

A RENEWAL PROPOSAL
FOR THE
NORTH SLOPE OF BEACON HILL

by

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B. Arch., University of Texas
1956


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ABSTRACT

Title of thesis: A RENEWAL PROPOSAL FOR THE NORTH SLOPE OF
BEACON HILL

Author: Victor Boone Powell

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The objective of this thesis is the creation of an attractive and contributing urban area out of an unpreferred but strategically located apartment house district in central Boston. Current planning problems are analysed and their historical roots exposed. A visual analysis of the area is made and design objectives stated. Specific objectives and standards are derived and an area renewal plan is developed. Several techniques for its implementation are proposed and analytic examples of each are given.

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PREFACE

Definition of Thesis Area

For the purpose of this thesis, the north slope of Beacon Hill is defined as follows. It is bounded on the east by Bowdoin Street; on the south by Revere Street, the rear property line between Myrtle and Pinckney Streets, and Derne Street; on the west by Charles Street; and on the north by Cambridge Street.

The north slope has a population of about 7,500 in an area of approximately 35 acres. It is contained in Census Tracts K-1, K-2, and H-4, and forms parts of Ward #3 and Ward #5. It rises approximately 75 feet from Cambridge Street and 70 feet from Charles Street.

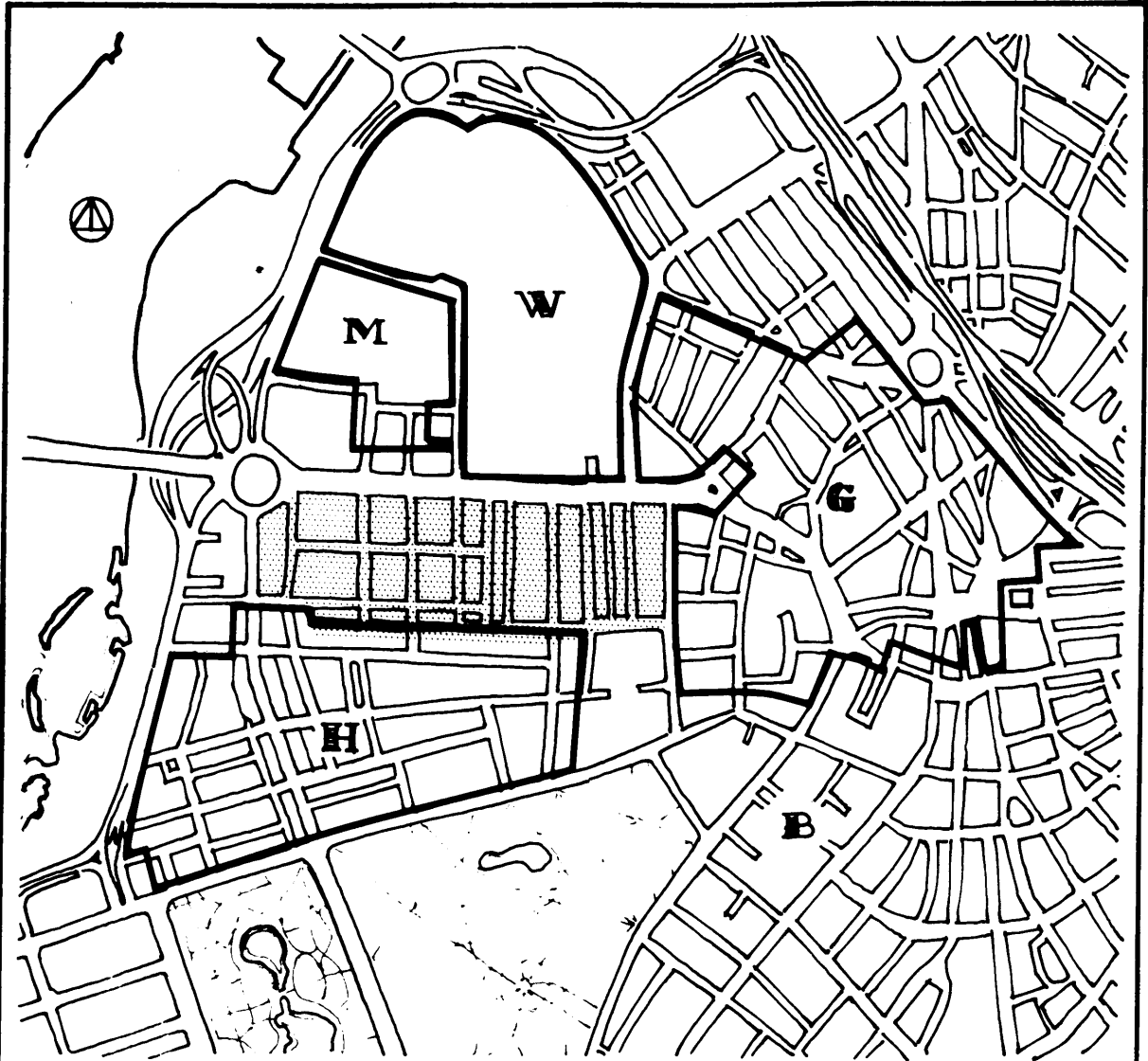
The south slope comprises the rest of Beacon Hill and also included the southwesterly portion beyond Charles Street which was built later but generally to the same high standards. In general, the south slope is that area which is covered by the special legislation of 1955 which set up the Historic Beacon Hill District.

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V I C I N I T Y M A P

- | | |
|--|---|
|  STUDY AREA |  GOVERNMENT CENTER |
|  WEST END REDEVELOPMENT |  BOSTON C. B. D. |
|  MASS. GENERAL HOSPITAL |  HISTORIC BEACON HILL DISTRICT |

0' 500' 1000'


INTRODUCTION

The north slope of Beacon Hill is surrounded by important urban land uses and renewal activity. On the south, and part of the west, slope, buildings are rigidly controlled by the Beacon Hill Architectural Commission, a body empowered by the Legislature of the Commonwealth to preserve the historical traditions and appearance of the area. The north edge is bordered by the West End Redevelopment project and the expanding Massachusetts General Hospital. To the east, the Government Center is planned. The location of the north slope in the middle of such intense and highly protected activities makes questionable its present function and its appropriateness as a strategically located part of a new urban fabric.

Most of the north slope is covered by closely packed four- and five-story brick apartment houses. These structures were built at the turn of the century, hugging a grid of narrow streets which had been laid out 170 years before. The streets cut like chasms through the mass of buildings. There are few open spaces and the sun seldom reaches the streets in winter.

But the area has its charms - an occasional glimpse of the Charles River or of the cornice of the State House, the ubiquitous corner store. Although it fails greatly in detail and obviously lacks the harmonizing elements of the south slope, it is difficult to picture it sacrificed to the bulldozer blade. Undoubtedly, the appeal of Beacon Hill would be greatly diminished by total clearance and redevelopment of its north slope.

Most of the area is not as deteriorated as other proposed renewal areas in Boston; and minor rehabilitation by private investors is not uncommon. These efforts do not affect the deficiencies of the area, however: the inadequate circulation and parking pattern, the lack of sunlight in the winter and air in the summer, and most of all, the general obsolescing of the structures.

Complicating the entire picture is the rise of property value that has resulted from the north slope's now advantageous location. Demolition and private redevelopment are now out of the question economically. Only by a change in land use, to high rise apartments or commercial use, could an adequate level of renewal be effected, by ordinary private investment processes.

If a planned program for the renewal of the north slope is put off too long, large scale federally-aided redevelopment will eventually be necessary; land write down charges will be high; and Boston will have sacrificed much of the attraction of its most elegant urban area.

A renewal plan for this area should recognize the difficulties of the Boston municipal condition but should not neglect to provide for the urban elite: potential members as well as those who are already committed to an active urban life. As David Riesman writes:

"Before World War II . . . the city provided a 'critical mass' which made possible new combinations - criminal and fantastic as well as stimulating and productive ones. Today, however, with the continual loss to the suburbs of the elite and the enterprising, the cities remain big enough for juveniles to form delinquent subcultures, but barely differentiated enough to support cultural and educational ac-

tivities at a level appropriate to our abundant economy." (1)

This is a critical situation and many large metropolises are doing an ineffective job of counteracting it. Most middle and upper income redevelopment projects are neither physically nor economically attractive to a family with young children. There need be no reason for every family who can afford it to rush off to the suburbs for the birth of the first child. The city, however, has little magnetic appeal to hold these people, as Dean Burchard has often lamented.

In broad terms, therefore, this design thesis is to deal with the creation of a sector of attractive urban space out of that narrow strip now generally thought of as "the hill." The approach will be to explore renewal techniques which seem appropriate for the accomplishment of this end.

More specifically, the text will contain an explanation of the historical roots of some of the major planning problems of the north slope and an analysis of the current situation. Standards will be derived from objectives which grow out of the current situation, but which are guided by the general goal set forth in this introduction. The objectives derived will lead to a plan for renewal based on an examination of appropriate renewal techniques. The plan itself will comprise the last section of this thesis.

1. David Riesman, "The Suburban Dislocation," THE AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCES, November, 1957, p. 132.

SECTION I

HISTORICAL ROOTS OF PLANNING PROBLEMS

Most of the current problems that pertain to the physical functioning and appearance of the north slope are seen in a much clearer light after its history is known. The north slope development is both older and newer than its more favored complement. The north slope was first settled in 1725, long before the south slope had more than a few scattered houses. The present street pattern was begun at this time (and was substantially finished by 1733) and this fact is indirectly responsible for the lack of connection with the south slope. Streets were narrow and grades difficult but not completely inappropriate to the times. The houses were mostly of wood frame construction of a cheap nature and were inhabited by artisans and mechanics working in the thriving maritime industries. The farthest reach of this development, the present route of Myrtle Street, was occupied by a rope walk (a long narrow shed for the manufacture of rope) which was not taken down until 1806. The beginnings of the north slope were modest and were soon to degenerate. As Whitehill writes, "however this remote development began, its reputation soon slipped to such an extent that the western peak of the Trimountain, on whose slopes it nestled, was dubbed Mount Whoredom."²

After 1789 when Massachusetts freed its slaves, the upper portion of the north slope which by that time had been built up in a village of small detached and semi-detached wooden houses, became

². Walter Muir Whitehill, "Boston - A Topographical History," (Cambridge, 1959), p. 40.

increasingly occupied by negroes. According to McKeever, "by the time of the Civil War this district had become a sanctuary for escaped slaves and a terminus of the Underground Railroad." ³

The building boom of the 1790's which saw the construction of the State House (1795) saw also the construction of upper class residences along the present Park Street and Tremont Street facing the Common. It was at this time that the south slope began to be attractive as a residential site for other of Boston's more influential people. In 1795 a syndicate, called the Mt. Vernon Proprietors, was formed and it bought the land now comprising the south slope. At that time, this was pasture land, or the site of country estates. A plan for the development of this land into mansion type houses was prepared by Bulfinch. His plan was not used, but some of his ideas were incorporated in the plan laid out by Mather Withington. The now famed Louisburg Square was a part of the Withington plan. Withington had planned for only 40 houses between the present Walnut Street and the river. But the Proprietors were speculators and considerably increased the number of houses to be built by decreasing the lot sizes. The lots were sold to families of high repute and the houses they built were of excellent construction and reflected their cultured tastes.

It is important to remember that the north slope, at this time, was becoming increasingly occupied by negroes and although the rope

3. J. Ross McKeever, "The Beacon Hill District," (MS.), Master's Thesis on deposit at the Massachusetts Institute of Technology Library of Architecture (Cambridge, 1935), p. 21.

walk had been taken down (in 1806) before the south slope was substantially developed, its site remained a boundary of development. The land subdivided by the Proprietors, then, was definitely bounded in extent. Because it was "back-to-back" with undesirable development, it was treated as an entity and no attempt was made to connect it to the north slope. The comparative isolation of the south slope and its orientation to the Boston Common, along with the traditions of its first settlers, have combined to keep it at a level of high maintenance and, with some exceptions, an area of prestige and relatively high income.

The north slope did not fare well and "through the first quarter of the nineteenth century, this mangy area on the northern slope of the hill - well isolated from the handsome development of the Mount Vernon Proprietors - continued as a source of disorder and a subject of complaint." ⁴

Toward the 1870's and 1880's the north slope underwent a new development. According to Firey, "by this time, thousands of immigrants from southern and eastern Europe were seeking cheap quarters in Boston and real estate speculators were quick to see their opportunity." ⁵ In more recent times, the residents of the south slope have exerted pressures to keep the north slope of the hill from 'undesirable' change. But at the turn of the 19th century, the Back Bay had been filled and become more fashionable than the south slope

4. Whitehill, op. cit., p. 70.

5. Walter Firey, "Land Use in Central Boston" (Cambridge, 1947), p. 48.

and no such protests were made. The north slope, then, was almost completely redeveloped by speculators for immigrant tenement housing in the fifteen year period from 1895 to 1910. This was accomplished plot by plot with no effort to coordinate the development or secure a harmonious design. Structures were built flush with the sidewalks to permit maximum utilization of sites and the old street pattern stayed just as it had been laid out in the early 18th century.

One part of the north slope, the area directly behind the State House, along with part of the West End, had been built at the same time as much of the south slope and at the same high standards. The famed Harrison Gray Otis house on Cambridge Street is a remnant of that period. But the areas rapidly went out of fashion and today the State House area is principally a lodging house district in deteriorated condition.

Since 1900, several attempts have been made to rehabilitate and modernize residences on both sides of Beacon Hill. Beginning about 1912 an attempt was made to restore the south slope to its former high state. According to Firey

so intense was the revival that it extended across Charles Street down to the river . . . and also across the summit and down the north slope . . . (where) a number of families in quest of a quasi-bohemian life with a touch of 'culture' located in privately developed colonies. Thus Primus Avenue, extending off Phillips Street, formerly a dirty, obscure alley notorious for its vice, crime, and frequent police raids, was reconstructed and terraced. . . . Champny Place, lying off Anderson Street, was another such development. (6)

6. Firey, op. cit., p. 121. He cites Elmer F. Murch, "A Reclaimed Beacon Hill - Primus Avenue, et. al.," BOSTON TRANSCRIPT, August 21, 1926.

The impact of this revival on the north slope was limited, however, mainly to the small courts or alleys which can be isolated from the general unsatisfactory environment. The south slope, however, managed to regain much of its former high status. Its legislative certification as a historical conservation district in 1955 further assures only gradual change - under the guidance of the Beacon Hill Architectural Commission.

Although there has been no further concentrated activity to rehabilitate the north slope, some private efforts have been made. An example is the clearance of the center of the largest block (Census Tract Block K-1, 11) by a local realtor to provide parking for the adjoining dwelling units, thus lessening the parking demand on the street system and providing open space in the center of the block for light and ventilation. Other activity has been confined primarily to minor rehabilitation - painting and fixing up plus minor plumbing changes and the addition of more modern bathroom and kitchen fixtures. Because the population of the north slope has undergone some change in recent years - from immigrant families to students, young professionals, and clerical workers - rehabilitation is increasing slightly. There is indeed hope that this area can become an attractive sector of urban Boston. But it does require, for a successful metamorphosis, a coordinated, comprehensive renewal plan.

SECTION II
CURRENT SITUATION

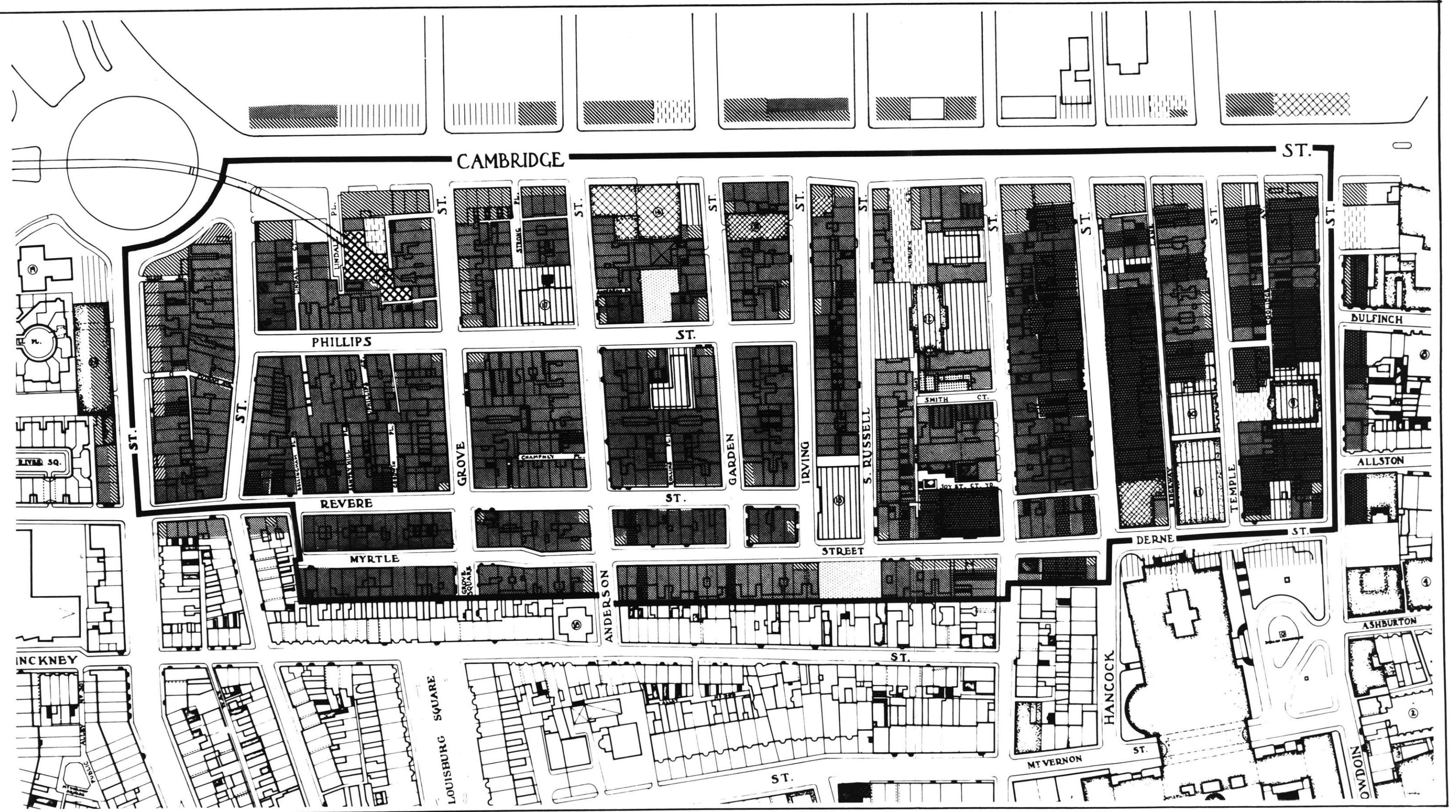
Land Use

The approximate areas for different uses on the north slope are:

Residential:	area in acres	per cent
detached	.10	.5
attached	12.79	58.0
lodging	3.57	16.2
 Non-residential:		
retail trade	1.59	7.2
manufacture and wholesale	.28	1.3
storage garage	.47	2.2
M.T.A.	.18	.8
institutions and semi-public	2.14	9.8
 Non-structural:		
parking	.34	1.5
public and semi-public open space	.25	1.2
vacant	<u>.23</u>	<u>1.1</u>
	22.04	100.0 %
 Streets:	 13.07	 37.2 (% of total area)
 TOTAL	 35.11 acres	

EXISTING LAND USE

- RESIDENTIAL**
- ▤ DETACHED
 - ▥ ATTACHED
 - LODGING
- NON-RESIDENTIAL**
- ▨ RETAIL TRADE
 - ▩ MANUFACTURE & WHOLESALE
 - ⊠ STORAGE GARAGE
 - ⊞ M. T. A.
 - ▨ INSTITUTIONAL & SEMI-PUBLIC
- NON-STRUCTURAL**
- PARKING
 - PUBLIC & SEMI-PUBLIC OPEN SPACE
 - VACANT
- STUDY AREA BOUNDARY



The north slope is composed almost entirely of multiple dwelling unit structures, excluding that portion behind the State House. Most of it lies in an R-65 zone (see Addendum 1) which allows general residence and imposes a 65 foot height limitation. Small businesses, many of which are located at the corners of the blocks, must be considered non-conforming uses. Most of these do not appear at all objectionable but, in fact, seem to add a great deal to the interest and convenience of the north slope environment.

The area behind the State House is primarily L-80, local business, and has a height limitation of 80 feet. As explained earlier, there are many lodging houses in this area and the other dwelling units are in badly run-down condition. Both the present use and the street pattern are inappropriate to its position next to the State House and to the proposed Government Center.

Both major bounding streets, Charles and Cambridge Streets, are strip zoned for business: local business (L-65) along Charles Street and general business (B-80) along Cambridge Street.

Most of the commercial uses along Charles Street are of a specialized type, including antique shops, art galleries, specialty apparel shops, and interior decorating shops. They are generally well maintained and seem healthy. The area from the Boston Common to Revere Street is controlled by the Beacon Hill Architectural Commission, which exerts considerable control over the exterior appearance of any shop undergoing repair or alteration of its store front. Although the Commission does not formally include the area covered by this thesis (see Addendum 1), from Revere Street to

Charles Circle, their standards do seem to have considerable influence on merchants in that block. It would be more desirable, however, to amend the Act to include this area with the other along Charles Street. This would guarantee more consistent control and would eventually increase the value of the northern section of the street in the Beacon Hill area.

The business uses along Cambridge Street are more non-descript, ranging from grocery stores to gas stations to parking garages. Many appear to be marginal operations and some vacancies are in evidence. This area will probably be favorably affected by the West End Redevelopment project, however. A considerable part between Staniford and Blossom Streets will be cleared and a new neighborhood commercial center constructed. This will lie just across Cambridge Street from the north slope and approximately midway in relation to the study area of this thesis.

Population

The thesis area does not correspond completely with a census tract. The method of figuring the population is given in Addendum 2. Of the 7,459 persons estimated to be in the area, 1,639 or 22% are lodgers.⁷ It is estimated that the average number of persons per dwelling unit, excluding lodging units, is 2.3. 13% of the population are children under age 15, and 10% are over 65. These are figured from 1950 Census data and although there seem to have been

7. Boston City Planning Board, Lodging House Survey, 1955.

changes in occupational status in the last 10 years, it is assumed that there has not been extraordinary change in the population composition. The area does presently house a population made up mostly of young families, single workers, students, and retired persons.

The Renewal Cycle

Urban renewal has been described as a "continuing and coordinated process of growth, maintenance and replacement of the parts of the urban structure."⁸ Correspondingly, the most essential parts of this process have, in practice, become known as development, conservation and redevelopment.

Of these essential elements only conservation or minor rehabilitation, is now being carried out on the north slope of Beacon Hill. Only one firm does what might be called major rehabilitation. They do two or three structures a year, at most. Few, if any, residential structures have been built in the last 50 years: none recently. Comprehensive continuing renewal is entirely absent. There are several reasons for this condition. The present zoning does not allow structures above 65 feet on most of the north slope. Private land assembly and construction of modern tower apartment buildings is therefore impossible. The construction of new row houses is blocked by moderately high property values and acquisition is complicated by the land ownership pattern - very small parcels with few

8. Miles Colean, "Renewing Our Cities," (New York, 1953), p. 156.

contiguous properties in common ownership. The north slope is thought by realtors to be an area of transition. Few wish to stake too much in its future; quick returns are the rule. Whereas a south slope property is worth approximately 5 times its yearly rent value, realtors will pay only 4 or 4½ times the yearly income for a property on the north slope. Minor rehabilitation brings quick returns while major rehabilitation does not. Minor rehabilitation, as it is carried out by owners, consists mainly of painting or redecoration and occasionally the addition of new fixtures. This can be done for \$80 a room - or approximately \$320 a dwelling unit; and can be regained in less than 5 years. Major rehabilitation, however, costs at least \$5,000 a dwelling unit (excluding purchase of structure) and is usually done on a 12 or 15 year mortgage. ⁹

Tax Base

Closely associated with private renewal problems on the north slope is its unsatisfactory position in the tax structure of Boston. When the West End Redevelopment project is completed, the north slope will be entirely surrounded by much more highly assessed areas. The proximity of the north slope to the planned Government Center and to the Central Business District indicates a much higher potential than is now obtained in fact. In some cities this would not be serious. In Boston, however, any addition to the tax base is of critical importance.

9. Based on the experience of a firm doing both major and minor rehabilitation on Beacon Hill.

Deterioration and Environmental Deficiencies

Housing: A housing survey of the north slope of Beacon Hill reveals that the area is divided sharply by condition into two sections, one part to the west of Joy Street, the other, primarily a lodging house district, to the east of Joy Street and behind the State House. (see Addendum 3)

In the former, the housing conditions, relative to Boston as a whole, cannot be considered seriously deteriorated. The 1950 Census listed 142 dwelling units without a private bath or deteriorated and 72 without running water or deteriorated. This was based on a survey of 1,987 dwelling units. This is a rough indication of at least 10% substandardness which contrasts with the 20% substandardness rule of federally-aided rehabilitation and redevelopment project qualification. Other factors may enter in, of course. Of 1,835 dwelling units reporting, 420 or 23% did not have central heating. By way of contrast, this figure is only 1% for the south slope of the Hill.

The 1950 Census also indicates the population of this section to be 4,860 persons. They are housed on about 10.5 net residential acres. This yields a density of 463 persons per acre or 220 families per acre at 2.1 persons per family. (Median number of persons per family for Census Tract K-1). This is an extremely high density, but that in itself is not necessarily bad. It can lead to variety and convenience for the inhabitants. But when high density is coupled, as it is here, with lack of recreation and open space and

high building coverage, it can be extremely undesirable.

The other section, that between the State House and Cambridge Street, is in much more dilapidated condition. On the currently used housing condition map of the Boston City Planning Board, this entire area is indicated as in worse condition than $2/3$ of the area under demolition for the West End Redevelopment Project. Of the 377 dwelling units surveyed in this area 92 were without a private bath or were deteriorated. This is 27.3 per cent and this figure does not include lodging houses. Based on a rooming house survey by the Boston City Planning Board, approximately 65 per cent of 140 residential structures in this area are rooming or lodging houses. In contrast, there are only 14 lodging house structures on the entire remainder of the north slope.

Although major elements of blight are relatively absent over most of the north slope, there are many minor elements in evidence throughout the area. They include: sagging, deteriorating, or non-existent gutters; loose or missing roof tiles; rotted window frames, sills, and sashes; eroded lintels; leaning chimneys, held up and together with wires, many with missing bricks; loose and missing mortar between bricks; and peeling paint.

The entire area has the advantage of good subsurface conditions. None of the north slope, as herein defined, is filled land. The foundations throughout the area are generally in good condition. Brick load-bearing walls are usually plumb and without major defects. The shell of each structure is therefore generally sound, greatly facilitating rehabilitation. Relatively low-cost redevelopment is

also feasible as even tall buildings would require only simple foundation structuring.

Building Coverage: The building pattern is very dense on the north slope. Courts and back yards resemble vertical shafts in most cases. Building coverage varies from nearly 60 per cent to more than 90 per cent of each block. Average block coverage is approximately 75 per cent. A precise calculation for 6 blocks in the center of the area reveals an average building coverage of 70.5 per cent and an average height of 4.36 floors per structure. This yields an existing floor area ratio of 3.06 (see Addendum 4).

Circulation and Parking: Most of the street pattern on the north slope was laid out prior to 1733 and was never intended to carry either the type or volume of traffic which is now imposed on the system. Both traffic flow and parking facilities are deficient. An unhappy compromise between the demands of each is in a constant state of fluctuation. Most of the streets are one way and on-street parking is illegal on at least one side of each street during the day. The same regulation generally applies to night time parking but is totally disobeyed. There are far too few legal spaces to serve the demand. The parking situation is one of the chief contributors to circulation chaos on the north slope. Parked cars obscure visibility, make street cleaning and snow removal difficult if not impossible, and cause fuel, delivery, and refuse collection trucks to park in the center of the street while conducting their business,

completely blocking traffic movement.

The present traffic situation is considered dangerous from a fire fighting point of view. This is especially true in winter and at night. Most of these problems are complicated by the topography of the Hill (see Addendum 5). Grades of 10% and up occur on Revere, Irving and Grove Streets. Most of the other streets have grades steeper in some parts than 6%.

The one positive result of the traffic confusion is that outside traffic seldom utilizes Beacon Hill streets for through traffic movements. (see Addendum 6)

Commercially-provided parking spaces are available at both the Cambridge Street and Bowdoin Square Garages at \$35 a month. Neither garage operates at full capacity. The Charles Street garage which was formed as a cooperative parking facility in 1922 has recently ceased to rent spaces.

Recreation: There are two small playlots and a space on either side of Faneuil School. All are asphalt covered. These are the only public open spaces on the north slope. Their locations and sizes are:

Play space - former Grant School site.....	.11 acres
Play space - Myrtle Street.....	.14 acres
Play ground - Peter Faneuil School38 acres
	<hr/>
TOTAL	.63 acres
	(see Addendum 7)

For comparison, Boston playground space in 1950 averaged .62 acres per 1,000 population. At present on the north slope there

are only .08 acres per 1000 persons, or, only 13% of the average for a city already far below National Recreation Association standards for playground space (N. R. A. standard - 1¼ acres per 1,000 population). Certainly not all of this difference may be explained by citing the lack of children in the area. In 1950, 13% of the population was under 15 years of age. For Boston overall, this figure was approximately 20%. Even if these proportions have changed somewhat since the 1950 Census, this area is still in obvious need of more neighborhood park and playground space.

Playlot standards are generally considered as primarily a function of accessibility and not of size. One standard is that in extremely dense areas such as this, there should be a public playlot within 200 feet of any residence. This should be conveniently placed so as not to require children to cross an even moderately busy street.¹⁰ Even if all the play space listed above is considered to double as both playlot and playgrounds, fully 2/3 of the north slope does not meet these criteria. Many residences are 800 or more feet from open public recreation space.

Play field and park space can be legitimately accounted for by public facilities along the Charles River embankment and the Boston Common. Although these areas contain facilities for passive recreation, each requires the crossing of a major thoroughfare. There are now no special facilities for sitting or walking on the north slope.

Other Deficiencies: Streets are very narrow on the north slope.

10. John T. Howard, "City Planning Techniques," unpublished class notes, p. 73 (V, C, 2, b).

Most are 10 to 15 feet narrower than Mt. Vernon or Chestnut Streets on the south slope, and in addition most of the structures are built flush to the sidewalks. Thus, another usually important source of light and air is minimized.

At present, refuse is collected three times a week. There is, however, no provision for easily accessible storage of refuse, and refuse containers, therefore, line the streets for 12 to 18 hours before each collection. Snow removal and street cleaning have been discussed under circulation and parking.

Municipal Facilities - In or Serving the Area

Schools: Peter Faneuil School is the only remaining elementary school in the area. It is located on a site of .6 acres between Joy and South Russell Streets and was built in 1910. The building is of fire-proof construction with an adequate seating capacity for future demand, although lacking play space. It is, however, considered obsolete for teaching purposes and is now tentatively scheduled to be removed within 20 years.¹¹ At that time a new school would be constructed near the north edge of the West End Redevelopment project. This is intended to serve the entire vicinity - from the Central Business District to the Charles River, from the Common to the Central Artery. There will be no elementary school on Beacon Hill (see Addendum 8). The West End Redevelopment plan retains William

11. Boston City Planning Board, tentative capital improvements programming.

Blackstone school, a junior high school which will adequately serve the area when it is reopened after remodeling.

Fire: Beacon Hill occupies part of Fire District #3. All four stations considered necessary for comprehensive protection are presently adequate. There are two stations serving the Beacon Hill area. Mt. Vernon Station at 60 River Street, built in 1949, is to be retained. Bowdoin Station in Bowdoin Square, built in 1929, is expected to be displaced by the Government Center. The consultants' report to the Boston City Planning Board is that it be relocated somewhere in the Haymarket Square area.

Police: The Police Department and the City Planning Board both recommend that Police Station #3 be abandoned. The structure is more than 80 years old and is not adequate for modern police purposes. A consolidation of downtown police stations is considered desirable and practical by police authorities. It is like that #3 station will be combined with #1 or with #1 and #2 stations at a central location. In that case, the present site of #3 will not be needed for future police functions.

Library: The West End Branch of the Boston Public Library has, until recently, occupied the Old West Church building on Cambridge Street. The library was closed, amid considerable protest, for financial reasons. The building occupies a part of the West End Redevelopment site, but is scheduled to be retained. The use has

not been finally determined but is being considered as a Protestant Church. The First Methodist Church on Temple Street has expressed its interest in the structure and is believed to have a high priority on relocating there.

Planning: A broad survey of the Boston housing situation was made by the Boston City Planning Board staff in 1958. Neighborhoods were divided into four categories of renewal need: Conservation, Rehabilitation I (modernization), Rehabilitation II (major repairs), and Redevelopment. Most of the north slope was placed in the second category, Rehabilitation I.

The currently employed Boston approach to renewal is the "roll back" plan of beginning in the more sound areas and working towards the most deteriorated. This is in the hope of securing the maximum amount of private investment, the necessity of which is dictated, in the main, by the current Boston municipal financial situation.

The Boston Municipal Research Bureau has recommended that the roll back policy of rehabilitation started in Roxbury be extended to the other practicable areas and considers this the number one priority in renewal action in Boston. ¹²

The north slope of Beacon Hill would fit in well with this concept. Financing should be more easy to secure than in many poten-

12. Boston Municipal Research Bureau, "Charting the Future of Urban Renewal," July 1959, p.vi.

tial renewal areas because the area is to be surrounded by stable, high-value, areas.

In May 1958, the City Planning Board presented a proposed new Zoning Ordinance to the City of Boston. The proposals for the north slope will be discussed in relation to the Renewal Plan.

SECTION III

ALTERNATIVES AND OBJECTIVES

The north slope of Beacon Hill does not seem logically suited for other than residential use. Although attempts have been made to establish other uses, citizen protest has prevented it. The topography is, moreover, too hilly for ordinary commercial and manufacturing enterprises. High quality merchandising has shifted from the Central Business District to Boylston, Arlington, and Newbury Streets. The Prudential Center will reinforce this trend. At present, the function of the Government Center does not seem likely to spill over into the area. The proposed center is meant to accommodate the need for State and other governmental office space for many years.

Since much of the area does not appear to qualify, in relation to the rest of Boston, for federally-aided redevelopment, and would be, indeed, far down on a priority list, the two logical alternative treatments for this area are:

- 1) Leave the area as it is except for improvement in house-keeping and city services;
- 2) Engage in a multi-faceted renewal action, maximizing private investment, under a comprehensive area renewal plan. The program should utilize available tools, and where necessary, new municipal programs, to upgrade the entire area.

Under the first alternative, major rehabilitation would probably continue as it has for some time. At the present rate, this is an insignificant action in view of the approximately 600 structures in the area. It probably would not even keep pace with the deterioration. Minor rehabilitation (essentially redecoration) will probably also continue, but this type of activity does not correct obsolescent dwelling types and even continually practiced, does not, in the long run, substantially increase the real value of the property.

The traffic situation could be improved somewhat by more diligent enforcement of day time parking regulations, but only to a limited degree. Diligent enforcement at night would only have the effect of decreasing property values. Without alleviation of parking and traffic deficiencies, improved housekeeping is almost impossible. Snow removal and street cleaning have been discussed earlier in this connection. The general appearance of the area cannot be improved, either, unless a more efficient system of refuse storage can be instituted.

Finally, therefore, although gradual improvement might occur, if the area were left alone, the gradual obsolescing of the entire area would also continue and basic environmental deficiencies would not be alleviated or corrected.

It was with these considerations in mind that the second alternative was chosen for more thorough investigation. Both the City's financial structure and living conditions should be improved. Boston should attract and hold persons capable of cre-

ating a stimulating cultural, educational, and civic environment. The north slope of Beacon Hill should be a contributing part of such an environment. Pursuant to these goals, and growing out of the current situation as described in Section II, are the following objectives for the area. Each one is considered a necessary element in a comprehensive renewal plan for the thesis area.

1) Maintain, approximately, the present density.

This is dictated partly by consideration of the overall housing supply in the metropolitan area. The overall metropolitan inventory of housing should be maintained and even increased in some areas if an expanding population is to be adequately housed. The solution for one area cannot be isolated from overall metropolitan and city consideration, and its problems shifted to another area, creating two problems where one existed before. It cannot be assumed that the existing population will be rehoused in this same north slope area after renewal; but approximately the same population number should be maintained. Just as important is the pattern of life that arises from the present density. Convenient corner stores and concentrations of specialty shops are closely related to high population density.

2) Maximize rent and property value levels while increasing stability of investments.

This objective is predicated on the need for increased municipal tax base. Although residential areas in large cities seldom pay their way and are not the primary source of revenue to the city, increasing the return from the north slope would constitute a

positive contribution that would not be insignificant.

3) Encourage new construction.

A properly operating renewal cycle - an overall balance of new construction with older carefully maintained buildings - assures a long life and continual stability for investment in an area. This must be accomplished in a coordinated way which recognizes current problems but does not sacrifice future soundness and potentials. The city should guide and direct all action through policies set up in a comprehensive area renewal plan.

4) Eliminate or alleviate deficiencies in open space and recreation space, school facilities, circulation, and parking.

Any gain made in the quality of housing would eventually be negated unless it were accomplished by increased environmental amenities. These must be supplied if young couples are to be attracted to the area and encouraged to stay when they have children. A good elementary school is often a strong magnet where young families are concerned. The strength of local institutional and civic organizations depends largely upon a nucleus of permanent families and individuals.

5) Recognize and enhance the individuality of the north slope.

The north slope is considerably different from the south slope in scale, spatial organization, living pattern, and social status. Some of these differences such as the corner store and vista-producing street pattern should be carefully retained and inte-

grated into any renewal approach for the area. The block structure should be fully utilized to create an identity for the north slope - an imageable rhythmic pattern of open space and masses.

- 6) Provide for functional interaction with the south slope and the West End Redevelopment project.

In order to take full advantage of the surrounding high-value areas, functional interaction should be facilitated with those areas. Certain facilities and ways should be shared in common. This is an essential element of fully utilizing the roll-back concept of urban renewal.

- 7) Utilize federal renewal aid when it appears reasonable and applicable.

As of July 1959, Boston, the 10th largest city in 1950, was 17th among U.S. cities in federal grants-in-aid project reservation for urban renewal.¹³ Boston should make an effort to increase its share of federally reserved funds. The City should make an effort to increase its debt limit in order to more fully utilize the existing federal program. Designation of federally-aided areas must be based on the overall city need which picks out key areas for this special assistance. Still other non-federally-aided areas should be designated as urban renewal areas in order to take advantage of liberal mortgage insurance provisions of the 1959 Housing Act.

¹³. Boston Municipal Research Bureau, "Charting the Future of Urban Renewal," July, 1959, p. 5.

SECTION IV

STANDARDS AND PROPOSALS

Introduction

This section sets forth specific elements of a renewal plan for the north slope in keeping with the objectives stated in the preceeding section. The proposed standards are meant to reflect existing conditions since the major objective of this thesis is to upgrade the existing area rather than redevelop it. They are also meant to incorporate as many elements as practical of an optimum plan for this area and the proposed population.

In the following table elements of the existing situation are given with proposed standards.

STANDARDS AND PROPOSALS

Existing Situation

Population: Families and lodgers; young couples, students, single clericals and elderly

Density: 460 persons/net residential acre. This is 220 families per net residential acre at 2.1 persons/median family

Building Coverage: Present average: approximately 75% of each block

Housing: 10% to 27% substandardness: 23% without central heating; some minimum rehabilitation; few structures that have had major rehabilitation

Program Elements and Proposed Standards

Same general composition; possibly fewer lodgers

Approximately the same. Not to exceed 225 families/net residential acre

Coverage reduction where economically feasible

Opening up of center of larger blocks; demolition of some residential structures at key points

Clearance of small wooden or temporary sheds

Clearance of entire blocks in some cases and construction of tower apartments covering only part of the same site

Clearance and redevelopment for the worst areas utilizing federal subsidy

Existing Situation

Housing: (continued)

Rent: Median rent 1950 Census: \$41.72 per month

Estimated 1960 rent: \$90.00 per month (rise of \$5.00 a month once each year is considered average)

Range: \$65.00 to \$200.00 per month

Estimated average rent south slope \$200.00 per month. Estimated schedule for West End Redevelopment \$125.00 to \$450.00 per month

Circulation: Automobile: one and two-way streets; streets too narrow for two-way traffic

Pedestrians: sidewalks - no other special provision

Program Elements and Proposed Standards

Rehabilitation through forced conformity to an area renewal plan

Block corporation to coordinate rehabilitation of entire blocks and resale to private owners or investors

Central heating of all units - utilization of fuel oil to facilitate servicing

For rehabilitation areas (1960 dollars) median rent: \$130.00 per month. Range: \$95.00 to \$300.00 per month

For redevelopment area next to State House for middle and upper income families (1960 dollars): range: \$150.00 to \$200.00 per month for efficiency and one bedroom units

Lower rents if limited dividend is applied: (approximately \$25.00 less for efficiency unit; approximately \$35.00 less for one bedroom unit)

Automobile: simplified street pattern; use only one-way streets

Pedestrians: special pedestrian walkways

Existing Situation

Parking: Parking regulations: on-street one side day or night (general condition)

Garage facilities: Cambridge Garage: 250 spaces

Bowdoin Square Garage: 850 spaces - estimated 100-200 of these available to residents of north slope

Service station, open lots, etc., estimated 50 additional spaces

Recreation: Present inventory: playground and lots: .63 acres or .08 acres per 1,000 population

Program Elements and Proposed Standards

Parking regulations: no parking on any street 2 a.m. to 8 a.m.; residents with cars must garage them

Parking in selected areas one side of street only, 8 a.m. to 2 a.m.

Specially designated areas for deliveries of merchandise and fuel oil

Garage facilities: 7 spaces for each 10 dwelling units (based on a floor area ratio of 3.0)

Model situation: 3 spaces per 10 dwelling unit self-contained in each block; 4 spaces provided in large private or municipal garages

Use of all tops of garages for open space, and community facilities (excluding Cambridge Street garage)

Playground: one large playground in conjunction with elementary school

Playlots or open space: at least 1 public or semi-public open space within 200 feet of each dwelling unit

Existing Situation

School Facilities: Elementary: Peter Faneuil School; site .6 acres; capacity 450

Junior high: in vicinity, William Blackstone; site .75 acres; capacity 450; now being remodeled

Zoning: Mostly R-65

Note: present building coverage is about 75%. Present floor area ratio is approximately 3.0

Program Elements and Proposed Standards

Elementary: new school with central location; enlarged site; capacity 500-600 to provide for all of Beacon Hill and West End Redevelopment Project; should have high educational standards

Junior high: retain Blackstone School

Assuming Boston adopts an ordinance based on Floor Area Ratio (proposed 1958)

Adoption of 3.0 floor area ratio with maximum building height of 85 feet

Retain residence use category

Special provision to allow commercial use on all corners in each block with maximum size for each location of 400 square feet

SECTION V

VISUAL ANALYSIS AND DESIGN OBJECTIVES

The present visual aspect of the north slope of Beacon Hill can be more conveniently described if abstracted to its two principle components: natural topography and man made topography.

The natural topography is perhaps best characterized as an oblong inclined plane warped down at its west end. Running along the crest and down to Charles Street are Pinckney and Myrtle Streets. At the top it is nearly 75 feet above Cambridge and Charles Streets. The average grade of the hill is about 8%.

From its slopes panoramic views to the north and west, over the Charles River, are occasionally had. At the top, tall apartment houses could have 360° visibility of Boston. The hill makes possible a multitude of vistas and numerous visual focal points are revealed from its slopes.

The man made topography consists of a grid of voids, the streets, and a series of masses, the structures. The masses rigidly channelize observation of the surrounding areas. Some views are closed by buildings; most are slightly open ended. The vistas created are one of the strongest features of the north slope. A few of these terminate in strong natural or man made focal points. The main tower of the Massachusetts General Hospital is on the axis of Grove Street. The Charles River is glimpsed from the sloping westerly portion of Revere Street. It appears that the

West End Redevelopment Project will supply minor focal points for a number of streets in the eastern section of the area (see Addendum 9).

Occasionally there are spaces which open, sometimes surprisingly, off the streets. There are small court ways such as Primus and Rollins Places and sometimes a glimpse of the center of a block. Nothing like Louisburg Square exists on the north slope, however.

Paul Zucker, in Town and Square,¹⁴ describes squares as psychological parking spaces within the civic landscape. This term suggests a function apart from that of merely providing light and air. The square can supply a mental and physical change of pace. There are presently few reasons to change pace while walking on the north side of Beacon Hill. The grades are not softened by visual delight or by a series of imagable features.

Fine details, so characteristic of the south slope, seldom induce a change of pace here, but are an important aspect in visual analysis of the north slope. The narrowness of the streets and the closeness of the structures tend to focus attention down upon architectural details; brick sidewalks, stone curbs, stairs and foot scrapers with an occasional glance into an entryway or at a bay window and upwards to the sky.

The most visually dynamic aspect of the closeness of the street pattern is produced by a combination of physiological and

14. Paul Zucker, "Town and Square," (New York, 1959).

psychological factors. In a narrow, almost totally enclosed urban space the sky may appear to be only 2 or 3 times the height of the surrounding structures, thus forming a completely enclosed space. This effect is particularly strong along some streets near the crest of the hill. An unexpected view of the horizon or of the Charles River explodes the box with an almost violent suddenness.

The most important aspects of visual and spatial impression on the north slope can be summarized as (1) architectural detail (2) open space (3) vistas. Each should be carefully considered as design elements when formulating a renewal plan for this area. Consideration of these factors has been expanded into a set of objectives which have the following points:

- (1) Make maximum use of the topography of the hill for providing visual interest
- (2) Preserve strong vistas and focus on symbolic structures
- (3) Supply focal points at key places along pedestrian ways
- (4) Accentuate the natural topography with tower structures
- (5) Create a variety of open spaces throughout the area
- (6) Pay particular attention to re-conditioning and conserving architectural details (entry ways, corner store fronts)

SECTION VI

RENEWAL PLAN

RENEWAL PLAN

USE

- MULTI-FAMILY RESIDENTIAL
- LODGING
- ▨ COMMERCIAL
- ×× PARKING GARAGE
- |||| INSTITUTIONAL

CIRCULATION & OPEN SPACE

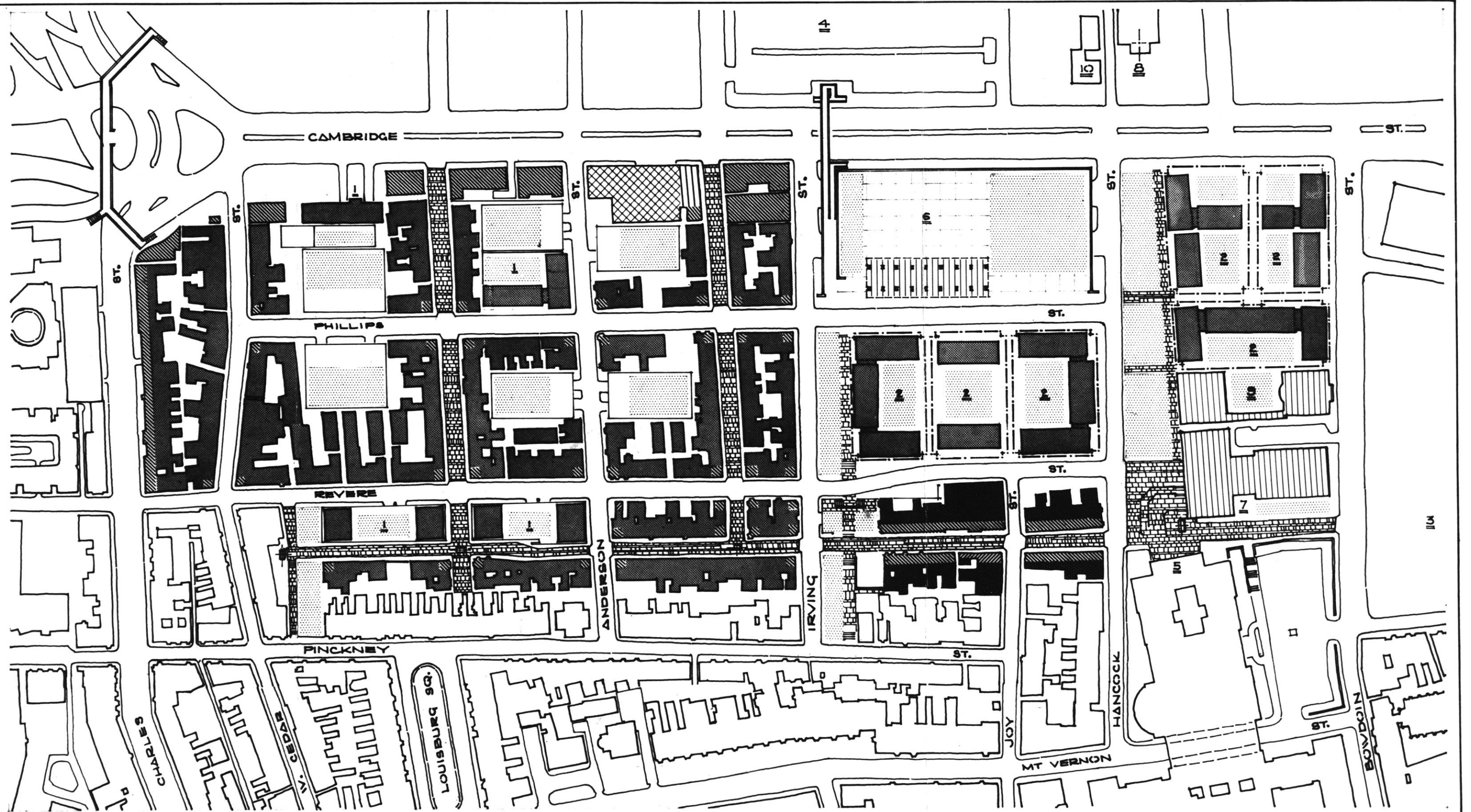
- ▨ PEDESTRIAN WAY
- ⊕ VISUAL FOCAL POINTS
- ⋯ UNPAVED OPEN SPACE

REDEVELOPMENT

- 1 MUNICIPALLY-AIDED
- 2 FEDERALLY-AIDED
- 3 GOVERNMENT CENTER
- 4 SHOPPING CENTER - WEST END REDEVELOPMENT

DESIGNATED STRUCTURES

- 5 STATE HOUSE
- 6 NEW FANEUIL SCHOOL
- 7 SUFFOLK UNIVERSITY
- 8 1ST METHODIST CHURCH
- 9 SOC. OF ST JOHN THE EVAN
- 10 OTIS HOUSE



CIRCULATION

VEHICULAR

- TRAFFIC PATTERN
- ▶ DIRECTION OF FLOW

MASS TRANSIT

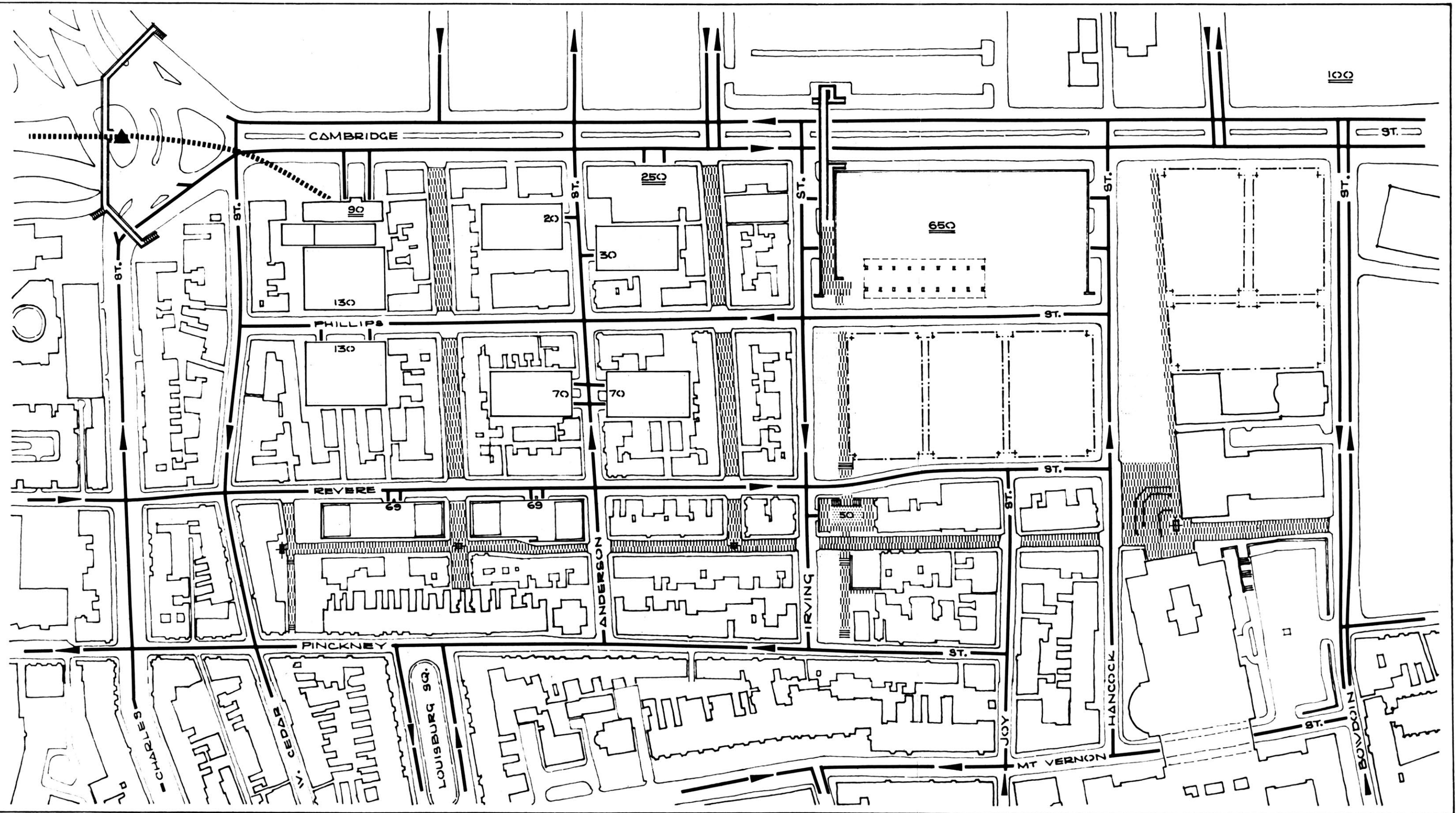
- ▬▬▬ TRANSIT RIGHT-OF-WAY
- ▲ STATION

PEDESTRIAN

- ▬▬▬ PEDESTRIAN WAY

PARKING

- OO PRIVATE GARAGE · NO OF SPACES
- OO MUNICIPAL OR COMMERCIAL GARAGE · NO OF SPACES



SECTION VI

PROPOSED RENEWAL PLAN

The proposed renewal plan is an illustration of what should be done for the north slope of Beacon Hill in order to make it an attractive and desirable place to live for that section of the population who often enjoy an urban life: young professionals, single workers, young families just establishing themselves, couples without large families, and middle aged or older couples whose own children have married and have homes of their own elsewhere. It is further an example of what could be done with a variety of renewal tools. The success of such a plan depends on the general desire for the revitalization of the central city and it is assumed that the signs of its beginning are evidence of such a desire.

Circulation: the circulation plan proposes a system of one-way traffic movement on existing streets, except that Irving Street has been cut through to Pinckney Street to provide a complement to Anderson Street. Grove, Garden, and part of South Russell Streets running north and south, and Myrtle and Derne Streets running east and west have been closed to traffic and made into pedestrian ways. Parking regulations and provisions are covered in appropriate places in this section.

General Features: for the area as a whole, the renewal plan contains several features. Open space is included in a variety of ways - some pedestrian ways, some small parks, and other open areas

provided through redevelopment at lower coverage. Connections to the south slope are provided in the form of pedestrian walks and green spaces.

Central to the residential revitalization of central Boston is the provision of a good public elementary school. Such a school should have high standards and frankly act as a magnet for professional families and those in higher income ranges. Boston has already considered the necessity for a new grammar school in this general area and a 2.3 acre site has been reserved in the West End Redevelopment project. That site is centrally located for neither the redevelopment area alone, nor for the total area it is supposed to serve. A 2.5 acre site for this school can be provided as part of a redevelopment area on the north slope and it is proposed that this be done. Depending on the population composition of the new West End, two such schools might be needed. The north slope site includes the present site of Faneuil School and also that of Police station #3 which is scheduled to be abandoned and demolished as part of the city's program of consolidation of police stations in the central city area. The school would be on a platform; and parking for nearby residents would be provided under the platform, taking advantage of the slope of the hill.

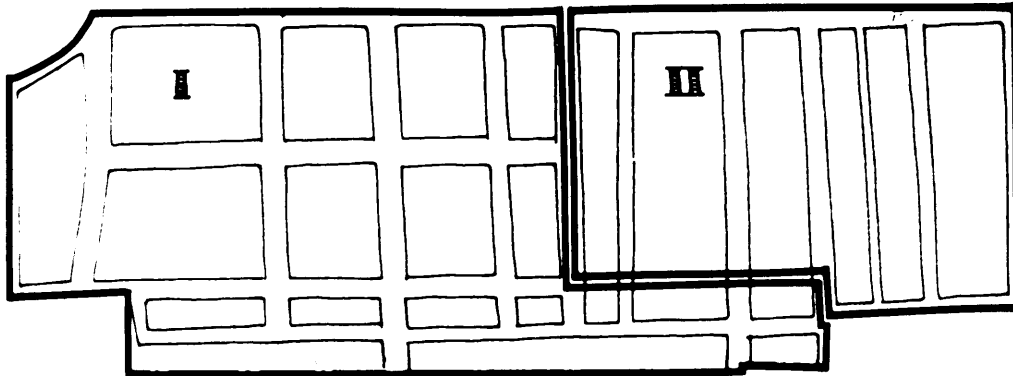
The renewal plan also proposes that the Beacon Hill Chambers for men be retained and that lodging houses be concentrated in this vicinity near the State House, along with a small local business area.

The plan includes increased and more efficient services for

the area. Cost calculations include amounts for general house-keeping of open spaces and pedestrian ways, and consolidated refuse disposal areas.

The most important general feature of the plan is that it provides a variety of types of housing at a variety of rents. This area should be a vital area, a lively urban scene, and it is the contention of this thesis that a vital urban area arises from the countless combinations - "stimulating and productive ones" - that a varied population affords.

The total 35 acre area is divided into two parts: Area I of 21.58 acres for rehabilitation primarily; and Area II of 13.53 acres for redevelopment. The map on the following page indicates the extent of each area. In each area, different renewal techniques will be applied. An analysis of each will be given by example.



RENEWAL AREAS

KEY	TYPE OF PROGRAM	TYPE OF TREATMENT	SIZE ACRES
I	MUNICIPALLY AIDED	BLK. REHABILITATION & SPOT REDEVELOPMENT	21.58
II	FEDERALLY AIDED	REDEVELOPMENT	13.53
TOTAL AREA			35.11

0' 400'

Municipally-aided Renewal

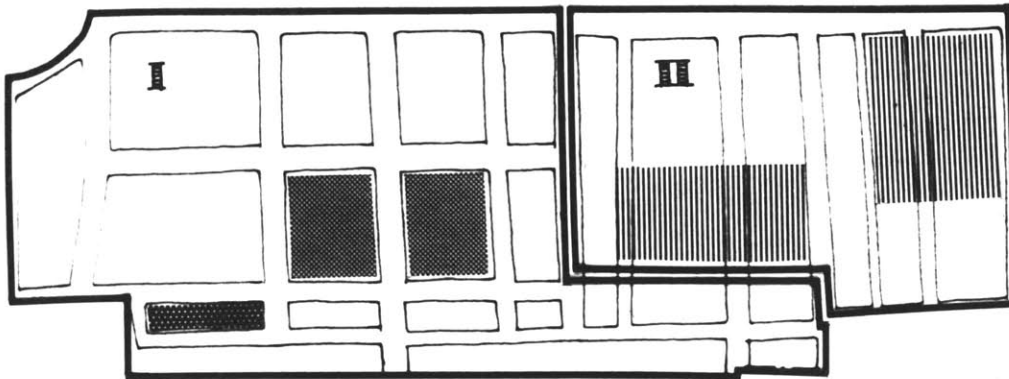
Area I is to be rehabilitated with spot clearance and redevelopment in certain areas. It could probably qualify for federal subsidy in most communities, but funds are limited for any one community and other areas in Boston are more in need than it. Investment opportunities on the north slope are attractive because of a basically strong location and surrounding land uses. While it is usually difficult to bring in private investment in projects which are surrounded by, and are themselves, blighted areas, this situation does not obtain on the north slope. This area might be treated as a municipal rehabilitation area with private investment supplying nearly all the capital. The municipality would supply the legal power for land assembly, standards, a renewal plan, some implementation, and relocation aid. F.H.A. long-term financing would be essential, however, to reduce the amount of equity money invested by the entrepreneurs. In such surroundings, if the action were part of Boston's "workable program," § 220 might be utilized. The use of § 207, applying to construction and rehabilitation of multi-family structures in unblighted areas, might also be possible if the area can qualify. This seems a likely possibility when the West End Redevelopment and the Government Center projects have removed surrounding blighted areas.

Two distinct types of treatment are proposed for Area I:




- 1) Block rehabilitation with, in some cases, center block clearance for open space and parking.
- 2) Block clearance and residential redevelopment to provide open space and garage facilities.

Action should be on a block-by-block basis. The smallest parcel for rehabilitation or redevelopment should be a complete block, a provision which would greatly facilitate adequate treatment. A private corporation for performing these actions might be set up and regulated as follows.

- 1) Formation of block rehabilitation or redevelopment corporation for each block; may be composed of single or multiple investors; present owners would have first priority in setting up corporations.
- 2) Acquisition of the entire block by the City.
- 3) Corporation posts bond and acquires title to property, subject to compliance with a block rehabilitation or redevelopment plan.
- 4) Corporation rehabilitates or redevelops block in conformity to standards and plan as per agreement.
- 5) Resale of parcel to individual investors subject to deed restriction necessary for continued operation OR continued holding of entire block by the corporation for investment purposes.



LOCATION OF EXAMPLE AREAS

AREA	TYPE OF PROGRAM	TYPE OF TREATMENT
I 	MUNICIPALLY AIDED	BLK REHABILITATION
	" "	BLK REDEVELOPMENT
II 	FEDERALLY AIDED	REDEVELOPMENT



Block Rehabilitation: Block Rehabilitation under the proposed plan consists mainly of rehabilitation and the provision of parking and open space. The most satisfactory technique for correcting the existing environmental deficiencies would include the clearing of the centers of the blocks and in that space providing parking under platforms with landscaping on top, taking advantage of the slope of the hill and correcting two deficiencies in one type of development. Some structures will have to be removed both to provide sufficient open space and to allow entrance and exit for the parking spaces. The total number of dwelling units will remain approximately the same, however, as major rehabilitation of some of the larger remaining structures will include conversion of each existing dwelling unit to two smaller, more modern units. This is to be done by gutting of an entire building, leaving only the structural shell, and redoing the entire interior. Most of the retained structures will be subject only to minor rehabilitation, however, which includes painting, decorating, and general fixing up.

Exterior repair of all retained buildings will include painting of sashes, doors, and trim, brick cleaning and pointing, gutter replacement, and minor roof work. The addition of shutters would improve the appearance of most facades which were originally designed for them. Attention should be given to the possibility of recessing entry ways and of painting brown and yellow brick buildings gray or mauve.

The population to be housed in these rehabilitated units would be much the same as is now housed there: some young profes-

sionals (often sharing apartments), some elderly couples, and many households of married students and other young married couples. There are now many children in this area and it is suggested that the proposed changes would make an even more attractive environment for this type of household.

Parking is provided at the rate of 7 per 10 dwelling units: 3 spaces on site, and an additional 4 spaces in central garages on Cambridge Street. The Charles Street station is within a five minute walk and provides connections directly to Park Street and to Cambridge. The area is within walking distance of MIT, although in inclement weather automobile transportation is desirable.

The commercial space on Charles Street and the corner stores on the slope which are to be retained are sufficient to meet the everyday needs of this population. Weekly shopping will be provided for by the new commercial development which is to be part of the West End Redevelopment project's Cambridge Street frontage. It is primarily intended that this area continue to serve the type of population now living there, with increased environmental values.

BLOCK REHABILITATION

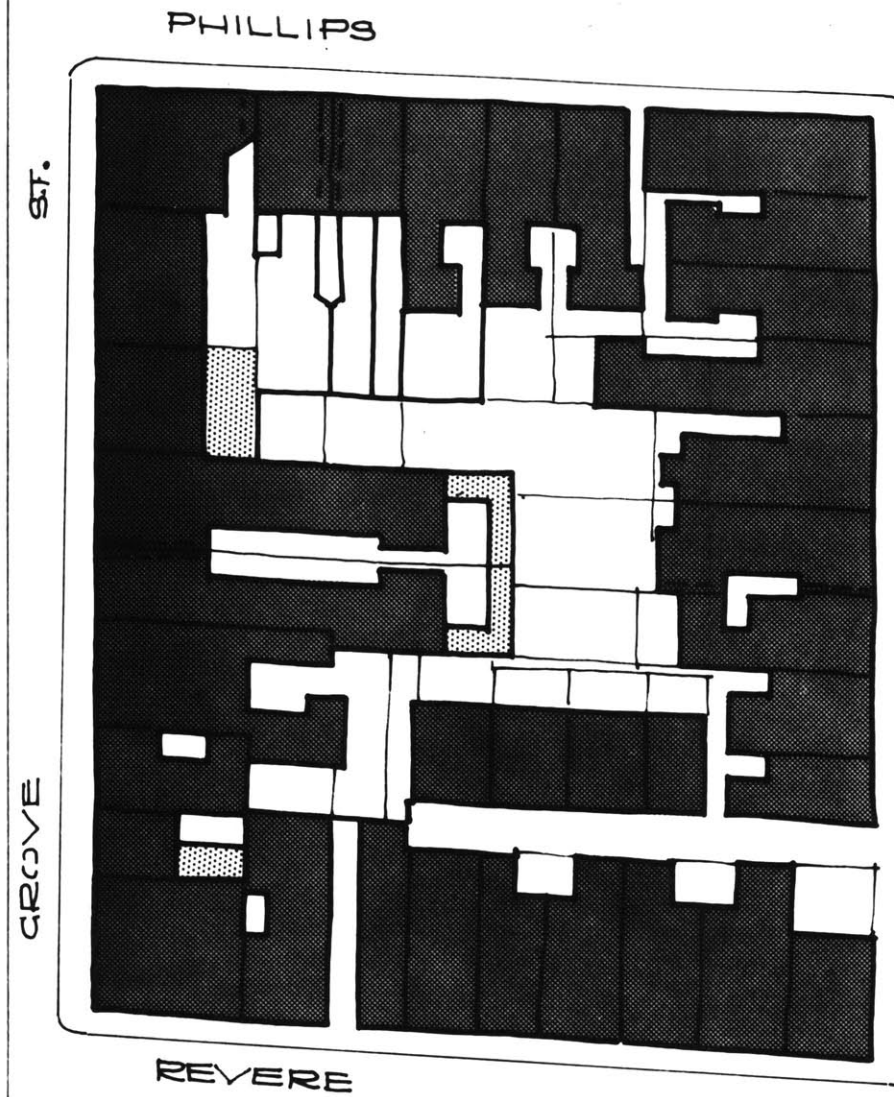
BLOCK "A" - EXISTING

67% BUILDING COVERAGE
292 F. A. R.
35 RESIDENTIAL STRUC'S.
227 DWELLING UNITS

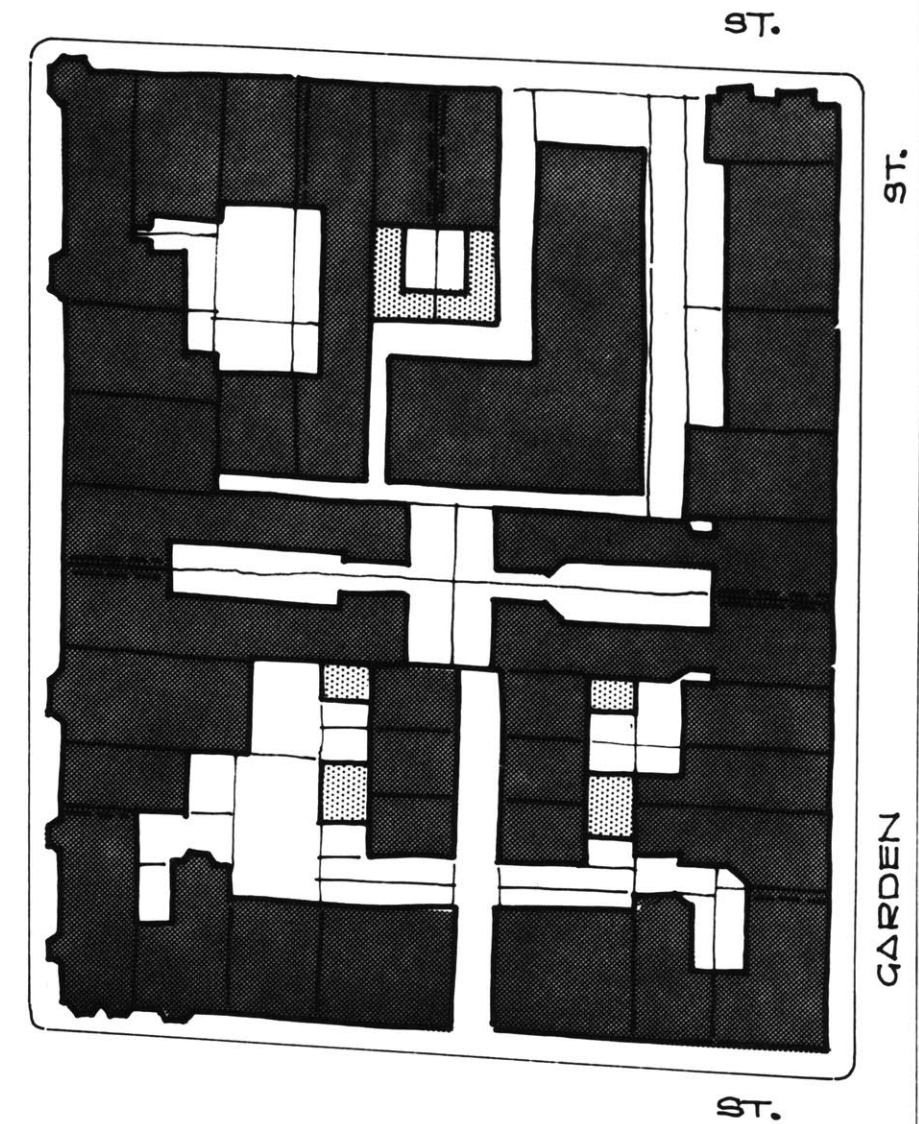
BLOCK "B" - EXISTING

71% BUILDING COVERAGE
3.1 F. A. R.
34 RESIDENTIAL STRUC'S.
227 DWELLING UNITS

BLOCK "A"



BLOCK "B"



0' 50'

A horizontal scale bar with tick marks, indicating a length of 50 feet.

BLOCK REHABILITATION

BLOCK "A" - PROPOSED

56% BUILDING COVERAGE
 2.43 F. A. R.
 30 RESIDENTIAL STRUC'S.
 230 DWELLING UNITS

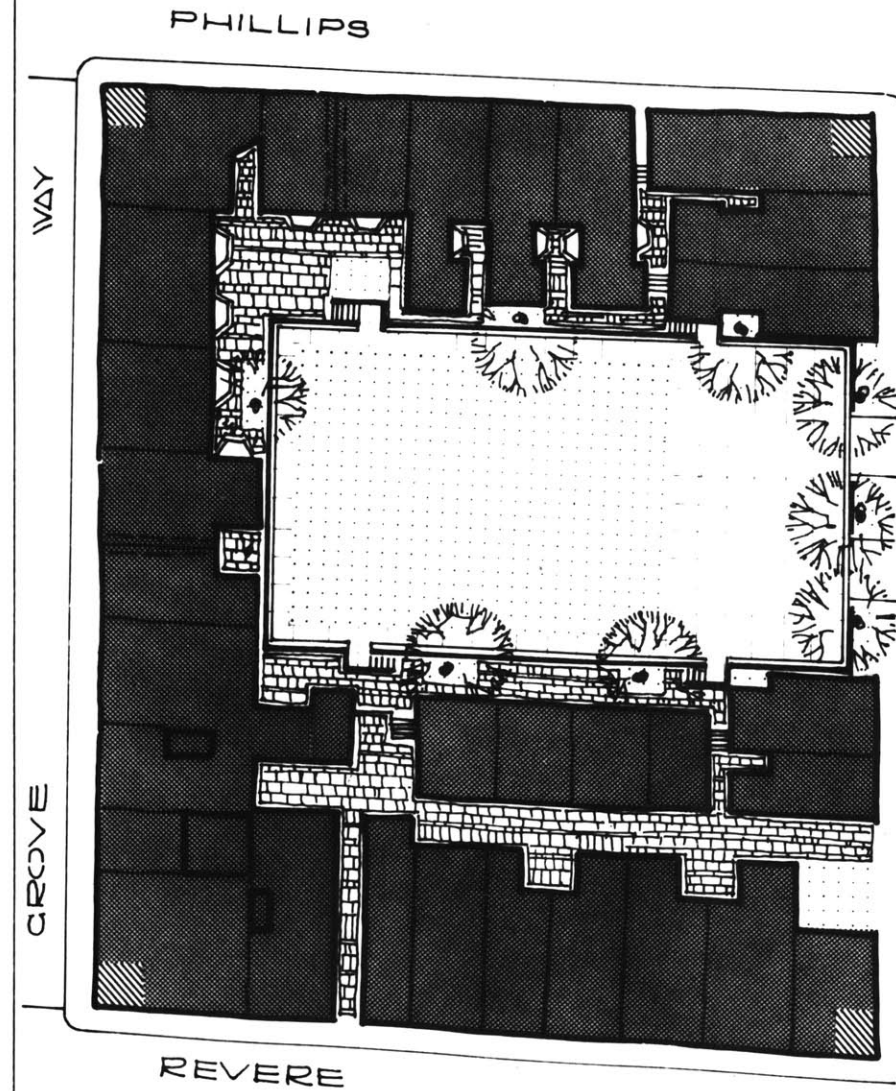
BLOCK "B" - PROPOSED

57% BUILDING COVERAGE
 2.5 F. A. R.
 29 RESIDENTIAL STRUC'S.
 232 DWELLING UNITS

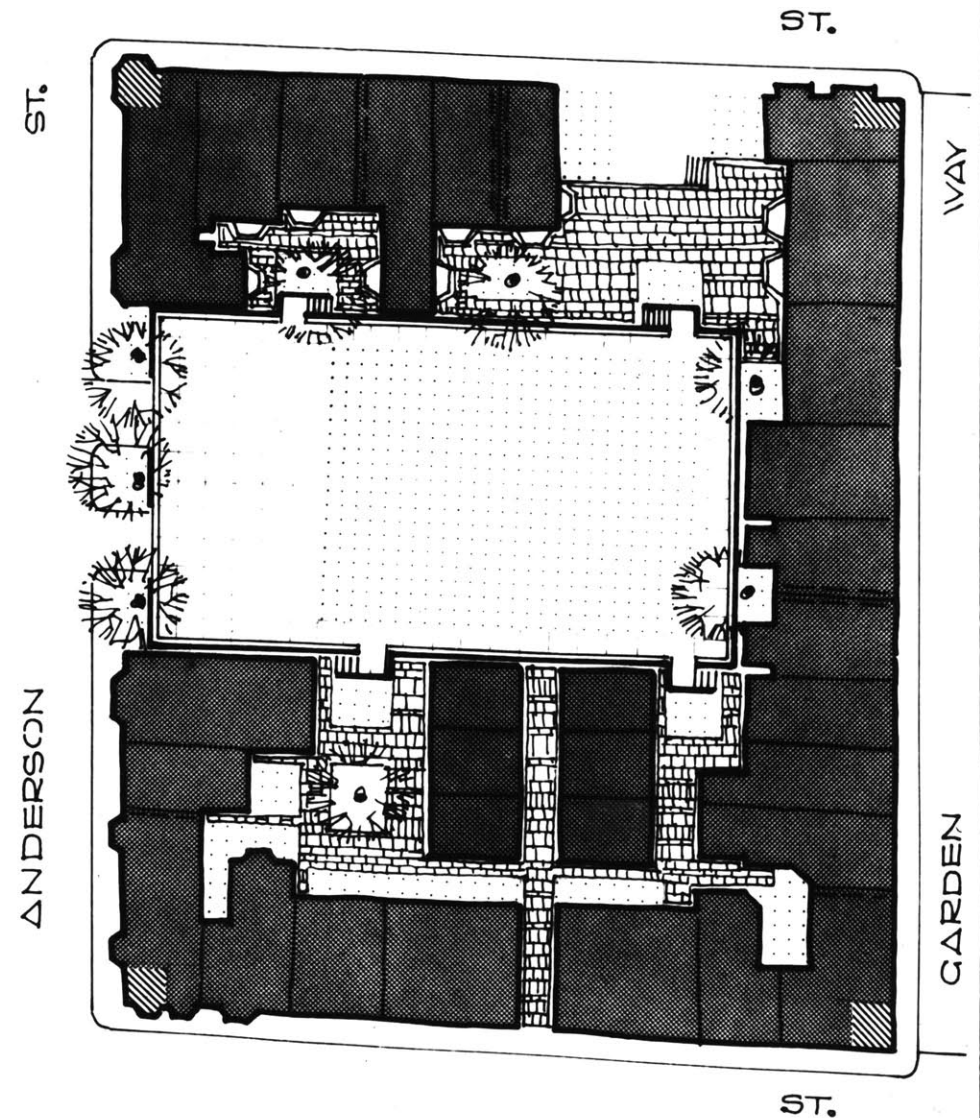
USE

- MULTI-FAMILY RES.
- ▨ COMMERCIAL
- ⋯ UNPAVED OPEN SPACE

BLOCK "A"



BLOCK "B"



NOTE:
 SEMI-PUBLIC OPEN SPACE PROVIDED AT
 CENTER OF BLOCKS w/ PARKING BELOW



0' 50'

Example # 1 - Block Rehabilitation

Block Composition	Block "A"	Block "B"
<u>existing:</u>		
<u>Residential structures:</u> total number	35	34
<u>Dwelling units:</u> total number	227	229
<u>Gross floor area:</u> in square feet	146,000	143,000
 <u>proposed:</u>		
<u>Residential structures:</u> total number retained	30	29
<u>Dwelling units:</u> total number retained	195	197
<u>Gross floor area:</u> in square feet retained	120,000	115,000
<u>Minor rehabilitation:</u> number of units treated	160	162
<u>Major rehabilitation:</u> number of units treated	35	35
<u>Major rehabilitation:</u> number of units created through gutting and repartitioning of structure	35	35
	<hr/>	<hr/>
TOTAL DWELLING UNITS	230	232
<u>Parking garage:</u> 3 spaces for every 10 dwelling units (one space supplied for each unit of major rehabilitation)	70	70
TOTAL PARKING SPACES	140	

Example # 1 - (continued)

Analysis of Rent Increase¹⁵

	Block "A"		Block "B"	
	rehabilitation minimum *	maximum**	rehabilitation minimum *	maximum**
<u>Open space</u> : square foot cost per each retained structure	\$ 1.33	\$ 1.33	\$ 1.93	\$ 1.93
<u>Garage facilities</u> : based on \$10 per square foot construction cost		6.60		6.60
<u>Paving and landscaping</u>	.42	.42	.44	.44
<u>Rehabilitation cost</u> : at 500 gross square feet per dwelling unit	1.00	10.00	1.00	10.00
total cost per square foot	<u>2.75</u>	<u>18.35</u>	<u>3.37</u>	<u>18.97</u>
<u>Tax increase</u> : based on 20% of esti- mated increased gross yearly income	.11	.45	.12	.46
<u>Operating expenses</u> : figure 2/3 in current rent	.25	.33	.25	.33
<u>Amortization</u> : at 7½% with 80% mortgage	.17	1.10	.20	1.14

15. Boston City Planning Department, "Method for Determining Economic Feasibility of Residential Design Standards" (September 28, 1959) gives a method for calculation of component costs. Report does not include above method of tax increase analysis.

* Based on \$500.00 per dwelling unit; ** based on \$5,000 per dwelling unit; includes one parking space.

Example # 1 - (continued)

Analysis of Rent Increase

	Block "A" rehabilitation		Block "B" rehabilitation	
	minimum	maximum	minimum	maximum
<u>Profit:</u> at 12 % of equity	.06	.44	.08	.45
cost per square foot per year	.59	2.32	.65	2.38
<u>Vacancy allowance:</u> based on 95 % occupancy	.03	.12	.03	.13
TOTAL - dollars per square foot per year	.62	2.44	.68	2.51
<u>Rent increase:</u> per year	310.00	1,210.00	340.00	1,250.00
per month	26.00	102.00	27.00	105.00
<u>Present rent:</u> estimated average per month	90.00	90.00	90.00	90.00
<u>Proposed rent</u> : per month	116.00	192.00	117.00	195.00

Municipal Tax Gain

<u>Present tax:</u> yearly for both Blocks	\$ 90,500
<u>Estimated tax:</u> yearly after rehabi- litation	140,700
<u>Tax gain:</u> yearly	\$ 50,200 or 64 %

Block Redevelopment: In some of the very small blocks between Myrtle and Revere Streets, a type of redevelopment may be essential, but this is to be accomplished primarily by private investment. These blocks lie along the crest of the hill, and in many cases, are only one structure deep. This particular strip of land is further complicated by the fact that Myrtle Street makes a turn at the western end and in this state is not really suitable for traffic movement. It is proposed, therefore, that three of these blocks be cleared and that new housing be constructed upon them. It is proposed that the type of housing take the form of small tower apartment buildings. They would be elevator apartments, 8 stories high, and would be privately developed. The height of these buildings is desirable from several view points. This factor allows lower ground coverage and built as shown, they would provide much needed open space in this sector of the hill. They would emphasize the natural crest of the hill and would balance the extremely tall, and now out of scale County building to the east of the State House. The extra stories would tend to make private development more feasible; and elevator apartments of this type would be ideal for in-town "town houses." A parking space is provided for every dwelling unit. These apartments would be more expensive than any others suggested, but the elevators, parking spaces, and open space provided will combine to make a setting worth the price. Again, because of the strategic location of the north slope, expensive apartments here would attract those

people who are interested in the cultural activities taking place in Boston during the fall and winter months.

In addition, two other new developments should be considered in this area. A large structure could be erected to close off the area from Charles Circle and the entrance of the M.T.A. into Beacon Hill. The site might be acquired by the purchase of air rights above the M.T.A. tunnel entrance. This location is extremely convenient to Massachusetts General Hospital, the Charles Street Subway station and to M.I.T. The possibility of constructing nurses' or student housing here should be investigated. Federal aid is available for either. This consideration could be decisive for the structure would need special foundation treatment to prevent vibration from the subway trains. Also, the building would require a slightly more expensive plan of single loaded corridors with the apartments facing south, away from the subway and Cambridge Street. The other development should be a residential structure to replace the existing Technical and Industrial Schools on Phillips Street. The use as it exists would make rehabilitation of the block impossible by the proposed method; and it is a use inappropriate to a residential area.

BLOCK REDEVELOPMENT

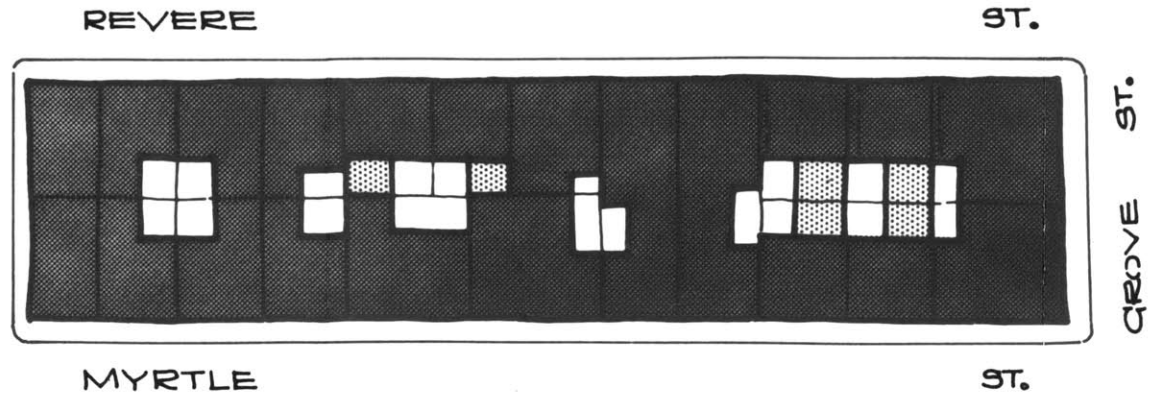
EXISTING

86% BUILDING COVERAGE
 3.6 F. A. R.
 21 RESIDENTIAL STRUC'S.
 63 DWELLING UNITS

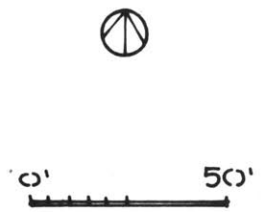
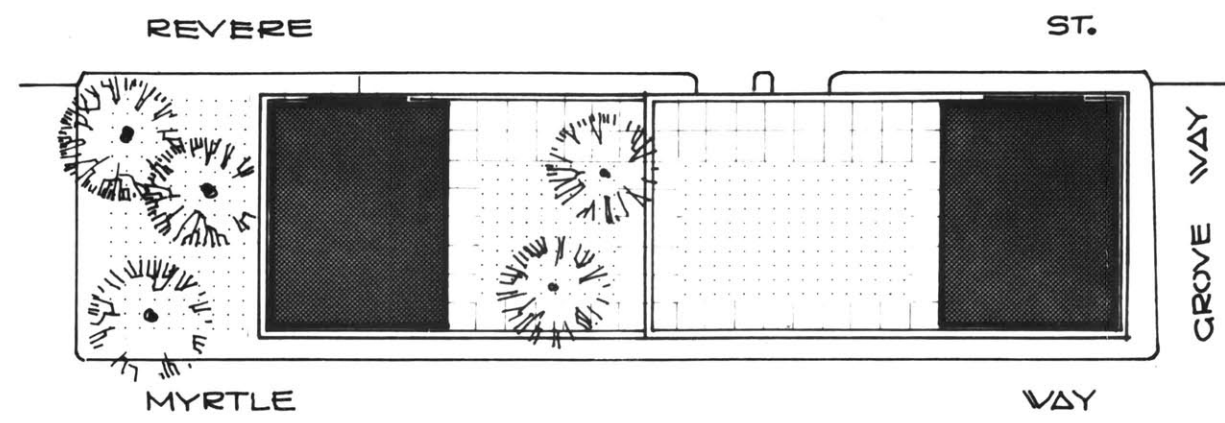
PROPOSED

31% BUILDING COVERAGE
 2.5 F. A. R.
 2 RESIDENTIAL STRUC'S.
 64 DWELLING UNITS

BLOCK "C" EXISTING



PROPOSED



Example # 2 - Block Redevelopment

Block Composition

<u>Existing dwelling units:</u>	63
<u>Proposed dwelling units:</u> in 2 tower apartment buildings; 8 floors each, 4 apartments per floor; 610 gross square feet per apartment average	64
<u>Gross floor space:</u> proposed; includes core; in square feet	40,000

Financial Analysis

<u>Construction cost:</u> per square foot	\$ 22.50
<u>Land cost:</u> per square foot of new structure	8.25
	<hr/> 30.75
<u>Tax:</u> based on 20 % of estimated gross yearly income	1.00
<u>Operating expenses:</u>	.87
<u>Amortization:</u> at 7½ % with 80% mortgage	1.84
<u>Profit:</u> at 12 % of equity	.74
	<hr/> 4.45
cost per square foot per year	4.45
<u>Vacancy allowance:</u> based on 95 % Occupancy	.23
	<hr/> 4.68
TOTAL - dollars per square foot per year	4.68

Example # 2 - (continued)Rent:

type of unit	gross square feet apartment alone	gross square feet apartment plus core	rent per month
efficiency	350	390	\$ 153.00
one bedroom	525	590	230.00
two bedroom	700	785	306.00
three bedroom	830	930	362.00

Parking garage: figured for one parking
space at 300 square feet

construction/ square foot	\$ 10.00
taxes	.28
amortization	.60
operating expenses	.25
profit	.24
vacancy allowance	.09
cost per square foot per year	\$ 1.46
RATE PER MONTH	\$ 36.00

Municipal Tax Gain

<u>Present tax:</u> yearly	\$ 23,200
<u>Estimated tax:</u> yearly from proposed redevelopment	48,400
<u>Tax gain:</u> yearly	\$ 25,200 or 109 %

Federally-aided Redevelopment

Area II qualifies for residential redevelopment with a federally-aided write-down on land acquisition costs. It is to be redeveloped in a manner appropriate to its position next to the State House and the proposed Government Center. Emphasis has been placed on providing densities and a rent scale in keeping with its proximity to these areas and to the Central Business District.

The housing to be built here should be mainly of small apartments and is intended primarily for professionals and single workers. It is within walking distance of the office district of the Central Business District, of the Massachusetts General Hospital, and adjoins the Government Center. It would further house older people who like city living. A further advantage of this location for the type of population suggested is its nearness to the amusement center of Boston. Within walking distance are movies, restaurants, theaters, and the Common and the Esplanade which are the scene of concerts and exhibits in the summer months. And it is within a five-minute walk of the Park Street station of the M.T.A. and even closer to the Scollay Square stop.

A large commercial center, part of the West End Redevelopment project, will be built almost directly across Cambridge Street from this area and a pedestrian overpass is to be constructed at this point. These facilities should be adequate to serve the shopping needs of the redevelopment area, but it is suggested that a small amount of commercial space, provided within the project area, would add a degree of convenience and amenity not fur-

nished by the center.

Parking is included at a ratio of 7 spaces per 10 dwelling units. Three of these are on-site, and the additional four are to be available in large commercial or municipal garages along Cambridge Street.

Of the existing institutional uses, Suffolk University and the Society of St. John the Evangelist have been moderately expanded through purchase of adjoining land at written down prices. The First Methodist Church has been relocated in the former West End branch of the Boston Public Library, a structure which was originally a church, and a move which is now contemplated.

Land uses for the proposed federally-aided redevelopment area are:

residential development	4.2 acres
commercial	.1
elementary school site	2.5
existing institutions	1.5
parks and pedestrian ways	1.2
streets and sidewalks	4.0
	<hr/>
total	13.5 acres

Example # 3 - Redevelopment:

<u>Proposed density:</u> dwelling units per net residential acre	225
<u>Proposed dwelling units:</u>	945
<u>Floor area ratio:</u> proposed	2.61
<u>Height of buildings:</u> in feet	85
<u>Building coverage:</u> in per cent	32.5
<u>Parking:</u> need at 7 spaces per 10 dwelling units	660
allocation:	
supplied on site at 3 spaces per 10 dwelling units	280
supplied in adjoining garages at 4 spaces per 10 dwelling units	380
total spaces supplied	<hr/> 660
<u>Population:</u> projected - at 225 dwelling units per acre x 4.2 acres x 2 persons per dwelling unit = number of persons	1890

Example # 3 - (continued)

Analysis of Rent

	limited dividend taxes = 10% of gross profit = 6% of equity efficiency one bdrm. 390 sq.ft. 590 sq.ft.		ordinary financing taxes = 20% of gross profit = 12% of equity efficiency one bdrm. 390 sq.ft. 590 sq.ft.	
<u>Taxes:</u> based on 20 % of estimated gross yearly income	.30	.30	.75	.75
<u>Operating expenses:</u>	.87	.87	.87	.87
<u>Amortization:</u> at 7½ % with 80 % mortgage building cost: \$ 22.50 per sq.ft. land cost: written down to \$ 1.37 per sq.ft.	1.43	1.43	1.43	1.43
<u>Profit:</u>	.29	.29	.58	.58
cost per square foot per year	2.89	2.89	3.63	3.63
<u>Vacancy Allowance:</u> based on 95 % occupancy	.16	.16	.19	.19
TOTAL - dollars per square foot per year	3.05	3.05	3.82	3.82
<u>Rent:</u>				
per year	1,190.00	1,860.00	1,490.00	2,250.00
per month	99.00	155.00	124.00	187.00

Example # 3 - (continued)

Municipal Tax Analysis

<u>housing areas only</u>	limited dividend	ordinary financing
Tax yield per square foot of residential structure	.30	.75
Total square feet of residential development	463,000	463,000
Tax yield for total residential development per year	\$ 139,000	\$ 346,000
Tax yield from on-site garages (.28/sq.ft./year - 280 spaces)	28,600	28,600
Tax yield from commercial propertys per year (based on construction costs)	12,000	12,000
Total tax yield per year	179,600	386,600
Present tax yield (excluding sites proposed for school, institutions, and park and pedestrian spaces)	153,000	153,000
Tax gain: yearly	26,600	233,600
<u>entire redevelopment area</u>		
Tax yield from housing area	179,600	386,600
Tax yield from garage beneath school site (.28/sq.ft./year, 650 spaces)	55,000	55,000
Total tax yield per year	234,600	441,600
Present tax yield of area	291,000	291,000
Tax gain: yearly	- 57,000	+ 150,600

Example # 3 - (continued)

Recommendation: the analysis on the preceeding page indicates that redevelopment of Area II should be in middle income housing under land write down and ordinary financing procedures.

Plans for the redevelopment of Area II are indicated on the Renewal Plan map. As shown, they are intended primarily as a diagram of intent that the buildings be sited primarily on the periphery of each block in order to free the centers and thus be in keeping with the rest of the north slope proposals and existing structures.

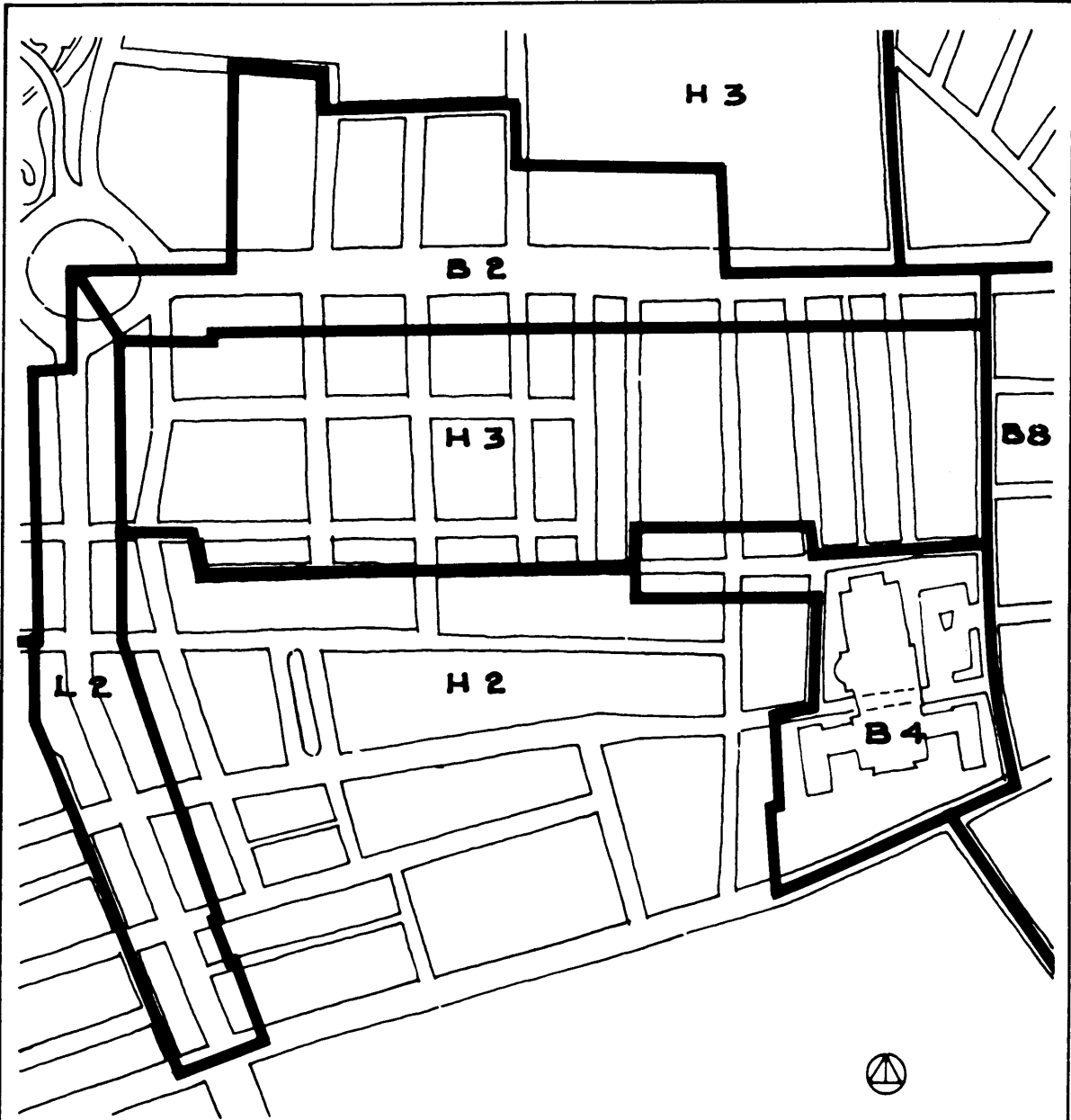
Tax Base

The analysis of tax return included with the examples indicates that a considerable gain can be expected if the area is treated as proposed. This increase is to be expected where major investments from both public and private sources are made. Nevertheless, one aspect of the projected tax situation was not included. Future assessments would reflect not only the new investment in the north slope area - or its earning power - but it would also be greatly increased by the measure of stability that would be added to investment. Property retained in the plan would be worth 5 times its yearly income instead of only 4 or 4½ times this amount. A block worth \$800,000 would appreciate almost automatically to \$900,000 or \$1,000,000. This would be in addition to any other improved earning power.

Zoning

The proposed revised zoning ordinance for the City of Boston¹⁶ is based on floor area ratios instead of the height limit as in the existing ordinance. Most districts will not have a specified maximum height limit. Most of residential Beacon Hill is proposed to be included in the H-2 category (see Proposed Zoning Map on the following page). This allows a floor area ratio of 2.0 and has no height limit. Since the existing floor area ratio on the north slope is about 3.0, the proposed maximum of 2.0 would render very

16. Boston City Planning Board, "Proposed Zoning" (May, 1958)



PROPOSED ZONING

DISTRICT	PERMITTED USE	HEIGHT LIMIT
H 2	APARTMENT	65 FEET
H 3	APARTMENT	85 FEET
L 2	LOCAL BUSINESS	NONE
B 2	GENERAL BUSINESS	NONE
B 4	GENERAL BUSINESS	NONE

* BASED PRIMARILY ON REPORT BY THE BOSTON CITY PLANNING BOARD - MAY 1958



unlikely any private redevelopment, causing a 1/3 reduction of floor space on new construction.

It has been suggested that the proposed floor area ratio for this area be raised to 3.0, but only with the addition of a height limit of 65 feet. There is an existing height limit of 65 feet so that the present density could only be maintained in reconstruction if the same coverage is maintained. Although there is some open space in the centers of blocks which is poorly utilized, one of the objectives of the renewal plan is to provide more open space than now exists. A floor area ratio of 3.0 with a height limitation of 65 feet would therefore make the provision of open space impossible.

It is suggested, therefore, that most of the north slope be zoned at a maximum floor area ratio of 3.0 with a height limit of 85 feet. This would allow 8 full floors. Efficient planning and good design of structures would allow considerable open space in each block and the 85 foot maximum would therefore not unduly restrict light and air. The proposed minimum usable open space requirement for districts with a floor area ratio of 3.0 would insure adequate open space. Other proposed dimensional requirements are permissive enough to allow the proposed structures. These changes are discussed only in relation to the north slope, which should be considered as a single district, distinct from the south slope.

The proposed ordinance would probably permit the extent of alteration that the plan proposes for the existing corner stores.

But it would forbid the establishment of additional ones. Corner stores are a desirable feature on the north slope (as in many high density areas), and zoning provision should be made for them. They could be allowed as conditional uses on any corner in the residential districts with floor area ratios of 3.0 and over. They should be regulated as to size. The typical corner store on the north slope is about 400 square feet.

It is further proposed by this thesis that the B-4 district which is proposed for the State House be extended to include a small local business and lodging house area adjacent to the State House.

The business zones as they appear in the proposed ordinance seem reasonable and the renewal plan proposals can be carried out under them.

Displacement and Relocation

No detailed study of relocation needs that would necessarily be an integrated part of a proposal of this nature has been made.

In the redevelopment area, 198 structures would be demolished (see Addendum 10). It is assumed that the population can be relocated by the proper agency. Approximately 42 % of this population are single lodgers which considerably reduces the difficulty of relocation.

In the rehabilitation area, a slightly different procedure will be required than is the case with redevelopment. Practi-

cally the entire population will have to be at least temporarily relocated at one time or another. The suggestion of block-by-block rehabilitation is based partly on this necessity. 94 structures, containing approximately 1000 people will be demolished during the proposed 5 year period. Many of these people will be able to return to the area as the total number of dwelling units will be slightly increased through rehabilitation and spot redevelopment. In fact, there are at least four factors which will lessen the impact of relocation problems in this area.

- 1) Many of the people in this area would not need to permanently relocate; they are middle class or young professionals and could, in many cases, afford the projected rents.
- 2) Of those forced to relocate, few are in the lowest income categories,¹⁷ and available housing opportunities would probably take care of most of their needs.
- 3) The number of families eligible for relocation at any one time from this area can probably be easily relocated by the relocation agency.
- 4) When the aim of a project is specifically to upgrade an area, physically and socially, some displacement is not only inevitable but also desirable.

17. U.S. Census of Population, 1950: median income was \$157 higher on the north slope than on the south slope of Beacon Hill, and each slope had a significantly higher median income than other central downtown areas.

Staging

The renewal of the north slope should begin immediately if the maximum use of private investment is to be secured. If the present pattern is to be improved, a beginning must be made before overall obsolescence appears too severe or individual investments in certain better locations make improvement too expensive to be accomplished without subsidy. The program, once begun, should be a continuing one which does not aim at a specific final completion date. A general description of how this might best progress follows.

Stage I: The rehabilitation of individual blocks in Area I should be initiated. The provision of parking and semi-public open space will be supplied concurrently. Most rehabilitation of individual units will be of the minor type and this activity should begin at the southern and western part of the area where investment would be more protected. At this time it will be necessary to enforce the current regulation of parking only on one side of streets, at night and on week ends as well as in the day time. This stage should be practically accomplished within 5 years.

Stage II: A continuation of Stage I in Area I, this stage consists of private investment in new construction. The ~~spot~~ redevelopment of tower apartments would be coupled with municipal conversion of certain streets to pedestrian ways and new connections cut through to link the north and south slopes. At this time, a new parking regulation throughout the area would be enforced. Far-

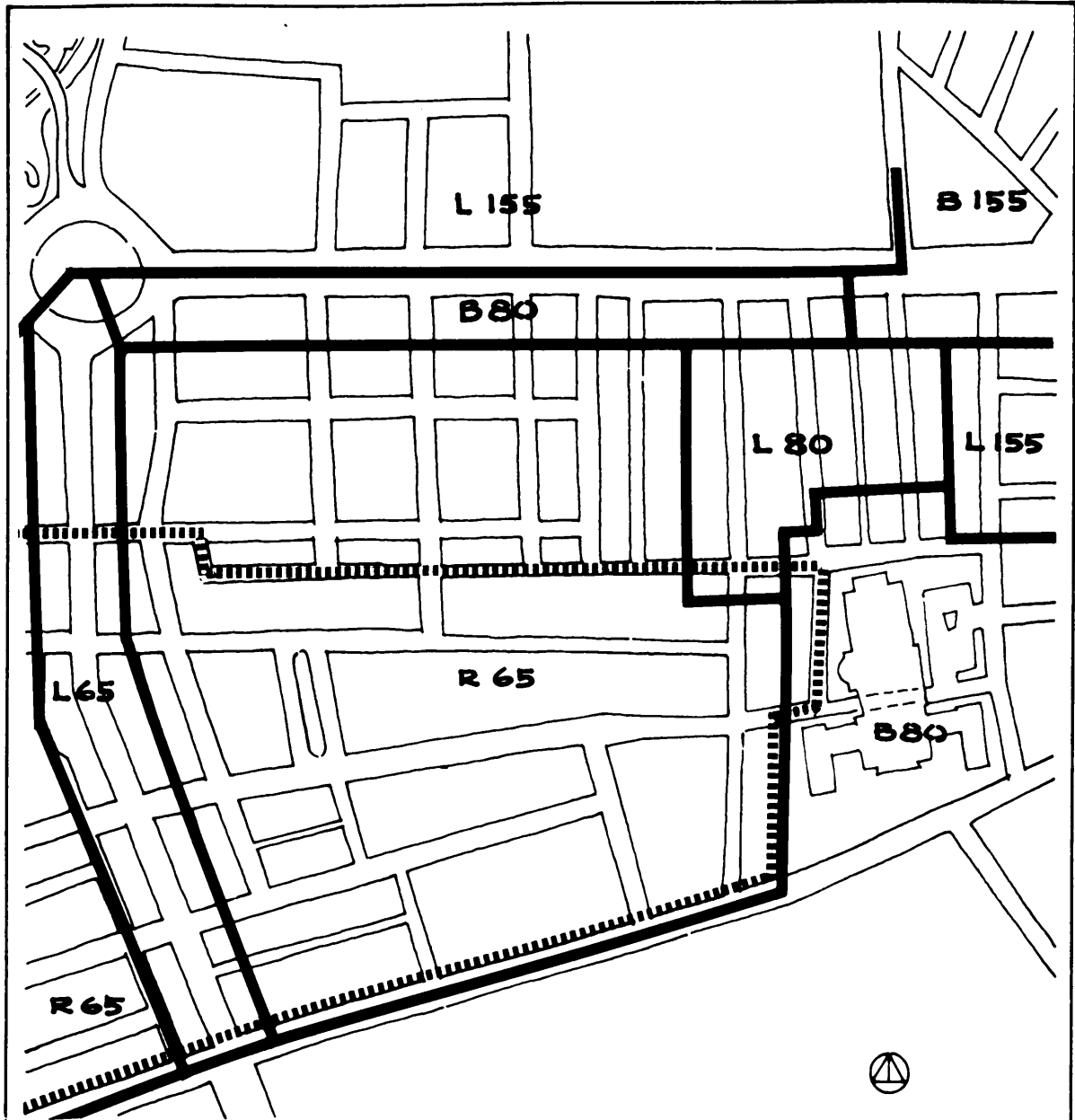
king would be allowed on one side of the street in designated areas only and would be entirely prohibited in the early morning hours.

Stage III: This should be initiated within 10 to 15 years and would be concerned with the redevelopment of Area II. Part of this area should be acquired during an earlier phase of the renewal program if it shows tendencies to greatly increase in value due to conversion and doubling up. Rigid enforcement of certain housing code standards which curtail such practices might prove more expedient, however.

Stage IV: Upon the amortization of shorter mortgages on dwelling units for minor rehabilitation in Area I, a program of more major rehabilitation in this area should be begun. Further upgrading of the area should continue through at least 25 years.

ADDENDA

ADDENDUM 1



PRESENT ZONING

DISTRICT	PERMITTED USE	HEIGHT LIMIT
R 65	GENERAL RESIDENCE	65 FEET
L 65	LOCAL BUSINESS	65 FEET
B 80	GENERAL BUSINESS	80 FEET
L 155	LOCAL BUSINESS	155 FEET
B 155	GENERAL BUSINESS	155 FEET

----- BOUNDARY - HISTORIC BEACON HILL DISTRICT



ADDENDUM 2

DETERMINATION OF EXISTING POPULATION

Given: the major portion of the north slope is in Census tract K-1;
Census tract K-1 is used as characteristic of the total area.

Average Number of Persons per Dwelling Unit

total dwelling units in tract K-1	2015
total population of tract K-1	5128
lodgers in tract K-1 *	<u>488</u>
total persons in dwelling units	4640
average number of persons per dwelling unit: 4640 divided by 2015	2.3

Total Dwelling Units and Lodgers by Census Tract

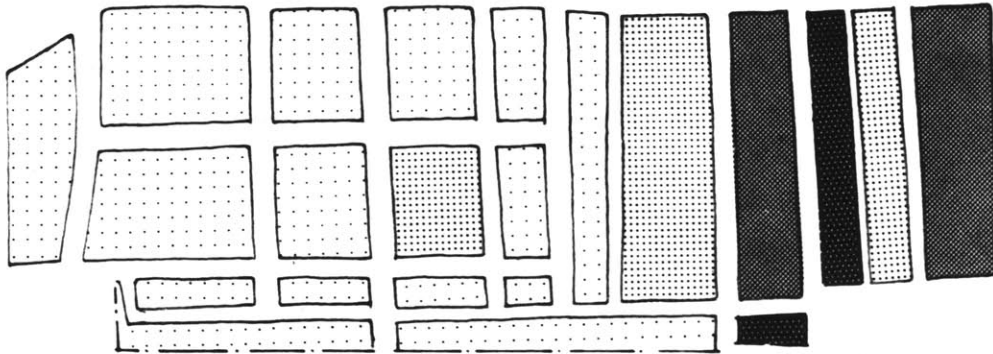
Tract	Dwelling Units	Lodgers
K-1	1978	509
K-2	218	22
H-4	<u>340</u>	<u>1108</u>
totals	2536	1639

Total Population of Study Area

dwelling units x average number of persons per dwelling unit: 2536 x 2.3 =	5820
lodgers	<u>1639</u>
TOTAL POPULATION	7459

* Based on Boston City Planning Board Lodging House Inventory, 1955, and assigning one tenant per lodging house room

ADDENDUM 3



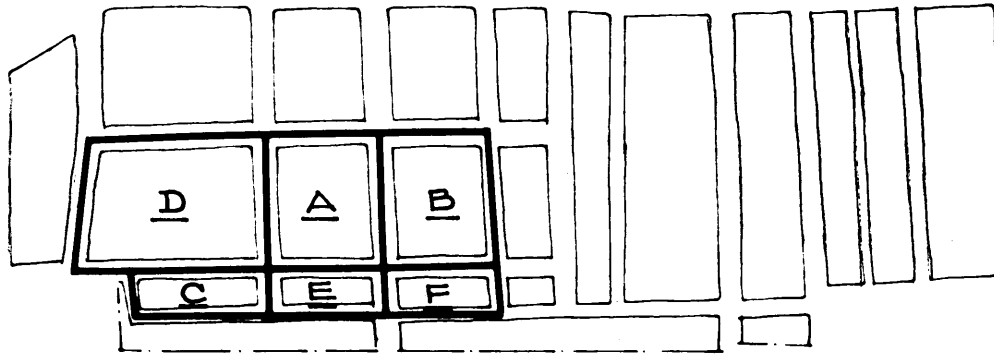
**RESIDENTIAL STRUCTURES W/ ONE OR
MORE BUILDING DEFICIENCIES - % BY BLK***

- LESS THAN 10 %
- 10 - 19 %
- 20 - 39 %
- 40 % AND ABOVE

* SOURCE: 1950 U.S. CENSUS OF HOUSING

0' 400'

ADDENDUM 4

**EXISTING FLOOR AREA RATIO - SAMPLE**

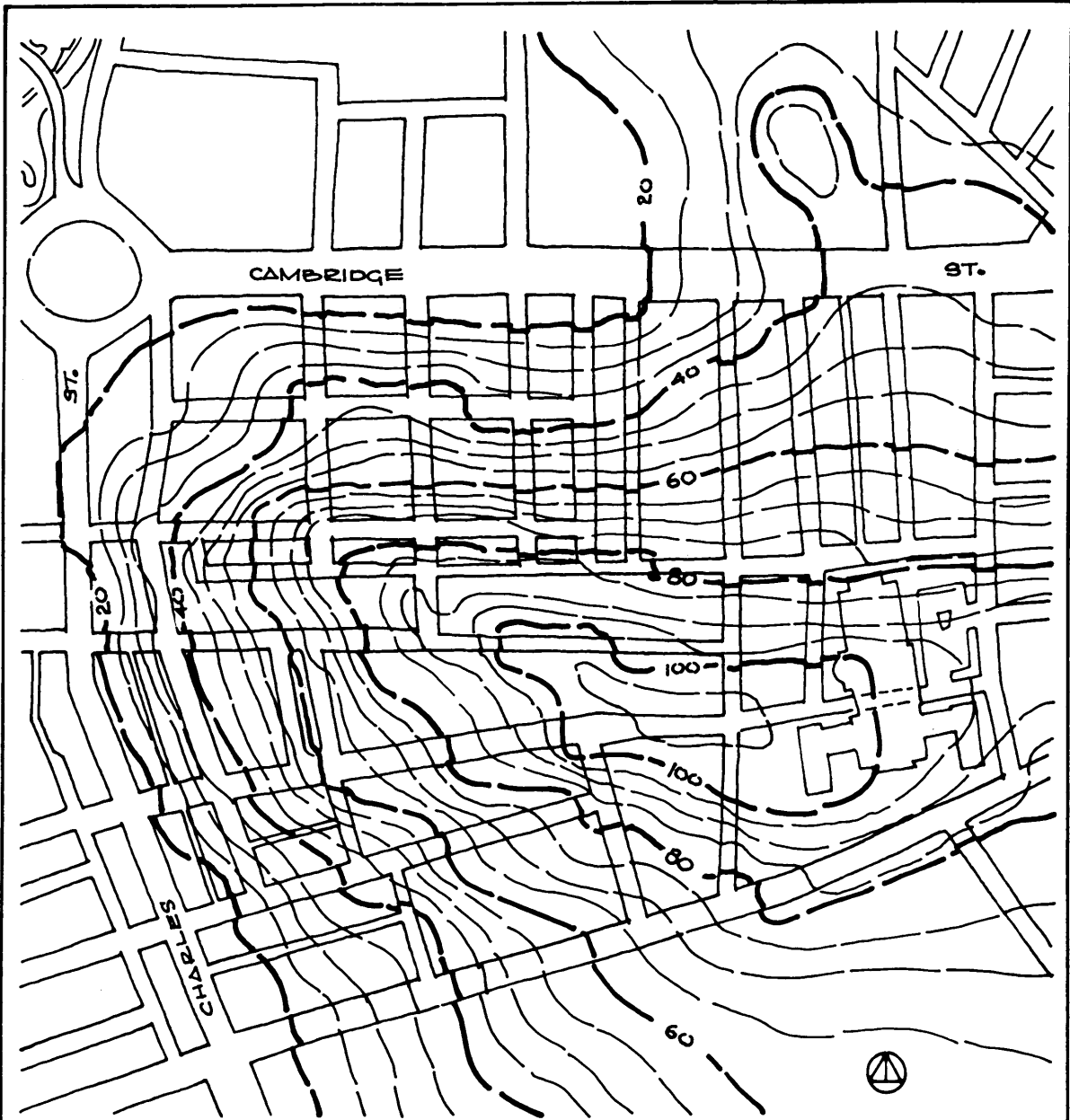
BLK	TOTAL SQ. FEET.	BLDG. COVERAGE SQ. FT. / BLK.	BLDG. COVERAGE PER CENT / BLK
A	49000	32980	67
B	49000	34600	71
C	16160	13600	86
D	81400	56200	65
E	13500	12400	92
F	12260	9600	79
TOTAL	226260	159400	

$$\text{BUILDING COVERAGE} = 159400 / 226260 \\ = 70.5 \%$$

$$\text{AVE BUILDING HEIGHT} = 4.364$$

$$\text{EXISTING F.A.R.} = 70.5 \times 4.364 \\ = \underline{\underline{3.06}}$$

0' 400'

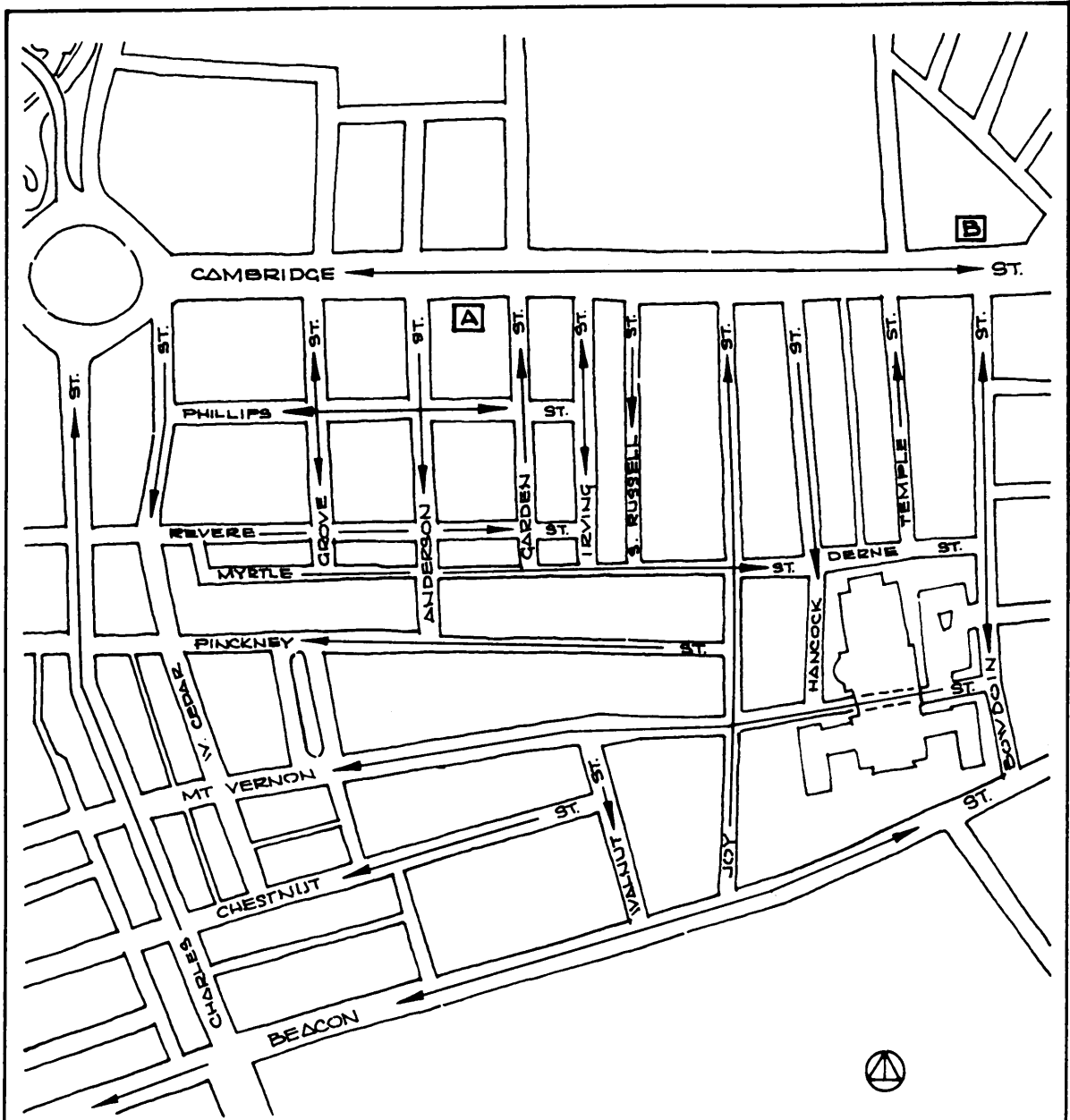


TOPOGRAPHY - BEACON HILL

ELEVATION IN FEET ABOVE MEAN SEA LEVEL
CONTOUR INTERVALS OF 5 FEET

SOURCE: BOSTON CITY PLANNING BOARD





EXISTING CIRCULATION & PARKING

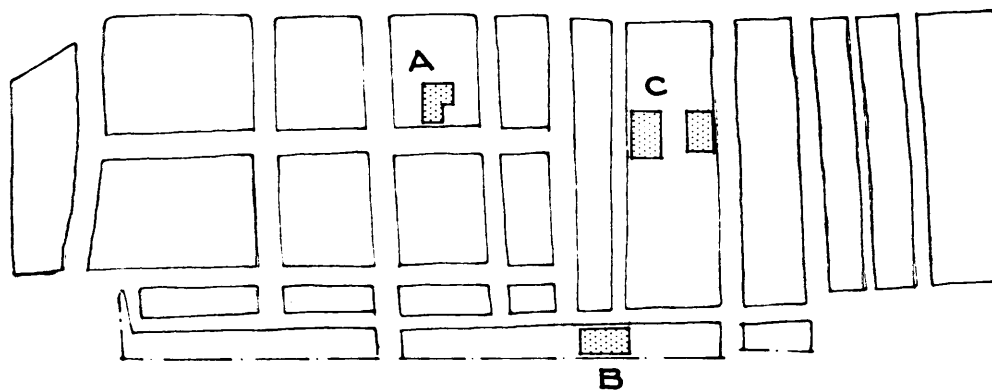
TRAFFIC MOVEMENT:

- ↔ TWO WAY
- ONE WAY

COMMERCIAL GARAGES:

KEY	GARAGE LOCATION	NUMBER OF SPACES
A	CAMBRIDGE STREET	250
B	BOWDOIN SQUARE	800-900, PRIMARILY SERVES OTHER AREA

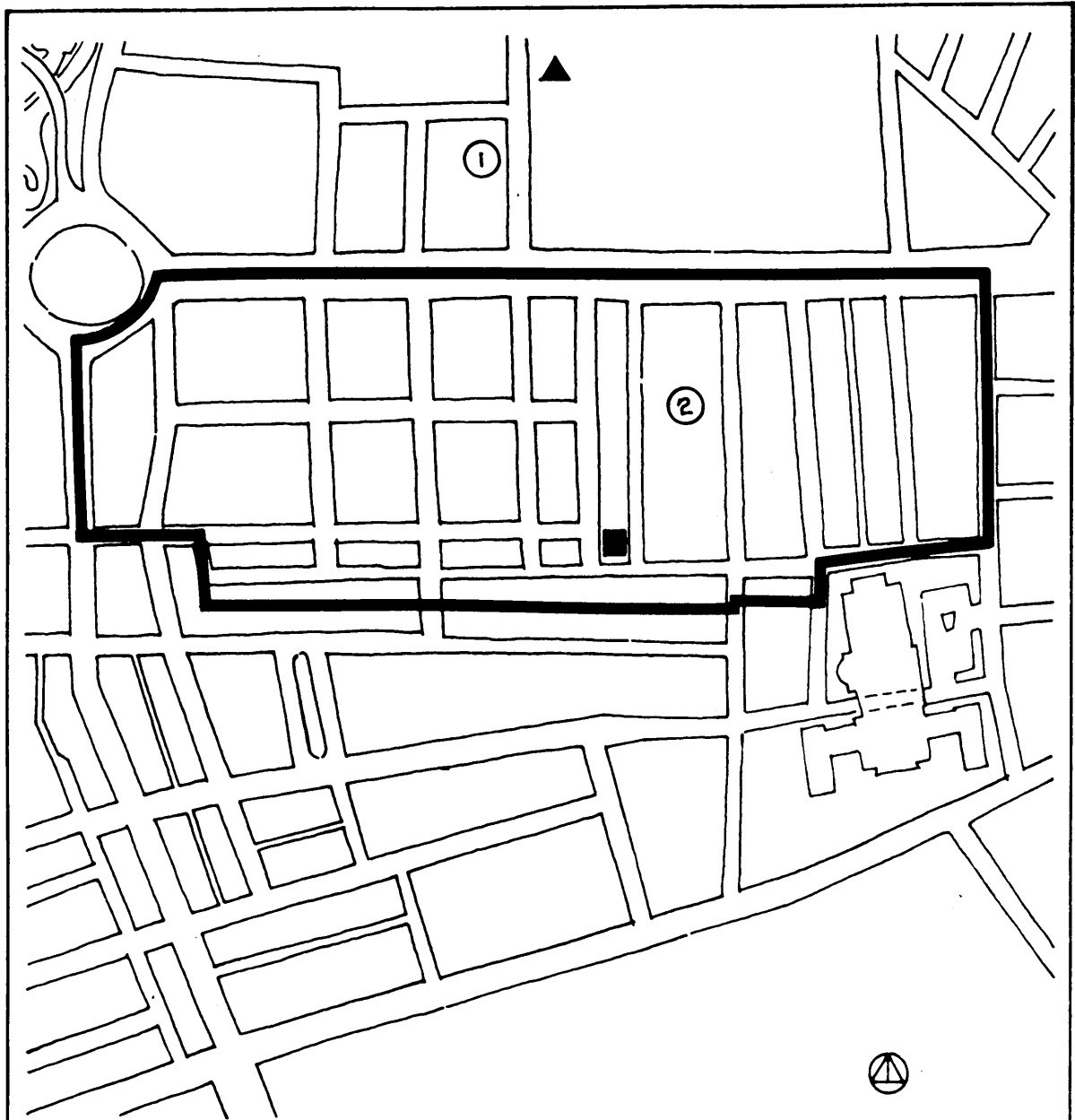




EXISTING NEIGHBORHOOD OPEN SPACE

KEY	TYPE OF FACILITY	SITE	SIZE ACRES
A	PLAYLOT	FORMERLY GRANT SCH.	.11
B	PLAYLOT	MYRTLE ST.	.14
C	PLAYGROUND	FANEUIL SCH.	.38
TOTAL OPEN SPACE			.63



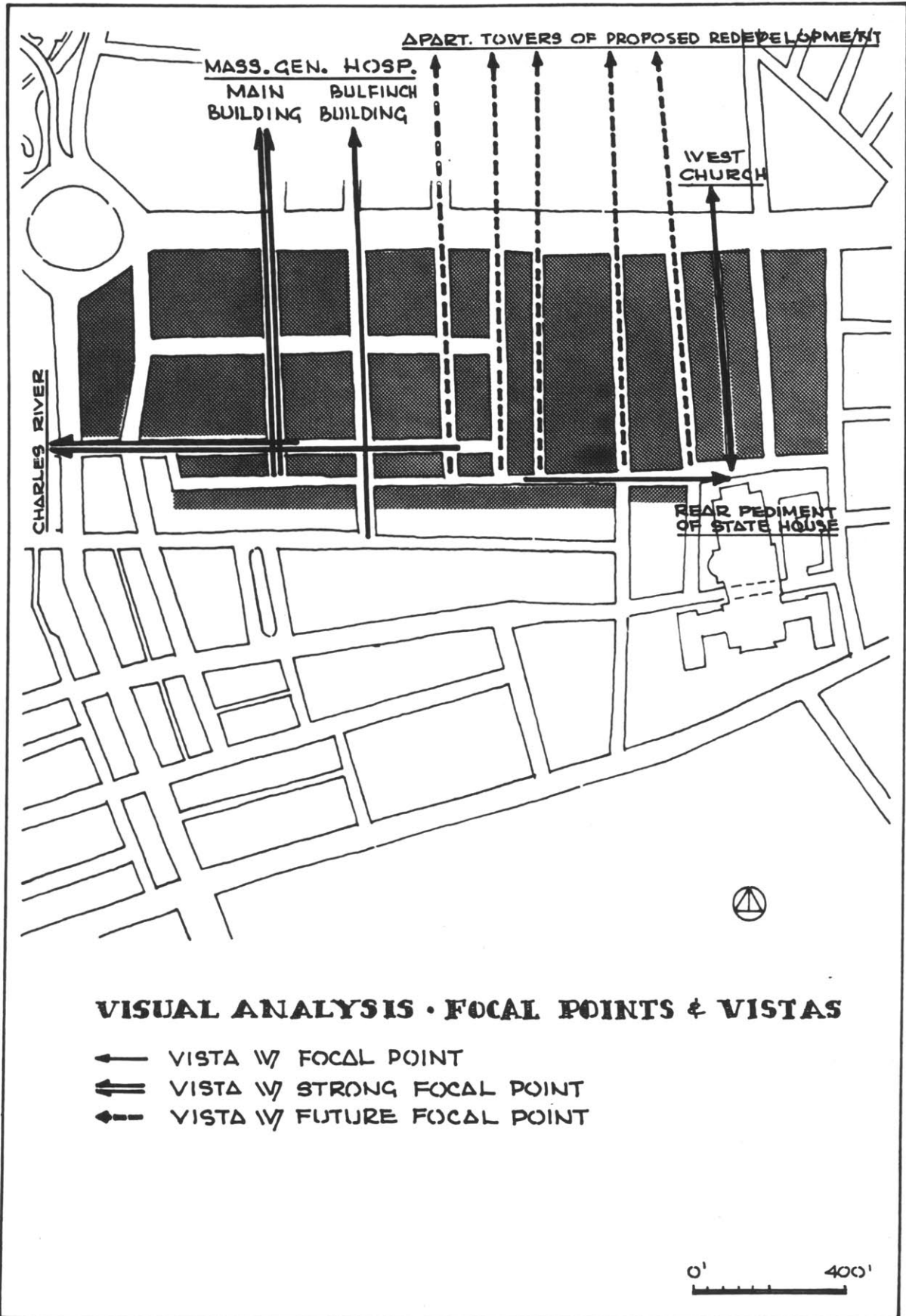


EXISTING SCHOOL FACILITIES

KEY	TYPE OF FACILITY	NAME	SIZE AC'S.	CONS. DATE	CAP. ACITY	1958 ENRL.	STATUS
①	ELEMENTARY	WINCHELL	.35	1885	450	324	TO BE REBUILT
②		FANEUIL	.60	1910	450	282	RAZED 10-20YRS.
▲	JUNIOR HG.	BLACKSTONE	.75	1916	450	206	TEMP. CLOSED
②		FANEUIL				86	TEMP. USED
■	BOSTON SCH. COMM. ADMIN. ANNEX		.22	TO BE ABANDONED WHEN NEW CITY HALL IS COMPLETED			

■ BOUNDARY - STUDY AREA





ADDENDUM 10

HOUSING AND POPULATION : EXISTING AND PROPOSED

	Area I municipally-aided	Area II federally-aided
<u>Existing</u>		
structures	400	198
dwelling units	1887	649
rooms: lodging	542	1097
<u>Demolished</u>		
structures	94	198
dwelling units	434	649
rooms: demolished or converted	97	1087
<u>Retained</u>		
structures	306	0
dwelling units	1453	0
rooms	455	0
<u>Projected:by rehabilitation</u>		
dwelling units:		
minor rehabilitation	1197	0
major rehabilitation: 3 units of every 17 being converted into 6 units	512	0
	<u>1709</u>	<u>0</u>

ADDENDUM 10 (continued)

	Area I		Area II
<u>Projected: new construction</u>			
structures	6		"x"
dwelling units:			
tower apartments	208		945
students' or nurses'			
housing	48		0
	<u>256</u>		
<u>Total dwelling units</u>	1965		945
<u>Total rooms</u>	455		-
<u>Projected population</u>			
1965 dwelling units x 2.3	4520	945 x 2 =	1890
lodgers at 1 per room	<u>455</u>		<u> </u>
TOTAL POPULATION	4975		1890
<u>Composite totals</u>			
Area I	4975		
Area II	<u>1890</u>		
TOTAL POPULATION	6865		
<u>Present population</u>	7460		
per cent of present population retained by plan =			92 %

ACKNOWLEDGEMENTS

I wish to express my appreciation for the assistance given in writing this thesis by members of the faculty in the Department of City and Regional Planning, particularly to Professor Adams; and to the staff of the Boston City Planning Board, particularly Bill Barbour, who generously made material available.

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