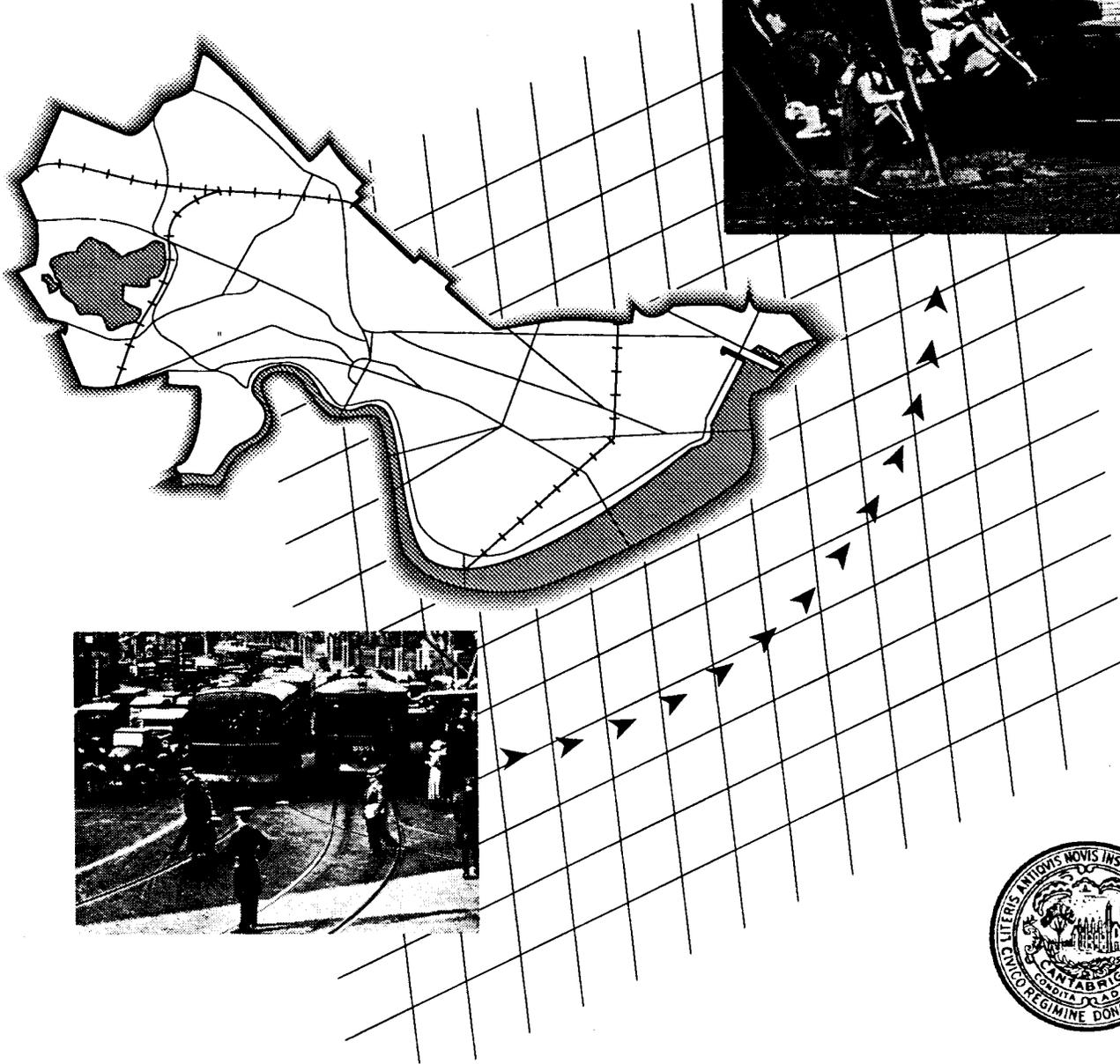


DRAFT

*Cambridge
Growth Policy
Document*

Toward a Sustainable Future

Cambridge Planning Board &
Community Development Department
Cambridge, Massachusetts



Toward a Sustainable Future
Cambridge Growth Policy Document

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Final Draft
23 February 1993

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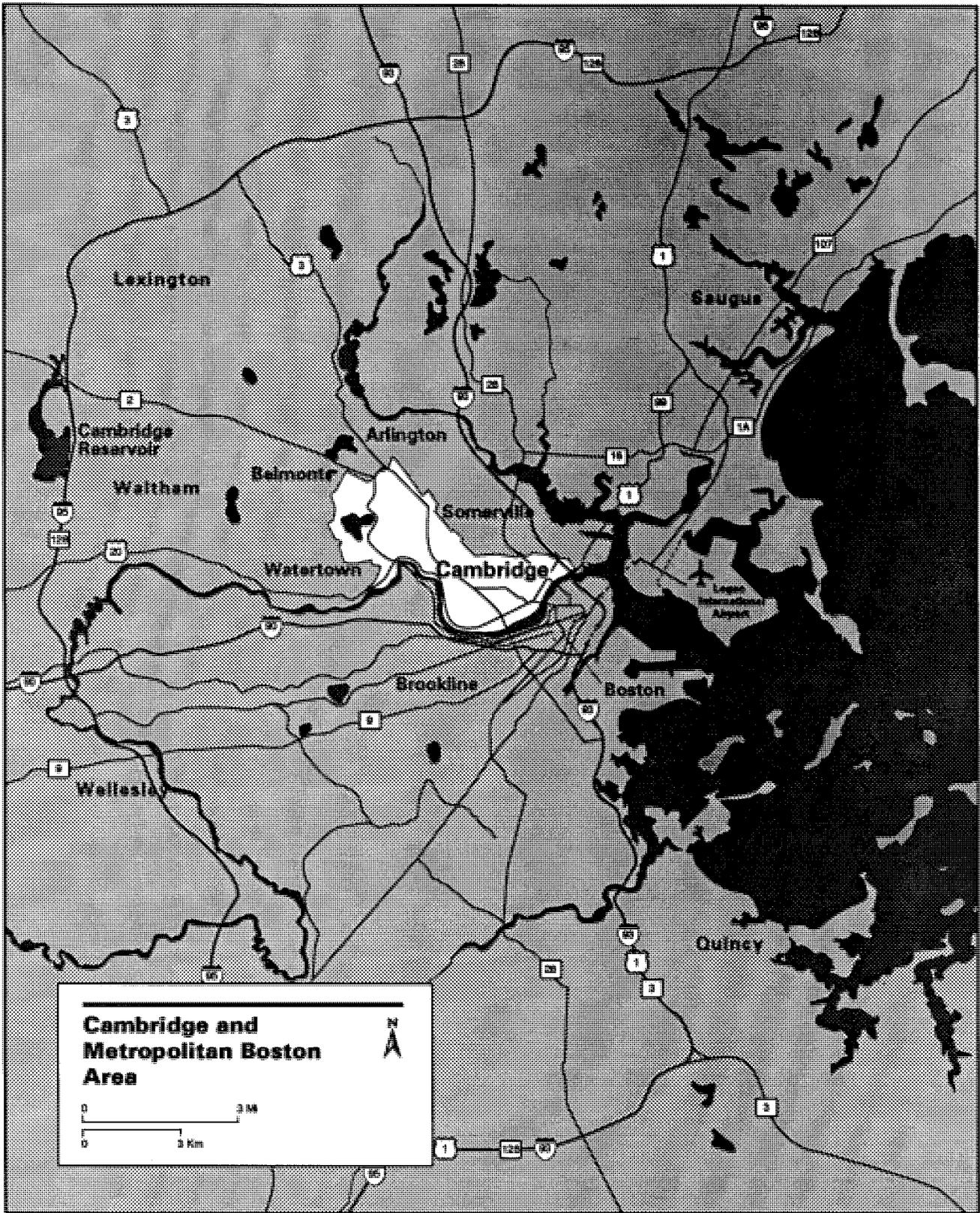
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Photography is principally the work of Elsa Campbell; additional photos by Claudia Thompson, Robin Shore, and Roger Boothe. Historical photos are courtesy of the Cambridge Historical Commission.

Workshop Participants

The following is a list of individuals from the neighborhoods, the institutions and the business community who, through the Growth Policy workshops, participated in active discussion and review of the draft policies and provided extensive feedback to the Planning Board. The participants were not asked to reach consensus, nor were they expected to endorse the final recommendations made by the Planning Board. The inclusion of their names in this document recognizes their thoughtful and useful contributions to the Growth Policy process and is not intended to suggest agreement with or endorsement of all of the policies contained in this document.

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Preface

The underpinning for this look into Cambridge's future is the concept of sustainability, defined by the World Commission on Environment and Development as *"Meeting the needs of the present without compromising the ability of future generations to meet their own needs."*

The vision embodied in this document is conserving, respecting the past, while not suggesting that land uses in Cambridge remain frozen or static. It recognizes that some growth and change can be beneficial to the city. It builds on the recognition that Cambridge works and human diversity works. The current mix of urban form, scale, density and mix of uses is worth sustaining and enhancing, both in existing neighborhoods and commercial districts, and in the older industrial areas.

Introduction

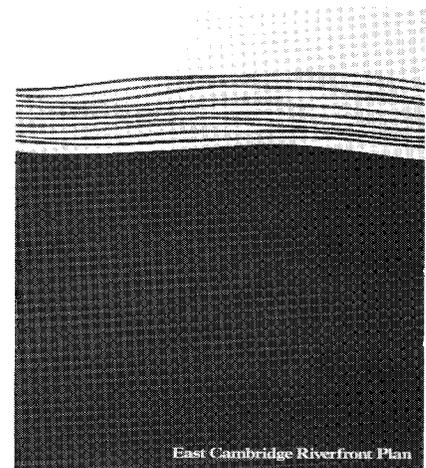
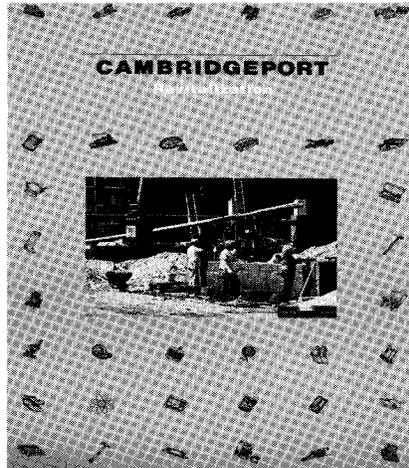
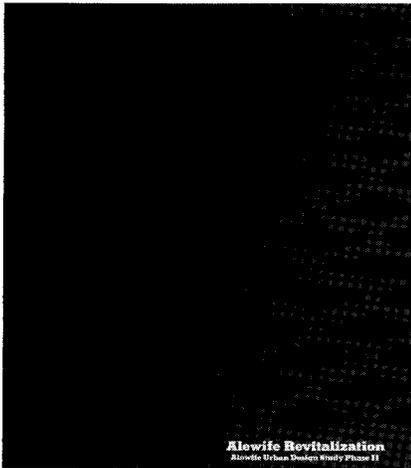
Cambridge is a dynamic, multi-faceted community that benefits greatly from the diversity of its citizenry and our interest in preserving and enhancing the city's unique quality of life. That diversity produces a wide range of opinion about what is important to our quality of life and has raised many questions about the future growth and development of the city. What makes our neighborhoods special? How can we maintain a vital economy? What uses are appropriate for the city's evolving industrial areas? How shall we protect our environment? What kind of community do we want Cambridge to be as we enter the next century?

These questions, and many others, have prompted much discussion of the city's physical planning and land use issues and the choices they raise. In response, the Community Development Department and the Planning Board have undertaken a comprehensive review of the land use and planning issues facing Cambridge in the 1990s. This document is the product of that review and articulates the Planning Board's vision and planning policies for the future of our city.

The Growth Policy Document and Process

The Growth Policy document outlines the planning assumptions and policies guiding the physical planning of Cambridge. The Planning Board will use the document to help make clear, consistent and fair land use decisions. It is not a formula but a framework for decision-making, spotlighting the trade-offs necessary to meet a number of public goals. These include decent and affordable housing, a vibrant economy providing good jobs, an attractive built environment, plentiful and well-maintained open space and effective transportation networks which lessen dependence on the automobile.

The document grew out of discussions between the City Council, the Planning Board and the Community Development Department in the Spring of 1991. At that time, the Council's Subcommittees on Economic Development and the Environment asked the Department to prepare a document clearly articulating the City's growth and planning policies. Previous plans and ordinances addressed the needs of specific districts, offering urban design visions for former industrial areas such as East Cam-



Plans for specific districts include the East Cambridge Riverfront Plan of 1978, the Alewife Revitalization Plan of 1980, and the Cambridgeport Revitalization Plan of 1983.

bridge and Alewife, or detailed land use recommendations for residential neighborhoods, including North Cambridge. Other initiatives considered topics such as open space or commuting and transit use. While considerable progress was made in specific locations or topics, a more comprehensive, coordinated approach was needed to guide the Board's decisions and to ground planning efforts in a coherent, citywide vision.

A document setting out planning assumptions, proposed policies, supporting data and the history of recent land use decisions was subsequently drafted. Planning Board members and Community Development staff also outlined a process for involving the community in shaping the document. Aided by Cambridge College, the Board and staff developed a series of workshops attended by 40 participants. The latter included neighborhood residents, business people and officials from the city's institutions. The workshops, which convened in the Spring of 1992, engaged small groups of participants in active dialogue about a series of policy areas. Individual sessions focused on a specific topic area: land use, housing, urban design and open space, institutions, transportation, and economic development and employment. Participants' comments and ideas were incorporated into the draft document and submitted to the Planning Board for revision. The draft document was also submitted for public review and comment in a widely distributed newsletter in August 1992.

In September 1992, the discussants reconvened to focus more intensively on housing, economic development and institutions, and to place the policies in the context of fiscal limits and land use.

Subsequently, the Planning Board reviewed all comments and revised the policies accordingly. In February 1993, the Board held a public hearing to receive further comment. After final revisions, the document was transmitted to the City Council in March 1993. As general agreements on policies are established, the growth policies will be implemented through a broad range of planning and program initiatives.

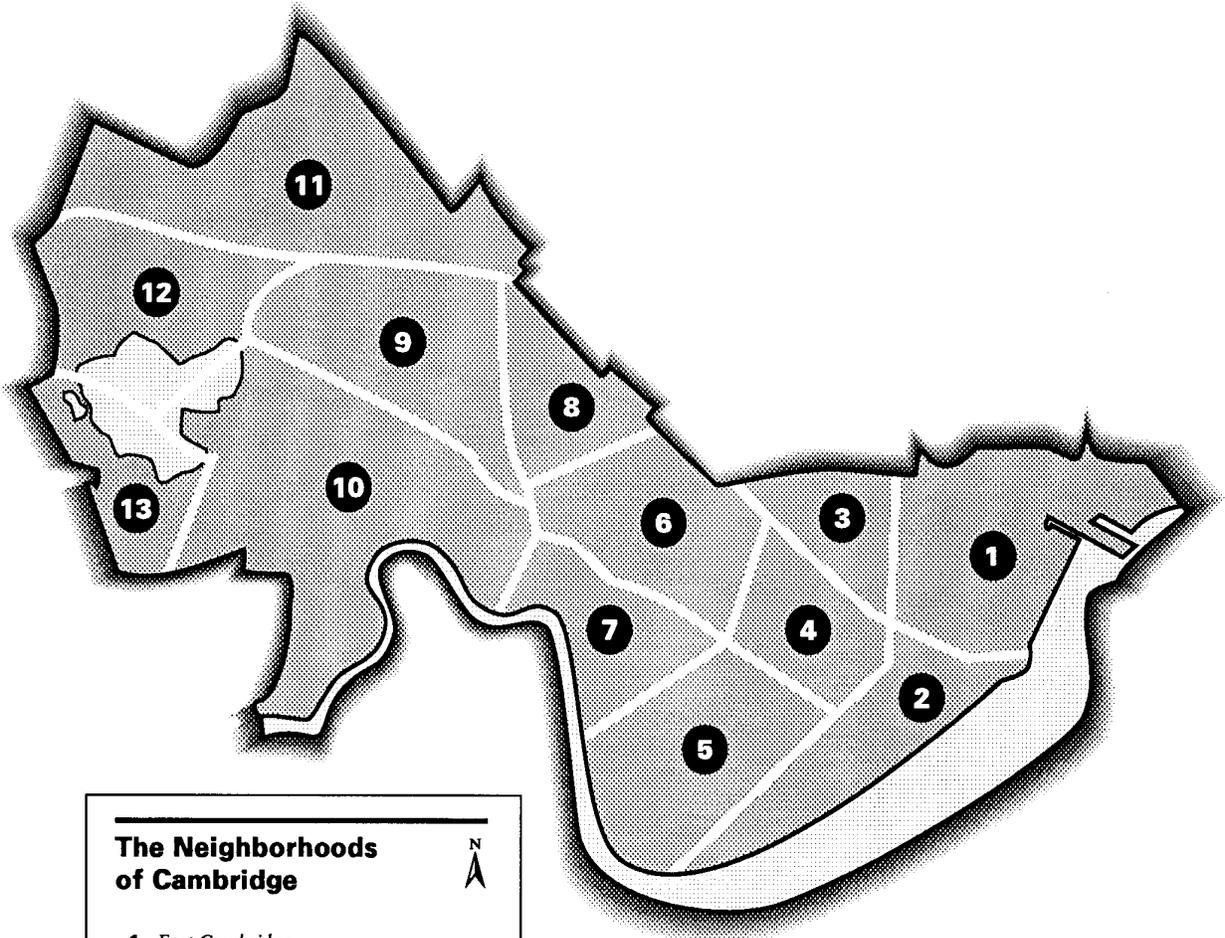
Uses and Limitations of the Document

While the growth policy document is meant to be comprehensive, it is not a master plan nor does it prescribe specific land uses or designs for specific sites. Nor can every policy be applied rigidly or simultaneously on every site. For instance, while more housing is advocated in formerly industrial areas, as well as job creation in new and growing industries, the document does not stipulate housing and job creation for every potential site. It proposes general policies which suggest that goals such as jobs and housing be considered and met in a systematic, coordinated way for the city as a whole. It aims to clarify the hard choices which must be made in specific instances, but does not attempt to resolve them in advance. It does, however, provide a framework within which these choices will be made.

The Growth Policy document is expected to aid city agencies and boards, including the Community Development Department, the city's planning agency. The Department will use the document as a guide, both in its work with the Planning Board and for creating and implementing plans. The document will not substitute for existing local rules such as the Zoning Ordinance, the Building Code or any other federal, state or municipal law but will potentially influence relevant changes to these overtime. While thus limited in scope, it is not a static document. The Board expects the growth policy document to be a dynamic policy instrument, evolving with annual reviews to consider citizen comments and Planning Board experience on specific issues and projects.

Part I.**Perspectives**

To create a vision for the future of Cambridge, it is important first to understand the history and context of the community's land use and planning decisions. That understanding gives a perspective on the choices the city has made and the issues facing Cambridge today. It allows us to create a vision for the city's future and enables us to consider carefully the policy choices and trade-offs that will help the city achieve that vision.



**The Neighborhoods
of Cambridge**



1. *East Cambridge*
2. *MIT*
3. *Wellington Harrington*
4. *Neighborhood Four*
5. *Cambridgeport*
6. *Mid-Cambridge*
7. *Riverside*
8. *Agassiz*
9. *Neighborhood Nine*
10. *Neighborhood Ten*
11. *North Cambridge*
12. *Cambridge Highlands*
13. *Strawberry Hill*

1. Cambridge in Context

Cambridge, Massachusetts is home to 95,802 persons tightly packed into 6.3 square miles. (In the last Census, only five cities over 75,000 in population were denser.) Its density affords residents a rich social and architectural mix, which finds thriving commercial centers cheek by jowl with village-like residential districts.

The streetscape and urban pattern of Cambridge have evolved from three and a half centuries of development, starting with the 1630 settlement of Newtowne in present day Harvard Square as the colonial seat of government and learning. Industrial hubs and villages would subsequently grow up around Cambridgeport, East Cambridge, and later, the clay pits and stockyards of North Cambridge and Alewife. The tight weave of roads and "village" form is at times an uneasy fit with modern city activities, such as automobile travel and office-based enterprises. The mix of old and new, of tradition and change continues to give Cambridge its unique stamp and also presents hard choices as the city faces the final decade of this century.

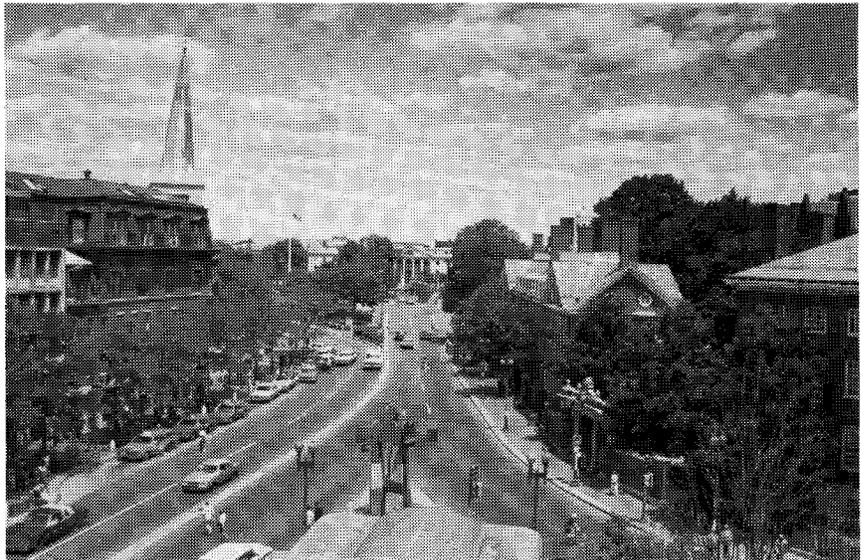
Cambridge is in actuality many communities: within its boundaries, it contains a multitude of architectures, neighborhoods, ethnic and social groups, and political persuasions. Most importantly, it is perceived and experienced differently by its diverse inhabitants. There is the Cambridge of Harvard Square's academics and professionals, and another lived in by police and fire fighters who dwell nearby in North Cambridge triple deckers. Still another is inhabited by immigrants and others of modest means blocks away in the Rindge Towers, or by homeless men and women along Massachusetts Avenue. This diversity helps attract people to cities. A city's well-being depends on a common experience, a shared commitment to dwelling in a place and making it better .

Cambridge's contrasts have sharpened over time. Over half of its residents over 25 have earned college or advanced degrees, yet one in six have not finished high school, and over one in five high school students drop out in a four year period. The city contains a higher proportion of professionals than the Boston metropolitan area, but it also contains a greater percentage of children in poverty. As the economic base has retooled from making footwear and furniture to software and pharmaceuticals, many remain left out, lacking sufficient skills and education to prosper.

Where one out of three residents could count on goods production (factory and construction work) to make a living in 1950, slightly more than one in ten are so employed today. Education, health and other professional services employ the greatest share of Cambridge residents.

The city's diversity is also a source of cultural richness and vitality. More than one in five Cambridge residents is foreign born. Students from 64 nationalities attend the public schools. Their families speak 46 different languages. An out-of-town visitor might be treated to a Greek festival or a Caribbean gala on the same weekend. On any morning the scents of Portuguese bakeries and fish markets greet pedestrians along Cambridge Street. Over 28% of all residents identify themselves as non-White or Hispanic, compared to five percent in 1950. The fastest growing minority, Asians, nearly tripled their share of the population in the past decade.

Cambridge is a city of contrasts, as shown by these views of Harvard Square and the three Rindge Towers in Alewife.



Other demographic trends point to Cambridge's unique character, as well as to patterns occurring nationwide. One quarter of the population is enrolled in college. In a five year period, over one-third of the population turns over. Fewer Cambridge households contain children. In 1950, one in four residents were under age 18, while in 1990, just one in seven were under 18. Today, under 8,000 households, or 20%, include children; more than twice that number are occupied by single people living alone. Children under four have made something of a comeback in the past decade, however. While family and individual incomes have been rising, even after inflation, one in three single mothers with children under 18 lives in poverty - a figure that has changed little in decades.

In comparison to many other communities, Cambridge benefits from a high degree of participation by its residents in a wide range of civic affairs. Each neighborhood has its own political and civic organizations, and few changes in the built environment occur without some form of organized comment or intervention. People care passionately about the quality of the social and physical environment - and disagree at times with equal passion. There is a sense of civic duty which results in a responsive local government. People do not simply criticize; they act to influence the outcome of decisions that affect their lives.

Cambridge blends tradition and change in equal parts, sometimes in the same building or institution. Nearly as old as the city itself, Harvard University and its academic community bring both the solidity of tradition and the flux of new ideas and inventions. MIT straddles this divide, as well. High technology firms spun off by MIT and Harvard occupy the former factory buildings which speak to a vanished tradition of manufacturing prominence. (Cambridge was once the Commonwealth's second largest industrial center.) These renovated buildings, such as One Kendall Square, formerly the Boston Woven Hose factory, illustrate the city's newfound prominence in cutting edge industries such as biotechnology, computer software and optics. They also point to the continuity of knowledge linking Cambridge past and present.



This attractively landscaped plaza which is the focus for ground floor retail at One Kendall Square was carved out of the complex of industrial buildings which made up the Boston Woven Hose factory.

The city's housing stock is a blend of old and new as well. Residential building styles range from the Tory-era mansions of Brattle Street to the modern brick apartment high rises along Harvard Street. Turn of the century two and three-decker apartments and similar wood-framed dwellings are a feature of many neighborhoods. Single-family houses on larger lots predominate in much of West Cambridge while multi-family structures are more common in the city's denser northern and eastern sections. High demand for this stock and the city's appeal to an increasingly professional, higher income population drove up home prices and rents in the past decade. While an unusually large subset of the stock is protected from the market by subsidies or rent control, most units which enter the market are either unaffordable or inaccessible to the majority of potential home buyers and renters, especially low- or moderate-income families. Cambridge remains a city of renters (30% of households are owner-occupied, compared to 60% of all units countywide), though homeownership increased by one-third in the past decade, due mainly to construction and conversion of condominiums. This was the largest jump in ownership in 40 years.





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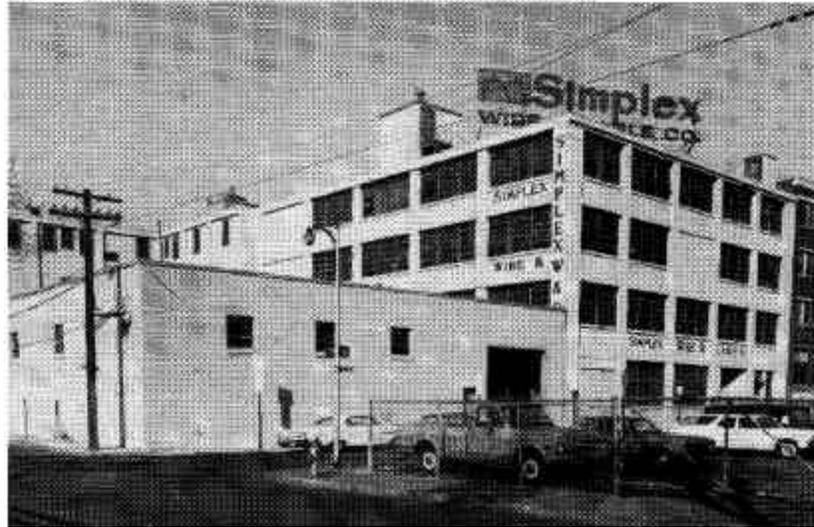
ities such as Cambridge are unique laboratories of social and technical innovation. Inc. magazine recently dubbed East Cambridge "the most entrepreneurial place on Earth," in part because over 17,000 jobs were created here during the last ten to fifteen years. Cambridge is an engine of innovation not simply because of its great institutions, but because of its ability to bring people together to exchange ideas and make things happen. This is an attribute of all great cities, but special care must be taken to preserve and build on those amenities and public spaces which make Cambridge a good place for collegiality and conversation. The balance of tradition and innovation is a fragile but vital one.

2 . Historical Background

Before outlining the planning assumptions and policies in the areas of land use, housing, transportation, economic development, open space, and urban design, a broader perspective is presented. Much of what the City encouraged in the 1980s as development and planning policy was an outgrowth of decisions made and efforts undertaken in the decade before. Those efforts in turn were initiated in response to the lessons learned in the decade before that. Some historical perspective helps to explain how the City evolved its set of planning assumptions and how the policies that grew out of those assumptions can be profitably altered to serve the city better in the decades that lie ahead.

The late 1950s and 1960s are important to consider because much of what transpired in subsequent decades, and what is occurring even today, is in response to actions taken and policies established in those decades. Each subsequent decade assumed a definable character that, when revisited, helps illuminate the circumstances that shape our decisions today. In each decade, the changes in the demographic character of the city's population, in the evolution of its economic base, in the changing character of land use, housing, and the institutions, and in the evolving modes of transportation can be traced and their impact on today's policy discussions understood.

This sketch of Old Cambridge (1745) shows the origins of the familiar street pattern of Harvard Square.



The 1950s and the 1960s- Trending Downward

Indicators of Decline

As we look forward from these decades, and particularly from 1960 onward, the future of the City of Cambridge did not look nearly as secure as it might from our vantage point in 1993. The city's population peaked in 1950 and each succeeding census would record a further decline. That decline reflected the national trend to suburbanization of the urban populations of the older central cities after World War II and the declining size of the family in later decades, compounded in Cambridge by the special influence of the large educational institutions and their distinctive populations. While young families and the financially upwardly mobile moved to the suburbs a parallel trend was clearly evident: the wholesale flight of the economic base of the city as the old industries that filled the brick factories of Kendall Square and Cambridgeport left Cambridge for distant suburbs, or for different regions of the country. The loss of Lever Brothers in Kendall Square was a hallmark; later Simplex Wire and Cable Company abandoned Cambridgeport. The former has been replaced by Technology Square, the paradigm for what would later prove to be the new Cambridge economy. The vacant Simplex Wire site is only now beginning to be occupied with what may prove to be the economic engine of the 1990s: biotechnology and other rarefied forms of research and manufacturing. Major employment sectors were being lost but it was not clear in these early decades what would replace them, either as job providers or taxpayers. Furthermore, those enterprises which remained in Cambridge found it difficult to thrive given tight capital and financing constraints. At the time the only growth industry was the education of other people's children at the two major institutions of higher learning, Harvard and MIT.

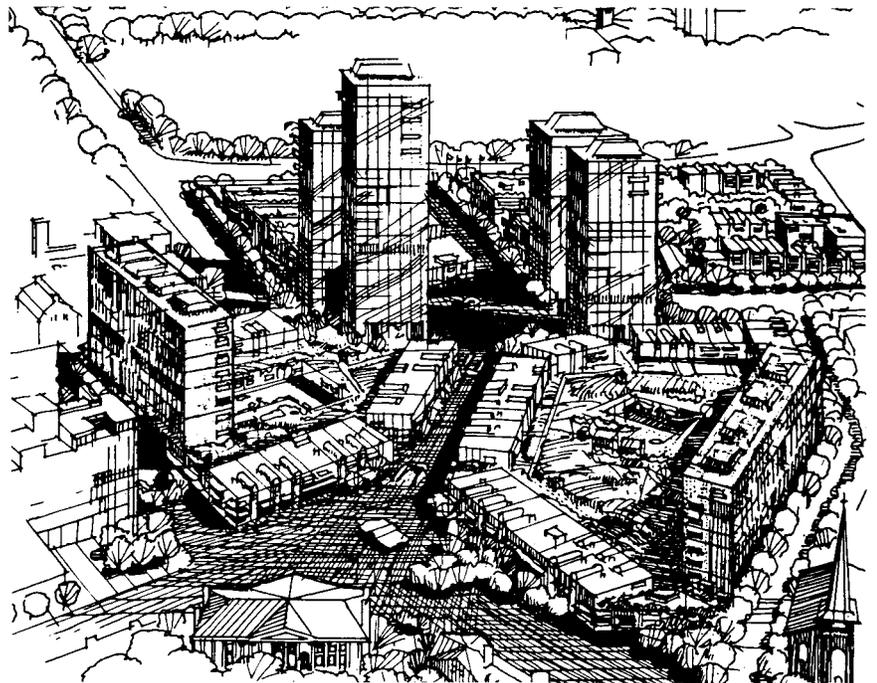
The flight of its young and prosperous population and the loss of the major elements of the old industrial economic base had serious implications financially for the City. From the perspective of the recent past it is easy to forget how precarious the financing of local government had become in the 1960s and 1970s and that two-thirds of the burden of financing City services was born by the residential segment of the city's tax base.

Redevelopment as a Solution

It is not surprising then that in those decades the city and its physical fabric were viewed as antiquated and in need of renewal. The dense residential neighborhoods which are so valued today were then viewed as cramped anachronisms. The intricate weave of narrow streets looked very claustrophobic in an age where the automobile was gaining ascendancy.

It is no surprise either that the decade of the 1960s saw the establishment of the Cambridge Redevelopment Authority. The vision of the decade was expressed explicitly in several documents published by the Authority and its predecessor agencies, one lamenting the hopelessly outdated character of the city's triple-decker neighborhoods and the vital need to renew -that is demolish -them. Another envisioned the day when the center of Harvard Square would be flanked by office towers in the mold of the now emerging Kendall Square. Their early efforts, as illustrated by the residential building at 221 Mt. Auburn Street, promoted the vision of old neighborhoods replaced by a new contemporary development pattern of more efficient land use in large buildings specifically designed to accommodate the automobile.

In 1968, the Cambridge Redevelopment Authority envisioned a dramatically transformed Square, including four high-rise towers. Harvard Yard is in the foreground.



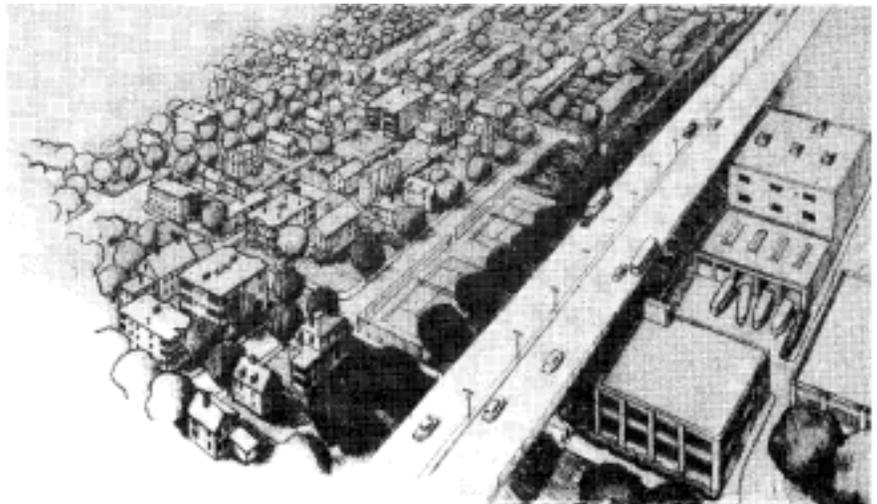
Zoning Amendments

Reflecting the new reality as well as the Zoning Ordinance adopted in 1960. It, and many subsequent changes to the document through the 1960s and much of the 1970s, reflected the prevailing notion that higher densities were desirable as an incentive to redevelop the older neighborhoods through private renewal and, in part, to accommodate the expansionist vigor evident at least in the city's two major institutions of higher learning. These were the decades when new programs were being developed at the national level to help inner cities overcome their new found obsolescence, through urban renewal, housing subsidies, and model cities. Substantial portions of Agassiz, Mid-Cambridge and Cambridgeport were rezoned to increase significantly the allowed density of development, to a level alien to these neighborhoods as they then existed. Harvard Street between Harvard and Central Squares is sprinkled with the brick products of that vision; large, blocky, apartment buildings replacing one or more wood frame homes and skirted by or perched upon an ample supply of parking. Some of the highest and densest housing in these years employed one or other of the several housing subsidy programs available to stem the flow of people out of inner cities.

Rise of the Automobile

One of the principal agents of the changing patterns of development in the 1960s, the automobile, was receiving its due. While we trouble ourselves today with the growing press of cars on all city streets, it is easy to forget that a six lane expressway (the innerbelt) was proposed to march down Brookline Street in Cambridgeport, cross Massachusetts Avenue at Central Square and bore its way through the Area Four and Wellington-Harrington neighborhoods in a headlong rush to join the similarly configured Route Two extension. That extension was to course through North

This image from the 1955 Cambridge Capital Improvement Program illustrates a different attitude toward the automobile than we have today.



The Belt Expressway, if built on the route of Brookline Street, would act as a buffer between residential and industrial districts. See CP-6, next page.

Cambridge, along what is now the main commuter rail line out of Porter Square, and meet the inner belt in a grand interchange in Somerville. Simultaneously, the Metropolitan Transit Authority (now known as the MBTA) was slipping into decline.

The 1970s -Incipient Revival

The Highrise as Exemplar

The former Commonwealth Energy building at 669 Massachusetts Avenue in Central Square was the commercial development vision for Cambridge in the 1960s and early 1970s. At the extreme, Rindge Towers, or more benignly 295 Harvard Street, or the several elderly housing towers constructed throughout the city, reflected the housing vision for that same period. It is this vision that formed the redevelopment plan for Kendall Square which is slowly emerging into reality at Cambridge Center today. It is a vision that could be easily accommodated in many of the zoning districts established or continued in the 1960 zoning ordinance revision. From North Point on the easterly edge of the city to the tip of Cambridgeport at the Cottage Farm Bridge, an unbroken band of Industry B zoning permitted commercial development of almost any kind with few constraints, and no height limit. Central, Harvard, Porter, Inman and Trolley Squares were similarly unregulated at the same high density except that industrial uses generally were not permitted. Similarly permissive zoning could be identified in many residential neighborhoods of the city as well. Despite that permissive zoning and some new commercial development, as at Technology Square, the economic vulnerability of the city continued to deepen. No clear successor to the old industrial economy was on the horizon.



The Revival Strategy

The Kendall Square renewal area remained vacant. The industrial areas in East Cambridge, Alewife, and Cambridgeport continued to deteriorate as marginal uses began occupying the space left by the departing industries.

In that depressed economic environment, the City began to search for a strategy to revitalize its economy and secure a tax base to ease the burden on city homeowners and stem the decline of the city's financial health. The strategy chosen was to make comprehensive plans for selected declining industrial areas to attract those activities that could find an inner city location acceptable. It was also hoped that a comprehensive planning effort would make it possible to secure some of the growing array of subsidy and economic incentive programs developed by the federal government to help ailing local communities revitalize their economies.

Most people were unaware that there was a Lechmere Canal in the 1970s, when it was a derelict body of water surrounded by parking lots and former industrial uses.



East Cambridge and Alewife were initially chosen for those planning efforts, in part because the potential side effects of the proposed new development could be contained most easily with the least disruption to residential neighborhoods. In the latter years of the decade, the City produced two plan and policy documents for those respective areas, in 1978 for East Cambridge and in 1979 for Alewife. As a companion to those planning efforts, the City adopted the first significant downzoning of an anachronistic Industry B area, reducing the density of permitted development and instituting many detailed controls by which the City could shape the direction of any private development in the study areas. It is in part a reflection of the state of the city and regional economy even as late as 1978 that such a significant reduction in development potential was accepted by property owners with only modest protest.

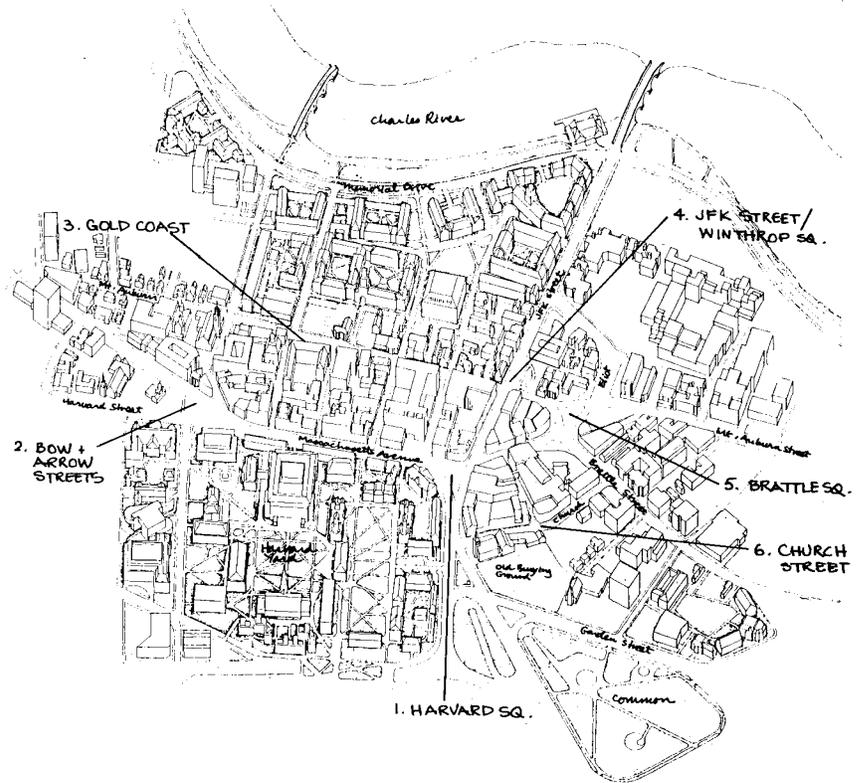
Residential Revival -Further Rezoning

Earlier and perhaps less dramatically, other changes were occurring in the city's residential neighborhoods. People were beginning to come back to Cambridge to live; these were not exactly the same families who left in the 1950s and 1960s, and these newcomers viewed the old neighborhoods and commercial centers with a more approving eye. The "1960s" versions of development were viewed with disdain and, beginning after mid-decade, a growing trend can be detected in the record of citizen sponsored, and at times City sponsored, rezoning petitions reversing, area by area, the increased density and development potential of the landmark zoning revision adopted a decade earlier in 1960.

The establishment of rent control in Cambridge in 1969 illustrates the complexity of the demographic trends shaping the future city. Adopted in response to low vacancy rates and spiraling rents throughout the 1960s, it is clear that the city and its housing stock was not being abandoned; rather the suburban working and middle class families were being replaced by others forming a different kind of household, of single persons and unrelated individuals, frequently associated with the education industry growing so dramatically in Cambridge and Boston. Two-thirds of the rental housing stock, about twenty thousand (20,000) units, were initially affected by the adoption of rent control.

In 1973 commercial Inman Square was rezoned; until that date it was permissible, if physically unlikely, to construct a 669 Massachusetts Avenue building in that neighborhood square. In 1973 and 1974 substantial portions of the Agassiz neighborhood were downzoned; Mid-Cambridge followed quickly in 1975 with reductions in density along Broadway and Harvard Street. In rapid succession other major downzonings were adopted: Porter Square in 1977, lower residential Cambridgeport in the same year, large areas of industrial and residential North Cambridge in 1978, most of the industrial portions of East Cambridge in the same year. In 1979 the Harvard Square Overlay District was adopted, establishing height limits there for the first time.

The Harvard Square Overlay District was refined in 1986 to recognize the special characteristics of six subdistricts and to encourage historic preservation.



New Transportation Directions

Early on, the decade began to bear the fruits of the growing opposition to major metropolitan highway construction, planned as far back as 1948 and advancing strongly in the 1960s. Protest throughout the region prompted a state moratorium on limited access highway construction within Route 128 in 1969; in 1972, after several years of study the inner belt and the Route Two extension into Cambridge from Alewife were officially deleted from the state's regional transportation plan. In a companion action, the State committed itself to major extensions of the MBTA transit system including one on the Red Line from Harvard Square to Arlington. The perennial problem of commercial traffic on the streets of Riverside and East Cambridge, and the boom in commercial development in Harvard Square, Alewife, and to a lesser extent Porter Square, keenly felt in the 1980s, have been influenced in part by the transportation decisions made in the early years of the decade before.

Trends into the 1980's -The New Prosperity

By the end of the 1970s a number of trends were clearly discernible. A gathering momentum would propel those trends headlong into the next decade, accompanied by an unprecedented level of regional prosperity. The 1980s would highlight the complexity of managing and balancing the consequences of an exceptionally high level of economic activity in the private commercial economy. The decade would also bring with it many extraordinary opportunities to enhance the public realm that only prosperity, and the leverage and income that flow from it, make possible.

Neighborhood Protection

One of the most significant trends was the expanding effort to protect all existing residential neighborhoods in the city such that their physical fabric would be stabilized and existing housing stock preserved; new development was intended to be permitted only at prevailing densities. The early downzonings in several neighborhoods have been noted. Similar rezonings in more areas and with greater refinement continued throughout the 1980s. The first townhouse ordinance, in 1976, and subsequent refinements in 1979 and 1989 were adopted precisely to encourage small-scaled, new development compatible with existing neighborhood development patterns. The special authority sought by Cambridge and granted by the legislature in 1979 to control institutional uses was motivated by the same objective: prevention of wholesale disruption, if not destruction, of residential neighborhoods by the expansion of institutional uses into them. The Institutional Use Regulations amendment to the Zoning Ordinance, adopted in 1981, implemented the authorization granted in 1979. Adoption of the Demolition Ordinance in 1979 and of the Mid-Cambridge and Half-Crown Conservation Districts in 1985 and 1984 respectively are elements of that same effort.

Commercial Densities Reduced

A second trend was the general reduction in the density of development allowed in the commercial and industrial areas of the city. As noted above, the reductions adopted in East Cambridge and Alewife were in furtherance of policy and urban design plans published by the City. Similar analyses would lead to reductions along northern Massachusetts Avenue and upper Cambridgeport and in Central Square in the 1980s. The process continued into the 1990s with an extensive study and rezoning in lower Cambridgeport, a second look at East Cambridge, and a look at the future of Alewife.



Residential construction activity was commonplace throughout the city in the 1980s.



The CambridgeSide Galleria at the heart of the Riverfront was reviewed extensively by the community over several years; the collaborative venture with the City is recognized as a national model for harmonizing good public and private design. In addition, the developer participated in the creation of Charles Park and helps maintain the public park system; the shuttle bus program helps alleviate traffic congestion; and significant jobs and taxes benefit the community.

Protecting the Public Interest

A third trend in the area of land use regulation was the continually expanding role of the public in reviewing and shaping private development in the city. With the establishment of a new planned unit development procedure in 1977 and the adoption of a parallel requirement for townhouse and multifamily housing about the same time, the City and its citizens have had an increasing opportunity to review and shape new development in Cambridge. That trend has accelerated and deepened throughout the decade with more and more development requiring special permit approval. Since issuing its first Planned Unit Development Special Permit in September of 1979, the Planning Board alone has considered a total of ninety-one applications for development approval, ranging in scale from the waiver of the sign limitation regulations on Alewife Brook Parkway to the request for approval of a 1,000,000 square foot retail, office, and housing mixed-use development in East Cambridge. Little more than a decade ago, each of those special permit projects could have been constructed without any public process and with little public or community opportunity to weigh the merits and demerits associated with the proposal, to secure necessary public benefits, and to reverse the course of a truly harmful scheme.



3 . The Changing Context for Growth and Development

The past decade was a time of unprecedented growth. Cranes and construction crews became a familiar sight in many neighborhoods and commercial areas. When the dust cleared, over eight million square feet had been added to the city's commercial landscape. Sleek office and research headquarters occupied once derelict parking lots in the East Cambridge riverfront. Kendall Square mirrored the Boston skyline (on a smaller scale) in its high-rise hotels and office towers.

The industrial tracts of Cambridgeport and Alewife became home to hundreds of cutting edge research firms and consultants. Nearly two thousand units of housing, primarily geared to the upper income market, were erected, most of them in previously non residential zones.

In contrast, less than two million square feet of commercial development was completed between 1960 and 1980. Today, few large projects are in progress or under review. Most building permits granted are for small restaurant additions or renovations and additions to the institutions. A large number of new condominiums remain unsold, vacant or held by investor owners. Portions of major projects in the development districts (Alewife, University Park, Lechmere Canal) remain on hold. Lenders, wary after the over extensions of the 1980s, have pulled back considerably, making it very difficult for new or growing enterprises to finance real estate or operations. Large anchor employers such as Lotus Development have contemplated moving some or all of their employment base to cheaper, more spacious suburban sites. The roll call of promising technology start-ups who are being lured by less expensive locations is increasing. Unemployment, long burdening blue-collar and lesser-skilled workers, now plagues white-collar professionals such as engineers. Because of lower commercial and industrial property values, homeowners' share of the tax burden has begun to creep up again.

While a few projects are on the boards or proposed for the next decade or so, Cambridge is unlikely to experience a development boom on a 1980s scale anytime soon. The combination of a hot private market, federal and state funding for infrastructure, and a decade-long planning process are not likely to be repeated often. In addition, population growth for the next twenty years is expected to be stable or modest at best, cooling large demands for new residential construction. What issues and lessons for growth policy are suggested?

Public Benefits

First, development, while clearly disruptive in some aspects, brings definite benefits. The city averaged one thousand new jobs per year. According to a survey of 91 Cambridge employers, nearly all job growth occurred in companies established since 1975, and the majority of that since 1985. Unemployment at one point was almost non-existent, falling to two percent in 1987. In such conditions, jobs outnumbered available workers, pushing up wages for even low-skilled, entry level positions. Physical improvements such as housing and parks graced areas long under used or vacant. The resurgent commercial revenue base cut homeowners' share of property taxes to one-third.

The relative prosperity of the 1980s, harnessed to long-term design plans for the former industrial districts, injected Cambridge with renewed vigor and greater latitude over its future.

Community Identity

Rapid growth brought its share of negatives as well. Rapid development changes the physical look and feel of a place quickly, making it less familiar. For example, "Mom and pop" businesses long patronized in a neighborhood may disappear or, new people, sometimes of different social or ethnic backgrounds, may replace long-term residents. For many, this can be disorienting, even frightening.

Taming the Automobile

During the 1980s, residents mired in traffic snarls became especially incensed at new development, even if the problem was also traceable to rising car ownership among city and regional residents and motorists crossing Cambridge to reach destinations in Boston or the suburbs.

From this dramatic increase in automobile traffic, an important lesson grew, the warning that the community must manage use of the automobile. Absent a willingness to totally succumb to the demands of the car, the city is very vulnerable to an increased level of auto usage and dependency: its very character as a dense but humanely scaled environment, walkable through its length and breadth, is threatened should the car truly gain ascendancy.

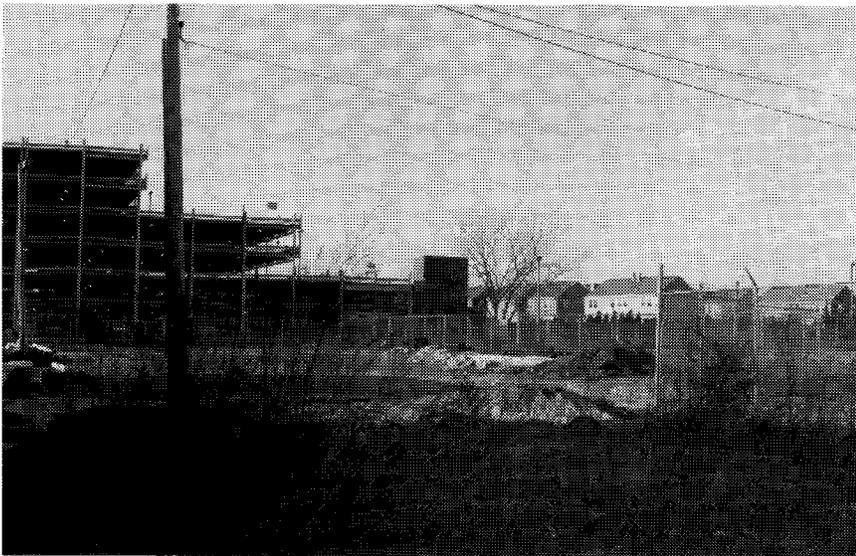
The decade did demonstrate, however, that real options are available. Detailed traffic mitigation planning was required of several large and small developments approved for construction: University Park, Alewife Center, the CambridgeSide Galleria retail mall, and several smaller developments in Harvard Square and East Cambridge. Supported by a City commitment to promote such efforts with the hiring of a Commuter Mobility Coordinator, first impressions and early results suggest that interest and self-interest on the part of the private sector make a program of alternate mobility throughout the city a real possibility for the future. Cambridge is especially favored to make such an effort successful given its compact size, relative density, and already extensive network of public transportation including seven transit stations that now serve the city.

Parking

As a corollary to the concern with traffic and congestion, the issue of parking, quantity and availability rose to the forefront of public policy discussions. Although costly to build and difficult to integrate physically into existing commercial and residential environments without significant visual and physical disruption, any parking supplied inevitably invites a car to fill it, intensifying the city's already difficult traffic problem. As the decade advanced, a more refined parking regulation seemed to be a necessary and useful step to tame the traffic and congestion problem.



The Galleria Shuttle, a result of private-public partnership, is a resounding success. Its first year (1991) it carried over a quarter million people through East Cambridge to connect with the Red and Green Lines. In its second year, it carried some 350,000 people.



Controversy surrounding the One Kendall Square parking garage illustrates the problems that can be raised by major parking structures.

Matching Land Use to the Character of Cambridge

Other information of value can be gleaned from the experiences of the 1980s. It is clear that Cambridge is more suitable as a location for some uses than others and, although the market is volatile, playing to the city's strengths would be a wise course. From a traffic perspective alone, pure general office - that is the administrative, employee-intensive functions such as banks and insurance companies - should be limited to those locations close to transit or well removed from residential neighborhoods so that their major contribution to peak hour commuter traffic can be moderated or contained. Alternately the start-up company, the research and development enterprise that might develop a line of prototypical manufacturing, would appear to be a Cambridge specialty.

Much of the commercial space in East Cambridge has been occupied by firms only recently born in Cambridge and successful beyond any possible prediction. The firms occupying the space in the evolving University Park complex fit a similar profile. This breed of enterprise is particularly well served by a wide range of physical plant from renovated old industrial buildings to specially designed space in new construction. The traffic benefits of such uses - fewer people overall and fewer trips in the congested peak commuter hours - are an added benefit. There are certain uses, which as they evolve to ever greater dependence on heavy industrial truck use, as for instance distribution facilities, probably have no appropriate place to locate in Cambridge.

New Housing in New Neighborhoods

As the opportunities for significant new housing construction were foreclosed in the existing residential neighborhoods through the successive rezonings adopted in the 1970s and 1980s, the 1980s demonstrated the feasibility of new housing construction, if sometimes at higher densities, in traditionally non residential areas. Several factors, including effective planning, as demonstrated in East Cambridge, relatively benign locations as in the narrow industrial corridors along the railroad right-of-way in North Cambridge, and a very vigorous market which seemed to guarantee the sale of any unit that could be built, contributed to the construction of large numbers of housing units in areas which had been optimistically zoned for residential use in the late 1970s. Rivercourt, Graves Landing and The Esplanade in East Cambridge, were constructed in an area carefully planned and supported by major public investments which helped to transform the industrial environment to one more favorable to residential use. The Pavil-

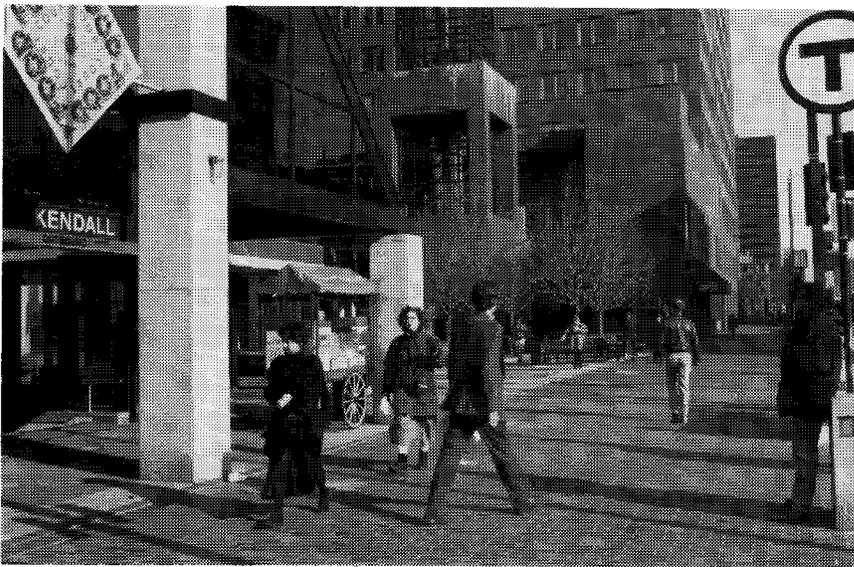
ion at 176 Gore Street, 217 and 218 Thorndike Street, 71 Fulkerson Street in East Cambridge, 129- 205 Richdale Avenue in Neighborhood 9, and 282 Sidney Street in Cambridgeport were all private developments made feasible by the private housing market in what would have been considered very marginal residential locations in earlier decades.

Reviewing Land Use Policy

The decade also demonstrated the wisdom of periodic review of public land use policy. The emerging Cambridge Center in Kendall Square is a physical manifestation of a plan adopted in the 1970s which itself was undoubtedly a reflection of the conventional wisdom for urban renewal areas formulated the decade before. Recent experience might suggest some alteration to that plan to ensure greater urban vitality through a broader mix of uses.

The East Cambridge plan is itself in part a revisionist view of the conventional urban development wisdom of the 1960s, also conceived in the 1970s but not executed fully for ten years. It vividly illustrates that even reduced development potential (both East Cambridge and Kendall Square represent significant reductions in potential development from that which prevailed before the rezonings in each areas) can in specific circumstances result in very large development.

The plentiful new construction throughout the city in the 1980s has illustrated forcefully the bulk potential latent in many of the city's current zoning districts, even those that reflect reductions accomplished in the 1970s. The decade's development also indicates that bulk alone is not the only relevant consideration. To assure a better fit between the new and the old, considerations of design, materials, more subtle refinements of height and bulk and disposition on the lot are also vitally important.



Main Street in Kendall Square is animated by ground floor activity at the Food Court and other retail uses around the main plaza.

Financial Rewards

Finally the financial consequences of the 1980s development boom must be highlighted. Seriously constrained at the opening of the decade due to a stagnant tax base and Proposition 2 1/2, the City had significantly improved its financial circumstances by the late 1980s. By 1991, two-thirds of the city's property tax burden was borne by the commercial sector. As late as 1981 that ratio was almost precisely reversed, with residential property owners paying three-quarters of the property tax bill.

Throughout the 1980s, the City was able to take maximum advantage of all state and the dwindling number of federal programs available to advance its policy objectives in housing, park development and renovation and reconstruction of long-neglected infrastructure while continuing the many social and educational programs central to the City's mission to serve its residents.

The environment for growth policy has altered dramatically. Today's slower pace of growth affords a breathing space to take stock of past and present development and craft a vision for the future. With fewer projects proposed or in the works, it is a good time to step back from the 'bricks and mortar' and consider the social and physical context of development and its future shape and direction. It is both an opportunity and an imperative, given widespread concerns with the negative impacts of recent growth, and the different problems posed by a stalled development climate. With fewer federal and state resources available to finance amenities and shape development positively, the City bears a greater burden of responsibility to finance services, to promote economic development and to meet environmental goals. Cambridge is largely built-up, except for its older industrial areas, increasing their importance as a resource and highlighting the necessity to choose the new uses and patterns of development there carefully.

Now is a good time to explore how economic development and environmental protection and management can be interrelated rather than competing goals. To this end, an important guiding concept is sustainability. Sustainable development means viable growth measured by good jobs and increased community wealth, not just redistribution of resources. In addition, the goal is better quality of life for all citizens, measured by investments in cultural and other public services, in children, the elderly, and all segments of the community. The environment should be improved through better air and water quality and enhanced recreational and cultural opportunities. In sum, investments should be made that improve both the economy and the quality of life for the community.

**Cambridge
Growth Policy
Workshops**



Cambridge
Community Development
Department

February 24, 1992

4 . Growth Policy Workshops

Between February and September 1992, the Planning Board conducted a series of five, three hour workshops to elicit a wide range of public opinion about the many planning issues of concern for Cambridge today and in the future. Forty individuals from across the city, representing the neighborhoods, the institutions and the business community, participated actively in these discussions. Each of the first three workshops included a discussion of two planning topics. Issues, proposed policies and supporting materials were given to the participants in advance to assist them in preparing for the discussions. At the request of the participants, two additional workshops were held to allow further exploration of the issues and proposed policies.

What follows is a synopsis of the workshop topics and comments. The Planning Board has reviewed all of the comments from these sessions and used them to help shape a vision for the future of Cambridge and policies to assist the City in achieving that vision.

The Community Development Department prepared workshop materials that were distributed to participants. A series of policy questions covered a wide range of issues, and relevant data was appended.

Transportation

In all of the major planning decisions of the last decade, transportation, and particularly automobile traffic, has been a central concern and has produced much debate. Growth policy discussions considered city-sponsored means to change the mode of travel (single occupancy vehicles vs. other means, including bicycling or walking), movement into and out of the city and within its boundaries, protection of neighborhoods from car and truck traffic and regional efforts to improve air quality.

Summary of Comments

Discussions grappled with how to protect the quality of neighborhood life from traffic impacts while enabling needed levels of economic growth. A recurring theme was the regional nature of the issue and the means of responding to it, particularly in light of the development of a new/amended State Implementation Plan (SIP) to respond to federal Clean Air Act mandates. Other factors outside the city's direct control include agencies such as the MBTA and the high percentage of non residents commuting to work in Cambridge. Differences arose over whether to emphasize requirements, such as in restricting car use and parking spaces, or incentives to reward desired transit behavior.

There was broad support for City investment in transportation alternatives such as jitneys, vanpooling and shuttles; bicycling; and land use policies which encourage non auto mobility and concentration of mixed used development close to transit stations. Mandatory regulations of car travel should be executed only as part of a regional effort, with the City taking the lead in State moves to craft a regional policy. Support was also voiced for public- private cooperation in developing Transportation Management Organizations to promote alternative transit programs such as



carpooling and employee education. Some participants stressed use of incentives or "carrots" to lessen the burden on business; others were concerned that "resident only" hiring initiatives were overly narrow. Regarding neighborhood traffic impacts, comments supported existing policies concerning one way streets, roadway improvements and other means to divert cars and trucks. Given the City's limited authority, a regional goods movement plan is needed to route trucks around rather than through neighborhoods.

Housing

The creation, preservation, quality, and afford ability of the city's housing stock are vital elements of the city's fabric and contribute greatly to the city's social and physical diversity. Yet responding to diverse housing needs while preserving the physical character of existing neighborhoods poses significant challenges. Resources for producing new housing are scarce, due to federal and state cutbacks and the shortage of vacant land outside of former industrial areas. Discussants considered whether the latter could accommodate residential uses; also discussed were how to balance existing densities with incentives to create affordable housing, populations to target for housing, and preservation of the existing stock.

Summary of Comments

Participants lauded the retention of existing residential character and density, except in cases where existing character is less desirable. Examples include neighborhoods closely bordering industrial areas, or excessively dense high-rise housing.

While most agreed that more housing was needed for families with children, particularly those with lower-incomes, a few concerns were raised about the proper proportion of housing which should be "affordable." Others wondered whether future demand warranted considerable new housing development. Mandating affordable housing in new developments was generally opposed, while participants supported the use of incentives to develop new affordable housing, and favored maintenance of affordability in the existing stock through reconstruction. Racial minorities, especially newcomers to the city, should be targeted for assistance, as well as persons with special needs. Rehabilitation assistance should receive a high priority and be concentrated in the city's lower-income neighborhoods. Rent control, which was not touched on directly by proposed growth policies, sparked some debate about its accessibility to lower-income residents, the causes of the physical deterioration of rent control buildings, and the amount of affordable housing in Cambridge.

Most favored the inclusion of housing as a component of development in the evolving industrial areas, where appropriate, though concern was voiced about effects of pollution and the compatibility of industry and housing. Some business representatives feared that new residents in these areas would spark conflict with their industrial neighbors. Well designed buffers and transitional zones were strongly recommended.

Economic Development and Employment

Economic activities are both the object of development policies, such as transportation and land use, and the vehicle for achieving them. Much future activity will likely occur in the city's evolving industrial districts, encompassing ten percent of the city's land area. These areas are a unique asset, and also suggest the multiple and sometimes conflicting objectives sought by growth policy. Workshop discussions highlighted the need for detailed, long-term planning to respond to desired goals, both in the older districts and in other non residential areas, such as the commercial squares and districts. Participants commented on development areas, retail districts, employment and business incentives, illuminating many of the key themes of growth policy: finding the appropriate scale and mix of uses, compatibility of commerce with other activities, preserving neighborhood character while ensuring economic vitality, and balancing regulations with incentives for business.

Summary of Comments

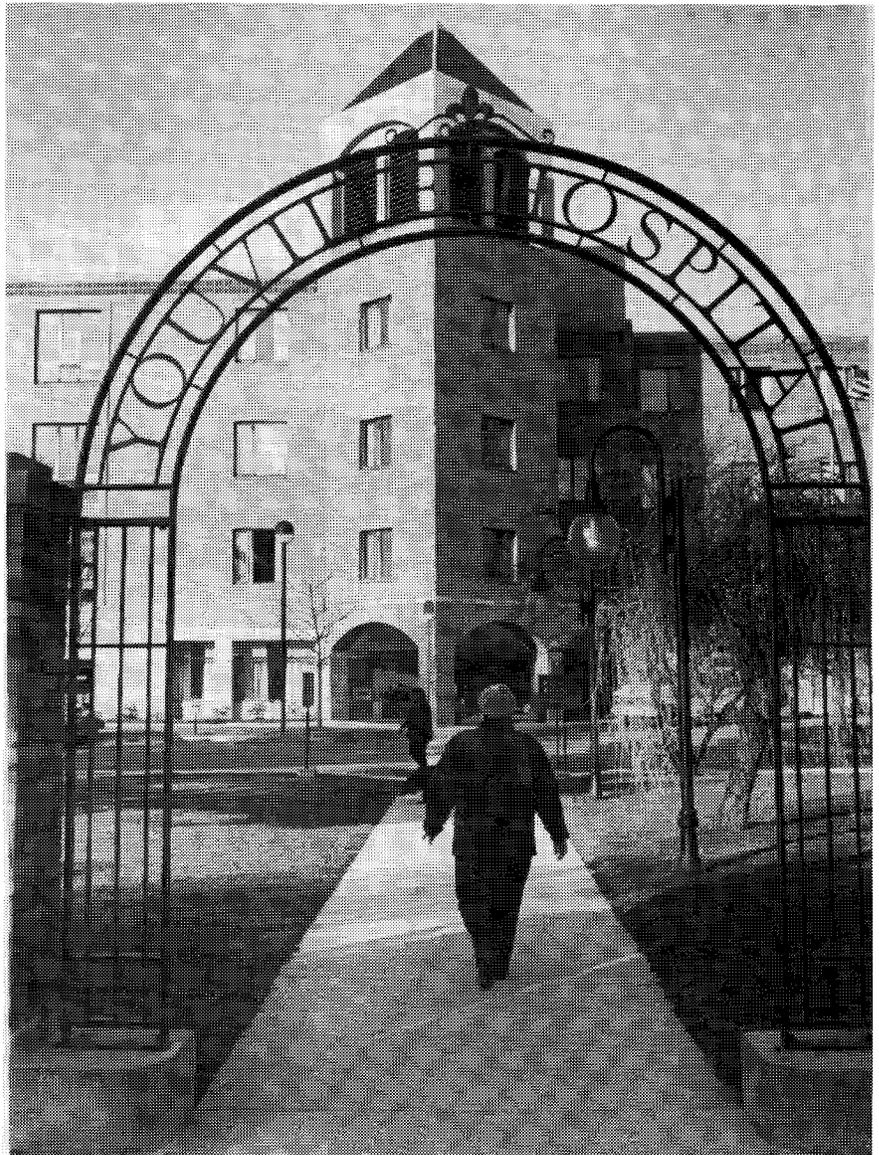
Participants gave qualified support for a mixed-use planning approach in the development areas. The need for a vibrant tax and employment base, along with ample space and flexibility of use to nurture new industries, was widely acknowledged. Participants heard testimony and volunteered many comments on the importance of the older industrial districts as a critical resource, both for tax revenue to support City services and as a source of new employment, particularly in emerging, environmentally sound, technology-based industries.

Other commentators felt that economic goals need to be balanced with other concerns such as preserving the existing scale of neighborhoods, minimizing traffic impacts and ensuring a smooth transition between commercial and residential uses, through zoning and urban design. Such concerns extended to other non residential areas. In all cases commentators emphasized the importance of addressing unintended consequences of economic development, such as traffic, and the need to tailor development strategies for specific circumstances.

Participants widely agreed that large new competing retail districts should not be encouraged. Ground floor retail in new office development was supported strongly. Neighborhood retailers deserve support, even if facing economic obsolescence, because they reduce traffic and provide opportunities for jobs and entrepreneurship. It was noted that many retailers need regional as well as local customers to succeed. The paradox is that such success breeds its own problems, such as increased traffic and change to the character of an area.

The means for choosing development policies elicited many comments. Long-term urban design plans providing a consistent and predictable environment for private developments received support. Some comments stressed the need for consistency between various policies, and for fairness in applying them to diverse private actors. Others debated the merits of business incentives versus regulation to achieve desired goals. All acknowledged that some level of regulation is inevitable in a complex city, but the need to understand the consequences -pro and con -of public policy on business was accented. Fundamental questions about how the City decides between housing and commercial development arose, particularly in light of conflicts when the two are mixed, and the high costs of infrastructure when uses are changed (as in East Cambridge, where housing has grown up in once industrial tracts.) The high costs of environmental clean-up for housing development was also noted. Some felt that the City needs to choose a specific direction for particular areas.

The social context for development was a topic of concern. Employment and training policies were supported, especially those targeted to women and minorities, to ensure that all benefit equally from the fruits of recent development and emerging industries. The impact of economic shifts on the city's cultural diversity, and the need to preserve and strengthen the latter, were also stressed.



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institutions

The city's institutions, particularly in higher education and health care, are a perennial source of strength and friction for Cambridge. Competing demands for scarce land, the tax-exempt status of institutions, and the concern over the city's character fuel continuing concerns. The challenge for growth policy is to address these issues while allowing institutions to remain competitive and adapt to demographic, economic and technological change. Participants discussed trade-offs between preserving taxable land and supporting technological advances spurred by university research. Areas discussed include community interaction, physical expansion, housing, preservation of the city's tax base, commercial investment, and smaller institutions.

Summary of Comments

There is strong public support for a formal, ongoing dialogue between the City and its institutions about land use, future plans and community needs for housing, job training and education. The institutions also need to carry on internal planning to determine their future needs and visions, particularly in light of development. While some called on the universities to maintain a formal liaison with public schools, it was observed that past attempts resulted in controversy.

Comments focused mainly on the universities, with some recognition of the hospitals as major institutions. The prevailing sentiment at workshops was to restrict universities to locations historically occupied by such uses, through the institutional overlay districts and the Residence C-3 zoning designation. University expansion into residential neighborhoods was generally opposed, though City controls over institutions' internal functions received little support. Expansion into abutting commercial areas, or in other nonresidential areas was not strictly opposed. Growth in the latter case was deemed acceptable if tax accords with the City were secured, retail and related services were a part of institutional development, and if institutional uses and ownership did not overwhelm commercial and industrial districts.

Most want to see educational institutions provide housing for their student, faculty and staff communities, where possible on land already owned by institutions. When it is built in abutting neighborhoods, it should match the scale, density and character there. While some residents suggested satellite campuses outside the city, educational representatives felt this would clash with their mission of maintaining a collegial atmosphere. The position was expressed that the institutions should not expand at all, unless a clear benefit to the city can be demonstrated.

Urban Design and Environment/Open Space

Sustainable development is fundamentally about the quality of the urban environment. That quality is greatly affected by a host of design issues ranging from broad concepts which help define the character of a particular area to specific details which will make that character come alive. Design plans and guidelines have been developed for many parts of Cambridge; to ensure a high quality environment, other areas will need to be addressed as well.

Open spaces such as parks and recreational areas are essential to good urban design. They reinforce and add their own dimension to the quality of life in a dense urban community. Workshop participants considered the content of urban design standards (height, setback, use, density, etc.), the scope of their application to different areas, and the appropriate process of design review. Standards for historic preservation in specific districts were weighed against the use of zoning mechanisms. Also discussed were the creation and maintenance of open space, as well as possible trade-offs with other uses. There was support for the idea of sustainable design, in terms of building in harmony with nature and with the cultural and historic character of Cambridge.

Summary of Comments

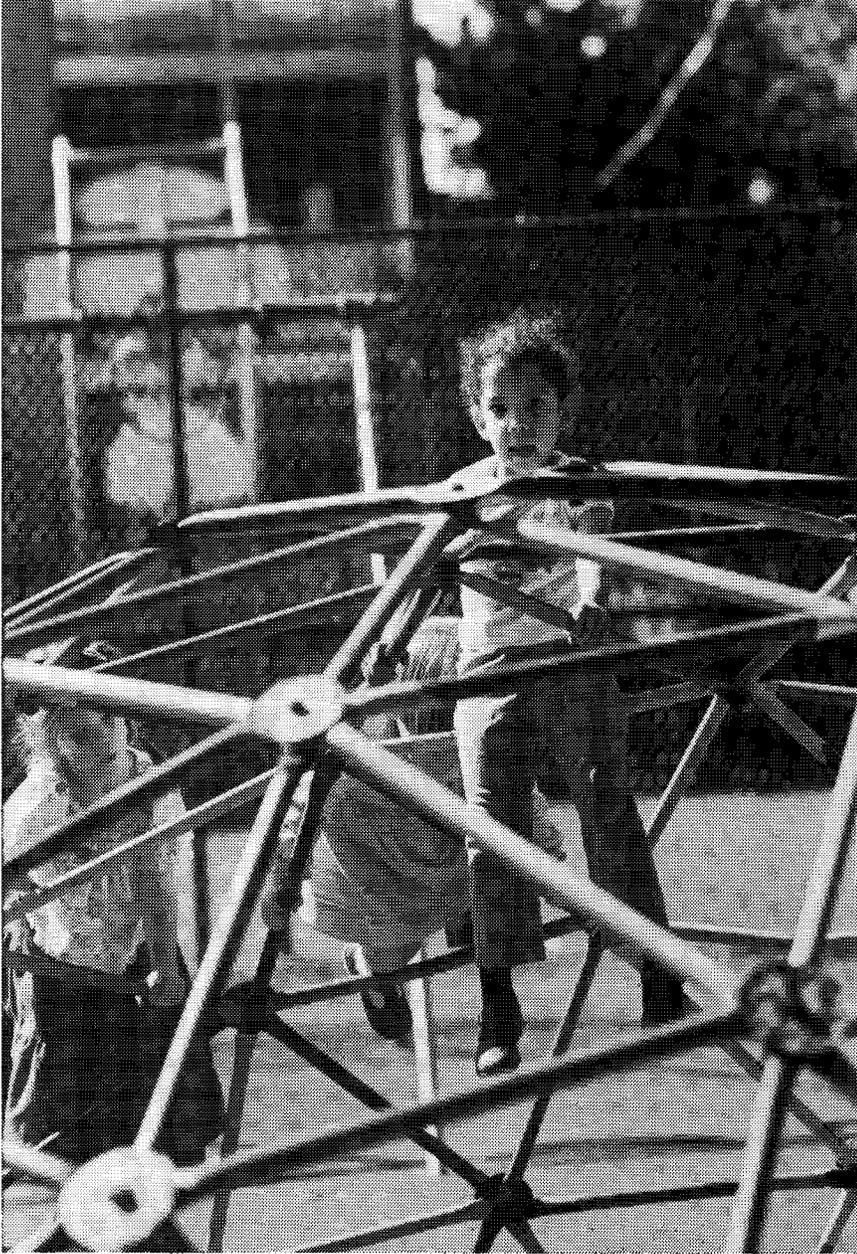
Participants agreed that height, setback, use, site development and density standards should reflect the City's fundamental urban design and environmental goals. Some felt that certain zoning provisions threaten neighborhood character; others supported lower base zoning levels, with bonuses reflecting open space and transportation goals. A citywide height limit was supported. Creation of design standards for new areas of development was favored, but it was noted that the city's image changes from section to section, and that plans should reflect that variety. Emphasis should be on designing for the public experience, as in streets and open spaces. The concept of "sustainable" or environmentally appropriate development was supported, so as not to shift environmental costs to future generations.



Comments about design review were mixed. The timing, scope and location of such reviews raised concerns, as did the fairness of their application. Success stories, such as University Park, were cited, while others cautioned that design review can engender tameness or staleness. Participants agreed that design review is needed in areas where small scale changes could disrupt the established character of a district.

Commentators favored open space and recreation facilities supporting a wide range of functions and clientele, including the elderly and special needs populations. Some cited problems of access with existing sites, due to a lack of transportation or to programming constraints. They also agreed that open space provision should be a required component of new commercial and residential developments. Participants also believed that existing open space should not be replaced with other uses, except under extraordinary circumstances.

Participants supported the incorporation of maintenance plans into open space planning, particularly through public-private partnerships, such as agreements made for the renovation and maintenance of Winthrop Park. Also noted was the importance of linking open spaces through an "Olmstedian" vision, strengthening pedestrian environments and recognizing the utility of private open space. Some felt that public access to private open space should be encouraged.



5. A Vision for Cambridge

Development is a heated subject in Cambridge, even if its pace has cooled considerably. It arouses passions because it is fundamentally about the kind of place we want to live in, even if the explicit focus is on site specific skirmishes of use, design or building bulk. The growth policy process has tried to pose the most basic question: what kind of Cambridge do we want now and in the future? To answer necessitates summoning our vision. A vision for Cambridge is of necessity broader than any single neighborhood or architectural style. Cambridge is the sum of its parts, but it is also more. Good planning is nourished by the attempt to see the city as a whole, and to take a long view.

Past planning visions proposed big schemes (highways, high-rise apartments and office towers). They typically assumed that the old should give way to the new, that bigger was better, and that continued growth would solve most problems and enable communities to sidestep fundamental choices and trade-offs. The vision was a radical one, in the sense of radically uprooting and replacing what existed in the built environment.

This vision is different. It is conserving, respecting the past, while not suggesting that land uses in Cambridge remain frozen or static. It builds on the recognition that Cambridge works and human diversity works. The current mix of urban form, scale, density and mix of uses is worth sustaining and enhancing, both in existing neighborhoods and commercial districts, and in the older industrial areas.

This vision also differs from traditional arguments about development. It recognizes that resources for urban development, both environmental and fiscal, are limited. Rapid development in the 1980s had measurable consequences for the natural and human environment of Cambridge and the surrounding region. Problems such as air quality, traffic congestion and subtler changes in the human-scaled built environment suggest that there are real limits to the pace of growth. The slowing of development in this decade has brought severe negative consequences as well: a declining commercial tax base, threatening the level and quality of services the city can offer, and shifting the tax burden to homeowners.

Fiscal constraints imposed by Proposition 2 1/2 a decade ago increase the pressure to rely on physical development to serve local needs. Rising joblessness and fewer new job opportunities also harm economic health.

Recognizing these realities means moving beyond arguments about the quantity of growth -beyond advocating "more growth" or "no growth" -and focusing instead on quality, or "better growth." Better growth maintains the essential qualities which give Cambridge its unique character. There is no quantitative standard or litmus test to determine what is sustainable development. Rather, there are different facets of the city's character which must be weighed in any development decision. These can be summarized as the built and natural environment, the social character, and the fiscal and economic climate of Cambridge. Policy directions implied by each are suggested below:

Built Environment

Maintain the human scale and texture of Cambridge, building on rather than replacing a dense urban form which works. Strengthen distinctive neighborhoods and protect special environments, such as historical and cultural districts. Repair and renovate the housing stock and infrastructure, and revitalize tired shopping districts. Design buildings of durability, excellence and suitability of use and materials for their context.

Natural Environment

Recognize that natural resources are finite, just as new land for building in the city is limited. Environmentally "sustainable" development addresses environmental costs now, rather than deferring them to future generations. Growth policies for reducing car use, thus lowering air pollution, or protecting and expanding green spaces, typify this approach, as do resource conserving design principles.

Social Character

Retain the city's diverse range of races, cultures, viewpoints and income groups which gives it its unique character and fuels its cultural and economic vitality. Promote a diversity of housing, jobs and public spaces. A



focus on people, as well as land, demands an enduring commitment to education and training for the work places of the twenty-first century.

Fiscal Climate

Consider the fiscal and economic consequences of development policies, tempering regulation with incentives where possible. Maintain the revenue base necessary to serve a diverse population and ensure a decent life for residents. Cultivate and retain local enterprises, based on innovation and knowledge generated by the institutions. Maintain an environment friendly to such activities, and the informal settings and amenities which nourish them.

These facets of the city's character are inter-connected; none exists in isolation from the other. Economic development to sustain City services and job creation need not threaten the quality of the natural and built environment. Ideally, development should be environmentally sound in all of its phases, from selection of raw materials to processing to use in society to waste disposal and ultimately to reuse and adaptation to new uses. Overly constrained growth could harm the city's social and economic diversity. Finding the right pace and quality of development requires weighing all elements of the city's character together and, at times, making trade-offs. It also requires finding new revenue sources to fund City services, and reexamining the level of services and the way they are delivered.

Viewing these elements as interdependent reveals that trade-offs are not always inevitable, however. They are also resources which can amplify and strengthen one another. For instance, a well-trained and well-housed work force will in turn strengthen the city's commercial base, helping provide the revenues needed to govern effectively. Sustainable development conserves the built environment as well as natural resources.

Building on

the city's mixed use character, where appropriate, enables more residents to live near their jobs, and to walk to small, neighborhood-oriented businesses, reducing car dependence and easing congestion.

Finally, the city needs development decisions which are sustained for the long-term by broad consensus. It should be clear that individual elements of this vision, and the policies to carry them out, sometimes stand in contradiction to one another. Conflicts over land use are inevitable, given multiple goals and needs, scarce land and divergent viewpoints. Since all needs cannot be met at every site, compromises must be made. Integrating diverse goals such as job creation and limited auto use, or environmental quality and social equity requires negotiation and hard choices. A sustainable



agreement

is one that results from the informed involvement of diverse participants. This requires keeping the process flexible and open to ongoing dialogue, to ensure that all decisions are timely, fair, consistent and well-debated.

Bearing these principles in mind, what kind of Cambridge can we hope for in the coming decades? The following are elements of a vision of a sustainable Cambridge in ten or twenty years:

- A vibrant, stable population of diverse races, cultures and viewpoints. New cultures continue to arrive; some rise to positions of public prominence.
- An environment where families with children can thrive. Parks, housing, schools and child care and other supports make the city a good place to raise families.
- Good housing available to a wide spectrum of income levels and households (singles, families with children, older people, etc.) Hundreds of units are renovated yearly by neighborhood-based organizations. More residents are experimenting with cooperatives, co-housing and other forms of ownership which share costs, community services and benefits.
- Significantly reduced automobile traffic. Walking, carpooling, public transit, bicycling and jitney trips are the norm. Employers and families compete annually to reduce single occupant car trips by the greatest percentage. All corners of the city (and adjoining cities) are stitched together by bicycle lanes and paths.
- A national model for community energy production, pollution prevention, and recycling. Grassroots organizations and the universities, churches, and other institutions cooperate on sustainable forms of transportation, heating, waste reduction and food production and distribution.
- A system of beautiful, well-maintained and accessible parks and open spaces. Landscaped pedestrian parkways knit the park system together in the style of Frederick Law Olmsted. Every neighborhood has volunteer groups pitching in to ensure clean and safe parks.
- A renowned system for training and retraining workers for emerging industries and successful careers. Youth combine courses, work ap-



prenticeships and community placements; older workers learn new skills and act as mentors to youth.

-A thriving economic base, anchored by new health, environment and communications-based industries, home-based and storefront businesses, and the academic institutions. Cambridge continues to attract national attention for its climate of innovation and entrepreneurship.

-Vital and distinctive retail centers serving neighbors, students and regional customers seeking an ethnic meal, a rare paperback or fresh fish and produce. Local retailers, hurt by higher rents in the 80s and early 90s, make a comeback and thrive.

-Strengthened and stabilized neighborhoods which retain their distinctive flavor. Connections between neighborhoods are improved by open space and transit improvements, as well as by increased cooperation on a variety of issues.

-A model for effective citywide design review. Widespread design review of new projects occurs in both traditional districts and in the former industrial areas, such as Alewife.

-A system of comprehensive, high quality city services. New revenue sources and forms of service delivery lessen the city's dependence on property taxes and physical development to fund services.

-An ongoing, successful process for addressing growth and development concerns. Local government expands shared responsibility for growth with the nonprofit and private sectors. All interested parties engage in continued debate about the appropriate pace and quality of development in the evolving industrial districts, and their impact on nearby residential areas.

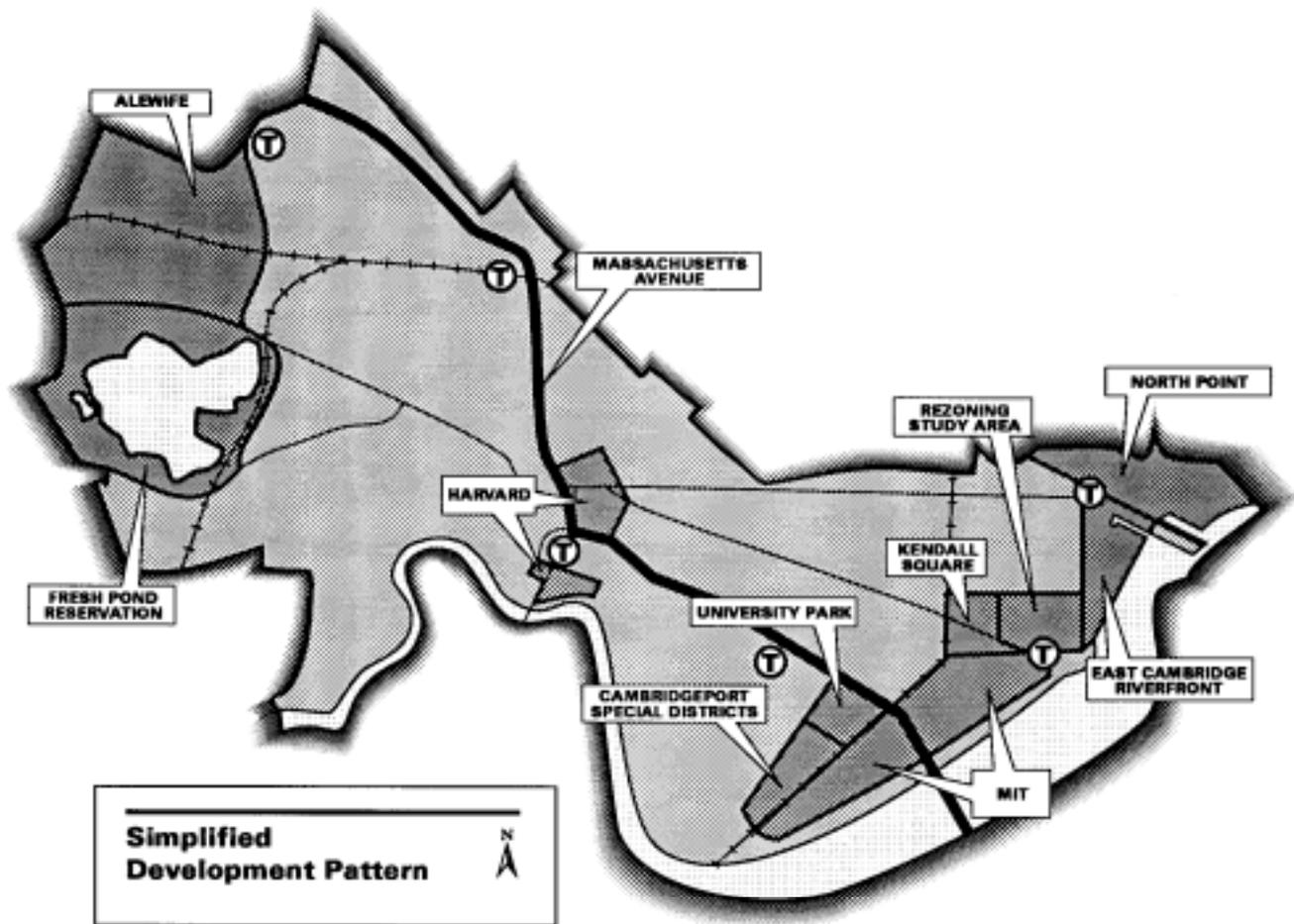
Part II.

Planning Assumptions and Policies

Whenever a public decision is made, an analytical process generally has preceded that decision providing the factual and theoretical context within which the policy choices are weighed and considered. Each planning effort is inevitably built upon the information gathered and past experience as well as upon the adopted policy.

What follows is an enumeration of the planning assumptions which have provided the context within which the Planning Board has developed its policy recommendations over the past decade. The assumptions may be ones of fact, as the Planning Board understands them, which limit or direct the choices the city may make with regard to its development. Other assumptions may take the form of policy directions which appear to have been adopted by the City explicitly or are implied in actions taken by the City in other matters and at other times. These assumed facts and principles are presented for functional areas particularly pertinent to land use planning concerns; also provided is some discussion of their origins and implications.

The planning assumptions are followed by a compilation of the policies for each functional area. These policies, which will help guide the Planning Board and others in future planning decisions and recommendations, reflect the changing context of our city and our planning assumptions. The policies are discussed and explained in the accompanying commentary for each functional area.



6. Land Use

The complexity of the city's land use pattern is a significant aspect of its appeal. How to regulate the evolution of that pattern in the future will require a number of critical policy choices affecting a wide range of issues and concerns that may be in conflict.

Assumptions

> The diversity of the city's development pattern is a major asset and should be fostered and protected.

> The close proximity of a wide variety of uses and activities requires careful consideration of buffer and transition requirements.

> The wide diversity of land use in the city fosters the social and economic diversity that is one of Cambridge's enduring assets.

The city's historic development pattern, established long before the influence of the automobile, provides an intricate mosaic of land uses, scales, densities and activities that are evident to anyone who moves through the city. The often lamented complexity of the zoning map is, in part, a reflection of that intricate pattern and of the policy choice, through zoning, to reflect the physical and use diversity of the city's many neighborhoods and commercial districts.

In Cambridge, many successful and stimulating juxtapositions of differing uses and scales can be found within the same general use category: the old multi-story brick apartment buildings in the predominantly wood milieu character of neighborhoods like Mid-Cambridge and Agassiz; or the dense commercial Harvard Square close by the green and lush ambience of the large homes and spacious lots along Brattle Street.

That intricacy, however, also has the potential for very real conflict, particularly as more contemporary building forms and activities replace earlier building types. For example, Massachusetts Avenue between Harvard and Central Squares has many illustrations of how the juxtaposition of very high density commercial uses and low scaled residential neighborhoods has proved more jarring than stimulating. Harvard Street between these same two squares illustrates how the same use -dense multi-family apartment buildings -has a completely different impact when the physical forms change: a 1920s courtyard building is a much more benign neighbor than its 1960s car dependent cousin.

The challenge to the City and its citizens is to recognize in public policy and land use regulation the very real but different problems that such diversity may engender in both existing neighborhoods and emerging new development districts.

Assumption

> New and evolving development areas have the greatest latitude as to character and type of development and offer the potential for innovative and non-traditional mixes of uses and scales of development.

Experience with the city's historic development pattern suggests that diversity in use and building form is a positive aspect of living in Cambridge. That experience is appropriately applied in the newly emerging development areas where all aspects of use, density, and scale are much less constrained by existing development patterns.



This drawing illustrates the potential for a completely new environment in North Point, the 70 acres of land in the extreme northeast corner of Cambridge. The viability of housing, hotel, and office development in this area was thrown into question by the Scheme Z ramp design for the Central Artery. Even though a more acceptable design is now being created, many steps remain to be taken before this mixed-use vision can be realized.

Given the increasingly important need to mediate between potentially competing public objectives - housing, jobs, environmental quality, and tax revenue - the flexibility found in these newly emerging development areas should not be unnecessarily constrained by a rigid policy that would impose the historic development patterns of adjacent neighborhoods on them. Greater flexibility as to form, use, and density is appropriate in these emerging districts, subject to the careful consideration of the impacts on the adjacent established neighborhoods. The opportunity to carefully fashion detailed plans, and zoning mechanisms to implement them, suggests that a wider range of options and choices would best serve all residents and help strike a balance between the multiple objectives that must find partial realization through the City's land use policies.

Assumptions

- > *By the nature of its rather fixed development pattern and the evolution of the characteristics of some contemporary land uses, Cambridge is not an appropriate location for all kinds of development or specific uses. Within the city some uses may be appropriately located in some areas and not in others.*

- > *The city's past development pattern sets limits on the kinds, scale and, ultimately, amount of development that can reasonably be accommodated without significant harm to the character and environmental quality of the city;*

- > *As the city's physical fabric changes over time, the evolving mix of uses and activities should be balanced to minimize the negative impacts of change on the community while advancing its multiple land use policy objectives.*

Cambridge is clearly not a clean slate upon which any new form of urban development can be written or upon which writing can occur forever, without limit. History and tradition have conspired to produce an urban environment that most feel is particularly pleasing. The pleasure is derived, in part, from a physical environment that has certain, irreducible characteristics that while often difficult to define specifically, nevertheless exist. The city is not infinitely flexible or accommodating; while the limits may vary from place to place, a recognition that limits do exist is helpful when policy choices have to be made. For instance, with the approval of several large redevelopment schemes in Harvard Square in the 1980s, the remaining opportunities for additional large scale development there are diminishing rapidly. Continuing the trends of the past decade into the future would clearly redefine the character of the Square and squander its special appeal (for many, indeed, this outcome has clearly already been

realized; definitions themselves are subject to considerable debate). The City has recognized the validity of limits in its adoption of downzonings in residential neighborhoods for more than fifteen years.

More specifically, the growing dependence on or desire for accommodation to the automobile on the part of many companies, their customers and employees makes some activities, where that dependence is irreducible, very difficult to integrate into the city's physical structure without completely transforming it. A variation on this theme is found in general office use where the density of employee population can generate very high peak hour traffic when the employees are car dependent. Such a use can be accommodated when it is limited to those areas of the city where public transit can provide options to the private auto.

Some uses, such as warehouse or distribution centers which are heavily dependent on industrial grade truck delivery and distribution systems, may have no appropriate location in the future in Cambridge.

The Red Line maintenance facility shown in the 1927 aerial photograph gave way in the 1980s to the JFK memorial park on the Charles River, with the JFK School of Government and the Charles Square mixed-use complex to the north.



Land Use Policies

The City's land use policies provide an overall framework within which the policies in other functional areas will present a more detailed picture.

Land Use Pattern and Neighborhood Protection

Fundamental to setting a growth policy direction for the future for Cambridge is clarity on the cluster of issues addressing how much change, if any, is acceptable in the built character of the city's long established residential neighborhoods, and commercial squares and corridors.

With some limited but significant exceptions, the distribution of residential and nonresidential areas in the city has not changed significantly since the early part of this century when the city's development matured after a period of rapid industrialization. Zoning, since its adoption in 1924, has tended to confirm and stabilize that general distribution of uses.

Beginning in the 1960s that balance began to shift somewhat, particularly with regard to institutional expansion. A more important, or at least more pervasive shift in the character of some residential neighborhoods and commercial squares was prompted by a change in City policy which envisioned these areas as growth centers appropriate for private or public redevelopment to more intensive, revenue producing uses.

The tall buildings and more intensive site development which ensued from that policy produced a reaction in the 1970s and 1980s. In those decades the physical stability of residential and commercial neighborhoods came to be valued more than their potential to be sources of revenue. That



viewpoint has continued into the present decade with a forthright recognition that there are resulting consequences for other public objectives: namely, that the need for new housing, especially affordable housing, and for new sources of revenue for the most part must be met elsewhere or through creative ways which do not involve wholesale transformations of the city's core neighborhoods. This two-decade old trend in public policy is made explicit in the land use policies presented in this document.

The city's neighborhoods, in all their physical variety, provide decent living environments not in need of redevelopment; nor should they be sacrificed to more intense development in pursuit of other, perhaps legitimate, public objectives.

POLICY 1

Existing residential neighborhoods, or any portions of a neighborhood having an identifiable and consistent built character, should be maintained at their prevailing pattern of development and building density and scale.

Policy 1 is meant to recognize the inherent value of the city's many neighborhoods as they have developed physically; it is not meant to suggest that these places should not change. Strict preservation is the province of historic or conservation districts. While retention of existing structures is encouraged, new construction is anticipated and at times perhaps desirable.

POLICY 2

Except in evolving industrial areas, the city's existing land use structure and the area of residential and commercial neighborhoods should remain essentially as they have developed historically.

The policy is intended to recognize the general, prevailing character of a neighborhood or portion of a neighborhood: the density of buildings, the density of dwelling units, the prevailing character of setbacks, open space and the way that open space is landscaped. Even in fairly uniformly developed neighborhoods there can be a great variety of building types and development patterns but the character the policy seeks to identify is the prevailing one, not the dense anomalies.

Acceptable change, consistent with the policy, would allow clearly deteriorated or excessively dense environments to be modified or removed.

Conversely, the policy does not imply that all or any particular neighborhood should be forced into unreasonable uniformity; the odd high-density brick apartment building should not be removed because it does not conform to the general wood-framed, two-family character of a place.

Finally, Policy 1 is not intended to foreclose opportunities for reasonable incentives to provide affordable housing, as for example, increasing the density of units within an existing building above that prevailing in the area or permitted by zoning when affordable units are the clear compensating benefit.

The city's pattern of residential neighborhoods and commercial squares and corridors has evolved over time into a complex weave of land use that is well balanced and mutually supportive. Policy 2 suggests that a fundamental change in this pattern, through expansion of commercial areas into established residential neighborhoods, or significant erosion of commercial corridors and squares through residential expansion, is not anticipated, not encouraged, and not desired.

This land use pattern is fairly accurately reflected on the City's adopted zoning map. However, consistent with the policy, that map might be adjusted locally where the zoning designation does not accurately reflect existing and desired land use conditions. Nevertheless, no wholesale changes are expected.

The complexity of the city's development pattern, whether in scale and density or use, is desirable and should be encouraged or retained. No particular neighborhood or sub-neighborhood, however, should be expected to exhibit the whole range of differences present in the city, as a whole.

Where a special positive character exists it should be reinforced; conversely, physical diversity for its own sake and beyond defined limits, when it brings in its train negative impacts or mean environments, should not be pursued.

It is appropriate that the City's zoning regulations should recognize and sustain those positive differences but Policy 3 does not preclude physical expansion within the limits set by the applicable zoning district regulations.

In the city's commercial districts particularly, the variety of functions and patterns -from downtown to neighborhood crossroads; from high density, high-rise and low-rise districts to one-story commercial strips; from squares serving the region to the local tailor shop -should be reflected in the zoning ordinance and other City policy; some modest adjustments in regulations, as for uses, heights and densities, can be expected but the general range should remain and be strengthened.

In a city of Cambridge's density and land use complexity, residential uses in particular require protection from abutting nonresidential activity. Policy 4 suggests that minimal transition standards should apply in all areas where residential and other uses abut. Noise, visual clutter, shadows, glare, building scale and site activity should all be considered.

Similar uses, including residential uses, at differing scales should also be subject to transition requirements. In some cases uses themselves might be used as a transition mechanism: as for example, office use between residential and retail or industrial activities.

POLICY 3

The wide diversity of development patterns, uses, scales, and densities present within the city's many residential and commercial districts should be retained and strengthened. That diversity should be between and among the various districts, not necessarily within each individual one.

POLICY 4

Adequate transitions and buffers between differing scales of development and differing uses should be provided; general provisions for screening, landscaping and setbacks should be imposed while in especially complex circumstances special transition provisions should be developed.

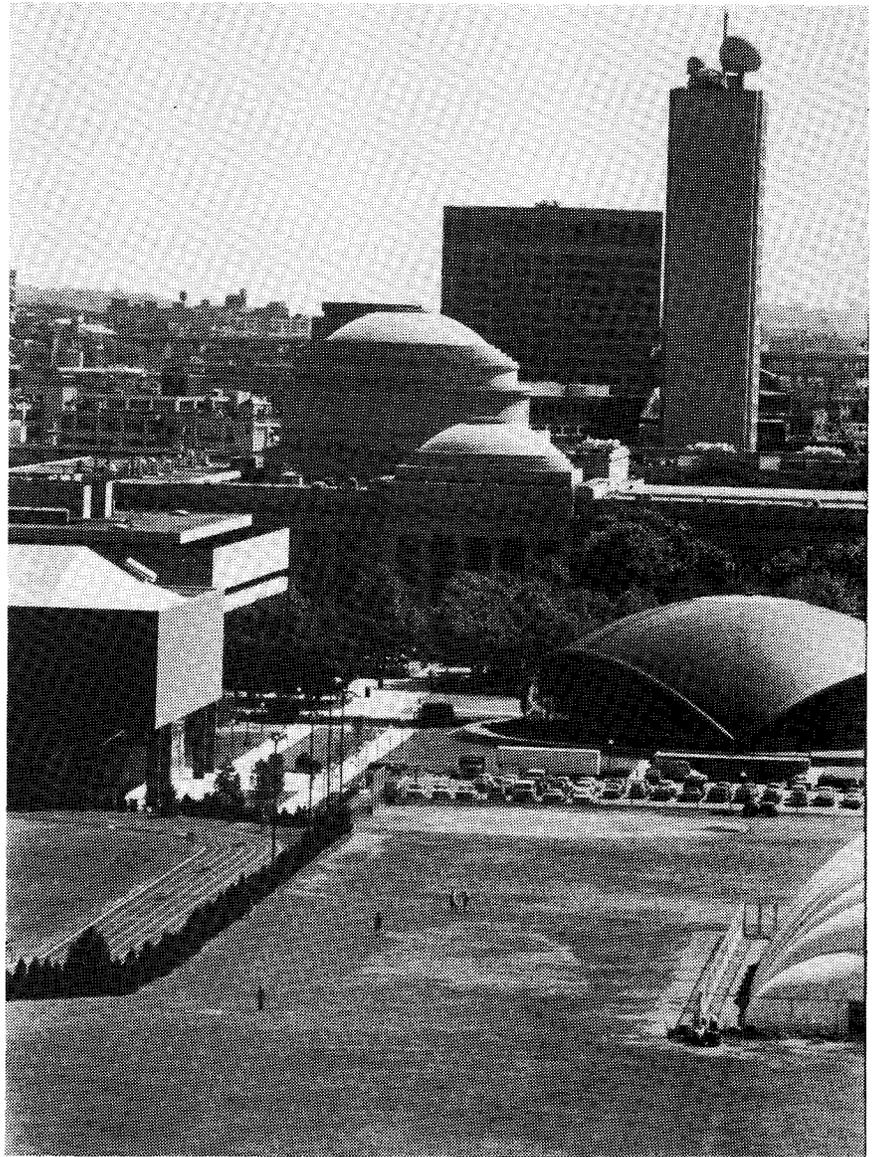
Institutional Land Use

Central to any discussion of the future of the City of Cambridge is the need for a clear understanding of the expected or anticipated physical relationship of the city's major educational and medical institutions to its business districts and residential neighborhoods.

While a presence in the city for three hundred years, institutions, as a category of land use, began to have a particularly significant impact on the city's physical fabric in the 1960s with the dramatic growth of the education industry. Partly in response to the pressure of that growth some of the City's regulatory standards were made more liberal; in 1961 major changes in the zoning ordinance were adopted that were intended, or had the effect, of facilitating the growth and expansion of the city's institutional centers. Much high-density institutional development was planned and significant elements of it were constructed in the succeeding years.

POLICY 5

The major institutions, principally Lesley College, Harvard University, Massachusetts Institute of Technology and the hospitals, should be limited to those areas that historically have been occupied by such uses and to abutting areas that are reasonably suited to institutional expansion, as indicated by any institutional overlay district formally adopted by the City.



Where actual physical construction did not occur institutional uses often expanded deep into established residential neighborhoods. In those years the City was prohibited by state law from regulating such uses in its residential communities.

After witnessing two decades of such expansion, the City acquired state authority to control institutional uses in its principal residential areas. In adopting regulations in 1981, the City established a de facto incentive for institutions to expand into adjacent industrial and commercial districts.

The stage has been set now in the early 1990s for a further reassessment of the relationship of the city's institutions to public policy regarding physical change in the future. Clearly that relationship is very complex.

Hospitals, the city's major noneducational institutions, provide vital direct services to Cambridge residents; on the other hand their physical expansion can severely impact adjacent residential neighborhoods when sites are constrained.

Institutions are important employment centers which are not subject to the vagaries of economic cycles as commercial uses are; alternately they may ignore the constraints of the marketplace to the potential disadvantage of the city.

Universities take property off the tax rolls, but may make in lieu of tax payments to the City treasury; they remove tax paying commercial properties at critical locations from the tax rolls but also construct new tax paying developments and impart added value to the private residential and commercial communities that surround them; they place demands on the city's housing supply but construct affiliate housing when the private market might not.

As the universities grow, their cultural, social and political impact inevitably increases (as for instance approaching the 20% ownership

POLICY 6

For such institutions reasonable densities should be permitted in their core campuses to forestall unnecessary expansion into both commercial districts and low-density residential neighborhoods.



Holyoke Center, with its ground floor retail and university administrative offices above, combines business and institutional uses in one complex.

threshold which could enhance their influence on city-wide zoning efforts). At a more local level they can come to control the character of a given locality, as in Harvard Square, with potentially quite benign results. But university policies affecting such important community values are always subject to the changing priorities of the individuals and administrations that establish institutional policy, often beyond the control of the City or its residents.

It is understood that the campuses of the city's major institutions cannot grow without limit. At some point unlimited growth would produce an institutional presence that would dominate the community to the detriment of the social, physical, and economic diversity that characterizes Cambridge today. While that circumstance does not prevail now, and it probably can't be defined with satisfactory precision, the always changing relationship between the city and its institutions requires continual monitoring and appraisal to ensure that both evolve in a harmonious and balanced way.

Institutions' impact on the city is various and complex but even small physical additions and changes can be felt keenly at the neighborhood level. Policies 5 and 6 recommend that, all other considerations being equal, any additions to the large institutions' physical plant occur within their existing campuses, using existing facilities more intensively or adding new facilities on appropriate vacant sites. However, any more intensive use of the existing campus facilities should occur where it will have the least external impact on adjacent residential communities and will do the least harm to those campus features, like open space and historic buildings, that are of value to the entire community.

Nevertheless, there is a limit to the amount of additional development that can occur within core campuses before the desirable goal of allowing institutions to adapt and respond to changing academic trends is outweighed by the losses sustained by the larger community when values shared by all are compromised. In this regard the Residence C-2 and C-3 zoning districts, which regulate much of the development on the core campuses, are meant to provide flexibility; they are not meant to imply a City policy that the campuses should always be built to those zones' full development potential. Recognizing that fact, some refinement of the regulations of the district might be appropriate, as for instance a height limit in the Residence C-3 zone, to more precisely define the bounds beyond which physical change is clearly inappropriate from the city's point of view.

The City has developed a series of institutional overlay districts which define those areas in Cambridge which are most suitable for concentrations of institutional use. Those districts encompass the core campuses as well as adjacent lower density areas where some expansion into abutting neighborhoods might be appropriate. They also identify some adjacent commercial areas the City has identified as locations for limited institutional expansion, although the City has no authority to control those uses there.

POLICY 7

Notwithstanding the limitations implied in the above policy statements, (1) the establishment of a new center of tax-exempt, institutional activity may be appropriate in one or more of the city's evolving industrial areas and/or (2) the development of a modest and discreet institutional presence may be appropriate in any nonresidential district when a combination of two or more of the following benefits accrue to the city:

- 1. Such action will permanently forestall excessive development at the core campus of an existing institution, in particularly sensitive locations; or**
- 2. Existing institutional activity in a core campus area will be reduced or eliminated, particularly at locations where conflict with existing residential communities has been evident or is possible in the future; and**
- 3. The potential for future commercial, tax paying development is not significantly reduced; or**
- 4. The presence of a stable, well managed institutional activity could encourage, stimulate, and attract increased investment in non institutional commercial tax producing development.**

Policy 7 leaves open the possibility that development of satellite institutional use clusters, in less sensitive locations, may be a preferred alternative to increased development at the main campuses or to expansion into adjacent areas, and may be, from a city perspective, a positive catalyst for changes in economic outlook that is encouraged by the City.

Nonresidential Districts and Evolving Industrial Areas

The effectiveness of many policies presented in this document will depend on the skill with which the issues centering on the amount and scale of development and the mix of uses which should be encouraged in the city's evolving industrial areas are addressed.

These areas were the principal setting for the new housing and commercial development occurring in the city in the boom years of the 1980s. Some of the tallest new buildings and densest development occurred here. These districts harbor the greatest potential for new development in the future. As a result, these areas will be the source of much of the city's new revenue in future years.

At the same time these industrial districts remain the setting for much older, low-density industrial buildings suitable for the start-up enterprises which have fueled the Cambridge economy in the last half of this century.

Despite their relatively large size (the Alewife area alone is more than 300 acres) the opportunities for future redevelopment in these areas are continually diminishing as new development patterns are set, as is the case in Kendall Square and in East Cambridge. And while some of these areas are relatively remote from established neighborhoods, external impacts like increased traffic affect even the most distant neighborhood as physical development proceeds.

With diminishing flexibility comes increasing conflict as the desire for additional housing, new sources of revenue, protected environments for start-up companies and generally improved environmental quality must all be satisfied in an increasingly more limited area.

Policy 8 is not meant to define the appropriate maximum densities that should be permitted in the city (most of the city is now well above the threshold above which modes of travel other than the single occupancy vehicle can be effectively developed). Rather the policy suggests that the most dense development should reflect the availability of transit services. Conversely, the availability of transit services should not mandate that the maximum development density be allowed as other policy objectives may play a more significant role.

POLICY 8

The availability of transit services should be a major determinant of the scale of development and the mix of uses encouraged and permitted in the predominantly nonresidential districts of the city; the highest density commercial uses are best located where transit service is most extensive (rapid transit and trolley); much reduced commercial densities and an increased proportion of housing use are appropriate where dependence on the automobile is greatest; mixed uses, including retail activities in industrial and office districts, should be considered to reduce the need to use the automobile during working hours. Similarly, the scale, frequency, mode and character of goods delivery should play an important role in determining the appropriate density of nonresidential uses anywhere in the city.

While the Planning Board has come to believe that the maximum desirable density in the city, regardless of circumstances and transit availability, should be established at a Floor Area Ratio of 3.0, the most appropriate density at any given location will depend on a variety of factors in addition to transit service. Residential uses may be more acceptable at a higher density at any given location than general office use; conversely general office use at the highest density may be appropriate only when in close proximity to transit service.

Policies 9,10 and 11 do not suggest the specific range of densities, scale and heights that are appropriate; those factors will vary from location to location and should be determined by the circumstances prevailing

POLICY 9

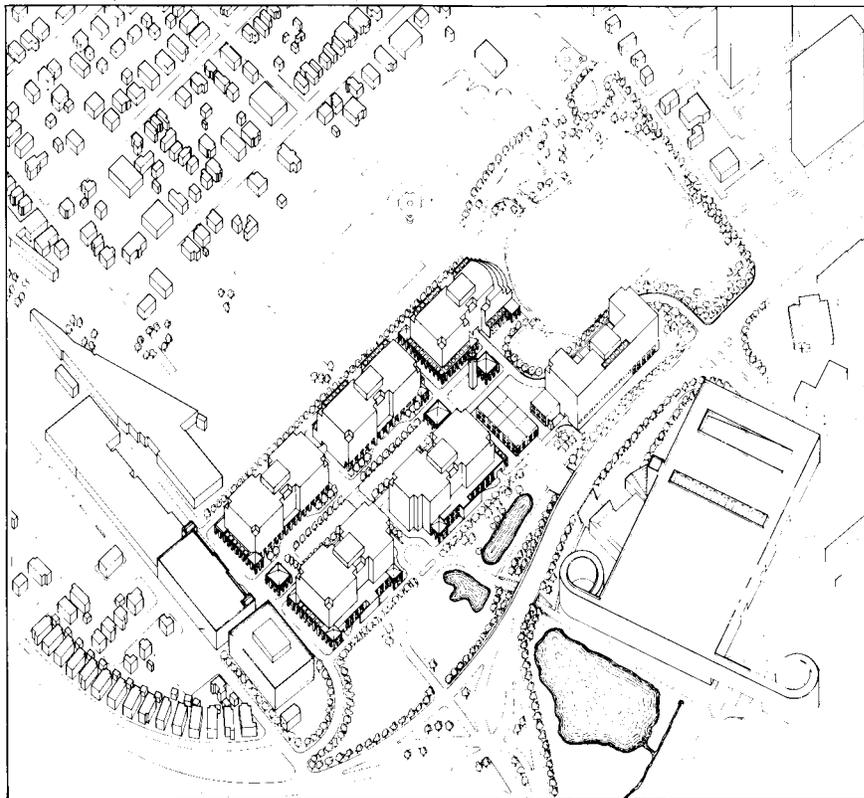
The evolution of the city's industrial areas should be encouraged, under the guidance of specific urban design plans, and through other public policy and regulations such that:

1. Those areas can adapt to new commercial and industrial patterns of development;
2. The residential neighborhood edges abutting such areas are strengthened through selective residential reuse within the development areas or through careful transition in density, scale and lot development pattern;
3. New uses and varied scales and densities can be introduced into such areas;
4. Uses incompatible with the city's existing and future desired development pattern are phased out.



at particular locations and after detailed analysis. The diversity suggested need not be repeated at every location within every evolving industrial area. That objective should be achieved as an outcome for the city as a whole.

The city's multiple objectives -in finance, job creation, urban design, adaptability to changing economic circumstances, and housing inventory expansion -are most easily accommodated in these industrial areas with the fewest conflicts and compromises. However, the space resource is not unlimited. Therefore, these many demands require careful planning and an urban design framework to guide future physical changes to achieve the maximum benefits to the city .



The Alewife Center plan for the former W.R. Grace site is designed to incorporate an entry to Alewife Station with a variety of buildings for office, hotel, and retail use.

POLICY 10

In some evolving industrial areas multiple uses should be encouraged, including an important component of residential use in suitable locations not subject to conflict with desired industrial uses, to advance other development policy objectives of the city:

1. To provide opportunities for those who work in the city to live here;
2. To limit the use of the automobile to get to Cambridge and to travel within Cambridge;
3. To encourage more active use of all parts of the city for longer periods throughout the day; and
4. To limit the secondary impacts of new development on the existing, established neighborhoods. These impacts may be both economic, as in the increased demand placed on the limited stock of existing housing, and environmental, as in the increase in traffic on neighborhood streets.

POLICY 11

A wide range of development patterns should be encouraged in these evolving industrial areas at scales and densities and in forms which would be difficult to accommodate in the city's fully developed districts and neighborhoods.

Special Uses and Environments

Policy 12 recognizes that the quality of life in a future Cambridge will be influenced by the way difficult but necessary uses or environments are accommodated or regulated. Similarly, that quality of life may change if fragile environments do not receive the specialized attention they require for survival.

Certain necessary uses, like gas stations and car repair facilities and low-cost industrial space for start-up companies, have lost ground to more intensive and/or financially more profitable land development in the past. In addition such uses frequently produce environments which are unpleasant or unattractive as neighbors to residential uses. As a result those activities are frequently excluded from the list of permitted uses during rezonings without full appreciation of the long-term implications. Or, as is the case of low-cost industrial space, natural market forces frequently hasten their demise when their special requirements are not recognized.

On the other hand, widely acknowledged quality environments that are clear assets to all residents of the city lose some of their character and value to the community when only the standard zoning' controls are applied and their requirements are also not understood.

POLICY 12

Those necessary or desirable uses and activities which require specially tailored environments should be provided for and those uses, activities and development patterns which create distinctive environments that serve as amenities for the whole community should be protected or maintained. For example: low-rent industrial space for start-up enterprises; locations for industrial use and development which could be compromised by proximity to other, incompatible, uses, including residential uses; small commercial enclaves which directly serve their immediate surrounding residential neighborhood; locations appropriate for gas stations, car repair facilities, tow yards, etc.; structures or clusters of structures eligible for local historic district designation; or for designation as a local conservation district; environments, as frequently found in the Residence "A" districts, where a unique combination of distinctive architecture and landscaped open space prevails; areas designated or eligible as national register historic districts.



Pace of Development and Limits to Total Development

No more vexing issue complicates the policy choices to be made for the future of Cambridge than that of defining the appropriate amount, pace and circumstances of future development in the city .

The rate of commercial development in the decade of the 1980s was nine times the rate for the preceding two decades. With that new development, combined with the adoption of classification, the burden of the property tax levy was shifted dramatically over the decade from residential property owners to commercial rate payers.

The new development of the 1980s provides a significant proportion of the current local tax levy; upwards of 500,000 square feet of new development or substantial rehabilitation of existing facilities might be required in succeeding years to maintain the level of services now provided by the City, within the constraints of Proposition 2 112, in the absence of additional revenue sources to the City.

Many areas of the City could be dramatically improved from a design or urban design perspective with additional construction.

Desirable construction from that perspective, however, might not be acceptable unless other considerations, such as auto traffic and congestion and increased demand on the city's infrastructure, are adequately addressed.

The decade just past witnessed much increase in traffic in the city, as well as increased disruption due to new construction. On numerous public occasions, citizens have expressed annoyance with the lack of resident parking in neighborhoods and dislike of taller and denser buildings. Many of the complaints articulated can be tied to the obvious construction which took place during the decade. Others, however, are less easily assigned to local circumstances as the region as a whole also underwent dramatic changes during that same period. The city must be cautious in extrapolating the experiences of the past ten years into the future lest future choices be unnecessarily constrained by outmoded objectives and shifting priorities.

POLICY 13

A pace of development or redevelopment should be encouraged that permits the maintenance of a healthy tax base, allows for adjustment and adaptation to changing economic conditions, and is consistent with the City's urban design and other physical development objectives yet does not unreasonably disrupt the daily activities of the city's neighborhoods and residents or overburden the city's water and sewer infrastructure.

Policy 13 suggests that the pace at which change occurs in the physical environment of Cambridge may be as significant an issue as any determination of the total amount of development that should be permitted. The actual balance of the multiple objectives that define an acceptable pace of development or an acceptable limit to development will change over time with changing circumstances. However subjectively described, the policy does recognize the legitimate need to define limits to the expansion of the physical environment of Cambridge.

Nevertheless, under present circumstances, the policy assumes that additional development in Cambridge is possible, is desirable, and is necessary when it occurs in forms consistent with the constraints implied by the sum of all the policies proposed in this document. Additional physical development not consistent with those policies or which occurs at a too rapid pace is understood to be, at a minimum, disruptive to the community and, at the extreme, harmful.

Given today's understanding of future development standards, transportation technologies, infrastructure availability, and desired environmental amenities there is a limit to the amount of new development the city can accept; well considered reductions in development potential through rezoning, adopted in the past and likely in the future, reflect that understanding. However, as development standards, transportation technologies, infrastructure availability and standards of acceptable environmental amenities change and evolve in the future, in ways that cannot be imagined today, so does the assessment of what is or is not an acceptable level of development. While it would appear to be seductively simple to define "pace" and "limit" with arithmetic precision, in reality those notions are more ambiguous than arithmetic and perhaps more useful as concepts whose validity is accepted and which are employed as evolving circumstances are continually assessed in the daily business of making planning choices.



Constraints on the available options to finance local government, and the constraints specifically imposed by Proposition 2 1 12, militate against good physical planning; they bias local decisions in favor of physical growth as a financial rather than a physical or environmental planning issue and severely limit the practical planning choices the city may make in defining its future. Funding of current City services cannot be maintained within the basic limits of 2 1 12; new development, however, has provided a legal "end run" around those constraints. Maintenance of the current level of services or their expansion can only be financed by the revenue from new development (laying aside difficult-to-forecast external sources of revenue like grants from state and federal governments, etc., or whole new sources of local income) or through increases in the residential contribution to the revenue stream.

One can easily imagine a point at which painful choices will have to be made: between suffering loss of services, increasing the level of resident financial support of those services, or enduring unacceptable levels of physical development and its ancillary negative impacts of congestion, traffic, and the like. The timing or nature of that choice is best not calculated or predicted by formula; rather, a constantly vigilant and sensitive planning process may be the best means to forestall the choice or minimize its impact.



7. Transportation

The modes of transportation available to move people in and out and through the city significantly impact the quality of life of those who live and work in Cambridge, affect the kind and nature of land uses in the city, and to the extent economic activity is encouraged or discouraged, ultimately affect the city's economic health. Perhaps no facet of long range planning that so directly and profoundly affects existing residents is influenced so greatly by actions taken by others at the regional, state, and national level. Nevertheless the city has a very critical role to play.

>The ability to expand the city's capacity to accept additional automobile traffic is very limited.

Modest and very local improvements can be made to the city's roadway system that can have beneficial effects within a specific neighborhood or section of the city. Improvements to the Kendall Square and the East Cambridge roadway networks are examples of major projects whose scale is not likely to be duplicated elsewhere in the city in the future. Improvements at a slightly less ambitious scale have been proposed throughout the Cambridgeport industrial area with the same objective in mind: to route commercial traffic around the heart of abutting residential neighborhoods. Nevertheless the capacity of the major arterials in the city is essentially established by current development patterns and roadway configurations. Improved signal management and minor intersection improvements, while possible and desirable, will not substantially alter that capacity.

It is not that significant capital improvements would not increase the speed and quantity of vehicles moving through the city. The historic inner belt proposal, and the extension of Route Two through Cambridge, would have undoubtedly vastly simplified movement of vehicles through the city, even for some residents. The major reconstruction proposed for Alewife Brook Parkway is a more contemporary example. However, any effective increase in the capacity of the city's highway network, whether at the edges in Alewife, Memorial Drive, or Commercial Avenue, or internally along Massachusetts Avenue, Broadway or Prospect Street must of necessity entail destruction of other community values far in excess of the traffic benefits that might accrue.

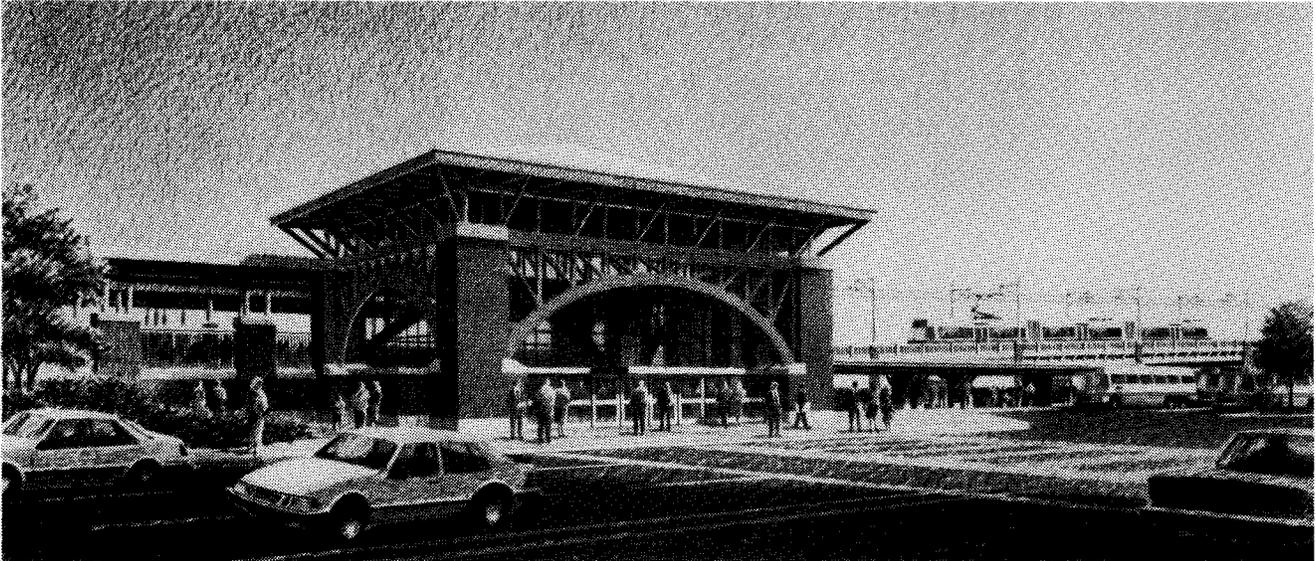
Even modest, non capital changes can have serious negative impacts. The capacity of many arterial streets could be increased by the elimination of parking. Aside from the loss of important parking for residents and visitors, such a change would radically alter the character of streets, rendering them more hostile to the pedestrian and a more significant physical and psychological barrier dividing neighborhoods.

In the end, street capacity improvements may only benefit the commuter whose destination is elsewhere in the metropolitan area and whose home is in some distant suburb.

Assumption

> All reasonable improvements should be made to the roadway network in Cambridge; the objective, however, should be to direct existing as well as future traffic away from local neighborhood streets.

For the foreseeable future, however carefully the City plans, more traffic can be anticipated on city streets, both from increased activity within Cambridge and from economic expansion in the metropolitan area that surrounds it. Nevertheless that additional traffic, and those vehicle trips already traveling in Cambridge, should be directed to the maximum extent possible, to the city's major arteries and away from local neighborhood streets.



In conjunction with plans for the westward extension of the Green Line, a new Lechmere Station is under consideration by the MBTA.

Assumption

> In the future the best hope for improving the mobility of residents and visitors to and from and within Cambridge lies with expansion and improvements to non auto forms of transportation as well as improvement in the efficiency of auto travel that occurs now within the city.

A number of improvements in the short-and long- term should be encouraged within the public transit system. Construction of a new Lechmere Station and the associated westward expansion of the Green Line should be advanced. Expanded and more responsive bus routes could serve the city's new centers of commerce and housing. Additional express buses from suburban locations could facilitate entry into the city's office and commercial districts from more diverse locations, as along the Route 1-93 corridor to the north and the Massachusetts Turnpike corridor to the west. Long-range efforts which hold the potential to greatly benefit the city should be pursued cooperatively with other agencies. An example would be developing transit options along the route encompassed in the MBT A Circumferential Transit Study now underway for portions of Boston, Cambridge, and Somerville in that area which in the past was proposed to be served by the inner belt.

Assumption

>A great potential source of increased mobility in Cambridge, with minimal undesirable side effects, and many positive consequences, is the expansion of public and private incentives to discourage single occupancy use of private vehicles.

The additional commercial and residential development which will inevitably occur in Cambridge can be most easily accommodated if, in addition to expanded use of public transit, private transportation options are made more available to discourage the single person from taking the otherwise empty automobile on all trips to and from the city. The possibilities for improvement are significant and relate not only to transportation policy but to land use and other policies as well.

The City has staffed a Transportation Management Program which even in its first year of operation has begun to have an effect. Through an integrated system of incentives and discouragements, from ride sharing and van pooling to "T" pass sales and subsidies on-site, existing businesses as well as new development have begun to explore the options available to replace the costly provision of parking spaces for employees. Such comprehensive traffic mitigation programs are voluntary for existing



businesses. They have been and should continue to be made compulsory for all significant new large developments in Cambridge. Consideration might be given to phasing in a similar requirement for all existing uses, substituting a requirement for the existing voluntary participation.

Land use choices can influence the transportation choices individuals and companies make. Higher densities should be encouraged at locations most easily served by transit; some high traffic generating uses might be discouraged or prohibited from some locations. The complementary mix of uses that reduces the need to use the car to secure the services needed in a given day should be encouraged. In all instances the city's physical environment should be maintained so as to encourage and nurture the pedestrian.

Assumptions

>Parking availability is a major source of traffic generation in commercial developments and a major disincentive to the use of alternate means of mobility. The parking supply should be controlled in private developments to limit the incentive to use the automobile and to increase the incentive to use alternate means of transportation.

>The acute problem of residential parking on city streets is principally caused by increased car ownership of residents in the existing housing stock which has never had any or sufficient supply of off-street parking.

New residential development cannot be expected to reduce the deficiency of residential parking in the city's older neighborhoods. Excessive parking requirements for new residential uses (greater than one space per unit) will not relieve the current inadequacy but may threaten to increase the cost of new housing (significantly if parking must be provided in a structure) and diminish the quality of the residential environment through increased pavement, reduction in green space, or bulkier residential buildings. In a short seventeen years from 1970 to 1987 car registrations in Cambridge increased by forty percent while the population remained static; the number of housing units increased by perhaps five percent. The acute parking problem experienced by residents on residential streets would appear to be the result of increased car ownership in existing households, many of which have never had any parking facilities at their disposal.

Transportation Policies

These policies are intended to assure a transportation system that will serve the transportation needs of the city's residents and its commerce while being compatible with the economic, social and natural resources of Cambridge.

Reversing Trend in Travel

To effectively realize a Cambridge future consistent with the policies recommended in this document, the city is faced with the need to reverse the trend, evident in recent decades, of greater and greater use of the automobile. A particular challenge is to encourage travel to and from Cambridge from those other towns where travel can be made by means other than the automobile.

Cambridge's population has remained relatively stable over the past twenty years, with a 1970 population of 100,000 and a 1990 population of 96,000. However, while the city's population has changed little, other factors have contributed to a large increase in vehicle travel. These factors have included higher employment, increasing household formation and rising automobile ownership per household. According to U.S. Census figures, 78,000 people were employed in Cambridge in 1970, increasing to 86,500 in 1980. By 1990 employment had risen to over 102,000 people or 31 percent in 20 years, and had undergone a considerable transformation from an industrial base to a service sector oriented market that attracts employees from throughout the region.

During this 20 year time span the home location of Cambridge employees has also changed dramatically. In 1970 almost three quarters of



the people who worked in Cambridge lived in Cambridge or the six abutting towns where transit is available. However, this dropped to two thirds in 1980 and is now down to just one half.

Automobile ownership also experienced great change in Cambridge and throughout the nation, with a clear pattern of rapidly rising rates of auto ownership per household. From 1970 to 1987, the number of cars registered in Cambridge rose by nearly 40 percent from 27,866 to 38,997, despite relatively little change in population and a major investment in expanding and improving the region's transit system. Traffic data available from the Massachusetts Highway Department (MHD) indicates that automobile use has risen considerably during the 1980s, and that the city and metropolitan region have experienced a considerable growth in vehicle miles traveled averaging over 3 percent per year.

POLICY 14

Increase the City's investment in Transportation Demand Management to promote non single-occupancy vehicle forms of transportation and assist Cambridge employers, both individually and collectively, in developing such programs for their employees and operations.

By 1987, Cambridge generated nearly 3.3 million vehicle miles of travel per day, which represented 8.2 percent of the total vehicle miles traveled in the Boston metropolitan region. Work-related trips represent the largest share of total travel in Cambridge, comprising over 57 percent of the total travel market. This share includes both Cambridge residents working inside or outside Cambridge and non-Cambridge residents who commute into Cambridge to work. Other non work related trips that are based from the home represent the next largest travel share at 27 percent. Non home based related travel represents the other 16 percent share of travel in Cambridge. Cambridge's importance as a major regional employment center is reflected in its relatively high share of work-trip based travel as compared to the regional average for work-related travel.

POLICY 15

Enact land use regulations that encourage transit and other forms of nonautomobile mobility by mixing land uses, creating a pleasant and safe pedestrian and bicycle environment, and restricting high density development to areas near transit stations.

Not reflected in any of these totals of vehicle miles of travel are vehicles which pass through the city without stopping. Travel data provided by the Central Transportation Planning office staff for several major and minor arterials in Cambridge indicates that about 33 percent of the total daily traffic on these roadways are through-trips which have no point of origin or destination in Cambridge.

Policies 14 and 15 address actions Cambridge can implement which will make public transportation and other non single occupancy vehicle modes more desirable for travel. The policies encourage the continuation and expansion of the City's successful Transportation Management program which has secured the voluntary cooperation of many Cambridge employers in a wide range of programs that promise to help established companies and their employees alter their commuting habits and provide a framework through which new companies and new employees can do the same more easily.

Central to achieving effective implementation of all transportation policies is the recognition that large generators of trips in Cambridge should be located in areas that are well served by transit.

Movement In and Out of Cambridge

The city's interests are best served if those persons employed in Cambridge or who for other reasons seek services in the city are able to choose a mode other than the automobile to get here. The issue facing the city is how to provide adequate transit service to and from those communities with strong historic travel pattern relationships to Cambridge; and conversely to encourage that relationship with communities which may not now but could have significant transit options available to commuters in the future.

The irregular road network in Cambridge contains numerous intersections with four or more converging streets. Many of these intersections have been identified in recent Environmental Impact Reports as having an existing level of service in the E or F range (that is, very poor, F being the worst condition). The result has been increasing congestion in many parts of the city.

Twenty-two percent of Cambridge employees and 28 percent of the Cambridge labor force traveled to work by transit in 1980. Although these percentages probably improved over the last decade, the majority of workers are still using the automobile for their commute to work. Of significant importance is the high transit use figure for travel to and from communities abutting Cambridge as opposed to those further away. This is probably due to the relatively extensive bus system serving travel to and from these close neighboring communities.

The greatest problem now and in the future is access from the north along the 1-93/Orange Line Corridor. Between 15 and 20 percent of Cambridge jobs are filled by people living in that corridor, but as of now, tran-

POLICY 16

Encourage regional employment patterns that take advantage of areas well served by transit to and from Cambridge.

POLICY 17

Seek implementation of MBTA transit improvements that will provide more direct and, where demand is justified, express service to Cambridge from those portions of the region now inadequately served by transit to Cambridge.



sit does not exist and major improvements are not contemplated in the near future. The Massachusetts Turnpike/Green Line Corridor to the west is another area lacking proper transit service to and from Cambridge.

Implementation of the city's transportation objectives depend heavily on priorities established and supportive actions taken at the regional and state level. Policies 16 and 17 are intended to ensure that Cambridge residents have access to jobs outside the city to which they can get without necessary resort to the automobile and that those who live elsewhere but work in or otherwise have business in Cambridge have the opportunity to do the same.

The City should encourage those regional investments in public transportation services which will make those options available.

Movement within Cambridge

There are many desirable, easily identified options for providing new transportation services to Cambridge. The problem facing the city is how to provide those desirable services and alternate modes of travel while keeping the costs within the financial ability of the city to pay for them.

Except for peak travel times, Cambridge residents who have access to an automobile generally experience little difficulty in satisfying their travel needs. Even under the parking restrictions of the City's Resident Parking Sticker Program, Cambridge residents are still allowed to park anywhere within the city. People relying on public transportation, however, (e.g. the elderly, the handicapped, the young) and others without automobiles, often are restricted as to where they can go for essential services such as medical care, education and recreation, to say nothing of work opportunities.



Most bus lines in Cambridge terminate at either Harvard or Central Squares. At present, only one bus line permits Cambridge residents to travel between the western and eastern parts of the city without the additional cost and delay of at least one transfer. The result has been that of trips made entirely within Cambridge, relatively few are made using public transportation.

The problem of inadequate transportation falls most heavily on the elderly and handicapped. Many of these people do not drive or have access to an automobile. Most of them are dependent on walking and public transportation, but their physical limitations cause difficulties in using fixed route modes. The walk to the bus stop or train station, the wait, the height of the step, the jostling, impatient crowds, the small signs, and the lack of public toilets all combine to make this form of transportation unusable for many people. As a result, they are forced to use taxi cabs, the closest thing to the private automobile. However, the cost of taxi service in general sharply limits travel by this mode, especially for those on low fixed incomes.

Again it is certainly possible to identify logical improvements to the transportation services provided to Cambridge and its residents, especially to those now poorly served. It is nevertheless vital to recognize the financial limitations within which the city must reasonably operate.

POLICY 18

Improve MBTA public transportation service within the city including updating routes, schedules, signs, and bus stop placement.

POLICY 19

Investigate the feasibility of developing and implementing, within the financial resources of the City, a paratransit system, utilizing taxi cabs where appropriate, in order to supplement the current MBTA system in Cambridge.

Neighborhood Protection

To thrive, the city must maintain an acceptable flow of goods and movement of people between their homes and places of employment and the services they require. The need is to maintain that flow with as little negative impact on the city's residential streets and neighborhoods as possible.

POLICY 20

Encourage the state transportation and environmental agencies to develop a regional goods movement plan; in the meantime, use the City's limited authority as much as possible to route truck traffic around rather than through residential neighborhoods.

The impact of heavy traffic volumes and trucks operating on local residential streets in Cambridge has been well publicized by various public agencies and citizen organizations. The problem has increased steadily over the years with increased development and the opening of the Massachusetts Turnpike and the Route 2 freeway inside Route 128. These major State facilities have been responsible for a substantial increase in through truck traffic on local streets.

Cambridge streets were not designed to ensure compatibility between trucks, high traffic volumes and people. Due to the narrowness of the streets and the close proximity of residential structures, traffic severely impacts residents in terms of noise, vibration, air quality and safety.

POLICY 21

Discourage vehicle travel through residential areas both by providing roadway improvements around the neighborhoods' perimeters and by operational changes to roadways which will impede travel on local streets.

Policies 20 through 22 are fairly straightforward. They recognize, however, that the city is imbedded in a larger regional network of streets and highways and that travel and economic patterns often place a constraint on the kinds of actions the city can take independently to reduce the impact of traffic on local streets and residential neighborhoods.

Policy 22 highlights the need to protect residents living along minor arterial streets. For example, removing parking in residential areas to increase vehicle capacity might not be a good idea even though it might have a clear traffic improvement benefit.

POLICY 22

Undertake reasonable measures to improve the functioning of the city's street network, without increasing through-capacity, to reduce congestion and noise and facilitate bus and other non-automobile circulation. However, minor arterials with a residential character should be protected whenever possible.



Bicycles and Pedestrian Improvements

The significant use of the bicycle and walking has many obvious advantages in a crowded city where air pollution, noise, and lack of space are real problems. The issue the city faces is the extent to which safe and convenient rights-of-way and parking facilities for bicycles, pathways for pedestrians, and other improvements can be provided within an acceptable range of impact on other necessary transportation modes and on the existing land use fabric.

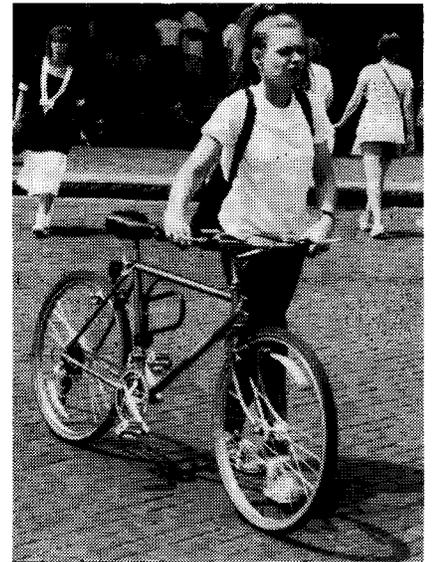
The use of the bicycle as a serious means of travel has become popular in recent years. Bicycling is a cheaper mode of travel than the automobile, and is also more healthful and non-polluting but it is inconvenient during times of inclement weather. This growing popularity has led to increased conflict between cyclist and motorists, due in large measure to a lack of public accommodation for the bicycle. The perception of many motorists is that bicycles are children's toys which belong on the sidewalk. On the other hand, many cyclists think of themselves as "pedestrians on wheels" and ignore rules and regulations pertaining to moving vehicles, including stop signs, one-way streets and traffic signals and the needs of pedestrians themselves.

The two major facilities needed for the bicycle are a system of protected rights-of-way and secure storage spaces. Presently, there are few bicycle rights-of-way in Cambridge or in the rest of the metropolitan area. The difficulty with allocating separate bicycle paths within existing rights-of-way is the present competition among cars, buses, trucks, taxis, motorcycles, pedestrians and parked vehicles within an already inadequate physical space. In addition, commercial districts, public buildings, most MBTA stations, and most employers in Cambridge offer very little in the way of bicycle parking facilities.



POLICY 23

Encourage all reasonable forms of nonautomobile travel including, for example, making improvements to the city's infrastructure which would promote bicycling and walking.



Walking is a necessary adjunct to any successful system of nonauto transportation in the city. The objective is to make it a pleasant and functional means of travel in as many kinds of weather as possible. To accomplish that may require some interference with the primacy of more conventional modes of travel, i.e. the automobile, but also requires a concern for the details in the environment that make walking more enjoyable: quality of buildings and sidewalks, a continual network of foot paths to places people want to go, good integration of those pathways with transit, some protection from inclement weather.

Facilitating bicycle use increases the potential interference with the automobile and even with walking when the two are not well separated. Whether removing parking, widening rights-of-way for bike paths or placing bicycle storage facilities in public places, some degree of compromise with other values or objectives may be necessary; some real choices, based on an assessment of relative benefits sustained, must be made.

The Federal Clean Air Act and Transportation Financing

Addressing the transportation objectives implied in the policy statements in this document will require the investment of significant capital and effort by the City and every other level of government and by private businesses and ordinary citizens. In addition Cambridge and the entire region are now faced with another transportation-related imperative: the implementation of the Federal Clean Air Act (CAA) as amended in 1990. A major task facing the city and the region in the next decade is finding the monies necessary to properly maintain the existing transportation system while also implementing projects required to clean our air; simultaneously the city must be concerned with how automobile use can be reduced without disrupting or destroying the economic viability and health of the city.

The CAA requires that no urban area exceed unhealthy air quality conditions more than four times in any three year period. When these standards are exceeded for smog forming compounds, an air quality designation is assigned to the region. Our metropolitan area is designated as moderate for carbon monoxide and as serious for hydrocarbon emissions. The serious designation means that we must reduce air pollution emissions by 15 percent by 1996 and an additional three percent annually until we have achieved a reduction in emissions totaling 30 percent. This is all to be achieved in the face of automobile travel increasing at a current rate of over three percent per year .

A very serious problem arises when transportation needs are matched against available funds. The Fiscal Year 1992 Transportation Improvement Program (TIP) for the Boston Region contains \$3.9 billion in transit improvements and \$5.5 billion in highway improvements programmed over the next five years. However, available federal funds over the next five years appear to be in the neighborhood of only \$455 million (\$569 million after a 20 percent state match) for MBTA transit projects. The problem is that even with full implementation of the TIP projects, the result will be only a 1.67 percent reduction in carbon monoxide.

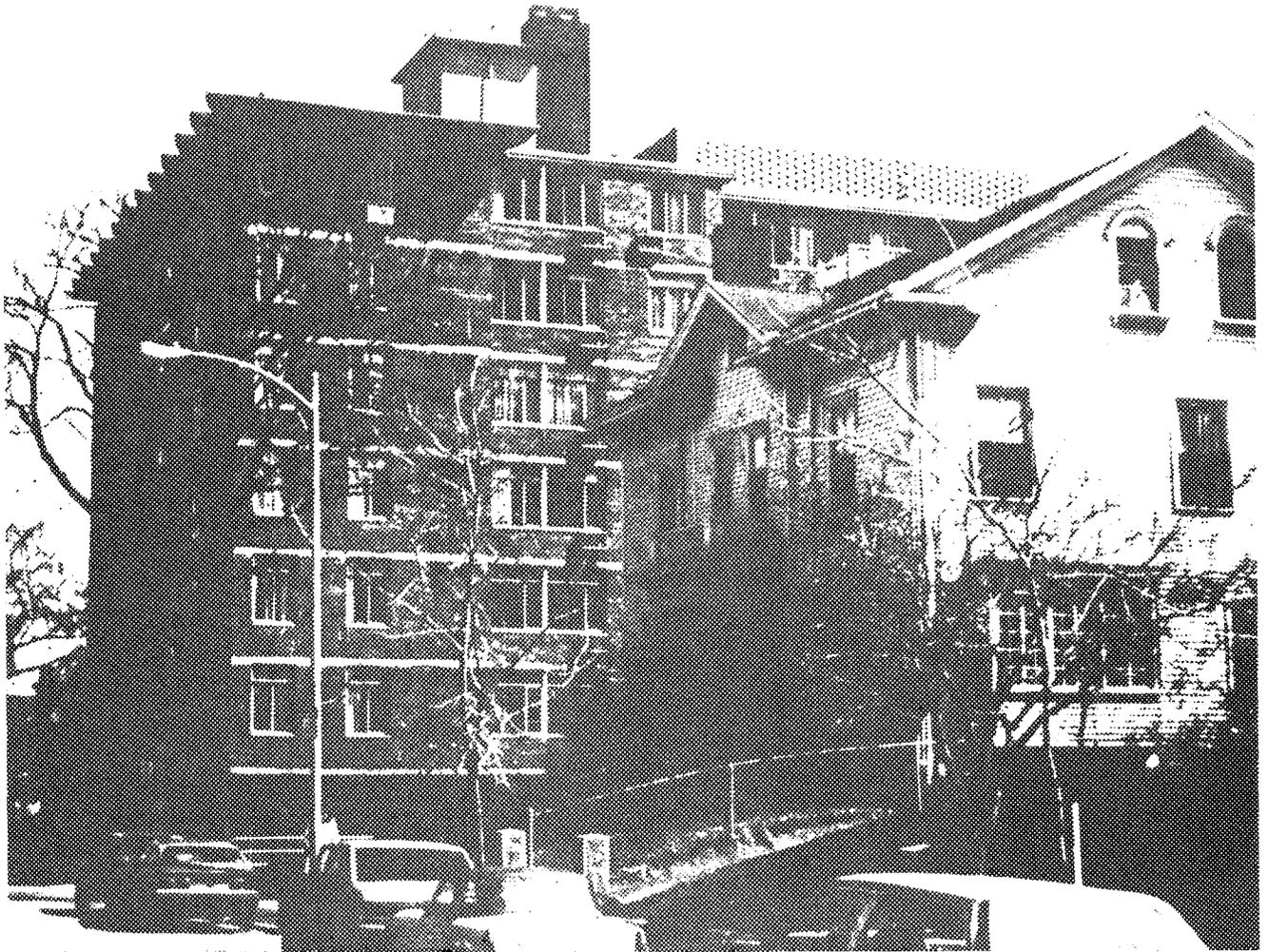
These policies support programs for clean air but stress the need to take a regional approach to the program. Cambridge working alone will not have much impact and would suffer severe economic consequences as business would relocate to other communities without restriction to the detriment of the region's air and larger land use objectives.

POLICY 24

Support regional transportation and land use policies that will improve air quality by reducing dependence on single-occupancy vehicles, both through reduction in employment-based travel and in other trips taken for nonwork purposes.

POLICY 25

Promote the use of truly clean alternative vehicle technologies for necessary vehicle travel particularly in regards to fleets.



8 . Housing

Housing, its preservation and production, has been at the center of public policy discussions throughout the 1980s. As with many other land use and development issues, housing policy at the local level is constrained by many factors from past history to contemporary economic trends. As with all land use issues, however, there is room for choice and the potential to shape and guide the future.

Assumption

> Cambridge's traditional neighborhoods should be maintained and preserved at their historic scale, density and character.

This has been an evolving, but de facto, City policy for at least two decades. With rare exceptions, for those twenty years rezoning in residential neighborhoods, from Mid-Cambridge to North Cambridge, have resulted in lowering permitted densities and heights to match more closely the existing development pattern and scale. The Townhouse Ordinance, through its several revisions from 1976 to 1989, was specifically developed and intended to encourage a scale and character of development more sympathetic to the wood-frame, two-and three-story building pattern that predominates in most residential districts in Cambridge. The adoption of two neighborhood conservation districts (in Mid-Cambridge and in Neighborhood 10) in the mid 1980s provided a very strong non zoning tool to limit significantly alteration to the prevailing character of these neighborhoods.

Harvard Street provides a particularly vivid representation of the massive disruption to the existing neighborhood fabric the successive rezonings of the 1970s and 1980s were designed to prevent; 295 Harvard Street and 334 Harvard Street are primary examples of this.

Assumption

> The opportunities to expand Cambridge's inventory of housing, market rate or affordable, are severely limited in existing residential neighborhoods.

This policy assumption flows directly from the previous one. Existing residential neighborhoods are fully developed in the sense that there is not much vacant land available for new housing construction. However there are examples of the very occasional vacant lot passed over in the 1980s boom years or a non conforming industrial building that might be converted to residential use. Even with the systematic reductions in the permitted zoning envelope in residential neighborhoods, there are occasional developed lots which could legally accommodate an additional unit or two or a townhouse cluster in the back yard. In total, however, the potential of such opportunities cannot be expected to account for more than one or two hundred new units in any given decade. As the 1980s have located the most available of those development opportunities the potential for new development sites is likely to be even slimmer in the future.

The Agassiz neighborhood illustrates the result of the two decade long effort to reduce permitted density in the city's residential neighborhoods. In a portion of that neighborhood two successive rezonings, in 1979 and 1982, altered the applicable district zoning from the high-density Residence C-3 to Residence C-1 and then to its current lower-density Residence B designation. In the course of those rezonings the allowed residential unit density has been reduced eight fold from 144 housing units per acre to just 17 units per acre. This is certainly a very dramatic change not typical in its scale, but surely typical in its trend.

In such constrained circumstances new housing construction may result in the loss of some important neighborhood asset. An attempt to increase the potential for more housing may result in the trade off of some other necessary or desirable public or community benefit.



This design sketch is a study of the possibilities for new housing and open space in a former industrial area. To make such a vision become a reality, many parties must reach agreements and work together over many years.

Assumption

> The greatest, and perhaps only, opportunity for construction of significant quantities of new housing is to be found in those areas which have been traditionally used and developed for non residential, principally *industrial, uses*.

This policy premise is a natural and inevitable corollary to the above propositions. While the fabric of the city's residential neighborhoods has been reinforced over the past two decades, the city's industrial districts have been undergoing a significant physical transformation in response to regional and national economic development trends. Old line industries have declined and new enterprises have gained ascendancy. This transitional period has created opportunities for redevelopment of industrial properties that has not been possible or desired in established residential neighborhoods. In addition, the zoning envelope in non residential districts has traditionally permitted a greater intensity of development than the city's residential districts; when residential development is permitted in a non residential district the scale of development and number of units constructed is likely to dwarf that which would be constructed in any residential neighborhood today under current City development policy.

The development history of the 1980s vividly illustrates the point. Those developments accounting for the vast majority of the housing units constructed during the decade have been built in areas currently zoned non residential or in areas used for industry prior to their redevelopment to residential use.

The list of these developments is a lengthy one and includes the following major projects: Graves Landing, 170 units; Rivercourt, 170 units; The Esplanade, 206 units; The Pavilion, 114 units; Thomdike Place and Spring Street Condominiums, 90 units; Bay Square, 110 units; 931 Massachusetts Avenue, 50 units; Cambridgeport Commons, 100 units; Charles Square, 94 units; University Green, 70 units; University Park, 142 units; Church Corner, 85 units; Richdale Terrace, 40 units; fourteen hundred units constructed in areas traditionally zoned and/or used for non residential use, fully 70% of the units constructed during the decade.

Assumption

> Cambridge's existing housing stock is and will continue to remain its principal housing resource and its greatest opportunity for retaining and expanding affordability .

The city's existing housing inventory will remain the vast preponderance of all housing in Cambridge in any foreseeable future. At an average of 2,000 units of new housing in each recent decade, each future decade's incremental addition to the housing stock, now at 42,000 units in 1990, is going to be very modest. Past additions reflecting robust market conditions, strong public subsidy, and available land have probably come more easily than will additions in the future.

Assumptions

> Every effort should be made to encourage an expansion of the city's housing inventory.

> In order to maintain the city's diverse population, every effort should be made to assure the preservation and creation of affordable housing units.

Despite the limitations and inherent conflicts that may arise, it is important that new housing be constructed within the city in the future. Cambridge lies at the heart of a large metropolitan area and is, and has been for more than a century, a significant industrial, and now, commercial center. It is clear that new commercial construction generates some additional demand for new housing and places pressure on the housing stock that already exists. It is also clear that the closer people live to their place of employment the greater the opportunity to choose other than an automobile trip to get there. By its very nature residential development, as a substitute for alternate commercial development schemes, generates much less peak hour commuter traffic. It is a long standing urban planning truism that the presence of housing in mixed-use developments adds an important element of activity that improves the safety and livability of predominantly non residential districts.

Many factors quite beyond the control of the City of Cambridge determine where people choose to live and how they commute to work; but the more benign options from Cambridge's perspective: living close to work, taking the "T", or walking to the job, will become increasingly less likely or possible if some measure of new housing is not constructed along with the new additions to the commercial and industrial component of the city's land use. Cambridge's role as a regional employment center undoubtedly means that a perfect match between job creation and housing will not be achieved; but a reasonable approximation can be attempted. Tough policy choices are not always inevitable. East Cambridge has shown that housing can be a significant component of a mixed-use district that also generates many new jobs and significant City revenues. In other areas of the city, as along the old railroad corridors in North Cambridge, the industrial zoning is an anachronism that does not offer the potential for significant new jobs or City revenue but does offer the potential for appropriate new housing construction. Many techniques have been employed in zoning to encourage housing in non residential areas or as a component of mixed use development. Those efforts, in the right real estate market have proven quite successful. Similar and more creative techniques should be employed in the future. Cambridge's large institutions, which place a heavy demand on the city's housing supply, also have an opportunity to contribute significantly to the supply of new housing at higher densities and at locations that may not be disruptive to their adjacent residential neighbors.

A companion concern, interwoven with the issue of housing production, is that of affordability. Since the 1970s, demographic, economic and real estate trends have combined to make a Cambridge home less and less affordable for Cambridge residents, particularly for low-and moderate income families with children. The income required to rent a market rate two-or three-bedroom apartment is beyond the reach of more than half of Cambridge households. A single family home on average is affordable by only 18 percent of those households. The shedding of housing support programs, first by the federal government beginning in the 1980s and now by the state government as fiscal resources become even more limited, has made it increasingly difficult to ameliorate the cost impact of the high demand for Cambridge housing by prosperous households. This demand has been facilitated in part by the recently popular condominium form of ownership and aggravated by the limited opportunities to expand the housing supply and by the basic cost of the land and labor needed to build housing.

Much of the past decade has been spent developing options for addressing the affordability problem: at the local level through linkage payment requirements in the zoning ordinance, the establishment of the Affordable Housing Trust, inclusionary housing requirements in some zoning districts, strong support for a number of local non profit housing agencies, and most recently a proposal to establish a land bank of City owned land for use as housing sites in the future.



The Affordable Housing Trust provided funds to help create a group home for ten low and moderate income mentally ill adults. This architecturally attractive project builds bridges between neighbors and differently abled persons.

Housing Policies

These housing policies define the City's commitment to maintaining Cambridge neighborhoods as places where households of great diversity can continue to live.

Neighborhood Character

Maintaining and preserving the rich and diverse physical character of Cambridge's residential neighborhoods is among the more significant policy objectives of the City. That physical diversity, from colonial era mansions on Brattle Street and working class three deckers in Wellington Harrington, to sixties era apartment buildings on Harvard Street, sustains the social diversity of income, class and ethnicity that is a Cambridge trademark, particularly when that physical diversity is combined with efforts to develop or preserve affordable housing. Nevertheless, the question invariably arises as to the extent to which that physical diversity should be maintained, modified or compromised in the face of perennial demands for additional housing, in particular affordable housing, and for additional development to increase City tax revenues.



The Lincoln School was renovated to provide 20 units of housing with one quarter of these for subsidized homeownership. Reusing this historic structure helped make the housing fit comfortably in the established neighborhood.

POLICY 26

Maintain and preserve existing residential neighborhoods at their current density, scale, and character. Consider exceptions to this policy when residents have strong reservation about existing character, are supportive of change, and have evaluated potential changes in neighborhood character through a planning process.

Neighborhood preservation, however, has been a growing priority in Cambridge since the late 1970s. The Townhouse Ordinance of 1976 (and its subsequent refinements) was adopted precisely to encourage small-scale developments that are compatible with existing neighborhood patterns. The special authority sought by Cambridge, (and granted by the legislature in 1979), to control institutional uses was motivated by the same objective: prevention of wholesale expansion and encroachment of institutional uses into residential areas. Other measures advancing that same objective have included adoption of the Demolition Ordinance in 1979, the Institutional Use Regulations amendment to the Zoning Ordinance in 1981, and creation of the Half Crown and Mid-Cambridge Conservation Districts in 1984 and 1985 respectively.

Urban blight, dilapidated housing, or general deterioration naturally are not among those neighborhood attributes that the City seeks to preserve. Therefore, Policy 26 suggests that positive changes in neighborhood character can be brought about by a participatory planning process with neighborhood residents that will result in physical alterations that are desirable, necessary and consistent with the principal objective of the policy.

New Affordable Housing and Target Populations in Existing Neighborhoods

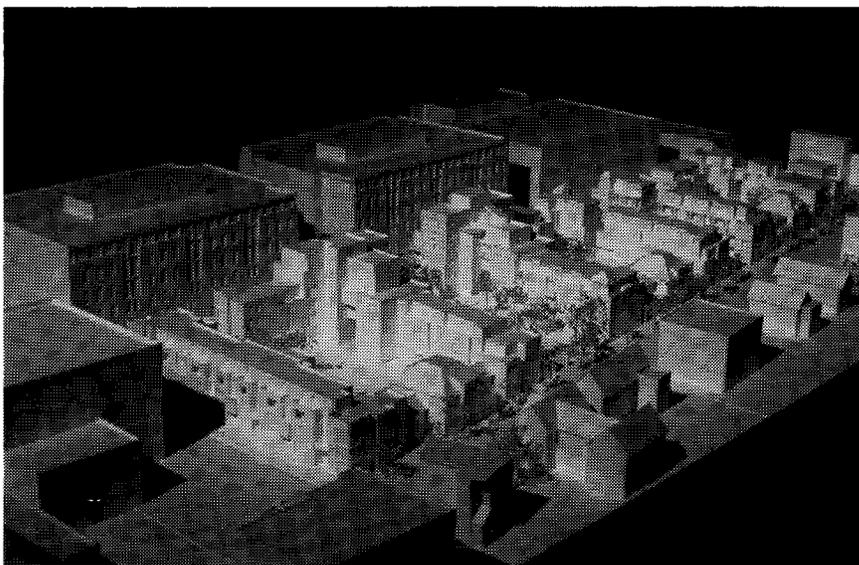
High demand for the city's housing inventory and the city's appeal to an increasingly professional, higher income population escalated both the sale price and rents for existing housing in the 1980s. Without policies that contribute to the preservation and development of mixed-income housing, Cambridge faces the distinct possibility that the existing diversity of its population will be eroded or lost. Twelve percent of the city's housing stock is available to lower income households through a variety of government subsidies. Another 40 percent is subject to rent control but there is no guarantee that those units will be occupied by low-or moderate-income residents. The city's objective is not necessarily to increase the proportion of units available to low-and moderate-income citizens, but merely to compensate for the loss of such units to higher income households, through new affordable housing construction or substantial rehabilitation of existing units. That being the case, the city must then thread a path between the continuing need for new affordable housing units and the desire to preserve the essential character of the neighborhoods as they now exist.

It is recognized that opportunities for the City to expand the housing inventory in existing neighborhoods is severely limited. Even with limited opportunities, however, newly constructed housing is possible but it must be designed to fit existing development patterns. Additionally it should serve to maintain the mixed-income, culturally diverse nature of the city's neighborhoods. Nevertheless, such infill housing opportunities are estimated to produce not likely more than 200 units in any given decade.

Policies 27 and 28 are also motivated by an increasing concern that demographic, economic, and real estate trends have combined to make a Cambridge home less and less affordable for current Cambridge residents.

POLICY 27

Where possible, construct new affordable housing that fits neighborhood character. In existing residential neighborhoods housing should be built at a scale, density, and character consistent with existing development patterns. Permit reconstruction of affordable housing (defined as more than 50% of units rented or owned by households at 80% or less than median income) that serves a wide range of incomes and groups at previous nonconforming density where reconstruction is less expensive than rehabilitation. Emphasize construction of affordable housing designed for families with children.



The University Park project will include 400 units of housing. Of these, 150 units of mixed-income housing are proposed along Brookline Street. The residences are being designed to respect the character of the Cambridgeport neighborhood.

That trend is particularly acute for low- and moderate-income households with children. The income required to rent a market-rate two- or three-bedroom apartment is beyond the reach of more than 50% of Cambridge's households. A single family house is affordable to only 18% of those households. The near abandonment of housing support programs by the federal and state governments has made it extremely difficult for cities such as Cambridge to narrow that "affordability gap". That gap is an especially important issue in Cambridge where over 50% of households have low- or moderate- incomes.

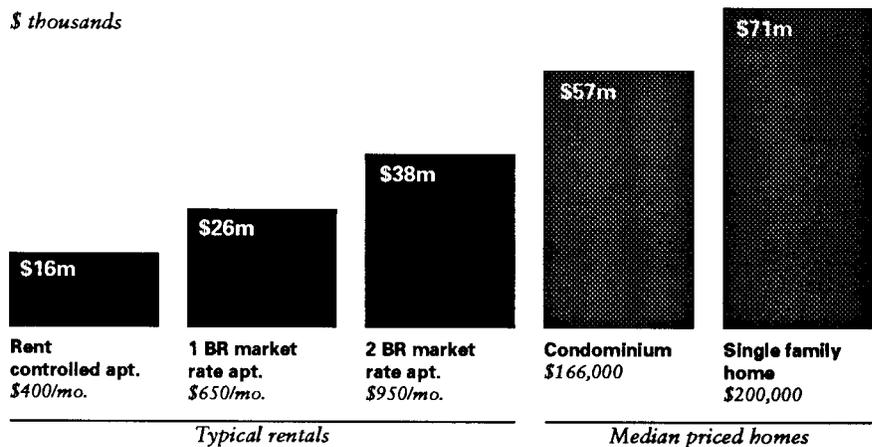
In an effort to prevent wholesale gentrification and displacement in Cambridge's existing neighborhoods, the City devoted much of the past decade to developing options for addressing the "affordability gap". Those range from linkage payment requirements in the zoning ordinance and the establishment of the Affordable Housing Trust, to inclusionary housing requirements in certain zoning districts and strong City support for a number of local non-profit housing agencies. The policies are meant to affirm the City's commitment to stabilize the current diverse, mixed income nature of Cambridge's neighborhoods.

POLICY 28

Affordable housing in rehabilitated or newly constructed buildings should serve a wide range of households, particularly low- and moderate-income families, racial minorities, and single persons with special needs.

Minimum household income required to rent or buy housing in Cambridge

\$ thousands



Assumes 30% of household income towards housing costs.

39H

Rehabilitation of the Existing Stock of Housing

Cambridge's existing housing inventory is and will continue to be its principal housing resource and greatest opportunity for retaining neighborhood diversity. If the dual objectives of preservation of existing neighborhoods and stabilization of the existing variety of households are to be met without serious conflict, the City must focus much of its housing effort on the renovation and rehabilitation of the existing housing stock.

The motivation behind these rehabilitation policies (Policy 29 and 30) is largely that of enabling present Cambridge residents, particularly those with low-and moderate-incomes as well as the elderly, to remain in their homes despite adverse economic circumstances. Towards that end the City, in partnership with non profit housing agencies, administers a wide range of programs designed to lessen the financial burden on homeowners of upgrading their homes.

The Home Improvement Program (HIP), is one such effort and is designed to stabilize present occupancy for low-and moderate-income homeowners. The program works through extending financial and technical assistance to those homeowners who are primarily elderly couples or single parent households. They may be people who live alone and are unable to cope with the required repairs or cannot get financing for the repairs. Often the loans and technical assistance provided through the program enable elderly residents to remain in houses they might otherwise be forced to vacate. Due in part to HIP, which has been operated in the city for the last twenty years, low-and moderate-income Cambridge homeowners have not been the targets of unscrupulous mortgage lenders as has occurred in other communities.

Another example is the Cambridge Neighborhoods Apartment Housing Service (CNAHS), which is a partnership of owners, tenants, lenders, and City officials. Its job is to promote investment and improvements in multi-family, rent controlled buildings, while keeping the rents affordable. CNAHS administers a loan pool through which money for improvements is loaned at different interest rates, depending on the tenant income. Landlords are required, through deed restrictions, to rent to low-income families. This approach has been successful in meeting the twin objectives of preserving the housing stock and maintaining the affordability of the units.

POLICY 29

Encourage rehabilitation of the existing housing stock. Concentrate City funds and staff efforts on rehabilitation that will provide units for low-and moderate-income residents.

POLICY 30

Concentrate rehabilitation efforts in the city's predominantly low-and moderate-income neighborhoods.

Homeownership

Cambridge is predominantly a city of renters, as only 30% of its households own their homes. The trend in Cambridge over the past decade has been one of rapidly escalating housing values which make homeownership increasingly out of reach for all low- and moderate-income households in the city. But homeownership often acts as a stabilizing force in neighborhoods. Therefore, widening the options for homeownership benefits both the larger community and the individual households involved. Non profit and tenant ownership of housing is another way of achieving those benefits while also ensuring fair access of low and moderate income households to affordable housing.

POLICY 31

Promote affordable homeownership opportunities where financially feasible.

POLICY 32

Encourage non profit and tenant ownership of the existing housing stock.

Ownership of some of the multi-family housing stock by either non profit housing agencies or by tenants is one way to ensure access to these units for low- and moderate-income residents. Under either arrangement, tenants can have a larger role in the management of the buildings in which they live. In addition, the non profit agencies have a strong track record in financing rehabilitation without resort to unaffordable rent increases.

The Community Development Department, working with Homeowner's Rehab, developed six townhouses on Columbia Street for ownership by low- and moderate-income families.



Redevelopment of Industrial Areas

If existing neighborhoods are not fertile ground for significant quantities of new housing units, the redevelopment of Cambridge's industrial areas offers major opportunities for expanding the city's housing inventory. The city's industrial areas have been undergoing significant physical transformation in response to national and global economic trends. As old industrial sectors decline, the notion of creating new mixed-use districts where those industries once thrived becomes a distinct possibility. The choice faced by the city, however, is how that land resource should be allocated between competing demands for its use: job creation, open space, housing, tax revenue.

The redevelopment of the East Cambridge riverfront is a good example of the creation of a new mixed-use environment in a former industrial district where housing, in this case market-rate housing, has played a prominent role. Indeed, the vast majority of housing built in the 1980s was constructed in areas then currently zoned for nonresidential use or in areas used industrially prior to redevelopment.

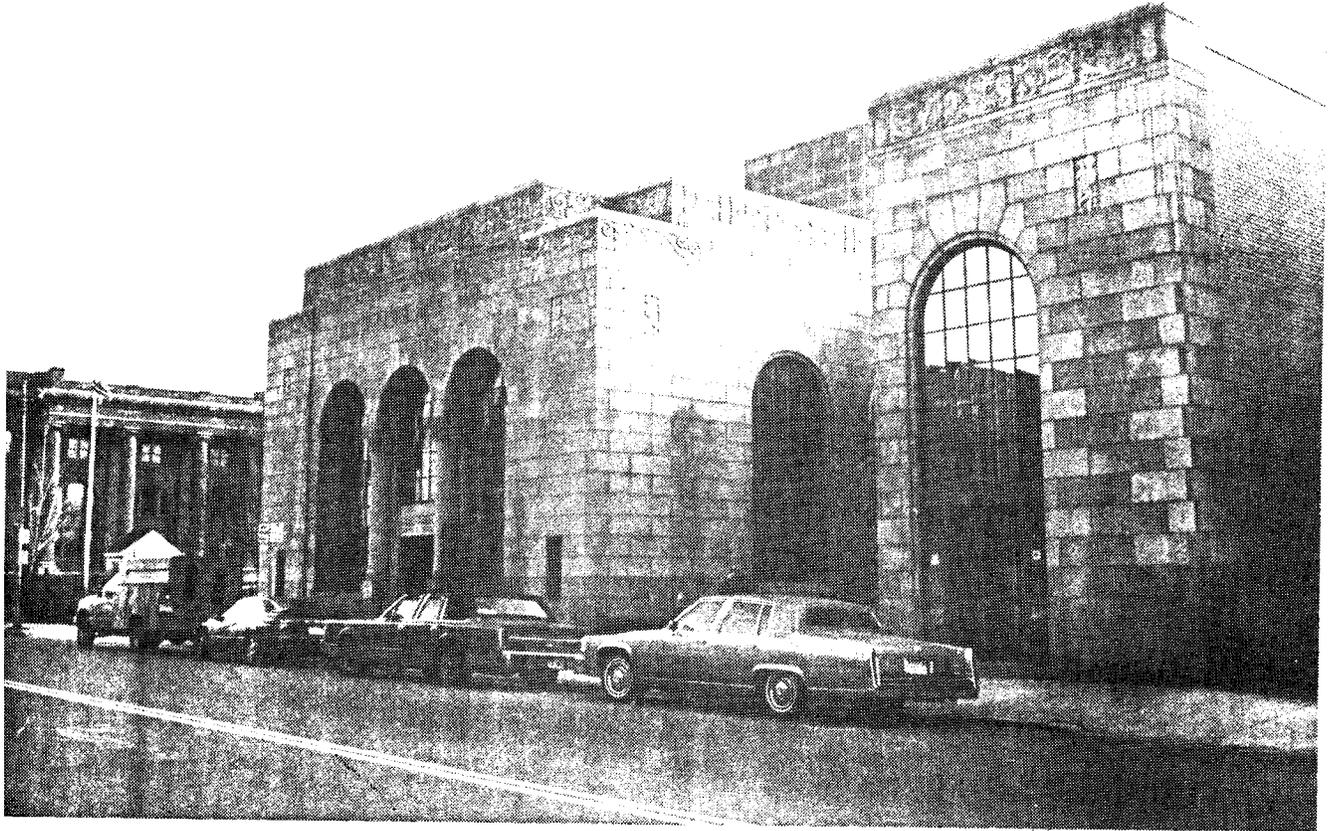
It cannot be expected that housing is suitable in every corner of every industrial district or that every lot or development upon it in such districts should have a component of housing. However, it can be expected that new housing can be appropriate, and not in conflict with other uses, in some portions of most industrial areas, particularly where the edge of an existing residential neighborhood can be strengthened and extended or where alternate commercial uses particularly compatible with residential activity are anticipated.



Zoning incentives encouraged housing on the sites of the Esplanade and River Court projects; residential use was allowed to be one quarter more dense than permitted office use. Because the housing market was stronger than the office market in the late 1980s, housing was built.

POLICY 33

Encourage where appropriate, recognizing housing's possible impact on desirable industrial uses, the construction of new affordable housing through requirements, incentives, and zoning regulations, including inclusionary zoning provisions, in portions of the city traditionally developed for nonresidential, principally industrial, uses. Create effective, well designed transitional zones between residential and industrial uses.



9 . Economic Development and Employment

Cambridge's economic success, whether it is measured by the jobs provided to city residents or the taxes paid to support City services, has depended in the past and will continue to depend in the future, on the synergism created among and between major research institutions, its well educated and trained citizenry, the wide range of physical places where enterprise can settle, and a pragmatic regulatory environment where problems can be anticipated and solutions found in advance of serious conflict.

Assumption

>A strong commercial and industrial/and use component is vital to the maintenance of Cambridge's general economic health.

Just as the city is not expected to grow all the food its citizens require, or provide all the services that are necessary for any family, it is not reasonable to expect that a city can be totally self-sufficient in the revenue required to deliver its public services. Nevertheless, the past decade has illustrated the advantages to any city of a healthy and diverse economic base. For most of the decade Cambridge has maintained a very low unemployment rate, even below that enjoyed by the state as a whole during the most heady economic growth years. Even now with falling employment everywhere, the city still fares better than the Commonwealth as a whole. When Cambridge residents are employed they of course are more easily able to contribute to the city's total well being.

Perhaps more dramatically, the burden of financing City government has shifted and now rests most extensively on the non residential portion of the City's commitment list. In 1990, two-thirds of the City's total property tax levy was secured from industrial and commercial property, reversing the burden borne by Cambridge's homeowners as recently as 1981. While the pace and scope of commercial expansion in the 1980s cannot be considered the norm for all time, the consequence of that expansion does indicate the great financial power, flexibility and freedom granted to the City when an increasingly valuable and dynamic industrial and commercial sector can be maintained. Since 1984 the City has been able to finance \$200,000,000 in capital investments. In the previous decade no money went to such improvements and the City was effectively excluded from

capital markets. The great challenge facing Cambridge today is to determine the appropriate pace and scope of the future expansion and development of the city's non residential land use component.

Assumptions

- > The health of the city's industrial sector is fundamentally dependent on its ability to respond to the change and innovation demanded by the national and international economy.*

- > The city's dense, inner metropolitan location, its historic development pattern, and its resultant cost structure make it an inappropriate and non competitive location for enterprises for whom production costs, parking availability and other factors, found in more favorable quantities in the suburbs, are of uppermost concern.*

- > The city's industrial and commercial advantages lie in its proximity to and the density of innovative enterprises and individuals and in the opportunities to nurture new ideas in a wide range of physical locations that can adapt to changed requirements for new enterprises.*

- > Land use regulations should permit flexibility of uses and provide a wide range of physical space from low-density R and D for start-up operations, to modern, specially designed high-technology facilities.*

The miracle of Cambridge's commercial expansion in the 1980s is noted in the fact that most of the new commercial space created in that decade has been filled through the expansion of enterprises indigenous to Cambridge and frequently non existent fifteen or twenty years ago. Without the innovation and invention spawned in the creative environment of Cambridge, the dying and migrating industries that characterized the city twenty years ago might not have been replaced by the dynamic and cutting edge enterprises that typify the city today. It has not been the service industries of downtown Boston or the land hungry back office and manufacturing enterprises of the suburbs that Cambridge has secured. Rather it is a unique mix of innovative enterprises that enjoy and indeed require the city's intense intellectual and experimental environment that feed the local economy and choose to make Cambridge home. It would appear to be the city's special niche to nurture new ventures where the stimulation of competition, innovation and collaboration on the part of others engaged in similar enterprises outweighs the costs of a city location. These costs include high rent, lack of parking, and all the other space and cost factors that suburbs can offer more cheaply and which appear to tempt even Cambridge bred companies as they mature.

The city's special need is to provide those physical environments that make insecure early experimentation possible, as well as those specialized environments that permit the more mature experimentation and prototypical manufacturing that success demands.

Assumptions

>Existing retail districts should be strengthened and reinvigorated where necessary; new retail districts should not be encouraged and are not needed.

>Each retail area should be recognized for its unique assets, opportunities and functions and those aspects should be strengthened.

>Development patterns in all commercial and industrial districts should be controlled to minimize negative impacts on abutting residential neighborhoods.

Cambridge is well served by retail squares and corridors which have for the most part been in existence in one form or other for decades. Each one has unique aspects in scale, appearance, services provided and the variable extent to which they serve the local community, the city as a whole or a wider region extending well beyond Cambridge. Only in East Cambridge with the establishment of the regional retail mall exceeding 700,000 square feet in area has the City consciously sought to establish a new retail center with no historical precedent; it seems unlikely that any attempt should be made to establish any other completely new retail complex in the future anywhere in the city.

Harvard and Central Squares have special qualities that derive from their historical development.



The existing districts in their many guises should, however, be supported through public policy in several ways. To the extent that it is feasible, given the propensity of shoppers to drive to perform even the most routine shopping errand, every effort should be made to retain and encourage that element in each district's mix of enterprises that serves the needs of the abutting community.

Where a special character has emerged or is latent in a district's existing businesses, such as the international flavor of the ethnic restaurants of Central Square or the academic ambience of the many bookstores in Harvard Square, that special character should be encouraged.

Finally, whatever its function, each retail district should employ a scale and design that ensures its day to day functioning is compatible with and not intrusive upon the residential neighbors that in so many cases lie just beyond the commercial facades.

The City's ability to control market aspects of retail districts beyond the scale, density and character of the physical structures built is very limited; such actions as are useful and effective should be employed to sustain the diverse character of the city's retail districts.

Assumption

> Development approved within the context of an area-wide design plan should be supported through to completion; nevertheless where plans have become obsolete or unfulfilled, additional planning review is appropriate.

The development of an urban design plan, from conception to completion and execution requires multiple efforts from many individual public and private groups and may take a decade or more. For example, East Cambridge riverfront planning was initiated in the late 1970s and it is only now nearing completion as a physical reality in 1993.

Commitment to that plan on the part of the City, demonstrated through substantial financial expenditures and consistent application of agreed upon standards during the years of public review of the several private projects that physically created the plan, was essential to instill the confidence necessary on the part of private land owners and developers who were asked to invest heavily in time and money on the promise that the City would stay the course for a decade or more. However, as the decade of the 1980s indicated, ten years can reveal much, including poor choices with regard to development policy or inadequacies in the mechanisms employed by the City to control and shape the physical environment. Whatever its policies, the City must be flexible enough to respond to changing circumstances where necessary but also steadfast enough to provide a policy environment in which private decisions can be made with regard to investment for the future with reasonable assurance that those investments can bear fruit.

Assumption

>Cambridge residents should be given the opportunity to maximize their access to the job opportunities offered by economic enterprises housed within the city.

The city's businesses are a vital source of employment. Today in Cambridge, there are more jobs (103,227) than residents (95,802). However, only 20.6% of the city's residents work in Cambridge. This figure has steadily declined from 1970 when 31.8% of all residents also worked in Cambridge. This is due, in part, to the changing nature of the economy and the types of jobs available in the city.

It is important for several reasons that Cambridge residents be given every opportunity to take advantage of job possibilities within the city and share in and contribute to the benefits of the local economy. A skilled local workforce is a major asset in attracting new businesses to Cambridge and helps strengthen the city's economic base. In addition, employees who live near their jobs have a number of transportation alternatives available to them, reducing their dependence on the automobile and decreasing the amount of traffic and congestion in the city. Reduced commuting time also allows individuals greater flexibility in their personal lives and enables them to spend more time on activities of their choice.

To increase the participation of city residents in the local economy, it is necessary to provide a mix of employment opportunities requiring a range of skill levels.

Economic Development and Employment Policies

The ability of the City to implement the policy directions suggested in other functional areas will depend in large measure on the success with which it advances the following economic development policies.

Evolving Industrial Areas

While much of Cambridge can be expected to change very slowly and only within a very limited range, the city's old line industrial districts, in the eastern portion of Cambridge and in Alewife, can be expected to change radically in the years ahead as they did in the most recent decade of substantial growth. Because they constitute such a large area (more than ten percent of the total area of the city) and are already evolving physically in response to the market forces changing the nature of the regional and



The former Ford Assembly Plant is being renovated for occupancy by a firm that specializes in personal emergency response systems.

national economy, these districts provide an opportunity to address many of the city's land use policy objectives with the least conflict with established development patterns and between and among the various policies.

Nevertheless such a nirvana can only be achieved if there is a clear recognition that the land resource is not unlimited, that many choices have already been made that limit future options, and that in many circumstances land use and policy conflicts can only be avoided in the context of detailed land use plans in force over many years. Careful recognition also must be made of the external impacts changes within these districts can make on abutting, established residential neighborhoods.

Given the wide recognition that these districts are a unique asset, the city is faced with the task of outlining the development process and establishing the physical plan by which its multiple objectives can be met in a reasonable way in these areas.

Many policy objectives unrelated to economic development can be most easily satisfied within anyone of the several industrial areas within the city. Without a careful process for detailing the recommended mix of uses in such districts, the City's economic policy objectives may, over time, be severely compromised. Even within the more limited policy field of economic development, careful planning is required to assure that, as an instance, unimproved industrial areas, important in incubating future industrial activity, are not lost in the process of redevelopment.

Cambridge has experienced successive waves of technology innovation in computer hardware, software, biotechnology, and perhaps now parallel processing super computers. It is important that less expensive and relatively unimproved land and buildings remain available in order to accommodate future incipient technologies; in addition it is important that there be a diversity of industrial land uses to avoid dependence on any single or limited range of industries.

Within the clear limits imposed by the City's limited ability to shape and direct economic forces, a comprehensive plan for development in these areas offers the best opportunity to preserve the diversity of development characteristics so important to the city's economic future.

It can be expected that these areas will provide the greatest opportunity to add to the city's inventory of jobs and its tax base, two elements that will maintain the city's future economic health as they did in the decade just past. Where infrastructure is already in place and when external impacts on city neighborhoods can be controlled, the new jobs and enhanced revenue potential from such districts is particularly valuable because the added costs to the city can be minimal.

POLICY 34

Cambridge's evolving industrial areas are a valuable resource whose mix of uses must be carefully planned over the next twenty years.

POLICY 35

Appropriate development in the city's evolving industrial areas should be encouraged to maintain the city's overall economic health, to expand the tax base, and expand job opportunities for Cambridge residents.

POLICY 36

The observable trend towards the development of clusters of related uses in the city's evolving industrial areas should be strengthened through the city's land use policies.

POLICY 37

In evolving industrial areas for which economic development, urban design, or other plans have been developed, private phased development consistent with those plans should be permitted to develop to completion, even if completion may take more than a decade.

Policy 36 recognizes that in many knowledge intensive industries, companies cluster together geographically as they grow. This clustering facilitates formal and informal information flow among companies that enables them to stay ahead of rapidly changing technologies and commercial applications. These clusters can serve as important focal points of economic growth with the establishment of ancillary supply networks and related service activities.

To be successful the clusters rely heavily on the accumulated skills of the local workforce and on clear and understandable regulation relating to their industries.

A phased development, which may require ten years or more to achieve completion, depends on a confidence in the future character of an area to justify the initial investment which may only reap an adequate return as the project nears completion. Policy 37 suggests that a publicly approved master or urban design plan is important in establishing that confidence and that it is essential that private development schemes consistent with the public vision be granted the protection to unfold as intended.

Circumstances change, however, and unforeseen negative impacts can arise over the life of a multi-year project. In the most egregious circumstances the city must be able to adjust its policy direction. But such change in direction must be done prudently, after considerable analysis of the impact on all parties involved, and only after every approved project has a reasonable opportunity to fulfill its intended objectives.

The constant renewal of the local economy through the growth of new companies, responding to new market forces and new technologies, is critical to the city's economic health. Over time, new activities and processes may come and go in a company and the physical form required for each may vary. Policy 38 implies that to the extent that the unforeseen evolutionary path of a new company can be accommodated flexibly within the City's land use regulatory framework the better the city can benefit from the varied employment patterns and financial returns these growing enterprises supply.

However, the desirability of granting significant regulatory flexibility to permit new enterprises to evolve naturally, in ways difficult to anticipate, must be balanced by the need to define those limits beyond which development will not be allowed to proceed or those paths it will not be allowed to follow. These limits are necessary to contain or prevent the negative impacts that might be spun off onto abutting residential neighborhoods (Policy 39).

POLICY 38

Within clearly established limits, land use regulations in the evolving industrial areas should recognize the need for flexibility of use - as for instance between office, research, and light manufacturing activities - and provide for a wide range of density options throughout the city including those which foster research and development and start-up operations.

POLICY 39

Development patterns in all nonresidential areas must be planned to minimize negative impact on abutting residential neighborhoods.

Employment

Of course every Cambridge resident need not find a job within the city, and every resident should be able to secure the best possible employment available within the region. However, many advantages accrue to the city and its residents, among them reduced commuting requirements, if employment opportunities present in Cambridge are made available to its residents. As a corollary, the ready availability of a well skilled work force is an additional incentive to locate a business or industry in the city.

Policies 40 and 41 suggest that an evolving economy provides for an ever changing mix of job opportunities and required job skills. Responsive education and job training efforts can help residents adapt to these changes. In Cambridge, market forces naturally lead to the creation of many high-skill and knowledge-intensive job opportunities due to the presence of the universities. However, it is important to facilitate the expansion of other companies which rely on a wide range of skill levels in their employees in order to provide employment for the wide diversity of people who reside in Cambridge.

POLICY 40

The City should actively assist its residents in developing the skills necessary for them to take full advantage of the city's changing economic makeup and to provide the personnel resources which would make Cambridge a desirable place to locate and expand.

POLICY 41

The benefits of a strong employment base should be extended to portions of the resident population that have not benefitted in the past; the City should support appropriate training programs that advance this objective.



Encouraging Business and Industries

In the 1990s, retention and expansion of appropriate industrial and commercial activity in the city will depend on the skill with which Cambridge can remain competitive with other communities in the metropolitan area, both urban and suburban. In some areas of the city that may mean no more than sustaining the existing comprehensive services now provided. In other areas in need of revitalization, however, an active effort must be undertaken to nurture and sustain renewal and balanced growth. In many circumstances the effort will be to retain existing firms; in others it will be to offer and support entrepreneurial opportunities. A particular focus will be on emerging technologies and providing the incentives, whether through training of the resident workforce or rationalizing and simplifying the permitting and regulatory process, that can strengthen the city's real advantages for many kinds of economic activity.



The former Henderson Carriage Factory was rehabilitated for use by a variety of occupants, including a restaurant, a bank, and several small firms.

POLICY 42

While recognizing some of the disadvantages of any urban location for many kinds of manufacturing activities, the City should make every effort to retain and recruit a wide range of enterprises suitable for a Cambridge location, presently, or in the future as manufacturing processes evolve and change. Where possible the disadvantages should be minimized and the real advantages strengthened for manufacturing activities that can widen the city's job base and solidify its economic vitality.

POLICY 43

The City should establish the regulatory environment and provide the support necessary to encourage the establishment of manufacturing activities for which the city may be a suitable location in the future.

POLICY 44

The City should actively cultivate a regulatory and policy environment that assists in the retention of existing industries, supports the creation of new businesses and the innovative thinking that precedes it, retains an inventory of low-cost space necessary for fledgling enterprises, and fosters an innovative environment where entrepreneurship thrives.

POLICY 45

Specialized economic activities for which Cambridge is a congenial host, such as the tourism and hospitality industries, should be supported.

POLICY 46

The diversity, quality, and vigor of the city's physical, ethnic, cultural, and educational environment should be nurtured and strengthened as a fundamental source of the city's economic viability. More specifically, minority businesses and economic entrepreneurship should be encouraged.

Urban congestion and high taxes may make many companies look to other metropolitan locations for expansion opportunities or for relocation. Yet for many companies the presence of the universities, the variety of intellectual exploration, the opportunities for urban living, the quality of services and the diversity of populations are all viewed as assets which can compensate in part for the added costs and regulation a Cambridge location might entail. In the new economic climate of the 1990s, benign inattention to our disadvantages cannot be tolerated; every effort must be made to reduce costs and minimize regulatory excess or unpredictability.

Policies 42 to 44 suggest that through appropriate zoning, finance programs, tax incentives and other effective means, modern manufacturing activities traditionally expected to seek suburban locations can be made a more likely component of Cambridge commerce in the future. Manufacturing operations often provide a wider range of good-wage jobs for people of differing skill levels and are less likely to relocate once established than other more mobile activities.

Cambridge has a wealth of resources and attractions that sustain a substantial tourist trade. With concerted effort the benefits that can be derived from that activity can be further developed and enhanced. While many advantages can accrue through cooperation on a regional level, Policy 45 suggests that the unique opportunities in Cambridge should be explored and developed in a manner consistent with the city's strengths, resources and limitations.

Diversity

Critical to the development of minority communities is the fostering of entrepreneurial opportunities within them. Through financing, technical services and other assistance, existing enterprises can be aided and new minority business formation encouraged. Policy 46 recommends that minority business development be encouraged throughout the economic environment in Cambridge to serve all city residents.

Retail Activity

The city's retail districts are as varied as any aspects of the city's economic life and physical form. They provide vital services to its neighborhoods and provide significant revenues to finance City services. The task facing the city is to maintain the retail districts' unique variety, maintain their viability in the face of suburban competition, and retain the services they provide directly to city neighborhoods.

The existing retail areas of the city, focused on its squares and along major arteries bordering its neighborhoods, are adequate to serve the needs of its residential and commercial communities. Any new major center of retail activity will diminish the viability of existing districts and introduce new problems of traffic and congestion.

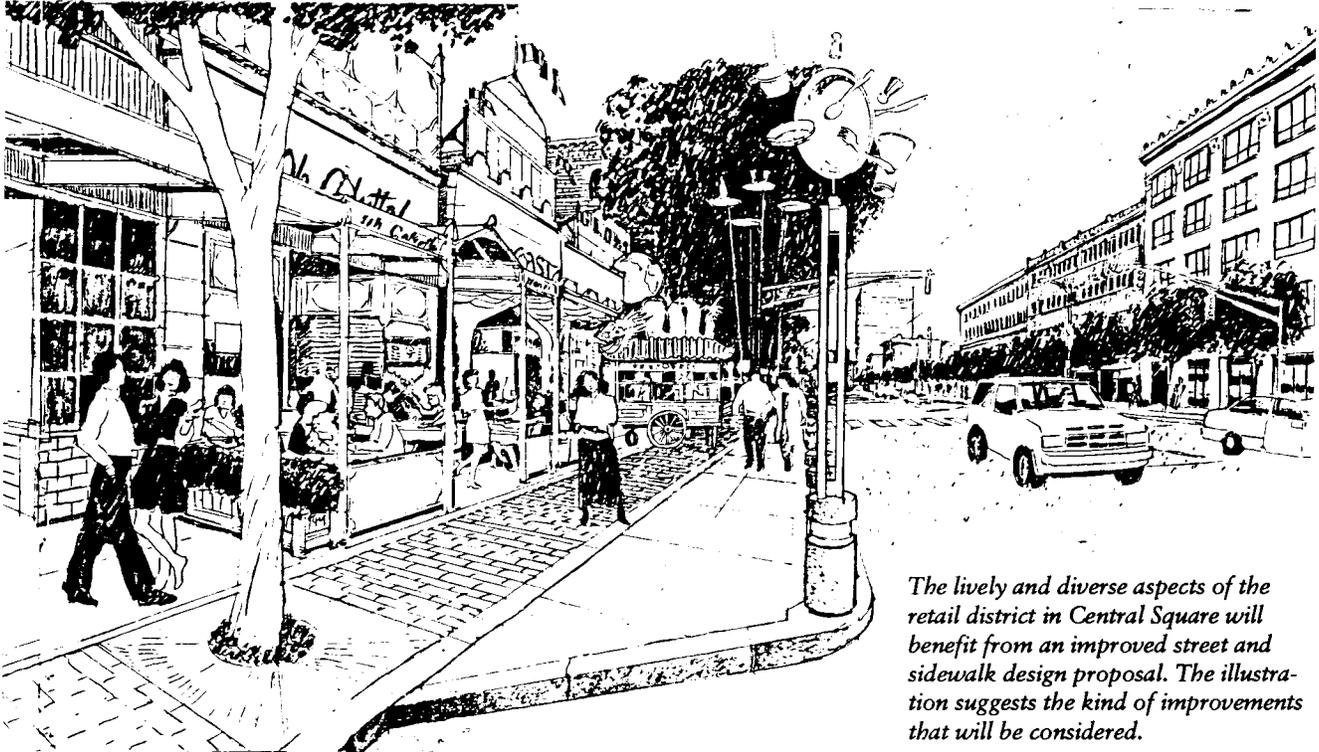
To the maximum extent possible all retail districts should be encouraged to serve their nearby neighborhoods or the city's residents generally. Nevertheless each has a special character, which may be the regional nature of its clientele, as in Harvard Square or at the Galleria Mall in East Cambridge; or that character may be represented by unique clusters of activities as represented by the bookstores in Harvard Square, the furniture stores in Putnam Square, or the antiques shops along Broadway. Such unique aspects permit each retail district to compete effectively in a regional environment, where people can move freely from town to town searching for the best bargains, while serving at some level the daily needs of the surrounding Cambridge neighborhoods.

POLICY 47

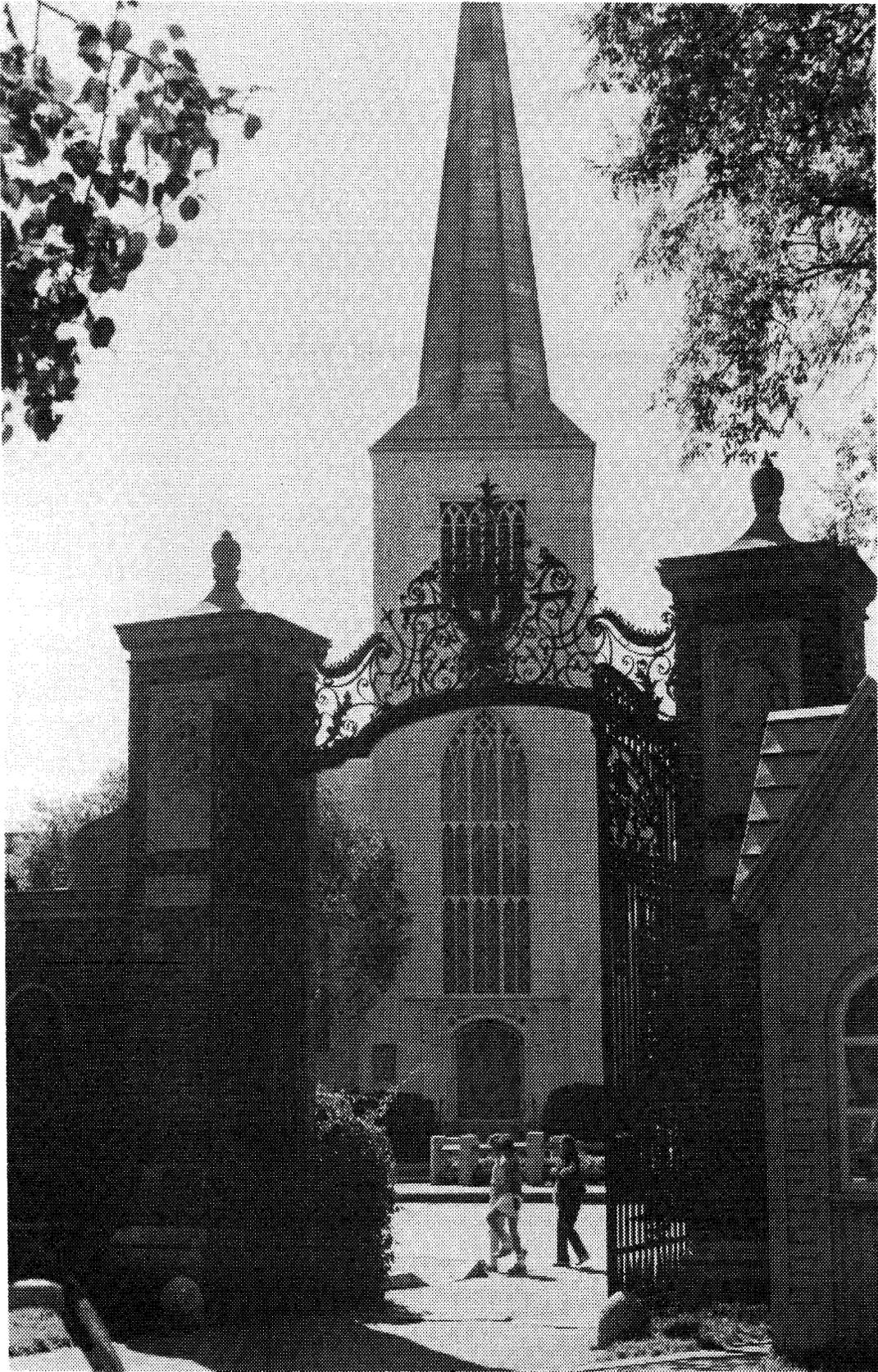
Existing retail districts should be strengthened; new retail activity should be directed toward the city's existing retail squares and corridors.

POLICY 48

Retail districts should be recognized for their unique assets, opportunities, and functions, and those aspects should be encouraged, in part to assure that they can compete with regional shopping centers and maintain their economic viability.



The lively and diverse aspects of the retail district in Central Square will benefit from an improved street and sidewalk design proposal. The illustration suggests the kind of improvements that will be considered.



10. Institutions

Institutions have been playing a role in the development of Cambridge almost from its inception. In the late twentieth century the influence of the universities and many lesser institutions is among the more central forces defining the future of Cambridge.

Assumptions

> The major institutions in Cambridge will continue to play an important role in the private economy of the city by stimulating the formation and development of new enterprises.

> As holders of large parcels of land and supporters of a large client population that places a heavy demand on the city's limited housing supply, the city's major institutions have the potential to contribute significantly to the amelioration of the housing supply and affordability problems in Cambridge.

> The generally positive influence of the institutions' presence in Cambridge, both socially and economically, must be weighed against the potentially negative impacts, both financial and social, of continued institutional expansion that does not adequately consider the effects of such expansion on the larger community.

Cambridge would certainly be a different place were it not home to Harvard, the Massachusetts Institute of Technology, and the many small institutions also found here. While the relationship between the city and its institutions is generally positive, it is also dynamic. This, at times, may make the harmonization of the interests and objectives of each difficult, or in the extreme, impossible. The expansion of the research role of the universities in recent decades has spawned the growth of private enterprises which have fueled the city's commercial resurgence. The expansion of, or appearance of new, functions at those universities has produced a need for

new space and facilities which, despite a stable enrollment, has resulted or may result in the future conversion of commercial, tax paying property to institutional use. An earlier initiative of the City, in 1981, foreclosed the option for expansion into residential neighborhoods.

On the other hand the MIT -supported University Park project will provide hundreds of thousands of square feet of state of the art research and development space and hundreds of new housing units for the private market. Recent construction in Harvard Square sponsored by Harvard University, has provided additional commercial construction and many new units of affiliate housing. In many of these projects there was extensive public process by which the interests of the city and of the institution were aired and a satisfactory balance achieved. Nevertheless it is important to protect and nurture the part of Cambridge which is distinct and independent from those institutions which unavoidably mold the character of the city.

Institution Policies

The policies applicable to institutions as set forth here address both the broad issues related to institutional presence in the city as well as the effects of particular types of institutions on Cambridge and its residents.

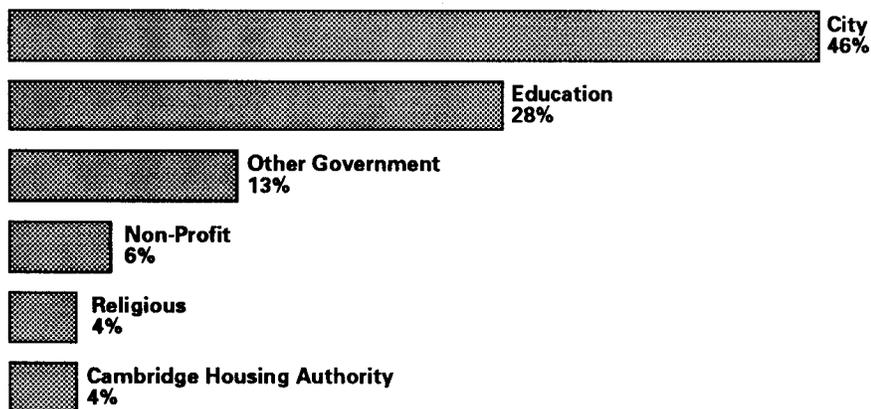
Community Interaction

Institutions have played a role in Cambridge since the city's establishment. Starting with the founding of Harvard College in 1636, the city has become home to several hundred institutions. These include schools, universities and hospitals; city, county, state and federal governments; churches and affiliated activities; and a whole array of non profit organizations, all serving a wide range of social, cultural and economic needs. Many institutions provide direct services to the city's residents; others are located here because of the services the city and fellow institutions provide to them.

While all institutions share some common characteristics, City policies cannot treat them in a single way, due to their varying natures, missions, sizes and needs. However for all institutions, regardless of size, there is an external impact on the surrounding community which requires attention; the cumulative effect of all of those impacts may in part be positive but it may also have serious negative consequences which are felt citywide.

Institutions, of which the City is the largest, have come to own nearly one-half the land in Cambridge. The substantial amount of land owned by institutions and their varied natures give rise to special planning concerns. Growth of client populations, expanding physical plants, acquisition of property, property development and tax-exempt status are some of the sources of friction between institutions and the city's residents. From the

Tax-exempt area in Cambridge



city's perspective these factors combine with the competing demand for scarce land for alternate commercial development and the legal constraints to raising tax revenue to highlight the serious planning issues that arise for the future of Cambridge.

The institutions have another perspective. Policy 50 recognizes that they must maintain their competitive standing by adapting to rapidly evolving demographic, technological, and economic environments. Adaptation takes the form of both programmatic and physical changes.

Institutions must now compete within their own industries by expanding or altering their mission and by providing better services and amenities to their client populations. Cambridge Hospital, for instance, proposes to improve and expand its facilities to better serve its client population in a competitive environment where the prospective patients may choose to go to another hospital. Growth of research and other programs through grants, expansion of professional and certificate programs, and expansion of continuing education and lifelong learning all impact on support staff and physical plant.

Clearly, the policies and actions of institutions can come in conflict with the policies of the City and the needs and expectations of its residents.

Policy 49 suggests there is a strong need for dialogue between the City, its residents, and the major institutions to avoid conflict, and to achieve a healthy balance between institutional and non institutional interests. Such discussions need to take place on a variety of levels and on a variety of issues including those focused on land use, future physical and programmatic plans and community needs and concerns.

There is a need to have distinct planning processes for different types of institutions. While there are overarching planning issues that encompass all institutions regardless of size, there are also characteristics and needs peculiar to an institution that may need to be considered in a more focused planning

POLICY 49

The City and its major institutions should engage in a formally established on-going dialogue to share concerns; identify problems, conflicts, and opportunities; and to fashion solutions and areas of cooperation to their mutual satisfaction. As part of this dialogue, each institution should create a plan describing its existing status as well as outlining its future needs and goals, and the means for achieving those goals.



effort. While both are large operations, the needs, impacts and services to the community of universities and hospitals can be quite different.

Much work has already been done to advance these policies. The 1991 Mayor's Report on Community-University Relations calls for inclusive dialogue between universities, the community and the City; the report was developed by a citizen/university/City committee working in 1991. Another recommendation of the Mayor's Report calls for the Planning Board to review annually the plans and programmatic forecasts developed by the universities and for the City to implement the planning recommendations of the Report and the policy directions suggested in this document.

On a more localized scale, Harvard University and residents working jointly on the Riverside Neighborhood Study Committee, compiled a set of recommendations to improve the relations between that neighborhood and the University. As part of those recommendations, procedures were set forth whereby plans for future physical development by the university could be discussed. In the same way, residents from Mid Cambridge, Agassiz, Neighborhood Nine and Neighborhood Ten; representatives from the Harvard Square Defense Fund and the Cambridge Citizens for Livable Neighborhoods; the City; and Harvard University meet to discuss the University's plans and programs and their potential impact on the surrounding neighborhoods and Harvard Square.

For these dialogues to be successful, the institutions must engage in their own internal planning, identifying the specific and institutional trends which will shape the physical dimensions of their operations in the future, as Harvard University is doing with its Project 2000 and the Cambridge Hospital with its capital plan. Sharing such information as part of a frank expression of needs and priorities by the City and its neighborhoods offers the opportunity to forgo conflict in the future or to reach fruitful compromises should basic interests come into conflict.

POLICY 50

The City should recognize the need for the major institutions to adapt and respond to changing circumstances to maintain their leadership positions in education, health care, and research while recognizing, responding to and coordinating with City policy goals.



Physical Expansion of the Major Institution.

New programs and larger client populations seeking more amenities may mean additional physical growth for the major institutions in Cambridge: new operational, research and administrative buildings, housing, recreational and other support facilities. The expansion of academic functions beyond the confines of the established campuses is the preeminent source of friction between universities and their residential neighbors. Policies 57 in the land use section recommend the circumstances under which institutional expansion may be appropriate.

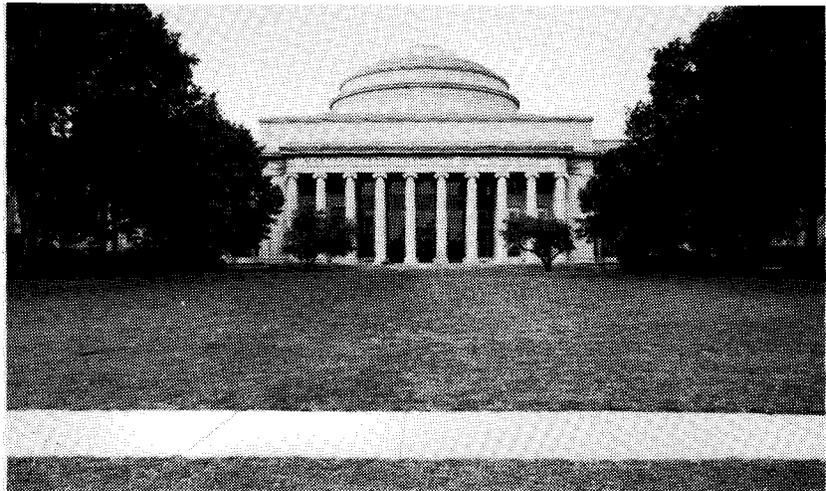
The City does not have the legal authority to regulate institutional uses in nonresidential districts. Nevertheless institutional activity in commercial districts can have significant impacts, particularly with regard to the potential interruption or displacement of the commercial activities which may provide services directly to the abutting neighborhoods.

Additionally, institutions may have sufficient market influence because of land ownership patterns or scale of activity to shape the character of the commercial environment present in their vicinity to the detriment of uses appealing to a more general clientele.

Policy 51 suggests it is appropriate that the City should indicate the degree to which institutional uses should be present in commercial areas and, to the extent permitted by law, ensure that the commercial character of a district not be diluted by inappropriate institutional intrusions.

POLICY 51

Where tax-exempt academic uses are expanded into retail corridors and squares, mixed-use development including taxable retail or other commercial development should be incorporated wherever possible, especially at street level, recognizing each retail area for its unique assets, opportunities and functions, and strengthening these aspects when expanding into such areas.



Housing

Of all the issues surrounding the physical expansion of educational institutions, one of the most sensitive is the nature of efforts to house the students and affiliates of those institutions. While the undergraduate populations enrolled in Cambridge colleges and universities has remained fairly stable throughout the 1980s, the number of graduate students and affiliates has increased.

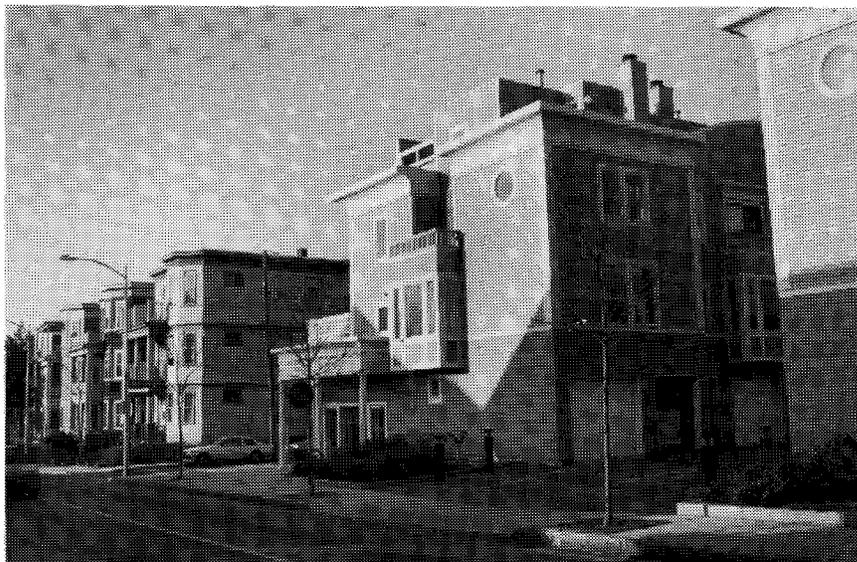
The wish of affiliates to live near their university, while desirable from many public policy perspectives (reduced commuting, involvement in their host community, etc.), nevertheless places an extra burden on an already tight housing market in portions of Cambridge where opportunities for expansion of the housing supply are very limited. Further, permanent residents of a neighborhood can come to view more transient students, when present in large concentrations, as having a destabilizing effect on their communities.

The universities recognize that problem, but also recognize from their own specific point of view the obligation to meet the housing needs of graduate students and junior faculty in order to remain attractive in a nationally competitive academic environment. The city can expect that the larger educational institutions, if out of self-interest alone, will seek opportunities to expand their housing stock in the years to come.

As holders of large parcels of land in central locations, these institutions have the potential to contribute significantly to the amelioration of demand on the city's current housing supply through new additions to that supply. However, Policy 52 encourages the schools and universities to develop that housing within existing campuses and on other land now owned by those institutions.

The policy is not meant to encourage schools to purchase additional land abutting campuses to accommodate additional physical growth. However, the institutions' and the city's interests might be served jointly, if the financial resources were harnessed to construct new housing fully integrated into residential neighborhoods, to serve the institutions' faculty and staff needs and the general, unaffiliated population as well.

Peabody Terrace (Harvard housing for married students developed in the 1960s) towers over its neighbors. By contrast, Harvard's Concord Avenue townhouses (affiliate housing developed in the 1980s) were designed to respect the neighborhood context.



The city's major educational institutions should be encouraged to provide housing for their respective faculties, students, and staff through additions to the city's inventory of housing units. Effective use of existing land holdings should be a tool in meeting this objective, where it does not result in excessive density in the core campus. In addition, where new housing is to be located within or abutting an existing neighborhood, it should match the scale, density, and character of the neighborhood. The institutions should be encouraged to retain this housing for client populations over an extended period of time. They should consider housing other city residents within these housing developments as a means of integrating the institutional community with city residents.

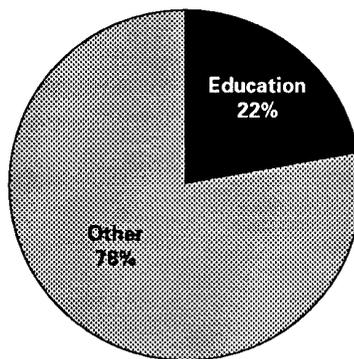
Preservation of the City's Tax Base

One of the most troublesome problems that expanding institutions pose for the city is the loss of property tax revenues through the conversion of private tax paying uses to tax-exempt academic uses. City services provided to the institutions, like fire protection and trash collection, increase with an expanding physical plant, while the revenues to pay for those services decrease, thus placing an additional financial burden on the city. For some institutions, a voluntary cooperative arrangement with the City to make payments in lieu of taxes (PILOT) reduces these negative tax consequences.

However, the economic impact of the large institutional presence in Cambridge is not limited to a simple calculation of the total amount of tax exempt property and the theoretical loss of tax income ascribed to that inventory.

A strong commercial and industrial economic component in the city is of course vital to the city's economic health. While only a small number of land owning institutions contribute directly to Cambridge tax income with in lieu of tax payments, and most pay nothing at all, institutions make substantial if indirect contributions to the larger private commercial economy. Institutions are a substantial source of employment in Cambridge, and are nine of our 25 largest employers; education alone provides about 23,000 jobs, or 22 percent of the total jobs available in Cambridge. Those circumstances are not likely to change in the near future.

Cambridge employees



Further, institutions are, and will continue to be, a source of emerging technologies and businesses. They spawn many of the knowledge-based industries centered on software, artificial intelligence and bio-medical innovations that are establishing themselves in Cambridge today. These new companies, along with more established businesses, view accessibility to the city's institutions as among the strongest motives for doing business in Cambridge. These new enterprises will be an expanding source of jobs in the future.

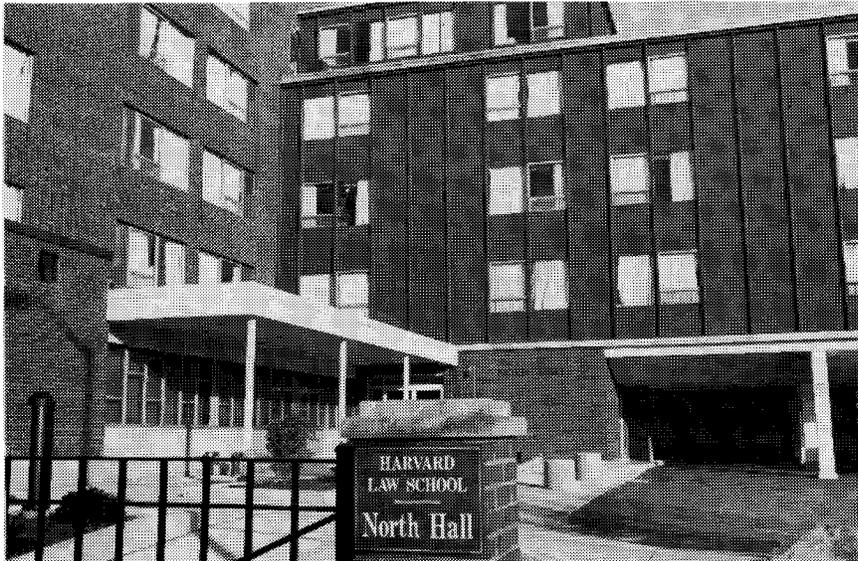
Institutions also sustain a considerable amount of related economic activity. Support businesses, including doctors' offices and medical laboratories; certain retail; and even tourism owe much to the presence of a unique inventory of institutions in the city .

Institutions should be encouraged to make maximum use of existing tax-exempt holdings in accommodating new physical and programmatic expansion.

Policy 53 recommends that any further withdrawals by the large universities from the inventory of tax paying property should be very limited and consistent with other policies outlined in this document; and in such circumstances the City should be compensated through expansion of the PILOT agreement. Participation by smaller organizations in a PILOT program might be considered as part of the conditions established when discretionary permits are required from the City to establish a new institutional presence.

POLICY 53

Except in circumstances where further institutional growth is appropriate or beneficial to the city as a whole (see Policy 7) the city's institutions should be discouraged from creating new fiscal burdens on the City treasury through the conversion of property from tax producing uses to nontaxable uses, and should mitigate any harmful effects of such conversions through financial compensation.



A building formerly used as a motor inn has just been rehabilitated for use by Harvard Law School.

Commercial Investment

The city's large institutions are complex organizations whose traditional mission is being joined increasingly by other activities designed to enhance that core function, support the institution financially, or stabilize and enhance the noninstitutional environment abutting the core campus, in an effort to maintain and improve their competitive standing in their respective industries.

Much of this nonacademic activity is occurring in commercial and industrial areas where the institutions' efforts affect the city in ways similar to those of any private property owner. Issues of traffic, density, height and urban design arise.

However, unlike many typical development organizations the institutions are permanent citizens of Cambridge with as long a view into the future as the city itself. Policies 54 and 55 suggest that much benefit can accrue to Cambridge if that long-term view, coupled with significant financial resources, can be recruited to advance articulated City development goals as well as those of the institutions.

The comprehensive redevelopment of the former Simplex site by the Massachusetts Institute of Technology is an example. The site serves as a source of income for the Institute, and has the potential to be a place of operations for new knowledge-based businesses originating out of the Institute's academic ranks and for other commercial ventures. The site will also serve the city's interest by providing enhanced tax revenue, hundreds of housing units, a continuing source of jobs, the development of much useful open space and the physical enhancement of a significant area of Cambridgeport.

The long-term commitment the universities must make to their home city offers a unique opportunity to advance community and institutional interests when universities act as investors in private property development and management.

Successful cooperation and mutual benefit depends in part on careful articulation of public policy objectives and a frank articulation of institutional objectives as well.

POLICY 54

The institutions' capacity for commercial investment should be directed in part to assist in the transformation of evolving industrial areas and commercial districts, as defined by City policy and elaborated upon through formally established, on-going planning discussions.

POLICY 55

Where major institutions invest in commercial properties, their willingness to manage those properties partly in response to broader community objectives of diversity and community need, as articulated through the continuing formal dialogue with the City and its residents, should be encouraged, consistent with the institutions' fiduciary responsibilities.

This sketch suggests an image for the major open space that will be at the heart of University Park, which is being developed on the former Simplex site. It will be connected to the existing neighborhood by improved sidewalks and pathways.



Smaller Institutions

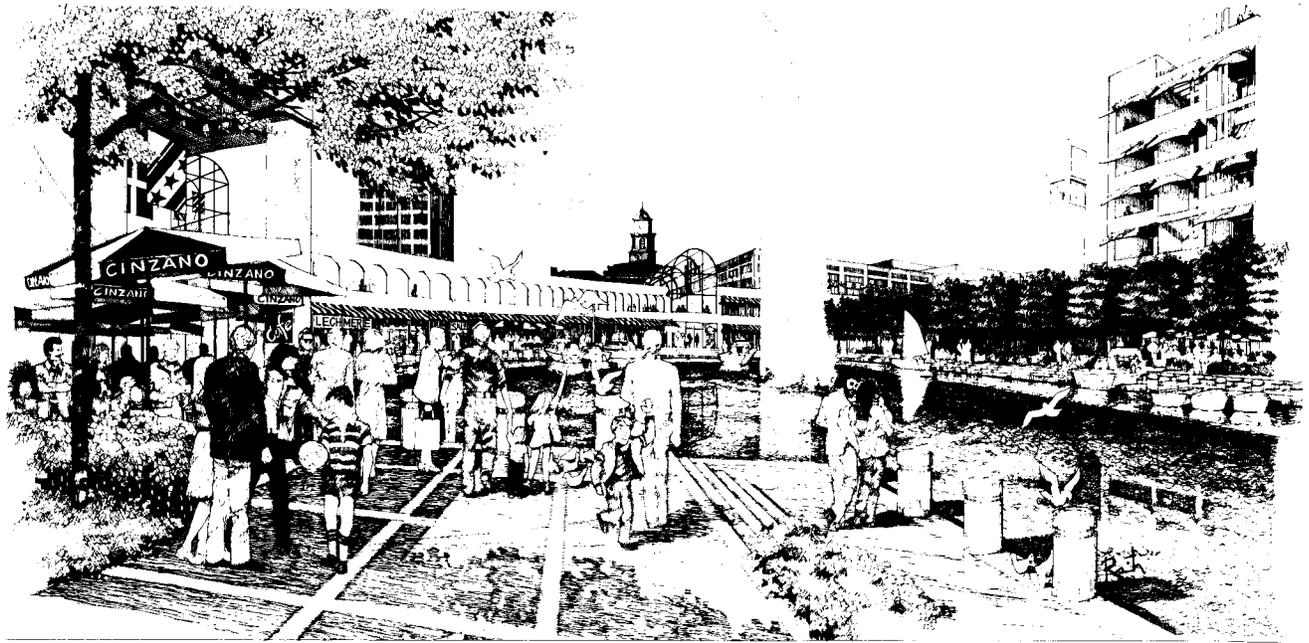
Smaller institutions, while not having a large effect on the city individually, do have effects which are sometimes substantial on the immediate area in which they are located. These institutions serve many functions, many of which are far removed from the daily lives of Cambridge residents; nevertheless, they contribute to the diversity of the city's cultural life and population.

The activities of the city's numerous small institutions are generally not of great concern when they occur in the nonresidential areas of the city; they are frequently merely tenants of commercial buildings not easily distinguished from any commercial operation. When their activities do generate wider impacts (traffic and parking as an instance) they are generally easily absorbed in the commercial environment that surrounds them.

When institutional activities are located in residential areas, where even modest impacts are more easily felt, Policy 56 suggests that the existing regulatory process provides an adequate opportunity to review the special circumstances that attend to each individual institution and each individual site; it also provides the opportunity to apply the policies outlined in this document where they may have relevance and provide guidance to the outcome of any regulatory process.

POLICY 56

Recognizing the localized nature of their physical presence, the city's smaller institutions should be regulated on an individual basis as provided in the zoning ordinance's institutional regulations and as they are impacted by zoning, urban design, and other City policies.



This vision is featured in the 1978 East Cambridge Riverfront Plan. The reality that now exists after a decade of work is remarkably faithful to the original concept.

11 . Urban Design and Environment

Questions of appropriate transportation and housing policy are naturally at the forefront of public discussion. However, our daily perceptions of the quality of the environment around us frequently rest on the observation of subtle details of design and fit: matters of landscaping, materials, or building design, that can too often be overlooked in the discussions of the larger issues of the day.

Assumption

> The quality of the city's urban environment in building design, site development, and building and site material is a major asset that defines, in part, the city's appeal as a place in which to live and work.

In straining to meet the many basic obligations of the city to its citizens housing opportunities, employment options, education of our children -it is tempting to overlook the tangible value of the quality of the city's environment. Investment in that environment may be expensive whether through direct means such as park improvements, street trees, and brick sidewalks, or indirectly through development potential foregone as a result of rezoning. However, the care and attention paid to a high quality environment is repaid through the commitment residents and employers make to the city, the demand for housing it creates and through the valuable commercial space that might be built. The revenues from those sources are quite direct and the benefit easily calculated. In addition, a commitment to quality helps mediate and reduce the potential conflicts that inevitably arise as a result of the dense urban living that characterizes so much of life in Cambridge.

Design review sessions with the community helped the architect and the developer create an especially successful new building at 1280 Massachusetts Avenue.



Assumption

> Much of the city's special appeal can be traced to its long development history and the legacy of that history still in existence today. New additions to the city should be compatible with that legacy while also innovatively and creatively responding to contemporary needs.

Much of that history was viewed with indifference or contempt not too many years ago. But as the physical products of the late twentieth century and beyond come to dominate and define the character of so much of suburban and rural America, and many inner city districts as well, Cambridge's past begins to define an ever more unique and distinctive environment in an expanding sea of rootless trendiness. Wood frame and brick masonry, real streets and pedestrians on sidewalks, moderate scale and complexity of uses, trees, grass and buildings instead of asphalt all speak to historical precedents which need not limit innovation but which can define the limits within which it can flourish.

Assumption

> *With rare exceptions, development should be required to enhance the pedestrian environment, enhance the public realm along city streets and ensure and deepen the quality of the experience of those who walk through Cambridge.*

Much of current building technology and custom and the accommodations typically made to the automobile, if left unchecked, are invariably hostile to the best interests of a sensitive urban pedestrian environment. Shadows, wind, barren plazas, multiple driveways, blank building walls and street front parking lots, are all examples of building patterns where design is indifferent to impacts on the public realm. In a city where walking is a traffic mitigation measure as well as a pleasant experience and a social opportunity, real damage is done if, over time, the cumulative effect of each indifferent or unfriendly building or site design produces a public environment unkind to the pedestrian and pleasant only for the car.

Assumption

> It is appropriate that the City should develop urban design and development standards for Cambridge that will provide a guide and framework for all future additions and changes to the built environment. It is appropriate that those standards should vary to reflect the diversity of the many environments found throughout the city.

In a city where context should play a defining role in shaping new development, it should be the obligation of the City to define those building, site and urban design standards to which new development will be expected to conform. In developing guidelines for East Cambridge, Central Square, Harvard Square and North Massachusetts Avenue, the City began the process of defining its expectations. These guidelines were developed in conjunction with major zoning revisions for the affected areas. Those zoning revisions were crafted such that the development guidelines can be mandated for, or at least substantially guide review of, new development which is subject to discretionary permits before the Planning Board or the Board of Zoning Appeal.



A sidewalk cafe in North Cambridge helps make a friendlier urban experience along this part of Massachusetts Avenue

Many critical areas of Cambridge, however, are not covered by any systematic set of development guidelines. Even where such guidelines do exist, construction which requires no discretionary permit (special permit or variance) need not conform. Without discouraging innovation or precluding design and development options which better serve the public interest, it is important to define a range of development standards from mandatory to recommended, which reflect the diversity of character from neighborhood to neighborhood, and which are consistently and fairly applied to all development. The basic elements of the zoning ordinance: height, use, density and setbacks, are rudimentary guidelines for development. At that level each rezoning adopted further refines the City's development policy. Even at that basic level much work remains to be done: several districts and much of the city's land area is, for instance, not subject to a height limit.

Many more subtle issues of building design, materials, landscaping and site design, modulations of heights, transitions between uses and scales of building, the relationship of buildings to public streets, regulation of the design and placement of parking facilities are among many other issues which should be explored. Those that are critical should be made mandatory, others may be appropriately cast as suggestions.

The Linear Park in North Cambridge transformed an obsolete rail corridor into an enjoyable urban amenity. It creates a pleasant connection of North Massachusetts Avenue to Alewife Station as well as to Davis Square Station.



Urban Design and Environment Policies

These policies take into account the physical environmental aspects of all policies contained in this document so that appropriately responsive urban design plans for the various parts of the city may be made.

Design Review

Design review mechanisms are in place for some parts of the city: the East Cambridge riverfront, Harvard Square, and Central Square among a few other districts in the city, are the subject of detailed design standards and urban development plans which are enforced through special or planned unit development permits issued by the Planning Board. However, there are still significant areas of the city which have no such standards or plans. Even in the areas identified above many projects not requiring a special permit may ignore the standards that are in place. Consistent and reliable regulations are needed to serve all segments of the community, providing direction for developers as well as protection for residents who live near the development and for the citizenry at large.



All buildings in the East Cambridge Riverfront underwent detailed review to ensure compliance with the City's plan and design guidelines.

Existing guidelines for particular sections of the city should continue to be followed (including The East Cambridge Riverfront, University Park, Central Square, Harvard Square, North Mass Ave. and North Point). Policy 57 suggests that like existing guidelines that have been developed and refined over many years, new guidelines should also reflect the specific character and goals for the different parts of the city. In particular, new guidelines are needed for portions of Alewife, the remaining Industry B zoning districts, and the Memorial Drive riverfront, and areas in prominent locations where new development will be very visible and contribute prominently to the visual image and environmental quality of the city for many years into the future.

POLICY 57

Design review for new development should be established throughout the city for all areas where future development will be of a scale or quantity that will potentially change or establish the character of the district.

POLICY 58

Even in areas where the character of a district is firmly established and new development is likely to be very modest, design review should be required where small scale changes are likely to disrupt the desired district character.

Through the design review process in Harvard Square, two developers were required to coordinate their site improvements, resulting in fewer curb cuts and a better walkway system for pedestrians.

Policy 58 is intended to address the fact that, for many areas, a single new project that is unsympathetic to its surroundings can have a negative impact that is out of proportion to its mere size. For example, a corner store in a purely residential area often stands out; this can be a welcome addition or an eyesore depending upon the character of the design. In especially distinguished areas, a historic district designation may be appropriate and the design review very detailed. In still other circumstances, where the character is more modest, the neighborhood conservation district approach may be most appropriate. For some other areas, review of only the most significant new projects might be conducted through a special permit process under the zoning ordinance, where only the most generalized design standards might be sufficient.



Urban Design Standards

In order to guide physical growth in the ways outlined in this policy document, urban design standards need to be strengthened where existing and articulated where lacking.

Two major points need to be addressed: height limits should be imposed throughout the city, and the density bonus granted in the zoning ordinance for uses which abut particularly wide streets or public open space should be eliminated. Both of these outdated provisions of the zoning ordinance are antithetical to more recent efforts to ensure that new development will be in scale with the positive aspects of the existing character of Cambridge.

More generally, the application of a zoning designation to an area in the city should accurately reflect public policy with regard to the character of that area. Many development conflicts have arisen in the past because the existing character of a zoning district has been quite different (and usually much less dense) than that permitted by the dimensional standards of the applicable zoning. Where that disparity exists the zoning designation should be changed or the inappropriate features of the zoning districts regulations should be altered.

Policy 60 recommends that design standards should be crafted for areas subject to major future development. In developing these standards, the following criteria should always be considered:

Buildings should enhance the street-level experience by providing transparency at the ground floor, providing "eyes on the street" for safety and animation;

The particular and differing characters of the streets throughout the city should be recognized; guidelines should reinforce desired setbacks, types of landscaping, building frontages, etc.; and

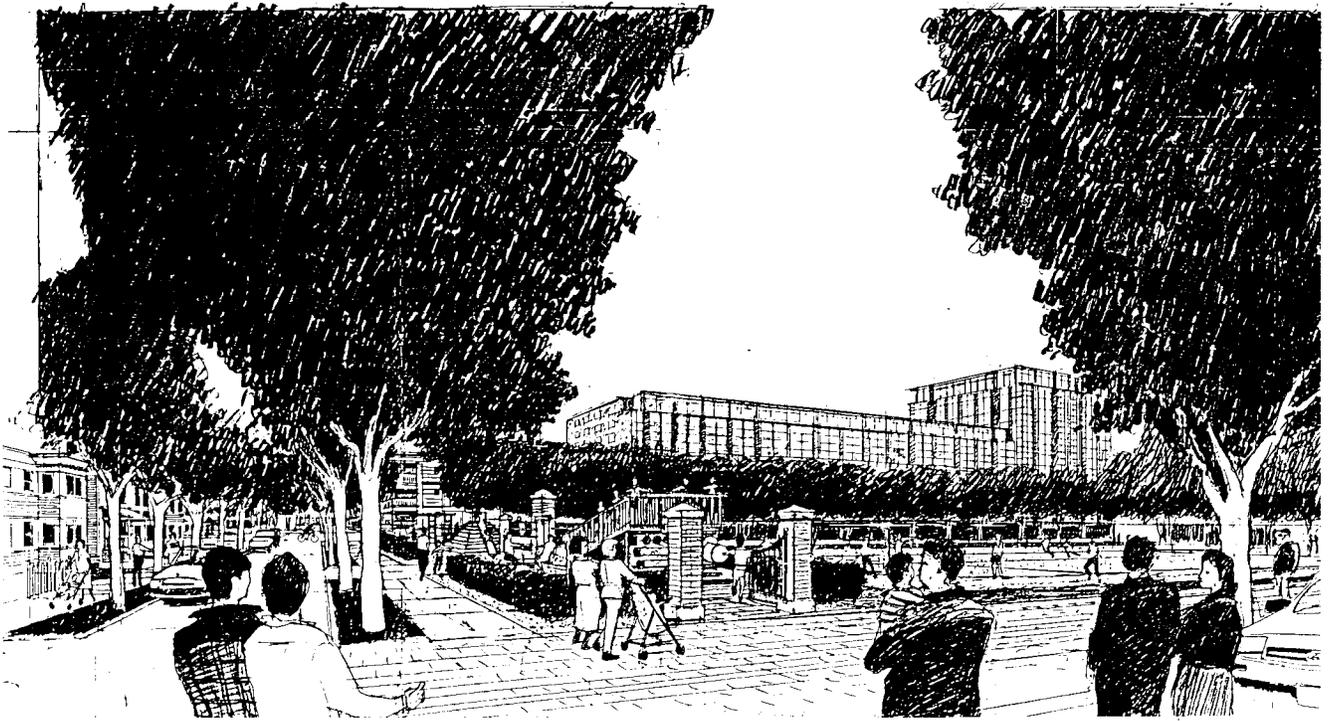
Open spaces {parks, squares, landscaped setbacks, urban wilds} should be linked by safe and attractive streets and sidewalks; the overall city goal is to realize a complete system of public ways and open spaces. In certain instances, the effectiveness of existing open space facilities can be increased through additional open space or other forms of pedestrian and recreational links between both publicly and privately owned spaces; the creation of such links should receive high priority and encouragement.

POLICY 59

The regulations for all zoning districts in Cambridge should reflect the city's fundamental urban design and environmental objectives: height, setback, use, site development, and density standards imposed should be consistent with or advance those urban design objectives.

POLICY 60

Urban design and environmental standards should be developed for all areas of the city which are or may be in the future subject to redevelopment or significant new development.



Steps are being taken to determine the design of a park that will help transform the character of the area south of Pacific Street, adjacent to University Park. This illustration is one example of how the site might be designed.

It is important to note that there are historic district regulations already in place in many parts of the city. Policy 61 recommends that any new urban design standards be considered in the light of these existing controls so that there is no contradiction in city policies.

More generally, however, there are many districts and neighborhoods in the city which while not so special as to require detailed, historically precise preservation, nevertheless have a feel and character that reflects their evolution over many decades if not centuries. That context gives Cambridge its special identity and should be respected, if not continually replicated exactly, in any design standards or zoning districts. That context should be respected as well whenever any new physical additions are made to the city's environment.

Policy 62 recognizes the need for urban design standards to ensure that appropriate transitions are made between differing uses. Where conflicts are inevitable, concessions should be made to the needs of the more vulnerable use; for example, residential uses should be shielded from the negative impacts of an adjacent industrial or office use, through landscaping, setbacks, and architectural design.

POLICY 61

Urban design standards should reflect the historic context within which change will occur while permitting design that is responsive to contemporary circumstances.

POLICY 62

As transitions between differing uses are extremely important in a densely developed city, urban design standards should be developed to ensure that these transitions are made properly, respecting the maximum extent possible the needs of each contrasting use.



12 .Open Space

Whether the venue for a rough and tumble soccer game or a small, quiet green space that marks the passage of the seasons, open spaces play a vital role in the lives of Cambridge residents. When well sited and well cared for, open spaces enhance the activities that surround them and help diffuse the conflicts and tensions that dense living may entail.

Assumption

> Cambridge's dense development pattern limits the opportunities for creation of new open space. The existing inventory of facilities is the city's greatest open space asset.

The fifty acre Danahy Park is an extraordinary addition to the Cambridge parks system, but it is clearly an anomaly. Although the park was well planned to take advantage of a rare opportunity to reuse derelict land, the circumstance under which the land became available is not likely to be repeated, at least not at the scale of this multi-functional facility .

By most professional measurement standards Cambridge is severely deficient in the neighborhood oriented recreational and open space resources deemed desirable in any community .The city's eastern neighborhoods in particular, suffer such a deficiency. The very density that makes housing choices so difficult, that exacerbates residential and commercial parking issues and that aggravates the process for locating any public facility, makes it extraordinarily difficult to add even modest elements to the city's park system.

Cherry Street in Neighborhood Four is a classic example of the hard choices that Cambridge's historic density forces on public policy. The City purchased the 18,000 square foot site, along with several others, to construct a planned complex of neighborhood oriented recreation facilities in an area clearly in need of such amenities. The other parcels were transformed into parks as planned, but the Cherry Street site was ultimately used to construct eight units of, also badly needed, affordable housing. Each new increment of parkland will come with increasing difficulty as it must overcome the dual problems of limited opportunities and severe competition from alternate, equally desirable public uses. The city's present open space inventory will continue to be its principal recreational asset for the foreseeable future.

Assumption

> Opportunities for significant additions to the open space inventory lie principally in those nonresidential areas where large coordinated redevelopment projects are likely to occur.

> Open space should be a major component of new development, both residential and nonresidential.

The acquisition of new open space facilities is of course not completely foreclosed. As indicated earlier with regard to the new housing construction Cambridge's industrial areas offer the greatest opportunity for securing important new facilities. Such areas tend to be in transition, accommodating in new physical forms the demands of an evolving economy; the districts and the lots within them are large enough that significant open space is a physical possibility; and such areas can and have been rezoned to incorporate incentives and mandates to provide open space within the new large scale developments which have typified such areas in the recent past.



The City's transformation of a forgotten remnant of water into Lechmere Canal Park was an essential first step in the revitalization of the Riverfront.

The East Cambridge Riverfront project, where thirteen acres of public open space was created from land once devoted to private parking and marginal uses, has employed the full range of mandates, incentives and public acquisition mechanisms to create a valuable open space system. That system both enhances the private development while providing recreational opportunities for all Cambridge residents. University Park, also rising in a long-neglected industrial district, will likewise create an elaborate system of publicly accessible open space which will serve its own residents and the adjacent Cambridgeport neighborhood.

Given Cambridge's relative paucity of open space and recreational resources, it is important that each new addition to the city's residential and commercial buildings inventory contributes, to the extent physically possible, to the enhancement of the city's open space resources. Each new building, whether residential or commercial, places additional demand on the city's open space resources; that additional demand should ideally be met in part by open space provided in conjunction with the new construction. The larger and more comprehensive the development scheme, the greater the opportunity to meet that goal. However, the modest contributions small development can make should not be ignored. In Harvard Square for example much semi-public open space has been created in conjunction with private construction that has materially enhanced the public enjoyment of that commercial district.

Assumption

> Programming and reuse of facilities will play a major role in extracting the most use and benefit out of the present and future limited additions to the city's open space inventory.

> Open space facilities settling a wide range of functions and clientele should be encouraged.

An increase in the quantity of open space in Cambridge will always be costly to achieve and, given the many competing demands for the limited land resources within the city's six square miles, may not be possible in many neighborhoods at any price. Therefore, the efficient and effective use of the city's existing available resources is of paramount importance. Growing demand and rising expectations for the services that open space facilities provide to Cambridge residents will have to be met increasingly without expansion of the supply. Responsiveness to changing demands and demographics, commitment to quality materials and maintenance, and innovation in programming, design and use options will be requisite in a constrained environment where the ideal will be difficult to attain.



It is also important to recognize the value of a wide range of open space facilities to the city's residents. Open space and its important role in the city is not and should not be defined as recreational facilities exclusively, or necessarily publicly owned, or in some cases even publicly accessible. There are many publicly used, privately maintained, valuable and necessary open space features which benefit all Cambridge residents in very diverse ways. These include such fine examples as the pedestrian walkway between Brattle Street and Mt. Auburn Street in Harvard Square, the private courtyard at Charles Square, the visible but inaccessible green courtyards at residential buildings throughout the city or at the Harvard houses, and the publicly-owned but simple, landscaped space at Arrow Street and Massachusetts Avenue.

Assumption

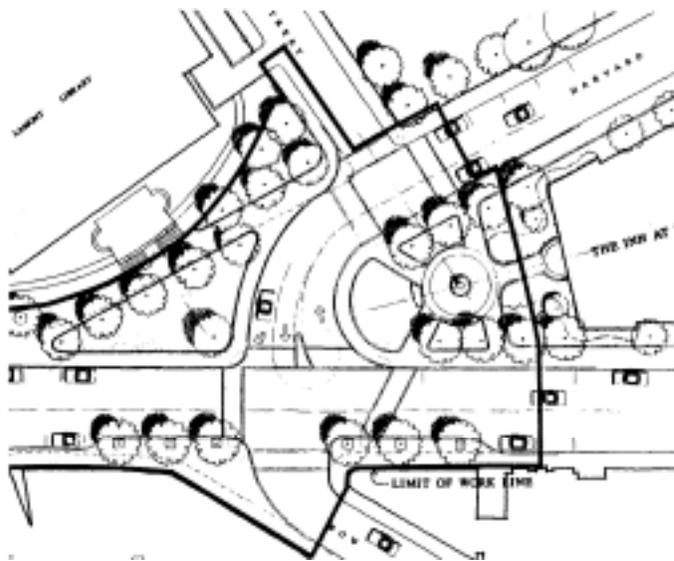
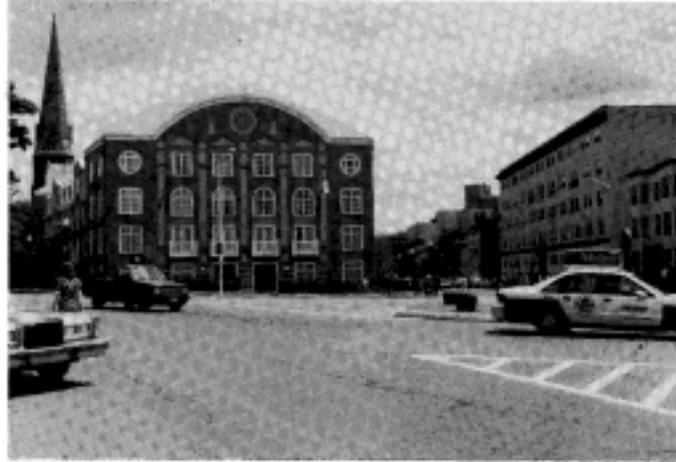
> Long-term maintenance of the existing inventory of parks and playgrounds is likely to prove a limiting factor in the city's ability to expand its open space resources.

It would appear at times that the creation of a new park or open space is easy, while more difficult is the day to day effort to maintain it as a useful, attractive amenity in the face of heavy demand and the deterioration that even respectful treatment entails. As in programming and use, innovation in this regard is essential to maintaining the usefulness of the city's existing facilities, never mind those additions which are desired and necessary. The wise first step, however, is a costly one: investment in good, proven design and quality, durable materials. Two hundred thousand dollars and more to renovate a small play space or \$30,000 to install an 800 square foot landscaped park may seem excessive at first blush. It can be expected, however, that dividends will be received in the years ahead when the deteriorated and dangerous equipment or the crumbling asphalt curb of a cut rate installation does not have to be replaced or constantly patched. Such initial investment may slow down limit the acquisition of new facilities but it assures that those we have are providing the most benefit possible over the longest period of time.

Innovations in actual maintenance tasks are another necessity. Already the city has begun to experiment with the impressive but very costly facilities installed as part of the boom construction years of the 1980s. Abutters to Lechmere Canal Park, for instance, make proportional contributions to the park's maintenance and have formed an organization to oversee the private contractor who does the actual work. In Kendall Square, Boston Properties is responsible for the repair and maintenance of the public improvements in the redevelopment area. At the initiative of the Program on Public Space Partnerships at Harvard's Kennedy School, a trustee group, formed of City, private business, neighborhood and institutional representatives, raised money for the redesign of Winthrop Square Park and now contributes to and oversees its maintenance. Similar innovative initiatives will be required in the future in many other locations in Cambridge.



At present, Quincy Square is only a wide expanse of asphalt. After a sewer separation project is completed, the City will create an attractive space for pedestrians, while defining safer roadways for automotive traffic.



Open Space Policies

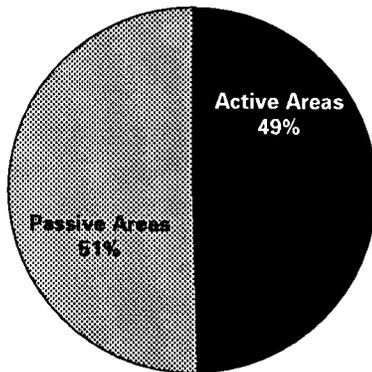
The open space policies are intended to provide the basis for maintaining and improving the city's existing inventory of natural areas and outdoor recreation facilities, as well as to prepare for the creation of new parks and open space where appropriate.

Use of Open Space Facilities

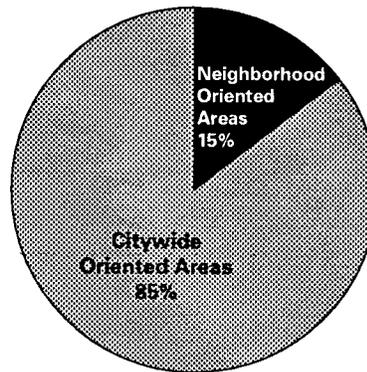
Cambridge is likely always to have a deficiency of all kinds of open space facilities, just by the nature of its past development patterns and the difficulty of acquiring any new facilities for cost and space reasons. Of central importance then is how the city makes use of those facilities it does have and who, among its citizens, can be served by those open spaces. While the city's open space inventory is quite varied and flexible in the kinds of activities it can support, real use limits arise when any individual facility is analyzed and when the distribution of facilities is taken into account.

The character, and consequently the uses, of open space vary widely within the city. Frequently, when the term is used, "Open Space" means publicly-held or controlled property whose dedicated or intended use is for recreational activities or as a landscaped amenity: the Cambridge Common, Danehy Park, the local tot lot, or the MDC's Alewife Brook Reservation are among the many possible examples. It is expected that such land will remain in public use or control and will not be built on or disposed of for private development or other public uses (like schools). When the issue of adequacy of standards arises it is this kind of open space that planners have in mind, and in this document this type of open space is the kind usually referenced.

Outdoor recreation areas by type



Outdoor recreation areas by users



POLICY 63

Open space and recreational facilities serving a wide range of functions and clientele, including the elderly and special needs populations, should be encouraged, either through expansion of the existing inventory, through multiple use of existing facilities, or through creative programming of those facilities.

POLICY 64

Conservation lands and other environmentally sensitive areas are a vital part of the city's open space system and should be maintained and protected appropriately. Public access to and use of these areas must be carefully planned and balanced with preservation of these resources.

POLICY 65

Expansion of Cambridge residents' opportunities to use regional recreational facilities (those owned by the Metropolitan District Commission and the Commonwealth) located in the city should be encouraged, particularly where the adjacent residential community is underserved by local recreational facilities, and when the legitimate regional use of that facility would not be unduly restricted. In addition, there should be increased coordination of recreation programming and planning between the local and regional levels.

The range in the character of this open space suggests opportunities to provide a variety of recreational uses and activities as recommended in Policy 63. Though all of these uses are not necessarily compatible on any single site, all are generally considered desirable or necessary and should be accommodated within the open space system. The new Daney Park is a large facility with many active uses but its location at the edge of the city, with limited nonauto access, assures that only a limited number of people can make convenient use of the facilities on a regular or daily basis. Smaller facilities located throughout the city, such as Sennott and Riverside Press parks, provide fewer recreational uses but are easily accessible to abutting neighborhoods.

Determining the appropriate mix of uses for a site requires careful evaluation of community needs, the site's special features and characteristics, the functions it can and does serve and the public benefit it contributes to the open space system. While a large facility in size, the MDC's Alewife Reservation is an important urban wild area which significantly limits its use for active recreation. Similarly, the Fresh Pond Reservation is a unique natural resource, providing the city a public water supply and high quality open space and recreational opportunities. Policy 64 suggests that the City must balance carefully the need to protect environmental resources with the need to accommodate recreational use throughout the open space system.

The multi-use MDC park along the Charles River is large, widely distributed, and accessible to a number of city neighborhoods. Its uses are limited in part by physical space or by its intended character (as for instance as a wild area or visual amenity). But in the case of the active facilities at Magazine Beach, the limitations are programmatic, because the facilities are, legitimately, designed to serve a regional clientele. Policy 65 suggests that more direct service to Cambridge residents requires a change in the way the facilities are managed and coordinated with local programming specifically.

New Open Space in Development Areas

In contrast to the severe constraints the city's existing dense neighborhood development pattern imposes on the expansion of open space facilities, the evolving industrial areas, in Alewife, East Cambridge, and Cambridgeport, provide an opportunity for significant additions to the city's open space inventory. This is because these districts, and frequently their individual constituent lots, are large by city standards, the use of the land is in flux, subject to change and frequently to total redevelopment, and it is possible to permit significant flexibility with regard to the character of the future private development. Policy 66 recommends that new open space facilities should be considered where these circumstances occur. The city's challenge is to secure such open space without disruption of the private redevelopment of these areas and with as little financial commitment as possible.

The city has actually had a significant track record in this regard over the past decade. Charles Park in East Cambridge is on land donated by three adjacent commercial and residential developments and financed exclusively by monies provided to the City by those developments. The park is, and will remain, publicly owned.

In Cambridgeport's University Park redevelopment, a multi-acre open space will be created which will be accessible to all city residents for various low-intensity recreational activities. The park, which is required by the zoning affecting the site, will remain in private ownership but is required to be accessible to the general public for at least seventy-five years.

A second site in Cambridgeport will be transferred to City ownership for a park, to be built and programmed by the City to meet the recreational needs of the abutting neighborhood. A zoning mechanism recently adopted by the City Council provides the means by which the site's development potential can be transferred by the owner, in this case MIT, to other sites, thus making the land available to the City at no cost.

POLICY 66

New open space facilities, including larger ones for organized activities, should be considered for those private developments where the size of the development, the amount of land area and/or the ownership patterns provide the flexibility to accommodate such a facility without loss of economic value for other uses.



The creation of Charles Park was established as an important goal in the 1978 East Cambridge Riverfront Plan. The land for this park had belonged to Lotus and the developers of the Cambridge-Side Galleria and the River Court housing project. Through agreements with the City, the land and money for design and construction of the park were secured. The park opened in 1992.

Acquisition of New Open Space

The desirability of additional open space facilities for Cambridge residents is rarely disputed. However, the issue which immediately comes to the fore, is the cost the city is willing and able to pay to increase its open space inventory. This cost comes both in monetary terms and in lost opportunities to use the land for alternate, equally important uses like affordable housing or residential parking.

Federal and state acquisition programs, when they are well funded, may ease the financial burden of open space acquisition. They do not ease the conflict between competing uses, but on occasion creative use of a site may make multiple uses possible.

POLICY 67

Acquisition of publicly owned or administered open space should be made in those dense residential areas clearly deficient in all forms of open space, but only where significant fiscal resources are provided through federal or state acquisition programs or a substantial portion of the cost is born privately; facilities of modest size and flexible in use characteristics, located close to the homes of the persons for whom they are intended should be encouraged.

Further, the constraints that density imposes on the city's attempts to secure new open space may be eased somewhat by exploring creative solutions to the shortage. The city's street and sidewalk rights-of-way, of which there is ample supply, may on some occasions and in certain circumstances provide open space options. An example is when a street is redesigned to make open space use possible simultaneously with use by vehicles: the "woonerf" concept common in European residential neighborhoods or when a street is closed on a regular basis to permit exclusive pedestrian use, as is done with Memorial Drive in the summertime.

Nevertheless, it is anticipated that any new additions of open space in critically deficient neighborhoods will be difficult to achieve and a rare occurrence.

This public open space in Central Square was created by the City following an eminent domain taking of a site which had been used as a gas station.

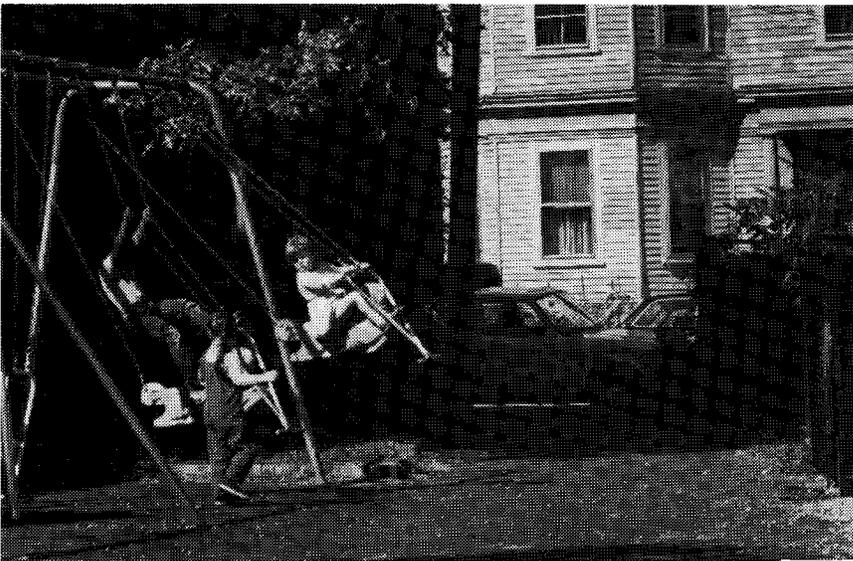


Retention of Open Space

A corollary to the difficulty of expanding the open space inventory, is the need to prevent the sites now in the open space system from falling prey to the demands of other, often compelling uses. Such diversions were not uncommon in the past when schools replaced parks regularly; minor incursions for expanding or improving a roadway are still not uncommon. The issues that will regularly face the city are whether there are any circumstances under which an open space should be lost to another use and, in such circumstances, is the loss of one kind of open space more acceptable than another kind.

"Use it or lose it" might be the motto to sum up the fate of open space facilities in the past and the danger they face in the future. Policy 68 suggests that except in the most unusual circumstances, so unique that they cannot be foreseen in advance, no open space should be lost to other uses. Further, the value of any open space should not be measured, in this regard, by the current intensity of its use for active recreation. Quite aside from the lost potential for future active use, the loss of green spaces which have no active use at present is real. Such spaces provide value simply by diluting the impact of the frenetic, cluttered environment that unavoidably characterizes any urban community like Cambridge.

Policy 69 recognizes that there is much open space in the city, held in private ownership and subject to the vagaries of the owner's future development intent, that is important and valuable to all citizens either directly through active use or indirectly as an amenity in the city's environment, appreciated by all who pass by or through it. The city can be served in very material ways both by securing such facilities from destruction and by making them ever more available to the general public for direct use where that is appropriate.



POLICY 68

Only under extraordinary circumstances should existing open space facilities be eliminated from the city's inventory for other uses; small, passively or merely visually used facilities, should not be undervalued in this regard merely for lack of intensive or active recreational use.

POLICY 69

The city should encourage the permanent retention and protection of useful, effective, attractive private open space whether publicly accessible or not. Community use of private recreational and open space facilities in the city should be encouraged at reasonable levels where the private function of those facilities would not be impaired and where the recreational activity provided by the private facility is not well served in available public facilities.

Maintenance of Open Space

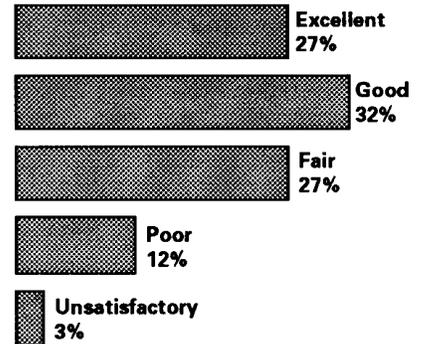
Pressure on the city's open space inventory can arise when available facilities are not useable for their intended purpose because they are in disrepair. This in turn may be because the facility cannot sustain the wear and tear of use to which it is subject. In a world of limited resources, how should the city balance acquisition of open space against maintenance of the existing inventory? How should the city balance lower cost investment in a wide range of facilities to address immediate needs against higher cost investment in quality facilities with greater durability but a limited range of impact?

POLICY 70

Repair, maintenance and timely upgrading of existing facilities should be the city's highest fiscal priority with regard to open space and recreational facilities. The City should explore, and adopt as appropriate, mechanisms whereby the private sector can reasonably provide, assist in and/or contribute to the maintenance of publicly useable open space and recreational facilities.

An open space system in a constant state of disrepair serves no one well and colors the perception of the utility and desirability of open space and recreational facilities for those who suffer their neglect. In an environment where choices must be made, where the options for public intervention are severely constrained, Policy 70 recommends that the city err on the side of quality construction and maintenance and timely upgrading of facilities as needs and demand change.

Condition of city maintained parks



Total not equal to 100 due to rounding

Appendices

A . MAPC's MetroPlan 2000

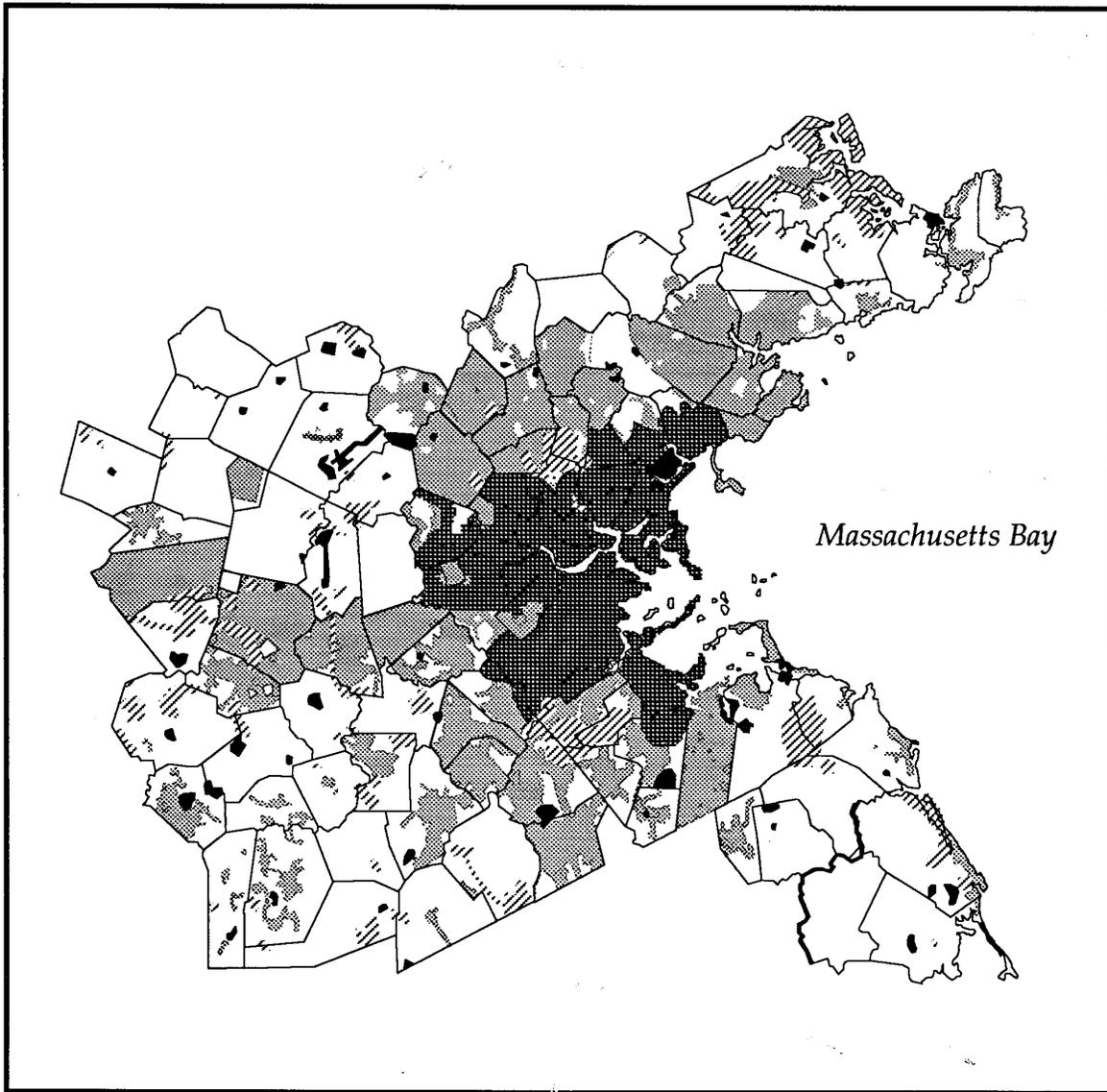
Cambridge is physically a very small place with just over six square miles of land area. Whatever its problems and prospects, or however it chooses to define its ideal future, the City's character in the years ahead will be greatly influenced by actions at the regional, state, and Federal level. Housing (money for affordable units) economic development (overall state economy) and transportation (priorities set by the State) in particular are tempered by such influences. With this in mind, the City has actively supported the efforts of the Metropolitan Area Planning Council (MAPC) in developing MetroPlan 2000, a Regional Development Plan for Metropolitan Boston.

In 1987, when the Metropolitan Area Planning Council initiated the MetroPlan 2000 planning process the region was continuing to show signs of stress from the impacts of development in the region. Traffic was growing by 4% per year leading to steady increases in congestion and air pollution. Water and sewer treatment facility capacity was in great demand. The ratio of housing costs to wages was higher in the Boston area than any other metropolitan area in the nation. The region seemed to be calling for a vision for its future which would allow economic development to take place in an efficient and well planned manner.

MetroPlan 2000 provides this vision for future growth in the 101 cities and towns in the MAPC region. The basic tenet of the plan is that concentrating development is economically and environmentally more practical than our current mode of scattered growth. Concentrated development encourages transit, ridesharing and pedestrian traffic thereby reducing auto travel, traffic congestion, air pollution and fuel consumption. In addition, this type of development reduces the pressure to develop open space and environmentally sensitive lands.

The plan is divided into three main sections. The first is the regional development plan which describes the classification of land use proposed for the metropolitan area. The second section is comprised of action recommendations which are the tools for implementing the plan. The third and final section of the plan will be a capital improvement program which prioritizes infrastructure expenditures in the region according to the goals of MetroPlan 2000.

MAPC Regional Development Plan



Development Area Classifications

-  Urban Area
-  Multi-Service Area
-  Suburban/Rural Area
-  Concentrated Development Centers (Not Shown)

Land Resource Protection Areas *

-  Preserved
-  In Need of Protection

* Information shown here is preliminary. Only parcels of 100 acres or more are shown. See page 36 for further discussion of Land Resource Protection Plan.

Note: This map is a graphic approximation of the boundaries of the area classifications. For more detailed delineation, refer to the GIS map at a scale of 1:60,000.

The Regional Development Plan

MAPC has created a regional development framework which addresses the imbalance between economic growth and the resources necessary to support it. The framework designates areas differentiated by various levels of development potential and natural resources. A basic foundation of this plan is to encourage future growth to take place in a concentrated manner.

There are four primary land use classifications in the plan:

- The Urban Area is the area within 1 1/2 mile of the rapid transit system.
- The Multi-Service Area is the area outside the urban area supplied with public sewer service.
- The Suburban/Rural Area has no public sewer service.
- The Land Resources Protection Area is to be preserved as part of a network of open space including critical environmental areas and unique landscape features.

Each of these classifications is mapped on figure 1 to show the areas of the region which need to be protected as well as those areas that are appropriate for development. The land resources protection plan and the development plan data are currently being updated and refined.

Within each of those four classifications are Concentrated Development Centers. These centers are characterized by the existence of or potential for sustaining mixed use concentrated development. General criteria for these centers include: the feasibility or availability of public transportation services, the existence of or plan for the achievement of 10% affordable housing in the host community, existing or proposed water and sewer capacity and a design and location which contributes to a reduction in auto travel.

Most potential development sites in Cambridge are located within the Urban Area which is defined as having the following characteristics:

- Potential high density development (FAR > 2.0)
- Public water and sewer
- Residential, commercial and industrial development
- Development focused around transit systems (especially walking distance to transit stops)
- Linkage to neighborhoods for affordable housing
- Protection of open space encouraged

Within the Urban Area are three subclassifications comprising the Urban Economic Core, Urban Growth Centers and Urban Centers. The Urban Economic Core is the commercial heart of the Region and includes the North Point, East Cambridge and Kendall Square development areas of Cambridge and probably extending to include University Park. Urban Growth Centers are areas that will grow substantially in the future. Alewife is considered an Urban Growth Center. Urban Centers are established areas that will experience mostly in-fill development and would include the Central, Harvard and Porter Square areas of Cambridge.

While encouraging growth in the Urban Area of the region that is within walking distance to transit, MetroPlan 2000 also discourages development not served by transit which would include in Cambridge such areas as lower Cambridgeport and the area along Memorial Drive at the Cambridgeport/Riverside border.

Action Recommendations

The second section of the plan is made up of 68 action recommendations. These are the tools for the implementation of the plan. The recommendations were developed by seven policy committees which meet regularly to discuss the problems facing the region in the areas of economic development, facility siting, housing, land resources, solid waste, transportation and water resources. The committees' recommendations include actions regarding specific technology, funding mechanisms, general policies, and specific MAPC actions in each policy area.

Although a full presentation of all action agenda items along with a discussion of objectives and possible implementation mechanisms are found in the actual MetroPlan 2000 document, a summary is presented here.

Economic Development

MetroPlan 2000 has singled out three major issues that threaten the region's economy. They are: a mismatch between the skills offered by available workers and the skills demanded by emerging job opportunities; the lack of job opportunities which can offer middle income wages to those lacking college educations; and inadequate local, regional and state control over the development process and infrastructure investment. From these issues, recommendations have been made, the goal of which is to preserve and enhance economic diversity within the region, reinforce its economic strength, and provide employment for its residents.

Facility Siting

Siting of facilities has become increasingly difficult as problems ranging from prison overcrowding to lack of waste disposal facilities remain unresolved. There is a need in our region to improve and streamline siting processes to ensure successful development of needed projects. Many of the problems encountered today center on perceived need for additional facilities, fairness in existing processes, and the lack of coordination between various siting entities. MetroPlan 2000 makes several recommendations which could help in the siting of necessary regional facilities.

Housing

Adequate and affordable housing is a critical piece of the region's development plan for the future. MetroPlan 2000 recommendations present programs and concepts that address the most pressing housing issues facing the region: an insufficient supply of housing to accommodate the future employment growth; an inability of communities to meet the state required 10% affordable goal; and a desire to keep housing permanently affordable. The goal is to assure adequate and sufficient permanently affordable housing to provide for the diverse needs of the region's population and its current and future work force.

Land Resource.

MetroPlan 2000 includes a set of recommendations the goal of which is the protection of environmental and recreational resources within the region to enhance the quality of life and protect the public health. These resources include environmental, recreational, historic, visual and cultural resources, such as views, landmarks and areas of special locational character which define "a sense of place".

Solid Waste

Solid waste disposal is a problem we can no longer ignore. Solid waste generation rates and current disposal practices in the region indicate that more than one third of the MA PC communities will run out of solid waste disposal capacity within the next ten years. MetroPlan 2000 recommendations center around the goal of communities working together to develop and integrate solid waste management systems.

Transportation

For transportation, the thrust of MetroPlan 2000 has been to reverse the trend toward longer commutes, to reduce the reliance on single-occupancy vehicles and to improve the options for auto-free commuting. In the MetroPlan 2000 recommendations, the emphasis is on consolidating travel and demand to a strong urban economic core and to concentrated growth centers. The hope is that in this environment, carpooling, vanpooling, walking and bicycling, in addition to transit, will be feasible to a far greater extent than today. Towards this end, MAPC proposes that a new regional transportation plan be developed including capital programming and project prioritization that is based upon the vision offered by MetroPlan 2000.

Water Resources

Based upon existing system capacities, future water and sewer demand projections, and the status of water quality, MetroPlan 2000 recommends a focus on the maintenance and upgrading of the existing water supply and waste water treatment systems. The goal is to provide adequate service to the region and to protect; water supplies; wetlands; and coastal resources.

Capital Investment Program

MAPC is currently prioritizing infrastructure expenditures in the region according to MetroPlan 2000. This annually updated Capital Investment Program (CIP) will be the third section of the Plan. This program will be developed by the MAPC policy committees and staff with input from sub-regions and communities. The program will include projects which require the expenditure of funds from state and federal sources or from quasi-independent authorities. Regional investments in waterworks, sewerage and waste water treatment systems, transportation, housing, and purchases to set aside land resources will be prioritized in the CIP .

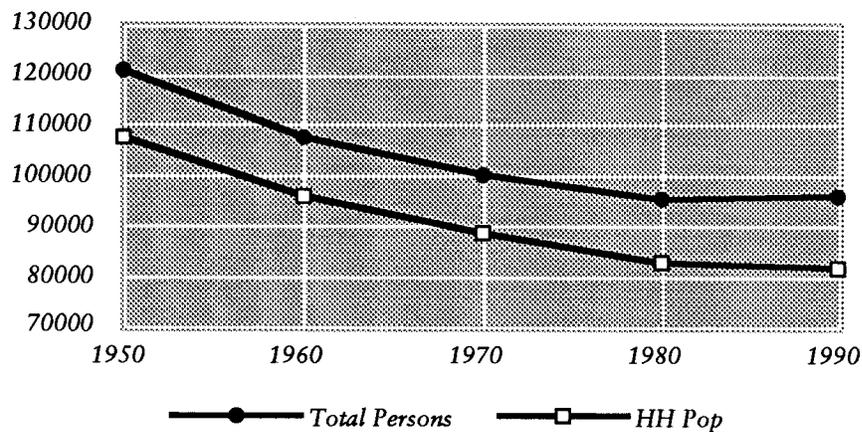
Planning Process

The action recommendations of MetroPlan 2000 establish a regional framework for the implementation of policies adopted in MetroPlan 2000. The plan cannot work without public input and support nor can the plan be implemented in a rational way without regional coordination of all component policies. MetroPlan 2000 offers several ways to reinforce the current regional planning process and to integrate regional issues into the local planning process and local planning issues into the regional planning process.

B. Background Data

Total & Household Population of Cambridge

The population of Cambridge has fallen steadily since 1950, though in the past decade it has begun to stabilize at 95,802. Decline has occurred mainly in the population which lives in households, while the number of people in "group quarters" - mainly students in college dorms - has remained stable.



Year	Population	Household Population	Group Qtrs Population	% in Grp Qtrs
1950	120,740	107,676	13,064	12.1%
1960	107,716	95,778	11,938	12.5%
1970	100,316	88,502	11,859	13.4%
1980	95,322	82,888	12,434	15.0%
1990	95,802	81,769	14,033	17.2%

¹ "Group Quarters" = college residences, nursing homes, shelters & jails.

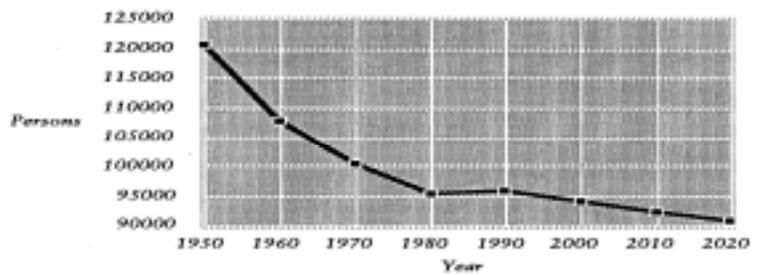
Population Trends

Cambridge population is projected to decline very gradually in the coming decades, but will likely level off around 90,000.

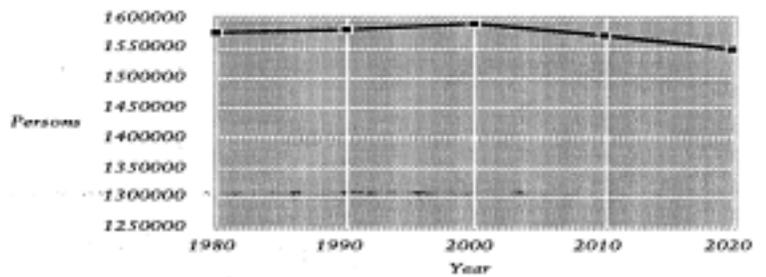
Year	Cambridge	Inside Rte. 128
1980	95,322	1,574,737
1990	95,802	1,579,452
2000	93,972	1,591,205
2010	92,128	1,568,746
2020	90,775	1,547,937

Source: Metropolitan Area Planning Council

Cambridge



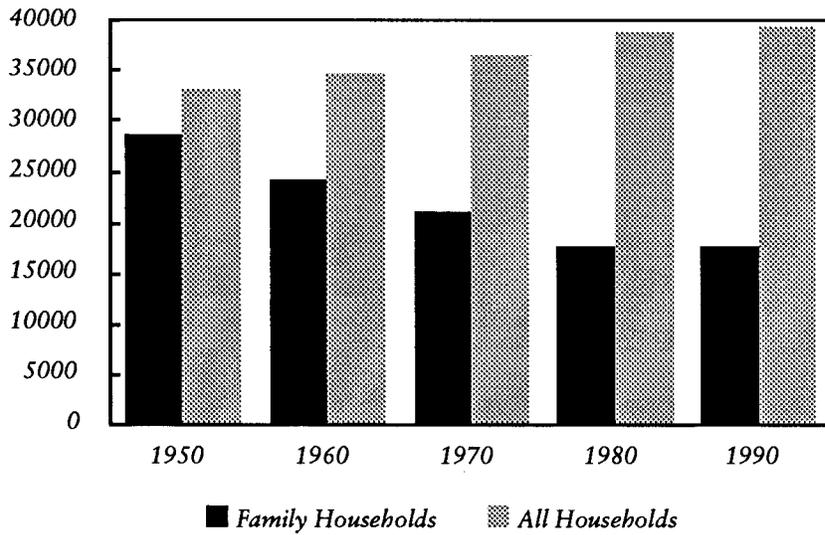
Regional: Inside Rte. 128



Family and Household Trends

The number of households in Cambridge has grown substantially since 1950, but the average size of households has shrunk, from an average of 3.27 persons per household in 1950 to 2.08 in 1990.

Changes in living arrangements, or "household composition," have created smaller households. Important changes include fewer families, fewer families with children, and more people living alone or with roommates. A family, by US Census definition, is any household with more than one person whose members are related by birth, marriage, or adoption. In 1990, over 40% of all Cambridge households included just one person. In 1950, families comprised 9 out of 10 households; today, less than half (45%) are families.



Year	Families	Households	Pct. Family Hhs
1950	28,640	32,921	87.0%
1960	24,187	34,523	70.6%
1970	20,850	36,411	57.3%
1980	17,415	38,836	44.8%
1990	17,575	39,405	44.6%

Persons/Family

Year	Persons/Fam
1960	3.4
1970	3.2
1980	3.0
1990	2.9

Detailed Household Types: 1990

Among families, a little over a quarter are couples with children; 40% are couples without children, and one in six families is headed by a single parent.

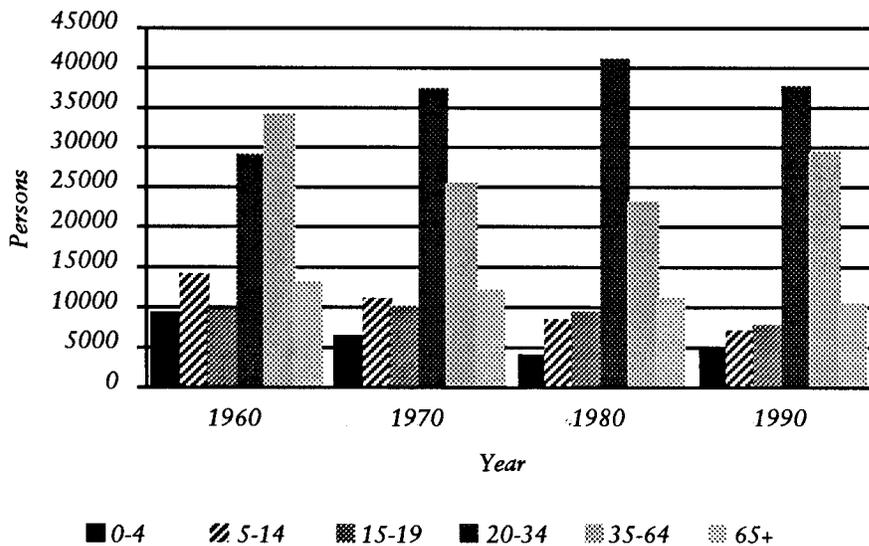
Family Households		% Families	% of All Households
<i>Couples w/Children</i>	5003	28.5%	12.7%
<i>Couples w/no Children</i>	7174	40.8%	18.2%
<i>Single parent families</i>	2864	16.3%	7.3%
<i>Other family households</i>	2534	14.4%	6.4%
Nonfamily Households			
<i>Single Persons Alone</i>	16686		42.3%
<i>Roommates</i>	5144		13.1%
Total Households	39405		

Age Structure

Cambridge has traditionally had a population "bulge" in the young adult age group (20-34); this group expanded dramatically between 1950 and 1980 and has leveled off. The age groups with the largest increases since 1980 were 35-44 and 45-54, as "baby boomers" grew into middle age. There was a slight increase in young children as well. As those born in the boom years age, there will be a corresponding rise in older middle aged and senior persons in the next 20 years.

	1960	1970	1980	1990
0-4	9,251	5,919	3,834	4,759
5-14	13,810	10,760	8,120	6,704
15-19	9,440	9,705	9,033	7,469
20-34	28,811	37,005	40,770	37,542
35-64	33,787	25,272	22,694	29,257
65+	12,617	11,700	10,871	10,071
Total	107,716	100,361	95,322	95,802

	1960	1970	1980	1990
0-4	8.6%	5.9%	4.0%	5.0%
5-14	12.8%	10.7%	8.5%	7.0%
15-19	8.8%	9.7%	9.5%	7.8%
20-34	26.7%	36.9%	42.8%	39.2%
35-64	31.4%	25.2%	23.8%	30.5%
65+	11.7%	11.7%	11.4%	10.5%
Total	100.0%	100.0%	100.0%	100.0%

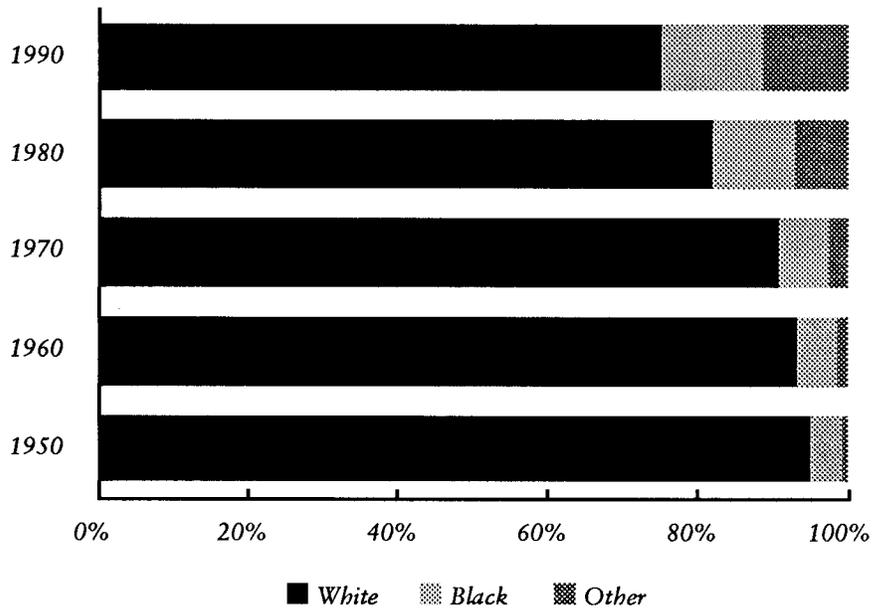


Race

Cambridge has become far more diverse racially over time; the minority population, 5% in 1950, now makes up over 28% of all residents. Though African American and foreign born black residents represent the largest minority, the Asian population has grown substantially, topping 8% of all residents. Close to 7% are of Hispanic background. Fifty percent of the public school population was of minority background in 1988-89, up from 38% in 1981.

	Total	White	Black	Other
1950	120,740	115,068	5,235	437
1960	107,716	100,929	5,671	1,116
1970	100,361	91,408	6,783	2,170
1980	95,322	78,460	10,418	6,444
1990	95,802	72,122	12,930	10,750

	Total	White	Black	Other
1950	100.0%	95.3%	4.3%	0.4%
1960	100.0%	93.7%	5.3%	1.0%
1970	100.0%	91.1%	6.8%	2.2%
1980	100.0%	82.3%	10.9%	6.8%
1990	100.0%	75.3%	13.5%	11.2%



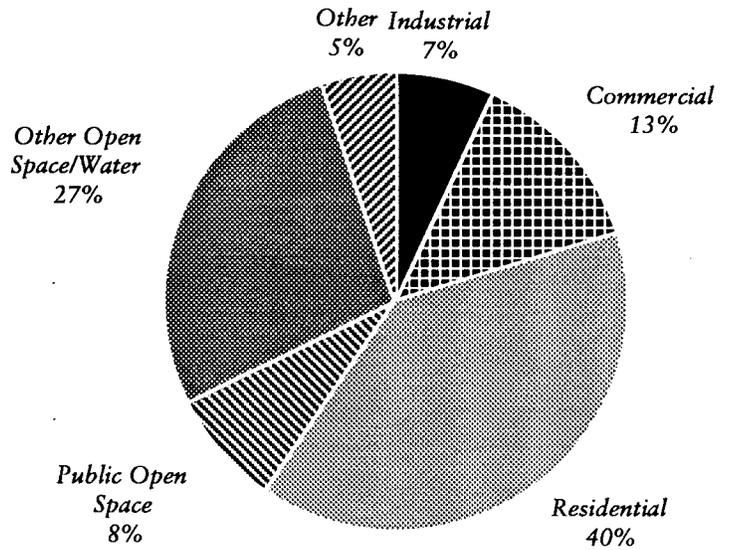
Detailed Race

The city's growing diversity is fueled by immigration. The largest groups of newcomers have emigrated from Portuguese-speaking nations (Portugal, Cape Verde, Brazil), Central and South America, and the Caribbean. In particular, many have arrived from El Salvador, Columbia, the Dominican Republic, Jamaica, and Puerto Rico. Other sources of newcomers include Africa, India and Eastern Europe.

	1980		1990	
	Number	% Total	Number	% Total
<i>White, Non-Hispanic</i>	75,793	79.5%	68,550	71.6%
<i>Black, Non-Hispanic</i>	10,086	10.6%	12,178	12.7%
<i>American Indian, Eskimo, Aleutian Isl. (Non-Hispanic)</i>	126	0.1%	237	0.2%
<i>Asian or Pacific Isl.</i>	3,612	3.8%	7,981	8.3%
<i>Chinese</i>	1,571	1.6%	3,616	3.8%
<i>Asian Indian</i>	705	0.7%	1,386	1.4%
<i>Korean</i>	493	0.5%	1,302	1.4%
<i>Japanese</i>	609	0.6%	734	0.8%
<i>Filipino</i>	126	0.1%	250	0.3%
<i>Vietnamese</i>	67	0.1%	216	0.2%
<i>Other Asian/Pac Isl.</i>	41	0.0%	477	0.5%
<i>Hispanic</i>	4,536	4.8%	6,506	6.8%
<i>Mexican</i>	496	0.5%	801	0.8%
<i>Puerto Rican</i>	1,583	1.7%	1,875	2.0%
<i>Cuban</i>	279	0.3%	254	0.3%
<i>Other Hispanic</i>	2,178	2.3%	3,576	3.7%
<i>Other, Non-Hispanic</i>	1,169	1.2%	350	0.4%
Total	95,322	100.0%	95,802	100.0%

Land Use and Development

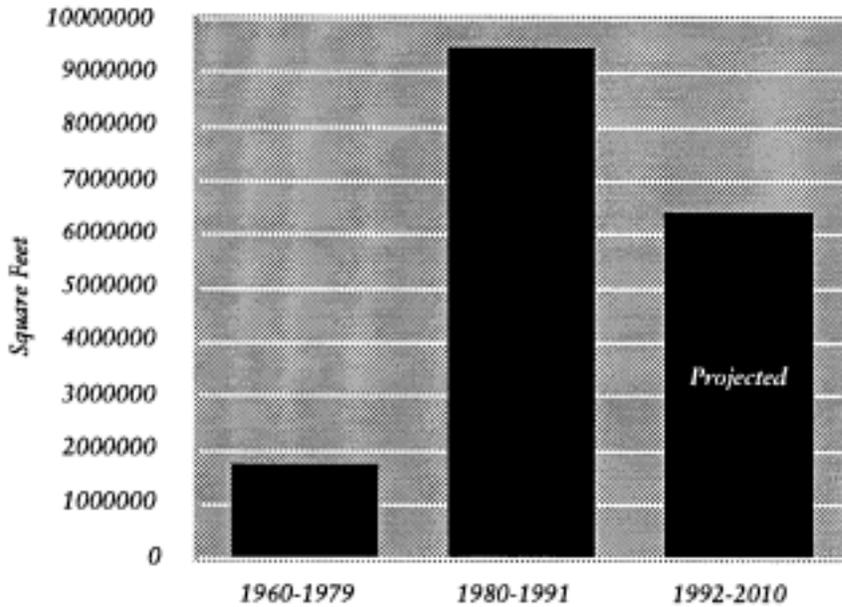
This 1985 estimate of land use in Cambridge was prepared from aerial photograph analysis in order to compare land use changes in the metropolitan area over the past two decades. The procedure is more effective for suburban and rural areas where there are dramatic changes from natural areas to urban land uses. While the analysis misses the subtleties of the city's land use composition- for example, it has no category for institutions-it provides a useful snapshot of the general balance of uses in the city's development pattern.



Source: Metropolitan Area Planning Council based on interpretation of aerial photography at the University of Massachusetts at Amherst.

Commercial Development

Cambridge experienced unprecedented growth in the past decade, adding close to 10 million square feet of commercial space, and over 1000 hotel rooms. Nearly half of this development occurred in East Cambridge, where software and biotechnology firms thrive where makers of footwear and soap once stood. By contrast, less than 2 million square feet of commercial space was constructed between 1960 and 1979.



District Commercial Development(1) in Square Feet

	Completed 1960-1979	Completed 1980-1991	Planned or Projected 1992-2010
<i>Alexwife</i>	20,000	1,352,900	2,332,000
<i>Cambridgeport</i>	0	666,000	1,293,000
<i>East Cambridge</i>	0	3,917,200	971,000
<i>Kendall Square</i>	1,158,527	2,250,000	1,427,000
<i>Mass Ave (Central to Harvard Sq)</i>	439,000	321,000	102,000
<i>Harvard Sq</i>	105,000	524,000	246,500
<i>North Mass Ave</i>	0	394,000	25,000
<i>North Point</i>	0	20,660	0
TOTAL	1,722,527	9,445,760	6,396,500

(1): 1st class office, R&D and some retail 1980-91;
1st class office only 1960-79.

Hotel Development

For the next 20 years nearly 1200 hotel rooms are in the planning stage.

Area	Project	Rooms
<i>Alewife</i>	<i>Alewife Center</i>	200
<i>Cambridgeport</i>	<i>U. Park</i>	350
<i>Kendall Square</i>	<i>One Kendall</i>	300
<i>Mass Ave (Central to Harvard Sq)</i>	<i>YWCA</i>	96
<i>North Point</i>	<i>N. Pt. Center</i>	200
Total: Rooms/Suites Planned/Potential		1146
Rooms/Suites Constructed 1980-1991		1054

Commercial Buildout and Potential Buildout

Areas formerly dedicated to industrial uses have been the focus of planning and rezoning activity for the past decade. The Alewife area has the greatest potential for additional development.

Location	Lot Area	Floor Area	FAR	Percent Built Out
<i>Alewife</i>	13,173,592	3,596,081	0.27	19.04%
<i>Cambridgeport</i>	3,400,000	3,900,000	1.15	68.50%
<i>East Cambridge (1)</i>	2,063,609	1,031,698	0.50	23.00%
<i>North Point</i>	2,645,336	957,792	0.36	63.85%

(1): Rezoning area only

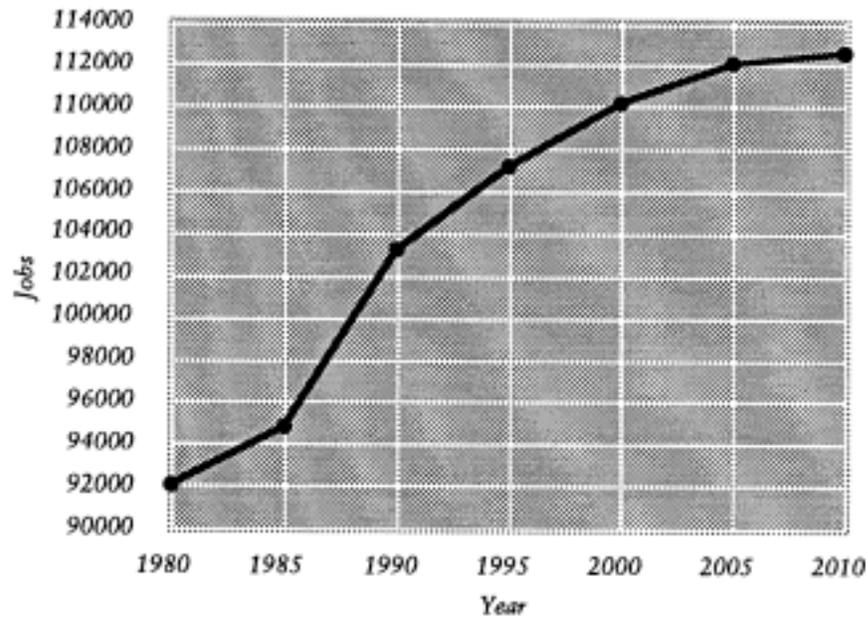
Cambridge Employment: Public and Private, 1980-2010

Over 10,000 (net) new jobs were created in the 1980s.

Year	Jobs
1980	92,044
1985	94,848
1990	103,277
1995	107,200
2000	110,150
2005	112,050
2010	112,600

Public and Private Job Growth

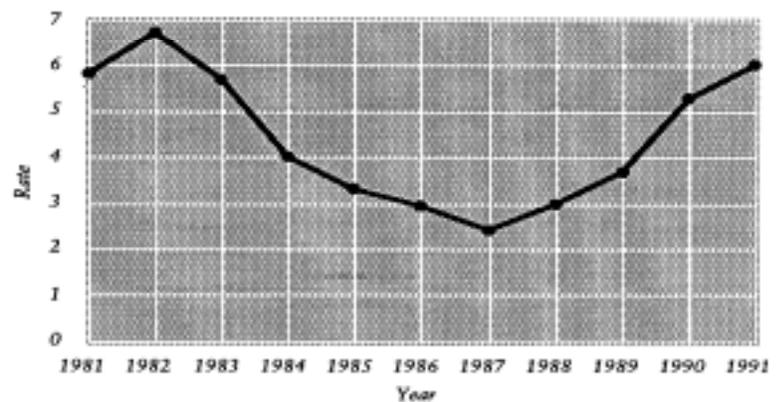
Cambridge may add up to 7000 new jobs by the year 2000; modest growth or stability is projected for the following decade.



Source: Metropolitan Area Planning Council; MA Dept. of Employment and Training

Resident Unemployment

Low rates of unemployment accompanied the robust development climate of the 1980s. Jobless rates have climbed since then, from a 1987 low of around 2%, to an average of 6% in 1991.

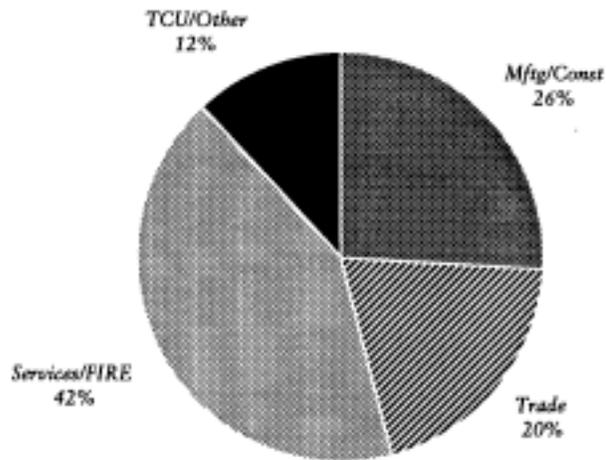


Employment in Cambridge Companies by Industry

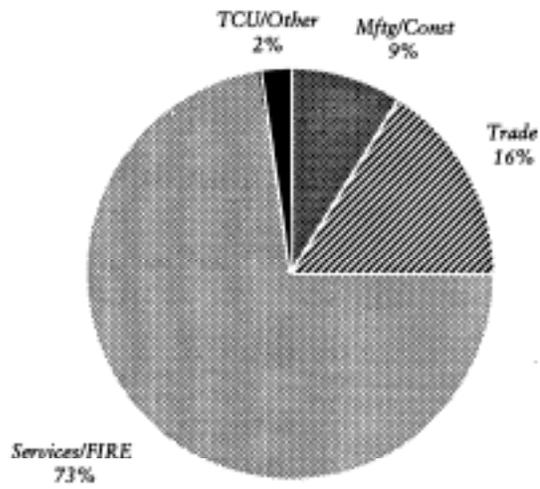
Recent developments continued long term trends in the economy. Twenty years ago, one in four private jobs in Cambridge companies was in production of goods (manufacturing and construction); less than half were in services or finances, insurance and real estate. Today, nearly three quarters of all jobs in Cambridge companies are service-oriented, while less than one in ten is devoted to goods production.

Industry	1972 Jobs	% of Total	1990 Jobs	% of Total
Agriculture/Mining	111	0.1%	199	0.2%
Construction	3,454	4.0%	1,358	1.4%
Manufacturing	19,214	22.3%	7,467	7.7%
Trans/Comm/Utilities (TCU)	9,960	11.6%	2,165	2.2%
Wholesale & Retail Trade	16,858	19.6%	15,532	16.1%
Finance, Insur, Real Est. (FIRE)	2,051	2.4%	3,398	3.5%
Services	34,506	40.1%	66,327	68.8%
Total Private Employment	86,154	100.0%	96,446	100.0%

Cambridge Employment by Industry, 1972



Cambridge Employment by Industry, 1990



Resident Employment

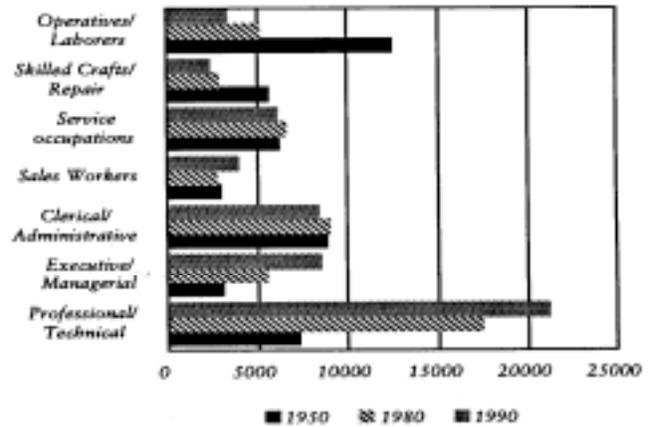
Jobs held by Cambridge residents also reflect industrial changes. In 1950, 40% worked in skilled and semiskilled "blue collar" trades, while less than one quarter worked in professional, technical and managerial jobs. In 1980, almost half of all residents held professional managerial jobs, and about one in six worked in blue collar fields.

	1950	% Total	1980	% Total	1990	% Total
Agriculture/Mining	177	0.4%	202	0.4%	196	0.4%
Construction	2129	4.5%	1166	2.3%	1374	2.5%
Manufacturing	13678	28.9%	6620	13.3%	5240	9.7%
Trans/Comm/Utilities	3660	7.7%	2178	4.4%	2114	3.9%
Wholesale & Retail Trade	8894	18.8%	6013	12.1%	6089	11.3%
Finance, Insur, Real Est.	2391	5.0%	2531	5.1%	3337	6.2%
Services (3)	13538	28.6%	28435	57.2%	33376	61.7%
Government	2887	6.1%	2537	5.1%	2371	4.4%
Total	47354	100%	49682	100%	54087	100%

(3) "Services" include Education, Health, Business & Professional services.

	1950	% Total	1980	% Total	1990	% Total
Professional/Technical	7143	15.7%	17555	35.3%	21211	39.2%
Executive/Managerial	3110	6.6%	5533	11.1%	8559	15.8%
Clerical/Administrative	8950	19.1%	9034	18.2%	8418	15.6%
Sales Workers	2989	6.4%	2796	5.6%	3961	7.3%
Service occupations	6251	13.3%	6650	13.4%	6148	11.4%
Skilled Crafts/Repair	5643	12.0%	2939	5.9%	2425	4.5%
Operatives/Laborers	12567	26.8%	5175	10.4%	3375	6.2%

Source: US Census, 1950, 1980

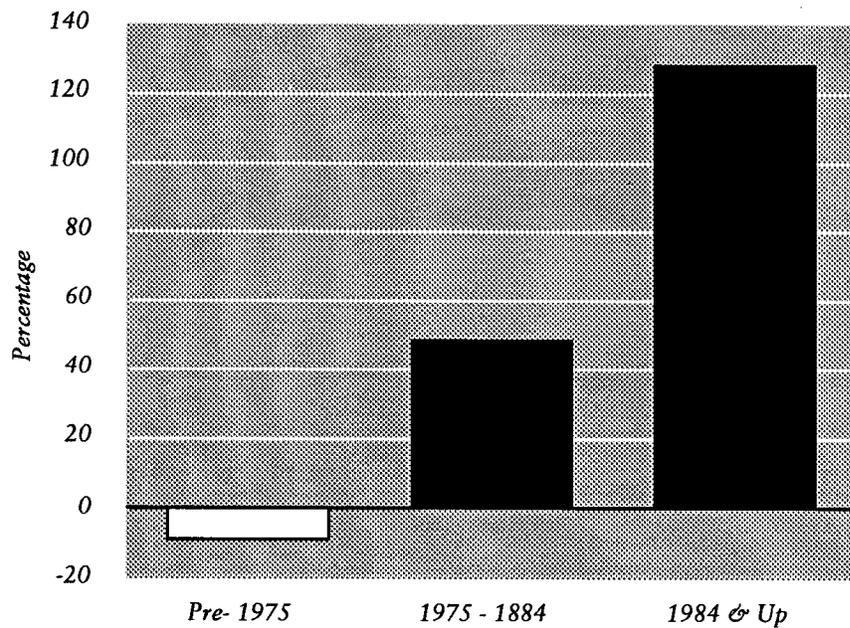


Employment Change 1987-1990, by Date Companies Were Established in Cambridge

A 1991 survey of 91 Cambridge employers further illuminated these trends. Job growth is focused in new, knowledge-based companies, led by business services such as software, research and consulting, and medical and biotechnical employers. Older firms specializing in producing goods or providing personal services tend to be declining or stable.

Mature companies, on average, reduced their employment by 10% between 1987 and 1990 while new companies had average growth rates of over 120%.

About half of the companies established prior to 1975 lost jobs, but only 18% of the companies established since 1985 experienced employment decline.

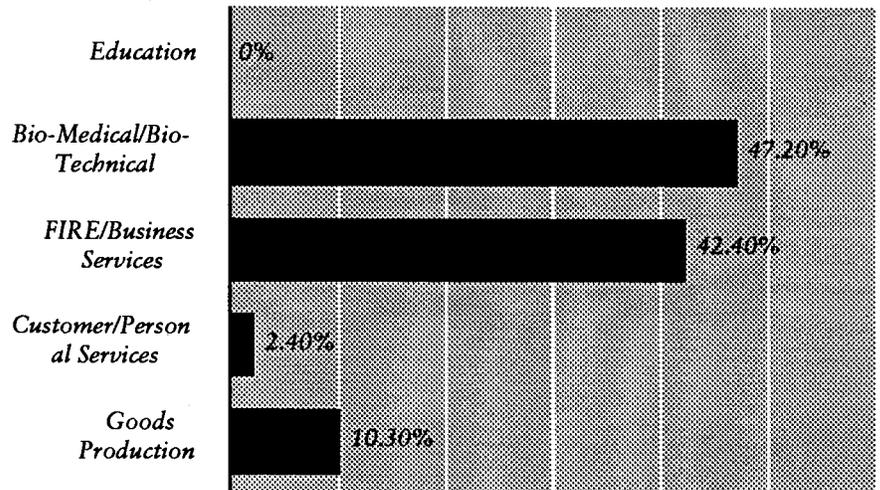


Expected Employment Changes by Industry, 1992-1995

The trends of the recent past are expected to continue. The Medical/ Biotechnical and the Finance Insurance Real Estate Business Services sectors will continue to expand but less rapidly than they have, and the Goods Producers and Customer/Personal Services both anticipated moderate expansion to replace their recent decline. Education should remain a steady source of over one in five of the city's jobs.

Virtually all Medical/Biotechnical companies surveyed expect employment expansion in the next three years, but most anticipate job growth of no more than 25% of their current total employment.

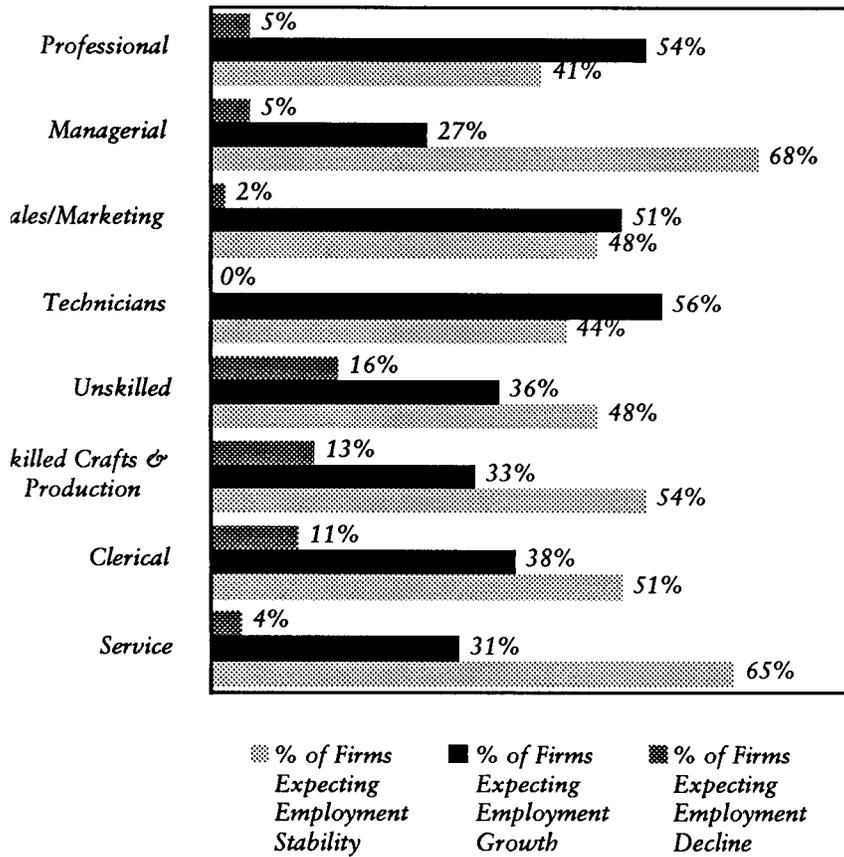
70% of FIRE/Business Service respondents anticipate net job expansion.



Expected Employment Changes by

Occupational Category, 1992-1995

Job growth for "technicians" led all other occupations in job growth and is expected to continue. Professional and sales/marketing jobs are also projected to rise. Candidates with education beyond high school have the most opportunities.

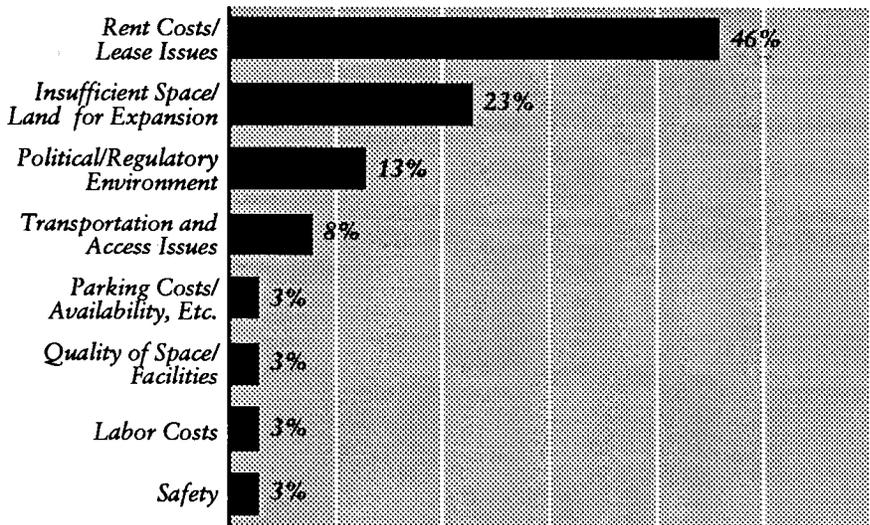


Why Companies Leave Cambridge

25% of all Cambridge companies rate the probability that they will stay in Cambridge for the next three years as something less than very likely.

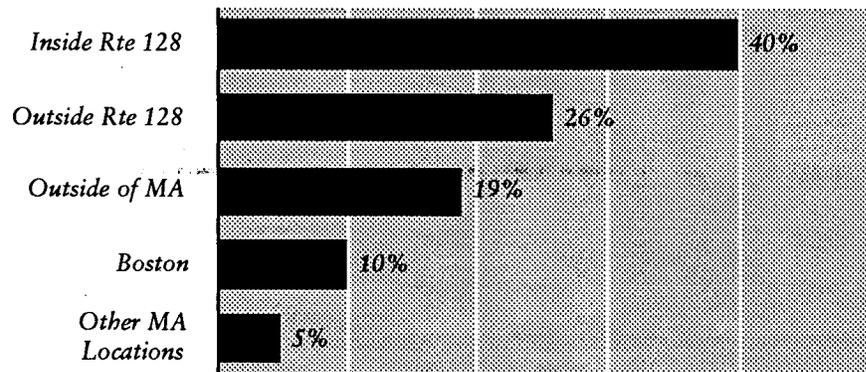
Companies established in the 1950's and 1960's are the most likely to consider leaving. 21 of the 23 companies that are less than sure to stay in Cambridge were established in 1975 or earlier.

Other than Education, FIRF/Business Services is the sector most likely to stay in Cambridge. Goods Producers and Customer/Personal Service firms are the most likely to consider leaving.



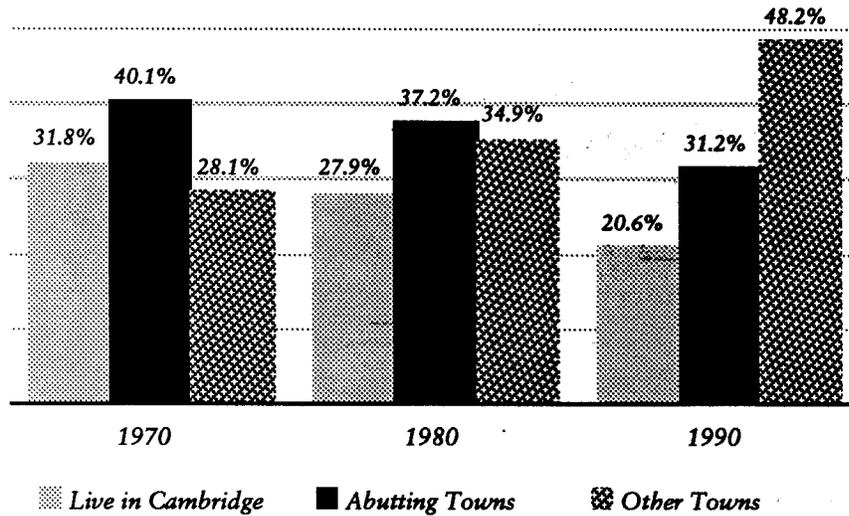
Where Else Cambridge Employers Would Consider Locating

The cost and availability of real estate are by far the biggest factors for firms that consider leaving Cambridge. The relative cost pressures on Cambridge commercial tenants have intensified in recent years due to the rapid decline in suburban real estate rents. The relatively high cost of the City's commercial space represents a genuine threat to employment stability.



Home Location for Cambridge Employee.

As the economy of Cambridge has shifted, so has the home base of its work force. Twenty years ago, 3 out of 4 local employees lived either in Cambridge or in abutting towns well-served by public transit. Today, just over half of the city's employees live nearby, while 48% commute in from more distant locations.



	1970	1980	1990
Live in Cambridge	31.8%	27.9%	20.6%
Abutting Towns (1)	40.1%	37.2%	31.2%
Total Cambridge & Abutting Towns	71.9%	65.1%	51.8%
Rest of the World	28.1%	34.9%	48.2%
Grand Total	100.0%	100.0%	100.0%

(1) Abutting Towns: Arlington, Belmont, Boston, Brookline, Somerville, Watertown

Source: US Census (1970 & 1980 data); Cambridge Commuter Mobility Program Survey representing 12,700 employees (1990 data)

Automobile Registration

From 1970 to 1986, the number of cars registered in Cambridge rose by nearly 40 percent, despite relatively little change in population and a major investment in expanding and improving the public transit system.

	1970	1986	% Change
Cambridge	27866	38997	39.9%
Abutting Towns	231561	322964	39.5%

Cambridge Employees Means of Commuting, 1980

Nearly half of all employees in Cambridge workplaces (43.3%) rely on single occupancy vehicles to get to work, according to the 1980 Census, while one in five uses public transit and one in six commutes in a car or van pool.

% of Employees by Home Location	Home Loc.	Single					
		Occ. Vehicle	Car/Van Pool	Public Transit	Bike	Walk	Other
<i>All Cambridge</i>							
<i>Employees</i>	100.0%	43.1%	16.8%	21.7%	2.6%	15.3%	1.2%
<i>Live in Cambridge</i>	27.9%	23.6%	8.8%	16.6%	3.2%	45.6%	2.2%
<i>Abutting Towns</i>	37.2%	38.8%	16.2%	34.9%	2.3%	6.6%	1.1%
<i>Total Cambridge & Abutting Towns⁽¹⁾</i>	65.1%	32.3%	13.0%	27.1%	2.7%	23.3%	1.6%
<i>Rest of the World</i>	34.9%	63.2%	23.7%	11.2%	0.7%	0.5%	1.0%

(1) Abutting Towns: Arlington, Belmont, Boston, Brookline, Somerville, Watertown. Source: US Census 1980

Cambridge Resident Labor Force Means of Commuting, 1980

Residents of Cambridge who work here are more likely to walk to work than to drive or use other means of transport. Over 45% in 1980 walked to Cambridge workplaces, while one fourth drove by themselves. Among residents working in abutting towns, one half used public transit, and close to one third relied on single occupancy vehicles.

% of Employees by Work Location	Work Loc.	Single					
		Occ. Vehicle	Car/Van Pool	Public Transit	Bike	Walk	Other
<i>All Cambridge</i>							
<i>Employees</i>	100.0%	31.5%	10.1%	28.0%	2.6%	26.2%	1.6%
<i>Live in Cambridge</i>	52.3%	23.6%	8.8%	16.6%	3.2%	45.6%	2.2%
<i>Abutting Towns</i>	34.2%	31.4%	7.4%	51.8%	2.3%	6.1%	1.0%
<i>Total Cambridge & Abutting Towns⁽¹⁾</i>	86.9%	26.7%	8.2%	30.6%	2.8%	30.0%	1.7%
<i>Rest of the World</i>	13.5%	62.1%	21.9%	9.8%	0.7%	1.4%	4.1%

(1) Abutting Towns: Arlington, Belmont, Boston, Brookline, Somerville, Watertown. Source: US Census 1980

Vehicle Miles of Travel (VMT) by Trip Purpose for Auto Trips with an Origin or Destination in Cambridge, 1987

Journeys between home and work account for over half of all miles traveled by car in trips which begin or end in Cambridge. One third of the mileage is traveled by non-residents working in Cambridge. About 33% of the total daily traffic on Cambridge arterial streets is through trips with no point of origin or destination in Cambridge.

Trip Purpose	Cambridge		Region	
	VMT	% of Total	VMT	% of Total
<i>Home-Based Work Trips</i>	1,874,680	57.1%	34,562,384	54.0%
<i>Non-Residents Work in Cambridge</i>		30.0%		
<i>Residents Work in Cambridge</i>		5.8%		
<i>Residents Work Elsewhere</i>		21.1%		
<i>Home-based Other Trips</i>	896,947	27.3%	21,507,019	33.6%
<i>Non Home-based Trips</i>	513,447	15.6%	7,912,970	12.4%
Total	3,285,074	100.0%	63,982,373	100.0%

Source: Central Transportation Planning Staff

The Federal Clean Air Act, as amended in 1990, requires that no urban area exceed unhealthy air conditions more than four times in any three year period. When these standards are exceeded for smog-forming compounds, an air quality designation is assigned to the region. Our metropolitan area is designated as moderate for carbon monoxide and as serious for hydrocarbon emissions. The serious designation means that we must reduce air pollution emissions by 15% by 1996 and an additional 3% annually until we have achieved a reduction in emissions totaling 30%. This is all to be achieved with automobile travel currently increasing at a rate of over 3% per year.

Growth in Housing Units

The number of housing units in Cambridge increased from 33,437 in 1950 to 41,979 in 1990.

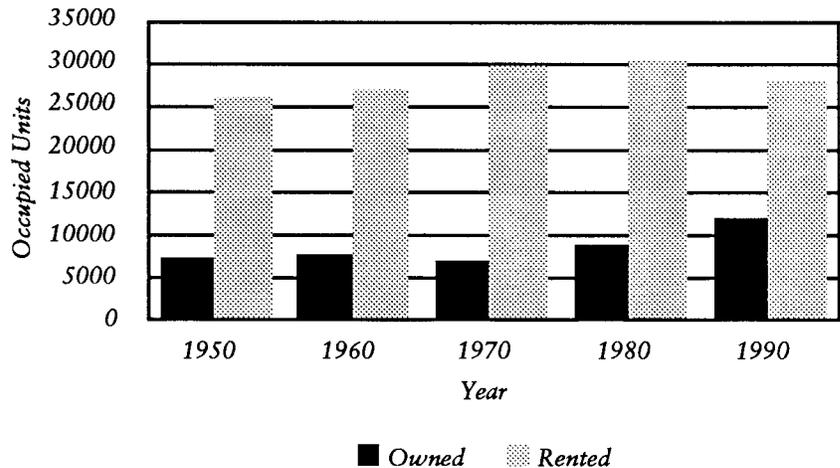
Year	Total	Occupied
1950	33437	32795
1960	35330	34253
1970	37648	36411
1980	41300	38836
1990	41979	39405

Homeownership Trends

Although there was considerable condominium conversion in the 1970s, Cambridge remains a city of renters. The rate of homeownership increased in the 1980s, from 23% to 30%, but this was due to construction of new condominiums, rather than conversion of rental stock.

There is little over-crowding in Cambridge. Nearly 85% of the house holds are "over-housed," i.e., between zero and 0.5 persons per room.

Among occupied rental units, about 56% are rent-controlled, one quarter are market rate (non-controlled), and the remainder are subsidized.



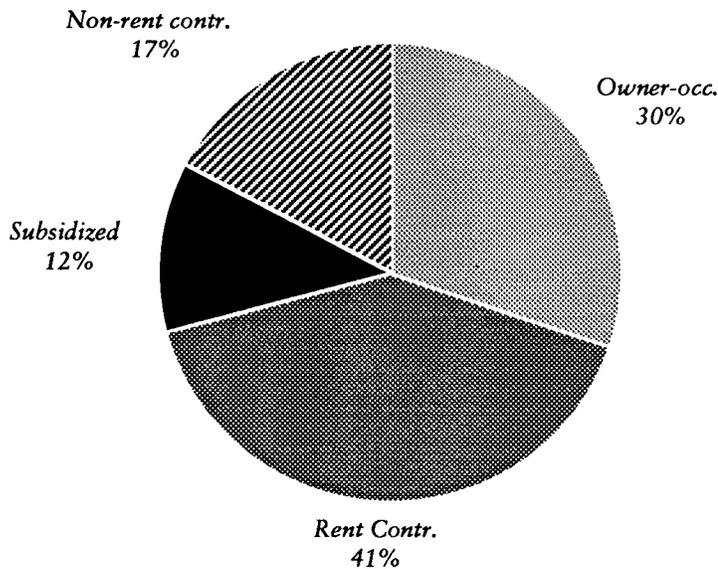
Year	Owned	Rented	% Owner Occupied
1950	7190	25605	21.92%
1960	7708	26545	22.50%
1970	6990	29421	19.20%
1980	8889	29947	22.89%
1990	11959	27446	30.35%

Source: US Census 1950-1990

Occupied Housing Units by Type

Rent-controlled and subsidized units together comprise 53% of all units, but these units are not easily accessible to many low income renters, particularly those with children. In addition, the demand for subsidized units far exceeds the supply: there are over 4000 households on the Cambridge Housing Authority waiting lists, of which 2000 live in Cambridge.

Type of Units	Units	% Total
Owner-occ.	11959	30%
Rent Contr.	16054	41%
Subsidized	4703	12%
Non-rent contr.	6689	17%
Total:	39405	100.0%



Source: Goetze, Cambridge Housing Challenges, 6/90 US Census 1990. Note: Counts for occupied rental units by type (subsidized, rent controlled and non-rent controlled) are estimated.

38% of all Cambridge renters pay over 30% of their income for rent. Over half of all city households have incomes below 80% of the Boston area median income (\$45,000 in 1989).

Rents in non-controlled units, which average \$950 for two bedrooms and \$1,150 for three, require an income of \$38,000 and \$46,000 a year, respectively. These rents exceed the typical salaries of a local school teacher, secretary, computer programmer or car mechanic. Many Cambridge households require two steady incomes to rent on the open market.

Purchasing a home at 1989 levels was affordable to just 18% of the city's households. A \$90,000 income was required to purchase a home at the 1989 median price of \$231,000. While home prices have dropped since then, homeownership remains beyond the reach of most Cambridge residents.

Market Rents and Minimum Household Income Required

Apartment Size	Typical Rent	Minimum HH Income Required @ 30% of Income
<i>Studio</i>	\$500	\$20,000
<i>1 Bedroom</i>	\$650	\$26,000
<i>2 Bedroom</i>	\$950	\$38,000
<i>3 bedroom</i>	\$1,150	\$46,000

Source: Goetze, *Cambridge Housing Challenges*, 6/90

Households by Income, % of Boston Area Median Income

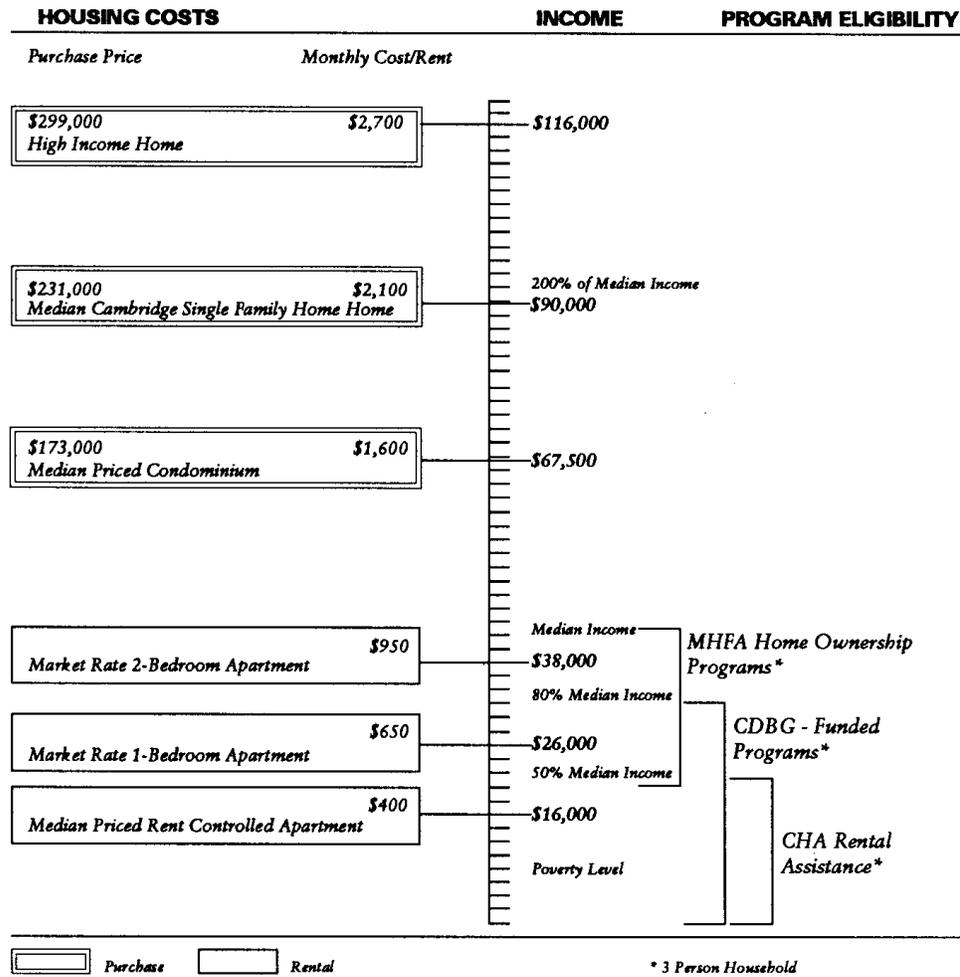
Income Level	% of all Households
<i>50% or less of median income</i>	31.1%
<i>51-80% of median income</i>	20.2%
<i>81-120% of median income</i>	20.9%
<i>Over 120% of median income</i>	27.7%

Cambridge Homes and Condominiums, 1987-1991 Median Prices

Year	Residential	Condo
1987	\$221,625	\$162,000
1988	\$226,000	\$165,000
1989	\$231,000	\$173,500
1990	\$225,000	\$168,300
1991	\$200,000	\$160,000

Source: Goetze, *Cambridge Housing Challenges*, 6/90; *Banker & Tradesman*.

Cambridge Housing Affordability



Cambridge Housing Affordability

FAMILY PROFILES	HOUSING TYPES							
	Annual Income	Affordable Monthly @ 30% of Income	Single or Multi-family Ownership 7,034 bldgs 17% of stock \$231,000	Condominium 2,718 units 7% of stock \$173,000	Market rate Rental 2 BR Apt 6,650 units 16% of stock \$950/mo	Market Rate Rental 1 BR Apt 2,903 units 7% of stock \$650/mo	Rent Controlled Apartment 16,104 units 40% of stock \$400/mo	Subsidized Housing 5,023 units 12% of stock 30% of income
Janitor and unemployed spouse; 1 child	\$14,434	\$361						eligible
Single computer systems analyst; no children	\$42,890	\$1,072			yes	yes	yes	not eligible
Single AFDC recipient; 1 child	\$6,984	\$175						eligible
Two Cambridge hospital workers; 2 children	\$29,750	\$744				yes	yes	not eligible
Single City DPW Worker; 1 child	\$23,000	\$575					yes	not eligible
Two first year Cambridge teachers; 2 children	\$44,886	\$1,122			yes	yes	yes	not eligible
Single skilled secretary; no children	\$24,289	\$607					yes	not eligible
Two Cambridge doctors; no children	\$115,381	\$2,885	yes	yes	yes	yes	yes	not eligible

Outdoor Recreation Areas by Type and Users

Cambridge contains 377 acres of public open space (Cambridgeport's Fort Washington contains about one acre). These parklands are evenly divided between active recreational uses, such as ball fields or tot lots, and passive uses, such as sitting areas with benches. The vast majority (85%) of this acreage is used by people from throughout Cambridge.

Type	Acres	% Total
<i>Active Areas</i>	185	49.1%
<i>Passive Areas</i>	192	50.9%
Total Area	377	100.0%

<i>Neighborhood-oriented Areas:</i>	55	14.6%
<i>Citywide Oriented Areas:</i>	322	85.4%

Park Conditions (under City responsibility)

Of the 68 parks under City supervision, two thirds of them are in good or fair condition, while about one in five faces serious problems or was rated totally unsatisfactory.

Condition	Number	Percent
<i>Excellent</i>	9	13.2%
<i>Good</i>	23	33.8%
<i>Fair/minor problems</i>	21	30.9%
<i>Poor/serious problems</i>	10	14.7%
<i>Totally Unsatisfactory</i>	5	7.4%
Total Parks	68	100.0%

Data for Selected Institutions

This data is taken from Appendix C of the Report of the Mayor's Committee on University-Community Relationships, dated 9 December 1991. The four schools participating on the Mayor's Committee, Lesley College, Harvard University, Massachusetts Institute of Technology and Cambridge College, provided the information shown here as part of their work on the Mayor's Committee. The city has not yet checked the land use information against city records, but intends to do so in the near future. In addition, the city intends to seek data in the near future on the other two institutions of higher education, the Episcopal Divinity School and Weston School of Theology.

	Harvard	MIT	Lesley	Cambridge College
Population:				
<i>Students</i>	14,530	9,100	2,312	1,019
<i>Faculty</i>	1,332 ¹	1,000	115	92
<i>Staff</i>	6,900 ¹	8,100	244	45
Employees Living in Cambridge				
	<i>Not Available</i>	1,300	48	21
Educational Facilities (Tax Exempt)(in acres)				
	117	140	<i>Not Available</i>	0 ²
On Campus Housing:				
Undergraduates (spaces)	8,000	4,000		0 ³
			470	
Grad Students, Faculty	1,157 ⁴	1,500		0
Payments to Cambridge				
	\$6,200,000	\$7,150,000	<i>Not Available</i>	0
Real Estate Taxes	\$3,300,000	\$4,230,000		
Payment-In-Lieu-Of-Taxes (PILOT)	\$1,200,000	\$810,000		
Fees and Permits	\$1,700,000	\$2,110,000		

¹The combined total of staff and faculty shown here, 7,233, differs with other sources showing the total number of Harvard employees at over 9,000.

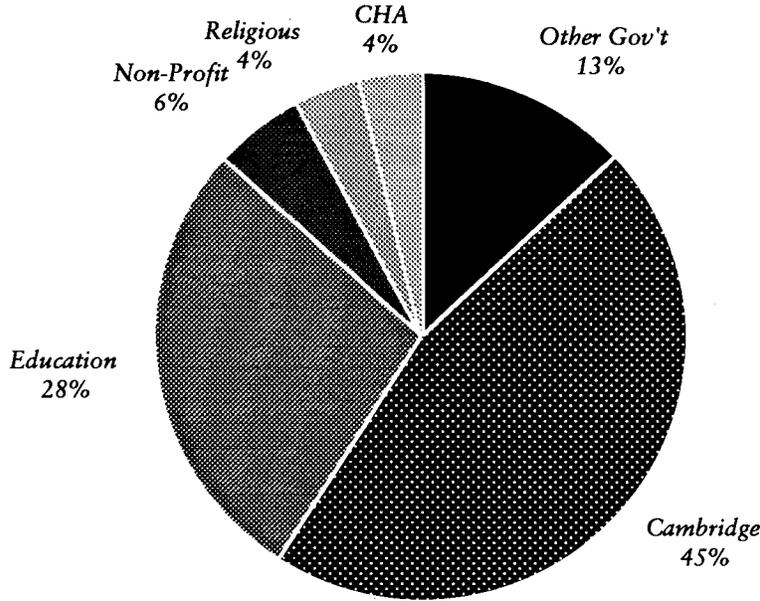
²Cambridge College owns no property in Cambridge. The school currently rents taxable commercial space in Harvard Square for its operations.

³Cambridge College provides no housing for students and has no plans to do so in the future.

⁴These are housing units and not spaces for individuals.

Tax-exempt Land Area in Cambridge

Area	Other Gov't	Cambridge	Education	Non-Profit	Religious	CHA	Total
% of Total Tax Exempt	7,280,467	25,787,597	15,313,080	3,105,569	2,150,725	2,034,756	55,672,194
	13%	46%	28%	6%	4%	4%	100%



Other Government: Middlesex County, state and federal properties. Also in this category are properties owned by state authorities such as the Mass. Bay Transportation Authority (MBTA) and the Mass. Water Resources Authority (MWRA).

Cambridge: all City-owned property including Cambridge Hospital.

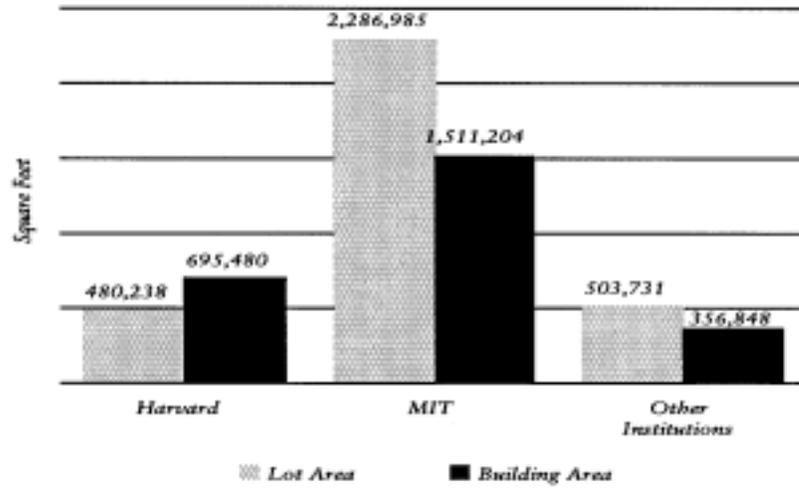
Education: properties owned by educational institutions and containing academic uses. This category comprises private primary and secondary schools, such as Shady Hill; colleges and universities; and schools with special curricula such as the Longy School of Music.

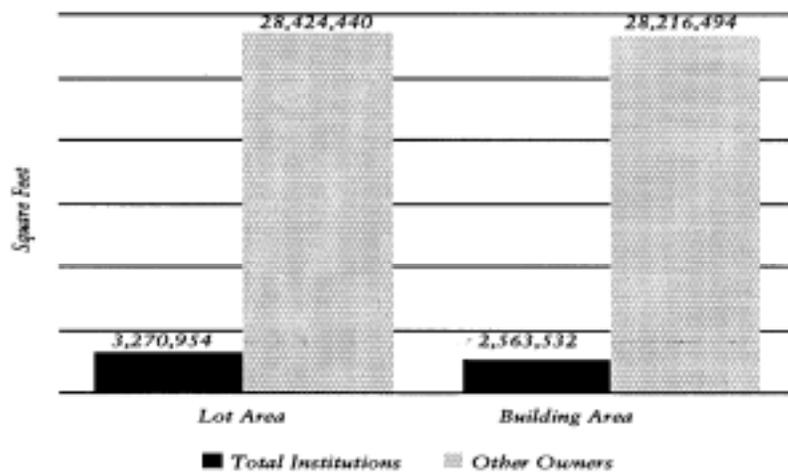
Non-Profit: properties with a wide variety of uses including hospitals; social service agencies, such as the Red Cross; community centers, such as the Margaret Fuller House; and charitable organizations.

Religious: churches and church related properties, most of which are small sites scattered throughout the city. The Roman Catholic Archbishop of Boston is the largest land owner in this category, holding approximately 1,335,509 square feet on nearly 50 sites in the city.

Cambridge Commercial Property, Square Feet

	Lot Area	Building Area	Value
<i>Harvard</i>	480,238	695,480	\$128,697,200
<i>MIT</i>	2,286,985	1,511,204	\$169,028,000
<i>Other Institutions</i>	503,731	356,848	\$48,441,700
<i>Total Institutions</i>	3,270,954	2,563,532	\$346,166,900
<hr/>			
<i>Other Owners</i>	28,424,440	28,216,494	\$3,146,980,000
<i>Total Taxable</i>			
<i>Commercial</i>	31,695,394	30,780,026	\$3,493,146,900

Institutional Taxable Commercial Property

Cambridge Commercial Property Ownership

C. Glossary

Affordable housing generally refers to housing occupied by persons or households with an income of less than 80% of metropolitan area median income, and for which the household pays no more than 30% of its income. In Cambridge, because of the high cost of housing, some sort of subsidy is usually required to create or preserve affordable housing.

Arterial streets provide for through traffic and connect principal areas of activity within the city while also providing for direct access to abutting land. The arterial system should help to define residential neighborhoods and commercial areas.

Commercial districts are parts of the city with a predominance of commercial activity, including retail uses such as shops, cafes, restaurants, and business uses, which are also generally referred to as offices.

Two **Conservation Districts** in the Harvard Square and Mid-Cambridge neighborhoods have been established by the City Council and are administered by committees of residents working with the Cambridge Historical Commission. These districts provide for very strict review of architectural changes and include some discretion in the amount of development allowed.

The **Demolition Ordinance**, adopted by the City Council and administered by the Cambridge Historical Commission, requires that the Commission review the demolition of any structure 50 years or older; if the building is found to be preferably preserved, the Commission may delay issuance of the Building Permit for 6 months, while an alternative to demolition is sought. If none is found, the structure may then be demolished.

Density of development refers to the degree of concentration of square footage of a building on its site. Floor area ratio (FAR) measures density by comparing the square footage of a building to its site: at .5 FAR the building area is half that of the site, at 1 FAR, these are equal, at 2 FAR the building area is twice that of the site, etc.

Design review is the process of studying an architect's proposal for a building to see if improvements can be made, on the basis of some defined criteria. In Cambridge, design review provisions are rather complex and vary from area to area. The basis for review may be set in the Zoning Ordinance, in guidelines supplementing the Ordinance, or in special ordinances adopted by the City Council (e.g. the Mid-Cambridge Neighborhood Conservation District).

Dimensional bonuses are provisions of the Zoning Ordinance which allow more lenient building heights or setbacks from property lines in exchange for some defined public benefit, such as adherence to a design plan or preservation of historic buildings.

Downzoning refers to a change in zoning which diminishes the amount of development allowed by the Zoning Ordinance.

Industrial districts are those parts of Cambridge which have been centers for traditional industrial uses, such as Alewife and parts of East Cambridge and Cambridgeport.

Infrastructure refers to the roadways and utilities (including water, sewer, electric, gas, and telephone) serving the city.

Institutional uses are nonprofit public and private entities such as libraries, churches, post offices, schools, colleges, and universities.

Institutional Overlay Districts have been defined in the Zoning Ordinance; their purpose is to prevent the growth of institutions in the lower density residential districts of Cambridge.

Linkage, like taxation, is based on the concept that development should bear some of the costs of its impact on the community. In Cambridge, there is a \$2 per square foot linkage payment required for commercial developments which require a Special Permit; the first 30,000 square feet is not subject to linkage.

Market forces refers to economic factors of supply and demand which, among other effects, may make a particular type of development more or less profitable and thus more or less likely to happen than another type.

MetroPlan 2000 is a document produced by the Metropolitan Area Planning Council with the intent of creating a vision for future growth in the 101 cities and towns in the Boston region.

Mixed-use refers to a building or area in which several uses coexist, such as Charles Square, with its office, retail, hotel, and residences, or Mass. Ave., with its mix of residential, office, and retail uses.

Neighborhood character is an imprecise term which attempts to summarize the variety of physical attributes that make a neighborhood "feel" a certain way. Character is certainly influenced by the predominant architectural styles, by types of buildings (e.g. triple deckers or brick apartment buildings), by dimensional aspects such as street widths and building heights and setbacks, and by landscaping of yards and streets.

Neighborhood study processes have been undertaken by the Community Development Department in several neighborhoods (East Cambridge, North Cambridge, Riverside, Area 4, and Wellington-Harrington) and will eventually cover the entire city. The purpose of these studies is to clarify each neighborhood's image and to establish a program for its future evolution.

North Point is the northeasternmost portion of Cambridge, separated from East Cambridge by the Msgr. O'Brien Highway. The controversial ramps for the Central Artery will be located partially in North Point, partially in Charlestown.

Open space loosely refers to unbuilt parts of the city. Most often, it is meant to refer only to public parks, playgrounds, and spaces like the Fresh Pond reservation and the Charles River and its banks; at other times, the term may include private spaces, like Harvard Yard, the Lotus Headquarters courtyard in East Cambridge, and Jerry's Pond in Alewife.

Planned Unit Development is a designation in the Zoning Ordinance. This is typically a district which allows development exceeding that permitted in the "base district." In order to qualify for the additional square footage or height of development, specified public benefits are required, such as adherence to an approved master plan or provision of open space.

Research and development refers to business enterprises doing just what the name implies; although this is not an official zoning term, "r & d" firms are most commonly located in office or industrial areas.

Retail uses in Cambridge are allowed in many districts, including business, industrial, and some Planned Unit Development areas. Most residential and office districts do not allow new retail use, although there are many stores or cafes which are "grandfathered" since they were in existence before the zoning was established.

The **Riverfront** is a term often used in reference to the East Cambridge Riverfront, from the Long fellow Bridge to the Museum of Science.

Scheme Z was the name given to the State's original plan for the massive Central Artery interchange and associated Charles River crossing. The City has sued the State to require that a satisfactory redesign be implemented, and negotiations are still underway to that end.

Section 8 Rental Assistance is a federal program of rental payments to private landlords on behalf of lower income tenants. Under this program, the tenant pays 30% of household income to the landlord, and the remainder of the rent is paid from the federal funds. In Cambridge, the program is administered by the Cambridge Housing Authority, which sets the rent for the unit, with maximum rents established by HUD as the local area fair market rents.

SHARP is a state rental assistance program operated through the Massachusetts Housing Finance Agency (MHFA) to provide rental subsidies to housing projects with MHFA below-market-rate financing to fill the gap between what low and moderate income tenants could afford to pay as rent and the income needed to pay the financing costs and other operating expenses. The SHARP program is no longer available for new projects.

Special Permits are given by the Board of Zoning Appeal or the planning Board when it is determined that a particular project is reasonable at the location where it is being proposed. A special permit will normally be granted unless the proposal fails to meet the special permit criteria established in the Zoning Ordinance. The Boards have the power to attach conditions as necessary.

The **State Implementation Plan** is the program by which the Commonwealth of Massachusetts will comply with the goals contained in the Transportation Control Plan for the Metropolitan Boston Interstate Air Quality Control Region as promulgated by the United States Environmental Protection Agency (EPA) and mandated by the Federal Clean Air Act as amended in 1990.

The **Townhouse Ordinance** was conceived in the late 1970s as a way to allow some flexibility in housing design and density in certain districts while, at the same time, avoiding the "Arlington Pillbox" type of apartment building, which could be built as-of-right with negative impacts on neighborhood character. Unfortunately, the number of townhouse/ condominium projects that were built was unexpectedly large, filling in too many back yards. Thus, in the late 1980s the ordinance was revised to eliminate most of the bonus provision

Traffic Mitigation can include strategies and formulas that the city can support and/or require to reduce the number of single-occupant vehicles. This menu can include computerized ride-sharing, incentives to carpool and vanpool, and encouragement of transit use as well as bicycling and walking.

The **Transportation Management Program** refers to the City's effort to encourage alternatives to the automobile carrying only its driver- incentives and requirements have been developed in Cambridge for carpooling, vanpooling, and the use of mass transit, including buses, the subway, and commuter rail. In addition, bicycle usage is being actively encouraged.

Urban Design is an evolving discipline which relates to planning and to architecture. Its focus is on physical design, bringing together aspects of building design with the design of outdoor spaces, both public and private. In Cambridge, urban design plans and guidelines have been created to supplement the Zoning Ordinance in guiding the growth of several parts of the city, such as the East Cambridge Riverfront and Harvard Square.

A **Variance** is a legal relief valve by which a property owner may obtain an exemption from the requirements of the Zoning Ordinance. The petitioner must establish that a hardship exists particular to the lot in question, and the Board must find that granting the variance will not harm the public good.