THE RENEWAL OF THE NORTH END OF BOSTON

by

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Signature of Author

Department of City Planning, May 25, 1959

Certified by

Thesis Supervisor

Accepted by

Chairman, Departmental Committee on Graduate Students
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ABSTRACT

Title of thesis: THE RENEWAL OF THE NORTH END OF BOSTON

Author: Robert John Frasca

Submitted to the Department of City and Regional Planning in partial fulfillment of the requirements for the Degree of Master in City Planning, May 25, 1959.

This thesis is a study of an aging area of Boston, which is primarily residential in character, and suffers from blight and deterioration. The study is divided into three parts for presentation.

Part 1. Analysis of Existing Conditions

This section investigates the various element types in the area (e.g., housing, commercial, schools, etc.) in terms of the problems they present.

Part 2. Objectives

This section contains a formulation of objectives for the future of the North End.

Part 3. Proposals, Effectuation, Control and Costs

In this final section, a program for the renewal of the area is outlined; definite proposals are cited, explained and justified; proposals are staged; means of implementing the proposals are discussed; and a cost estimate of the total operations is made. A redevelopment plan is suggested to show how the transition plan proposals are consistent with total redevelopment proposals.

Thesis Supervisor:

Frederick J. Adams

Title: Professor of City Planning
PREFACE

Accompanying Maps

The maps presented in this thesis are photographic reductions of the original drawings and are submitted here for the thesis record. The large-scale originals are submitted separately as a part of the thesis.

Explanation of terms

The term "Renewal" as used in this thesis is meant to denote the total plan for improvement of the area specified and includes protection, conservation, rehabilitation and redevelopment (clearance) as used in the current Urban Renewal nomenclature. Rehabilitation is used to include conservation, the degree not being specified in the thesis.
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 Professor Lynch who provided much constructive criticism; to the staff of the Boston City Planning Board, particularly Joseph Savitzky, who generously made helpful comments and material available; and to Mr. Frank Havey of the North End Union Settlement House, who provided valuable insights and information in regard to the study area.
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INTRODUCTION

The North End is an aging residential area located near the downtown and inhabited by a low-income ethnic group. As the site of the original Boston colony, it was an important residential area of the day (see cover map). Relics of this day still remain. From the time of the great wave of immigration, it has been the first settling place of immigrants from Europe. From 1850 to the present it has successively housed newly arrived Irish, Jewish and Italian immigrants, who settled immediately upon arriving from the docks. In 1905 it became a predominantly Italian colony, and presently over 90 percent of the population is of Italian origin, bound into a strong social unit.

A series of physical changes have taken place. The original peninsula was filled in and eventually the area was rebuilt almost entirely with four-story brick tenements crowded together on small plots of land, the pattern which exists today. The pattern has developed many of the characteristics of a slum.

The North End now presents a difficult problem. Its image as a slum and the potential of the land as high tax-producing property have raised cries for redevelopment. Political pressures on the part of the inhabitants, and social costs have tended to muffle these cries. This thesis will identify major planning problems, investigate possible courses of action and make proposals for the future of the area.
SURROUNDING LAND USE - EXISTING AND PROPOSED:

Renewal proposals for the North End are concerned with the future downtown pattern. Adjacent uses of material significance are the waterfront, the market area, the Scollay Square area, the North Station area and the downtown core (see Map 1). A review of these surrounding land uses and their significance in the renewal of the North End follows.

The waterfront: The portion of the waterfront adjacent to the study area but not included in it extends from Battery Wharf south to Clinton Street along the eastern edge of the North End. The uses of this area are mainly storage, fishing docks, packing plants and small manufacturing establishments. The significant structures are the Kelso Warehouse, the U.S. Appraisers Storage Building, and the MTA Power Station.

Changes in the use of this portion of the waterfront can have an important bearing on the renewal of the North End. While it remains in its present state and type of activity, it will help keep the contiguous portion of the study area much as it is at present. However, its suggested redevelopment for recreational use can have profound effects. The Boston Planning Board has proposed a marina, marine museum and other related recreational activities from Lincoln Wharf south to the Fort Point Channel for regional use. This proposal is considered compatible as an adjacent land use and will be considered as the re-use of this area for the purposes of this problem.

There have been no proposals for the portion included in the study area.
Wholesale and Market Area: extends from the southern edge of the North End residential area on south between Atlantic Avenue and the Central Artery. A portion flows under the Central Artery westward to Dock Square. Since the decline of shipping activities, this use is no longer essential to the area and it is logical that most of this activity will eventually be removed.¹

The portion to the east of the Central Artery and south of Clinton Street has been suggested as suitable for high-income residential or commercial activities related to the adjacent boating facilities.

The portion to the west of the Central Artery, housed in the Quincy Market buildings which will probably be preserved because of historic significance, can remain in their present use.

The re-use of the area south of North Street to Clinton Street between Atlantic Avenue and the Central Artery is seen as a logical extension of the North End residential area and is included as part of the study area for this re-use.

The portion of the present market area east of the Central Artery (south of the study area) adjoins the study area for only four hundred feet along Clinton Street. As long as it remains as a wholesale and market area, it will generate truck traffic along Atlantic Avenue and Commercial Street. Visually it is poor and its redevelopment is important to the North End only if to provide a more attractive neighbor. Redevelopment for commercial activities relating to the proposed waterfront facilities or high-income residential use are considered the best proposal for this area.²

¹Attitude expressed by the Boston Planning Board staff.
²Proposals suggested by the Boston Planning Board staff.
The Scollay Square Redevelopment Area: lies along the southwestern edge of the study area across the Central Artery centered about Hanover Street west to Scollay Square and to the foot of Beacon Hill. This area presently contains a variety of marginal retail stores, offices, lodging houses, bars, and cheap food dispensaries. The redevelopment of Scollay Square into a Government Center is currently being studied and should be realized at least in part sometime within the next five years. Proposals include an Historic area, a Federal building, a city hall, a State building, area set aside for private office development, and parking for several thousand cars.

The North Station Redevelopment Study Area: lies to the west of the study area between the Central Artery, North Station, the proposed Government Center, and the West End residential redevelopment area. It presently contains assorted retail and wholesale stores with a predominance of home furnishing suppliers and is scheduled as a commercial redevelopment area for mainly wholesale activities, although not for some time. An adjacent portion bounded by Commercial Street, Washington Street North and the Central Artery also contains warehouse activities but is not included in the study area.

The Core: The North End lies northeast of the commercial and office core of the Boston Metropolitan area; twelve minutes' walk from the foot of Hanover Street to the corner of Summer and Winter Streets, and 8 minutes to Post Office Square. The continued dominance of commercial and office

---

1 Preliminary Government Center Project Report, 1958, Boston City Planning Board.
activities for the core seems certain. The North End is considered con-
venient to the core and could offer housing to persons who want to be
near it.

**Summary:** The North End, although somewhat isolated, can be significantly
affected by what will be going on around it. The redevelopment of the
waterfront for regional recreation and high-income housing will provide
an attractive neighbor and alter the public image of the general area.
The cavity that can result by the relocation of the markets will provide
a logical residential extension that would strengthen the area. The con-
venience to the continually dominant core adds to its long-range poten-
tial as a residential area. The Government Center redevelopment brings
the core even closer. The convenient North Station commercial area pro-
vides a variety of nearby employment opportunities and adds to renewal
alternatives. Proposals for renewal must bear these factors in mind.
PART 1: ANALYSIS OF EXISTING CONDITIONS

Definition of the Study Area: The study area is located at the northern end of the Boston peninsula and is defined by the Boston Inner Harbor as it arcs from northwest to east; then across Battery Wharf to Commercial Street to Atlantic Avenue on the east; to Clinton Street on the south; to the Central Artery on the southwest; to Washington Street North on the west (see map 1).

The Central Artery and the waterfront almost completely define a convenient planning unit. As previously stated, the waterfront south from the Edison Power Plant is considered as regional recreation and is omitted from the study area. Clinton Street has been considered the southern boundary since the land to the south belongs more logically to the waterfront planning unit, its relationship to the North End residential area becoming tenuous beyond this point.

Facilities not described are considered not directly pertinent to the planning of the area.
### TABLE 1. LAND USE TOTALS

<table>
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<th>GROSS AREA</th>
<th>107.2 acres</th>
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<tr>
<td>Net Residential Area</td>
<td>28.0 acres</td>
</tr>
<tr>
<td>Streets</td>
<td>23.7</td>
</tr>
<tr>
<td>Possible Permanent Features &amp; Open Space</td>
<td>16.0</td>
</tr>
<tr>
<td>a) Churches</td>
<td>1.4</td>
</tr>
<tr>
<td>b) Club</td>
<td>0.2</td>
</tr>
<tr>
<td>c) Public Utility</td>
<td>0.5</td>
</tr>
<tr>
<td>d) Schools and Library</td>
<td>2.3</td>
</tr>
<tr>
<td>e) Recreation Building</td>
<td>0.4</td>
</tr>
<tr>
<td>f) Playground</td>
<td>4.8</td>
</tr>
<tr>
<td>g) Paul Revere Mall</td>
<td>1.5</td>
</tr>
<tr>
<td>h) Paul Revere &amp; Hitchborn House</td>
<td>0.1</td>
</tr>
<tr>
<td>i) Parking Garage</td>
<td>1.3</td>
</tr>
<tr>
<td>j) Copps Hill Burial Ground</td>
<td>2.1</td>
</tr>
<tr>
<td>k) Protection</td>
<td>1.4</td>
</tr>
<tr>
<td>Other Isolated Non-Residential</td>
<td>3.1(^2)</td>
</tr>
<tr>
<td>Predominantly Non-Residential</td>
<td>35.9</td>
</tr>
<tr>
<td>a) Market area defined by</td>
<td>12.9</td>
</tr>
<tr>
<td>North Street, the Central Artery, Atlantic Avenue and Clinton Street</td>
<td></td>
</tr>
<tr>
<td>b) The waterfront from Charlestown to Battery Wharf</td>
<td>23.0</td>
</tr>
<tr>
<td>Commercial Facilities</td>
<td>0.5(^3)</td>
</tr>
</tbody>
</table>

1. Does not include North End Playground (2.5 acres)

2. Includes offices, manufacturing, warehousing, open commercial and open auto storage

3. Of the 28 acres designated as net residential area, 17 acres houses shopping facilities on the first floor. Buildings which serve exclusively shopping functions are few and isolated. Therefore only one predominantly shopping area on Salem Street is tabulated here.
I Population - Social and Economic Characteristics

Problem: The displacement of the present population and the disruption of a strong social unit because of renewal measures.

The Social Unit: The North End is almost exclusively composed of people of Italian origin or extraction who are woven into a tight social fabric. In 1950 about 30 percent of the population were foreign born, 9¼ percent of Italian origin. Its significance goes much deeper than statistics can reveal. Extensive social studies have shown the presence of a highly organized society where the interests and ambitions of the people are exclusively oriented to this isolated community. The church, club and "paesani" groups are the core of the community activity. A local newspaper is a medium for gossip and hails residents' accomplishments in local and "outside" affairs. The North End functions as a single family might and any attempt to disrupt it radically would meet with comparable resistance on the part of the inhabitants and sympathy on the part of the city as a whole. This factor is probably the most dominant of the existing conditions which should determine renewal policy for the area.

The Low-Income Group: In 1950, the majority of the residents were in the lower income brackets (median income $2173). They were paying a median rent of $21.00 per month. Present rents are estimated at thirty dollars for a four-room apartment, a typical dwelling unit. It is believed that the residents have somewhat improved their financial position in the last

2 U.S. Census, 1950.
POPULATION TRENDS IN THE NORTH END

POPULATION IN THOUSANDS

Year:
- 1920
- 1925
- 1930
- 1935
- 1940
- 1945
- 1950
- 1955
- 1960

Population:
- 10
- 20
- 30
- 40
NORTH END COMPARED TO BOSTON
BY POPULATION PERCENTAGE
decade and can afford more rent than they are paying. Still the costs of renewing the structures to meet higher standards for occupancy may be economically prohibitive to some families.

The specific factors that will cause displacement will be the elimination of structures because of poor condition or location and increased rental costs, the latter described above. This, however, should be offset by the following factors.

Factors Offsetting Displacement:

A. Breaking up of the social unit:

1) The limitations on immigration: From 1940 to 1950 the number of foreign born decreased by one-third. Unless immigration laws are revised, this trend will continue.

2) The tendency of the second and third generations to leave the area and be absorbed into the American community. Population decline from 1940 to 1950 was charted by age groups with the following results.

<table>
<thead>
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<th>1940-1950 by Age Group</th>
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<tr>
<td>1940</td>
<td>15-24 years</td>
</tr>
<tr>
<td>1950</td>
<td>25-34 years</td>
</tr>
<tr>
<td></td>
<td>35-44 years</td>
</tr>
<tr>
<td></td>
<td>45-54 years</td>
</tr>
<tr>
<td>% difference from '40 to '50</td>
<td>-34%</td>
</tr>
</tbody>
</table>

Although this trend has started and will inevitably continue, it will be some time until the breaking up point will be reached. Presently this socio-ethnic unit appears as strong as ever. Therefore this remains as a major problem in the renewal of the area.

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1 Many persons who claim they would have remained in the North End if better housing were available have moved to outlying communities and are paying as high as $70 per month rent.
B. The breaking up of the old-world pattern of extended families will cause some decrease in the present family size. The average number of persons per dwelling unit decreased from 4.0 in 1940 to 3.6 persons in 1950 and is estimated at 3.4 persons in 1959. An estimate shows that there are 1940 persons considered as an extended part of a family.

C. Extension of the residential area. Another factor which should minimize the displacement problem is the proposed extension of the residential area into the present market area adding 12.9 gross acres.

II Housing Problems: 1) High residential density

2) Commercial intrusions in the residential area

3) Poor relationship of rooms to each other and the external environment

4) Lack of adequate sanitary facilities and central heating

5) Poor maintenance and dilapidation of buildings

6) Non-conforming uses in the residential area.

1. High Residential Density. The North End has a residential density which averaged 570 persons or 165 dwelling units per net residential acre in 1950. The following table compares North End conditions with contemporary standards. 

---

1 See Appendix B.
2 See Appendix A.
3 See Appendix C for density calculations.
4 Standards taken from Planning the Neighborhood and interpolated for 4-story buildings (the average number of floors for residential structures in the
### TABLE 3

<table>
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<th>N.E. 1950</th>
<th>Standard</th>
<th>Estimate N.E. 1958</th>
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<tr>
<td>1) Dwelling units/net residential acre</td>
<td>160</td>
<td>48</td>
<td>--</td>
</tr>
<tr>
<td>2) Net building coverage (percent of net residential land built on)</td>
<td>90%</td>
<td>28.5%</td>
<td>--</td>
</tr>
<tr>
<td>3) (a) Net resid. land/family (sq. ft.)</td>
<td>255</td>
<td>780</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>660&lt;sup&gt;1&lt;/sup&gt;</td>
<td>1,090&lt;sup&gt;2&lt;/sup&gt;</td>
<td>720&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>(b) Minimum interior floor space required/family (3.6 persons in 1950, 3.4 persons 1958 estimate)</td>
<td></td>
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2. Commercial Intrusions. Of the 28 acres of net residential area, 17 acres have a commercial use on the first floor. This in some cases detracts from the residential environment. The factors involved in this are:

1) Concentration of commercial uses. In many cases, commercial frontage is spotty, in poor condition, or abandoned. This does a great deal to detract from the residential environment. Where commercial uses are solid and active along a street, they do not visibly disturb the area.

2) Refuse from commercial uses. The refuse from commercial uses, especially in the food market area on Salem Street, is discarded into the street and creates an unhealthy and visually poor situation in the residential area.

North End). Figures for net residential land and building coverage/family have not been corrected for family size. Standard/or net residential land/family includes component uses of building coverage, outdoor living, service walks and setback and off-street parking.

<sup>1</sup>See Appendix D for estimate of floor space.

<sup>2</sup>Planning the Home for Occupancy, Chicago, Public Administration Service, 1950.
3. **Poor Relationship of Rooms to Each Other and to the External Environment.**

The total building coverage in the North End (including open space) is 75 percent. The building coverage for residential structures approaches 90%. Although in most cases minimum standards for light and air are met, the conditions are substandard in regard to cross-ventilation, views, etc.\(^1\) Also, the relationship of interior rooms is such that the maximum degree of privacy is not always afforded.

4. **Lack of Adequate Sanitary Facilities and Central Heating.** The buildings in the North End have not been updated to meet modern requirements for heating and sanitary facilities. Very few buildings have baths, in many cases as many as three families share one toilet, and central heating is very much the exception. A statistical abstract of the conditions follows:

| TABLE 4 |
|-----------------|--------|----------|
| **HEATING**     | No.    | % of total |
| central heating | 290    | 6.8      |
| non central heating | 3,935 | 91.7     |
| not heated      | 65     | 1.5      |
| **PLUMBING**    |        |          |
| units with no private bath, or no running water, or neither | 3,500 | 76.5 |

The Public Bath House on North Bennett Street does not relieve the situation since it by no means satisfies the desires of the population.

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\(^1\)Planning the Home for Occupancy, op.cit., Chapter V.
5. Buildings are poorly maintained or dilapidated. Almost all (99.6 per cent) of the buildings in the North End are forty years or older and have not been adequately maintained through the years. In some cases, because of a combination of these two factors, the result has been dilapidation beyond repair (see map 3).

6. Non-conforming Uses in the Residential Area. In some cases isolated manufacturing and warehousing activities are located in the residential area. Inasmuch as odors, noise and continual truck traffic accompany these activities, the existence of non-conforming uses has a detrimental effect on the residential environment.

III Circulation and parking

Problems: 1) Direct vehicular access from the North End to Boston is lacking.

2) The internal street system is inadequate to handle traffic.

3) Parking facilities are inadequate to serve present needs.

At present, the North End has no strong connection with the rest of Boston. Hanover Street connecting Scollay Square is severed by the Central Artery and only a pedestrian underpass connects the two ends. The other major thoroughfares (Commercial Street, North Street, Atlantic Avenue, and Washington Street North) have a very tenuous relationship to the city. The separation will be emphasized when the circulation proposals for the Government Center and second tunnel are complete (see Map 8). With these proposals, the North End will be closed to vehicular traffic from Haymarket Square south to Fulton Street with only a right turn off
Hanover Street onto a limited access road into Scollay Square.

Because of its situation on the peninsula, most of the traffic in the area is self-generating. Commercial traffic along Atlantic Avenue and Commercial Street serves the waterfront and wholesale market area. This is also the line for a freight car shuttle between North and South Stations. Within this area, Hanover Street is the organizing element serving as the intra-area artery. In general, through traffic is not a problem. However, the internal street system is not adequate to serve the traffic or parking demands. The narrow street widths make the present one-way system necessary (see map 2). The only streets that can accommodate commercial traffic and/or parking are Hanover, Battery, North, Endicott, and the Atlantic Avenue-Commercial Street belt.

Even with on-street parking, the parking facilities for the area are inadequate. Parking needs can be divided into three groups: (a) Parking for the residents: The major accommodations for off-street parking are the North Terminal garage (400 cars),\(^{1}\) two garages on North Margin Street (45 cars) and scattered open-lot and street parking accommodating 300 cars. In 1950 there were 2,300 automobiles owned by North End residents or one auto for every seven persons (vs. 1:4 for Beacon Hill, a similar circulation pattern; 1.5 for Boston proper), but this number has probably risen considerably and will continue to do so. (b) Parking for outside patrons of Salem-Cross Street market: Patrons of the food market district use the parking facilities under the Central Artery (678 cars) from North Street

---

\(^{1}\)North End residents park only on the roof of the garage. Capacity of 400 cars requires parking attendant. Other floors are used by trucks and patrons of the Boston Garden. Total capacity is 1500 cars.
to north of Haymarket Square. Since it is shared with the food market area across the Artery it is not sufficient to satisfy the present need. This situation will be worsened when much of this parking will be eliminated or cut off from the North End by the circulation proposals for the second tunnel.

Present proposals for the Government Center will provide parking spaces for 3000 autos immediately across the Central Artery from Hanover Street.

Mass Transit Facilities. The area is presently served by three bus routes, two from North to South Stations (one via Hanover Street, the other via Haymarket Square) and one from Charlestown to Haymarket Square. Nearby subway stations are located at Haymarket, Union Friend, Dock Square, Atlantic Avenue at State Street and Scollay Square (see map C).

IV Commercial Facilities

Problems: 1) Shopping facilities are scattered and overextended

2) Parking is inadequate to serve needs of shoppers

3) The circulation proposals for the Government Center and second tunnel will eliminate the Cross Street retail frontage and substantially weaken the food market area.

Problems (1) and (2) relate to the effect of commercial intrusions in the residential area and the traffic system respectively, and therefore are discussed under those sections. A general description of
shopping facilities follows and is directed toward determining the location of the stronger shopping areas (by streets) and also those located on streets too narrow to accommodate commercial traffic.

A statistical summary follows:

**TABLE 5**

<table>
<thead>
<tr>
<th>STREET</th>
<th>NO. OF ESTABLISHMENTS</th>
<th>% OF TOTAL</th>
<th>WIDTH OF STREET PAVEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hanover</td>
<td>101</td>
<td>22</td>
<td>44'</td>
</tr>
<tr>
<td>Salem</td>
<td>104</td>
<td>22</td>
<td>20'</td>
</tr>
<tr>
<td>Cross</td>
<td>18</td>
<td>4</td>
<td>20'</td>
</tr>
<tr>
<td>Endicott</td>
<td>56</td>
<td>12</td>
<td>28'</td>
</tr>
<tr>
<td>North</td>
<td>40</td>
<td>9.1</td>
<td>38'</td>
</tr>
<tr>
<td>Commercial to North</td>
<td>15</td>
<td>3.0</td>
<td>60'</td>
</tr>
<tr>
<td>North Bennett</td>
<td>25</td>
<td>6.0</td>
<td>16'</td>
</tr>
<tr>
<td>Fleet</td>
<td>52</td>
<td>11.0</td>
<td>26'</td>
</tr>
<tr>
<td>Prince</td>
<td>51</td>
<td>11.0</td>
<td>--</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>462</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hanover, Salem, Cross, Endicott and North Streets are the most substantial shopping centers in the area. Salem Street is inadequate to handle any traffic and serves as a pedestrian way during heavy shopping. North Bennett, Fleet, and Prince Streets are less substantial because of a poorer location and narrow streets, but are still sound and active.
3) **The Elimination of the Cross Street Retail Frontage.** The entire Cross Street retail frontage will be eliminated by the circulation proposals for the Government Center and second tunnel. This represents a large portion of the most substantial retail space in the area and its absence will significantly weaken the North End extension of the food market area across the Central Artery.

V **Recreational Facilities**

**Problem:** Outdoor recreation facilities are inadequate to meet the needs of the present population.

**Outdoor playgrounds.** The North End has approximately five acres of outdoor play space within the area varying in size from five thousand square feet to seven-tenths of an acre. If compared to recommended area standards, it represents only one-quarter of that necessary to satisfy the needs.\(^1\) Besides being inadequate in this respect many are not properly developed, or badly located for proper use as a playground facility.

**Playfields.** The North End "Playground" is defined as a playfield only because it more closely approaches this character than any of the other outdoor spaces in size and location.\(^2\) The recommended standard for a playfield to serve the North End is about seven times that which exists.

**Other Recreational Space.** Copps Hill Terraces because of its location, size, and extent of development, does not adequately serve as a park.

---

\(^1\)Adapted from National Recreational Association, Standards for Neighborhood Recreation Areas and Facilities, 1944. Standards recommended 1 acre/800 persons for playgrounds and the same for playfields. See Appendix F for standards recommended for existing intown areas by the Boston Planning Board.

\(^2\)Recommended by National Recreational Association, op.cit.
A summary of existing facilities follows.

**TABLE 6. EXISTING RECREATION FACILITIES**

<table>
<thead>
<tr>
<th>NAME</th>
<th>OUTDOOR PLAY ACREAGE</th>
<th>FACILITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PLAY SPACES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) Michaelangelo School Yard</td>
<td>0.15</td>
<td>outdoor: paved play-space</td>
</tr>
<tr>
<td>2) Eliot School Yard</td>
<td>0.25</td>
<td>outdoor: paved play-space</td>
</tr>
<tr>
<td>3) George White Playground (at Health Unit)</td>
<td>0.10</td>
<td>outdoor: paved play-space. sitting</td>
</tr>
<tr>
<td>4) Polcari Playground (at St. Anthony's School)</td>
<td>0.50</td>
<td>outdoor: paved play-space. indoor: at St. Anthony's at Bath House</td>
</tr>
<tr>
<td>5) Vincent Cutillo Playground</td>
<td>0.35</td>
<td>outdoor: paved play-space</td>
</tr>
<tr>
<td>6) Defilippo Playground (Prince Street)</td>
<td>0.40</td>
<td>outdoor: paved play-space</td>
</tr>
<tr>
<td>7) Foster Street Playground</td>
<td>0.10</td>
<td>outdoor: paved play area. sitting</td>
</tr>
<tr>
<td>8) Charter St. Playground</td>
<td>0.1</td>
<td>outdoor: paved play-space. sitting</td>
</tr>
<tr>
<td>9) Thatcher St. Playground</td>
<td>0.05</td>
<td>outdoor: unpaved play-space</td>
</tr>
<tr>
<td>10) North End Playground</td>
<td>2.50</td>
<td>outdoor: ballfield, swimming pool indoor: showers and dressing facilities</td>
</tr>
<tr>
<td>11) C. Columbus Youth Center</td>
<td>0.70</td>
<td>outdoor: paved play-space</td>
</tr>
<tr>
<td></td>
<td></td>
<td>indoor: meeting rooms; gym; showers. Excellent condition</td>
</tr>
<tr>
<td>NAME</td>
<td>OUTDOOR PLAY ACREAGE</td>
<td>FACILITIES</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>12) North End Settlement House</td>
<td>NONE</td>
<td>meeting rooms</td>
</tr>
<tr>
<td>13) Bath House</td>
<td>(shared with Polcari's Playground)</td>
<td>shower facilities; gym - poor condition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.8 acres</td>
</tr>
</tbody>
</table>

Other outdoor recreation space

<table>
<thead>
<tr>
<th>NAME</th>
<th>OUTDOOR PLAY ACREAGE</th>
<th>FACILITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>14) The Prado</td>
<td>0.85</td>
<td>paved sitting area</td>
</tr>
<tr>
<td>15) Copps Hill Terraces</td>
<td>0.60</td>
<td>shelter, paved sitting area</td>
</tr>
<tr>
<td>16) North Square Park</td>
<td>0.05</td>
<td>grass; sitting</td>
</tr>
</tbody>
</table>

subtotal 1.50

<table>
<thead>
<tr>
<th>NAME</th>
<th>OUTDOOR PLAY ACREAGE</th>
<th>FACILITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>6.80 acres</td>
</tr>
</tbody>
</table>

VI Schools

Problems: 1) Poor condition of parochial elementary schools

2) Uneven distribution of elementary school population within the schools

3) All schools lack outdoor play facilities

In general, the two public schools are in good physical condition and the parochial schools are in poor condition, appear as fire traps, and lack indoor assembly and recreation facilities. The elementary school population is distributed between parochial and elementary schools so that a public school (Michaelangelo) in good condition is at one-half capacity
while the dilapidated parochial buildings are near capacity. The parochial High School is overcrowded. All schools lack outdoor recreational facilities. A description of each school follows.

### TABLE 7

<table>
<thead>
<tr>
<th>School</th>
<th>grade</th>
<th>cap.</th>
<th>1950</th>
<th>1958</th>
<th>YEAR BUILT</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. PUBLIC SCHOOLS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) Michaelangelo</td>
<td>5-9</td>
<td>450</td>
<td>276</td>
<td>230</td>
<td>1919-1921</td>
<td>fireproof, Class I construction. Gym showers, assembly room (stage). Good condition.</td>
</tr>
<tr>
<td>2) Eliot</td>
<td>K-6</td>
<td>480</td>
<td>280</td>
<td>423</td>
<td>1932</td>
<td>Fireproof; Class I construction. Good condition</td>
</tr>
<tr>
<td><strong>SUBTOTALS</strong></td>
<td></td>
<td></td>
<td>930</td>
<td>506</td>
<td>653</td>
<td>% of total in Pub. K-8</td>
</tr>
<tr>
<td>% of total in Pub. K-8</td>
<td></td>
<td></td>
<td>34%</td>
<td>17%</td>
<td>23%</td>
<td></td>
</tr>
<tr>
<td><strong>B. PAROCHIAL SCHOOLS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) St. Anthony's</td>
<td>K-8</td>
<td>730</td>
<td>718</td>
<td>686</td>
<td>1904</td>
<td>Fireproof; Class I construction. Use assembly &amp; recreat. facilities at C. Columbus Ycuth Cen- ter. Fair condition</td>
</tr>
<tr>
<td>2) St. John's</td>
<td>K-8</td>
<td>500</td>
<td>327</td>
<td>274</td>
<td>1899</td>
<td>Brick with steel girders. No rec'tal or assembly facil. Only ¾ of bldg in use. Poor condit.</td>
</tr>
<tr>
<td>School</td>
<td>grade</td>
<td>cap.</td>
<td>ENROLLMENT</td>
<td>YEAR BUILT</td>
<td>REMARKS</td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>-------</td>
<td>------</td>
<td>------------</td>
<td>------------</td>
<td>-------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1950</td>
<td>1958</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SUBTOTALS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of total in Parochial K-8</td>
<td></td>
<td></td>
<td>66%</td>
<td>83%</td>
<td>77%</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL K-8 school pop.</strong></td>
<td></td>
<td></td>
<td>2720</td>
<td>1630</td>
<td>1855</td>
<td></td>
</tr>
<tr>
<td><strong>4) Julie Billiart</strong></td>
<td>9-12</td>
<td>375</td>
<td>221</td>
<td>358</td>
<td>1904</td>
<td></td>
</tr>
<tr>
<td>(girls)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Class I. fireproof construction. Use rec'l &amp; assembly facil. at the C. Columbus Youth Center. Fair condit. (same bldg as C. Columbus High Sch) 25% of students from outside the North End.</td>
<td></td>
</tr>
<tr>
<td><strong>5) C. Columbus</strong></td>
<td>9-12</td>
<td>400</td>
<td>509</td>
<td>548</td>
<td>1904</td>
<td></td>
</tr>
<tr>
<td>(boys)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>775</td>
<td>730</td>
<td>906</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL for High School</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C. OTHER SCHOOLS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North End Industrial School</td>
<td>high</td>
<td></td>
<td></td>
<td></td>
<td>Red Feather supported. Cabinet making piano-tuning, metal work, etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>sch.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>post</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>grad.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*The work done of the various schools is credited from the number of enrolled in percent of total enrollment.*
VII Historic Sites

Problems: 1) The Paul Revere and Hitchborn Houses are situated in a poor setting.

2) In some cases access to the historic sites is difficult and no parking is provided for tourists.

1. A better setting for historic sites. The Paul Revere and Hitchborn Houses are historic sites of national interest and require settings which manifest their significance and meaning. These buildings are located prominently in North Square but are lost in a setting of confusion and shabbiness.

2. Easy access and parking. The above-named areas with the Copps Hill Burial Ground are in need of better access and parking facilities for the convenience of tourists. In the case of the Paul Revere House site, North Street at the west end will be closed to provide entrances for the second tunnel, denying entrance from downtown Boston. North Square provides no off-street parking for autos or buses. The Old North Church, facing on narrow Salem Street, cannot provide for vehicular tourist traffic. Parking spaces are virtually non-existent. Copps Hill Burial Ground is substantially above the street level in most places and it is not possible to take full advantage of the area as an open space.

VIII Predominantly Non-Residential Land

1. The waterfront facilities make up the outer section of the study area from the mouth of the Charles River into the Boston Inner Harbor for a length of two-fifths of a mile along Commercial Street and form the northern
portion of the study area. The existing uses from the Charlestown Bridge in order are the U.S. Corps of Engineers Motor Pool, the Harbor Master's Station, the North End Playground, the U.S. Coast Guard Base, and the Boston Provision Company plant and storage building. The significant structures are the U.S. Coast Guard Building, the Boston Provision Company and the Quincy Market Building. Since the decline of shipping activities in Boston, many of these activities can and will relocate in other parts of the metropolitan area. Those with reason to be located on the waterfront feel that they would just as well or better be located elsewhere in harbor.¹

2. The Wholesale and Market Area. The re-use of the wholesale and market area south of North Street to Clinton Street between Atlantic Avenue and the Central Artery is seen as a logical extension of the North End residential area and is included as part of the study area for this re-use.

IX Other Isolated Non-Residential Land

In some cases there are warehouses and small manufacturing establishments within the residential area which generate truck traffic and bad odors, and are considered detrimental to the residential environment.

X Zoning

The major portion of the study area is presently zoned for general business which permits dwelling units, wholesale and retail stores, offices,

¹Based on interviews of major activities on the waterfront by the Boston City Planning Board staff, 1956.
accessory uses and certain light industries. The market area (part of which is included in the study area) is zoned for light manufacturing, as is the waterfront area. It is obvious that these regulations cannot be considered applicable to the renewal of the North End as a residential area.

A proposed Zoning Regulation which has recently been drafted by the Boston City Planning Board will be considered for the purposes of this problem as the existing zoning regulations. Although the proposed zoning map is not necessarily consistent with the renewal of the area, changes in the map for renewal proposals will be considered in relation to it and not the existing zoning map.

Summary of Existing Conditions

Generally, the living conditions in the North End are poor. The housing is characterized by a range of problems. The residential density is excessive, the buildings are old, poorly maintained or dilapidated, and they are crowded onto small plots of ground. Most dwelling units lack adequate sanitary facilities, central heating, have compromise interior room layouts and relationships to the exterior environment. The internal street system cannot conveniently handle traffic. Parked automobiles illegally crowd the narrow streets and even then the number of parking spaces is very inadequate. There is a great need for public open space and this need is magnified when the extent to which buildings are crowded

1Proposed Zoning. A report by the City Planning Board, Boston, Massachusetts, May 1958. See Map 11.
on the land is remembered. Some schools are very substandard and all lack proper outdoor play facilities. In summary the environment as it exists is detrimental to the physical health and safety of the residents.

However, in examining the existing conditions with the intention of renewal, the presence of the low-income ethnic group rises above the decaying environment and becomes firmly established as the most significant. In spite of the depressing surroundings they are a healthy minded, morally sound and closely knit social unit. Although there are signs and reasons why this group should eventually break up and leave the area, it presently appears solid and probably will remain so for some time. Therefore much care and attention must be given to their interests.
PART 2: OBJECTIVES - ALTERNATIVE COURSES OF ACTION

I Objectives

1. The Creation of a Better Residential Environment

The North End occupies the northermost tip of the Boston peninsula. It is a distinctly defined and isolated residential area surrounded by commercial activities with its back to the sea. The building of the Central Artery severed Hanover Street (its only strong tie to the downtown) and hardened its southwestern edge by creating a massive and almost impenetrable wall. In this position it can easily maintain its identity as a residential area and will not conflict with the intensive activities in the adjacent downtown areas.¹

As was described under Existing Conditions, the area is characterized by many of the conditions which define a slum. Therefore the general objective is to create a better residential environment.

2. Provide for the Existing Population

The people who presently reside in the area form a strong social unit which will not reach a breaking point for some time. A second objective of the study is that renewal proposals be directed toward the needs of this group.

3. Provide a Program under which a Totally New Pattern can be Evolved Without Prematurely Disrupting the Present Physical and Community Characteristics

Two key objectives in terms of renewal proposals are that the existing group not be forced out and that the physical unity not be disturbed while

¹The Boston City Planning Board proposes the continued use of the North End as a residential area. Preliminary General Plan 1950.
a completely new pattern is being evolved. Supporting this last objective is the present physical unity of the North End, which is one of its greatest attributes.

4. The Continued Use of the Area for Low and Moderate Income Families with Children

From the standpoint of the metropolitan area, good housing should be provided for low and moderate income families with children who want to live near the center of the city. Because of its physical situation, form, and scale, the North End is ideally suited to satisfy this need. Presently the area is largely made up of lower-income families with children. Consequently a population objective is that family living be continually provided for in the renewal of the area and that the program be extended so as to include families of moderate income. This will tend to remove the stigma of a low-income ghetto from the area.

II Alternative Courses of Action

A. Total Redevelopment

Complete and immediate redevelopment appears politically unrealistic and socially evil. The complete and permanent displacement of the socioeconomic group because of redevelopment and its high initial costs would never be tolerated on political or moral grounds. This course of action is in direct conflict with the objectives stated above of continuity and family living.

\(^1\) A study of the high-income housing market by the Boston Planning Board staff (L. Schaeffer) indicated that the West End and Back Bay proposals will satisfy the market for many years (August 1958). By partial elimination it is assumed that there is a housing market for moderate income families near the core.
B. Staged Redevelopment

Staged redevelopment phased to the change in the population characteristics can be considered as a valid course of action in the North End. It, however, has the following shortcomings:

1) The difficulty of initiating a small parcel of redevelopment in a predominantly deteriorated area.
2) The inertia from resistance to even a partial redevelopment in a politically vocal area.
3) The loss of confidence in the area after the initial stage of redevelopment might result in the rapid deterioration and abandonment of the remaining portion.1 This would no more solve the social problem than the alternate of complete and immediate redevelopment.

C. Rehabilitation

Rehabilitation through code enforcement, extension of community facilities and spot redevelopment is most suited to achieve the objectives. The advantages of this program are as follows:

1) Less inertia from political resistance since the great portion of the proposals will be directed to the needs of the existing population.
2) Public display of continued confidence in the area; opportunity to take advantage of community participation.
3) Low initial cost.

---

1The experience in the redevelopment of Boston's West End was that rapid deterioration of the area followed the announcement of redevelopment. This could happen in the North End after one stage of a total redevelopment proposal.
h) An evenly timed and continuing process which accommodates the present group as long as necessary and sets the stage for eventual redevelopment.

This, however, has one shortcoming in relation to the objectives. In a program relying primarily on rehabilitation, it would be difficult to attract persons of higher income into the area because only old housing is available. Because of this, it is necessary to supplement the program with strong residential redevelopment proposals if this income group is to be attracted. The preliminary rehabilitation has the additional advantage in that it should be comparatively easy to initiate redevelopment proposals in an invigorated district rather than a deteriorating one. In conclusion, therefore, a program which considers both rehabilitation and redevelopment seems best suited to achieve the stated objectives.
PART 3: PROGRAM, PROPOSALS, STAGING, IMPLEMENTATION AND COSTS

I Program

The following program for the North End outlines a plan of action in pursuit of the major objectives, that being to create a better residential environment without displacing the low-income social unit. In order to realistically pursue these ends, it will be necessary to present compromise proposals aimed at only relieving the worst situations, in some cases very indirectly. Some situations cannot be altered at all within the framework which has been set. Still, solutions can be found to many problems that will appreciably improve the environment to a high level that is worthy of the effort.

A. Housing

1) Rehabilitation

In general, the policy in regard to rehabilitation should be to relieve the worse situations through code enforcement that would bring the conditions up to minimum standards. In cases where the situations are intolerable and cannot be relieved, the buildings should be razed.

a) Residential Density. The problems of high density can be substantially relieved in rehabilitation. Although the conditions recommended by the American Public Health Association for new construction cannot be satisfied, the new conditions can be considered satisfactory and are not unhealthful.¹ The present amount of interior floor space per family already

¹Standards for New Construction, Planning The Home for Occupancy, The American Public Health Association, 1950; Recommended conditions for existing housing, A Proposed Housing Ordinance Regulating Supplied Facilities, Maintenance, and Occupancy of dwellings and dwelling units. The
satisfies the minimum requirements for existing housing recommended by
the American Public Health Association.\textsuperscript{1}

The dwelling units/net residential acre or residential building coverage cannot be significantly modified. This problem will be relieved by providing public open spaces and will be discussed in more detail under the program for recreation.

b) \textbf{Commercial Intrusions in the Residential Area}. In most cases, the commercial intrusions are not harmful to the residential area. In considering the needs of the existing population, they are the means of livelihood for many persons and serve as convenient social and commercial centers. However, measures will be taken to eliminate some commercial uses in residential areas where they are very marginal, in poor condition, in a poor location in regard to the proposed plan, and in general detract from the residential environment. Space occupied by stores can easily be converted into satisfactory dwelling units. (This and the reverse are continually taking place in the North End.)

c) \textbf{Relationship of Rooms to Each Other and to the External Environment}.
The unhappy interior arrangement of rooms cannot be directly altered within the framework of this program. Although they do not afford a desirable\textsuperscript{1}

\textsuperscript{1}American Public Health Association, 1952. The Boston Health Department has recently enacted a regulation which establishes regulations for minimum standards of fitness in the City of Boston (September 1956). These are substantially the same as those proposed by the APHA Housing Ordinance. \textsuperscript{2}The APHA recommends about 400 square feet of interior floor space for a family of 3.4 persons, the 1958 estimated family size in the North End. The 1958 interior floor space estimate for the North End is about 720 square feet/family. This however includes many two-person families who continue to occupy a 750 square foot apartment after their children have moved away. There will be many situations where substandard occupancy conditions will persist unless regulated.
degree of privacy, an inspection of typical units revealed the situation to be tolerable (see diagram h).

In general the situation with regard to light and air standards is adequate. Inspection of all dwelling units by the Health Department can uncover the offenders and the situation can be improved or the building demolished in the worst situations.

d) Heating and Sanitary Facilities. At least a minimum standard of sanitary facilities will be provided in North End dwelling units. In general, the space-heating units which are used to provide heat in the majority of dwelling units are considered adequate. Since buildings are built closely together, there is relatively little heat loss. Although central heating would be desirable, it is not necessary.

e) Rehabilitation of Dwellings; Removal of Dilapidated Dwellings. Buildings which are poorly maintained will be rehabilitated in regard to foundations, floors, walls, ceilings, roofs, plumbing facilities, and stair wells. Buildings which are dilapidated beyond repair will be removed.

2) Residential Redevelopment

The policy in regard to redevelopment is to raze predominantly dilapidated areas to make way for new development, and to extend the residential area to provide housing for displaced persons, and also to provide a new stock of private housing to generally invigorate the area.

1Ibid.
2Ibid.
a) **Redevelopment on Residential Land.** In areas where buildings are predominantly dilapidated beyond repair, all buildings will be cleared to make way for complete redevelopment.

b) **Extension of the Residential Area.** The extension of the residential area is necessary in order to provide: (1) housing for persons displaced by redevelopment on residential land; (2) housing for a higher income group; (3) a strong lever for total redevelopment without displacing the present population. Proposals for new housing will include:

   (i) **Public Housing.** In order to provide housing for low-income families, displaced by renewal proposals, public housing will be provided to satisfy their needs.

   (ii) **Public Housing for the Aged.** Housing for the aged is a legitimate form of subsidized housing for the North End. Presently nine percent of the total population is 65 years or older. With the break-up of the old-world extended family pattern, aged persons would be able to remain in the area where their long-established ties exist.

   (iii) **Private Housing.** Land will be made available in the area for private housing development.

B. Circulation and Parking

1) **Circulation**

   The policy in regard to circulation should emphasize pedestrian movement within the area and improve the existing circulation system by minor surgery. Mass transit and automobiles should only be provided for in regard to intra-area travel. In line with these, the major lot of parking will
be provided on the periphery of the area adjacent to the major intra-area artery.

a) **A Better Connection to Boston.** Washington Street North, Commercial Street and Atlantic Avenue will be used as the main connecting routes to Boston and the metropolitan area. Main access to and from downtown Boston and the Central Artery will be made via this circumferential road. (Hanover Street will connect to a limited access road into Scollay Square.) Street widenings will be made in order to provide a few good radial roads into Hanover Street which is the main organizing spine within the area.

b) **Internal Street System.** A program of minor surgery will be applied to the internal street system in order to alleviate the worst traffic bottlenecks. Proposals will consist of minor street widenings and an extension.

c) **Pedestrian Ways.** Existing streets which are heavily traveled routes but are too narrow to serve a steady stream of vehicular traffic will be used as pedestrian ways with only service and fire access allowed. The historical way, primarily for tourists, will be strengthened and extended. Since the entire area can be circumscribed within a circle with a radius of 400 yards, it is reasonable to assume that a system of pedestrian movement can be used for inter-community movement.

d) **Mass Transit.** The North End is an intown residential area proposed for a low and moderate income group. Given this condition, it is reasonable to assume that mass transit facilities can satisfy a large proportion of the residents' transportation needs. Therefore it is necessary to improve bus connections from Hanover Street and the circumferential road to the nearest subway stations.
2) Parking Facilities

a) On Street Parking. On-street parking will be permitted where it will not disturb traffic flow. The street on which parking will be permitted are Hanover Street, the remaining Commercial Street, Atlantic Avenue and Washington Street North.

b) Off Street Parking

(i) Rehabilitated Housing. In general parking for rehabilitated housing is proposed on the periphery of the area on presently vacant or non-residential land. In some cases, in the interior of the area, small pockets of parking are proposed that are convenient to existing dwellings with an attempt to locate only on non-residential land.

(ii) All parking for new housing can be provided for on the site in the ratio of 7 parking spaces for 10 dwelling units.

c) Shopping Areas. It is assumed that Hanover Street above Richmond-Parmenter Street and the small interior convenience centers can be served without major parking additions. These areas which contain mainly banks, dry goods, drugstores, ice-cream parlors, etc., are and can be in the future served by pedestrian traffic. However, some parking facilities will be made available for these areas.

The bulk of new parking facilities for shopping is proposed to be provided for the area at the lower end of Hanover and Salem Streets. This area (the
extension of the food market area across the Artery) is most in need of parking since shoppers with a week's food supply continually stream through this portion of the commercial area.

C. Commercial Facilities

The policy in regard to commercial facilities is to concentrate and strengthen the externally oriented food market area, strengthen the Hanover Street line as the local shopping district, and eliminate only the marginal commercial development. Convenience centers within neighborhoods should be retained but controlled as to use.

1) The food market area should be strengthened by new additions and a connection to the food market across the Central Artery by a shop-lined underpass. The connection should be made to Salem Street, the heart of the food market.

2) Hanover Street can be strengthened by filling in gaps with new commercial uses and concentrating the activity in the more central portion of the area.

3) Only the most marginal commercial uses will be eliminated as discussed under commercial intrusions in housing.

4) Convenience centers should be retained but uses should be limited to drugstores, delicatessens, etc., small service uses, etc., so as not to create a cross-traffic of community-oriented uses which would occur in areas inadequate to accommodate them.

D. Recreation

It is important to provide generous outdoor recreational facilities in the rehabilitation of the North End. Because of the somewhat crowded
living accommodations and the fact that no outdoor living space is provided on residential land, the people will spend a greater proportion of their time in public open spaces. This is considered a key issue in the renewal of the area.

The program for recreation will be directed toward: (1) creating a large number of small sitting spaces and playspaces for pre-school children in the interior of the dense residential area; (2) concentrating recreational facilities requiring large amounts of space on the waterfront where large tracts of semi-developed and non-residential land are available.

E. Schools

1) Elementary Schools

In general, the program for elementary schools will be the contraction of school facilities in line with the decreasing need. The two public school buildings which are comparatively new and in good condition will be utilized while the parochial schools which are in poor condition will eventually be eliminated. It will be necessary to construct one new elementary school building in order to accommodate the expected enrollment.

It is difficult to predict the elementary school needs in regard to whether the need will be greater in the public or parochial schools. It is possible that public schools could be sold to the church if the parochial population was such as to make it necessary.¹

It would be necessary to negotiate with the archdiocese and convince them of the school needs in relation to the Catholic population.

¹This was done in the case of St. Anthony's School which was formerly the Paul Revere Public School.
2) The Parochial High Schools

Although the high schools are in part metropolitan oriented, the principals expressed the desire to remain in the area regardless of the future North End Catholic population. From this designer's point of view, it seems desirable to have such an institution located in the city where many of the rich experiences of urban life, not found in the suburbs, are available.

The present high schools require new and expanded facilities. Because enough land cannot properly be made available in the central area, new facilities will be located on the periphery of the area. Here they will be able to take advantage of the expanded outdoor recreational facilities.

F. Historic Sites

Off-street parking facilities will be provided for the Old North Church and Paul Revere-Hitchborn House Sites. Design proposals will be made to provide a better setting for the latter. Pedestrian access for Copps Hill Burial Ground will be provided.

G. Other Isolated Non-Residential Land

Measures should be taken to eliminate other isolated non-residential uses (manufacturing, etc.) where they are believed to have a detrimental effect on the residential area.

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1Presently in the Christopher Columbus School 75 percent of the students are from outside the North End and represent 25 communities in the metropolitan area. In the Julie Billiart School 25 percent of the students are from outside the area.
H. Land Retained as Industrial Use

The waterfront land from the Charlestown Bridge to Police Station #1 will remain for light industrial uses. It is a logical extension of the North Station wholesale commercial area and will not detract from the adjacent residential use because of the rapid change in the topography and also the buffer of the North Terminal garage. This area will not be included as part of the renewal program.
II Proposals

The following sections specifically describe proposals and are meant to be read in conjunction with the maps, particularly numbers 7 and 8.

A. Housing

1) Rehabilitation.

(a) Provision of sanitary facilities: Sanitary facilities will be provided for each dwelling unit where lacking. The facilities will include:
(i) kitchen sink; (ii) a room which affords privacy and contains a flush water-closet, a lavatory basin and a bathtub or shower. Exceptions can be provided for where two dwelling units may share a single flush water-closet, lavatory basin and bathtub or shower. Typical units were inspected which had been rehabilitated in this manner and it is believed that all units can be dealt with in a similar fashion. Facilities were provided in closed-off portions of hallways and under stairways without major remodelling to the dwelling unit.

(b) Rehabilitation of dwellings; removal of dilapidated dwellings:
Buildings which are poorly maintained will be rehabilitated in regard to foundations, floors, walls, ceilings, roofs, plumbing facilities, and stairwells. Dwellings which are dilapidated beyond repair will be removed. In some cases buildings that could be rehabilitated will be removed when they are located in a predominantly dilapidated area or are in direct conflict with the overall plan.

(c) Elimination of uses considered non-conforming in the residential area.
2) Redevelopment

(a) Public Housing.

(1) Project Location - between Richmond and extension of Clinton Street near new tunnel entrance.
   Area 1.6 acres
   Assumed family size 3.6 persons
   Total no. d.u. (3-3 story - 1-6 story elevator apt.) 60
   Total no. persons 215
   Density 38 d.u./net acre

(2) Project Location - Washington Street North between Cooper and Thatcher Streets
   Area 1.25 acres
   Assumed family size 3.6 persons
   Total no. d.u. 56
   Total no. persons 192
   Density 43 d.u./net acre

(3) Project Location - Harris Street
   Area 1 acre
   Assumed family size 3.6 persons
   Total d.u. 36
   Total no. persons 130
   Density 36 d.u./net acre

(h) Housing for the Aged.
   Project Location - Moon and Fleet Streets
   Area .95 acre
   Assumed family size 1.5 persons
   Total no. d.u. (6 story elevator apartments) 60
   Total no. persons 90
   Density 50 d.u./net acre

   Total subsidized d.u. 200
   Total persons 627

1 Family sizes were assumed on the following basis. Since a major objective is to provide housing for families with children, most housing is provided for families that average 3.6 persons, an average for a normal suburban community. In order to provide some units for smaller families (the type normally found in the downtown area) the average family size is reduced to 3.3 persons in projects nearer the regional recreation and downtown areas.
(b) Private Housing

(1) Project Location - Atlantic Avenue between Clinton and Richmond Streets
   Area 3.1 acres
   Assumed family size 3.6 persons/d.u.
   Total d.u. (3 story) 108
   Total no. persons 390
   Density 35 d.u./net acre

(2) (a) Project Location - between Richmond Street Extension and Sun Court Extension on Atlantic Avenue
   Area 2.1 acres
   Assumed family size 3.3 persons/d.u.
   Total d.u. (3 and 6 story) 95
   Total no. persons 315
   Density 45 d.u./net acre
   (b) Upper portion of same block
   Area 1.65 acres
   Assumed family size 3.6 persons/d.u.
   Total d.u. (2 and 3 story) 60
   Density 36 d.u./net res. acre 215

(3) Charter Street (pedestrian way)
   Area .55 acres
   Assumed family size 3.6 persons
   Total d.u. (2 and 3 story) 24
   Total no. persons 85
   Density 44 d.u./net acre

(4) Project Location - between Prince and Tileston Streets
   Area 1.15 acres
   Assumed family size 3.6 persons
   Total no. d.u. (2 and 3 story) 48
   Total no. persons 170
   Density 40 d.u./net acre
(5) Project Location - lower end of block between Sun Court and Fleet Street
Area 2.2 acres
Assumed family size 3.6 persons
Total no. d.u. (3 story) 80
Total no. persons 290
Density 45 d.u./net acre

Subtotal: total no. d.u. 415
          total no. persons 1590

TOTAL UNITS 615
TOTAL PERSONS 2092
B. Circulation and Parking

1) Streets

Generally, the vehicular proposals are based on the use of Commercial Street and Atlantic Avenue as a circumferential ring connecting to downtown Boston and the Central Artery. Hanover Street remains as the internal organizing spine and radiates spokes of streets which connect to the surrounding neighborhood. Proposals are as follows (see map 8):

(a) Street widenings (55 foot right of way) for two-way traffic from Clinton Street joining to Richmond Street and Parmenter Street to Washington Street North.

(b) The extension of Salem Street for two-way traffic (55 foot right of way) and the widening of Salem Street for one-way traffic access from Commercial Street.

(c) A new street is proposed connecting from the foot of Hanover Street and looping around between Parmenter and Cooper Streets. This will serve to return traffic from the foot of Hanover Street back into the area.

(d) Widening of Harris Street for one-way traffic access from Atlantic Avenue to a 45 foot right of way.

(e) Widening of Salem Street (35 foot right of way) between Prince and North Bennett Streets to better accommodate one-way traffic.

(f) The widening of Fleet Street from Moon Street to Atlantic Avenue. This will be done in conjunction with the redevelopment of the market area and is done in order that these proposals would be consistent with eventual redevelopment.

(g) Most of the existing streets south of and including North Street will be replaced by a new pattern which will better accommodate the residential extension.
(h) A new system of streets is proposed to accommodate the residential extension. The existing rights of way which are used in the new system are Richmond Street and Sun Court which is extended and widened.

(i) A new system of one-way streets is proposed which will better accommodate traffic in light of the above-noted street improvements.

2) Pedestrian Ways

The following streets will be closed to vehicular traffic except for service and fire access. These streets are too narrow to handle the vehicular traffic generated and can better serve as pedestrian ways.

(a) Salem Street from the Central Artery to Parmenter Street

(b) From Salem Street to Hanover Street between Parmenter Street and the Central Artery

(c) Prince Street from Salem Street to Hanover Street

(d) North Bennet Street from Salem Street to Hanover Street

(e) Tileston Street from Salem Street to Hanover Street

(f) Charter Street from Commercial Street to the new extension of Salem Street. In this case the street closing is proposed in order to connect the Copps Hill Terraces to the Burial Ground.

(g) Clark Street from Hanover Street to Commercial Street

The Waterfront redevelopment proposals by the Boston Planning Board suggest a historical marine museum and a new mooring for the Constitution as a part of this regional recreation center (not shown on map). These facilities should be located at the foot of Clark Street which would complete an imageable historical pedestrian way beginning on the water, then through the city and ending at another point on the waterfront.

(h) A system of pedestrian ways from northeast to southwest between Salem and Hanover Streets which connect to a series of small open spaces and various institutions and community facilities will be added.
3) Parking

Proposals for parking are as follows:¹

(a) Parking for the commercial area:

Off street parking:

(1) Fleet Street lot (behind Hanover Street) (metered) 65
(2) Cooper Street lot (metered) 155
(3) Parmenter Street 50
(4) Richmond Street lot 80

On street parking:

(5) Parking on Hanover Street (two sides) 70

subtotal 420

(b) Parking for rehabilitated housing

On street parking

(1) Commercial Street and Atlantic Avenue (one side) 110
(2) Washington Street North (one side) 13

Off street parking

(3) Commercial Street on the waterfront 290
(4) Commercial Street and Henchman Street 30
(5) Atlantic Avenue between Fleet and Clark Streets 130
(6) North Bennet Street²
(7) Prince Street²
(8) Washington Street North from Thatcher to Endicott 160
(9) Battery Street 25

¹Calculations are based on 300 square feet per automobile
²Spaces have already been allocated to new adjacent housing
(10) Commercial Street at Battery Street  
(11) Commercial Street at Hull Street  
(12) The North Terminal Garage (attended)

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Ratio: 1 parking space per 3.2 rehabilitated dwelling units

(c) Parking for Historical Sites. The Paul Revere and Hitchborn House sites can use the metered lot on Richmond Street. A lot is provided for the Old North Church for 25 cars and a bus space.

<p>| | |</p>
<table>
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<td>total spaces</td>
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1The North Terminal Garage as an attended lot will be used mainly for weekday storage. As an unattended lot it holds 370 automobiles.
2The metered lots if considered as overnight parking spaces for residents would reduce the ratio to 1:2.3
C. Commercial Facilities

1) The elimination of commercial facilities from parts of the area will be discussed under zoning changes.

2) New Commercial Floor Space is proposed on the following sites:

(a) On the west side of Salem Street south of Parmenter Street 25,000 square feet
(b) Commercial along pedestrian way from Salem to Hanover Street 5,000 square feet
   The north corner of Hanover Street and Prince Street 1,800 square feet
(c) Snow Hill, Prince Street 3,600 square feet
(d) Salem and Charter Streets 1,200 square feet

Total 4,360 square feet

D. Recreation

In general the policy for recreation space is to provide for outdoor games requiring little land area, small parks and sitting areas inside the North End, and then providing for the more active games in a playfield outside the area.

1) Playgrounds

(a) Improvement: Prince Street Playground
   The division of the area into a totlot, handball courts, basketball, sitting area, shelter and planting 0.14

(b) Extension of White Playground at Health Unit
   Handball court, other hard surface games and planting, and sitting and shelter area 0.14

\[ All figures assume one floor only. \]
(c) New School Playground at Richmond Street
Play-yard with basketball, handball, other
hard surface games, planting, sitting area

(d) At the Central Artery and new tunnel entrance
(to supplement new school playground)

subtotal 2.8 acres

2) Outdoor Playspaces for Preschool Children (totlots)

(a) Battery Street

(b) Clark Street and Harris Street

(c) Charter Street (Copps Hill Terraces rehabilitated)

(d) Between North Bennett and Prince Streets
(pedestrian ways)

(e) Between Cooper and Thatcher

subtotal 0.9 acres

3) Sitting Spaces

(a) Many small courts and sitting spaces are being
provided throughout the area (see map 1)

(b) Harris and Clark Street (park)

subtotal 1.25 acres

4) Playfield

(a) Expansion of North End Playground
Provision of softball diamonds, hard sur-
face games, picnic area, band concert
shell, sitting areas, junior playground
facilities.

TOTAL OUTDOOR RECREATION
SPACE 17.95 acres

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1 One-half of area has been assessed as a public totlot.

2 The size of the outdoor playspace in conjunction with the new school site
is substandard if measured against contemporary standards. However con-
sidering total redevelopment of the area, it is possible to extend the
school site (consistent with the total redevelopment plan) to a standard
level (see maps 7 and 10.)
E. Schools

1) Schools K-8

As was previously stated, no predictions have been made as to the future distribution of the school population between the parochial and public schools. The following proposals for new schools or the elimination of schools has no relation to this characteristic of the school population, but is based on the projected need.

(a) The elimination of St. Anthony's Parochial School.
(b) The elimination of St. Mary's Parochial School.
(c) The elimination of St. John's Parochial School.
(d) A proposal for a new school located off North Square and Richmond Streets. This school will have a capacity of 570 students.

K-8 school totals

(1) Michaelangelo School 450
(2) Eliot School 480
(3) New School 570

1,500

This represents the approximate mean of the high and low school estimates.

2) Replacement of the Christoforo Colombus and Julie Billiart High Schools

This school will be replaced with expanded facilities on a six-acre waterfront site. The approximate capacities will be 700 for the boys' school and 500 for the girls' school.¹

¹Projections based on interviews with principals who expressed the need for more facilities because of the pressure exerted by students from all areas of the city.
F. Historic Sites

1) The Closing of North Square - Extension of the Site for the Paul Revere and Hitchborn Houses:

North Square will be closed and redesigned in such a manner as to provide a better setting for the above-named historic sites. The site of the buildings will be extended and a connection will be provided to Hanover Street.

2) Parking

See Section B - Circulation and Parking Proposals.

G. Zoning Changes (see map 11)

1) Chance for different uses because of redevelopment:
(a) market area; (b) Washington Street North; (c) waterfront; (d) residential at Cooper Street.

2) In some cases, the rezoning of certain commercial strips (L-2) into residential (H-3) seemed arbitrary and unnecessary. The following changes were made:
(a) Extension of L-2 on Hanover Street to the Paul Revere Mall.
(b) Extension of L-2 on Fleet and Prince Street South of Hanover Street.
(c) Extension of L-2 on Prince Street to Snow Hill.
(d) Retain L-2 on Commercial Street opposite proposed community recreation.

3) Elimination: L-2 district between Snow Hill and Hull Street.
III. Staging

The renewal of the North End should begin immediately if the main objectives of the program are to be achieved. If the area is not invigorated soon, it may become too late to create a better residential environment within the present physical framework. The program should be well into the second stage in about five years and be nearing completion in about fifteen years.

A brief description of the Stages of Development follows (see map 9).

STAGE I. Non-residential land in the market area should be cleared. Private and subsidized housing units should be built to create a stock of housing for persons displaced by the next stage. It would be desirable if a definite program for the redevelopment of the adjacent regional recreation were under way at this time in order to provide a more attractive surroundings and stimulate confidence and investment in the area. All circulation proposals should be staged with the project in which they are located.

STAGE II. This stage concentrates on rehabilitation through code enforcement, community organization, and the provision of community facilities. All dwellings should be brought up to minimum standards through inspection and enforcement, and community organization should encourage a paint-up, fix-up campaign to bring conditions to a level above that prescribed by the Health Code.

Isolated dwellings which are dilapidated and non-residential intrusions will be eliminated. Two small redevelopment projects within the rehabilitation area should be done at this time. They are the extension of the
Playground on North Margin Street and the residential development on Charter Street.

Since recreation and parking proposals are key to the rehabilitation program, the waterfront should be redeveloped in this stage to provide these facilities. This would be a strong manifestation of public confidence in the area and could give great impetus to the community participation program. Also the new high school should be built in order to make way for the removal of the old building in the next stage.

STAGE III. A large portion of housing should be provided on non-residential land in order to prepare for the large displacement in the next stage. This would include both public and private housing. The new school should be built, then two old schools (St. Anthony's on North Bennet Street and St. John's on Moon Street) razed. Overflow can be taken by the Michaelangelo School which has excess capacity.

STAGE IV. This stage is involved with major redevelopment on residential land. Two small public housing projects are provided; then the main commercial area is extended and parking provided.

Stage For Total Redevelopment:

By 1985, it may be that total redevelopment can be considered. The population could decline to about 10,500 (low estimate) and the social unit should be broken up to a point where this measure would become realistic and desirable.

A breakdown of housing additions and demolitions by stage follows.
### Stage I

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**Subtotal: Net Change** 143

### Stage II

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<td>Demolitions: (Spot Demolition)</td>
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**Subtotal: Net Change** -326

### Stage III

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**Subtotal: Net Change** 124

### Stage IV

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**Subtotal: Net Change** -260

**Totals:**

- **Total Housing Added:** 615
- **Total Housing Demolished:** 954
- **Total Net Change:** -329
POPULATION TRENDS AND PREDICTIONS 1920 - 1985
IV Summary of Implementation of Renewal Proposals

1) Means for implementation of renewal proposals are available through Title I of the U.S. Housing Act of 1949, as amended.¹

Major elements of this Act to be utilized in this renewal program are:

(a) A two-thirds Federal contribution of the write-down cost in acquiring the land for sale and redevelopment.

(b) Special types of mortgage insurance in declared urban renewal areas. Section 220 provides a special type of mortgage insurance as an incentive to private developers to borrow money to build or rehabilitate housing. Section 221 provides for persons displaced by renewal projects to build or rehabilitate housing by offering a special type of FHA mortgage insurance.

2) The major objective is to have minimum displacement through renewal and to provide adequate housing for a low-income group. Because of the low income of some residents, it will be necessary to consider forms of subsidized housing.

(a) Public Housing. In order to provide housing for low-income families public housing should be provided in some of the areas scheduled for clearance. It is necessary, however, to consider other forms of housing subsidy.

(b) Alternate plan. A subsidy for low-income families unable to meet the

¹The study area qualifies for a Federal grant, as explained in Slum Clearance and Urban Redevelopment Program - Manual of Policies and Requirements for Local Public Agencies, Chapter 4, Sect. 1 and 2.
economic rents in the renewal area should be provided in rehabilitated structures in addition to the present form of housing subsidy.¹

(c) Public housing for the aged. Housing for the aged is a legitimate form of subsidized housing for the North End. With the break-up of the old-world extended family pattern, aged persons would be able to remain in the area where their long-established ties exist. Presently nine percent of the total population is 65 years or over. These persons are the most likely to want to remain in the area because of these social ties.

3) Middle Income Cooperative. Since many of the persons in the area have significantly improved their financial position in the last decade, middle-income housing can be considered. It is possible that private developers could be induced to build housing through land write-down provisions and the Federal and State sponsored mortgage insurance aids to private cooperatives.²

4) Code Enforcement. The Regulations Establishing Minimum Standards of Fitness for Human Habitation prepared by the Boston Health Department should be enforced to bring housing to minimum standards.

5) Voluntary Rehabilitation. Voluntary rehabilitation through community participation can become a powerful tool in the North End if it is properly utilized. The local spirit channeled through the various community groups can stimulate general interest, promote specific projects

²U.S. Housing Act of 1956, Sub-section 213.
and accomplish a great deal in this program where much is oriented toward
minor rehabilitation measures. This could evolve into a major paint up-
fix-up campaign which would go beyond the requirements specified by code
enforcement.

A major shortcoming of this method is the problem of persuading the
non-resident owners to participate. Only ten percent of the dwelling
units are owner-occupied.¹ However, it is estimated that fifty percent of
the dwellings are owner-occupied. In some cases North End residents own
several dwellings. Still a large number of "outside" persons must be
contacted and convinced of the validity and eventual returns of such a
program. Here the public body must step in and provide the necessary
leadership.

¹U.S. Housing Census, 1950.
V Costs

The following is a rough statement of the major costs involved in the renewal of the North End. This is done to get an approximation of the financial magnitude of the problem and nothing more.

A) Cost to landowners in areas of rehabilitation. Costs involved under the code enforcement program can vary from a few dollars in cases of minor violations to several hundred dollars in cases where structural difficulties occur. In the latter instance, it is assumed that the building will be demolished. Estimates for installing proper facilities, a typical violation have ranged from 50 to 100 dollars. Costs involved in rehabilitating the outside of buildings and hallways should not exceed four hundred dollars in the average situation.

B) Cost to the local agency. The following analysis is directed toward approximating the cost result of the renewal project under the present system of grants and then to measure it against the social benefit. In this manner an evaluation of the net benefit can be more objectively arrived at.

The approximate assessed valuation of property to be taken is $10,000,000. The gross project cost including demolition (and assuming the assessed valuation at 150% of assessments) would be about $15,250,000. Assuming the resale value at one dollar/square foot, the net project cost would be about $13,500,000. Considering the two-thirds federal contribution, the local grant-in-aid would be approximately $1,150,000. Non cash grants-in-aid which include new roads and utilities, street widenings, recreation and parking, etc., and land donations would reduce the local cash grant-in-aid to about $1,250,000. Considering the tax value of demolished areas
and the new values created by new housing and the appreciated old housing stock, the city would break even. However the financial costs over time which would include interest on loans and amortization over twenty years would create an annual deficit of about $200,000.
A SUGGESTED PLAN FOR THE REDEVELOPMENT OF THE NORTH END

The proposal that has been suggested for the renewal of the North End may be called a plan for transition from the present conditions of deterioration to the brink of total redevelopment. The area is deteriorated, but because of social, political and economic factors, it must be retained in its present form for quite some time. It can successfully submit to rehabilitation proposals and better serve housing needs until these factors have been resolved. Still the buildings are old, and redevelopment is inevitable.

Redevelopment proposals have been made as a part of the transition plan. An inherent danger here is that these proposals might tend to freeze development or force redevelopment in a manner which might be inconsistent with the redevelopment of the entire area. Therefore a sketch plan is submitted suggesting how the transition proposal might be consistent with the redevelopment of the entire area (see map 10).

Description of Major Elements in the Sketch Plan for Total Redevelopment.

Housing: Most of the area would be redeveloped walk-up apartment units with variation. Height ranges would include two, three and six story building. The parking garage and playground at Prince Street would be eliminated, the Hill filled in, and housing would follow the contours around, looking down onto the center of the community, the city, and the sea. In the central area some tower apartments would be interspersed among low units, retaining the new dwellings proposed in the redevelopment plan.
Commercial. The lower end of the area would remain as the major commercial center and be flanked by parking garages. This would contain the larger retail stores (supermarkets, local furniture stores, etc.). A local office center would be located across Hanover Street. Small convenience centers would be located at strategic points in the residential area.

Institutional. A band of institutional uses would separate the commercial area from the residential. This would contain the new school proposed in the transition plan, another school at the opposite end to replace Michaelangelo and Eliot, a community building (possibly the present Recreation Center could remain), a new Fire and Police Station, etc., would also be located here.

Circulation. The circumferential ring road would remain as the main intra-area artery with spokes coming into the center. Salem Street would supplement Hanover Street as a second interior spine, but visually Hanover Street would remain the stronger, with first commercial, then institutional, then local commercial (with apartments above) lining its sides. At the bend the Paul Revere Mall terminates it and then it becomes a residential area.
APPENDIX A

Estimate of Persons who are Part of Extended Families in the North End

1) married couples 3,180 x 2 6,360
2) total population 16,050
3) number of unmarried persons 9,690
4) number of unrelated individuals 1,935
5) number of married persons who are part of families 9,690
6) number of married persons doubled up 300
7) persons 1-19 years of age 4,454
8) persons 1-19 years estimated to be married1 -390
9) assume that all unmarried persons below 29 years of age are a legitimate part of a family. No. of persons below 29 years of age unmarried 1,560
10) number of persons considered as extended part of families 7,955

1Statistical Abstract of the U.S. % of married persons by age group.
APPENDIX B

1958 population estimates: The 1958 population estimate was made by a straight line projection from the 1940-1950 trend and then adjusted by using 1958 figures from the elementary school enrollments and the voting lists. The 1958 population is estimated at 11,500 and the average family size is 3.4 persons.

Population projection: The low population for 1975 was arrived at by a simple straight line of the 1940 to 1958 trend. It is considered the "low" because the factors contributing to the decline (see discussion of population under existing conditions) seem to be already fully in motion. The low estimate is 10,500.

The percentage of decline of foreign born persons from 1940 to 1950 representing about one-quarter of the total population drop shows the curb on in-migration from Europe to be important. The fact that the succeeding generations leave the area makes up the remainder of the figure.

It can be assumed that the renewal of the area will tend to keep some persons who would otherwise have left. Also other persons will probably locate here. Because of this, it is assumed that midway in the renewal period, the population will stabilize representing a high project for 1985. The high estimate is 12,500.
APPENDIX C

Determination of Residential Density

1) Net Residential Land Area. Source: Assessor's data on land areas and evaluation (subtracting all non-residential land use).


3) \[
\frac{\text{Net residential area}}{\text{no. of dwelling units}} \times 43,560 = \text{no. of dwelling units/net resid. acre}
\]

4) \[
\frac{16,050}{4,456} \text{ total population} = 3.6 \text{ persons/dwelling unit}
\]

5) \[
3.6 \times \text{no. of dwelling units/acre} = \text{no. of persons/acre}.
\]

Note: The 1958 residential density determined from the population estimate indicates that the density has been reduced in the last eight years to an average of 51.0 persons/net residential acre, or about 3.4 persons/dwelling unit.
APPENDIX D

Residential Floor Space Per Family

1. Net Residential Area in the North End   28.5 acres

2. Ground coverage for residential buildings  88%. Therefore 88% x 28.5  25.7 acres

3. Assume 15% of interior space for circulation between units  21.8 acres

4. Of 28.5 acres 17 acres is intruded upon by commercial uses. Applying the same assumptions to commercial as to residential: 17.0 x 10% x 15%  12.8 acres

5. The average floor height of residential buildings in the North End is 4 floors. Therefore: 9 acres at 4 floors  36 acres
    12.8 acres at 3 floors  38.4 acres
    74.4 x 1.5,360  3,230,000 of residential floor space

6. Assume 5% abandoned and vacant  161,000
    3,070,000 of residential floor space

No. of households (1950)  4,500/3,070,000  636 sq.ft./household
No. of persons (1950)  16,050/3,070,000  190 sq.ft./person
Average size of household  3.6 persons

APHA Standards for dwelling unit occupancy

<table>
<thead>
<tr>
<th>family size</th>
<th>no. of square feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0 persons</td>
<td>765</td>
</tr>
<tr>
<td>2.5 persons</td>
<td>877</td>
</tr>
<tr>
<td>3.0 persons</td>
<td>990</td>
</tr>
<tr>
<td>3.6 persons</td>
<td>1,130</td>
</tr>
<tr>
<td>4.0 persons</td>
<td>1,159</td>
</tr>
</tbody>
</table>

Note: The 1958 estimate for the residential floor space/person based on the population estimate indicates that there are about 210 square feet of floor space per person, or 720 square feet per household.
APPENDIX E

Description of Condition of Buildings Survey

The Condition of Buildings was determined by surveying the area on foot and judging the buildings in the following categories and considering only the factors described:

1) GOOD - Building appearing structurally sound. Walls plumb and foundations solid. Also building is well maintained regarding brick (clean and pointed), trim, paint, gutters and downspouts, and hallways.

2) FAIR - Building appears structurally sound. Walls plumb and foundations solid. Maintenance is poor regarding brick, trim, paint, gutters and hallways.

3) POOR - Building characterized by sagging bearing walls, lines not plumb and foundations cracked. Deteriorated beyond rehabilitation.

Description of Typical Building and Dwelling Unit

Building Description:
Typical North End buildings range from 3 to 5 floors, most structures being four floors in height. Almost all structures are constructed of brick, load-bearing, party walls with wood framing, non-fireproof and covering up to 90 percent of the land. The number of dwelling units ranges between four and twelve units per building.

From the 1950 Census:

<table>
<thead>
<tr>
<th></th>
<th>No.</th>
<th>% of total</th>
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<tbody>
<tr>
<td>3 and 4 unit buildings</td>
<td>1809</td>
<td>40</td>
</tr>
<tr>
<td>5 dwelling units or more</td>
<td>2602</td>
<td>57</td>
</tr>
<tr>
<td>others</td>
<td>160</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4570</td>
<td>total</td>
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</table>

Dwelling Unit Description:
A typical dwelling unit consists of a kitchen (entrance to the apartment), a living room, and two bedrooms, a total of four rooms. A toilet
is usually located in the hallway, sometimes shared by as many as three families. Where individual toilets and baths have been provided, they have been located under stairways or in a closed off portion of a hallway. (See following diagrammatic plans.)

In general, the interior of the apartment contrasts sharply with the outside hallways and exterior of the building. The apartment interiors are painted and very clean. The hallways and exterior of buildings are usually poorly maintained. Diagrammatic plans of typical buildings and units follow.
TYPICAL NORTH END DWELLINGS

A. ONE APARTMENT PER FLOOR

B. THREE APARTMENTS PER FLOOR
APPENDIX F

Standards for Recreational Spaces

Standards Recommended by the National Recreation Association plus the minimum standards recommended in the several Boston City Planning Board Studies for a similar area are summarized in the following table:

<table>
<thead>
<tr>
<th>TYPE OF FACILITY</th>
<th>1948 PLAYGROUND STUDY</th>
<th>1950 GEN. PLAN STUDY</th>
<th>COM'Y FAC. DTY.</th>
<th>N.R.A.</th>
</tr>
</thead>
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<tr>
<td>Junior Playground (age 6-11)</td>
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<tr>
<td>sq.ft./child res.</td>
<td>60</td>
<td>72</td>
<td>70</td>
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<tr>
<td>sq.ft./child user</td>
<td>100</td>
<td>120</td>
<td>0.5</td>
<td>0.7</td>
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<tr>
<td>site acreage minimum</td>
<td>0.15</td>
<td>0.5</td>
<td>0.5</td>
<td>0.7</td>
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<tr>
<td>walking distance</td>
<td>1/4 mile</td>
<td>1/4 mile</td>
<td>1/4 mile</td>
<td>---</td>
</tr>
<tr>
<td>Senior Playground (12-15)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>sq.ft./child res.</td>
<td>150</td>
<td>300</td>
<td>300</td>
<td>1000</td>
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<tr>
<td>sq.ft./child user</td>
<td>375</td>
<td>750</td>
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<td>2.75</td>
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<tr>
<td>site acreage minimum</td>
<td>1.00</td>
<td>3.0</td>
<td>3-5</td>
<td>3.0</td>
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<tr>
<td>walking distance</td>
<td>5/12 mile</td>
<td>1/2 mile</td>
<td>1/2 mile</td>
<td>1/12 mile</td>
</tr>
<tr>
<td>Playfield (age 16-21)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sq.ft./person res.</td>
<td>50</td>
<td>---</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>site acreage minimum</td>
<td>7</td>
<td>10</td>
<td>10-12</td>
<td></td>
</tr>
<tr>
<td>walking distance</td>
<td>1 mile</td>
<td>---</td>
<td>1 mile</td>
<td></td>
</tr>
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</table>

Parks at least two acres

1The Boston City Planning Board studies propose two sizes of facilities, corresponding to the elementary and junior high school ages. The NRA proposes one per neighborhood for age 6-15.

2Sq.ft/area/child user assumes that 60 percent of all juniors and 40 percent of all seniors would be using a facility at any one time.
APPENDIX G

Schools

The estimate of elementary school population for 1975 was derived from the estimates of total population for 1975. The low estimate is 1,310 and the high estimate is 1,750.

These were arrived at in the following manner:

low estimate

\[
\frac{1950\text{ (K-8 enrollment 1950)}}{16,050 \text{ (total population 1950)}} = 12.5\% \times 10,500 \text{ (low population estimate 1975)}
\]

\[= 1,310\]

high estimate

\[
\frac{2,075\text{ (K-8 enrollment)}}{11,500 \text{ (estimate of 1958 pop.)}} = 14\% \times 12,500 \text{ (high population estimate 1975)}
\]

\[= 1,750\]
APPENDIX H: MAPS
BUILDING CONDITION

GOOD
FAIR
POOR
STAGES OF DEVELOPMENT

PROJECT AREAS
REDEVELOPMENT
REHABILITATION

1. CLEAR MARKET AREA
   BUILD PUBLIC & PRIVATE HOUSING

2. REHABILITATION THRU CODE ENFORCEMENT, SPOT REDEVELOPMENT
   REDEVELOPMENT OF WATERFRONT FOR PARKING, RECREATION, & SCHOOL

3. CONTINUE TO REDEV. FOR PUBLIC & PRIVATE HOUSING
   BUILD SCHOOL
   SPOT REDEV. FOR HOUSING

4. REDEV. FOR COMMERCIAL, PARKING & HOUSING
REVISION OF PROPOSED ZONING DISTRICTS FOR THE NORTH END

DISTRICT LINES
REVISION OF DISTRICT LINES
(FOR KEY SEE OVER)

### PROPOSED ZONING DISTRICTS

**CITY OF BOSTON**

**MAP 1: BOSTON PROPER**

<table>
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<tr>
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<th></th>
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<tbody>
<tr>
<td>S-</td>
<td>.3</td>
<td>Single Family</td>
<td>L-</td>
<td>.5</td>
<td>Local Retail &amp; Service Stores</td>
<td>M-</td>
<td>1</td>
<td>Light manufacturing</td>
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<tr>
<td></td>
<td>.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>R-</td>
<td>.5</td>
<td>Two Family</td>
<td>B-</td>
<td>1</td>
<td>Retail Business &amp; Offices</td>
<td>I-</td>
<td>2</td>
<td>General Mfring.</td>
</tr>
<tr>
<td></td>
<td>.8</td>
<td>3 Fam, Apts</td>
<td></td>
<td>2</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>H-</td>
<td>1</td>
<td>Apartments</td>
<td></td>
<td>4</td>
<td></td>
<td>W-</td>
<td>2</td>
<td>Waterfront Industry</td>
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<td></td>
<td>8</td>
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Prepared by the Boston City Planning Board, Marcy 1956.
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Unpublished Material


Census Material

