkinton State Park - Hopkinton

Hopkinton State Park is a heavily used recreational area with facilities for swimming, boating, fishing, hiking, and picnicking. The park is 932 acres and located just 26 miles west of Boston.

The Wellesley Fells Bus Lines provides limited transportation to Hopkinton center. Service is not provided to the park, which is several miles from Hopkinton center.

9. Lake Cochituate State Park - Natick, Wayland, Framingham

Lake Cochituate State Park is an actively used recreational area. The park is presently used for hiking, picnicking, swimming and boating. Lake Cochituate State Park is 1032 acres and is operated by the Department of Environmental Management (DEM).

Lake Cochituate State Park is inaccessible by public transportation during the evening and Sundays. A commuter rail line provides transportation from the South Station

to Framingham center, Monday through Friday. The Wellesley Fells Bus Lines provides transportation to the park from Framingham center via Route 9, Monday through Saturday. The Wellesley Fells Bus Lines does not provide service during the evening.

The commuter rail service also stops at Natick center. A local mini-bus service provides regular transportation to and from the park. However, the mini-bus is limited to Natick residents only.

10. Blue Hills Reservation - Milton, Quincy, Braintree, Randolph, Canton

The Blue Hills Reservation is 6000 acres. It is the largest reservation administered by the MDC. The reservation is presently used for hiking, camping, picnicking, swimming and boating.

The reservation is within 6 miles of Boston. The Blue Hills Reservation is accessible by public transportation using several different routes, although service on Sunday is limited. Since the park is large, travel within the park, itself, is quite difficult without an automobile. No in-park shuttle service is provided.

11. Ponkapoag Pond - Milton, North Randolph

Ponkapoag Pond Park is situated just south of the Blue Hills Reservation. It is separated from the reservation by Route 93. The park includes the pond and 1000 acres of surrounding woods. The pond is used for fishing, but

swimming is not allowed. The MDC has cleared a number of trails. The Appalachian Mountain Club (AMC) operates sixteen cabins and a number of tent sites at the park. Tent sites and cabins may be rented throughout the year. The Young Men's Christian Association (YMCA) also runs a camp along the pond.

The park is accessible by public transportation, using the same bus that travels to the Blue Hill Reservation.

12. Fowl Meadow Reservation - Canton, Milton

Fowl Meadow Reservation is a large wetlands area situated just west of the Blue Hill Reservation. Fowl Meadow is connected with the Blue Hill Reservation by a 1.5 mile easement. Fowl Meadow has a limited trail system.

The park is accessible by public transportation, although service on Sundays is infrequent.

13. Wampatuck State Park - Hingham, Cohasset, Norwell, Scituate

The Wampatuck State Park is 2778 acres and is located approximately 15 miles southeast of Boston. The park is operated by the Department of Environmental Management. The park has picnic areas, camp sites and bicycle trails or walking paths.

The park is not accessible by public transportation.

14. World's End - Hingham

World's End is a large peninsula that extends into Boston Bay. The park is owned and managed by the Trustees of Reservations. The park is used for hiking, picnicking and fishing. Swimming is prohibited at the park.

The park is accessible by public transportation, although changeovers between trolleys and buses are confusing. There is also a charge of 50 cents at the park entrance. Children under the age of 15 are admitted free.

15. Neponset River Reservation - Milton, Canton, Boston

The Neponset River Reservation is 920 acres and is located just south of Boston. The reservation is used for picnicking, hiking and nature study. It is maintained by the MDC.

The reservation is accessible by public transportation. The park entrance is several blocks from the nearest bus stop.

16. Stony Brook Reservation - Boston

The Stony Brook Reservation has been classified as both a city-wide and a regional park. The reservation is quite large (700 acres) and is used for picnicking, hiking and fishing. It is administered by the MDC. Because of its location within Boston, it is more accessible than all of the other regional parks, with the exception of the Arnold Arboretum. Three different buses travel to the reservation from the Forest Hills (orange

line) station.

17. Arnold Arboretum - Boston

The Arnold Arboretum has been classified as both a city-wide and regional park. The Arnold Arboretum is a large botanic garden with over 6000 different trees, all of which have been labelled. Arnold Arboretum is operated by Harvard University and owned by the City of Boston.

The park is easily accessible by public transportation. Arnold Arboretum can be directly reached by both the green and orange rapid transit lines.

Conclusions and Recommendations

To be better utilized by inner city low income residents, the regional parks will have to be more accessible by public transportation. Routes will need to be extended to more regional areas. Existing service should not be eliminated or cut back during the evenings or on weekends. More direct and convenient service should also be provided.

More funds will need to be directed toward public transportation projects. In the realm of what has taken place over the last several years, it seems unlikely that anything will be done in this direction. The MBTA has just received state notice that public transportation funds will be substantially cut from next year's budget.

According to the National Technical Information Service (NTIS), for the nation as a whole, metropolitan areas have been continually cutting back in their public transportation service since World War II.⁵ Special federal funding programs that provide regular or occasional transportation services to regional park and recreation areas for the inner city poor are available. The Urban Mass Transportation Administration grants money for this purpose. The Community Services Administration also has a small funding program. These programs have been ineffective since there is little money to work with.

As another measure to improve regional park accessibility, recreational facilities, where possible, should be located near the park entrance. In any case, such things as walking trails and bikeways should emanate from the park entrance or from a point which is easily accessible.

In-park shuttle services should also be provided in large areas, such as the Blue Hill Reservation, where recreational facilities and special features are interspersed throughout the park.

It is likely that poor inner city residents are not aware of the location of these regional outlying areas. As is the case with many of the city-wide recreational areas,

poor city residents do not know what type of facilities are offered at these regional parks. Their perception of what is provided at these parks may be entirely different from what is actually the case. The 1977 National Urban Recreation study stated that many lower income city residents, interviewed throughout the nation, perceived "regional parks as do nothing areas rather than as active recreation sites." ⁶ Accordingly, whether these areas are made more accessible or not, will have no impact unless inner city residents are made more aware of the recreational opportunities at the regional areas.

SUMMARY

The low income neighborhoods in this study lack access to an adequate number of neighborhood, city-wide, and regional recreation areas. As a result, the recreational opportunities for these low income residents are limited.

Many neighborhoods have relatively few neighborhood recreation areas that are within walking distance. Many of the parks that are within walking distance are in very poor condition or are overcrowded. Access to these neighborhood parks is hindered by both physical and non-physical barriers. These barriers especially affect the accessibility of neighborhood parks to young children and the elderly.

To improve this situation within the neighborhoods, city officials should take several measures. Physical and non-physical barriers which restrict access to neighborhood recreational areas should be eliminated. This could be accomplished by diverting traffic away from residential neighborhoods. The city has effectively discouraged traffic through the Brunswick-King neighborhood by establishing one way streets. With less traffic congestion on neighborhood streets, access to neighborhood recreation areas will be less of a problem for the young and old. Where it is not possible to divert traffic away from neighborhood streets, as where a major connector bisects the neighborhood, accessibility could be greatly improved by providing more

overpasses, crosswalks and traffic lights. Park access could also be improved with a local mini-bus shuttle service which could provide low cost and convenient transportation to and from local neighborhood parks. City officials should also acquire more open space within these low income neighborhoods for recreational development and use. In establishing new recreational areas, city officials should ensure that no serious barriers limit access for the young and elderly.

Conditions at existing parks should also be improved. With better conditions at existing parks, there will be less need for new acquisitions. The city, so far, has found it difficult to properly maintain many of these areas. Maintenance crews are undermanned. Vandalism has further complicated maintenance efforts. As an alternative approach to the problem, it may be possible to contract maintenance responsibility to a recognized community group. Such community maintenance programs could be instituted on a trial or experimental basis.

The city-wide parks within Boston are accessible by public transportation. There are indications, however, that city-wide parks, although accessible by public transportation, are not being properly utilized by low income residents. City transportation officials should provide more information on the types of services and facilities offered at these city-wide parks. Officials should also

better publicize public transportation schedules and perhaps provide more direct routes to recreational areas.

Regional parks are, for the most part, inaccessible to the inner city poor. Only a few regional recreational areas are accessible by public transportation. Public transportation routes generally do not extend out to regional parks. Service is often eliminated or cut back during evenings and weekends, when park demands are the highest. Efforts should be made to correct this situation.

In addition, regional parks are often quite large and park facilities and features are not always situated near park entrances or near spots which are accessible to people without automobiles. Likewise, park facilities are often interspersed throughout the park and an automobile is required to take full advantage of all the facilities. In-park shuttle service could be provided for parks which are quite large and for parks which do not have easily accessible facilities.

The problems of accessibility to park areas for the inner city poor are largely the result of poor planning and city neglect. These problems are not insurmountable. However, it will take a conscious city and regional effort to improve the situation.

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APPENDICES

APPENDIX I

Clawson, Knetsch Outdoor Recreation Classification
System

User-oriented areas. At one extreme in our classification are the user-oriented areas, such as city parks or playgrounds. Their most important characteristic is their ready accessibility to users. Their chief time of use is after school for children, after work for adults, and during the day by mothers and small children. For these purposes, it is essential that such areas be close to users, both in order to keep the travel time down and to permit some users to go from home to the area unaccompanied by adults. The use of these areas is closely correlated with the free time available each day. Such areas are often individually small, frequently ranging from a few to a few hundred acres: their physical characteristics are not too demanding.

Resource based areas are at the other extreme. Their dominant characteristic is their outstanding physical resources. Resource quality for recreation is largely a subjective matter, yet most people would agree that some areas are inherently more attractive and outstanding than others. This applies to historical as well as to natural sites. The major areas of this type are mountains, desert, sea and lake shores, and swamps - areas that usually lie at considerable distance from concentrations of population. For most

people, a visit to a resource-based outdoor recreation area involves considerable travel, and thus both time and money in moderately large amounts; as a result, such visits are typically vacations. Except for historical sites, which are often small, most resource-based outdoor recreation areas are fairly large units, generally of several thousand acres or more. Typical of this group are the national parks and monuments, the national forests, federal wildlife refuges, privately owned sea and lake shore areas, and the like.

Intermediate areas lie between these extremes, both geographically and in terms of use. They must be well located with respect to users - typically within an hour's driving time, almost certainly within two hour's time - and they should be on the best sites available within this range. Such areas are typically used for all-day outings, and on weekends. Visits to them involve less travel time and expense than visits to the usual resource-based areas. Many such areas are state parks: federal reservoir areas also fall into this general category. Tracts of this type often include a few hundred acres; they are much larger than the typical user-oriented area, but much smaller than the typical resource-based area.

APPENDIX II Recommended Standards by Classification and Population Ratio*

Classification	Acres/1000 People	Size Range	Population Served	Service Area
Playlots	NA ^a	2,500 sq.ft. to 1 acre	500-2,500	sub-neighborhood
Vest-Pocket Parks	NA ^a	2,500 sq.ft. to 1 acre	500-2,500	sub-neighborhood
Neighborhood Parks	2.5	minimum 5 acres, up to 20 acres	2,000-10,000	¼-½ mile
District Parks	2.5	20-100 acres	10,000-50,000	½-3 miles
Large Urban Parks	5.0	100 + acres	one for each 50,000	within ½ hr. driving time
Regional Parks	20.0	250 + acres	serves entire population in small communities; should be distributed throughout larger metro areas	within 1 hr. driving time
Special Areas and Facilities	NA ^a	Includes parkways, beaches, plazas, historical sites, flood plains, downtown malls, small parks, tree lawns, etc. No standard is applicable		

APPENDIX II (cont.)

a
Not Applicable

b
By percentage of area: The National Recreation and Park Association recommends that a minimum of 25 percent of new towns, planned unit developments, and large subdivisions be devoted to park and recreation lands and open space.

*
From Robert D. Buechner (Ed.), National Park and Recreation and Open Space Standards (Washington, D.C.: National Recreation and Park Association, 1971) p. 12.

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