

# **Cambridge Center**

**An  
Evaluation of the  
Redevelopment Potential  
of Cambridge Center  
in the Kendall Square  
Urban Renewal Area**

**for the  
Cambridge  
Redevelopment Authority**



**A Panel Service Report by  
ULI—the Urban Land Institute  
1200 18th Street, N.W.  
Washington, D.C. 20036**

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Cambridge, Massachusetts  
November 15-19, 1976

A Panel Service Report by  
ULI—the Urban Land Institute  
1200 18th Street, N.W.  
Washington, D.C. 20036

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*The Cambridge Center site with downtown Boston in the background. At few locations is there such a fortunate assemblage of a technically skilled labor force, high accessibility, and academic reserves.*

# FOREWORD

Local communities and both private and public land users are often faced with major land use and development issues without convenient access to advice from knowledgeable and experienced practitioners in the field. In recognition of this need, ULI-the Urban Land Institute operates the Panel Service Program which brings the practical experience and talents of ULI's leading members to bear on difficult community and project development problems. The Panel Service Program has served nearly 100 communities and developers over more than a quarter-century. Panel members are carefully selected to fit the needs of each panel service from ULI's six Councils: Commercial and Office Development, Industrial, New Communities, Recreational Development, Residential, and Urban Rede-

velopment. Members contribute their time and knowledge without personal remuneration.

Under the sponsorship of the Cambridge Redevelopment Authority, a panel from the Urban Land Institute was convened for 5 days during the week of November 15, 1976 in Cambridge, Massachusetts to evaluate the redevelopment potential of Cambridge Center in the Kendall Square Urban Renewal Area. This report is the permanent record of the panel's findings, conclusions, and recommendations. It is hoped that they will both challenge and assist the community in attaining its goal of redeveloping Cambridge Center and thereby contribute to the overall enhancement of the community.

# ACKNOWLEDGMENTS

Both personally and on behalf of the Urban Land Institute, the panel members express their appreciation to his Honor Alfred E. Vellucci, Mayor of the city of Cambridge, and to the other members of the Cambridge City Council. Also, the panel members wish to thank James L. Sullivan, Cambridge City Manager.

The panel appreciates the contribution to this effort made by the Cambridge Redevelopment Authority Board: Chairman Thomas J. Murphy, Vice Chairman Charles C. Nowiszewski, Jerry R. Cole, Frank S. Maragioglio, Gustave M. Solomons, Executive Director Robert F. Rowland, and G. Ronald Thomson, the Authority's consultant for the Cambridge Center project.

Further, the panel wishes to thank Fred F. Stockwell, Executive Vice President of R.M. Bradley &

Company, Inc., and his associates, Murray Regan and Frank G. Neal. Special appreciation is extended to Kenneth J. English, Cambridge Redevelopment Authority staff, for his work in preparing the excellent advance briefing kit.

The cooperation of the Authority Board, staff, and the administration of the city of Cambridge was invaluable to the panel's work during its on-site investigation. ULI wishes to express its appreciation for the many courtesies extended to the panel during its stay in Cambridge. Individually and in teams, the panel talked with nearly 100 community spokesmen, citizens, businessmen, government officials, members of the local real estate community, and others interested and concerned with the future revitalization of the Cambridge Center area. Without exception, their fullest cooperation and assistance was received.



*Longfellow Bridge provides direct access to downtown Boston. The MBTA line runs across the bridge at grade, then disappears underground just before reaching the Kendall Square station. The MIT campus is at the left of the picture.*

# PANEL MEMBERS

**WILLIAM F. CALDWELL**, President of Caldwell Development Corporation, is a Trustee of ULI-the Urban Land Institute and Vice Chairman of Membership for the Residential Council. Mr. Caldwell's company activities are in the housing and commercial construction areas and include eight residential subdivisions, eight apartment complexes, an industrial park, two large shopping centers, and several office buildings. Several years ago, the company began a planned unit development in Amherst, New York, which encompasses 1,200 acres with housing and other developments centered around golf course and lakefront communities. To date, the company has been responsible for developing and building over 350 condominium units, 100 single-family units, and 240 apartments on the site. The New York State Urban Development Corporation selected Caldwell's firm to build over 614 apartment units on Buffalo's waterfront. The company is presently building 276 apartments in Michigan. In addition, Caldwell Development Corporation has an enclosed mall center in the southern tier area of New York state and is building an enclosed mall in Ithaca, New York. In December 1974, the company consummated a substantial equity and joint venture arrangement with a large New York City realty investment firm. The new partnership, U.S. Real Estate Equity Company, is actively seeking real estate opportunities throughout the northeast and southeast United States. At present, the partnership has assumed an asset management role in several larger projects in the northeast on behalf of banks and other lenders. Caldwell is a member of the National Association of Home Builders and is a past vice president of the New York State Home Builders Association, as well as a past president of both the Buffalo Home Show Corporation and the Buffalo Lumber Exchange. He also served many years as a director of the Niagara Frontier Builders Association in Buffalo, New York.

**PATRICK J. CUSICK, JR.**, Vice President of Hayden Associates, Inc., is an Executive Group member of the New Communities Council of ULI-the Urban Land Institute. Cusick joined Hayden Associates, Inc., in July of 1973 and now specializes in multi-use land and central city developments, in particular those activities which interface between project plan and actual development including such aspects as feasibility, organization, development strategies, financing, and cost/benefit analyses. Prior to mid-1973, Cusick was president of the Greater Hartford Community Development Corporation, an organization established by the Greater Hartford Corporation to act as the central city and new communities development arm of the Greater Hartford Process. For a period of 6½ years, commencing in late 1964, Cusick was employed as vice president and general manager of Litchfield Park Properties in Litchfield Park, Arizona. This subsidiary of the Goodyear Tire and Rubber Company was established for the purpose of developing a

new community on the 13,000-acre Goodyear Farms property in the vicinity of Litchfield Park. Cusick was in charge of all phases of this undertaking, advancing it from initial concept through several years of development and sales. During the period from 1953 to 1964, Cusick lived and worked in the Pittsburgh, Pennsylvania area where he was heavily involved in planning and development activities associated with the Pittsburgh "renaissance." For most of that period he was executive director of the Pittsburgh Regional Planning Association and concurrently as of October 1962 executive director of the newly established Southwestern Pennsylvania Regional Planning Commission. Major projects included renewal work in the Golden Triangle (CBD), the Oakland and East Liberty districts of Pittsburgh, an economic study of the Pittsburgh region, and the *Southwestern Pennsylvania Land Use and Transportation Study*. Prior to his years in Pittsburgh, Cusick worked in city management, construction engineering, and planning in various locations in the northeast, and he served in the Civil Engineer Corps of the Navy during World War II. Cusick is a past president of the American Institute of Planners, former vice president of the American Society of Planning Officials, and a fellow in the American Society of Civil Engineers.

**RICHARD G. HANSON**, Vice President of Gerald D. Hines Interests, is an Executive Group member of the Urban Redevelopment Council of ULI-the Urban Land Institute. As Vice President of Gerald D. Hines, Hanson is responsible for development of urban centers, including major office, hotel, retail, and multi-use projects, and suburban office parks. The company owns and operates over 170 diversified projects, including manufacturing plants, office parks, retail shopping centers, warehouses, distribution centers, and industrial parks. Among the firm's most important projects are: One Shell Plaza, Two Shell Plaza, the Galleria Complex, and Pennzoil Place in Houston; TWA headquarters in Kansas City, Missouri; and One Shell Square in New Orleans. Hanson's past experience includes responsibility for commercial and industrial development in Reston for Gulf Oil Company for 2 years; the responsibility for commercial and industrial development in Clear Lake City, Houston for Exxon for 3 years; and participation in various panels or as a speaker during seminars relative to multi-use, industrial, and office building developments. He is a member of the Houston Chamber of Commerce and the International Downtown Executives Association. Hanson received his BA in psychology and completed advanced work in economics and real estate at the University of Southern California.

**HUNTER A. HOGAN, JR.**, Chairman of the Board of Goodman Segar Hogan, Inc., is a Trustee of ULI-the Urban Land Institute, an Executive Group member of the Commercial and Office Development Council, the immediate past president, and a past secretary of the



Institute. Hogan is a former chairman of the Institute's Central City Council (now Commercial and Office Development Council). Goodman Segar Hogan, Inc. and its subsidiaries specialize in property management, chain store leasing, shopping center development, residential sales and land development, appraising, and consulting. Hogan has had wide experience as a commercial land developer, plant site locator, real estate broker, shopping center developer, and real estate consultant, and he is also experienced in property valuation. Hogan is a former regional vice president of the American Institute of Real Estate Appraisers and the Society of Industrial Realtors, and a member of the American Society of Real Estate Counselors, the International Council of Shopping Centers, and the National Association of Realtors.

**KEITH KELLY**, Vice President of development and administration for the Crown Center Redevelopment Corporation, is an Executive Group member of the Commercial and Office Development Council of ULI-the Urban Land Institute. Kelly joined the Crown Center Redevelopment Corporation, a wholly owned subsidiary of Hallmark Cards, Inc., in April 1967. As executive vice president, he was responsible for the continuing economic and financial feasibility studies for Crown Center during its initial stages. He is now in charge of all development and administrative operations for Crown Center. An economist and lawyer, Kelly has had experience as a financial officer, land planner, real estate consultant, and land redevelopment administrator. Prior to his present position, he practiced law in Washington, D.C. for 5 years with Awalt, Clark & Sparks. In 1956 he joined Larry Smith and Company where he worked on economic and financial analysis of real estate problems involving shopping centers, department stores, economic base studies, and the renewal of downtown areas by public and private interests. From 1958 to 1960 he played a part in developing the first regional shopping center in Melbourne, Victoria, Australia. During 1960-1962 he was a consultant for the development of a 100-acre shopping center in Elmhurst, Illinois and the 100-acre Severance Shopping Center in Cleveland, Ohio. He also worked on shopping center and downtown development in Alaska and other states, Canada, and New Zealand. Crown Center in Kansas City is being developed on 85 acres, and the development is projected to incorporate 2,000,000 square feet of office space; a 400,000-square-foot retail, entertainment, and cultural complex; over 2,200 high-rise and low-rise apartments; a 728-room hotel, and parking facilities for 7,000 cars. Completed prior to this year were 600,000 square feet of office space, the hotel, a 4,000,000-square-foot retail complex, a multimedia forum, and parking for 4,000 cars. During 1976, 247 condominium and rental units with parking for 600 additional cars, plus a new office tower of over 600,000 square feet with parking for 600 cars, were added.

**PETER KORY** of John W. Galbreath & Company is an Executive Group member of the Urban Redevelopment Council of ULI-the Urban Land Institute. Kory joined

John W. Galbreath & Company in May 1975 and is currently representing the company in Cincinnati as Vice President of the Cincinnati Redevelopment Corporation. Prior to 1975, Kory was with the New York State Urban Development Corporation where he headed the commercial operations for that organization. He was involved in a broad range of commercial developments focused on the downtowns of cities in the state of New York. From 1955 to 1972, Kory served the city of Cincinnati in various capacities including downtown coordinator and urban development director. During his 17 years with the city of Cincinnati, Kory was in charge of downtown redevelopment efforts including the Central Riverfront and was responsible for the initiation of such other developments as the Over-the-Rhine Town Center, the Queensgate II Town Center, and Uptown Towers. He was also involved with the planning and development of the Queensgate Industrial Park, Queensgate II, the convention center, the stadium, and Riverfront Park. Kory has also participated in projects in the Cincinnati central business district, among them Fountain Square, the second level walkway system, and various building developments such as the Fifth-Third Center, the 580 Building, the Fifth-Race Building, Stouffer's, the Pogue Garage, and Operation Streetscape. Kory has also taught at the University of Cincinnati as an adjunct associate professor of architecture and lectured on urban renewal at the Miami University Graduate School. He has served as a trustee of both the Cincinnati Contemporary Art Center and the Henry Bettman Foundation and was chairman of a highway research board committee on transportation and land development implementation. In 1975 he was made an honorary member of the American Institute of Architects and in 1974, Kory was awarded the citation for excellence in community architecture by the American Institute.

**MELVIN MISTER**, Director of urban economic policy and finance management for the League of Cities, is an Executive Group member of the Urban Redevelopment Council of ULI-the Urban Land Institute. Mister earned his BS degree from Carnegie Institute of Technology in 1958 and his Master of Public Affairs from Princeton University in 1964. His experience at the city level includes 6 years as executive director of D.C. Redevelopment Land Agency (RLA). For the past 3 years, Mister has been involved at the national level with the Conference for Mayors. He has been engaged in the development of programs, worked for their enactment by Congress, assisted in the preparation of regulations to carry them out, and participated in implementation at the neighborhood level. His experience had included social, economic, and physical development programs such as those funded by HEW, HUD, OEO, EDA, and other federal agencies. More specifically, Mister is involved in assisting the mayors to influence federal program and design and to successfully obtaining funds for local use. One of his first steps at RLA was to develop an innovative method for solving the city's urgent housing problems by creating an office of social and economic programs. This office has implemented and developed a number of innovative programs

designed to insure that local residents and minority groups share in the social and economic benefits flowing from the urban renewal program. During his tenure as executive director of RLA, the agency borrowed nearly \$13 million directly through the urban renewal definitive financing program. Mister directed the agency's involvement in the capital budgeting process, including its role as the central relocation agency. During his tenure the agency obtained over \$175 million for urban renewal under the neighborhood development program alone. With amendments to conventional projects, about one-half of the \$435 million of urban renewal money obtained by the agency since it started in 1945 has been obtained while Mister was executive director.

**ROBERT M. O'DONNELL**, President of Harman, O'Donnell & Henniger Associates, Inc., is Trustee and Vice Chairman of the New Communities Council of ULI-the Urban Land Institute. Harman, O'Donnell & Henniger Associates, Inc., is an internationally known planning and consulting firm whose outstanding developments have been Southdale Shopping Center in Minnesota, Vail ski area in Colorado, and the Denver Technological Center. The firm was also a member of an association of consultants who planned Costa Smeralda in Sardina, Italy. As President of the firm, O'Donnell has been responsible for planning Sunset Mountain Park, a planned residential community on 3,500 acres involving a hillside, open space, and unique topography in the Santa Monica Mountains of Los Angeles. O'Donnell was planning consultant for an 8,000-acre new town, St. Charles Communities in La Plata, Maryland, and for the 2,850-acre multi-use planned unit development, Cheyenne Mountain Ranch in Colorado Springs, Colorado. Recently, O'Donnell traveled to Russia with members of HUD's New Communities Administration as a guest of the Soviet government. O'Donnell formerly served on the HUD Design Committee, region V in 1966-68, and he was a HUD transportation awards juror in 1968. Among the awards he has

received are the *House & Home* Top Performer of 1963 distinction and the National Association of Home Builders' award for innovative planned community. His professional affiliations include the American Institute of Planners, the American Society of Landscape Architects, the American Society of Consulting Planners, and the National Association of Home Builders.

**GLORIA M. SEGAL**, Vice President of Cedar-Riverside Associates, Inc., is an Executive Group member of the New Communities Council of ULI-the Urban Land Institute. She has attended the University of Minnesota; the University of Minnesota Continuing Business Education Seminars for Interpersonal Communication and Advanced Communications; the Center for Creative Leadership, Greensboro, North Carolina; the University of North Carolina National Science Foundation; and Harvard's Graduate School of Business, Small Corporation Management Program. Segal is a member of the board and major stockholder in Cedar-Riverside Associates. She is also a consultant, authoress, and lecturer with a special interest in urban redevelopment, and the role of women in corporate policy and management positions. Segal is the cofounder and developer of Cedar-Riverside, the first HUD-recognized "New-Town In-Town." She has been responsible for planning, development, and management of the \$90 million project, including government and community relations, and commercial/residential planning and marketing. She has traveled extensively both in the United States and Europe to study multiple approaches to urban redevelopment, including on-site meetings with management of new communities in England, Scotland, France, Germany, and Israel, as well as in New York, Philadelphia, Atlanta, Pittsburgh, Chicago, Washington, D.C., Miami, Los Angeles, San Francisco, Seattle, Portland, New Orleans, St. Louis, Dallas, Houston, San Antonio, and others. Segal is a past director of the National League of New Community Developers.

## **STAFF OF ULI-THE URBAN LAND INSTITUTE FOR THE CAMBRIDGE CENTER PANEL SERVICE ASSIGNMENT**

**Jerry S. Church**, Membership Services Director

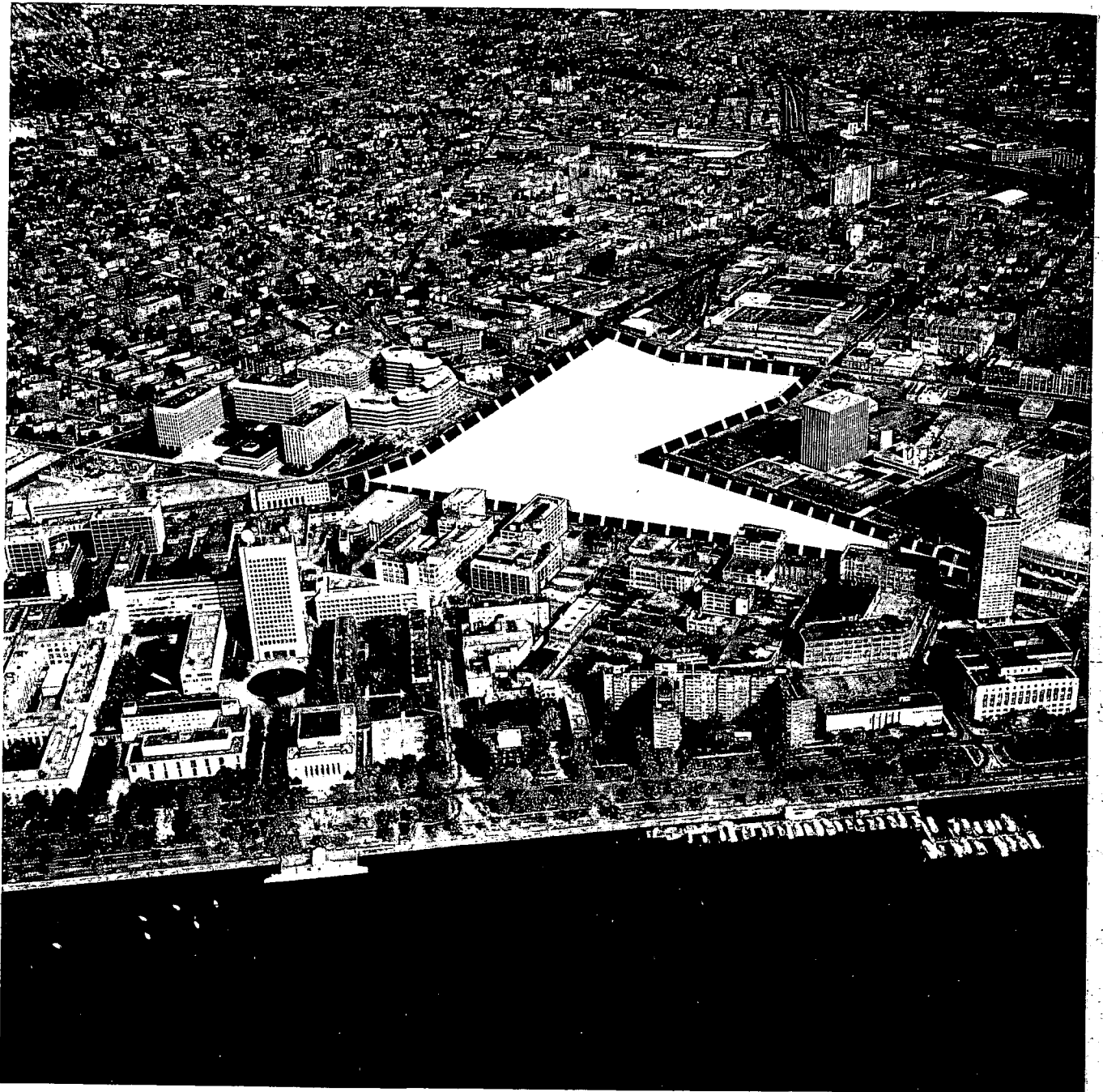
**Nathaniel M. Griffin**, Publications Associate

**Robert L. Helms**, Director of Administration

**Leslie N. Goldman**, Councils' Administrator

### **SPONSOR**

Cambridge Redevelopment Authority



*Aerial view of east Cambridge with the Charles River and MIT campus in the foreground. The proximity of high-density development on all four sides will insure the value of the redevelopment site.*

# THE PANEL'S ASSIGNMENT

In November 1976, a ULI—the Urban Land Institute panel convened to consider a series of questions posed by the Cambridge Redevelopment Authority. These questions were framed within the context of the following five specific objectives which the sponsor identified as being crucial in evaluating the re-use potential of Cambridge Center in the Kendall Square Urban Renewal Area:

- Evaluate the development potential of Cambridge Center.
- Examine the alternative land use proposals included in the Draft Environmental Impact Report and test against the ULI's panel evaluation of the area's development potential.
- Recommend a specific course of action for land use development in the area.
- Provide guidelines for the execution and implementation of the recommended land use development.
- Facilitate the coordination of public officials, community groups, and prospective developers in the acceptance of a unified development program.

The sponsor asked that the panel answer questions grouped around four areas of inquiry—Development Potential, A Course of Action, Execution and Implementation Guidelines, and Coordination Policy. The sponsor gave the following group of questions to the panel:

## Development Potential

1. What is the economic potential of Cambridge Center?
2. Given real estate market conditions in the area, what can the area expect to attract in the way of development? Square foot market absorption?
3. Is there a market for market-level, high-density housing? How many units? Public or private financing?
4. Is there a need for subsidized housing in the area?
5. Will the area support a motel? What is the optimum size of a hotel facility? How much function space?
6. Is there a potential market for industrial development? What kinds of industrial space can be developed here?
7. Is there a potential market for office space? What amount of office space can be successfully marketed? What about "technical" office space?
8. What is the potential for retail development? What kind of retail space is recommended? Physical layout or location in the project?
9. What is the market potential for research or laboratory space?
10. Should an arts center (opera, music, theater) or trade center be considered as part of the development package?

## A Course of Action

1. Which if any of the proposals can be most successfully developed from a marketing standpoint?
2. What is the recommended mix of land use possibilities?
3. What approach should be used to develop zoning for the area?
4. What public facilities are necessary to assure a proper development package?
5. How does the panel view transportation problems? Should emphasis be placed on public transportation? What is the need for Massachusetts Bay Transportation Authority (MBTA) service? Should it be expanded?
6. What are the parking needs? Where should they be placed geographically? When in the development timetable?

## Execution and Implementation Guidelines

1. What number of developers should carry out the proposed program?
2. What kind of developers: local, national, international?
3. Will it be necessary to phase the development over a period of time? If so, how long? Should it be developed all at once?
4. What is the best approach toward space allocation for specific uses?
5. What financial tools (public and private) can be used to facilitate the development?
6. What should the role of government be in aiding or expediting the development? Tax incentives? Moratoriums?

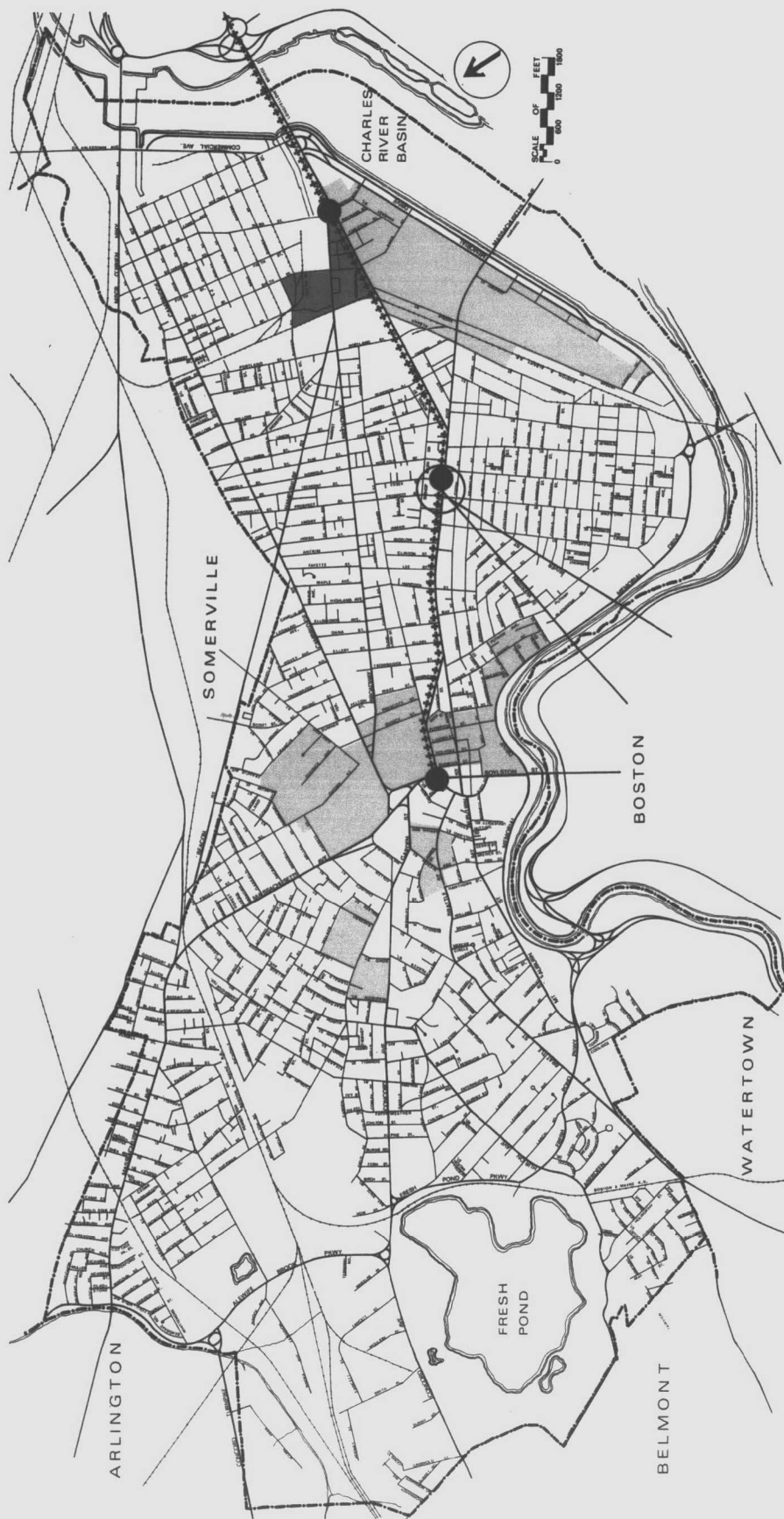
7. Should site be made available now for at-grade public parking?
8. How should the developer(s) be chosen? What inducements should be offered?
9. Should subordinated ground leases be considered? Installment sales? Other arrangements with developers?

**Coordination Policy**

1. What is the best method of bringing all parties together and expediting the program?
2. What might be an effective method to "sell" developers on the desirability of a Cambridge location in light of past feelings about political problems?

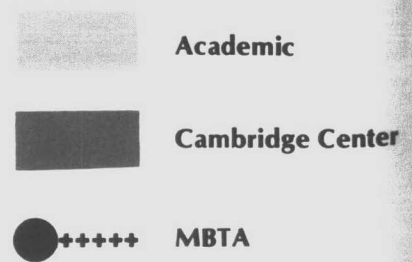
# HIGHLIGHTS OF THE PANEL'S REPORT

- There is very little difference among the five community-prepared alternative land use plans. Cambridge should push ahead with a development program incorporating the uniform aspects of these previous studies.
- Cambridge Center is a unique opportunity area, one which should be reserved for a development program designed to maximize its locational advantages in particular.
- The proximity of MIT and the academic community of Cambridge enhances the site's potential for high-technology research and development and academically oriented uses.
- A mixed use development incorporating offices, hotels, and retail uses should be the set piece of the development. The MXD should be located in the triangular parcel between Broadway and Main Street.
- There is a demand for high-density housing oriented toward high-income professionals and white-collar workers employed in Cambridge. The city may, if it wishes, capitalize upon this demand, although no housing is included in the proposed land use plan.
- A retail potential of 50,000 square feet, principally oriented toward serving the MIT community and possibly incorporating a Harvard COOP type facility, has been identified.
- A portion of the property should be reserved for high technology facilities. Best suited for this purpose is the rectangular parcel situated north of Broadway. The plan visualizes 275,000 square feet of one and two story research and development industrial structures at a floor area ratio (FAR) of 1.0.
- There is no perceived demand for an arts or trade center in the Cambridge Center location.
- There appears to be an unsatisfied market for a 200- to 300-room hotel catering to the academic community. Rates should be in the \$28 to \$30 per day range.
- There is support for additional office space in Cambridge. The plan proposes 500,000 square feet of technical and general office space in the triangular parcel bounded by Main, Broadway, and the Penn Central railroad tracks.
- The existing MBTA transit stop provides a strong rationale for high-density redevelopment. It should be shifted 300 or 400 feet to the west in order to better serve MIT, Technology Square, and the redevelopment site.
- Major modifications to the city's at-grade arterial street systems are required. Broadway should be converted to a landscaped boulevard accommodating primary east-west access through Cambridge Center. Main Street should be downgraded to the standard of a local street in order to enhance the redevelopment site and the adjacent MIT campus.
- The proposed mixed use zoning district should be adopted.
- Cambridge must be prepared to finance and operate structured parking as part of the redevelopment program.
- Cambridge needs a master plan, revised and up-dated at 5-year intervals by the city staff.
- A redevelopment program utilizing a multiplicity of developers is suggested. Developers should be selected for their experience in each phase of the redevelopment process—some will be local, others international.
- The city must devise a strategy for interim use of the property, including removal of derelict buildings and cleaning up trash and debris. Parking and recreational activities represent possible temporary uses.
- A package of public resources intended to induce developer interest in Cambridge Center must be assembled.
- Use of the Chapter 121A Development Corporation approach should be seriously considered.



## City of Cambridge, Massachusetts

Community Development Department 1976



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# FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

## INTRODUCTION

Cambridge Center has presented a unique and complex challenge for the ULI panel. This 24-acre parcel in the Kendall Square Renewal Project received its initial redevelopment stimulus with the National Aeronautics and Space Administration (NASA) commitment to the site in 1965.

NASA's decision to depart Cambridge in 1969, however, was a severe blow to the city's effort to enhance its economic base. Subsequent efforts to market this redevelopment property have been unsuccessful due to legal and title entanglements.

Nevertheless, other redevelopment efforts in this section of Cambridge have been successful. Land abutting the project area has absorbed over 150,000 square feet of new building development per year from 1964 through 1976, including Draper Laboratories completed in 1975. This experience provides ample evidence of the marketability of the Cambridge Center property if the proper development strategy is adopted. Elsewhere in the city, however, the market for industrial property has been much more limited. Citywide, the industrial base of Cambridge is declining.

Nationally, the city of Cambridge is recognized as a center of academia. It is the location of two of America's most prestigious centers of higher learning—the Massachusetts Institute of Technology and Harvard University. Most persons not directly familiar with the area extend this perception to the balance of the community, visualizing Cambridge as a bedroom community closely integrated with the universities and their needs and operations. Such is not the case, however. The city of Cambridge is a pluralistic community of 100,000 persons, strongly differentiated in social, economic, and ethnic terms. Many residents are blue collar operatives and their families. There is a large student population along with many young, college-oriented families. The population is also made up of many elderly persons, and there are less than 10,000 children registered in the public schools. Unfortunately, each of these groups has viewed its interests as separate from the larger community. If Cambridge is to progress this perspective must be rectified.

Cambridge is also an industrial city, especially in the eastern sections of the community north of the Cambridge Center site. Industry, however, is in decline, having lost no less than 5,500 manufacturing jobs in the past 5 years. The redevelopment site is adjacent to extensive areas of old, deteriorated, and underutilized industrial real estate. This lack of dynamism in an important segment of the local economy is one reason why the ULI

panel was brought into the picture.

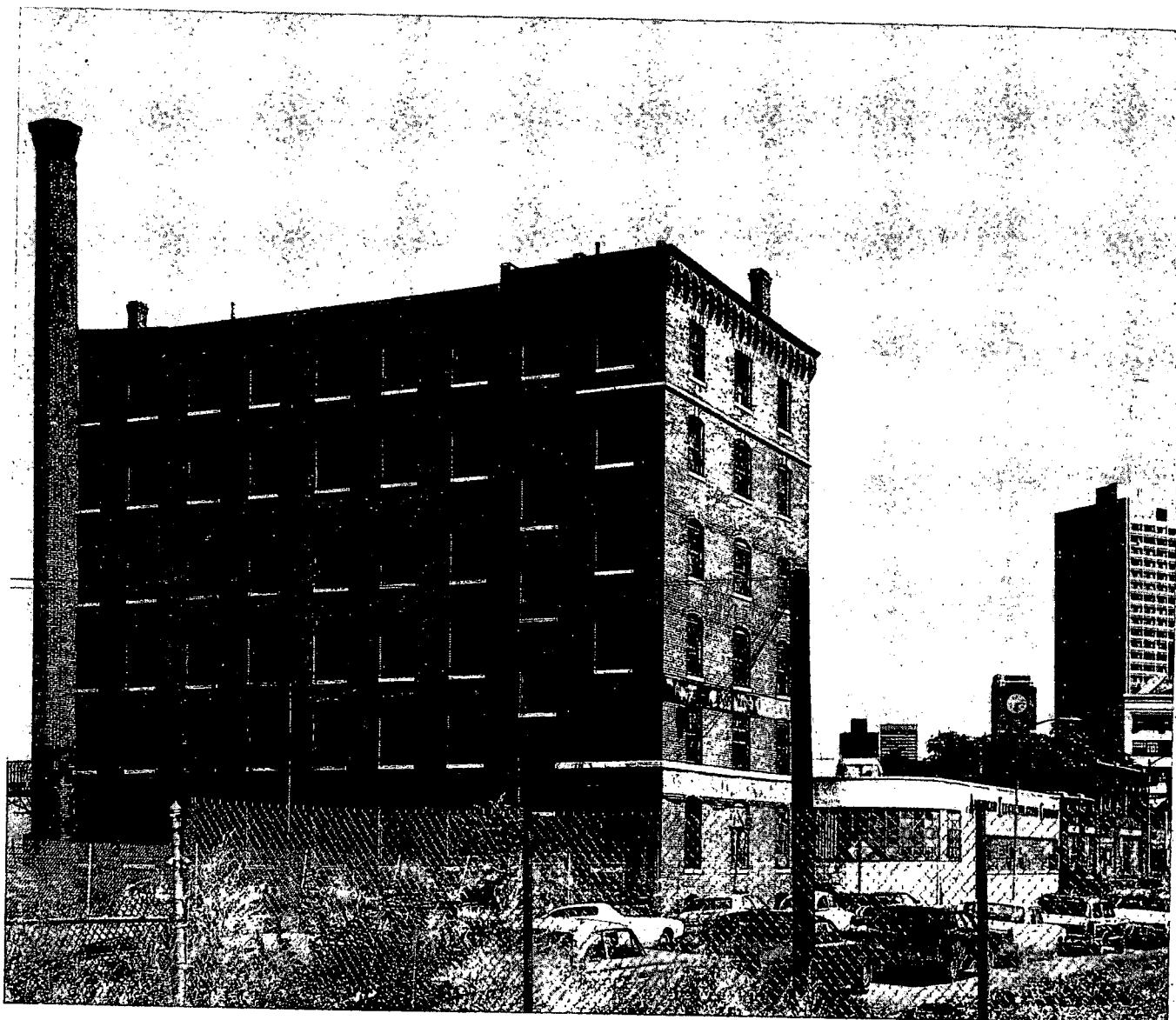
Cambridge can be proud of its history and its institutions. Today, however, citizen concerns, political pressures, economic uncertainty, and the absence of a united and strong development process have combined to create a credibility problem with the real estate development community relative to the city in general and the Cambridge Center site in particular.

The panel feels that this property, like many other development areas, has been overstudied, overplanned, and under acted upon. A strong entrepreneurial decision-making process is needed to generate a successful development climate and create market activity for the site.



*Fred F. Stockwell, executive vice president of R. M. Bradley Co., and panel member Keith Kelly board bus for field trip.*





*The ULI panel recommended that obsolete industrial structures, such as this multistory loft building, be removed from the site as an essential first step in the redevelopment process.*

The panel recognizes that both civic and community leaders understand the dimensions of these problems and are prepared to adopt a plan of action which will result in the early redevelopment of the Cambridge Center property. This consensus has not come a moment too soon.

If a good marketing climate is to be created, some courageous political and legislative decisions are required immediately. The active involvement of all city leaders is essential to reactivate the renewal process. A partnership between the political and private sector is also necessary. Redevelopment of Cambridge Center should be undertaken as a cooperative effort, one which draws upon the undivided strengths of the respective participants.

The panel urges an intense and concentrated effort by the city council and the various departments and agencies involved. Even if highest priority is given to this undertaking, a minimum of 6 to 8 months will be required to ready the site for delivery. Possibly, it could take longer. Credibility has been a severe restraint to development in the past. Therefore, the first step in the process is for the city of Cambridge to complete its obligations for the development and site preparation process. Then, commitments can be made in advance to insure proper disposition of the property.

We feel that the timing is right for all concerned to move forward together.

## ALTERNATIVE LAND USE PROPOSALS

Five alternative development programs have been proposed for Cambridge Center over the past half-dozen years. These constitute the most recent evidence of the extended discussion and debate which has surrounded the disposition of the redevelopment property since NASA announced its decision to close the partially completed Electronics Research Center in 1969 and withdraw from Cambridge. City government, the neighborhoods, the universities, and special interest groups have all participated in this replanning process, and each developmental proposal defines in physical terms the perceived best interests of the group proposing it.

The proposals may be briefly delineated as follows:

- The No-Build Plan, which proposes utilizing the property as open space with no development whatsoever.
- The Task Force Plan, which proposes a multiplicity of uses for the site with an FAR of 1.4.
- The City Manager's Plan, which proposes a multiplicity of uses for the site with an FAR of 2.4.
- The Preferred Plan, which proposed a multiplicity of uses for the site with an FAR of 2.8.
- The Maximum Plan, which proposes a multiplicity of uses for the site with an FAR of 3.4.

When the no-build alternative is disregarded, there turns out to be considerable unanimity of opinion relative to the reuse of the Cambridge Center site. This is particularly true of the two proposals having the greatest support within the community, the city manager's plan and the preferred plan which has been endorsed by the city council. The major difference among the four main proposals relates to the inclusion of residential uses within the development, the need for structured parking, and the scale of each of the uses visualized as comprising the component mix.

Table I: Alternative Land Use Proposals

Permitted Uses (1,000 sq. ft. floor space)	"No Build" Plan	Task Force Plan	City Manag- er's Plan	Pre- ferred Plan	Maxi- mum Plan
Light industry	0	1,000	800	670	809
Technical office	0	150	500	330	381
General office	0	150	300	300	360
Retail	0	100	200	250	303
Residential	0	0	0	500	606
Hotel	0	0	200	250	303
Fire Station	0	11	11	11	11
Structured Parking	0	0	361	500	606
Total proposed uses	0	1,411	2,372	2,811	3,379
Floor area ratio (overall)	0	1.4	2.4	2.8	3.4
Total parking spaces	0	1,166	1,605	1,980	2,400
Public open space (1,000 sq. ft.)	Entire site	100	100	100	100
Number of residential units	0	0	0	500	606
Number of hotel rooms	0	0	266	325	400
Employment					
Blue Collar	0	3,640	3,500	3,270	3,960
Nonprofessional white collar	0	1,580	2,790	2,410	2,910
Professional	0	610	1,070	910	1,100
Total	0	5,830	7,360	6,590	7,970

Source: Cambridge Redevelopment Authority



The ULI panel recommended that the cleared site be cleaned up and landscaped to make it more attractive to potential users.

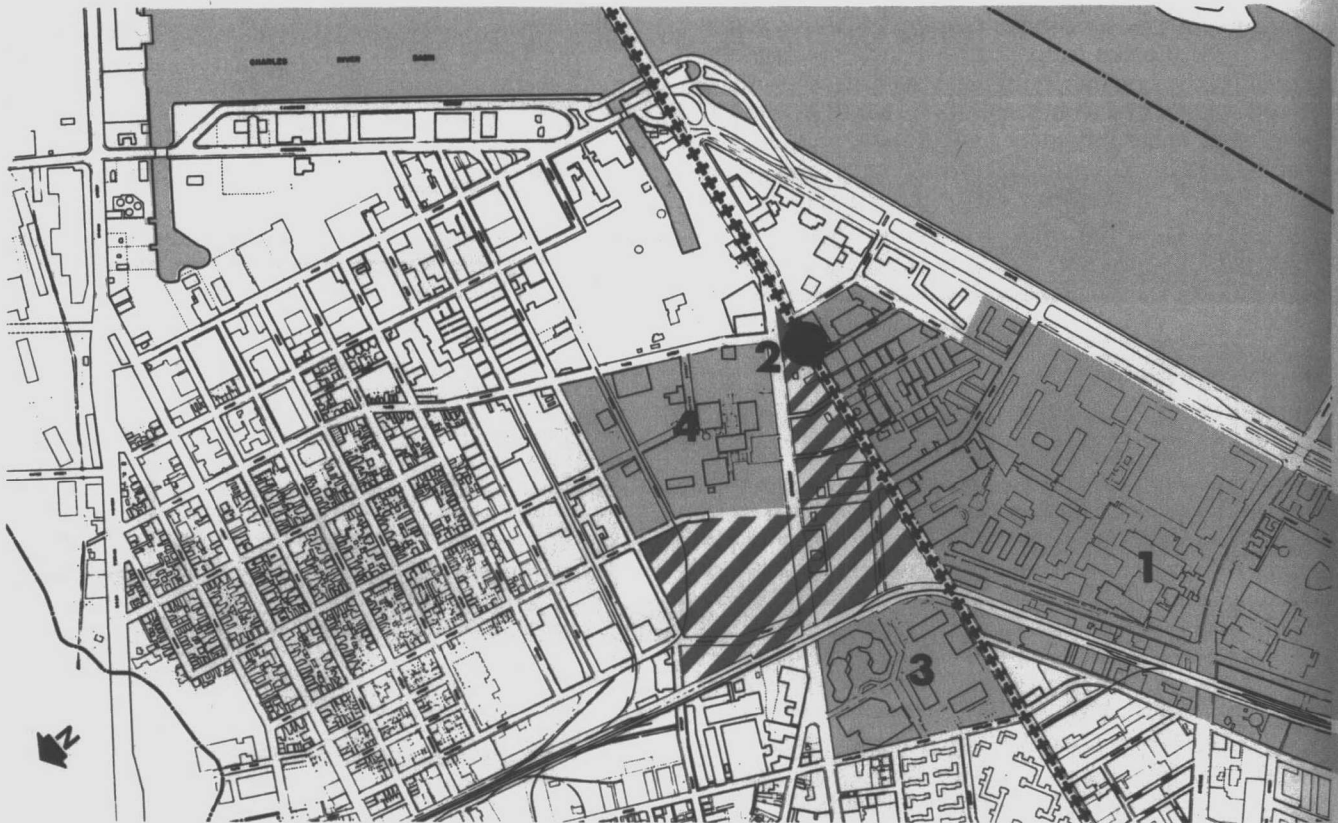
The panel could cite certain other minor variations among the proposals, but it does not view these differences as significant. In the absence of any concrete development proposal, there is no way that the reuse of the property can be forecast with the kind of precision contained in the alternatives. These plans, therefore, should be viewed as concepts which establish the framework within which redevelopment can occur. This is essentially the conclusion that was reached in the Draft Environmental Impact Report, which implies that the impact of the few serious development alternatives will be minimal and that environmental considerations do not constitute an impediment to redevelopment.

The panel believes that the similarities among the proposals should be emphasized. The lowest density alternative proposes 5,830 jobs while the highest density alternative proposes 7,970 jobs. Each includes a fire station. Three of four proposals include a hotel. In all four proposals the largest single employment group will be blue collar rather than white collar nonprofessionals and professionals. But perhaps most important of all, each plan visualizes a mix of uses for the site, including light industry, office, hotel, retail, and public facilities. This type of configuration is most appropriate for properties having unique locations and characteristics, and Cambridge Center has a number of site advantages duplicated nowhere else in the country. Participants in the site evaluation

process have already recognized the need to maximize the development potential of this strategically located property, and these deliberations have produced a remarkably uniform end product.

Each proposal can be demonstrated to respond positively to the city's expressed socio-economic objectives for the site: (1) to provide maximum blue collar and non-professional white collar jobs for Cambridge residents; (2) to provide for upgrading of workers' skills commensurate with the cost of living in Cambridge; and (3) to provide a substantial increase in the city's tax base. This unanimity of viewpoint is a highly positive circumstance, and runs counter to the common misconception that the city is irreconcilably deadlocked over the reuse of the Cambridge Center site.

The panel sees little benefit in sifting among the alternatives to select one as preferable to the other, so it has chosen to prepare its own development configuration based upon opportunities inherent in the Cambridge Center location and the perceived demand for new uses in the area. Significantly, the results of this exercise are little different from those derived by the various Cambridge groups. The panel's conclusion is that the most important need is for action (not further planning) and refinement of concepts which differ only marginally when viewed from the perspective of the development community.



Cambridge Center site in relation to (1) MIT, (2) Kendall Square MBTA Station, (3) Technology Square, and (4) U.S. Department of Transportation site.

# DEVELOPMENT POTENTIAL OF CAMBRIDGE CENTER

## An Overview

Cambridge Center in the Kendall Square Urban Renewal Area consists of approximately 24 acres in east Cambridge adjacent to the MIT campus. The property is divided into three parcels, the largest of which is separated from the other two by Broadway, a major arterial providing area access from downtown Boston to central Cambridge and Harvard Square. The property has an excellent location from a real estate standpoint. Ready access is available to all points in the community, and downtown Boston is only a few minutes away either by rapid transit or automobile.

Assuming that requisite land use approvals can be obtained, the property lends itself to numerous development concepts. Many development proposals have already been posed by various groups interested in the community, including the Cambridge Redevelopment Authority, the city manager, MIT, the planning board, R.M. Bradley & Company, and various citizens organizations.

An important question needs to be asked, relative to these proposals. Should the property be held for an optimal type of development that will reflect the highest and best use of the land, thereby bringing the greatest long-range benefit to the Cambridge community? Or, should the land be disposed of in such a way as to take advantage of its short-term marketability? The latter approach would involve using the \$15 million that is available for infrastructure and other supportive facilities. One benefit of this approach is that it would enable the Cambridge Redevelopment Authority (CRA) and the city council to accommodate the criticism they have received in response to the lack of apparent progress in marketing and redeveloping the Cambridge Center site. Those demanding that something be done with the property could be placated. It is the panel's opinion that for development to proceed, the various groups involved will have to reach a mutually satisfactory compromise.

The purpose of analyzing the development potential of a proposed project is to establish the range of specific land uses it might contain and to determine the pace of development support suggested by market conditions. The market prospects identified at this juncture also help to establish the land use possibilities and the rate at which development can occur. These data in turn establish the basis for future revenue and expense forecasts, enabling both market and financial feasibility to be ascertained. Development potential provides the basis for projecting annual market absorption rates for each use under consideration.

Each project component must be considered separately. Luxury apartments, for example, represent a different use than moderate income or Section 8 apartments, and

even though all are residential uses, each has its own distinct economics. Identification of potential uses also involves an evaluation of public regulations, development impact, physical site characteristics, and surrounding land use patterns. Developer business objectives and methods must also be determined.

The schedule of market absorption potentials does not, however, automatically indicate the total development program. Rather, it provides a *framework* of possibilities within which the specific use allocations must be made. But stated uses are neither cast in bronze nor etched in glass. Overall project flexibility must be maintained. The allocations will ordinarily feature widely different development periods for each use, sometimes closing out lower value uses in early years and leaving land available for later development as values increase. This is optimizing development.

## Residential Land Use

The panel found that a majority of people that work in Cambridge reside in one of the surrounding communities. Would some of these people of middle to high income who now reside elsewhere move into Cambridge if mid-density to high-density housing of a medium to high quality became available? After interviewing numerous people working in the Cambridge community, the panel has concluded that the high-income professionals and white collar workers employed in Cambridge constitute a potential market for quality housing in and near the redevelopment site. The actual size of the market, however, is less clear. Because of the proximity of the site to downtown Boston and MIT, the panel suggests that high-rise, high-density housing could be included as a possible future redevelopment component. About 300 units might be built, 75 percent market housing and 25 percent subsidized housing. Our proposed development plan, however, does not include housing except as a possible alternative late in the development period.

One way to bring about disposition of the subject land would be to negotiate with developers interested in building high-density, low-cost, subsidized housing. Even without the benefit of a market study focused on housing, it is probable that subsidized housing would be occupied as fast as completed. Nevertheless, this type of housing would not represent the optimal use for the Cambridge Center site.

## Industrial Land Use

Historically, Cambridge Center and the surrounding area has been substantially industrial in character. In recent years, however, heavy industry has started to move away from the area, a trend that is still continuing. As a consequence, many industrial buildings and sites have been converted to higher uses, such as the Technology

Square and the Hyatt Regency Hotel. A much larger area, has remained vacant or underutilized.

While the panel recognizes the desire of the city council to provide jobs in the area, it does not believe that the kind of industrial uses suggested would be particularly compatible with the balance of the mixed uses suggested for the redevelopment site. Further, the panel points out that it would be a mistake to develop a unique opportunity location like Cambridge Center with uses that can be readily accommodated only a few blocks away. The community must plan for future growth and changing conditions. While the panel is sympathetic to the desire of the city to create traditional blue collar jobs within the area, and consideration was given to this possibility, the long-term gains afforded by optimal re-use of the property exceeded the short-term benefit of new jobs in questionable industrial uses. In any event, it is highly unlikely that Cambridge will be able to attract much new industry to the city under prevailing conditions. But if it can, there is a sufficient supply of vacant space in good industrial buildings to satisfy the potential needs created by additional industrial firms moving into Cambridge. As long as this situation exists it is unlikely that an industrial developer could economically offer competitive space in new buildings while competing with older but still usable industrial buildings.

Furthermore, most industrial uses are incompatible with the commercial, residential, and hotel/motel uses suggested for location within the redevelopment site. Industry requires the delivery of materials and the shipment of a finished product, which creates traffic problems, noise, and congestion. This is the reason why the kind of industrial uses found in east Cambridge tend to be located in designated industrial districts in many other communities.

### Office Use

The various plans for Cambridge Center call for the development of varying amounts of general office space. While the Boston metropolitan area office market is presently overbuilt, there appears to be support for additional office space in Cambridge. Between 1963 and 1976, approximately 1,220,000 square feet of office space (exclusive of government use) has been constructed in proximity to the site. This would suggest an immediate absorption rate of about 100,000 square feet annually. Thus, over the next 3 to 5 years a demand would exist for between 300,000 to 500,000 square feet at rent levels that would be somewhat below rates for new space in downtown Boston. The foregoing does not purport to be a demand analysis for office space. It has not been possible for the panel to make detailed market studies within the time



At the briefing session CRA planning consultant Theodore Monacelli reviews development programming for the Cambridge Center area.

allotted—nor was the panel expected to do so. Rather, a review of existing materials, prior experience, and a market feel have provided the rationale for such a projection.

The panel is not unmindful of the generally overbuilt state of the office market in the Boston metropolitan area. As planning for the project proceeds, the developer should remain up-to-date on metropolitan trends, and the proposed plan should be sufficiently flexible to permit upward and downward adjustments in office space to reflect changes in the broader market.

Possible office tenants include a branch of a major bank and university-oriented and research and development companies. New office space could also accommodate the expansion of tenants now located in Technology Square. Overall, 500,000 square feet of technical and general office space is recommended.

### **Retail Use**

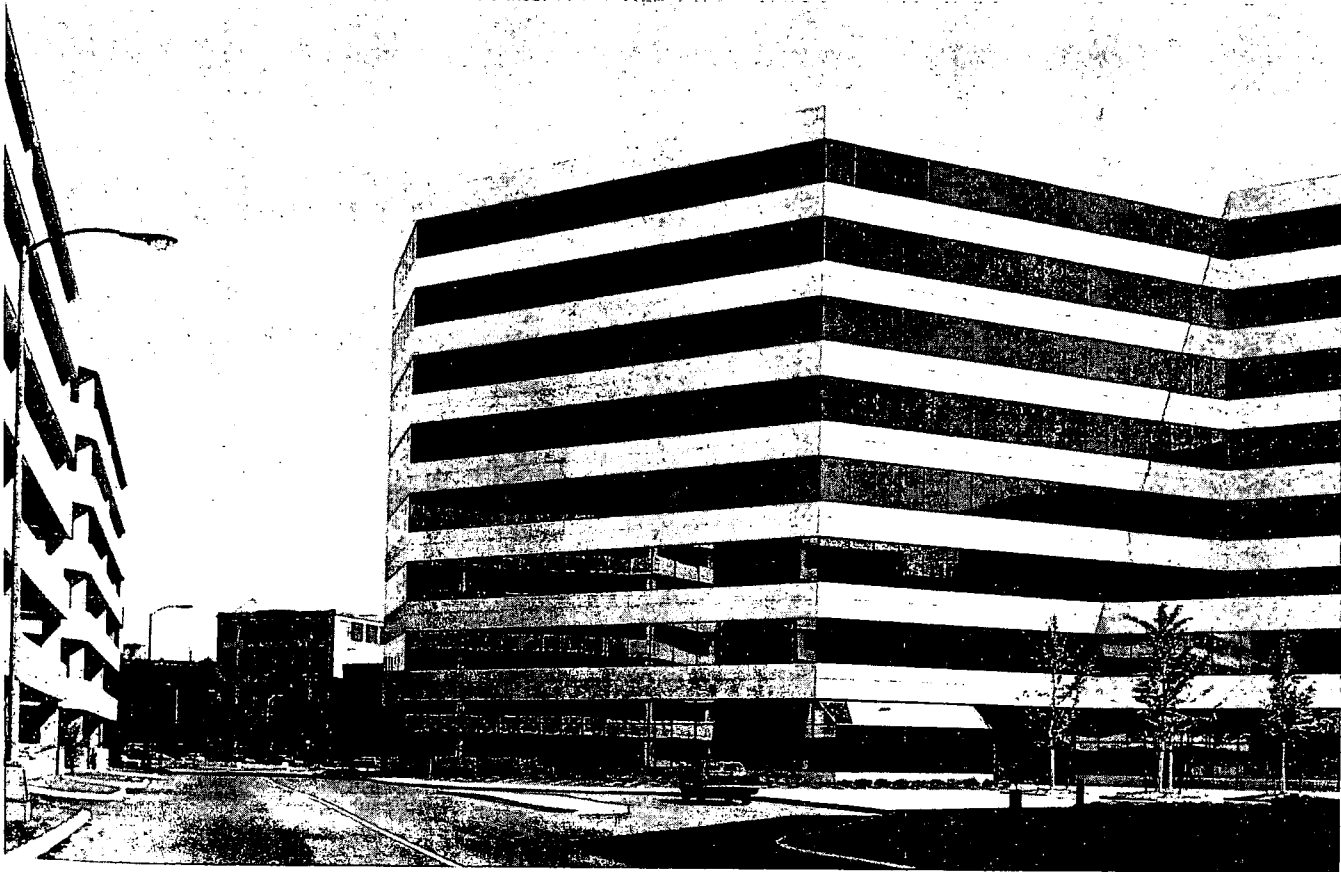
Varying amounts of retail space have been suggested in the different plans. Most sources contacted by the panel indicated that some retail space would be desirable, particularly for employees. In terms of size, however, the panel believes that the site could *not* support a major retail complex for several reasons. First, the site is too close to downtown Boston and the metropolitan scale retail facilities located there. Second, the site is not well

located with respect to the residential population of Cambridge in general and the east Cambridge neighborhood in particular. Third, pay parking, unless subsidized, would put retail facilities at a disadvantage because suburban retail facilities have free parking.

The panel feels that the best approach would be to develop a facility of some 35,000 square feet, similar in scope and focus to the Harvard COOP, as the hub of Cambridge Center's retail component. If this were done, it is quite probable that an additional 15,000 to 30,000 square feet of service uses might further expand the retail portion of the project. This retail component should include service facilities, dining and drinking facilities, and a multiplex cinema. Overall, the area has a retail potential of about 50,000 square feet.

One benefit of a retail facility would be to encourage nighttime activity in an area which is virtually uninhabited after 5:00 p.m. This is an essential aspect of the proposal since restaurants and many other retail uses cannot succeed on the basis of lunchtime business alone. While a local residential population helps some, 300 units alone cannot support this activity.

Thus, Cambridge Center requires a retail component large enough to create an impact on the MIT campus and to encourage patronage from other parts of Cambridge



*High technology R & D uses constitute a prime development opportunity at Cambridge Center. Just to the west of the site is Technology Square, a redevelopment area occupied by firms wishing to grow in proximity to MIT.*



The panel takes a walking tour through the Faneuil Hall Marketplace, one of many adaptive reuse projects now in progress throughout the Boston metropolitan area.

and Boston as well. More specifically, a *theme* is needed in order for retail to have any chance of succeeding. Nighttime activity is important in any mixed use development and the Cambridge Center area is no exception.

In summary, if a store such as the COOP becomes the prime tenant, every effort should be made to supplement it with auxiliary retail services. If this is not possible, planning should provide for limited retail and service facilities but seek a unique feature such as a restaurant row or unusual boutiques that will extend the activity cycle into the evening hours. This strategy is not easy, and every consideration must be given to selecting the proper developer to attempt it.

#### **Research and Development Potential**

The basic character of the redevelopment of Cambridge Center has already been established by virtue of the projects already in place and the proximity of MIT. This character consists of high technology uses and activities supporting such uses. Consequently, any proposal for rebuilding this site must be evaluated in relation to

Cambridge Center's potential for high technology research and development (R & D) uses.

Support for this development strategy, which has been followed by all developers active in the area over the past 10 to 15 years, derives from a multitude of factors, not the least of which are the developments which have already been completed on adjacent sites within the last several years. Primary site advantages include the following:

- The Boston region's national pre-eminence in the field of high technology research and development.
- The availability of substantial amounts of highly trained scientific research personnel and the specialized support services required for such activities.
- The proximity of two front-rank educational institutions—Harvard and MIT—both sources of scientists, researchers, and other academic specialists.
- The high quality of life available to residents of the Cambridge area, an incentive which has encouraged many highly educated people to remain in the area following completion of their academic training.

- The propensity of many of the region's university-oriented residents to combine the results of their scientific and engineering research with the development of practical applications of these findings in nonacademic situations. Highly skilled professionals in Cambridge have the opportunity to seek substantial personal gain within a working environment which facilitates the dual role of academician and entrepreneur. The universities have wisely encouraged this attitude on the part of their faculty members to the substantial benefit of all in the area.
- MIT, the local university possessing the largest share of Cambridge's scientific and engineering talent, is located adjacent to the southern boundary of the project area. Therefore, it is particularly well positioned with respect to furthering the site's potential for the development of research and development and similar high technology uses. This interrelationship should be encouraged by every available means.

Existing facilities available for R & D uses are of two types:

- Older multistory warehouse, manufacturing, and distribution facilities which have been converted to R & D purposes. While relatively cheap to rent, these buildings exhibit numerous inadequacies including structural obsolescence, difficult access, and lack of flexibility.
- New facilities designed to house organizations that have become established enterprises. Draper Laboratories and Abt Associates are examples of companies which have outgrown incubator buildings and are now housed in modern campus-type buildings.

The panel believes there is a limited demand for mid-range R & D space in the \$3 to \$5 per square foot rental range. There is also a demand for warehouse distribution, light industry, and small office uses related to high technology research and development. In combination, these potential uses constitute a total market capable of absorbing 100,000 to 350,000 square feet per year. Provision for these uses should be made on parcel two—the Quadrangle—property bounded by Main, Broadway, and Sixth Streets.

The necessary property should be sold to a developer interested in providing such facilities on a rental basis in accordance with a concept that calls for an architecturally attractive, well-landscaped development. Initially, he should agree to test this market by constructing some speculative space (developing without a tenant). The panel suggests that this tract be developed at a maximum floor area ratio of 1.0, which should result largely in a combination of one and two story structures. A low-rise configuration is generally most appropriate for such activities.

One of the developers with whom we discussed Cambridge Center indicated an immediate interest in facilities of this type. His thinking (which is basically consistent with the foregoing) is that this type of development would provide a readily accessible location for research

application endeavors on the part of MIT personnel and others related to the university. Such a project would formalize and enhance already established relationships between MIT and the private sector.

Using the western and northern portions of parcel two for this purpose would create a buffer between the heavy industrial areas to the north and the mixed use portion of Cambridge Center. The views from this location are generally unsatisfactory, particularly for a high-quality mixed use development. But low-density R & D facilities of the sort proposed appear to constitute a desirable transitional use because they would protect and enhance the attractiveness and values of the interior portions of parcel two and the triangular parcels located between Main and Broadway.

The panel recognizes that parcel three has been set aside through the end of the first quarter of 1977 by the redevelopment authority for possible occupancy by the Solar Energy Research Institute (SERI). Based on conversations with those people knowledgeable about SERI's search for a location, we learned that numerous other communities are competing for this specialized facility. Until something more concrete is learned, then, the prospect of SERI locating in Cambridge must be viewed as uncertain. Therefore, the panel suggests that the redevelopment authority proceed with the necessary steps for the development of parcel three for R & D uses. In the event that SERI decides in favor of Cambridge, parcel two could accommodate it equally as well.

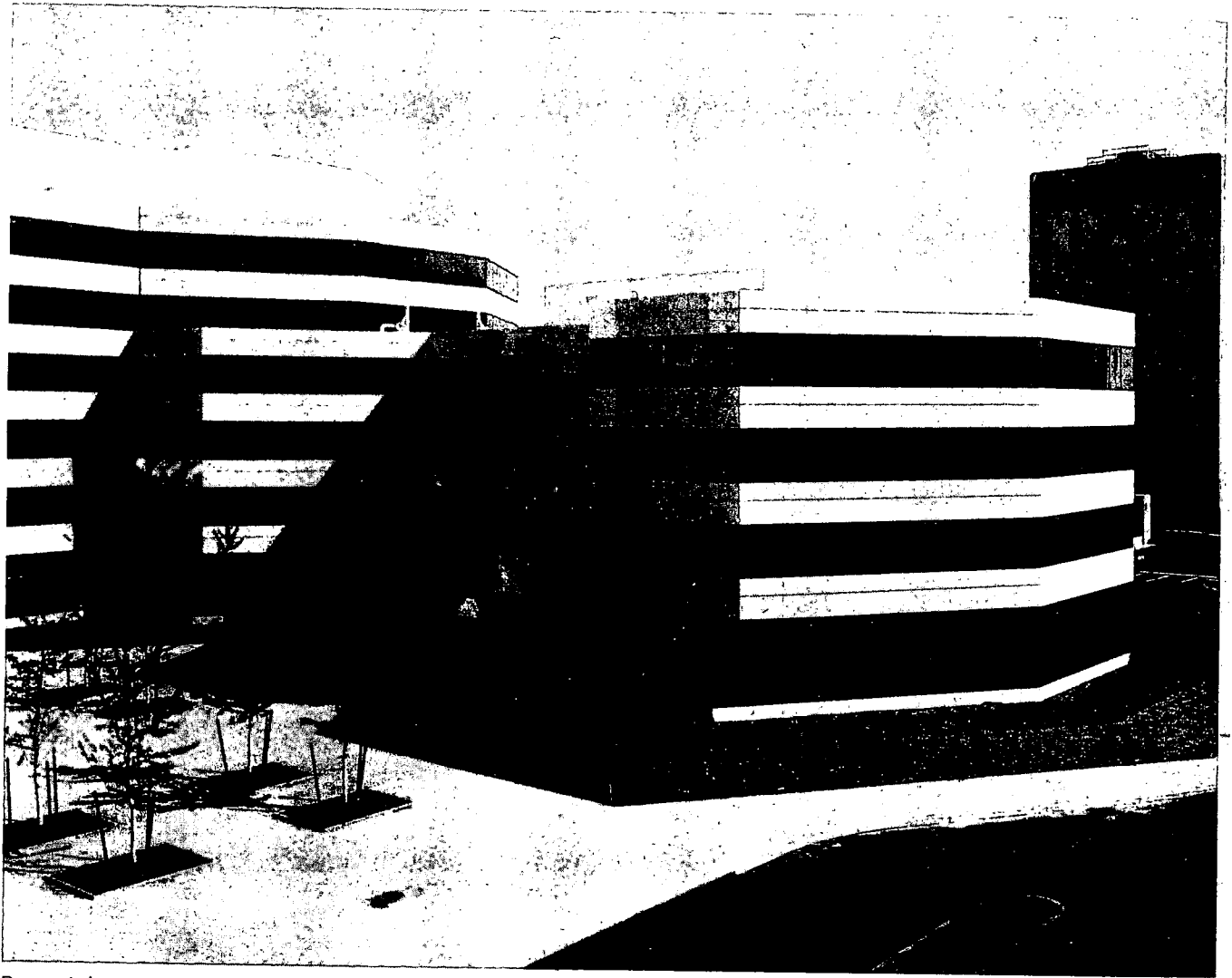
Consistent with our position that Cambridge Center should be devoted to high technology R & D and associated uses is the belief that a high-quality occupant like Draper Laboratories or Technology Square could be attracted to parcel three within the next 5 years. The panel recommends that this site be held and actively marketed for such development. Another possibility is that Polaroid or Draper Laboratories might want to expand within the 5-year time frame.

Other prospects could emerge from the facilities proposed for parcel two as well as from existing R & D facilities in the Boston area or elsewhere which are seeking an MIT location. A further possibility would capitalize on federal programs likely to appear during the next 5 years—energy research, a field which would benefit from the expertise and supporting facilities available in the MIT area.

#### **Cultural Center/Trade Center Use**

The panel has given careful consideration to Cambridge Center's potential as the location of a cultural center devoted to opera, music, and the theater. Similar consideration has been also given to the site's potential for a trade center accommodating a merchandise mart, a graphic arts display, and other functions. We recognize that in advocating that the area focus on high technology and related uses we are, in effect, proposing a type of trade center. Beyond that, however, no interest in locating any of the traditional aggregations of associated arts or business uses on the site has been uncovered.





*Draper Laboratories, a high technology firm founded by a professor at MIT, completed its modern facility at Technology Square in 1975.*

It is apparent to the panel that this location is inappropriate for a traditional cultural center for several reasons. The most important is the fact that many other locations in the metropolitan area, particularly downtown Boston, are better suited for this type of use than eastern Cambridge. Further, there are alternative development opportunities more appropriate in nature for this site.

#### **Hotel/Motel Use**

Conversations with representatives of the Hyatt Corporation, Sonesta Hotels, and ITT-Sheraton Corporation suggest an unsatisfied market for a moderately priced hotel/motel with 200 to 300 rooms, limited dining and drinking facilities, and minimum-function rooms. A project could be staged that would offer single guest rooms for \$27 to \$29 per day, including free parking. (Major convention facilities and meeting rooms are not visualized because their cost would raise the room rate above \$30 a day. It is suggested that those needing such facilities consider assisting in the payment for these special installations.) The proposed rate would be below that of

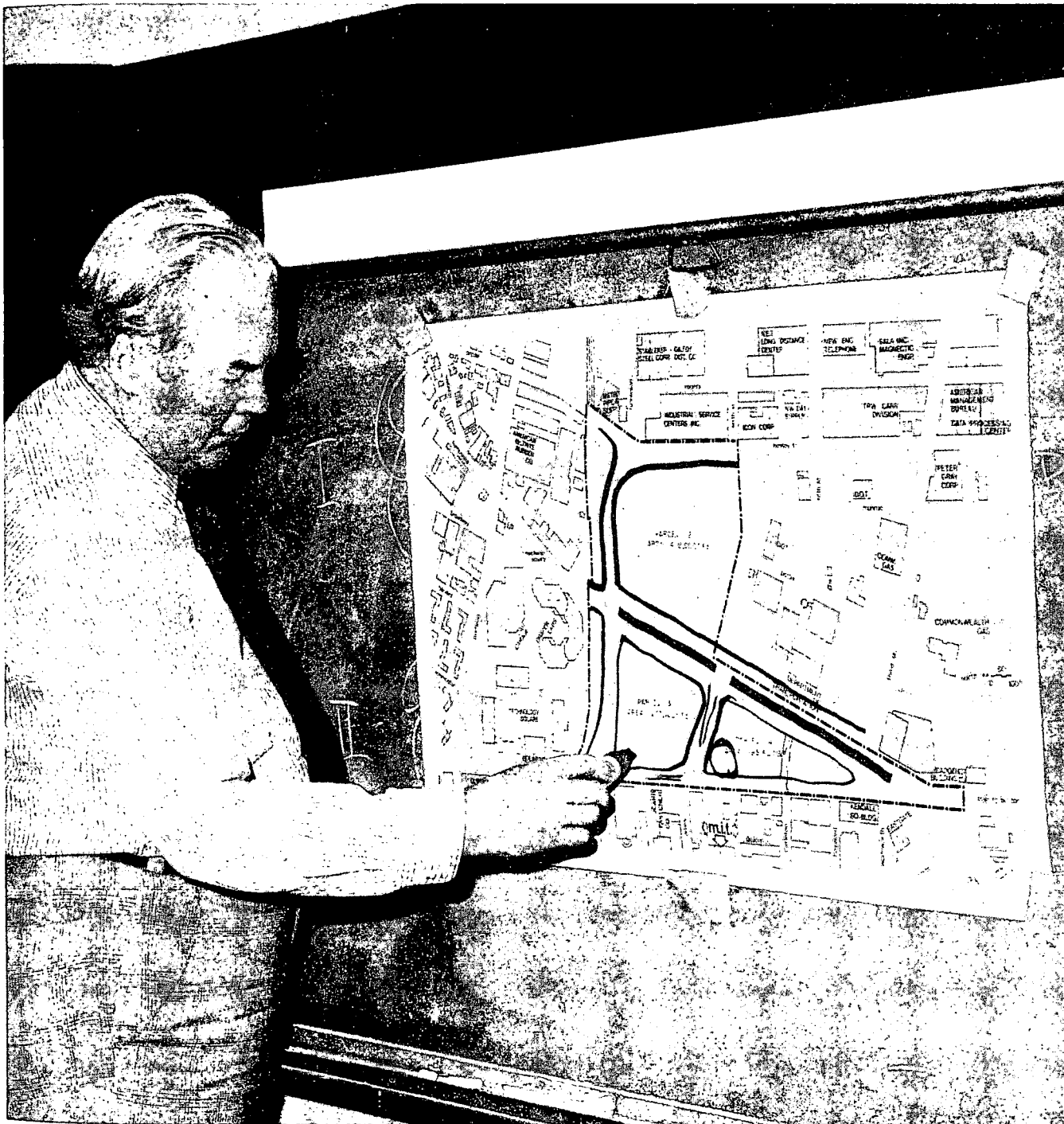
both the recently completed Hyatt Regency Hotel (\$42 a day) and the Sonesta Hotel (\$32 a day). One of the hotels intends to raise its rates by \$2 to \$3 a day in the near future. The proposed rate would also be competitive with the Sheraton Commander, which presently offers rooms between \$22 and \$28 a day. The Sheraton facility contains only 107 rooms, and it was operating at an annual occupancy rate of 88 percent as of September 1976.

The proposed rate structure is intended to permit academicians, businessmen oriented to the universities, and others with limited per diem budgets to patronize the facility. Further, it appears that the opportunity may exist to negotiate contracts with local universities or local businesses for "blocks" of rooms at slightly discounted rates for their visitors and others. In order to achieve the proposed room rate (the cost of a Sheraton Inn or Hilton Inn type of motel) the facility should be constructed for \$27,000 to \$30,000 per room. In addition, the parking facilities, either surface or structured, would have to be publicly provided.

There are at least two conditions precedent to acceptance of this location by a hotel/motel operator or owner:

- The facility would have to be one component of a multi-use development designed for Cambridge Center in a comprehensive plan.
- A small service-type retail facility would have to be included within the development.

A thorough market analysis, performed by an experienced research firm, will be necessary to verify the need for a new hotel/motel facility to serve the perceived market. If such an analysis verifies a demand, there are several franchises and owners in metropolitan Boston who would be good development prospects.



Robert O'Donnell prepared ULI's proposed land use plan for the Cambridge Center site during work session.



## A COURSE OF ACTION

The opportunities associated with the Cambridge Center area suggest a sophisticated development approach. Few properties in the country have a broader array of locational advantages. Among the most important of these are:

- Proximity to two major educational institutions, Massachusetts Institute of Technology and Harvard University.
- Ready access to downtown Boston.
- Proximity to Logan International Airport.
- The Kendall Square subway station.
- Ability of the Cambridge Redevelopment Authority to make the site available at low cost to potential users and otherwise facilitate the development process.

The disadvantages associated with Cambridge, namely high taxes, environmental constraints, contentious political climate, congested surface transportation, and generally high land costs in the environs of CRA property, create problems for all but the most carefully conceived and implemented development plan. Developmental problems in Cambridge are such that all but the most determined developer, the one who perceives a very close relationship between locational advantages and developmental opportunities, will be deterred from coming into the community.

This assessment is not intended to be pessimistic. Rather it is intended to point up the fact that both the Cambridge Center site, and the community itself, are unique. Any approach to the property must take these considerations into account.

### The Plan

A general analysis of market potentials has been conducted within the framework of regional economic trends and against past, current, and estimated future patterns of metropolitan area development. Development trends in the project market area, including an analysis of competitive offerings in each major land use category, have been evaluated to determine use potentials for the Cambridge Center property. Uses have been grouped in generalized categories, including office, retail, research and development, and hotel. Each of these uses has a different market absorption potential and each can be expected to absorb land at a different rate. This analysis has convinced the panel that the following mixture of uses can be developed on the site during a period of 3 to 5 years. An essential first step will be the completion of the necessary infrastructure.

Such externalities as securing the Solar Energy Research Institute for Cambridge or an unexpected redirection of federal research and development funds could result in substantial modification of the above estimates during the development period.

Research and Development	275,000 sq. ft.
Office (both general and technical)	500,000 sq. ft.
Retail	50,000 sq. ft.
Residential	none
Hotel (300 rooms)	228,000 sq. ft.
Fire Station	11,000 sq. ft.
Structured Parking (garage with 1,000 stalls)	350,000 sq. ft.
Total Space	1,414,000 sq. ft.

### Physical Elements

The panel recommends that Broadway be widened and converted into a landscaped thoroughfare to provide ready east and west access through Cambridge Center. Such an improvement would create a sense of entry and anticipation for persons visiting the area. Existing traffic plans show Main Street being downgraded in width and capacity and shifted in two locations to tie to Broadway. The panel reaffirms this concept in general terms, but does question the extension of Ames across the lower portion of the development site. One advantage of reducing Main to the status of a collector street would be to enhance the physical relationship between the Cambridge Center site and the MIT campus.



Panel member Hunter A. Hogan reviews his first draft manuscript.

The panel recommends that the MBTA transit stop be shifted 300 or 400 feet to the west of its present location on Main Street. Advantages of this proposal include the fact that the old terminal can be used on an interim basis until such time as a new terminal becomes operable and could be more centrally located within the track itself. Further, a relocated terminal can better serve Technology Square, Draper Laboratories, MIT, and other high intensity developments located in the vicinity of Kendall Square.

Research and development uses are designated for approximately 11 acres, the rectangular parcel north of Broadway. A portion of this area (parcel two) will also be occupied by light industrial uses. Office space is recommended for parcel three, the 6-acre tract bounded by the central connector, Main, Broadway, and the Penn Central railroad tracks. This area is just to the east of Technology Square and Draper Laboratories, and constitutes a logical extension of this R & D complex.

The wedge formed by the intersection of Main and Broadway can best be used as the site of a mixed use

development. The panel feels that retail, office, and hotel uses should be integrated with the transit stop. The precise configuration of these uses cannot be depicted with accuracy. However, the project should emphasize pedestrian interconnections, a subtle mix of uses, and an activity cycle which will generate life into the evening hours. The uses (retail, office, and hotel) should be designed to enhance the unique mix of activities in proximity to Kendall Square. Some structured parking would also have to be provided. The present power substation building could be retained as a symbol of the project's gateway location, as it sits at the intersection of Main and Broadway.

The transit station is certain to be the hub of pedestrian activity in Cambridge Center, so the panel visualizes either an elevated or underground walkway system interconnecting the transit stop with all the components of the development. An extension of this pedestrian system could also serve the Draper Laboratories and Technology Square. The third arm of this system would penetrate the commercial component, extend to the hotel, and provide a link with MIT.



ULI panel members draft the plan.

## Land Use Controls

The panel has evaluated the 1965 Kendall Square plan and the 1969 city zoning ordinance in light of the redevelopment opportunities at Cambridge Center. It has also studied the development controls proposed for this site by consultants retained by the Cambridge Redevelopment Authority and the Cambridge Planning Board. The panel feels that the urban renewal plan, zoning ordinance, and covenant agreements between the authority and developers, as set forth in the 1976 Monachelli Associates proposal, should adequately control the future development of Cambridge Center.

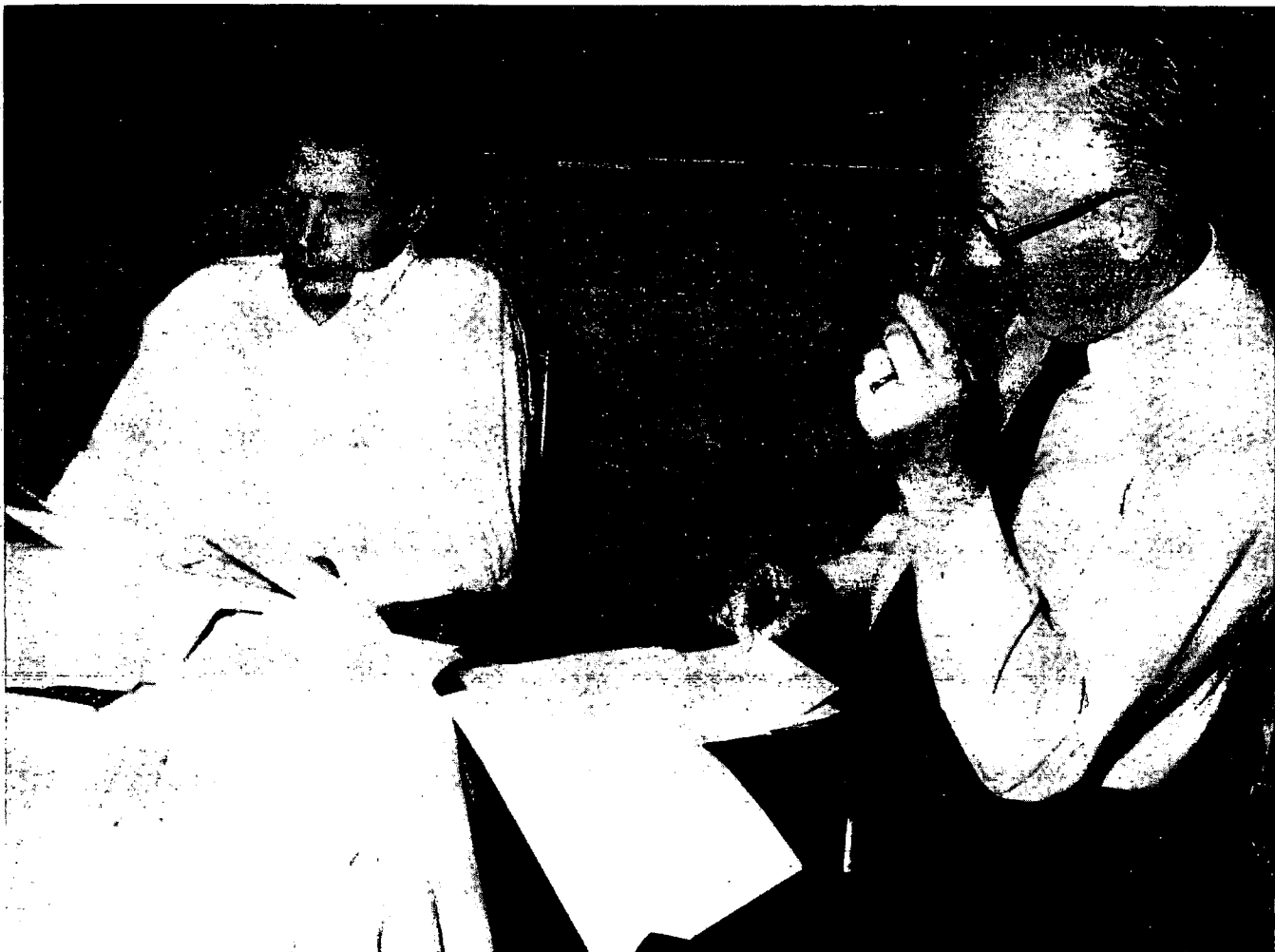
The Urban Land Institute is familiar with and highly supportive of the mixed use district or multi-use zone concept. It permits the flexibility required to accommodate adjustments in land use, whether dictated by the public or the private sector. Covenant agreements between the developer and the authority will also help insure specific compliance by the developer. This proposed system of controls also allows the CRA and the city of Cambridge to negotiate with a potential developer or

group of developers about land costs, taxes, and parking. The mixed use approach can be expected to promote high standards of design, to permit improved land use, to accommodate changing economic conditions, and to capitalize on the site's unique location. Therefore, the panel urges the city in the strongest possible terms to proceed with the implementation of these land use controls, applying them specifically to the triangular property between Broadway and Main.

## Investment in Public Facilities

The city of Cambridge, the CRA, and potential developers of Cambridge Center should investigate possible joint public facility needs. Grants, matching grants, and other federal and state financial assistance can be obtained. As all are aware, municipal bonding and other long-term financing methods at favorable rates are available to municipalities. They can be used to provide the necessary infrastructure, which is beyond the scope of the private sector.

Public facility investments can include utilities, parks, streets, and highways and such facilities as recreation cen-



*Report preparation involves considerable give and take among panel members. Here, ULI panel chairman William Caldwell and Patrick Cusick discuss their preliminary findings.*

ters and parking garages. Heating and air conditioning, if tied to a municipal power and gas company, can also be provided.

Each potential developer who is advised of opportunities in the site should be familiar with the business incentives outlined in Section VIII of the Cambridge, Massachusetts "Economic Profile."

### **Parking**

Cambridge's 1969 zoning ordinance (as amended to 1976) requires off-street parking in all zoning districts. Residential uses are not permitted in industrial districts. The panel recommends that the city look with favor upon the provision of public parking to accommodate needs generated by the future development of Cambridge Center. The construction of parking facilities should be carefully phased to the development to insure optimum economic feasibility.

As soon as possible, the site should be cleared of derelict structures and on-site debris. Interim commercial open space uses such as parking lots and playgrounds can generate income on a temporary basis and can be used to fit the phasing of final land uses. Surface parking is a logical use of such space and should be encouraged.

The panel noted that a 1,000-car garage proposed for Cambridge Center in 1974 was estimated to cost \$6,500,000. It would have created parking spaces costing \$2.96 per space per day if built under a proposed city 20-year 5 percent bonding plan. Obviously, parking needs and costs of this magnitude would be a burden unless subsidized by the public sector. The panel believes that the responsibility of building, financing, and operating structured parking should be assumed by the city of Cambridge. This will be part of the front-end cost incurred as a preparatory step to the construction of a mixed use development. The long-range tax benefits of such a project will, in large measure, offset the initial outlay such an improvement will require.

### **Transportation**

**Massachusetts Bay Transportation Authority.** The panel discussed the future location and proposed improvements to the Kendall Square rapid transit stop with MBTA. It was learned that funds have been set aside to improve the rapid transit station, but they are being used elsewhere within the MBTA system until a master plan for Cambridge Center has been approved by the city. Once that happens, funding, design, and reconstruction of the terminal will probably require 2 or 3 years.

Kendall Square station on the red line of the MBTA constitutes an unusual development opportunity. It makes this site one of the most convenient within the Boston area, and the proposed extension of this line from

Harvard Square to Arlington will further enhance the site's strategic character. All community leaders should support improvements to the line and its extension to the west, since the net effect of these improvements will be to make west Cambridge an integral part of the entire MBTA system and further tie the Cambridge community together.

At Main Street and Broadway the tracks run at limited depth. Therefore, no mezzanine level can be provided between the tracks and the street surface, and pedestrian passages under Main Street and Broadway are precluded. Nor would a pedestrian crossover to a second loading platform on the southside track be possible. The existing underground loading platform must be extended west to provide six-car loading and unloading capacity.

The eastern corner of the triangle formed by Broadway and Main is owned by MBTA and is the site of an electric substation. This facility may need improvements in the future. MBTA also has two parking lots, one for employees and one for commuters, on the site. As already stated, the panel feels that every effort should be made to relocate this terminal to a more central location to serve the new mixed land use plan for the redevelopment site. A better and safer system of pedestrian crossovers is needed, as are a safer and more modern underground security system and a more direct tie between MBTA, the terminal, and the bus transit stop.

MBTA may eventually become involved in the construction of a proposed circumferential line. Acquisition of rights-of-way continues while planning and feasibility studies are going forward. The panel recommends continued city support for and participation in this long-range plan, with the hope that a logical tie can be made to the new proposed rapid transit terminal at Cambridge Center.

**Traffic and Major Street Plan for Cambridge.** New and more adequate traffic controls are badly needed in the community. The Cambridge street and highway system, including bus and truck routes, requires a complete and thorough evaluation by traffic experts. We highly recommend that Broadway be redesigned as a parkway with a width of at least 150 feet between Main and Fulkerson.

**A Master Plan for the City of Cambridge.** The city of Cambridge should have a comprehensive master plan which is updated by city staff at 5-year intervals. The planning board and the city's planning and development staff should work together to provide such a plan. Among the advantages of an adopted master plan are that transportation and other capital investment needs of the community can be planned, organized, and maintained in a much more systematic fashion. The thinking and input of each of Cambridge's 13 neighborhoods should be part of this process.

## EXECUTION AND IMPLEMENTATION GUIDELINES

### Developers

The size of Cambridge Center, the fact that total development is apt to span several years, and the desirability of maintaining a position of flexibility and selectivity in responding to opportunities as they occur are all factors which suggest a policy of redevelopment using many developers. They may be local, national, or international in terms of scope of activities. Efforts to seek them out should not be limited in geographic terms. More specifically, the nature of the proposed dominant uses deemed appropriate and realizable in Cambridge Center suggests a vigorous marketing program aimed at three types of mutually supportive targets.

One involves large developers of substance who are receptive to ventures requiring an innovative approach and who have a more-than-average degree of speculation. While several can be found in the local area, the search should range nationally and even internationally. The second target should be the end user and the prospective base tenant, who represent a key building block in the successful development of Cambridge Center. Here too, the marketing should be both national and international in scope. The third target deals with the service aspects of the project, including the realization of the area's needs for retail, transient housing, and entertainment uses. Developers and users willing and able to produce this element of the program can, in all probability, be found locally. Therefore, the initial emphasis for the provision of service uses should involve explora-

tion of the Boston region.

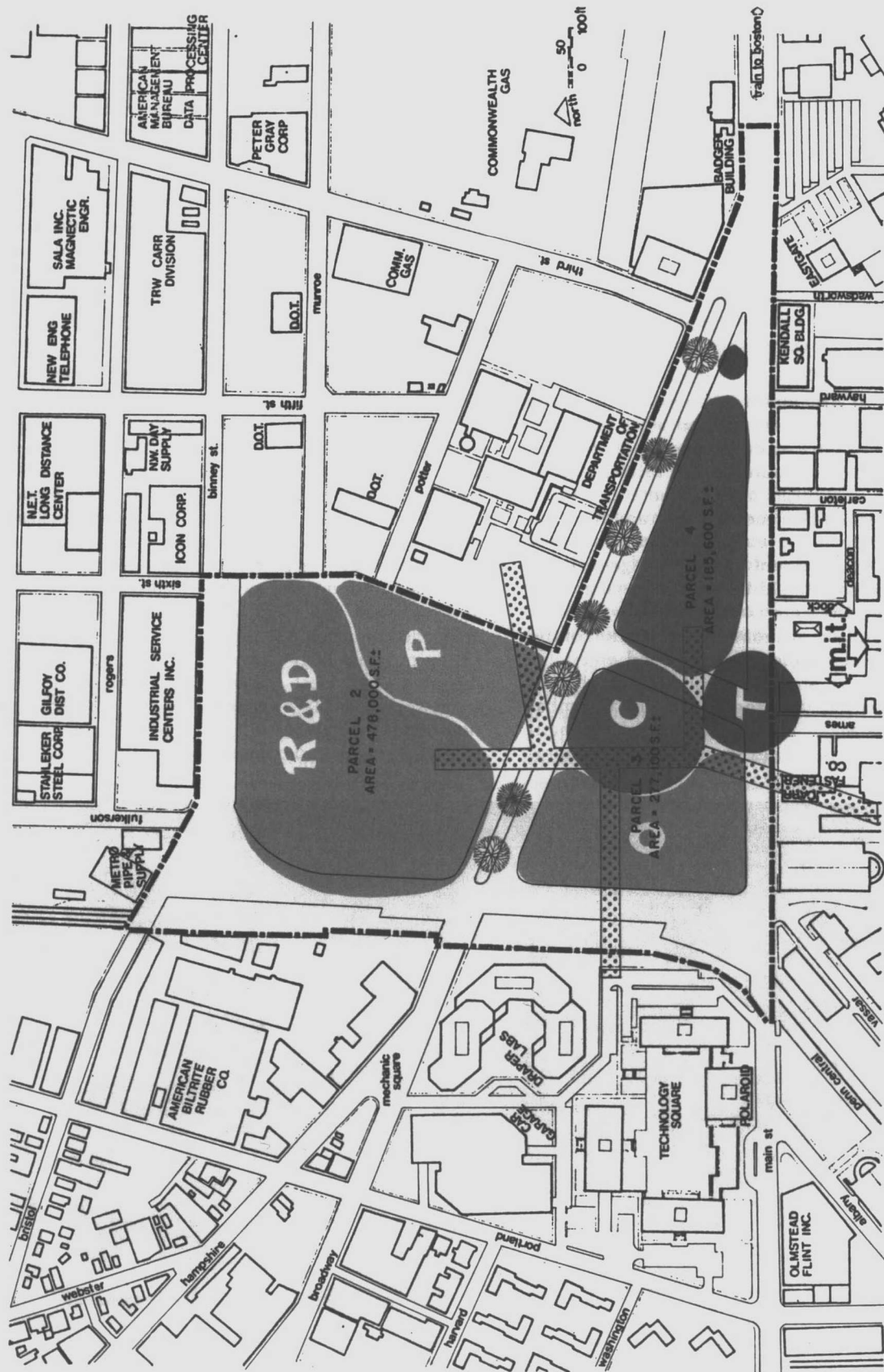
It is essential that a flexible posture be maintained in selecting developers, particularly at the outset of the marketing program. The real estate values in Cambridge Center will rise with each successful disposition of land and subsequent development. Therefore, it is possible that once Cambridge Center has become established as a viable land development venture, a competitive selection of developers will be possible. In the meantime, however, a negotiated approach to selection based on a careful process of identification and qualification will be necessary.

Far more crucial at this juncture is the agenda which must cover the point at which developer involvement can occur, beginning with the solicitation of formal proposals. That point, the panel stresses, should occur only after: (1) a policy consensus is reached on a plan as manifested by approval of city council of the urban renewal plan and zoning ordinance amendments; (2) some physical evidence exists that upgrading of the area's visual appearance as well as that of its surroundings is underway; (3) resources and development incentives are aggregated and packaged in a form which is credible, understandable, and committable to developers or users; (4) the marketing program begins to yield a more inviting image of the area; and most importantly, (5) an organizational framework is in place for effective and reliable interface between the public sector and the private user/developer seeking to invest and operate in Cambridge Center.



ULI panel members Cusick, Hanson, Kelly, and Caldwell at the report session.





**ULI Concept Plan for the Cambridge Center Urban Renewal Area**

- Pedestrian Circulation and Landscaping
- Relocated MBTA Station (T)
- Commercial (C)
- Parking (P)
- Research and Development (R & D)
- Office (O)

## Phasing

While no formal phasing plan is suggested, as a practical matter it is unlikely that the entire area can be rebuilt at once and still realize its optimum potential. Therefore, a strategy for incremental marketing and development should be anticipated. Such a strategy might contemplate, for example, concurrent initial development activities in both the triangle and the quadrangle with a focus on service-related uses in the former and economic base uses in the latter.

Along with these activities, the city and the redevelopment authority must be in a position to make critical design decisions and funding and timing commitments for completion of project infrastructure, including major streets, utilities, and, more importantly, the proposed expanded utilization of the transit stop. The MBTA station is one of the more spectacular assets affecting the potential of the redevelopment site in general, and the triangle in particular.

## Interim Use of the Property

Management of the site and its surroundings prior to and during the development period is an important element of the marketing strategy of Cambridge Center. Initially, a positive physical appearance for the project site seems indicated. Vacant structures must be cleared and interim uses should be considered, such as parking or recreational activities.

Likewise, a beautification program for the areas adjoining the project to the east, north, and south is also essential. Geographically, the property has a strategic gateway location, but until the Longfellow Bridge approach and the area between Kendall Square and the Charles River is upgraded, the full potential inherent in this location remains literally hidden.

On the south, MIT has extensive land holdings bordering the Cambridge Center site and facing Main Street and the Kendall Square station. Much of this property consists of older warehouses, industrial structures, and commercial buildings. A clearly defined development program for the MIT property is needed, preferably one which accommodates a community subcenter around the Kendall Square subway station. Such a program might also include a plan for rehabilitating the properties on Main Street for interim commercial use until MIT completes its own development program.

An aggressive commercial leasing program, combined with the establishment of design criteria, lighting, planting, and sign controls should also be immediately implemented for the areas surrounding the project site. A successful leasing and rehabilitation program could provide an immediate community scale focus for MIT students and staff, as well as employees of Polaroid, Draper Laboratories, and other occupants of the area.

## Financing Redevelopment

A package of public resources designed to induce and aid the private redevelopment of the area must be com-

plied as part of the agenda leading to solicitation of developer and user interest. What is suggested is a kit of precommittal tools which can be made available to fit precise circumstances in the process of negotiating a public/private development package. Such precommittal tools should include as a minimum:

- Availability of Chapter 121A tax benefits.
- A substantial reserve of capital funds for special on-site public improvements to be identified within the context of design plans of private developmental proposals. Such improvements might range from bridges, walkways, plazas, and the like, up to (in some cases) the creation of a stable substructure, where necessary to offset the unusually difficult subsoil conditions.
- A reserve fund for reducing the burden of front-end feasibility analysis costs and other costs enabling a developer to test alternative plans, test specialized markets, and undertake detailed financial analysis. This tool will be particularly important in cases where such developers are expected to proceed with innovative and speculative projects.
- Publicly provided off-street parking is specifically recommended as part of the kit of financial inducements.
- An in-depth analysis of the various means for tax-exempt financing and loan programs should be made available and coupled with an effective, and if possible, accelerated delivery system.
- Developers should be able to utilize the general marketing effort, retrieving (to the extent that they can be identified) prospective tenants, favorably disposed lenders, and interested investors.
- Developers should be able to lease land on a long-term basis. If possible, such leases should be subordinated. The base price of the land, whether for the purpose of lease or sale, should be written down as much as possible as a function of economic feasibility.

The creation of this kit of developer inducements and suitable delivery system is clearly a public sector function and should be handled within that framework. The panel emphasizes, however, that the interface between the public and private sectors is a matter that must be addressed forcefully and unequivocally. The community needs to realize that the Cambridge Center property is competing with other locations in the Boston area and elsewhere in the country for development, and developers have many options. If conditions are not satisfactory in one location, they can be expected to seek another.

One critically important factor influencing a developer's preference for one site or area over another, given more or less comparable opportunities, is his assessment of the circumstances under which he will be operating. In this respect, Cambridge Center is operating at a disadvantage. The past history of the area implies the possibility of future conflict, and to a developer, this is a strongly negative circumstance.

It is the concern which leads the panel to recommend at least one method to overcome what it perceives as a potential constraint to the effective marketing of the project site. This method involves using the Chapter 121A development corporation approach. Such an entity would have to be created explicitly for Cambridge Center and mandated to accomplish the *private* development objectives for the area initially agreed upon by the city and the corporation. This approach would permit a variety of arrangements to involve individual private developers and would enable them to deal on a one-stop basis with the corporation in the capacity of subdevelopers.

This would in no way alter the existing structure or process of local government. Nor would it affect the existing functions and relationships between the CRA, the city manager, the mayor, the city council, the planning board, the state, HUD, or other governmental agencies. Determining the make-up of the corporation will not be an easy task. Several characteristics however appear desirable:

- It should be compact and manageable, with a small board probably not in excess of seven members.
- The members should be both knowledgeable and experienced in private development, including fi-

nancing, construction, business attitudes, and practices.

- While not directly representative of the public sector, the board should be well regarded by public sector representatives.
- The director should have the confidence of city government, business leadership, and the university community.
- The one-stop character of the organization should be established contractually with the CRA and the city.

Initial funding and seed monies would have to be raised privately, basically in the same manner as is customarily done in private ventures. The impetus for the creation of the corporation should be generated by the city which should convene an appropriate group of major Cambridge business, financial, and institutional interests for the purpose of organizing and securing the necessary participation and seed funding commitments for the corporation. This call to action will require an immediate and concerted effort on the part of key elements of the community. Its success would represent the clearest signal that Cambridge is indeed ready to proceed energetically and on a high-priority basis with the development of Cambridge Center.



ULI panel members Kelly, Caldwell, Kory, Mister, O'Donnell, and Segal at report session.

## CONCLUSION

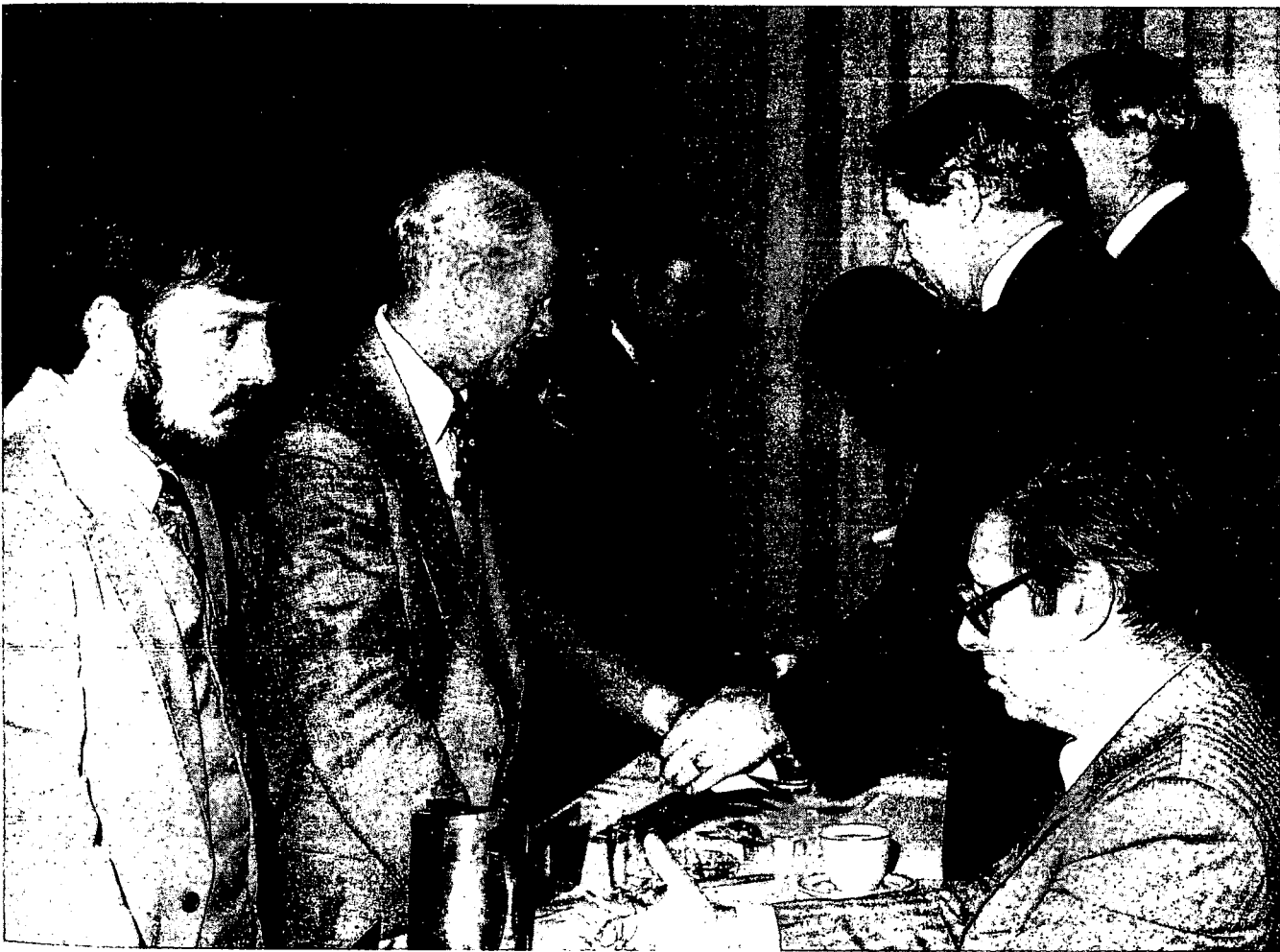
The Cambridge Redevelopment Authority has taken an important step forward by retaining R.M. Bradley & Company as marketing consultant for the property. The firm will contribute the real estate expertise needed by the development team.

Next, the city, its staff, and the Cambridge Redevelopment Authority must develop a delivery system and prepare the site for redevelopment. This will require substantial commitments on the part of the city and the city council, among which are the following:

- Approval of an amended renewal plan.
- Amending the present zoning to permit a mixed use development on the Cambridge Center site. This might require an interim change from its present classification, to a more suitable use until such time as the new mixed use of the district is approved for the site.
- Move expeditiously to acquire, relocate, and clear the redevelopment site for delivery and to devise an interim land plan until ultimate uses are committed.

Once the above steps are completed, actual development will take another 5 to 10 years. Public improvements that can be accomplished now will not only demonstrate the community's commitment to redevelopment but also better present the site in visual terms for marketing. The new master plan study for Cambridge should be initiated immediately. The CRA should quickly move forward to complete the various programs now underway. This includes obtaining approval for the environmental impact statement from all the required governmental agencies.

The necessary approvals and actions (those associated with preparation of the site for delivery) could take half a year or more to complete. Since these needed actions will take the form of actual commitments and consequently will receive publicity, this is an important way to restore credibility with the development community. Market analysis and feasibility studies encompassing the various uses for this site will be needed. Perhaps this could be made a front-end tool to offer to the developers interested in particular aspects of this project concept.



*Following the presentation, members of the audience discuss findings with ULI panelists in greater detail.*

## COORDINATION POLICY

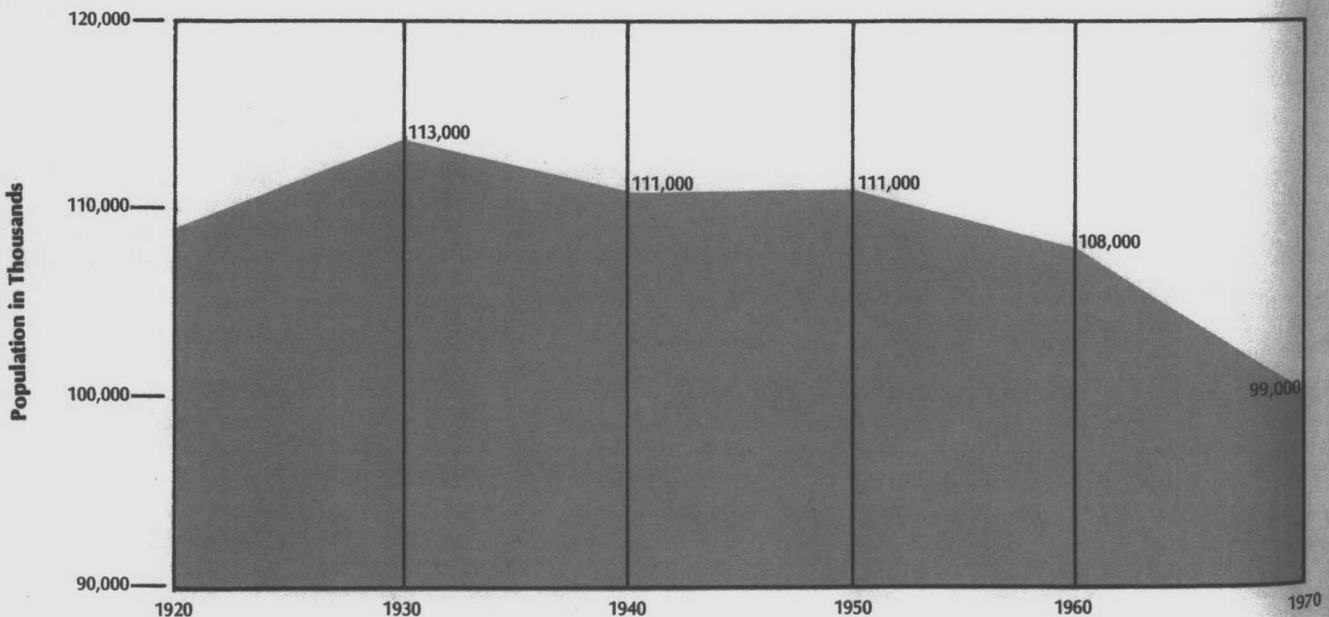
Cambridge is a city of vitality and diversity. Historically, this has been a source of both strength and stress. As such, it has been a key factor in the community's inability to make decisions regarding development. Further, the diversity of resident and institutional interests, a highly articulate and often transient population, and a daytime working population residing outside the city have compounded the difficulty of identifying leadership for the community. The panel believes this problem is one which must be overcome if Cambridge is to move ahead with the development of Cambridge Center in Kendall Square. The city also seems to understand this. The panel found that public and private sectors are committed to moving ahead by providing more jobs and revitalizing the city's economic base. All facets of the community recognize that there are no easy or ideal answers to the city's problems in general and those of Cambridge Center in particular, but there has been an expressed willingness to contribute time and resources to revitalizing the Kendall Square Urban Renewal Area. A primary benefit of redevelopment will be to increase jobs and improve the tax base in the city of Cambridge. This view was articulated to the panel by politicians, public officials, citizens, businesses, and institutions of Cambridge.

The panel has concluded that a vehicle for formalizing the cooperative intent needs to be developed, one which will be viewed by potential developers and users as a mandate from the city of Cambridge for development with clearly articulated goals and objectives, an approved plan, and full community support.

The panel feels most strongly that the private rebuilding process must be assumed by strong, knowledgeable, real estate development interests. Project leadership should be experienced in construction, financing, and marketing aspects of real estate development. This new entity must have both the responsibility and the authority to deliver the site to users subject to city council approval under a prescribed approved plan.

To restore credibility for the future, the decision-making process must be removed from the political forum. This authority must be in a mandate form—a flexible corporation or an agency with a mandate to move ahead and deliver subject to council approval. The site is extraordinary. Its location is unique. The opportunity is unique. Now is the time to take the first giant step forward.

**Population Change in City of Cambridge  
from 1920 to 1970**



# APPENDIX

## Background of the Kendall Square Urban Renewal Area

prior to the panel's arrival in Cambridge for its on-site investigation, panel members were provided with an advance kit reviewing the issues to be addressed. The advance kit, prepared by the redevelopment authority, contains a great deal of background information on the city of Cambridge. That portion dealing with project history is reproduced below.

In 1964, at the request of the federal government, the Cambridge Redevelopment Authority began the Kendall Square Urban Renewal Project (Mass. R-107) in Cambridge, Massachusetts, under provisions of Title I of the Housing Act of 1949, as amended, with a very tight time schedule in order to meet the urgent need for a 29-acre site within the project area for construction of a National Aeronautics and Space Administration (NASA) Electronics Research Center (ERC). The authority promptly completed its planning and obtained requisite approvals by December 1965.

The original urban renewal plan for the Kendall Square area—which is bounded on the north by Binney Street, on the south by Main Street, on the east by Third Street and Kendall Square, and on the west by the Penn Central Railroad right-of-way—was approved by the Cambridge city manager, the city council, the Commonwealth of Massachusetts, and the Department of Housing and Urban Development (HUD). The plan provided for development of the ERC north of Broadway and permitted a mix of high-density, tax-generating uses in the triangle south of Broadway. The original plan remains in effect legally at the present time.

Subsequent to receipt of the requisite approvals, including allocation of a federal capital grant of \$15,333,000, NASA entered into a land disposition contract with the agreement to acquire the 29 acres and to build its ERC thereon. The land acquisitions that followed throughout the project resulted in displacement of many large industrial and business firms employing more than 2,750 people.

The authority subsequently conveyed approximately 14 acres, in several tracts, to NASA, for staged building development with appropriations approved for FY-65, FY-66, and FY-67. However, this was followed by 3 years when no funds were made available for the construction of the Electronics Research Center in FY-68, FY-69, and FY-70.

On December 29, 1969, by executive order and without prior notification either to the city of Cambridge or to the Cambridge Redevelopment Authority—and contrary to its commitments to the community—NASA announced the closing of its partly built Electronics Research Center and its intent to withdraw from the project.

The closing, bitterly protested by Cambridge as a flagrant breach of contractual obligations, necessitated a replanning and reprogramming of the entire renewal

project area. While this effort got underway, NASA's interest in the site was being transferred to the Department of Transportation (DOT) for a transportation systems center, effective July 1, 1970.

The negotiations following the NASA closing served to further negate the original momentum for the renewal project, since no durable replanning or binding development agreements on any undeveloped portion of the project area could take place without first obtaining the necessary governmental approvals respecting the so-called "NASA surplus land."

On November 23, 1971, then Secretary of Transportation, John A. Volpe, acceded to requests from the city of Cambridge and redevelopment authority officials that his department, which had acquired the NASA buildings on some 14 acres east of former Sixth Street, relinquish any rights it had to the acreage west of former Sixth Street, under the terms of the land disposition contract, and not yet conveyed by the redevelopment authority to the federal government. Secretary Volpe also expressed agreement with the idea of a mutual exchange of certain minor land areas if it could be worked out legally.

From that date, until well into 1976, frequent meetings and exchanges of correspondence took place among the authority, DOT, General Services Administration (GSA), and HUD concerning the completion of development, the exchange of land, and the required GSA appraisals.

Secretary Volpe's statements made in November 1971, nearly 2 years after NASA's abrupt abandonment of the Kendall Square urban renewal area, were regarded as a green light for the redevelopment authority to complete its reprogramming effort involving an adjacent 13-acre triangle and the 11 acres of acquired and cleared "NASA surplus land," pending completion of federal agency negotiations.

To compound the delays respecting final agreement on the "NASA surplus land" rights, the HUD funding pipeline abruptly narrowed beginning in 1969, producing at best only small increments on a yearly basis, thus lengthening the estimated times for completion of project activities, and forcing the city to commit even greater assistance requirements which the authority obviously needed to replan and dispose of the rest of the project.

In recognition of the lack of sufficient federal grants for completion of project activities, the U.S. House Subcommittee on Housing and the full Committee on Banking

and Currency in 1972 included in their "omnibus housing bill" (H.R. 16704), a provision which would have authorized the HUD Secretary to approve an application for an amendment to the urban renewal contract for the Kendall Square project to provide all funds necessary to complete the project. The omnibus legislation failed to clear the House Rules Committee, however. Efforts by the city of Cambridge to secure legislative and/or administrative remedies continued.

In January 1972, the authority issued a preliminary re-programmed concept plan for the project area for local review and comment. Under this proposal, the triangle parcel would be developed intensively, for mixed office, commercial, residential, and hotel uses, while the "surplus land," or quadrangle parcel, would be developed predominantly for market-rate, high-rise residential uses. Substantial local opposition to this plan, particularly with respect to the quadrangle provisions, caused the authority to reconsider the proposal.

In July 1973, the Cambridge city council passed an order directing the authority to institute a development plan that would create and provide maximum blue collar and nonprofessional white collar jobs for Cambridge residents. The council also directed that a Citizens' Task Force be formed to advise the authority with respect to this revised development plan.

As a result of this process, three alternative development plans were considered by city council: a task force plan, a neighborhood (MIT) plan, and a city manager's

plan. On October 9, 1974, the city council voted 5 to 4 to accept the neighborhood plan, in principle, as a minimum for development in Kendall Square. The council also directed that the city manager's and task force plans be submitted as alternatives for the purposes of the forthcoming environmental impact study.

While local development objectives were being agreed upon, progress was being made in securing federal project completion commitments. HUD Secretary James T. Lynn in 1974 agreed to "reserve" \$15 million plus interest in additional capital grant funds for the project. The authority's formal application for the "reserved" funds was submitted in September 1974, and is still under review in the Boston area office of HUD. Whether this will, in fact, represent "all funds necessary to complete the project" cannot be determined at this time. HUD's superimposed requirement, for example, that the change in land use for the quadrangle constitutes a major plan change and that therefore an environmental impact statement must be prepared before commencement of additional development may subject project costs to further inflationary forces as more time elapses.

As further remedial action, late in 1975, Congress passed and President Ford signed legislation limiting the city of Cambridge's share of the project cost to the initial \$6,416,500 contributed in 1965, primarily by MIT in the form of Section 112 credits. These credits are made up of the cost of certain real estate acquired for educationally related purposes by the donor institution.

# The Cambridge Economy, Employment, and Population

**Table II: General Manufacturing Data for the Boston SMSA and the City of Cambridge**

	City of Cambridge			Boston SMSA		
	1967	1972	Percent Change	1967	1972	Percent Change
Total establishments (number)	311	257	-17.4	5,200	5,229	+ .6
Establishments with 20 employees or more (number)	147	120	-18.4	1,974	1,867	- 5.4
All employees, number (x 1,000)	24.2	20.0	-17.4	316.2	273.0	-13.7
All employees, payroll (million dollars)	166.0	204.3	+23.1	2,222.3	2,687.2	+20.9
Production workers, number (x 1,000)	15.7	10.1	-35.7	209.7	163.2	-22.2
Production workers, man hours (millions)	32.0	18.7	-41.6	409.3	316.2	-22.7
Production workers, wages (million dollars)	86.0	75.3	-12.4	1,202.6	1,272.1	+ 5.8
Value added by manufacture (million dollars)	332.4	268.3	-19.3	4,155.5	4,845.0	+16.6
Cost of materials (million dollars)	292.1	243.1	-16.8	3,511.2	4,029.1	+14.7
Value of shipments (million dollars)	627.0	518.6	-17.3	7,629.2	8,853.4	+16.0
Capital expenditures, new (million dollars)	15.3	9.9	-35.3	213.8	222.5	+ 4.1

Source: U.S. Census of Manufacturers.

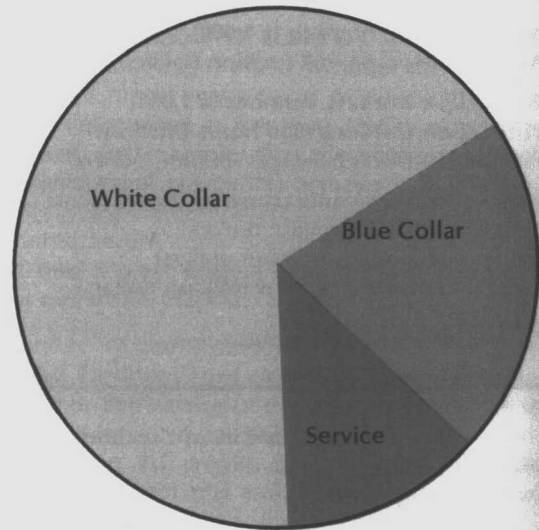
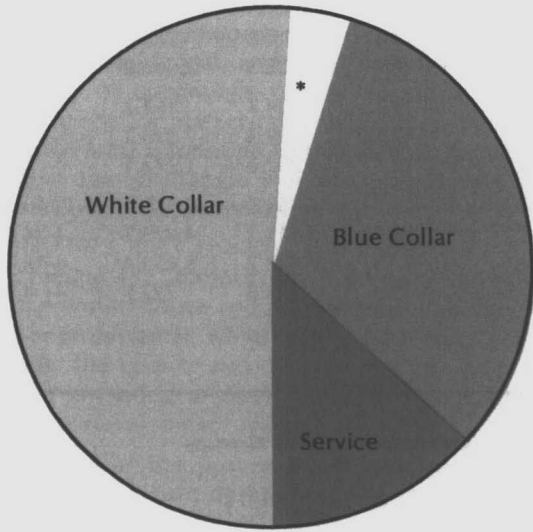
**Table III: City of Cambridge Employment Statistics by Selected Major SIC Groups**

Category	1970	1971	1972	1973	1974	1975
Total Employment	87,497	85,497	86,098	85,460	85,453	NA
Agriculture	110	105	111	106	99	NA
Construction	3,395	3,297	3,454	2,931	2,928	NA
Trans., Comm., Util.	3,689	3,688	3,544	3,440	3,147	NA
Trade	18,037	17,672	16,858	16,326	15,647	NA
Fin., Ins., Real Est.	2,383	2,198	2,051	2,095	2,389	NA
Services	31,978	32,973	34,506	35,817	36,182	NA
Government	5,656	5,993	6,360	6,472	6,736	NA
Manufacturing	22,249	19,571	19,214	18,273	18,325	16,562
Food & Kindred Products	3,180	2,768	2,276	1,812	1,739	1,648
Textile Mill Products	88	86	87	92	92	95
Apparel & Other Products	849	911	947	860	794	974
Lumber & Wood Products	68	65	69	71	75	24
Furniture & Fixtures	334	320	335	320	302	294
Paper & Allied Products	460	394	398	435	415	364
Printing & Publishing	1,263	792	577	644	488	506
Chemicals & Allied Products	1,246	1,156	1,094	1,089	1,258	1,214
Petroleum & Coal Products	14	11	10	10	12	26
Rubber & Plastic Prod's nec	1,363	1,268	1,256	1,259	1,276	1,136
Leather & Leather Products	1,193	1,064	1,156	874	832	682
Stone Clay & Glass Products	113	92	98	155	156	104
Primary Metal Industries	132	23	24	21	90	80
Fabricated Metal Products	997	922	764	1,976	1,779	1,582
Machinery Except Electrical	377	373	452	464	696	649
Electrical Equip. & Supplies	3,104	2,598	2,911	3,181	3,367	2,914
Transportation Equipment	.16	15	15	13	12	19
Instruments & Reltd. Products	4,977	5,257	4,713	4,325	4,370	3,813
Misc. Manufacturing Ind's	2,478	1,461	2,033	672	572	439

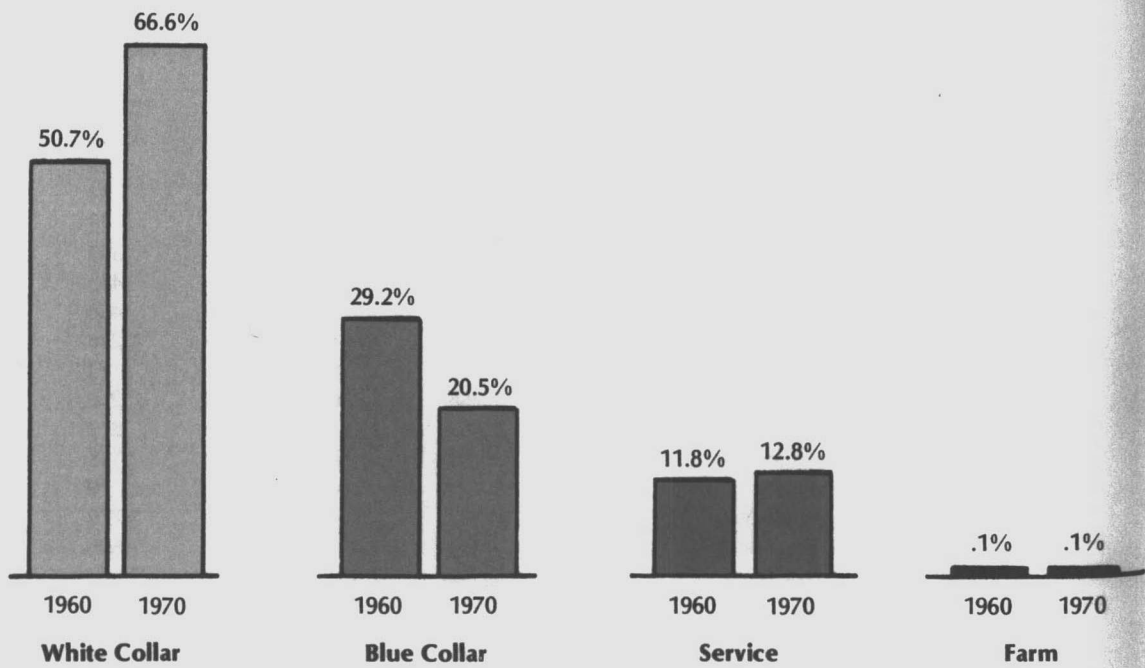
Source: Office of Economic Development and Manpower, Employment Data Series, State of Massachusetts.



## Employment



\*8.3 percent not reported



Change  
in Percent

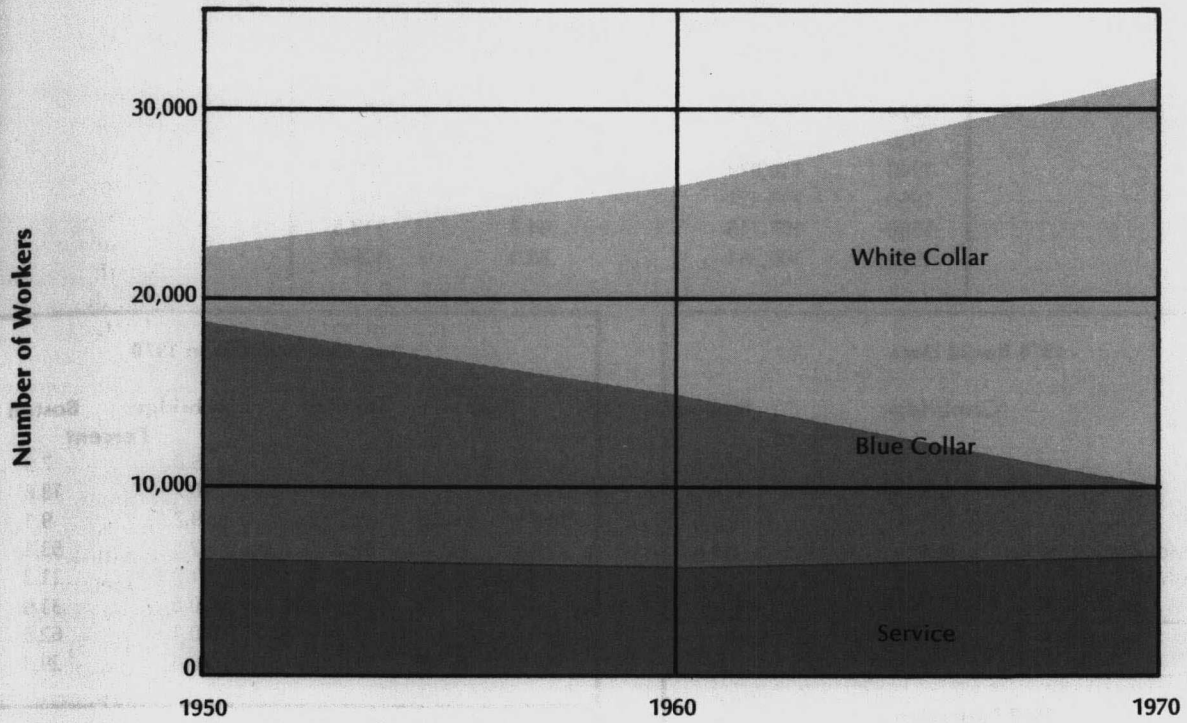
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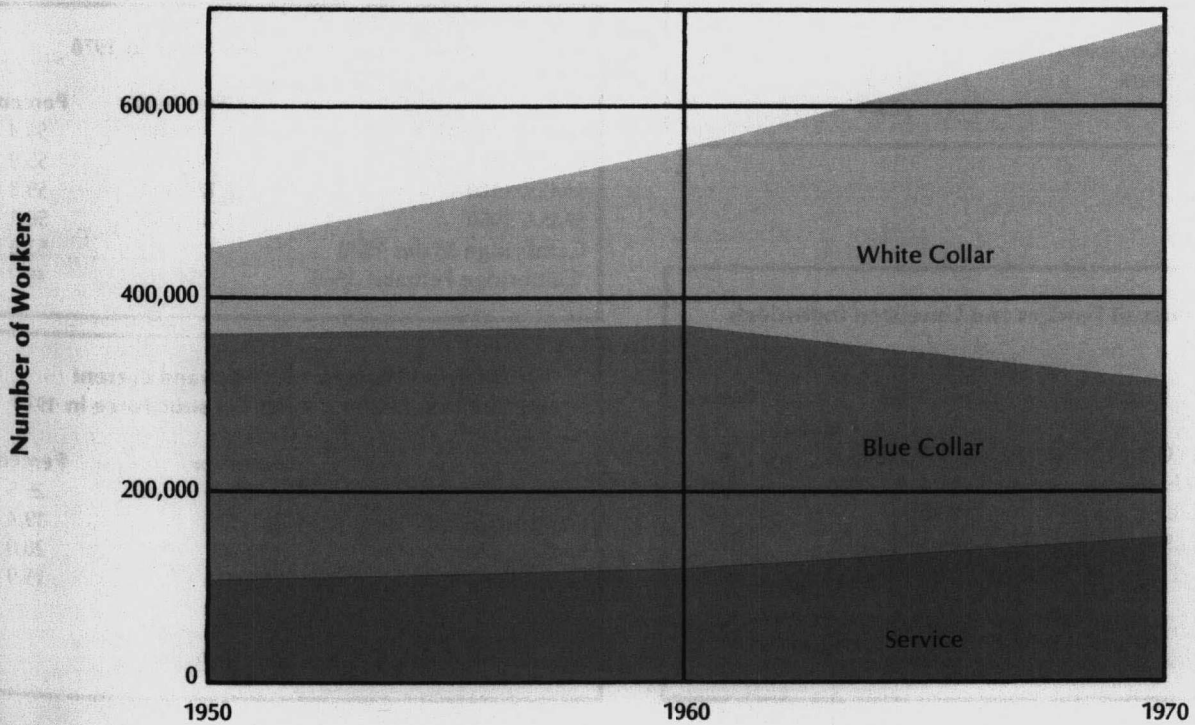
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### Occupations of Cambridge Residents 1950 - 1970



### Occupations of Boston SMSA Residents 1950 - 1970



**Table IV: Cambridge Population, Income, and Employment**

Year	Number	Number of People	
		Cambridge	Boston
1920	109,604	96.5	86.2
1930	113,643	100.0	100.0
1940	110,879	97.6	101.9
1950	111,124	97.8	106.7
1960	107,716	94.8	119.5
1970	100,361	88.3	126.8

**1970 Racial Data**

	Cambridge	Boston
	Percent	
White	91.1	94.5
Black	6.8	4.6
Other	2.1	0.9
Foreign Stock	38.4	35.4
Foreign Born	15.4	9.9

**Age Composition in 1970**

Age	Number	Cambridge	Boston
		Percent	
Under 5	5,919	5.8	7.9
5-14	10,760	10.7	18.6
15-19	9,705	9.7	9.1
20-64	62,277	62.1	53.1
65-Over	11,700	11.7	11.3
Under 18	20,155	20.0	31.9
21-Over	70,346	70.1	62.5
Median Age		26.8	29.1

**1970 Education**

	Cambridge	Boston
	Percent	
Less than 5 years completed	4.4	3.6
Completed High School	24.0	36.8
Completed College	10.0	15.8
Median of Completed School Years	12.5	12.4
	years	

**Persons in Civilian Labor Force in 1970**

	Number	Percent
Cambridge 1970	48,983	59.4
Cambridge 1960	47,972	55.9
SMSA 1970	1,177,942	59.8
SMSA 1960	1,063,840	56.1
Cambridge Males 1970		53.8
Cambridge Females 1970		46.2

**Incomes of Families and Unrelated Individuals**

Income	in 1970	
	Cambridge	Boston
	Percent	
Under \$3,000	9.0	6.1
3,000-5,999	15.4	10.8
6,000-9,999	27.0	23.2
10,000-14,999	26.1	29.8
15,000 over	22.5	30.1
Median Income	\$9,815	\$11,449
Per Capita	\$3,899	\$ 3,713

**Married Women with Husband Present and Children Under 6 Years in Labor Force in 1970**

	Number	Percent
Cambridge 1970	1,019	26.5
Cambridge 1960	1,175	19.4
SMSA 1970	30,355	20.0
SMSA 1960	25,621	15.9

Source: U.S. Census of Population, 1970.

## About ULI-the Urban Land Institute

ULI-the Urban Land Institute is an independent research organization which conducts research; interprets current land use trends in relation to the changing economic, social, and civic needs of our society; and disseminates pertinent information leading to the best and most efficient use and development of land.

Established in 1936 as a nonprofit institute supported by the contributions of its members, ULI has earned recognition as one of America's most highly respected and widely quoted sources of information on urban planning, growth, and development.

Members of the Washington, D.C. based Institute include land developers, builders, architects, city planners, investors, planning and renewal agencies, financial institutions, and others interested in land use.

Much of the Institute's work is accomplished through its six Councils, each headed by an Executive Group of distinguished authorities—Recreational Development, Residential, New Communities, Industrial, Commercial and Office Development, and Urban Redevelopment. This alignment has resulted from the realization that more specific information in diversified areas will be needed, and that there are no fractional solutions to urban problems.

This panel service report is one of a series of research publications to further the objectives of the Institute and to make generally available authoritative information to those seeking knowledge in the urban field.