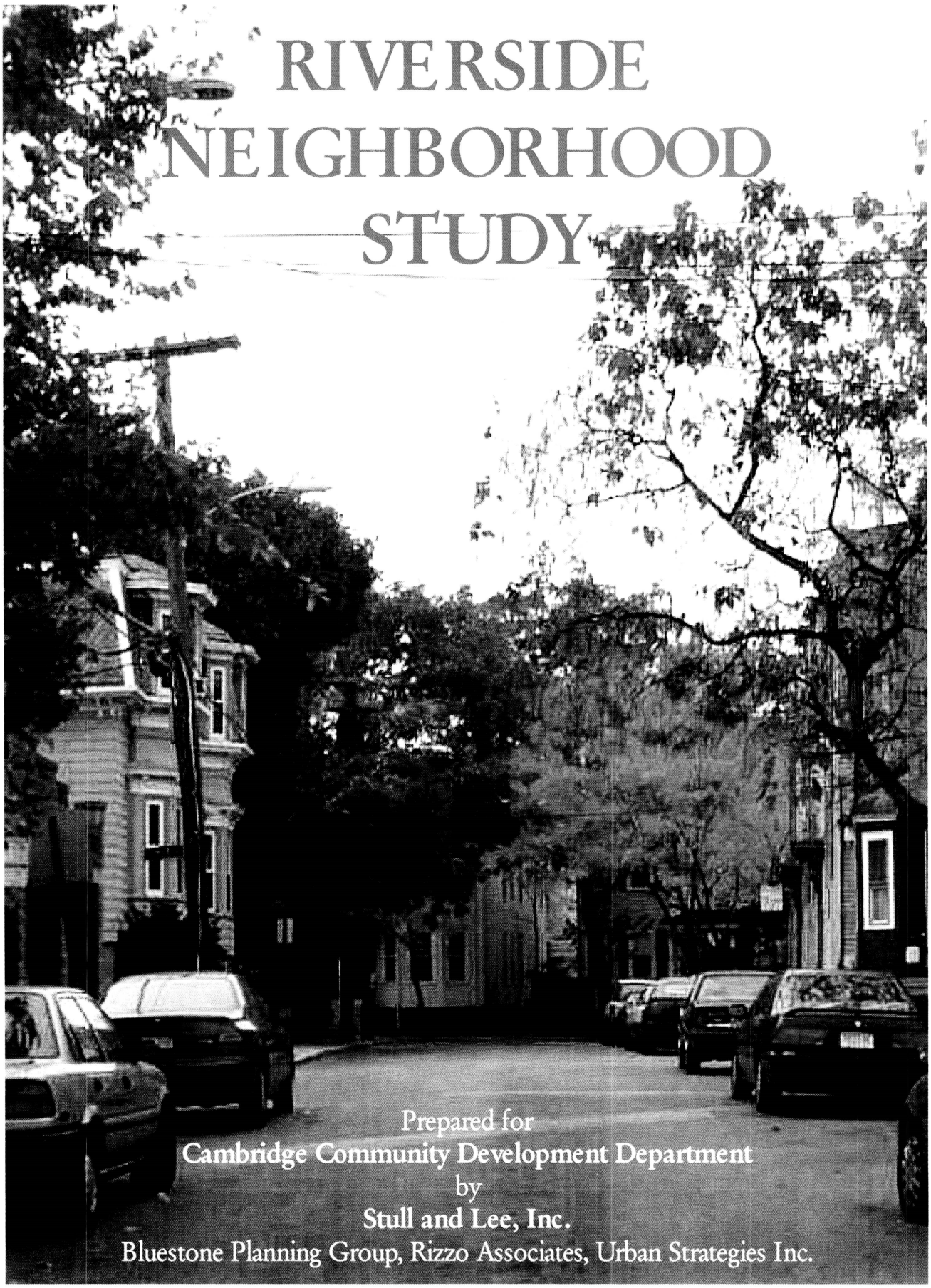

RIVERSIDE
NEIGHBORHOOD
STUDY
Prepared for
Cambridge Community Development Department
by
Stull and Lee, Inc.
Bluestone Planning Group, Rizzo Associates, Urban Strategies Inc.

RIVERSIDE NEIGHBORHOOD STUDY

April 2003

Prepared for
Riverside Study Committee and the
Cambridge Community Development
Department
by
Stull and Lee, Inc.
in association with
Bluestone Planning Group
Rizzo Associates
Urban Strategies, Inc.

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EXECUTIVE SUMMARY

In October 2000, a group of Riverside residents filed a petition which requested an 18-month moratorium on development in an area of Riverside along the Charles River roughly two blocks deep and extending from River Street to DeWolfe Street. The purpose of the moratorium was to provide time for the city and residents to study potential development impacts. In conjunction with adoption of the moratorium, Cambridge City Council authorized the Riverside Neighborhood Study.

After public advertisement for volunteers, a Study Committee was appointed by the City Manager and was charged with carrying out the study, working with Cambridge Community Development (CCD) staff and a consultant team retained by the City of Cambridge. The Study Committee included 13 Riverside residents, one business representative (who is also a resident), two institutional representatives (from the Cambridge Community Center and Harvard University) and four CCD staff members. From April 2001 to the present, the Committee held 16 meetings, all open to the public. The Committee and CCD also hosted two community-wide workshops that were very well attended. The Committee analyzed neighborhood issues and opportunities, explored numerous alternative development scenarios and arrived at a set of recommendations.

The Riverside Neighborhood Study report represents the 18-month effort of the Riverside Study Committee. Beginning in April 2001 the Committee, with the assistance of the Cambridge Community Development Department and the consultant team retained by the City of Cambridge, arrived at a set of zoning, transportation and general urban design recommendations. The Committee looked broadly at neighborhood-wide issues and more in depth at future development options for several key sites that were of paramount interest to members of the Committee and community at large.

This 2002 Riverside Neighborhood Study addresses many of the issues cited in the 1992 Riverside Neighborhood Study, produced by the Cambridge Community Development Department and the 1992 Riverside Neighborhood Study Committee.

A number of concerns and goals articulated in the 1992 study were also considered key by the present Committee:

- Maintaining existing density and character
- Creation of more affordable housing, family housing and opportunities for home ownership
- Town/Gown relationships and institutional expansion into the neighborhood
- Traffic congestion
- Zoning

Issues. The major issues addressed by the Committee included: neighborhood character and scale; affordable housing; type and location of commercial uses; open space; institutional expansion; traffic and parking. In addition to neighborhood-wide issues, the Committee focused on three special sites: Mahoney's Garden Center on Memorial Drive; The NStar complex on Memorial Drive; and a group of parcels on Banks, Grant, Athens and Cowperthwaite streets. These special sites are all owned or under Purchase & Sale Agreement by Harvard University. Resident members of the Committee want to insure that the University develops the sites in a way that is compatible with their vision for Riverside.

Goals. The following goals, developed by members of the Riverside Study Committee, represent the majority of the Committee members' vision for the neighborhood and, to a great extent, those of the community as expressed at the two neighborhood-wide visioning sessions.

Character/Scale
- Maintain and enhance Riverside's residential character and scale of two- and three-story houses

Housing
- Prevent the loss of existing housing
- Encourage local home ownership
- Preserve residential diversity
- Preserve affordable housing
- Create new affordable housing that is in harmony with its surroundings

Commercial
- Preserve "mom-and-pop" businesses
- Allow for ground floor commercial uses along River Street and Western Avenue

Institutional Expansion
- Mitigate problems caused by institutional expansion

Open Space
- Preserve and promote public open space
- Preserve and promote access to the river

Charles River
- Recognize the centrality of the Charles River as a recreational and ecological urban asset for all of Cambridge

Transportation
- Mitigate existing traffic and parking problems and the impacts of any new development

The Committee's recommendations fall into three general categories: (1) zoning changes, (2) transportation related actions and (3) general recommendations.

Recommendations. The following recommendations for zoning changes were formally adopted by a substantial majority of the Committee members.

Area 1 - Mahoney Blocks (roughly bounded by Memorial Drive, Akron Street, Banks Street and Western Avenue): Rezone from C-3 to a new zoning district, Special Residence C-X.

Committee Objectives. The majority of the Committee members' objectives for the recommended zoning for this area can be summarized as follows:
- Preclude development that would adversely impact the neighborhood
- Provide views of the river
- Prevent dense development facing the river
- Provide an incentive to encourage public open space on site
- Prevent the development of dormitories
- Exclude high traffic generators
- Create some affordable housing through Inclusionary Zoning
- Provide an appropriate transition between the residential neighborhood and the river

Area 2 - NStar (bounded by Memorial Drive, Western Avenue, Blackstone Street and the Technology Center parcel): Rezone from O-3 to a new zoning district, Special Residence C-Y.

Committee's Objectives. The majority of the Committee members' objectives for the recommended zoning can be summarized as follows:
- Preclude development that would adversely impact the neighborhood
- Provide views of the river

· Prevent dense development facing the river
· Prevent the development of dormitories
· Exclude high traffic generators
· Create some affordable housing through Inclusionary Zoning
· Provide an appropriate transition between the residential neighborhood and the river

Area 3 - Western Avenue, Kinnard, Green and Franklin Streets (an irregular-shaped area located west of Central Square): Rezone from C-2 to C-1.

Committee Objectives. The majority of the Committee members' objectives for the recommended zoning can be summarized as follows:
· Preserve the scale of the neighborhood by preventing large-scale development
· Minimize parking and traffic problems

Area 4 - River Street and a portion of Western Avenue (Western Avenue from Jay to Howard streets and River Street from Putnam Avenue to Williams Street): Rezone from Business A to a new zoning district, Neighborhood Business (NB).

Committee Objectives. The majority of the Committee members' objectives for the recommended zoning can be summarized as follows:
· Bring zoning into conformance with existing uses and dimensions
· Allow retail use without adversely affecting traffic and parking situation

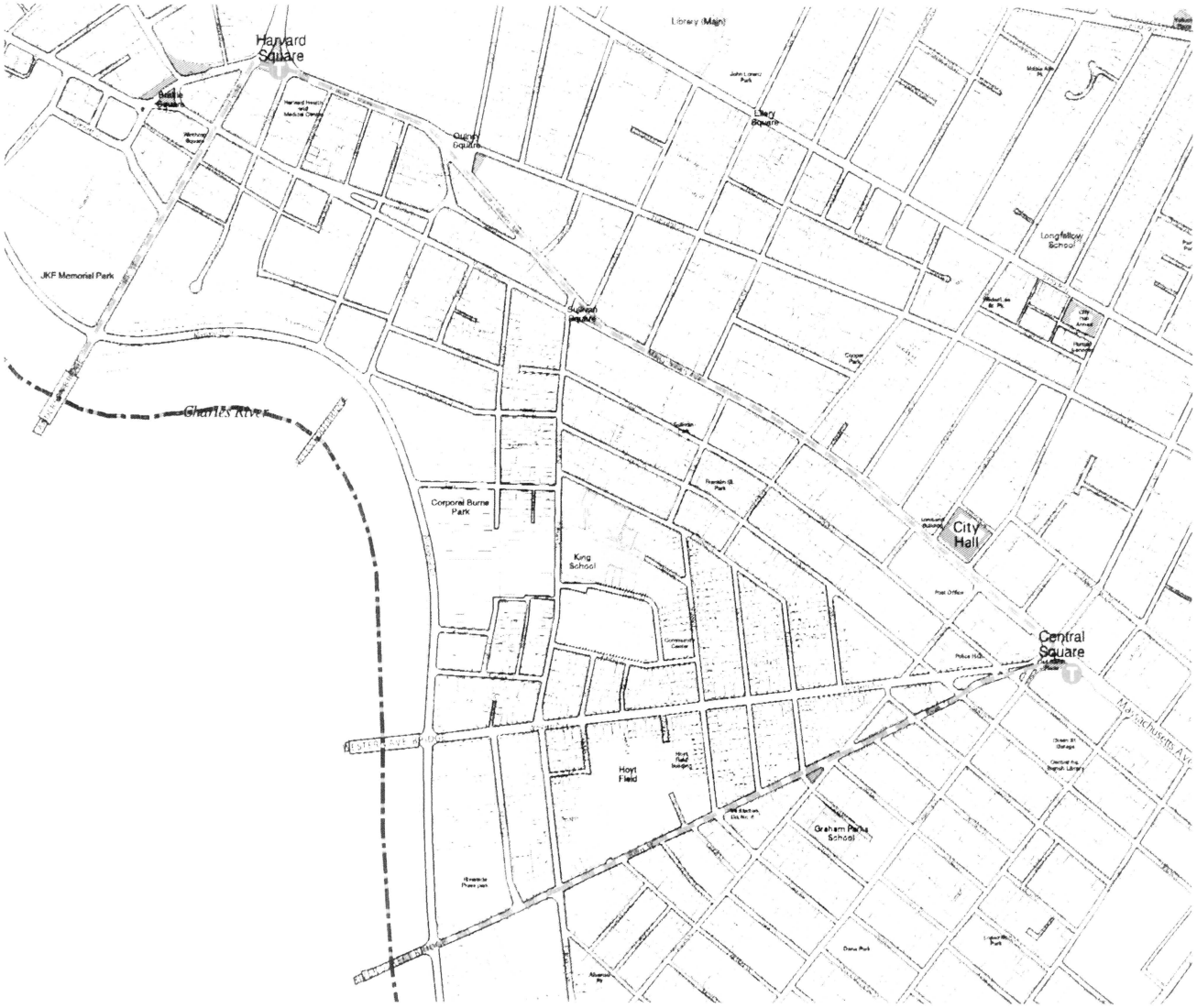
Area 5 - Putnam and Western Avenues; Banks, Elmer and Hingham Streets (bounded by Peabody Terrace, Putnam Avenue, Western Avenue, and Mahoney's): rezone from C-3 to C-1.

Committee Objectives. The majority of the Committee members' objectives for the recommended zoning can be summarized as follows:
· Bring zoning into conformance with existing uses and dimensions
· Prevent further institutional encroachment in the neighborhood

Area 6 - Banks, Grant, Athens, Mt. Auburn, and Cowperthwaite Streets (roughly bounded by Mt. Auburn, Banks, and Cowperthwaite streets and Harvard properties to the west): Rezone from C-3 to a new zoning district, Special Residence C-Z.

Committee Objectives. The majority of the Committee members' objectives for the recommended zoning can be summarized as follows:
· Replicate the existing pattern of housing on small lots
· Discourage dormitory development

The Committee's zoning recommendations were presented to the Planning Board on June 18, 2002, and submitted separately to the City Council as a neighborhood zoning petition, the Carlson petition, on September 23, 2002.



Study Area Map

1. ISSUES AND OPPORTUNITIES

The Study Committee, working with Community Development Department staff, consultants, and neighborhood residents, explored a wide range of issues and opportunities. Beyond the core concerns around zoning, development options and traffic, suggestions for other potential neighborhood enhancements came to the Committee's attention. Individual committee members' opinions sometimes diverged from those of others. In general, however, a strong majority of members reached agreement on most points, although residents and the Harvard University representative (land owner) often disagreed on the recommendations for parcels owned by Harvard University.

The Committee developed the set of goals found at the end of this chapter. They are general in nature and, while not specifically addressing each issue or opportunity, they reflect an overall vision for the neighborhood shared by a substantial majority of the Committee members.

1.1 Character and Scale. Each of the sub-areas in Riverside has its own particular character and scale. In Harvard Square there are typically three-to-four story business blocks with no side or front yards. In the Mass. Ave. Corridor building sizes are quite varied. Central Square is a classic early 20th century commercial core. The Harvard Dorms sub-area includes two distinct building types, the lower red brick U-shaped River Houses and the later high rises. The character and scale of the Riverside's Residential Core is established by the regular rhythm of its small individual buildings, most with shallow front yards and more generous back yards. (See Figure 1.1: Character and scale of Residential Core.)



Figure 1.1 Character and scale of Residential Core

Riverside residents place high value on the existing character and scale of the Residential Core and are concerned that its qualities are being threatened, by present and possible future development. The Committee has, therefore, focused more on the character and scale of the Residential Core than on other sub-areas.

The Residential Core has already experienced changes to the original fabric, beginning in

1953 with Putnam Gardens. Putnam Gardens was followed by Leverett Towers and New Quincy House in 1958; Harvard's Peabody Terrace in 1963; and Mather House in 1967. During the 1970s and 80s a number of multi-story apartment buildings were constructed between Green Street, Western Avenue, Mt. Auburn Street and Hancock Street. (See Figure 1.2: High-rise apartment house on Franklin Street.)

There are very few developable parcels in Riverside and even fewer multiple, contiguous parcels. Nevertheless, existing zoning would allow very large buildings in portions of the Residential Core (up to 120' in height, with an FAR of 3) and it is conceivable that development pressures could increase to the point that acquisition and demolition of existing small residential buildings might occur. Many members of the Committee are concerned that under present zoning, the vacant and underutilized parcels owned by Harvard University will not be developed in a manner that is compatible with the historic fabric. The Harvard-owned sites are discussed in detail in Sections 1.10, 1.11 and 1.12.

1.2. Housing. The Committee values and supports affordable housing, home ownership, more families with children and economic and racial diversity. Most recently constructed units, however, are expensive to rent or own.

The Committee discussed the development of affordable housing in Riverside using Cambridge's incentive inclusionary zoning. (For a description of this article refer to Appendix B.) For projects with ten units or more and over 10,000 sf of floor area this ordinance requires 15% of the units to be affordable. The type and scale of residential building that the committee favors in Riverside would contain only approximately 3000 sf of floor area and two to three units. Smaller residential buildings of this size do not trigger the inclusionary zoning requirement. Most Committee members do not think the trade off of scale and the changes to the character of the neighborhood that would be necessary to achieve affordable units through inclusionary zoning is desirable and they prefer to pursue the addition of affordable housing by other means.



Figure 1.2 High-rise apartment house on Franklin Street



Figure 1.3 Young Riverside family

Committee members expressed their concern about additional undergraduate housing in the neighborhood. Cambridge's Citywide Growth Policy Document calls for the major educational institutions "... to provide housing for their respective faculties, students and staff through additions to the city's inventory of housing units." The policy calls for housing that matches the "... scale, density and character of the neighborhood." It does not, however, differentiate between housing for faculty, staff, graduate students and undergraduate students. Many Riverside residents find the undergraduate life style incom-

patible with a family-oriented neighborhood. They would, however, welcome faculty and staff as residents, in housing designed to be functionally and visually an integral part of the neighborhood. Committee members strongly recommend the university develop within its campus.

1.3 Commercial. The Riverside Neighborhood has a wide range of commercial uses, from the high yield establishments at Harvard Square to the small "mom-and-pop" stores on River Street and Western Avenue. Harvard Square is a major destination commercial center, Central Square is successfully reinventing itself, and the Mass. Ave. Corridor continues to be a viable location for furniture and other specialty goods. These areas were largely viewed as peripheral to the core neighborhood and did not receive a great deal of the Committee's attention. The Committee focused instead on the issue of "mom-and-pop" stores and their relationship to the Residential Core.

The primary concern in relation to "mom-and pop" stores was that the siting and massing of any new such stores be compatible with nearby residential structures. For this reason a building type with its ground floor built to the front and side property lines was rejected in favor of buildings with front, side and rear yard setbacks similar to those of nearby residential buildings. Because the "mom-and-pop" stores are envisioned as serving walk-in customers, Committee members did not favor provision of dedicated parking for customers.

1.4 Open Space/Community Facilities. Riverside residents, like residents of other dense neighborhoods, treasure parks and open space. Many residential units in Riverside have no private open space, other than perhaps a deck or balcony. Back yards are either dedicated to the first floor occupants or shared.

The Charles River and its related parkland



Figure 1.4 Charles River Park



Figure 1.5 Example of a riverfront link

have special meaning for Riverside residents. For long-time residents, the riverfront is viewed as open space that is essentially an extension of the neighborhood. Over the years the connection has become more tenuous as a result of dormitory construction and increased volumes and speeds of traffic on Memorial Drive. The majority of Committee members do not want future development along Memorial Drive that either physically or psychologically creates a barrier between the Residential Core and the river. Improved pedestrian access to the riverfront is desired. The Committee advocates streetscape designs that visually and functionally reinforce the pedestrian realm leading to the parkland along the river. (See Figure 1.5: Example of riverfront link.) The Committee also sees the need for improved maintenance of the riverfront parkland and the Charles River bridges. Though the parkland and bridges are the responsibility of the

MDC, the City of Cambridge and its residents could work collaboratively with the MDC to plan for improvements, such as is being done at Magazine Beach.

During the course of the study, the Committee also discussed the need for a larger view of the riverfront, one that might result in an overall vision for the Cambridge riverfront that could be adopted by other riverfront neighborhoods. A similar concept was put forward in the 1992 study, which recommended a parkway district to protect the Charles River bank from intrusion. The Committee considers that design guidelines and criteria to regulate future development along Memorial Drive could be important tools to protect the special character that a riverfront location offers.

In March 2000 the City issued the Report of the Green Ribbon Open Space Committee. This 17-member committee, appointed by the City Manager, inventoried different park types and areas in the city that do not have access to each park type. They also analyzed the amount of public open space within one-quarter mile of every 1000 persons. With regard to the Riverside Neighborhood the report includes these findings:

- The Central Square area was rated high priority for a neighborhood park
- King School was rated high priority for an elementary school park (implemented in 2002)
- Tot lots were needed in Central Square and Harvard Square
- Three multi-purpose playing fields were needed in the eastern half of the city
- More emphasis on open space designed for passive uses was appropriate throughout the city

These findings reflect the Green Ribbon Open Space Committee's charge to identify under-served areas of the city and are not meant to imply that additional open space would not be a welcome addition to any neighborhood.



Figure 1.6 Example of sidewalk as open space

In dense urban areas like Riverside, sidewalks also function as open space. They allow for light and air to adjacent buildings. Sidewalks double as meeting places for teens and adults. Sidewalks also provide pedestrian and bicycle connections to schools, parks and shopping. Recent improvements in Central Square, where sidewalks have become extensions of cafes and restaurants, illustrate their potential for recreational use. In Riverside, Western Avenue and River Street, in particular, offer similar opportunities in selected locations. (See Figure 1.6: Example of sidewalk as open space.)

The recent addition of the retail area on River Street makes it possible for many Riverside residents to accomplish routine shopping trips on foot or bicycle. With creative streetscape design an enhanced pedestrian link through the neighborhood could connect a portion of the Residential Core to this center as well as to Harvard Square. This "Neighborhood Spine" could run along Banks Street from Harvard Square to Western Avenue shifting to Blackstone Street south of Western. (See Figures1.7: Potential Neighborhood Spine; 1.8: Potential Neighborhood Spine at Putnam Avenue; 1.9: Potential Neighborhood Spine at Peabody Terrace; 1.10: Potential Neighborhood Spine at parking lot; 1.11: Potential Neighborhood Spine at Blackstone Street.) North of Western, one section would follow an exist-

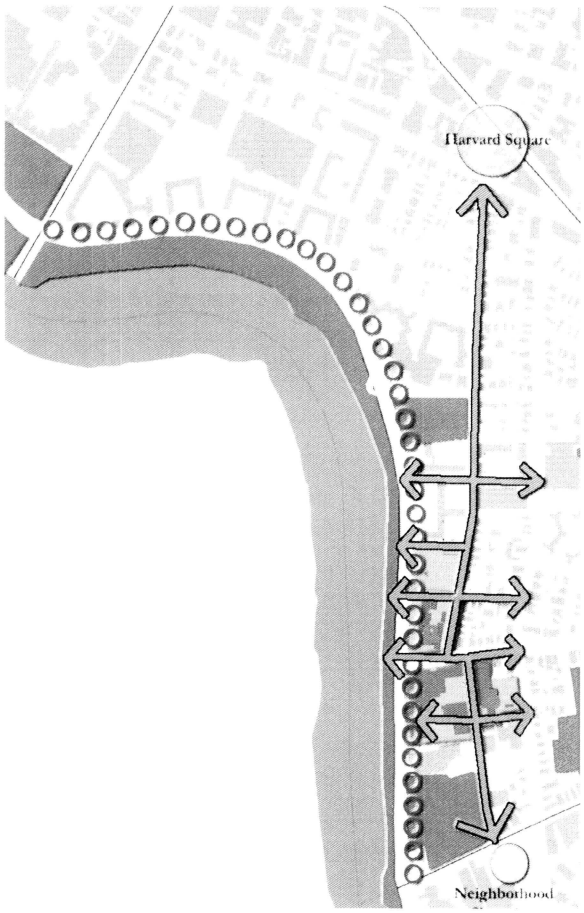


Figure 1.7 Potential Neighborhood Spine

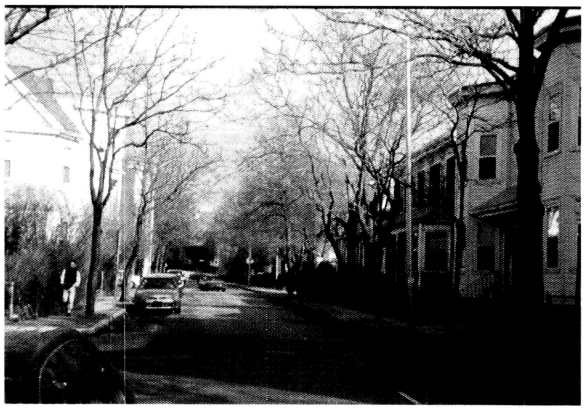


Figure 1.8 Neighborhood Spine at Putnam Avenue

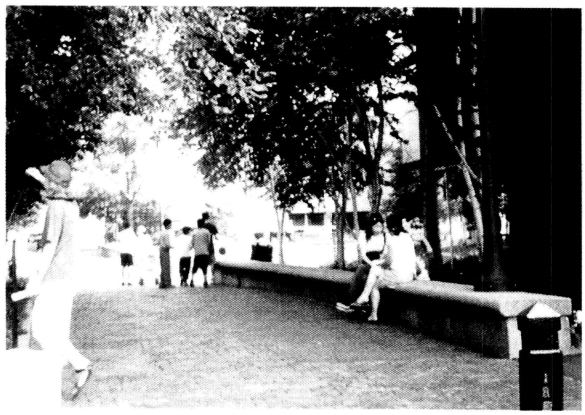


Figure 1.9 Neighborhood Spine at Peabody Terrace



Figure 1.10 Neighborhood Spine at parking lot



Figure 1.11 Neighborhood Spine at Blackstone Street

ing public walkway through Peabody Terrace. In the block directly north of Western an easement would be required through what is currently a Harvard parking lot. The Neighborhood Spine could be identified by pedestrian-scale paving, lighting and landscape treatment.

The principal community facilities in Riverside are King School, Moore Youth Center at Hoyt Field, Corporal Burns Park, Riverside Press Park, and the Cambridge Community Center. At the outset of the planning process residents expressed concerns about the condition of both the building and the grounds at King School. The

playground has recently been redesigned and reconstructed. Residents also noted that the non-profit Cambridge Community Center was in need of capital improvements, and the Corporal Burns Park building is underused and in need of renovation. There are several churches in Riverside that serve the neighborhood.

1.5 Institutional Development and Expansion. Many members of the committee view Harvard's potential expansion of its facilities into the Residential Core and along the Charles River as a threat to the identity and viability of the neighborhood. Some residents "... do not want to feel as if they are living on the Harvard campus... " Some residents were apprehensive that, as a result of continued Harvard expansion along the riverfront and in Allston, the river would effectively become part of the campus. (See Figures 1.12: Existing land use and 1.13: Property owned by Harvard University.) It is also the opinion of the majority of the Study Committee that Harvard's ownership of 267 acres in Allston could relieve some of the pressure Harvard has felt in the past to expand its campus into the Riverside neighborhood.

A half-block area bordered by Cowperthwaite, Banks and Grant streets, considered by residents to be a part of Riverside's Residential Core, is located within the Institutional Overlay District. Issues related to Harvard's development plans for this area and the block to the north are discussed below in Section 1.12. The other two Harvard-owned sites that underwent special scrutiny by the Committee - Mahoney's and NStar - are located outside the Institutional Overlay District, and are in zoning districts for which the overlay district provisions do not apply. Issues related to these special sites are also discussed below, in Sections 1.10 and 1.11.

1.6 Parcel Size/Development Potential. Parcels in Riverside are typically 40' to 50' wide and 90' to 100' deep. If the present dimensional requirements were applied to the historic residential fabric in Riverside virtually all structures would be non-conforming. The principal difference between historical development patterns and existing dimensional requirements is in the side yard setback. Vintage residential structures are typically set back only 5' from the side property line whereas today setbacks are typically 7.5 to 10 feet. (See Figure 1.14: Typical building pattern in Riverside.)

Because of Cambridge's requirement for on-site residential parking, there would, in most cases, be a driveway on one side of a residential structure.

Following adoption of the Townhouse Ordinance in 1976, a number of townhouse projects were developed in Riverside. Though only slightly higher than Riverside's historic residential structures, these townhouse developments typically break the established rhythm of freestanding buildings. A majority of the members of the Committee felt that it was inappropriate for townhouses to be subject to less stringent dimensional requirements than other building types and supported changes to the Townhouse Ordinance. Given current real estate values, the Townhouse Ordinance no longer serves as an incentive for the creation of moderate-income housing.

1.7 High Water Table/Drainage. Riverside residents periodically experience flooded basements and in many cases have been unable to determine the cause. Suspected causes have included the City's storm and sanitary drainage systems and new construction.

Only portions of Riverside have separate sewer and storm drainage systems. Significant storms can cause back-up in the systems. Exact analysis of a basement flood-

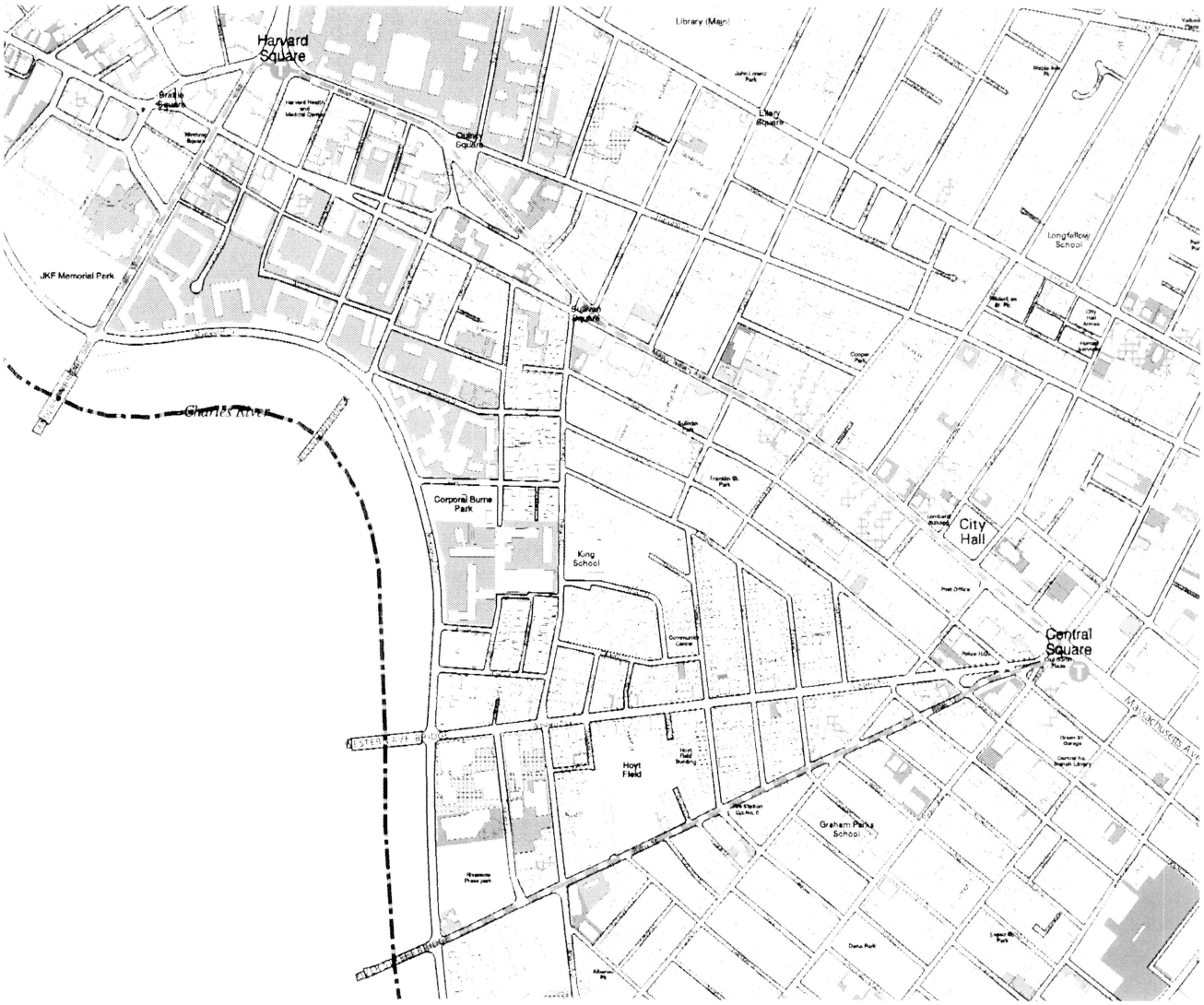


Figure 1.12 Existing land use

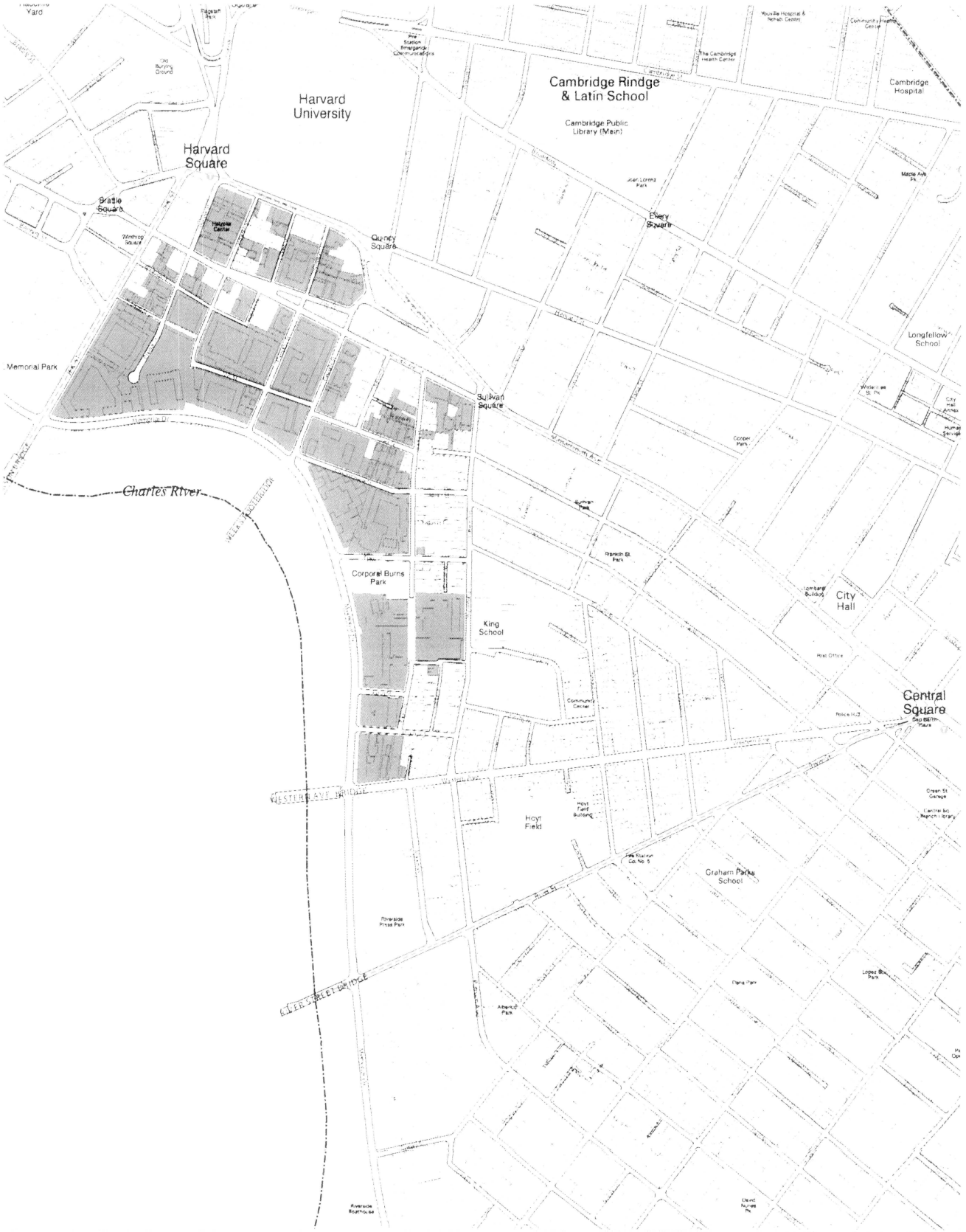


Figure 1.13 Property owned by Harvard University

ing problem must be on a case-by-case basis. The water table in Riverside is high and fluctuates two-to-three feet each year. Basement space must be designed and constructed to withstand water pressure and infiltration. For this reason, below-grade parking, or any other below-grade use, is very expensive to build.

The City now has in place design and construction regulations that preclude ground water impacts on adjacent properties due to construction activity.

1.8 Traffic. The Riverside Neighborhood experiences significant traffic impacts. Memorial Drive is in effect a major regional arterial. River Street and Western Avenue serve as primary connectors from the Mass Pike to all of Cambridge, Somerville and other towns to the north. Through traffic also finds its way onto Riverside's residential streets, primarily Putnam Avenue, which leads from River Street to Harvard Square, and other neighborhood streets.

Two suggestions were put forward as mitigation for through traffic: (1) traffic calming and (2) improved pedestrian crossings. Committee members also stressed the need to consider traffic impacts when evaluating proposed development in and near Riverside.

Residents at the Visioning Session noted the adverse impacts of truck traffic on River and Pleasant streets. They were particularly concerned about trucks carrying hazardous materials. The City is participating in a regional truck study with the Mass. Highway Department to address these issues. (See Figure 1.15: Traffic on River Street.)

1.9 Parking. Riverside residents often find it difficult or impossible to locate on-street parking in the neighborhood. One focus of the Committee's discussion was what role, if any, Harvard students and affiliates play in creating and/or exacerbating the parking problem. Harvard undergraduates are not



Figure 1.14 Typical building pattern in Riverside



Figure 1.15 Traffic on River Street

allowed to have cars in Cambridge. Graduate students, faculty and staff living in Harvard-owned or private housing who own cars are currently entitled to resident parking permits (one per car) and visitors' parking permits (one per household). Dormitory residents are not entitled to visitor permits. Residents of Peabody Terrace can rent parking spaces in the Peabody garage. Despite an opinion to the contrary from the City Solicitor, the majority of the Committee believes that the City can and should deny resident and visitor permits to students living in university dormitories, and has requested the Department of Traffic and Parking to pursue this possibility.

The Committee strongly urges that future development in and around the neighborhood not aggravate the demand for on street parking. (See Figure 1.16: Double parking on

Western Ave.) See Section 2.3 for a fuller discussion of transportation issues.

1.10. 870-888 Memorial Drive (Mahoney's Site). The Mahoney's site has been owned by Harvard University since 1927 and occupied by a garden center since 1950. As the last developable riverfront site remaining in the Riverside Neighborhood, it generated extensive debate in the Committee's meetings. (See Figures 1.17: Mahoney's site and 1.18: Aerial view of Mahoney's site.)

The site comprises the entire block bounded by Memorial Drive, Akron Street, Banks Street and Hingham Street and the eastern portion of the block bounded by Memorial Drive, Hingham Street, Putnam Avenue and Western Avenue. The North Block is approximately 30,000 sf in area and the South Block (including the parking lot) approximately 64,000 sf. Both are presently zoned C-3, which allows buildings up to 120' high and an FAR of 3. Residential and institutional uses are allowed. The site is located outside the Institutional Overlay District, and as a C-3 District, restrictions on Institutional uses do not apply.

The site is subject to the Commonwealth's Chapter 91 regulations (described in Appendix B). These regulations would limit heights of buildings to 55 feet within 100 feet from the riverbank, stepping up at a ratio of two feet of height for each foot away from Memorial Drive. The 100' line lies in the front portion of the parking lot.

Many Riverside residents find the garden center an asset to the neighborhood and would be in favor of it remaining there indefinitely. Members of the Committee have proposed that the City purchase the site and develop it as a park, or, alternatively, that Harvard donate the site to the City (or possibly a combination of these actions). In discussions of how open space on the site would be used, a majority of Committee members' stated preference was for passive uses. Specific suggestions included a sculpture park, horticultural uses and a place for community gatherings and outdoor performances. Harvard, however, is exploring options for developing the site for University use. In July 2001 the University provided the Committee with a proposal to construct a two-part museum on the site. The University



Figure 1.16 Double parking on Western Ave.



Figure 1.17 Mahoney's site



Figure 1.18 Aerial view of Mahoney's site

recently withdrew the proposal and is now investigating housing options instead.

The Mahoney's site is not well served by public transit. The closest T station is at Central Square, a twelve-minute walk (.6 miles). Nearby buses on Western Avenue and River Street run on an average of every 20 minutes. Any office development would very likely need to provide for significant parking on-site.

The vision for future development of the Mahoney's site shared by the majority of Committee members can be summarized as follows:

- Future development should incorporate a large percentage of publicly accessible open space.
- The open space should include a primary space that is generously proportioned and highly visible, rather than residual strips of lawn.
- The primary open space should be located adjacent to Memorial Drive and Western Avenue
- Building(s) should be limited to two-to-three stories
- Building uses should be limited to residential and institutional, but not include undergraduate dormitories
- Visual and functional access to the river front should be enhanced
- Building service should not negatively impact the neighborhood
- The development should not add to the demand for on-street parking
- Traffic impacts should be minimized

(See Figures 1.19: Open space and institutional use; 1.20: Open space and housing and 1.21: Example of open space use.)

1.11. NStar Site. The NStar site includes portions of two blocks: one bounded by Memorial Drive, Western Avenue and Blackstone Street (West Block) and the second bounded by Blackstone Street, Western Avenue and Putnam Avenue (East Block).

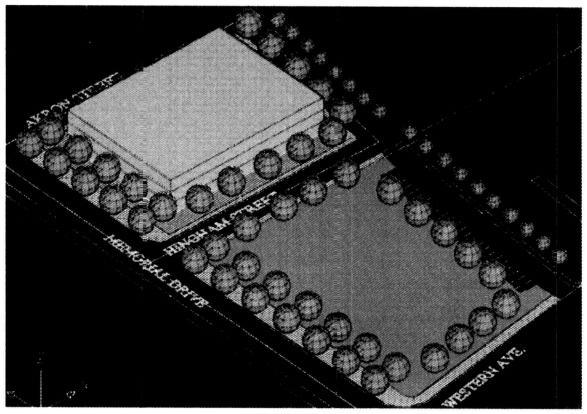


Figure 1.19 Open space and institutional use

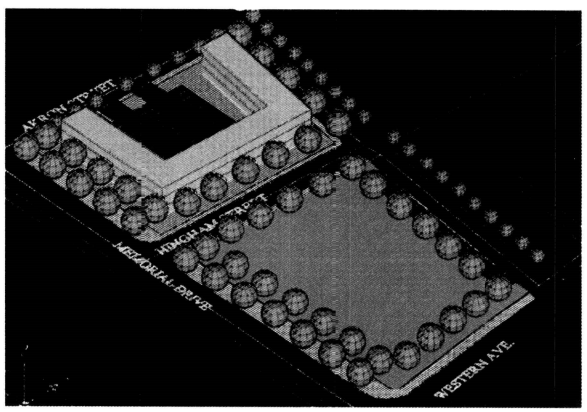


Figure 1.20 Open space and housing



Figure 1.21 Example of open space use

(See Figure 1.22: Aerial view of NStar site.) There is a wide variety of building types on the West Block: the Power Plant; a low hip-roofed building located on Western Avenue; a four-story office building on Blackstone Street; and numerous lower buildings scattered over the site. (See Figures 1.23: Power Plant; and 1.24 Office building on Putnam

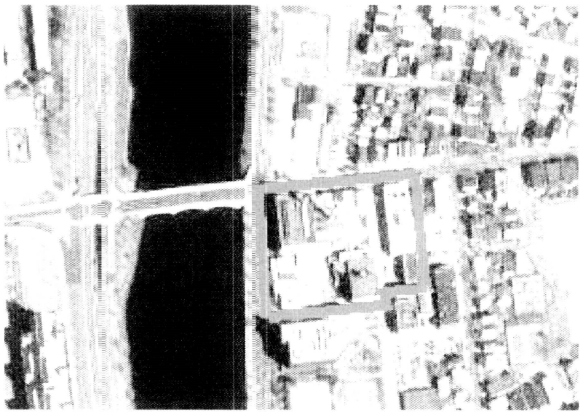


Figure 1.22 Aerial view of NStar site

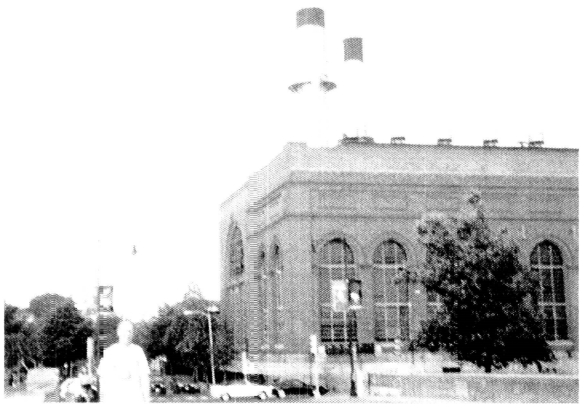


Figure 1.23 Power Plant



Figure 1.24 Office building on Putnam Avenue



Figure 1.25 Switch Building

Avenue.) There is one major building on the East Block: the Switch Building. (See Figure 1.25: Switch Building.) Three of the buildings may have historic merit: the Power Plant, the hip-roofed building on Western Avenue and the Switch Building. With the exception of the Power Plant, buildings on the site appear to be entirely or nearly vacant.

The Power Plant supplies heat to 200 Harvard buildings in Cambridge and Allston. Harvard recently agreed to buy the plant from NStar for $14.6 million, subject to state regulatory approval. NStar will operate the plant for one year, at which time Harvard will assume operations. The Committee has raised concerns regarding the pollution generated currently from the stacks and has requested that the new owners address these problems once they complete the purchase of the site.

The West Block of the NStar site is presently zoned O-3, which allows buildings up to 120' high and an FAR of 3. Allowed use categories are residential and office. The West Block is located outside the Institutional Overlay District, but, because of its present zoning, special restrictions on institutional uses that can apply to areas outside the Overlay District do not apply.

The East Block is currently zoned C-1, which allows buildings up to 35' and an FAR of 0.75. Allowed use is residential. This portion also lies outside the Institutional Overlay District and, because it is zoned C-1, special regulations limit institutional uses.

The consultant team investigated several reuse possibilities for the site. These included:

- Existing buildings adaptively reused for housing

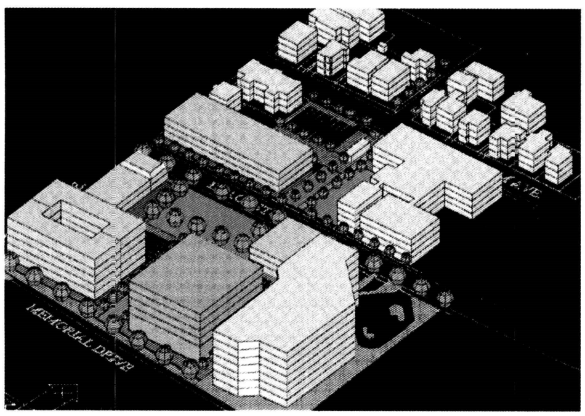


Figure 1.26 All housing option

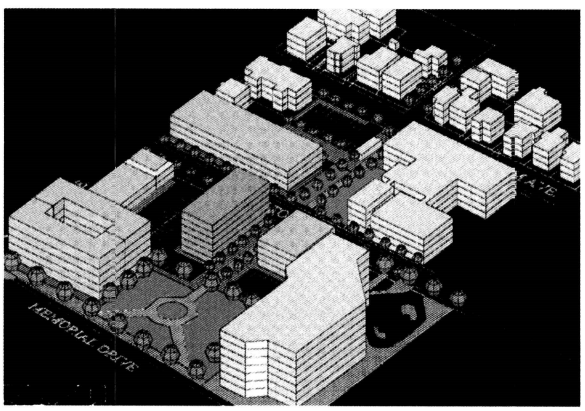


Figure 1.27 Open space/housing option

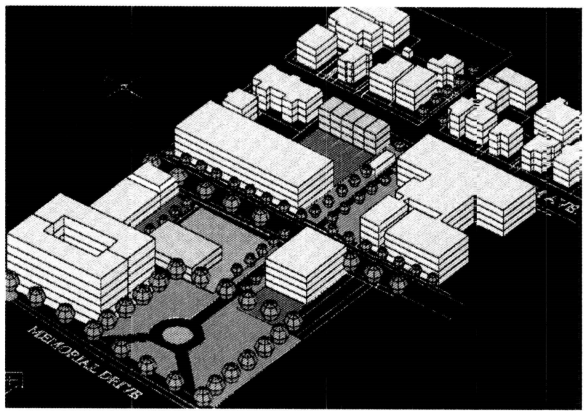


Figure 1.28 Office/housing option

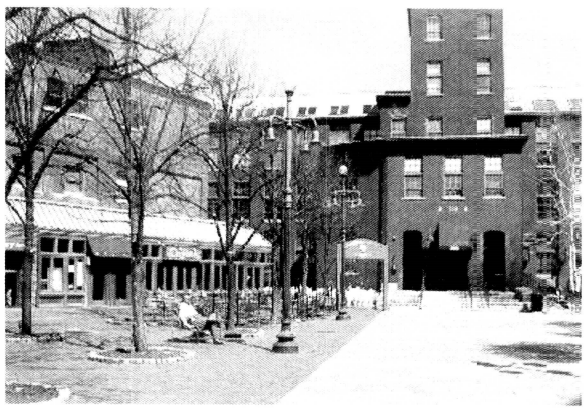


Figure 1.29 Example of adaptive reuse

- Major open space with some existing buildings adaptively reused for housing
- New office building with some existing buildings adaptively reused for housing

(See Figures 1.26: All-housing option; 1.27: Open space/housing option and 1.28: Office/housing option.) Additional alternatives can be found in Appendix D.

The NStar site is not well served by public transit. The closest T station is at Central Square, a twelve-minute walk (.6 miles). Nearby buses on Western Avenue and River Street do not run frequently. An office development on the site would very likely need to provide for significant parking on-site. Massing studies revealed that, without demolishing one of the three structures deemed to have historic merit, it would be difficult (or impossible) to provide an efficient parking structure on the site. The office option does not, therefore, appear to be likely. (Continued use of the Harvard-owned surface lot opposite the site could provide some parking.)

The City has in its zoning code a special provision for the conversion of non-residential buildings to residential use. This provision obviates the FAR limitation for such projects, so long as the floor area is contained within existing structures. It appears that this would be an attractive option for the NStar site in that it would allow significant floor area, even if, as is likely, not all buildings on the site prove to be good candidates for reuse. Floor plates in the Switch Building, the hip-roofed building on Western Avenue and the existing office building on Blackstone Street are well proportioned for housing. If the generation facility in the Power Plant structure were ever phased out, that building could potentially also be adaptively reused. A housing scheme organized around an atrium is a possible

option, subject to further study. (See Figure 1.29: Example of adaptive reuse.)

Some Committee members have advocated a selected mix of uses on the site, including artists' studios, galleries and other art-related activities. If small commercial uses were located on Blackstone Street, they would not face or abut existing residential areas.

1.12 Banks, Grant, Athens, Cowperthwaite Streets. This site is located in the Residential Core of the neighborhood adjacent to Harvard housing. It includes: the entire block bounded by Mt. Auburn, Banks, Grant and Athens streets; the eastern part of the block bounded by Mt. Auburn, Athens, Grant and DeWolfe Streets; and the eastern part of the block bounded by Grant, Banks, Cowperthwaite and DeWolfe streets. (See Figure 1.30: Axonometric of Banks, Grant, Athens, Cowperthwaite) Existing development consists of freestanding residential structures, most dating from the 19th century. A number of parcels are owned by Harvard University, some of which serve as parking lots. (See Figure 1.31: Property owned by Harvard University, ca. 2001.) All three portions of the site are presently zoned C-3, which allows buildings up to 120' and an FAR of 3. Only the portion of the site bounded by Grant, Banks and Cowperthwaite lies within the Harvard University Overlay District. Because of its current C-3 zoning, special restrictions on institutional uses do not apply to areas of the site located outside the Overlay District.

Beginning in 1999, the University engaged nearby residents in a discussion of potential development of its parcels. Through these discussions the University identified that the most appropriate use for the parcels would be graduate student and affiliate housing. Members of the Riverside Committee expressed clear concern and opposition to undergraduate housing. Discussions have since continued within the context of the

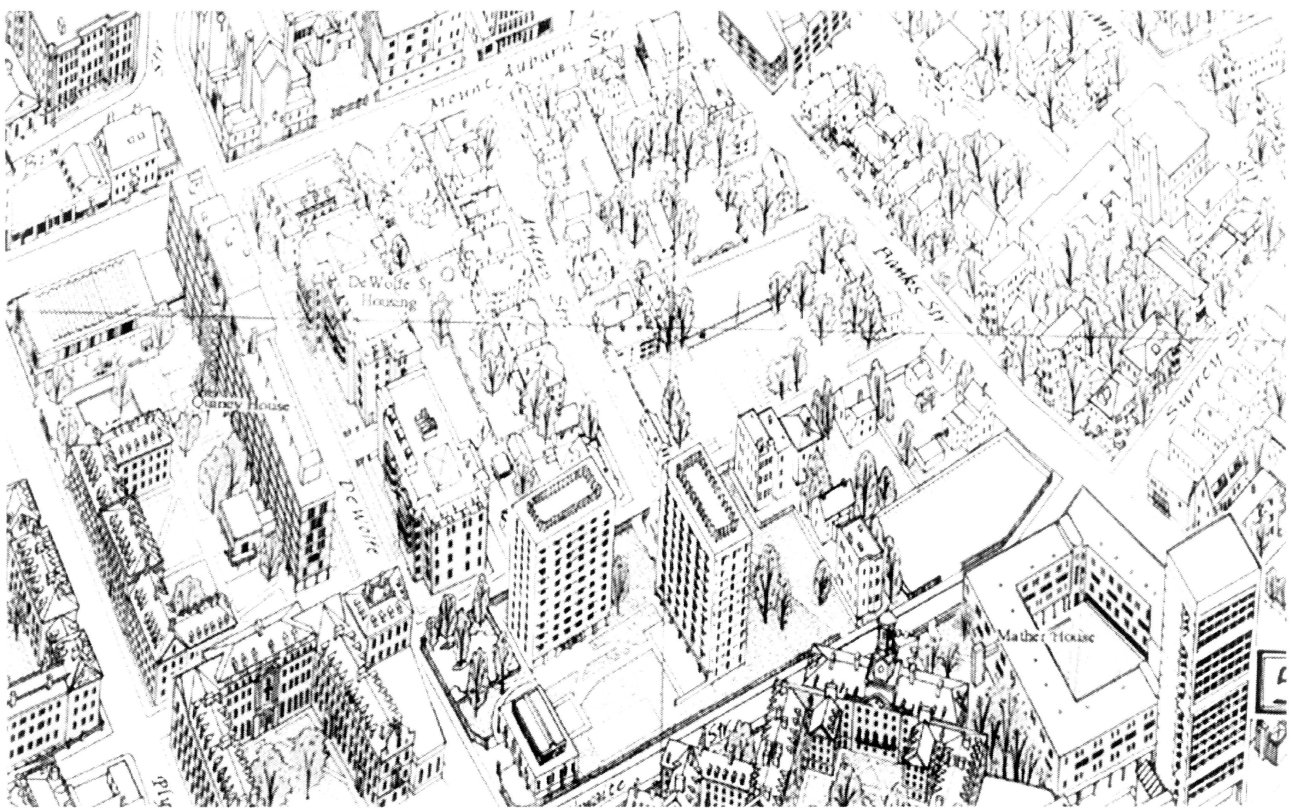


Figure 1.30 Axonometric of Banks, Grant, Athens & Cowperthwaite (Map courtesy of Tom Kane)

present Riverside Study. Critical remaining issues related to this potential development are two:

· Building height
· Building footprint

Existing building heights in the vicinity of the site are typically 35'. Residents want future development to conform to this height. Harvard suggested that heights of new buildings on Cowperthwaite be 65' to relate to the heights of existing buildings on Cowperthwaite. Harvard also suggested that new buildings on Grant Street to the west be 45' high, in order to form a transition from the higher buildings to the 35' height that is typical for existing buildings on the remainder of the site. A majority of the Committee did not agree with Harvard's rationale that new buildings on Cowperthwaite should be 65' tall to relate to existing buildings on Cowperthwaite, nor accept the need for a "transition" from existing institutional higher buildings to the neighborhood's predominant 35' height. Residents have subsequently proposed a small 45-foot transition zone along a portion of Cowperthwaite Street. They have also proposed that a portion of the block bounded by Grant, Banks, Cowperthwaite and DeWolfe be removed from the Institutional Overlay District.

Of the dozen or so developable parcels owned by Harvard there are five contiguous parcels on Grant Street and another five on Cowperthwaite. These parcels are 40' wide; when combined they create 200' long development sites. Current zoning would allow buildings with very long facades. A majority of the Committee expressed a strong preference for smaller individual buildings, each on a 40' to 50' wide parcel. The majority felt this pattern would be sympathetic with the current residential fabric (See Figure 1.33: Preferred development pattern.)



Figure 1.31 Property owned by Harvard University



Figure 1.32 Mather House



Figure 1.33 Preferred development pattern

2. RECOMMENDATIONS

The work of the Riverside Study Committee yielded a wide variety of recommendations. A set of recommendations for zoning changes was adopted by majority vote at the Committee's June 12, 2002 meeting. These proposals, which were presented to the Planning Board on June 18, 2002, are explained in Section 2.1 below. A number of the Committee's goals will require tools other than zoning for implementation. These are discussed in Section 2.2. Recommendations related to transportation appear in Section 2.3.

2.1 Zoning Recommendations. The majority of the members of the Riverside Study Committee view zoning as the primary tool for preserving the character of the neighborhood, and zoning issues were integral to the Committee's discussion of planning issues throughout its year of meetings. The Committee viewed much of the existing zoning in Riverside as appropriate; it focused, therefore on those areas where existing zoning did not coincide with the majority of the members' and community goals. Six areas were selected for study:

1. Mahoney Blocks
2. NStar Site
3. Western Avenue, Kinnard, Green and Franklin Streets
4. River Street and a portion of Western Avenue
5. Putnam and Western Avenues, Banks, Elmer and Hingham Streets
6. Banks, Grant, Athens, Mt. Auburn and Cowperthwaite Streets

(See Figure 2.1: Proposed Areas of Change.) A discussion of each of these areas and the recommended zoning is presented below.

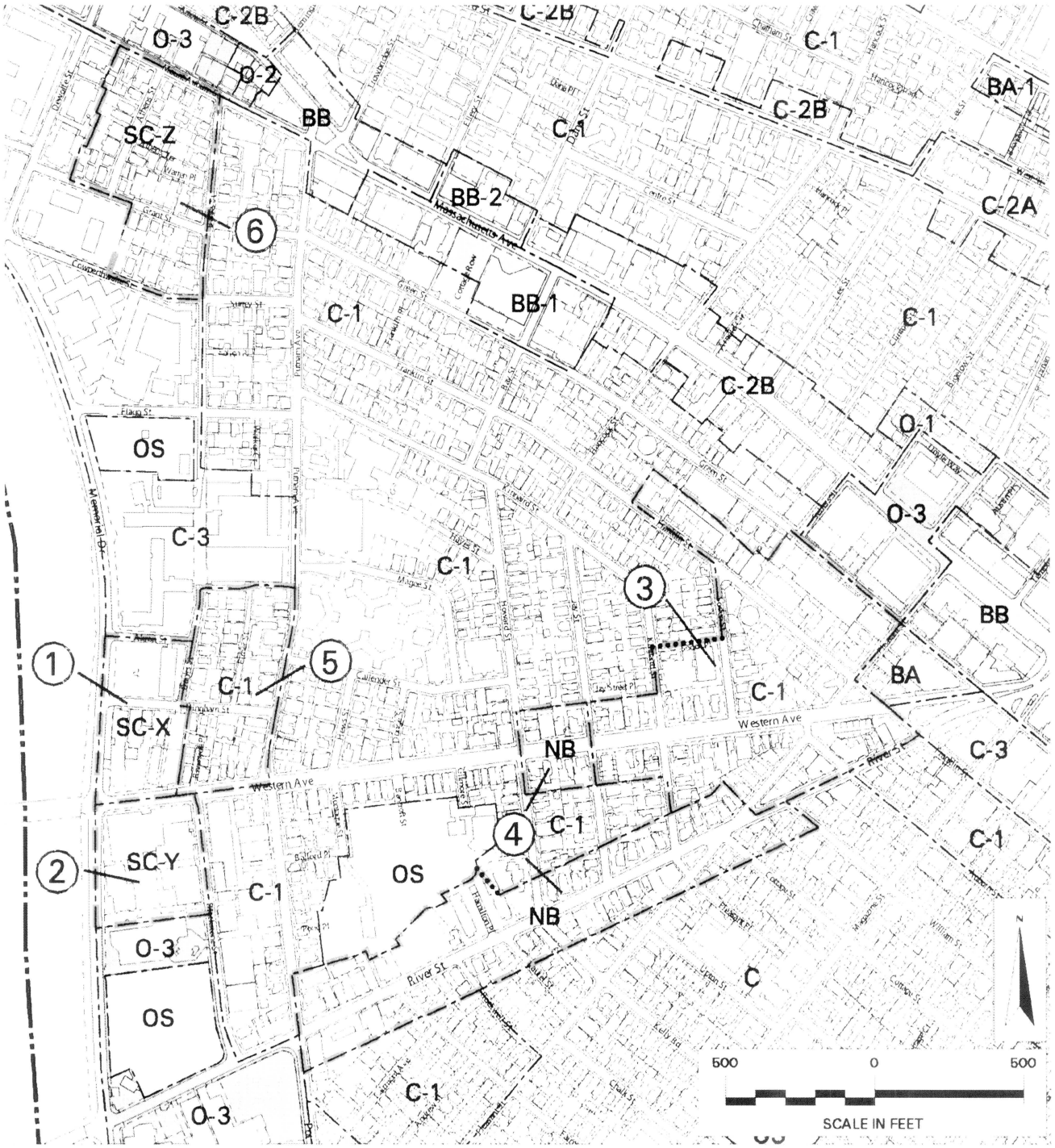


Figure 2.1 Proposed Areas of Change

2.1.1. AREA 1 - MAHONEY BLOCKS

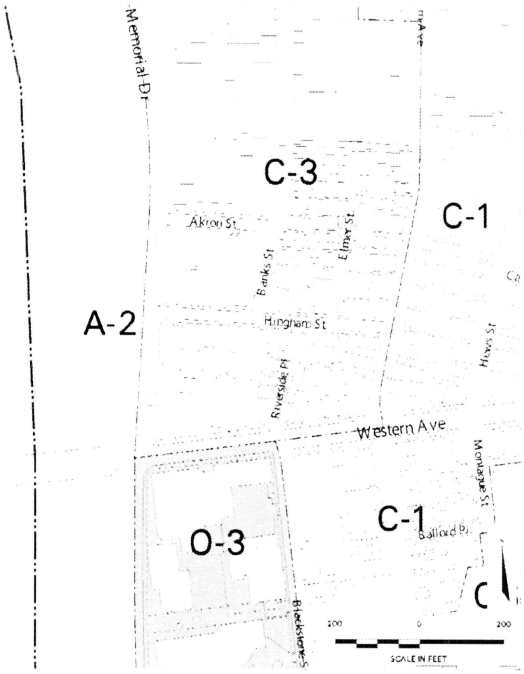


Figure 2.2
Existing Zoning District
Residence C-3
Uses: Residential, Institutional
FAR: 3.0
Height: 120'

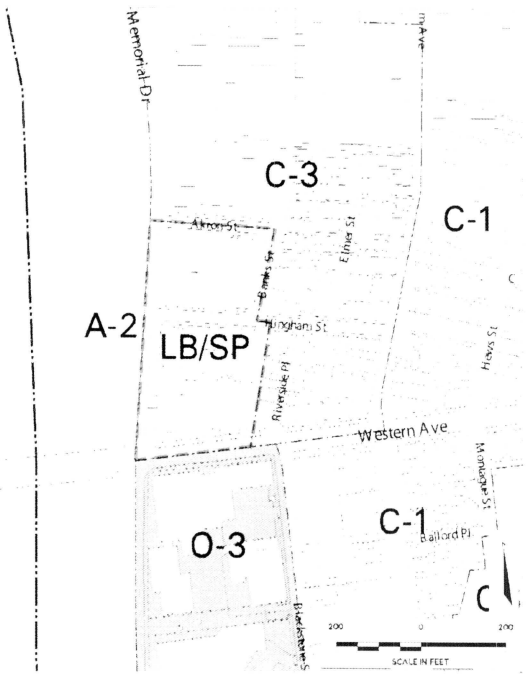


Figure 2.2a
Proposed Zoning District
Special Residence C-X (New district)
Uses: Residential, Limited Institutional
FAR: 0.6, 1.0 by Special Permit
Height: 20-24', 35' by Special Permit

Existing Development. The site is entirely owned by Harvard University. It is currently occupied by a retail nursery and garden center and has been so used for decades. The current use is nonconforming in the district. Improvements include a few small buildings on the southern parcel, the tallest probably no higher than 17'. The FAR is probably no greater than 0.10 on that block. Some parking unrelated to the nursery use is located on the eastern edge of the southern parcel.

Existing Context. The surrounding blocks are quite varied in character. To the north is Peabody Terrace, a housing complex for Harvard graduate students. Its scale and form is typical of the kind of development the Residence C-3 district was meant to permit before a 120' height limit was imposed in 1997. The tallest structures are 180' or more in height. The existing FAR is approximately 1.5. To the west the Mahoney Blocks are open to Memorial Drive, the riverfront greenway and the river itself.

To the south is a dense complex of industrial buildings (NStar). The scale of this complex is generally fairly modest with the exception of the power plant, which is about 75 feet in height; other buildings are in the 35-45' range. Existing FAR is approximately 1.20.

To the east is a neighborhood of wood-frame, one, two and three-story residential buildings, fairly typical of the Riverside Residential Core. With one exception, their height does not exceed 35 feet. The average FAR for one-to-three unit buildings is 0.93.

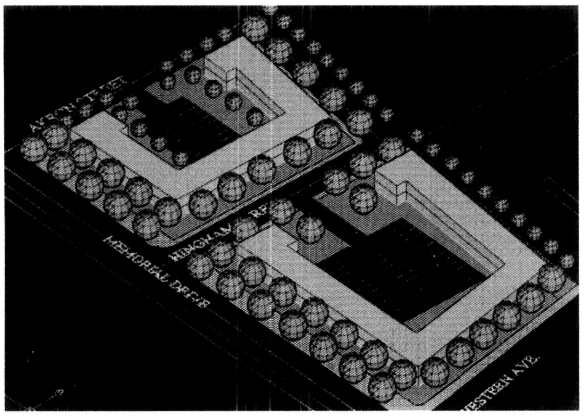


Figure 2.3 Potential development: As-of-Right



Figure 2.3a Development analogue: As-of-Right

Committee's Objectives. The majority of the Committee members' objectives for the recommended zoning for this area can be summarized as follows:

- Preclude development that would adversely impact the neighborhood
- Provide an appropriate transition between the residential neighborhood and the river
- Provide views of the river
- Prevent dense development facing the river
- Provide an incentive to encourage open space on site
- Prevent institutional encroachment and expansion
- Expand neighborhood connection to river
- Limit use to residential to provide for affordable housing
- Exclude high traffic generators

Existing Zoning District. The blocks are currently zoned Residence C-3. It is a high-density multifamily district that allows housing and institutional uses. Commercial uses are not permitted. An FAR of 3.0 and a height of 120 feet (potentially modified by state Chapter 91 tidelands restrictions) are allowed. Yards by formula are required. The Residence C-3 District has been traditionally the university campus district and is the district that regulates development at the core of the Harvard and MIT campuses.
Chapter 40A (state law governing local zoning authority) does not allow Cambridge to prohibit university or other institutional uses in a Residence C-3 district. However, Cambridge has created eight Institutional Overlay Districts to regulate institutions within the limits imposed by Chapter 40A. The Mahoney Blocks are not within any of those Overlay Districts. The fact that the Mahoney Blocks are not within the Institutional Overlay District indicates that at the time of the establishment of the District (1981), the Mahoney Blocks were not, as they are not now, in active institutional use. At the same time, the fact that the Blocks are designated Residence C-3 allows institutional or university uses on them, subject only to the dimensional limits imposed by the district.

Proposed Zoning District. The Committee recommends a variation of the current Residence C district, with an FAR of 0.6, a height of 20-24', and 20' setbacks for all yards. Single, two-family, multifamily and townhouse development would be permitted. Thirty percent of the site would be required to be at-grade Green Area Open Space. (See Figures 2.3: Potential development: As-of-Right; 2.3a: Development analogue: As-of-Right; 2.4: Potential development: Special Permit; and 2.4a: Development analogue: Special Permit.)

The proposed zoning is intended to accomplish the following:

- Residential development at a low density (both as to height and FAR)
- Increased amount of open space to

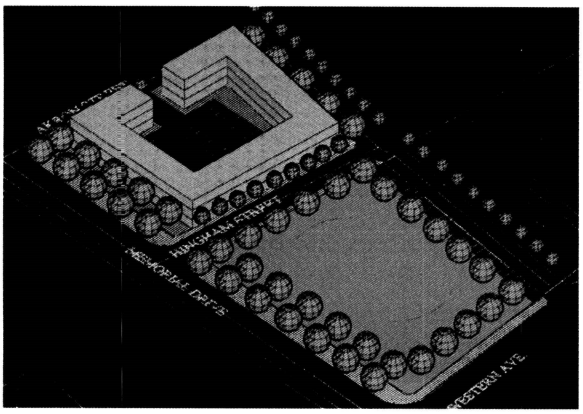


Figure 2.4 Potential development: Special Permit



Figure 2.4a Development analogue: Special Permit

maintain the current sense of openness between the existing neighborhood and the river (through low FAR and building height, but also through a high open space requirement and extra wide yards).

- Prohibition of dormitories (and other intensive institutional uses). Such a prohibition is only possible if the district is residential with a dwelling density of one unit per 1,200 square feet or more of lot area (the criteria established by the General Court by which Cambridge can regulate institutional uses in residential neighborhoods).

The Committee included certain special permit provisions in the proposed zoning to entice a private property owner to partially fulfill that objective. By Special Permit the new district would allow an FAR of 1.0, a height of 35', reduction of yard requirements to zero in most cases, and would allow transfer of development potential from the Western Avenue block to the block abutting Peabody Terrace. Such additional benefits would be allowed only if the south block were devoted almost exclusively to open space accessible to the general public.

Alternatives Considered. The Committee's preferred use for both blocks is as a public space. Recognizing that goal cannot be achieved through zoning, the Committee examined, and in the end rejected, a number of alternate zoning schemes. Harvard University presented the details of a proposed museum use: one building on each block, connected underground across Hingham Street. The proposed project had an FAR of less than 2.0, a height of fifty-five feet, at-grade landscaped setbacks of forty feet around all sides of the buildings, constituting about 50% of the area of the Blocks. The parking was underground and the design called for 82 spaces. The majority of the Committee considered the proposal too dense, although some members did not object to the use itself. The Consultant also presented some alternative massing proposals that were of interest to the Committee. No additional museum proposals were presented by Harvard University. The museum proposal was withdrawn.

Alternate massing sketches were also presented by the University illustrating possible housing development of the Blocks at FAR densities ranging down from 3.0 to approximately 1.75. The majority of Committee members expressed dissatisfaction with such schemes based on the height and scale of the illustrated development.

The Committee also considered variations on the recommended special district that would have allowed retail use in addition to housing. However, any non-residential district would automatically have to allow university uses and dormitories by state law. The dormitory possibility was not acceptable to most

Committee members. On the other hand retail uses of a certain kind (i.e. small in scale and serving the neighborhood or users of the riverfront) were generally thought to be appropriate. Nevertheless, in the end, the decision was not to open the door to dormitory use or large-scale retail operations (e.g. Osco Drug) or other inappropriate retail activity no matter what its scale.

2.1.2 AREA 2 - NSTAR SITE

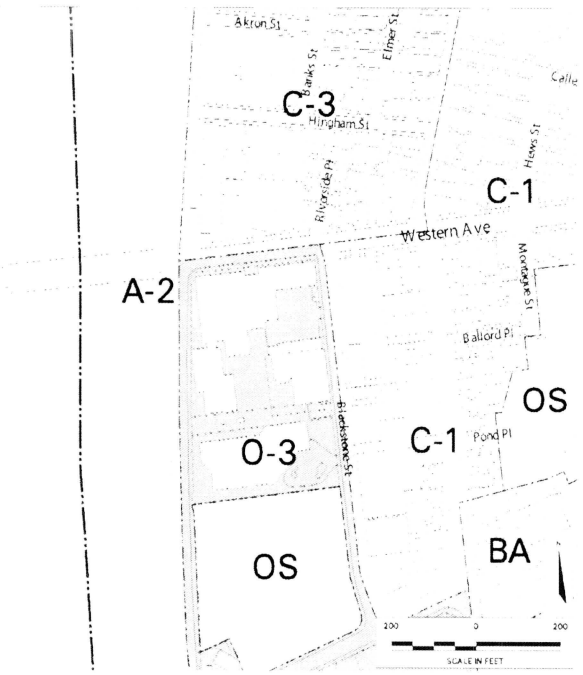


Figure 2.5
Existing Zoning District
Residence O-3
Uses: Office, Residential
FAR: 3.0
Height: 120'

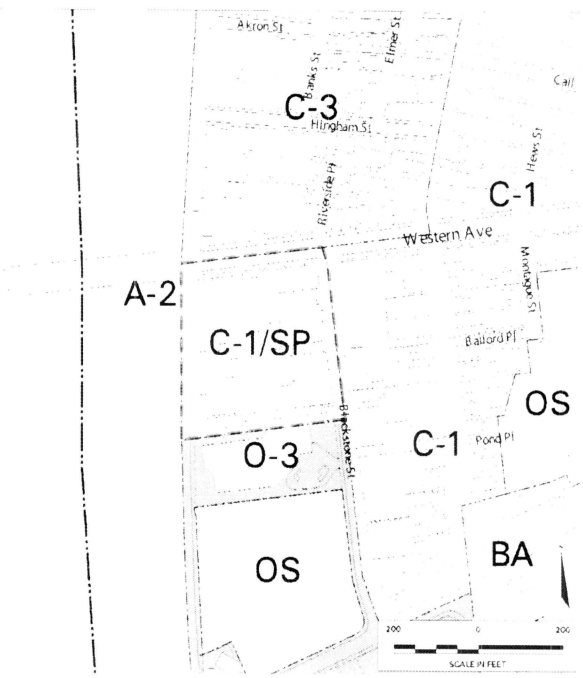


Figure 2.5a
Proposed Zoning District
Special Residence C-Y (New district)
Uses: Residential, limited institutional
FAR: 0.6
Height: 20-24'

Existing Development. The site includes a functioning steam generating power plant and ancillary buildings that have served the utility function in the past. Some of the ancillary buildings are underutilized and most of them are no longer needed to service the power plant. The current power generation use is non-conforming. Most buildings are likely non-conforming as to setbacks, which are determined by formula, because they are at, or close to, the property line. The FAR of existing buildings is around 1.20.

Existing Context. The site abuts the Mahoney Blocks to the north. To the east, other ancillary NStar industrial buildings are located across Blackstone Street. That entire block was recently rezoned from Office 3 to Residence C-1. To the south is the Technology Center office building, with a height of about 70 feet. To the west, the site is open to Memorial Drive, the riverfront greenway and the river. Some of the buildings on the site have architectural merit and/or historical interest.

Committee's Objectives. The majority of the Committee members' objectives for the recommended zoning can be summarized as follows:

- Preclude development that would adversely impact the neighborhood
- Provide an appropriate transition between the residential neighborhood and the river
- Provide views of the river
- Prevent dense development facing the river
- Prevent the development of dormitories
- Provide opportunity for affordable housing

· Exclude high traffic generators

Existing Zoning District. The site is currently zoned Office-3. This is a high density office and multifamily district that allows general office and research and development uses in addition to housing and institutional activities. Retail uses are not permitted (nor is the Power Plant, which is not an allowed use anywhere in the city). An FAR of 3.0 for housing and 2.0 for office uses applies, with a height of 120' (potentially modified by state tidelands restrictions) for residential uses and 90' for all others. Yards by formula are required. The site was zoned high density business in 1943, rezoned to high density office in 1961. The Office-3 designation was created in the mid 1970s when the Zoning Ordinance established a series of three office districts from what had previously been a single district. The site is not located within any Institutional Overlay District.

Proposed Zoning District. The new district (Special Residence C-Y District) is intended to accomplish the following:

· Residential development at a low density (both as to height and FAR) should existing structures be demolished, or at a higher density through the conversion of those existing non-residential buildings to housing.
· Prohibition of dormitories (and other intensive institutional uses). This prohibition can only be accomplished if the district is zoned as low density residential.

The district has the same dimensional and use characteristics as the proposed zoning for the Mahoney Blocks without any of the Special Permit options: an FAR of 0.6, a height of 20-24', and 20' setbacks for all yards. Single, two-family, multifamily and townhouse development is permitted. Thirty percent of the site would be required to be at grade Green Area Open Space. (See Figure 2.6: All-housing option.)

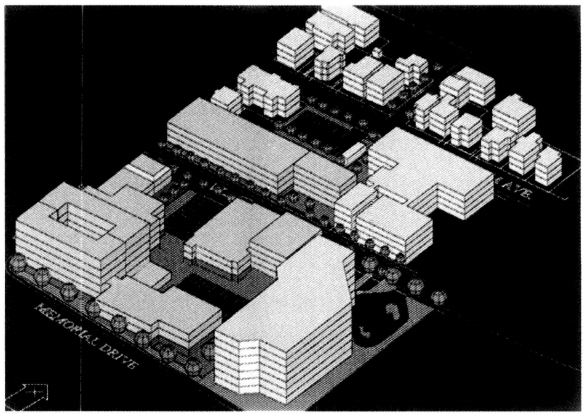


Figure 2.6 All-housing option

Alternatives Considered. A number of alternate zoning schemes were examined by the Committee.

Alternate approaches were considered that would have allowed higher density and greater height on portions of the site (FAR of 2.0, height of 85 feet). Those options were intended to encourage partial redevelopment of the site to secure open space on it, and public access through it, from Blackstone Street to the river. As with the Mahoney Blocks, there was also an interest in allowing limited retail activity to serve both the neighborhood and people out for a stroll along the river promenades. Transfer of Developments Rights (TDR) was suggested for this site as a way to create more open space, but met with strong opposition from the neighborhood.

Again, as on the Mahoney Blocks, potential dormitory use was of concern. Because any non-residential district must allow university functions and dormitories, a non-residential district was unacceptable to most Committee members. The Committee was also not strongly in favor of more development on the site, but was generally in favor of residential reuse of the existing buildings.

2.1.3 AREA 3 - WESTERN AVENUE; KINNARD, GREEN, AND FRANKLIN STREETS

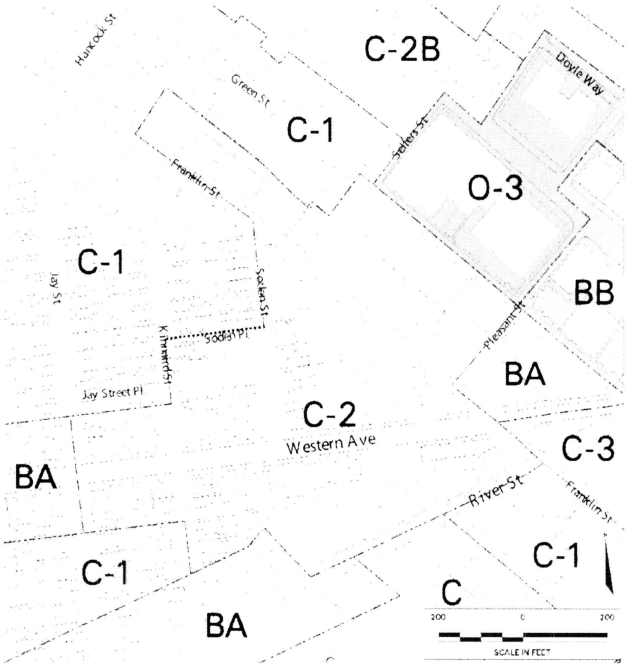


Figure 2.7
Existing Zoning District
Residence C-2
Uses: Residential, Institutional
FAR:1.75
Height: 85'

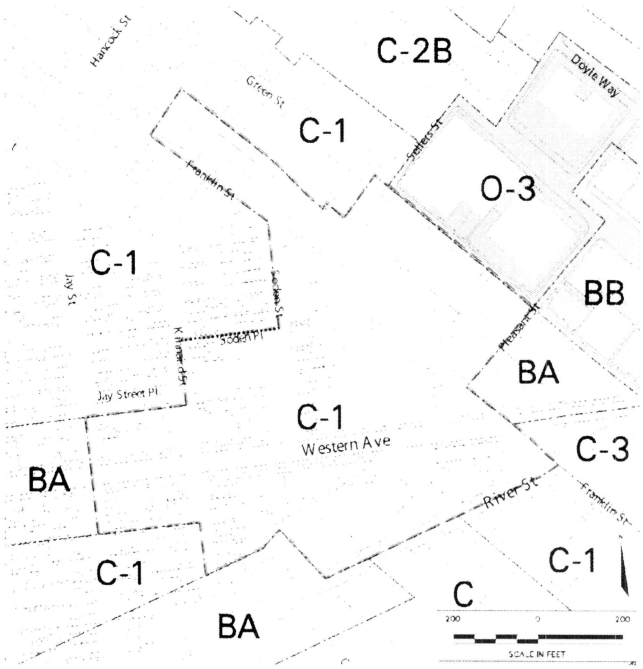


Figure 2.7a
Proposed Zoning District
Residence C-1
Uses: Residential
FAR: 0.75
Height: 35'

Existing Development. The area is substantially residential in character. Sites previously used for industry along Franklin Street have mostly been converted to housing. Some ground floor retail activity, probably established when that corridor was commercially zoned, remains along River Street. A large parking lot fronting on Green Street, owned by the YMCA, is the largest undeveloped site within the area.

In scale, the residential pattern is split between low scaled wood frame construction (about 35' high) at moderate to high density and masonry-construction housing, including late 19th and early 20th century apartment buildings of four or five stories. The area also includes higher-rise apartment construction dating from the last forty years. These buildings are usually about 85' in height. The average FAR of one-to-three family buildings within the area is 0.83.

Existing Context. The area is bordered by the Central Square commercial district to the east and neighborhood-scaled residential development elsewhere.

Committee Objectives. The majority of the Committee members' objectives for the recommended zoning can be summarized as follows:

- Preserve the scale and pattern of the one, two, and three family residential neighborhood (excluding the small setbacks, backyard houses and limited off-street parking of older development) by preventing large-scale development

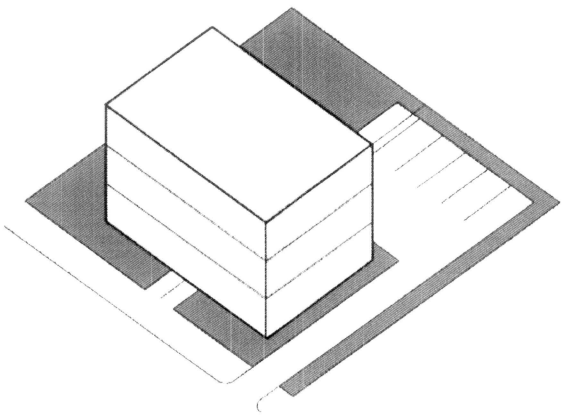


Figure 2.8 Potential development (two parcels)



Figure 2.8a Development analogue

· Minimize parking and traffic problems

Existing Zoning District. The area is currently zoned Residence C-2. This is a medium-density multifamily residential district that allows all forms of housing and institutional uses. An FAR of 1.75 is permitted with a height of 85 feet. Yards by formula are required. The area has been so zoned in its current configuration since 1961. Prior to 1961 portions were zoned C-2 as far back as 1943. Other portions along the River Street corridor were zoned Business A from 1943 to 1961. Existing retail or other commercial activity in the area is now non-conforming. The area is not located within any Institutional Overlay District.

Proposed Zoning District. The Committee has recommended designation of the area as a Residence C-1 district, the prevailing zone in the abutting neighborhoods to the east and west. An FAR of 0.75 is permitted with a height of 35'. Yards, by formula, are required. The density allowed is one unit per 1,500 sf of lot area. All residential uses are permitted, but institutional uses are severely restricted.

The Committee has made its recommendation in order to preserve the significant inventory of low scale frame housing now common in the district, and to prohibit further erosion of that character through redevelopment to larger scaled buildings. The large scaled high-rise masonry apartment buildings in the area are not the form of future development desired by the Committee. (See Figures 2.8: Potential development (two parcels); and 2.8a: Development analogue.)

Alternatives Considered Several alternatives to the Residence C-1 designation were considered. All involved the Residence C-2B district. That district differs from Residence C-2 in that the permitted height is 45' rather than 85' and special green area requirements apply to some required yards. Those alternatives were:

· Rezoning the entire area Residence C-2B
· Rezoning the portion of the area between Franklin and Green streets to Residence C-2B
· Rezoning the half block abutting Green Street to Residence C-2B.

There was some sentiment on the Committee favorable to the notion that portions of the area close to Central Square and close to subway service could support higher density housing for urban design, housing and transportation policy reasons. The larger-scaled and taller buildings present tend to be concentrated in the blocks nearer to Central Square. In the end the Committee preferred to maintain for the future the generally prevailing neighborhood building norm reflected by the limitations established in the Residence C-1 district.

2.1.4 AREA 4 - RIVER STREET AND A PORTION OF WESTERN AVENUE

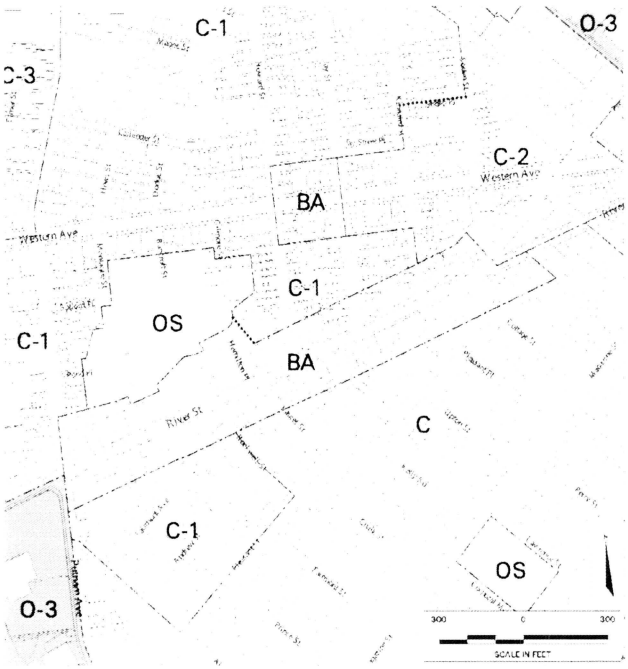


Figure 2.9
Existing Zoning District
Business A
Uses: Commercial/Residential
FAR: 1.0/1.75
Height: 35'/45

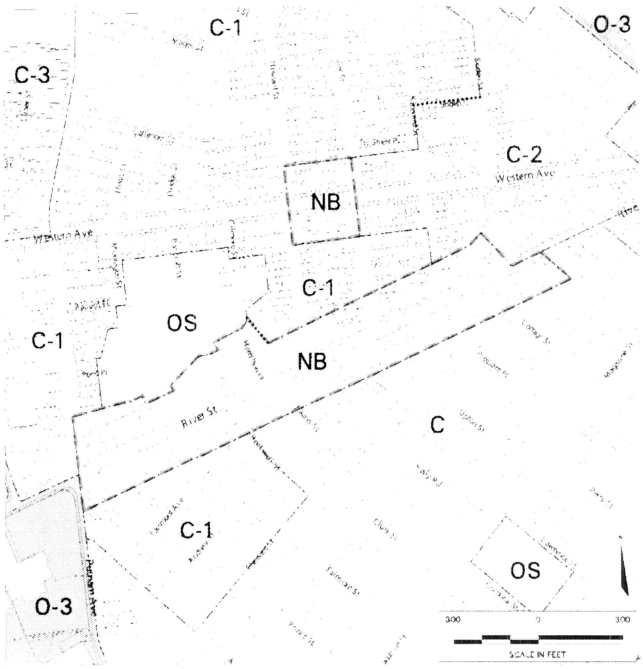


Figure 2.9a
Proposed Zoning District
Neighborhood Business (New district)
Uses: Residential, Retail
FAR: 0.75
Height: 35'

Existing Development. This area consists of one block on Western Avenue between Jay and Howard Streets and several blocks along River Street from Williams Street in the east to Putnam Avenue on the west. While a wide range of commercial uses are permitted, both areas are predominately residential in character. The retail activities that are present tend to be located in small commercial extensions onto older wood frame residential buildings. Few sites are in exclusive commercial use. The actual pattern of development differs little from the residential lots abutting in the neighborhood. Most structures are residential, wood framed, about 35' tall, and freestanding on their own lot. The existing average FAR is about 0.97.

Existing Context. The section on Western Avenue is bordered on all sides by residential neighborhoods. The section on River Street is bordered by residential neighborhoods in Riverside and Cambridgeport and by Hoyt Field in Riverside.

Committee Objectives. The majority of the Committee members' objectives for the recommended zoning can be summarized as follows:

- Bring zoning into conformance with existing uses and dimensions (but not the small setbacks, backyard houses and limited off-street parking of older development)
- Allow residential use
- Allow retail use that is small in scale which will not increase traffic and parking problems

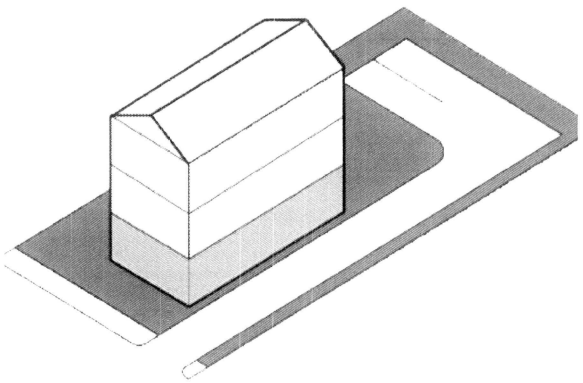


Figure 2.10 Potential development



Figure 2.10a Development analogue

· Encourage small business development

Existing Zoning District. The two areas are currently zoned Business A. This is the highest density neighborhood business district; it allows a range of retail and office uses in addition to all forms of housing. An FAR of 1.0 for retail and office uses and 1.75 for housing are permitted. Commercial uses are limited to a height of 35'; housing is permitted at 45 feet. Yards, by formula, are required for housing but only a 20' rear yard is required for commercial uses. The two areas have been similarly zoned since 1943. The area is not located within any Institutional Overlay District.

Proposed Zoning District. The Committee has recommended the creation of a new residential/retail district that would be the retail analog to the Residence C-1 residential district and the Office-1 district: i.e. an FAR of 0.75, a height of 35', yards by formula, and a dwelling unit density of one unit per 1,500 sf of lot. Retail activity would be permitted in a building containing residential uses, but only on the first floor and in the basement. It could constitute no more than 40% of the gross floor area (GFA) of the structure. (See Figures 2.10: Potential development and 2.10a: Development analogue.)

The Committee has made its recommendation in order to preserve the significant inventory of housing and freestanding buildings that characterize the areas, while offering the opportunity to expand small neighborhood-serving commercial activity along the streets. The proposed regulations are intended to allow retail activity at a neighborhood scale without encouraging the transformation of the street from a residential extension of abutting blocks to a full fledged retail district of streetwall buildings and large stores.

Alternatives Considered. Two alternates were considered: retention of the existing district or rezoning to Residence C-1. The Committee viewed the new district as a reasonable compromise to preserve existing housing while allowing limited retail activity in the form that currently exists along River Street and Western Avenue.

(See also Zoning Options in Appendix F.)

2.1.5 AREA 5 - PUTMAN AND WESTERN AVENUES; BANKS, ELMER AND HINGHAM STREETS

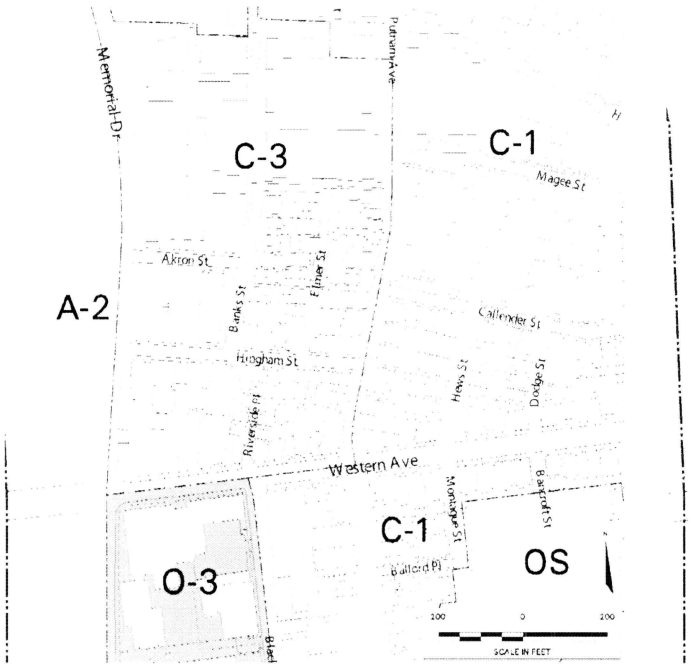


Figure 2.11
Existing Zoning District
Residence C-3
Uses: Residential, Institutional
FAR: 3.0
Height: 120'

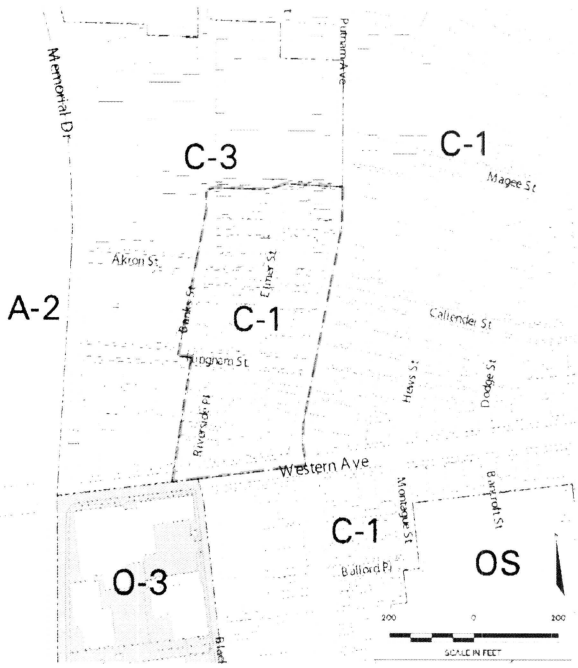


Figure 2.11a
Proposed Zoning District
Residence C-1
Uses: Residential
FAR: 0.75
Height: 35'

Existing Development. The area is nearly entirely residential in use. The prevailing development type is a freestanding wood frame structure, two to three stories high. There is one large multifamily structure on a previously commercial site redeveloped to housing in the 1980s. While individual structures tend to be modest in size, the built density of one-to-three-family buildings is relatively high (FAR of 0.93).

Existing Context. The area is bordered by the Mahoney Blocks to the west, the parking garage and low-rise elements of Peabody Terrace to the north, Putnam Gardens public housing and residential neighborhood blocks to the east, and the NStar facilities and some housing across Western Avenue to the south.

Committee Objectives. The majority of the Committee members' objectives for the recommended zoning can be summarized as follows:

- Prevent further institutional expansion in the neighborhood
- Preserve the scale and pattern of the one, two, and three family residential neighborhood (excluding the small setbacks, backyard houses and limited off-street parking of older development) by preventing large-scale development
- Minimize parking and traffic problems

Existing Zoning District. The area is currently zoned Residence C-3. It is a high-density multifamily district that allows housing and institutional uses. Commercial uses are not permitted. An FAR of 3.0 and a height of

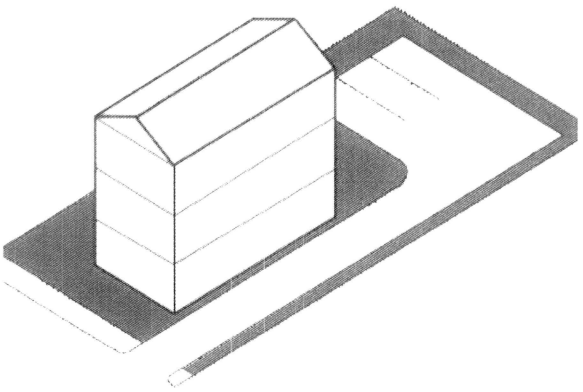


Figure 2.12 Potential development



Figure 2.12a Development analogue

120 feet is permitted. Yards by formula are required. The zone has traditionally been the university campus district and is the district regulating development at the core of the Harvard and MIT campuses. The site has been zoned C-3 since 1961. From 1943 to 1961 the entire area had been zoned Residence C-1, except that the frontage on Western Avenue was designated Business A. The area is not located within any Institutional Overlay District.

Proposed District. The Committee has recommended designation of the area as a Residence C-1 district, the prevailing zone in the abutting neighborhood blocks to the east. An FAR of 0.75 would be permitted with a height of 35'. Yards, by formula, would be required. The density allowed is one unit per 1,500 sf of lot area. All residential uses are permitted, but institutional uses would be severely restricted. The Committee has made its recommendation in order to preserve the scale of the present neighborhood. (See Figures 2.12: Potential development and 2.12a: Development analogue.)

Alternatives Considered. The Committee did not consider alternate approaches.

2.1.6 AREA 6 - BANKS, GRANT, ATHENS, MT. AUBURN AND COWPERTHWAITE STREETS

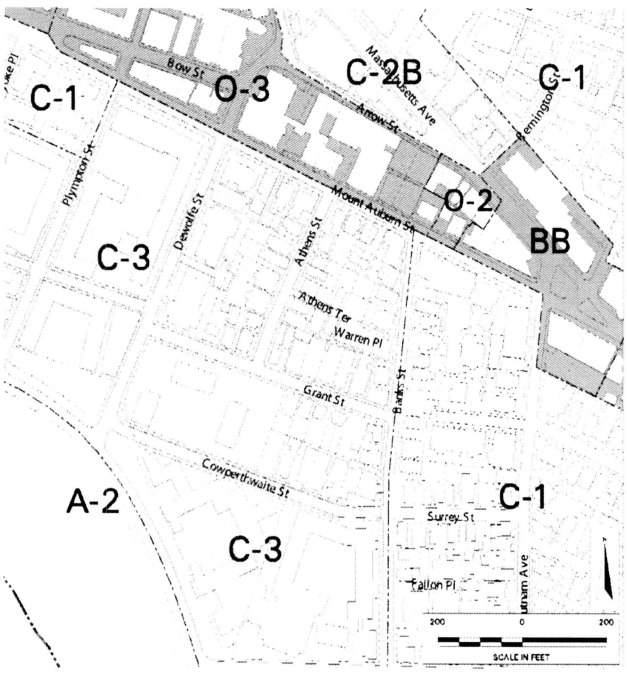


Figure 2.13
Existing Zoning District
Residence C-3
Uses: Residential, Institutional
FAR: 3.0
Height: 120'

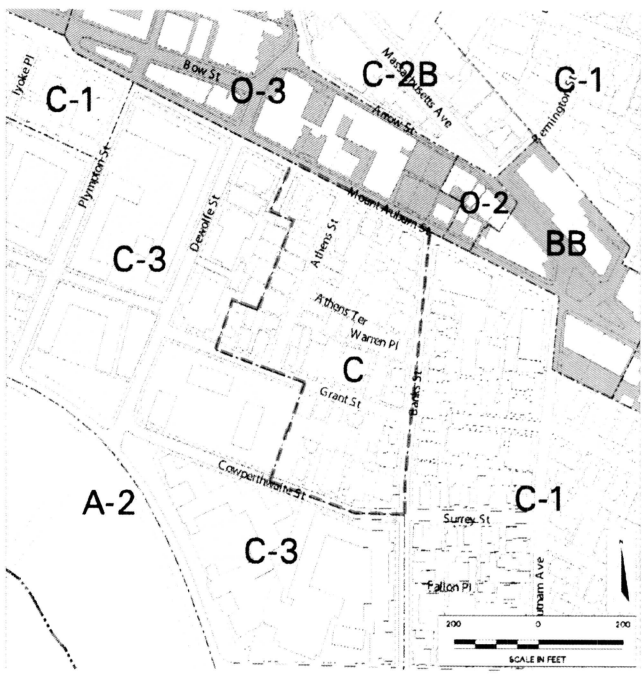


Figure 2.13a
Proposed Zoning District
Special Residence C-Z (New district)
Uses: Residential
FAR: 0.60
Height: 35'

Existing Development. Buildings in the area are all in residential use. The area also includes two large parking lots owned by Harvard University. The prevailing development consists of freestanding wood-frame structures, two-to-three-stories high. Lot sizes and lot widths are commonly substandard (ca 4,000 sf, sometimes less, with a width of 40'). The overall density is about 0.75 FAR, when the few larger apartment buildings are excluded. This area of Riverside was identified during the Citywide Growth Management process as a key transition edge to be addressed.

Existing Context. The area is bordered to the west and south by Harvard University dormitories. They are generally large complexes, moderately to quite dense, and ranging from 40' to 110' feet in height as they directly abut the area. To the east across Banks Street are standard Riverside residential blocks. To the north across Mt. Auburn Street is the Harvard Square business district where the St. Paul's Church complex and the Reversible Collar Factory building are the immediate neighbors.

Committee Objectives. The majority of the Committee members' objectives for the recommended zoning can be summarized as follows:

- Replicate the existing pattern of one, two and three family housing on small lots except for the small setback, backyard houses and limited off-street parking of older development
- Discourage dormitory development

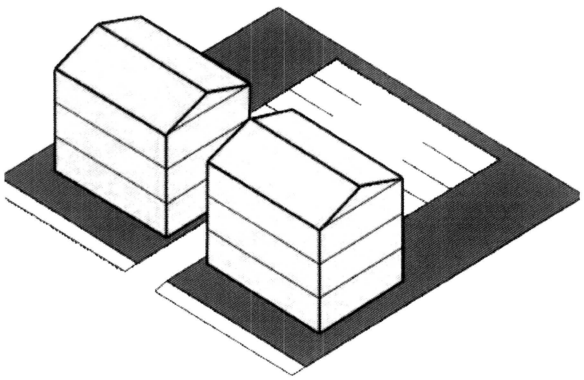


Figure 2.14 Potential development



Figure 2.14a Development analogue

Existing Zoning District. The area is currently zoned Residence C-3. It is a high density multifamily district that allows housing and institutional uses. Commercial uses are not allowed. An FAR of 3.0 and a height of 120' are permitted. Yards by formula are required. The C-3 zone has traditionally served as the university campus district in the Zoning Ordinance and is the district regulating development at the core of the Harvard and MIT campuses. The site has been so zoned since 1943.

The portion of the area between Grant and Cowperthwaite Streets is located within the Harvard, Radcliffe, Lesley Institutional Overlay District.

Proposed Zoning District. The Committee has recommended designation of the area as a new district that would be a variation on the Residence C district (a Special C district). It would have the usual Residence C dimensional provisions: an FAR of 0.60 with a height of 35'; yards by formula; one dwelling unit per 1,800 sf of lot area; and a 36% open space requirement. All residential uses would be permitted, but institutional uses would be severely restricted.

The special features of the district are intended to provide incentives (and some explicit restrictions) to encourage a traditional pattern of development on the large vacant parking lots that front on Cowperthwaite and Grant Streets, among others. The objective is to see residential structures with two or three units each constructed in regular rows along existing streets, infilling vacant spaces in a traditional manner.

To prevent large townhouse or multifamily structures, each lot in the district would be allowed only to have one principal structure on it, containing no more than two units, and containing no more than 3,000 square feet of gross floor area. Variations on this kind of limitation are now in force in Residence A and B districts. These limitations would require subdivision of large lots if the full, or nearly full, development potential of those lots were to be achieved.

To encourage those subdivided lots to be located on streets (fairly easy to achieve in this context), dimensional requirements for lot size, setbacks, lot frontage, FAR and dwelling units would be relaxed if a lot fronts on a street within a specific width range and the building is in close proximity to the street. The relaxed standards would apply to the smaller subdivided lots, but the general density limits of the original large lot could never be exceeded.

The recommendation would eliminate from the Institutional Overlay District the portion of the Cowperthwaite/Grant Streets block that is now developed only for parking lot and residential uses.

(See Figures 2.14: Proposed development; 2.14a Development analogue and 2:15: Double house in Riverside.)

Alternatives Considered. Harvard University, owner of many of the frame houses in the area and of the large parking lots, developed a schematic zoning proposal with some of the immediately affected neighbors in the Banks Street area. It suggested new housing construction well below the density allowed in the C-3 district, with building heights varying from 35' to 65'. The new housing would not be for undergraduates. The proposal was presented to the Committee, most of whose members considered it too dense and too permissive as to height.

Both the standard Residence C district and the standard Residence C-1 district were considered as options. Most members of the committee desired strong incentives to replicate current building patterns on these city blocks and to secure some additional open space; the special C district was therefore the preference. (See also Zoning Options in Appendix F.)

2.2 Non-Zoning Recommendations. While zoning changes were the primary focus of the Committee's discussions, other potential planning tools and public actions were also addressed. Four areas of Committee concern and the resulting recommendations are presented below.

2.2.1 Townhouse Ordinance. The majority of Committee members were of the opinion that the Townhouse Ordinance results in projects that do not conform to the development pattern they envision for Riverside. It no longer serves the purpose of encouraging moderate income housing, and in the Committee's view unfairly rewards the developers over homeowners. They suggested modifications to the Townhouse Ordinance that would bring townhouse projects in closer conformance with the base C and C-1 zoning districts requirements. Following are



Figure 2.15 Double house in Riverside

the major differences between the Townhouse Ordinance and the base C and C-1 zoning districts:

- FAR
  C = .6; C-1 = .75
  Townhouse = .825 in C-1 district for lots of 15,000 sf or more

- Height
  C and C-1 = 35'
  Townhouse = 40'

- Minimum lot width
  C and C-1 = 50'
  Townhouse = No minimum

- Frontyard
  C and C-1 = Formulas (minimum =10')
  Townhouse = Match neighboring projects or 10', whichever is less

- Parking
  C and C-1 = One space per unit
  Townhouse = Allows possibility of on-street parking

The Study Committee recommends that Townhouse developments be required to conform to the lot width and FAR requirements for the underlying zoning district.

The change in height from 40' to 35' could possibly make the difference of a full floor (though under the Townhouse Ordinance

this floor would be within a Mansard roof).

Requiring a 10' minimum front yard, rather than matching neighboring projects could mean a greater setback, depending on the location. Residential structures in Riverside are often located close to the street, so in most cases it would probably result in a greater setback.

2.2.2 Existing Dormitory Complexes. Throughout the Committee's discussions, many detailed suggestions were made for changes to existing Harvard dormitory complexes in the Riverside neighborhood. Most of these suggestions were directed toward mitigation of the inward facing buildings and impenetrable peripheries of these complexes.

The typical Riverside block is approximately 200' by 500'. Some dormitory complexes maintain blocks of similar size, but others create what are essentially super blocks. The majority of the members of the Committee recommend introduction of publicly accessible passageways through the large blocks, wherever possible. This change could serve to functionally and visually integrate the dormitory complexes into the neighborhood.

The dormitory complexes all include interior courtyards. Resident Committee members would like these open spaces to be more publicly accessible (fences and/or black mesh removed). (See Figures 2.16: Peabody Terrace Courtyard and 2.17: Fence at Peabody Terrace.)

In some locations the dormitory complexes present unfriendly facades to the neighborhood, such as the façade of the Peabody parking garage on Elmer Street. (See Figure 2.18: Peabody Terrace Garage.) Resident members of the committee would welcome modifications to architectural and landscape treatment that would make the complexes more neighborhood-friendly. In some cases, perhaps, new ground level uses that would appropriately be oriented to the sidewalk could be introduced.



Figure 2.16 Peabody Terrace Courtyard

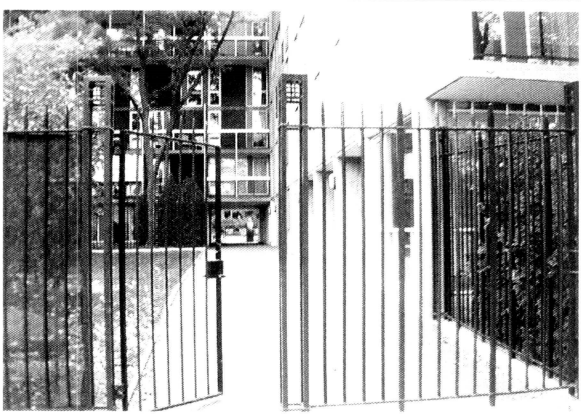


Figure 2.17 Fence at Peabody Terrace

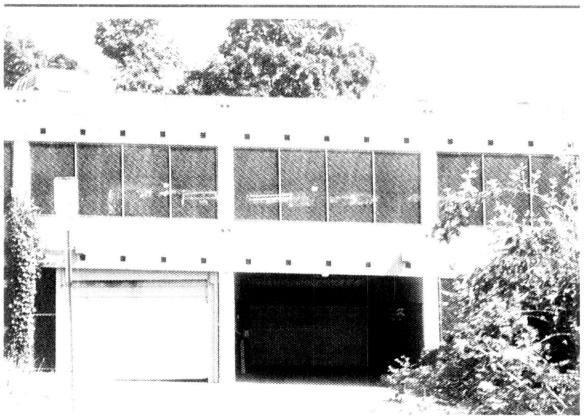


Figure 2.18 Peabody Terrace Garage

The Study Committee recommends that the City work with Harvard University to improve physical and visual public access to its dormitory complexes in Riverside.

2.2.3 Pedestrian Network. A combination of public and private improvements could result

in a more attractive and functional system of pedestrian ways in Riverside.

Traffic calming measures and improved pedestrian crossings are needed on Western Avenue, River Street and Memorial Drive. These are discussed in Section 2.3.

Streetscape improvements could enhance the pedestrian environment throughout Riverside. Western Avenue is a particularly strong candidate for improvements. Its generous width would allow for wider sidewalks than those currently existing, without reducing the number of traffic lanes. Wider sidewalks, with trees, pedestrian-scale lighting and other pedestrian amenities, would not only be more attractive, but would also provide a buffer between residential uses and the relatively heavy traffic on Western.

Section 2.2.2 addressed the need for more pedestrian connections through existing dormitory complexes. The University is currently exploring options for future housing development on the Mahoney's Blocks. If the Neighborhood Spine discussed in Chapter 1 is to be implemented, a public pedestrian way from Hingham Street to Western Avenue will need to be included in the site plan. Future development along Blackstone Street in the NStar site will also need to recognize and provide for the spine.

The Study Committee recommends that the City develop a strategy for enhancing the pedestrian environment in Riverside, both through public improvements and through cooperative agreements with Harvard University and other key property owners.

2.2.4 Charles River Parkland and Bridges. The MDC has jurisdiction over the parkland along the Charles River. It also owns and maintains Memorial Drive and the bridges across the river.

Cambridge parks are well maintained and Cambridge residents have high expectations for maintenance of the riverfront parkland. Maintenance of the riverfront park does not meet these expectations. The Charles River bridges located by Riverside are in obvious need of repair.

The Study Committee recommends that the City work with the MDC to improve maintenance of the Charles River parkland and bridges.

2.2.5 Long Term Studies

The Study Committee recommends that the City establish a group to explore Town/Gown relationships around the country, make an assessment of practices that could result in the least negative impacts on the community, establish an early information process, and study the impact of the Allston development on Riverside.

2.3 Transportation. The Riverside neighborhood's roadway network is quite diverse, ranging from arterial roadways to one-way residential streets. The network itself is predominantly a rectangular grid pattern, though some variations occur around River Street and Western Avenue, which are radial streets. Figure 2.19 shows the geometry of the existing roadway network in Riverside.

Transit service for Riverside is concentrated at the edges of the neighborhood, with Red Line stations and major bus hubs at both Central Square and Harvard Square. MBTA bus service is confined to Massachusetts Avenue, Western Avenue and River Street. Some shuttles have routes that run through the neighborhood. One of these, the MASCO LMA Shuttle, is open to the public.

While the City has implemented many policies and projects aimed at promoting alternatives to single-occupant vehicle travel to reduce congestion and maintain the livability of Cambridge, neighborhood concerns remain about pedestrian safety, increased traffic on residential streets and parking.

2.3.1 Traffic Analysis.
Existing Traffic Volumes and Circulation. The

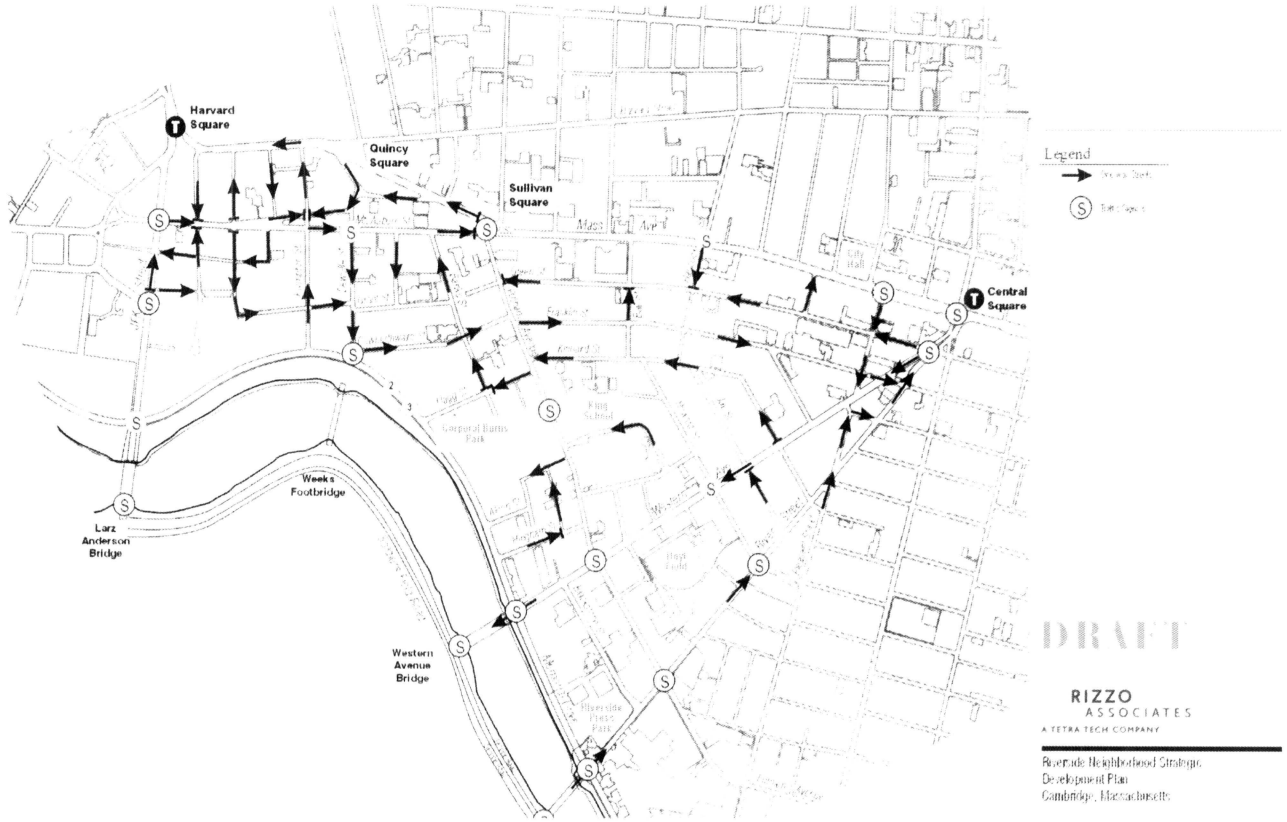


Fig. 2.19 Street System and Traffic Control

majority of streets in Riverside are one-way streets. These streets tend to be narrow, residential streets with on-street parking. The one-way restrictions help to limit the use of these streets for through traffic. Weekday traffic volumes on these streets are typically less than 750 daily vehicles between Putnam Avenue and the Charles River. Between Massachusetts Avenue and Putnam Avenue, daily volumes on these streets typically range from 1,000 to 1,200 vehicles, as they are also used to some extent by vehicles destined for businesses and employment centers in Harvard Square.

A few short streets provide important links between major arterial roadways. These links carry more traffic than those serving primarily the residential uses adjacent to the streets, with weekday traffic volumes ranging from approximately 1,500 to 4,500 vehicles. These streets include Bow Street/Arrow Street/DeWolfe Street (from Massachusetts Avenue to Memorial Drive), Plympton Street (from Memorial Drive to Mt. Auburn Street), and Hingham Street (from Memorial Drive to Putnam Avenue).

Longer streets that create direct routes attract a higher proportion of through traffic than those which end or reverse direction after only a few blocks. There are eight roadways in Riverside which operate in this manner. Three of these streets operate as both local and regional connectors, with weekday traffic volumes between 5,000 and 8,000 vehicles per day. These streets are Putnam Avenue, Green Street and Franklin Street. Five others are major facilities which connect Cambridge to surrounding communities and attract primarily regional traffic. For these streets, weekday traffic volumes are approximately 25,000 to 30,000 vehicles per day (with roadways restricted to one-way traffic carrying approximately one-half of this daily volume). Memorial Drive, River Street, Massachusetts Avenue/Mt. Auburn Street, and JFK Street, all fall into this category. Western Avenue is

also a major facility with approximately 21,500 daily vehicles.
Daily volumes by street are depicted in Figure 2.20.

Existing Traffic Operations. The efficiency and safety of vehicular operations is controlled by the capacity of key signalized intersections at the entry/exit points of the Riverside neighborhood. These intersections effectively "meter" the volume of traffic within the neighborhood. The nine signalized intersections are:

- Memorial Drive and JFK Street
- Memorial Drive and DeWolfe Street
- Memorial Drive and Western Avenue
- Memorial Drive and River Street
- Putnam Avenue and River Street
- Putnam Avenue and Western Avenue
- Sullivan Square (Putnam Avenue and Mount Auburn Street)
- Massachusetts Avenue and Inman/Pleasant Streets
- Central Square

The three signalized intersections in Allston on the Soldier's Field Road ramps at North Harvard Street, River Street and Western Avenue were also analyzed.
Figure 2.21 depicts the current level of service for the weekday morning and afternoon peak hour and for the Saturday peak hour which occurs midday at signalized intersections. Level of service F conditions, indicating high levels of congestion, presently occur on JFK Street and on River Street at intersections on both sides of the Charles River during one or both of the weekday peak hours. The only level of service F condition during the Saturday midday peak is at the intersection of JFK Street and Memorial Drive.

Critical Movements analysis was used to evaluate operations at twelve intersections in or near the Riverside neighborhood. Critical Movements analysis is an appropriate tool for comparative analysis of traffic operations over long periods of time, providing a snapshot of the relative differences in intersection performance. This methodology has been used in both the Citywide Rezoning process and the Eastern Cambridge Planning Study. This methodology yielded similar results to the level of service analysis, showing current performance deficiencies at the intersections of Memorial Drive/Western Avenue, Memorial Drive/JFK Street and Soldier's Field Road/River Street.

It is also worth noting that Committee members reported that neighborhood residents experience significant seasonal variations in traffic. In particular residents perceive Sunday traffic, when Memorial Drive is closed for Riverbend Park as much heavier than during months when Memorial Drive is not closed. Residents also remarked that traffic is less of a burden and it is significantly easier to park during summer months and during school vacation periods.

Trucks. The Regional Truck Study recommendations were completed in September 2001. The effect of the recommendations on Riverside is that through trucks would be banned from 11pm to 6am except on Massachusetts Avenue (Route 2A). No changes would be made to the current restrictions on River Street and Western Avenue, which currently ban trucks from 7pm to 7am Monday to Friday and 24 hours on weekends. Trucks carrying hazardous materials, however, are permitted to use River Street and Western Avenue at all times.

To date, the City has been unable to get the necessary Massachusetts Highway Department approvals to implement the Study recommendations. The City Council passed a zoning ordinance as an alternative mechanism to implement the truck restrictions. Hearings on the proposed ordinance by the Council and the Planning Board were held during November 2002. The ordinance was adopted and takes effect in February 2003.

Pedestrian Environment. In many areas,

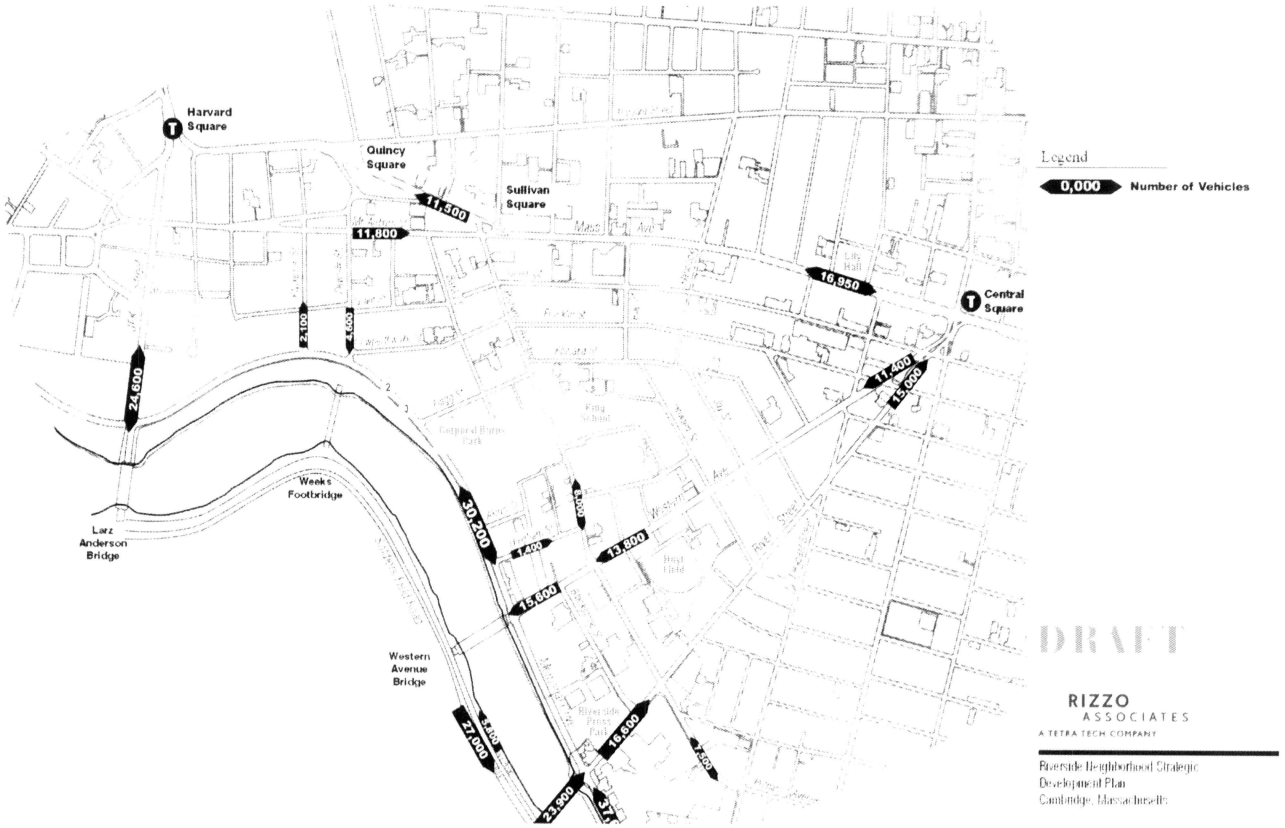


Figure 2.20 Weekday Traffic Volumes and Roadway Segments

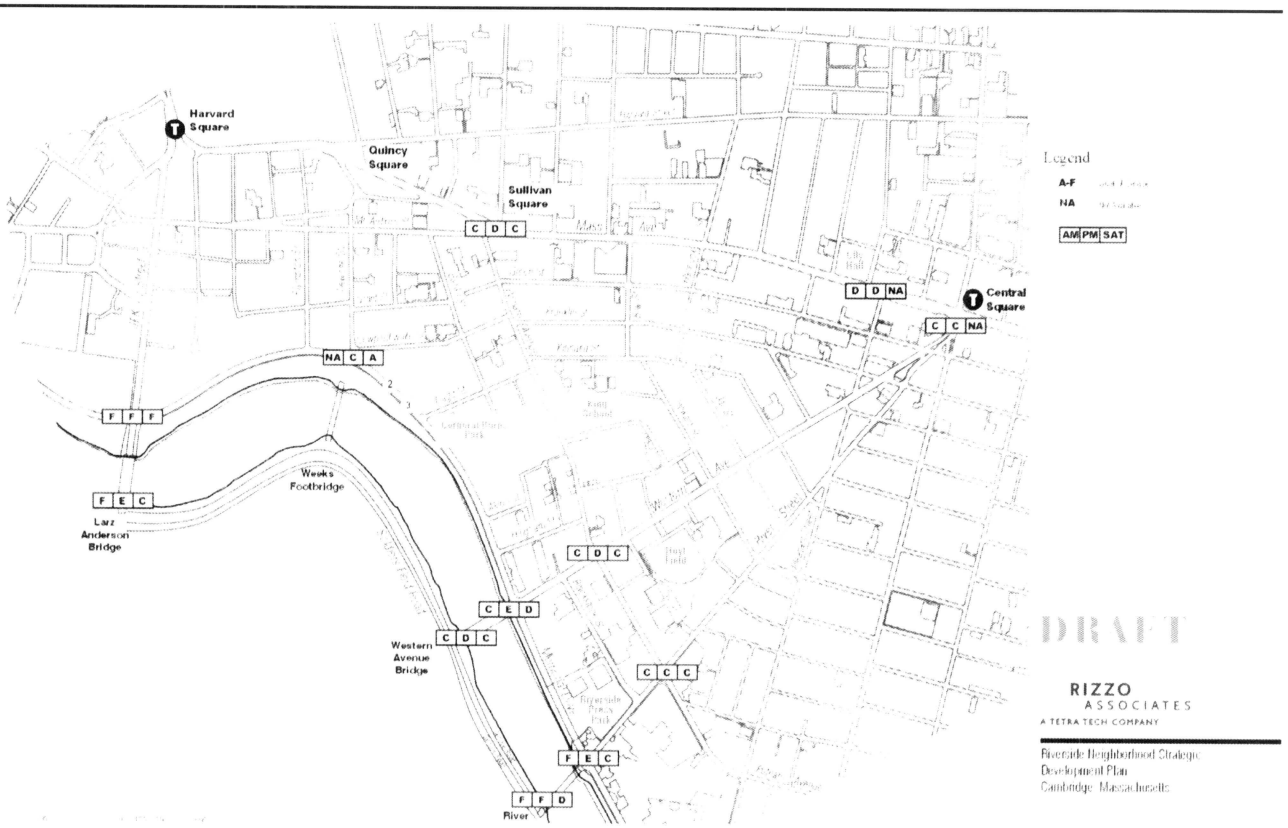


Figure 2.21 Vehicle Level of Service

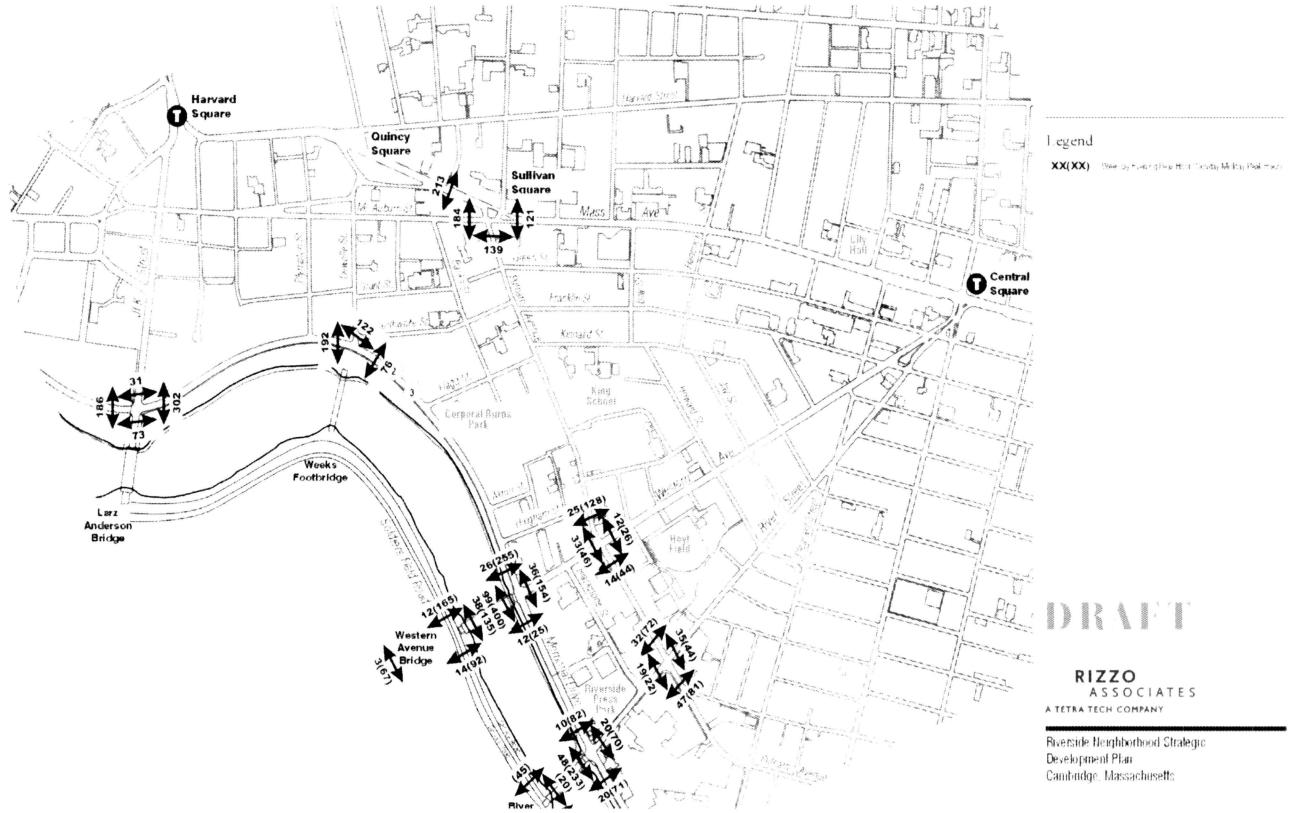


Figure 2.22 Pedestrian Volumes

Riverside provides a positive environment for pedestrians. Its narrow, residential streets, sidewalks buffered by on-street parking and bounded by an attractive, well-defined street wall make it an eminently walkable neighborhood. However, there are areas where this network of walkable streets breaks down. In some cases, the vehicles that can serve as a buffer from passing traffic also impede sight lines, making safe crossing of the street - by either pedestrians or vehicles - more challenging. Deficiencies typically are associated with crossings, particularly of the major streets that make up the borders of the neighborhood. In some cases, simple improvements, like re-painting crosswalks, are needed. Other crossing situations are more complex. In particular, the acute angle intersections created by the radial River Street and Western Avenue with the local cross streets pose particular challenges in creating safe crossings for pedestrians. Memorial Drive also poses a major barrier for pedestrians attempting to access the riverfront across from the neighborhood. While walkways are provided on both sides of Memorial Drive, there is a significant stretch of the roadway without any signalized crossing for pedestrians. Peak pedestrian volumes at key Riverside intersections are depicted in Figure 2.22.

Bicycle Environment. The bicycling environment in Riverside is varied, with many opportunities and also some challenges. Because there are so many destinations close together, bicycling can be an ideal way for people to get around, both for transportation and for recreational trips. The Paul Dudley White Bike Path along the Charles River provides opportunities for all types of cyclists to enjoy space separated from motor vehicles. Bike lanes on Massachusetts Avenue clearly indicate to motorists that the presence of cyclists is to be expected and accommodated. Many of the residential streets, while narrow, carry very low volumes of auto traffic, making them comfortable for bicycling.

However, some streets are not as accommodating. Putnam Avenue is sufficiently narrow that an automobile cannot pass a cyclist without protruding into the on-coming traffic lane. In some areas, cyclists may feel squeezed between parked vehicles and traffic. On Western Avenue, roadways are sufficiently wide to accommodate bicycles, but the width also has the effect of encouraging higher speeds among motorists, making some cyclists uncomfortable. Even the Paul Dudley White Path poses some challenges for cyclists, since the path is generally too narrow to accommodate all the users, and crossing Memorial Drive to get to the path is not as comfortable as it ideally could be. In general, a cyclist with either good knowledge of the street layout in the neighborhood or confidence riding in urban traffic can typically find routes to accommodate both transportation and recreational riding needs.

Public Transportation and Shuttle Service. Transit in the Riverside neighborhood includes both public and private services. Public transit services are operated by the Massachusetts Bay Transportation Authority (MBTA) and include the Red Line rapid transit line, with stations at Central Square and at Harvard Square, and bus services. There are six bus routes which serve the Riverside neighborhood, with routes along the boundary streets and within the neighborhood. There are also other bus routes which terminate at or within a few blocks of Central Square (four additional routes) and Harvard Square (ten additional routes).

Buses run on average every 10 to 20 minutes during rush hours, 15 to 30 minutes during the rest of the day, and 30 to 60 minutes after 8:00 P.M.

Private transit shuttle bus routes in the Riverside neighborhood are currently operated by Harvard University and by the Medical Academic and Scientific Community Organization (MASCO). Harvard has three routes for use by members of the University. These routes connect between their Cambridge and Allston facilities and travel on streets in the Riverside neighborhood as follows:

- Mather House - Science Center via Harvard Square: Loops around DeWolfe Street, Cowperthwaite Street, Banks Street, and Mt. Auburn Street to Massachusetts Avenue.
- Soldier's Field Park - Lamont Library via Harvard Square: Travels on DeWolfe Street, Memorial Drive, and across the Western Avenue Bridge into Allston, returning via the Larz Anderson Bridge onto JFK Street.
- Currier House - Science Center Express: Travels on DeWolfe Street, Cowperthwaite Street, Putnam Avenue and across the Western Avenue Bridge into Allston, returning via the Larz Anderson Bridge onto JFK Street.

MASCO manages (for Harvard University) three variations of the M2 shuttle bus between the Longwood Medical and Academic Area (LMA) and Harvard Square. The primary route travels along Massachusetts Avenue and returns via Bow Street and Mt. Auburn Street. Bus stops adjacent to the Riverside neighborhood are located at Central Square, Massachusetts Avenue at Bay Street, Massachusetts Avenue at Sullivan Square, and at Harvard Square. There is a morning express route that stops at Putnam Avenue and Mount Auburn Street, the Bread & Circus on River Street and at the corner of Brookline and Granite streets. The M2 shuttle operates every ten minutes during rush hours, every 15 to 30 minutes during the day, and every hour during the evening until 10:30 P.M. The shuttle is free for members of the Harvard Medical Community and is available for a fee (ranging from $0.65 to $0.85 per ride) to other members of the Harvard Community and to the general public. Tickets for this shuttle are available for purchase in Cambridge at Holyoke Center and at 1350 Massachusetts Avenue. No cash fares are accepted. Drivers are allowed to pick up and discharge passen-

gers at designated stops only. It is not well known that this shuttle is open to the public, as advertising and opportunities to purchase tickets have been very limited to date. However, the operator has been required, through the City's Jitney License process, to actively publicize the shuttle's availability to the general public.

The Committee expressed concerns regarding shuttle operations, especially on routes through residential areas. Neighbors along these routes noted that the vehicles tend to be very loud, are very frequent and run late into the night. While there was a recognition that shuttle service can help reduce vehicle trips through the neighborhood, the concerns about wear and tear on neighborhood streets and the irritation with the noise from the shuttles outweighed this benefit for many Committee members.

Parking. Parking in Riverside, as in much of Cambridge, is constrained. Riverside is a densely populated, older urban neighborhood where many households have no driveways or other off-street parking. Thus, residents rely heavily on on-street resident permit parking spaces. There is high demand for these spaces in Riverside, not only from Riverside residents but also from Harvard affiliates commuting to the area and those destined for the Harvard Square commercial district as either patrons or employees. It is also the case that several streets in Riverside are owned by Harvard and are therefore not available as on-street parking to residents without a Harvard affiliation, thereby making the parking in the area relatively more constrained than would be the case otherwise. It should be noted that Harvard has made some effort to ameliorate the situation by allowing some Riverside residents to park as guests in the Grant Street lot overnight from 5 P.M. to 7 A.M. for an annual fee of $135. Many residents do not avail themselves of this opportunity, as the requirement to move one's car by 7 A.M. is seen as an onerous restriction that significantly reduces the value of the parking.

It is likely that demand for parking in Riverside has grown over the last decade due to a number of factors, including changes in households and auto-ownership. Harvard affiliates who elect to park their vehicles on-street rather than pay more for Harvard's off-street facilities also contribute to parking demand. Non-Riverside Cambridge residents commuting to the area also increase demand for on-street spaces. However, based on existing data, it is not possible to quantify precisely the relative influence of these factors.

During the Riverside Study residents expressed concern that parking for residents in the study area was very constrained and provided a hardship to residents. Parking spaces available for residents to park in were static, while demand for those spaces has increased. They also expressed concern about the adverse impact of Harvard students on the limited parking supply. A group of residents put together a careful and thorough inventory of the on- and off-street resident parking available in the study area. The inventory was well documented and provided counts of residential parking by block face as well as in driveways and off-street areas. This information would not have been available without this substantial undertaking by the residents. To complement the work done by the residents the City provided information on the number of resident permits issued in the study area as well as the 1990 census information on auto ownership. (2000 census data on auto ownership is not yet available.) Information on permits issued to students in the Harvard dorms was also provided.

The parking available to residents in the area, both on-and-off street, totaled 3,000 spaces with that supply split 50-50 between the on-street and off-street supply. The City issued 2009 resident permits for the area. Of the 3,300 students in the River Houses, 37 had resident permits on their cars. The River

Houses are concentrated in the Kerry Corner section of Riverside. (See Appendix H for more information.)

2.3.2 Future Traffic Operations. Two future scenarios were considered to evaluate the relative performance of traffic operations for the year 2022. The first scenario (the "existing zoning" scenario) envisioned a probable build out scenario under the existing zoning during that time frame. The second scenario reflected a zoning proposal under consideration by the Committee as of April 10, 2002 (the "April 10" scenario). This scenario included development which was considerably more dense and included more retail development than the zoning ultimately recommended by the Committee. The consultant team did not produce a traffic scenario based on the committee's final zoning recommendation ("final zoning" scenario). From these build-out projections of the "existing zoning" and "April10" scenarios, estimates of expected traffic volumes were developed and assigned to the street network and their impact on intersection performance analyzed. While the analysis represents a reasonable projection of future events, the results are best understood as providing a picture of the relative, rather than absolute, impacts associated with the two zoning scenarios.

According to this analysis, there is little difference in intersection performance between the existing zoning in 20 years and the "April 10" zoning scenario in 20 years. The Committee's recommended zoning would result in less traffic than either the existing zoning or the "April 10" zoning scenario. However, many of the intersections analyzed are heavily influenced by traffic whose origins and/or destinations are outside of the neighborhood, and therefore development in the neighborhood is unlikely to be a major factor in intersection performance. The two scenarios analyzed showed a maximum 5% difference in the performance of the most heavily impacted intersection from current operations. The percentage difference between the existing zoning scenario and final zoning scenario has not been determined. Additionally, it should be noted that background traffic growth over a twenty-year period has not been factored in because it is not impacted by zoning changes proposed for Riverside. Therefore, results reflect only additional traffic generated by Riverside-area development and should not be seen as a forecast for actual intersection performance.

For complete results of the traffic analysis, please see Appendix I.

2.3.3 Neighborhood Transportation Plan.
The Neighborhood Transportation Plan aims to address many of the transportation-related concerns that have been raised through the Riverside Study Committee. The majority of these concerns relate to creating an environment which is safe for, and inviting to, pedestrians and cyclists; however, concerns were also raised regarding minimizing traffic on residential streets and alleviating current parking difficulties. Possible strategies for addressing these objectives are summarized below. Specific measures are outlined according to the timeframe in which they may be expected to be undertaken.

Create a Pedestrian- and Bicycle-Friendly Environment. The Riverside Study Committee repeatedly brought up concerns relating to the walking and bicycling environment. The Committee's desire to maintain and enhance Riverside's pedestrian-oriented nature, where one can walk to the corner store, to the park, to school, and to visit a neighbor, was very clear, as were concerns that the volumes and speeds of traffic in the neighborhood has made this a challenge. In order to create a safe and inviting environment for bicycling and walking, operational, service and/or infrastructure improvements have been proposed for several streets in Riverside. These improvements will aim to:

- Slow vehicular traffic
- Reduce crossing distances and improve sight lines

- Increase protection from vehicles at crossings
- Improve access to area recreational opportunities

Minimize Traffic on Residential Streets. A strong desire was also expressed to minimize traffic on residential streets in the neighborhood, including Putnam Avenue, River Street and Western Avenue. Of particular concern was traffic from trucks and shuttles, especially late at night. While many options were discussed, most had the effect of shifting traffic from one residential street to another, rather than reducing traffic on residential streets overall. Strategies, therefore, have focused on ways of reducing the impacts of traffic. Strategies that could help in this regard include:

- Working with Harvard to minimize impacts from loading at houses abutting the neighborhood
- Ensuring that shuttle services regulated through the Cambridge License Commission use routes and operating hours that minimally impact residents
- Exploring opportunities for using quieter, cleaner vehicles for shuttle operations

Reduce Parking Constraints. The Committee voiced a strong desire to see the parking situation in the neighborhood improved. Many expressed frustration with the currently constrained supply and the apparent increase in vehicles in the neighborhood. Though, as noted earlier, the precise influence of particular factors in this situation are difficult to quantify, it is still possible to move forward with some strategies to ameliorate the situation. Options for improvement include:

- Working with Harvard to entice a greater number of Harvard-affiliated Riverside residents to store their vehicles in Harvard-owned parking facilities
- Looking for opportunities to add on-street parking in the neighborhood
- Increasing enforcement, especially regarding visitor passes and verification of residential addresses

2.3.4 Challenges and Opportunities.

Challenges. In discussing the possibilities for improvement to transportation in Riverside, it is important to recognize that there are many challenging aspects of the current system which it may not be possible to change. While exploring possibilities and opportunities for improvement, it is important to keep the following constraints in mind:

- Multiple roles of River Street, Western Avenue, and Putnam Avenue serving regional and local traffic. This leads to heavy traffic volumes on residential streets.
- Riverbend Park results in increased traffic on Putnam Avenue from late April to early November and no good alternative routes exist.
- Often no obvious way of preventing short-cut routes without impacting emergency response, trash collection, street sweeping, etc.
- Trade-offs between moving vehicles along Memorial Drive and maintaining good pedestrian access to the Charles River.
- Unlikely to reverse trends leading to greater auto-ownership in Riverside.
- It is the City's position that it is not permitted to deny residential parking permits to students who establish Cambridge as their residence. Committee members, however, feel that it may be possible to distinguish between students and other residents in issuance of resident parking permits and feel that this is worth pursuing, through whatever channels necessary.

Opportunities. Despite these challenges, many opportunities for improvement exist. The City has already undertaken some improvements at the request of residents and many others are underway or being evaluated for feasibility. These opportunities reflect a range of proposals to reduce traffic, improve the pedestrian and bicycle environment and relieve some of the strain on on-street parking.

On-going:

1. PTDM ordinance requires implementation of transportation demand management programs for all non-residential projects creating new parking.
2. Wherever streets are reconstructed, the City looks for opportunities to implement traffic calming and bicycle/pedestrian improvements.

Short-term (0-1 year):

1. "Tow Zone, No Stopping" signs have been installed on Western Avenue at Jay and Soden Streets to clear the edges of the intersections and improve sight lines.
2. Crosswalk at Kinnaird Street and Putnam Avenue has been relocated and widened to improve pedestrian safety at the crossing.
3. Crosswalks at Putnam Avenue at Green Street and at Putnam Avenue at Franklin Street have been repainted.
4. The City has committed to increase enforcement of illegal parking.
5. Signal timing/phasing at Sullivan Square will be improved to aid pedestrians.
6. The overhead signal indicating through movement on Green Street at River Street will be fixed so that the signal is clearly visible to drivers.
7. The City will study the impacts and benefits of prohibiting left turns from Flagg Street onto Memorial Drive, either during rush hour or throughout the day.
8. The City will develop signage to direct traffic during Riverbend Park street closings, such that unsuspecting drivers will not be detoured inappropriately through the residential neighborhood. The City will look into additional ways of providing route information to drivers.
9. Work with Harvard to address:

a. Trucks obstructing sidewalk at DeWolfe/Mt. Auburn. Smaller delivery trucks would be less prone to obstructing the sidewalk, but would require more frequent deliveries. Harvard will discuss the possibility of using smaller trucks with each vendor.
b. Better access for the general public on shuttles
c. Incentives for Harvard-affiliated residents to park off-street in Harvard facilities. The Committee suggests that Harvard reduce fees to a level which encourages affiliates to park off-street but does not encourage those who do not currently own or drive vehicles in the neighborhood to do so.

10. Add bike lane to Western Avenue.
11. Implement zoning ordinance banning through trucks in Cambridge between 11PM and 6AM except on Massachusetts Avenue. No changes would be made to current restrictions on River Street and Western Avenue.
12. Parking can be added to the other side of Banks Street. Before such a change is made, the City will notify residents and seek their feedback.

Mid- or Long-term:

1. Improve pedestrian safety and comfort at Pleasant Street/Western Avenue and Pleasant Street/River Street intersections.
2. Reduce speeding on River Street and Western Avenue through traffic calming.
3. Study feasibility of adding a pedestrian-only crossing of Memorial Drive between Western Avenue and DeWolfe Street.

APPENDIX

APPENDIX A - THE RIVERSIDE NEIGHBORHOOD; AN OVERVIEW

The Riverside neighborhood has historically been oriented to the Charles River. Known by many long-time residents as "The Coast," the community has always looked to the river's edge as its focus. At first, the community faced a working waterfront of ship docks to serve its riverside factories and book binderies. Workers housing naturally grew up around these factories and docks. Later, as the tidal river was tamed and industry gradually declined, the river was captured for new recreational opportunities and scenic views that attracted both neighborhood and new university housing to the river's edge.

Much of Riverside was originally tidal wetland. Gradually, the wetland areas were filled and the neighborhood street and development patterns were completed. Initial development was additive, occurring without an overall plan. The result today is a juxtaposition of different land uses and sometimes conflicting opinions as to what uses would be appropriate on the few remaining developable sites.

Riverside has from the late 19th century been characterized by a diverse population of lifelong residents, students newer homeowners and renters.

This chapter highlights physical and social aspects of Riverside that provide the context for issues that are discussed in detail in Chapter 2.

History. The 1992 Riverside Neighborhood Study contains a fascinating history of the neighborhood. The following outline summarizes major conditions, trends and events that are described in more detail in that report:

- **1630** Mostly salt marsh Settlement in Harvard Square Mass. Ave. a narrow road Putnam Ave. path on a moraine

- **1811** River Street constructed (then called Brighton St.)

- **1824** Western Ave. constructed (then called Watertown Rd.)

- **1840s through 70s** Marsh filled Residential development Industrial development along river

- **1850s to 90s** Book binding factories locate at River Street by river
(See Figure A.1: Riverside Press at Charles River)

- **1890s, 1900s** Blacks settle in area

- **1894 to 1914** Charles River Park (constructed in stages; portion by Riverside finished in 1908)

- **1900 to 1931** Harvard River Houses (land acquisition; construction)
- **1910** Charles River Dam constructed
- **1930 to 1971** De-industrialization
- **1953** Putnam Gardens constructed
- **1963** Peabody Terrace constructed
- **1967** Mather House constructed

The Coast. During the period from approximately 1910 to 1960 Riverside had a particularly small-scale, livable, residential character. The Charles River Park had been completed from what is today John F. Kennedy Street (JFK) to Western Avenue in 1908. After the Charles River Dam was finished in 1910 the riverbanks to the west were no longer subject to tidal changes in water level. Industrial uses were gradually disappearing. Residents of Riverside used the Charles River Park as a neighborhood park and Riverside itself was known as "The Coast". (See Figure A.2: Riverside ca. 1960.)

Neighborhood-University Interface. Harvard buildings in Riverside, with minor exceptions, are residential buildings. Their impact on the neighborhood varies according to their location and design. The first group to be built, the Harvard River Houses completed in 1931, were attractively designed and scaled and replaced industrial uses. Because of their location at the northeast corner of the neighborhood adjacent to Harvard Square, the early River Houses did not have as much impact on the Residential Core as the later modern dormitories. The 1960s era high-rise dorms were located between the existing low-scaled Residential Core and the river. Like the earlier housing complexes, the towers and their lower accessory structures face inward to enclosed landscaped courts. (See Figure A.3: Peabody Terrace.)

Later, the architects of Harvard's DeWolfe Street Housing utilized a design that is essentially lower in scale and oriented to the street. Although some still regard this development as too large, it is more neighborhood friendly in scale than its 1960s-era high-rise predecessors. (See Figure A.4: DeWolfe Street Housing.) De Wolfe was originally intended to house graduate students. Recently, howev-

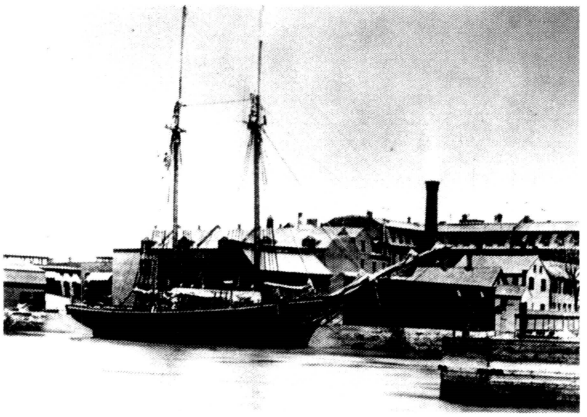


Figure A.1 Riverside Press at Charles River



Figure A.2 Riverside, ca. 1960



Figure A.3 Peabody Terrace

er, because of a shortage of undergraduate housing, Harvard has been placing undergraduates in DeWolfe.

Several small existing Harvard-owned houses in the Banks, Grant, Athens Cowperthwaite area have recently been renovated for Harvard affiliate housing. Because of their small-scale and traditional style, and the fact that they will be occupied by Harvard affiliates rather than undergraduates, these reuse projects have not been controversial.

Harvard University recently made public its ownership of 260 acres on the west side of the Charles River in Allston. The overall size of this property is roughly equivalent to the existing Cambridge campus. Most of Harvard's Allston properties are either vacant or candidates for redevelopment.

Commercial Areas. Large - scale commercial areas in and adjacent to the Riverside Neighborhood include Harvard Square, the Mass. Ave. Corridor, Central Square and the new neighborhood shopping center across River Street in Cambridgeport. There are also scattered small-scale retail businesses along River Street and Western Avenue.

In its clientele and types of shops, Harvard Square functions as much as a regional destination as a local commercial center. Because it abuts Harvard housing, activities in Harvard Square do not directly affect the Riverside Residential Core. Two buildings have recently been constructed in the Riverside portion of Harvard Square: One Bow Street and the Omni Travel Building. The new Inn at Harvard is located at the edge of Riverside. All three buildings are relatively small in size and scale and have minimum visual impact in the Riverside Neighborhood.

A major redevelopment site exists at Zero Arrow Street near its intersection with Massachusetts Avenue. The site, which connects Arrow Street to Mt. Auburn Street,



Figure A.4 Dewolfe Street Housing



Figure A.5 Mass. Ave. Corridor

was proposed to be constructed as a commercial development. However, the current proposal is for an arts and non-profit complex, including a 350 seat theater, associated rehearsal rooms and office space.

Buildings in the Mass. Ave. Corridor are a mix of one-story commercial structures, small frame structures and large masonry blocks. (See Figure A.5: Mass. Ave. Corridor.)There is a significant change in elevation between Mass. Ave. and Green Street to the west. This slope, which marks the line of the original salt marsh, provides a natural separation between the commercial activities on Mass. Ave. and the predominantly residential uses on Green Street. There has been no significant new construction in the Mass. Ave. Corridor since 1992.

Central Square, a portion of which is includ-

ed in the Study Area, has undergone a significant transformation since the 1992 study. The Holmes Building, a six-story apartment building with ground floor retail was recently constructed on the corner of Mass. Ave. and Magazine Street, replacing a group of two- and three-story commercial buildings. (See Figure A.6: Holmes Building in Central Square.) The City's Facade Improvement Program has resulted in new façade treatments in the square. Recent streetscape improvements along Mass. Ave. include new street and pedestrian lights; sidewalk paving; curb extensions at crosswalks; trees and street furniture. (See Figure A.7: Streetscape Improvements in Central Square.)

The Bread and Circus supermarket and Osco Drug Store on River Street adjacent to Riverside introduced new neighborhood services to the community. The Bread and Circus building includes a ground floor cafe on Putnam Street. These stores are within walking distance of the Riverside Residential Core (maximum 15 minutes). (See Figure A.8: Retail area on River Street.)

Other than the new neighborhood shopping center, commercial uses on River Street and Western Avenue are primarily small-scale "mom-and-pop" establishments. Recent construction and rehabilitation projects on these streets have been residential. (See Figure A.9: Typical "mom-and-pop" store in Riverside.)

Parks/Community Facilities. Riverside's three major city parks - Corporal Burns, Riverside Press and Hoyt Field - are well equipped, well maintained and intensively used. These parks provide facilities for a wide range of activities: basketball, softball, tennis, street hockey, and water play. They also include playgrounds, tot lots and areas for passive recreation. (See Figure A.10: Corporal Burns Park.) The Martin Luther King School playground has recently been renovated and will double as a neighborhood park. There are three small green spaces in Riverside: Franklin Street Park, Sullivan Park



Figure A.6 Holmes Building in Central Square



Figure A.7 Streetscape improvements in Central Sq.



Figure A.8 Retail area on River Street

on Green Street, and an ornamental triangular park on Western Avenue. Quincy Square, a new small passive park on Mass. Ave. near Harvard Square, lies just outside the neighborhood. The 1992 study recommended redesign and reconstruction of Franklin Street Park and this recommendation is just being implemented. The Riverside neighbor-

hood also enjoys use of the MDC's Charles River Park along the community's entire western riverfront edge.

The Moore Youth Center is located in Hoyt Field. A private institution, the Cambridge Community Center on Calender Street, also serves Riverside youth.

Socio-Economic Factors. For the many people who appreciate the advantages of urban living, Riverside is ideally located. It is within walking distance of Harvard University, Harvard Square and Central Square. Its northern portion is also easily accessible by public transit to downtown Boston and its many cultural institutions.

Real estate prices and rent levels have significantly risen in Riverside, along with the rest of the metropolitan area. Recently constructed residential units are typically clustered luxury condominiums that sell for a half million each, or more. (See Figure A.11: Recent condo development in Riverside.) Potential homeowners and renters with limited income find it difficult to find housing in Riverside.

Phasing out of the rent control ordinance in 1994 contributed significantly to the loss of affordable housing in Riverside. According to the 1992 Riverside Neighborhood Study, 1826 of the total 3232 housing units in Riverside were rent control units. Rent-control- level rents were phased out over a two-year period.

The City of Cambridge has an aggressive affordable housing program. Units are added by two basic means: inclusionary zoning and grants. Housing developments of ten units or more are required to provide 15 % affordable units. Grants provide gap financing to developers of affordable housing. These tools are gradually adding affordable units, but the net number in Riverside does not replace the affordable rent control units that have been lost.

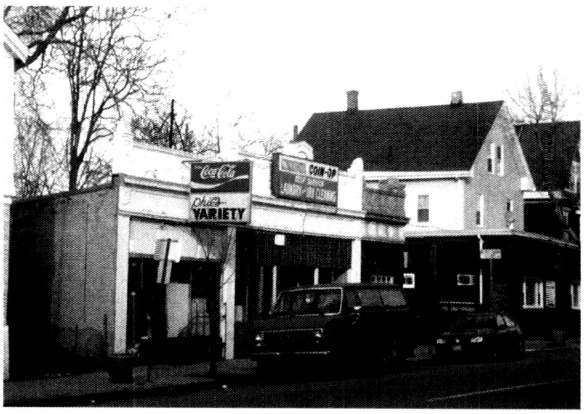


Figure A.9 Typical mom-and-pop store in Riverside

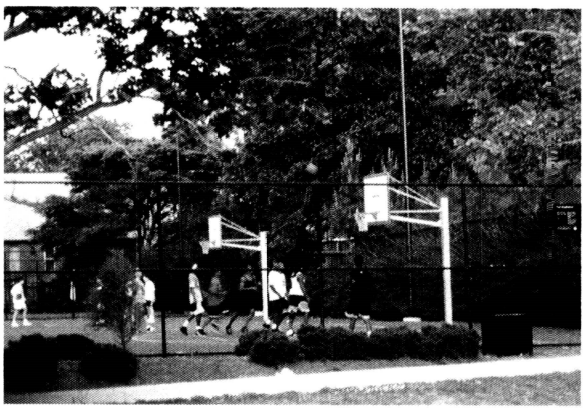


Figure A.10 Corporal Burns Park



Figure A.11 Recent condo development in Riverside

APPENDIX B - EXISTING REGULATORY CONTEXT

Neighborhood planning occurs within the larger context of city, state and federal planning and development activities. This chapter provides an overview of a variety of policies and regulations most relevant to the issues addressed by the Riverside Study Committee. The summaries are necessarily brief and are not intended to replicate information found in federal, state and local statutes.

Cambridge Growth Policy. *Toward a Sustainable Future; Cambridge Growth Policy Document* (published in February 1993) outlines the planning assumptions and policies guiding the physical planning of Cambridge. It is used by the Planning Board to make land use decisions.

The Growth Policy Document includes 70 policy statements in the areas of land use, transportation, housing, economic development, institutions, urban design and open space. The following policies are particularly relevant to issues addressed by the Riverside Study Committee:

Policy 1: Existing residential neighborhoods, or any portions of a neighborhood having an identifiable and consistent built character, should be maintained at their prevailing pattern of development and building density and scale.

Policy 5: The major institutions, principally Lesley College, Harvard University, Massachusetts Institute of Technology and the hospitals, should be limited to those areas that historically have been occupied by such uses and to abutting areas that are reasonably suited to institutional expansion, as indicated by any institutional overly district formally adopted by the City.

Policy 52: The city's major educational institutions should be encouraged to provide housing for their respective faculties, students, and staff through additions to the city's inventory of housing units. Effective use of existing land holdings should be a tool in meeting this objective, where it does not result in excessive density of the core campus. In addition, where new housing is to be located within or abutting an existing neighborhood, it should match the scale, density and character of the neighborhood. The institutions should be encouraged to retain this housing for client populations over an extended period of time. They should consider housing other city residents within these housing developments as a means of integrating the institutional community with city residents.

Policy 69: The city should encourage the permanent retention and protection of useful, effective, attractive private open space whether publicly accessible or not.

Community use of private recreational and open space facilities in the city should be encouraged at reasonable levels where the private function of those facilities would not be impaired and where the recreational activity provided by the private facility is not well served in available public facilities.

Citywide Rezoning. In 2001 the City adopted zoning changes affecting properties throughout the city. The changes were the result of dialogue among the Citywide Growth Management Advisory Committee, the Planning Board and the public. Changes included the following components:

- 14 new residential districts
- Reductions in FAR and height provisions
- Citywide project review (projects over 50,000sf)
- Incentives for conversion of non-residential buildings to residential
- Reductions in parking requirements
- Inclusions of structured parking in FAR

Relative to Riverside:

- No new residential districts were created in Riverside.

- The new article of the zoning code for conversion of non-residential buildings to residential use is potentially applicable to the NStar property. This article allows for the application of special provisions in connection with issuance of a Special Permit by the Planning Board. The article is intended to facilitate conversion of non-conforming buildings in neighborhood residential districts, where both the non-residential use and the scale of the building(s) are non-conforming. Additional gross floor area beyond what is permissible under the base zone may be added provided it occurs within the limits of the existing structure. The allowable number of dwelling units is determined by dividing the gross floor area by 900 rather than by applying the formula for the base zone. Height limits and yard setbacks do not apply to the existing structure. The amount of required usable open space may be reduced by the Planning Board.
- Allowable commercial densities were reduced for some properties in Riverside: in Harvard Square, the Mass. Ave. Corridor, Central Square and for portions of the NStar property.

- The new article stipulating inclusion of structured parking in FAR has implications for large new development projects in Riverside. If structured parking is included in a project, the gross rentable floor area will in most cases be less than it would have been previous to the change.

- Under the new Project Review requirements a Special Permit is required for new building construction of 50,000 sf or more and for certain smaller projects, such as drive-in retail, that can be expected to be major traffic generators. The Planning Board grants the Special Permit only if it finds that the project is consistent with the City's adopted urban design objectives.

- Adjustments were made to the minimum and maximum amount of parking required for general office and research and development uses. To insure that an oversupply of parking is not possible anywhere in the city, a special permit is required for a project to exceed the maximum amount of parking established in the zoning code. The intention was to discourage single-occupancy peak hour commuter trips. This revision could potentially impact Riverside if new office, research and development uses were located in or adjacent to the neighborhood. If the number of parking spaces included in the project were less than the actual demand for parking generated by the project demand could spill over into Riverside.

Existing Base Zoning. Existing zoning to some degree reflects Riverside's current urban design structure, characterized by a Residential Core with business and office zones at the periphery. The major deviations form existing conditions occur along the east

edge and adjacent to Central Square, where current zoning allows higher densities and greater heights than is the existing pattern. There is also a discrepancy along River Street where the predominant use today is residential rather than business. (See Figure B.1. Existing Zoning.)

Townhouse Development Regulations. Special regulations were adopted to provide flexibility for townhouse design. The following points summarize the relevance of this regulation for Residence C-1 (the predominant existing district for Riverside) and residence C (the next lower density existing housing district):

- Special Permit required for six or more units in Residence C and for 12 or more units in Residence C-1.
- Eliminates minimum lot width requirement (Minimum width requirement is 50' in zoning districts C and C-1.)
- For lots of 15,000 sf or larger in C-1, allows density increase from .75 FAR to .825 FAR (no change in C)
- Allows height increase from 35' to 40'
- Allows front yard setback to match setbacks on neighboring properties
- Allows possibility of on-street parking (rather than on-site)

Incentive Zoning/Inclusionary Housing. The Incentive Zoning/Inclusionary Housing provisions of the City's zoning code provide a mechanism by which commercial and residential development can contribute to increasing the supply of affordable housing in exchange for greater density or intensity of development than that otherwise permitted as a matter of right. A developer of an Incentive Project either creates affordable housing units or makes a contribution to the City's Affordable Housing Trust Fund. A Housing Contribution or creation of affordable units is required for any non-residential project over 30,000 sf.
Residential projects over 10,000sf and with ten or more units are required to provide affordable units on site and are called Inclusionary Housing Projects. In such a project 15% of the total number of units must be affordable. In exchange for creation of affordable units the FAR for the project can be increased 30%. The developer must devote 50% of this increase to affordable units. The required lot area per dwelling unit can be reduced to allow up to two additional units for each affordable unit.

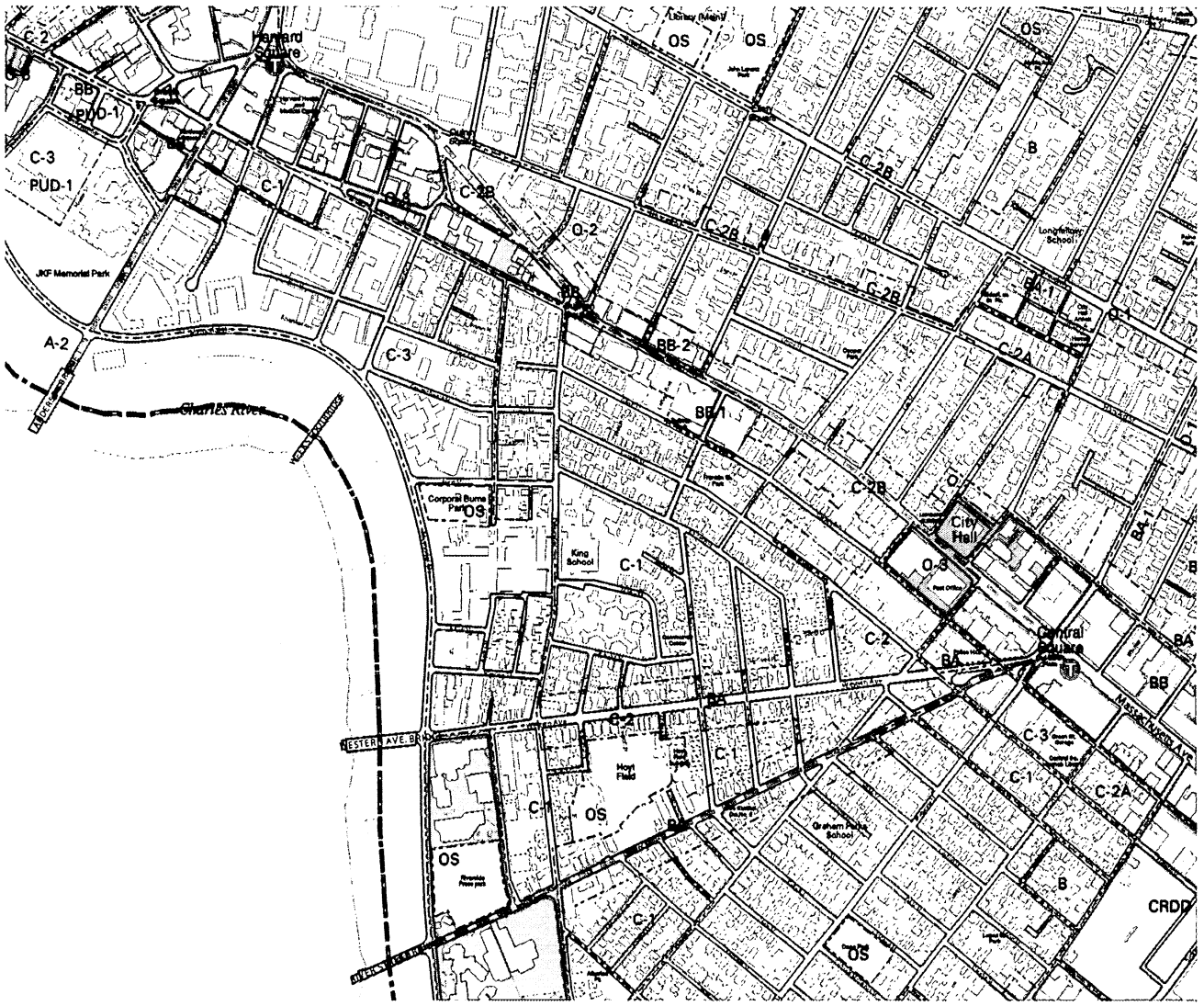
Residential projects under 10,000 sf that voluntarily provide affordable units are called Voluntary Inclusionary Projects. For these projects the Planning Board only issues the Special Permit granting zoning incentives after it has determined that the resulting development would not be out of scale and character with its surroundings.

A Board of Trustees oversees the Affordable Housing Trust Fund. The Fund can be used to: provide favorable financing; subsidize the purchase of sites, existing structures or units; and finance rehabilitation of deteriorated properties.

Overlay Districts. Overlay districts are adopted to protect the character of areas of special concern or to encourage new development. There are three Overlay Districts in Riverside: (1) Harvard Square; (2) Central Square and (3) Harvard University. (See Figure B.2. Overlay Districts.) For each of these districts there is a set of zoning regulations that is applied either in addition to, or in lieu of, the base zoning regulations.

The Harvard Square Overlay District was created to both preserve the environment of the area and to reduce negative impacts on adjacent neighborhoods. The overlay regulations establish a maximum height of 60', which can be increased to 80' if certain set back requirements are met.

The Central Square Overlay District requires review of proposed development to insure that it does not negatively impact the district and/or the abutting neighborhoods. The



BB-1	Business 1	B	Residence B		Open Water
BB-2	Business 2	C	Residence C		Building Footprint
BA	Business A	C-1	Residence C-1		Rail Line
BA-1	Business A-1	C-2	Residence C-2		Edge of Pavement
BB	Business BB	C-2A	Residence C-2A		Neighborhood Boundary
CRDD	C-Port Rev. Dev	C-2B	Residence C-2B		City Boundary
IB	Industry B	C-3	Residence C-3		MBTA Red Line
O-1	Office 1	SD-7	Special District		
O-2	Office 2	SD-6	Special District		
O-3	Office 3	SD-10(H)	Special District		
OS	Open Space	SD-9	Special District		Zoning District Boundary
A-1	Residence A-1	SD-8	Special District		Location of Boundary Still Being Determined
A-2	Residence A-2				

Figure B.1 Existing Zoning

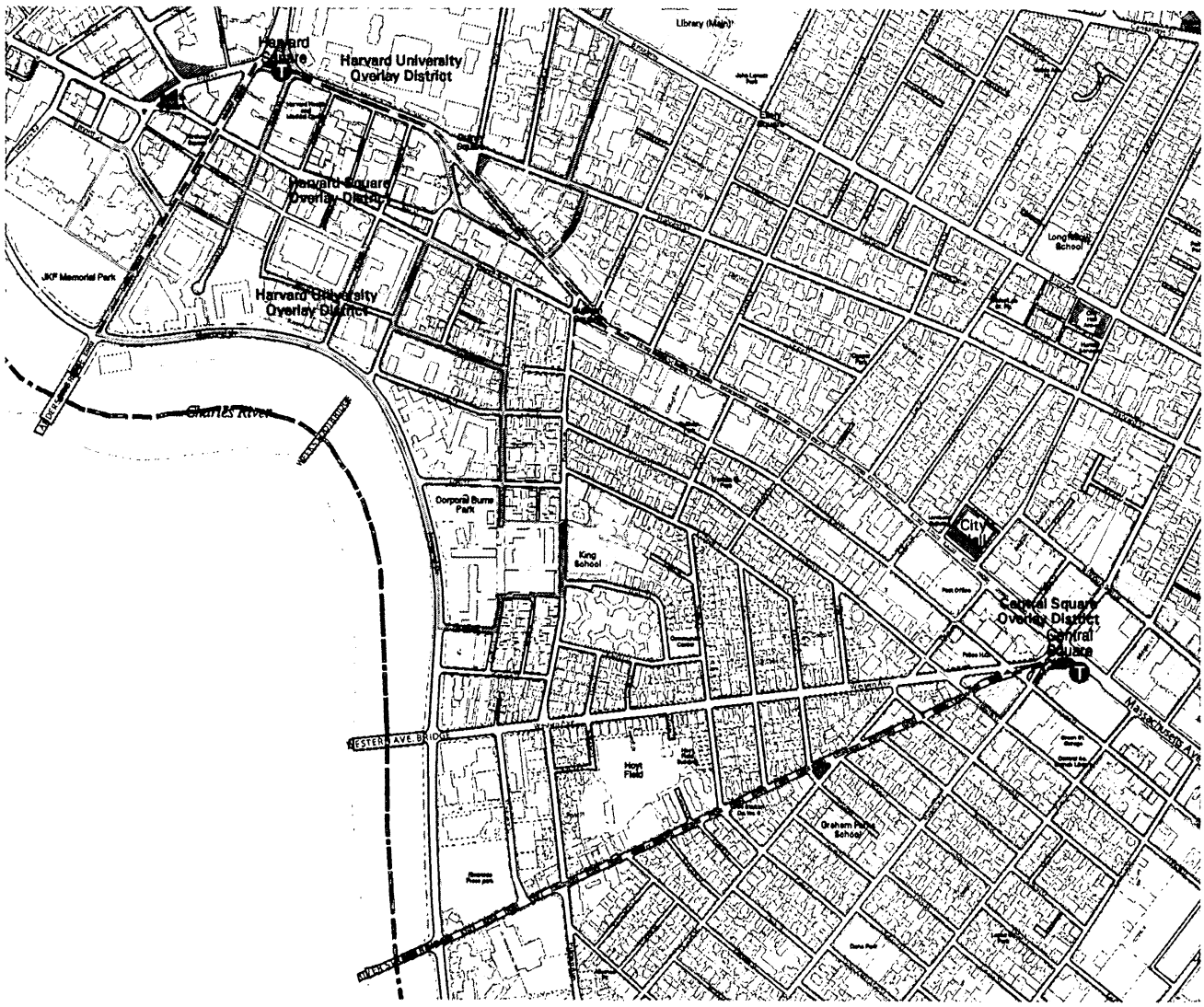


Figure B.2 Overlay Districts

Special Permit process allows increases over the as-of-right FAR and height for particular uses, subject to design review and satisfying specified goals and objectives. Special use limitations and restrictions apply to ground floors. Certain exemptions from parking and loading requirements can also be allowed.

The Harvard University Overlay District is an Institutional Overlay District. (See Figure B.2. Overlay Districts.) Massachusetts General Law Chapter 40A restricts Cambridge's authority to prohibit university or other institutional uses. In response to this law Cambridge has created eight Institutional Overlay Districts to regulate institutions within the limits imposed by Chapter 40A. Institutional Overlay Districts differ from typical regulatory districts in that restrictions apply outside of, rather than inside of, the district. Restrictions apply to areas outside the Institutional Overlay Districts only if the underlying zone is A, B, C and C-1. The following three hypothetical examples illustrate how the combination of Institutional Overlay District boundaries and the above mentioned underlying zones determine if institutional uses (such as a dormitory or museum) are allowed:

- Development site in Institutional Overlay District/ Underlying Zone is A, B, C or C-1. University facility use such as dormitory or museum allowed.
- Development site located outside Institutional Overlay District/ Underlying Zone A, B, C or C-1. University facility such as dormitory or museum not allowed.
- Development site located outside Institutional Overlay District/Underlying zone other than A, B, C or C-1. University facility such as dormitory or museum allowed, if permitted under base zone.

There are two exceptions to the above examples:

- Existing or recent residential uses inside the Institutional Overlay District can be displaced by an institutional facility such as a dormitory or museum only if these units are replaced in other locations.
- A new university facility such as a dormitory or museum can, with a Special Permit, be developed on a site that lies outside the Institutional Overlay District and in an A, B, C or C-1 zoning district if the site was previously in institutional use and if it can be shown that the new institutional use has fewer adverse impacts than the previous one.

Historic Sites and Districts. There are three potential levels of historic designation in Cambridge: (1) National Register of Historic Places; (2) State Register of Historic Places and (3) local designation.

The National Register of Historic Places is the official list of American cultural resources worthy of preservation. Properties listed in the Register include districts, sites, buildings, structures and objects. Properties listed in the National Register are eligible for federal tax incentives and other preservation incentives. The Massachusetts Historic Commission administers the National Register program in Massachusetts. There are three national Register Districts in Riverside: Harvard Houses, River Front and Central Square. (See Figure B.3. National Register Districts.)

The State Register of Historic Places includes buildings, structures, objects and sites that have received local, state or national designations based on their historical or archaeological significance. Since it was established in 1982, 59,000 properties have been added to the State Register. Districts and individual properties in Riverside that are listed in the National Register or recognized by the Cambridge Historical Commission are included in the State Register.

The Cambridge Historical Commission administers the city's historic districts, its city-wide landmark and demolition ordinances and nomination of eligible properties to the National Register. Neighborhood

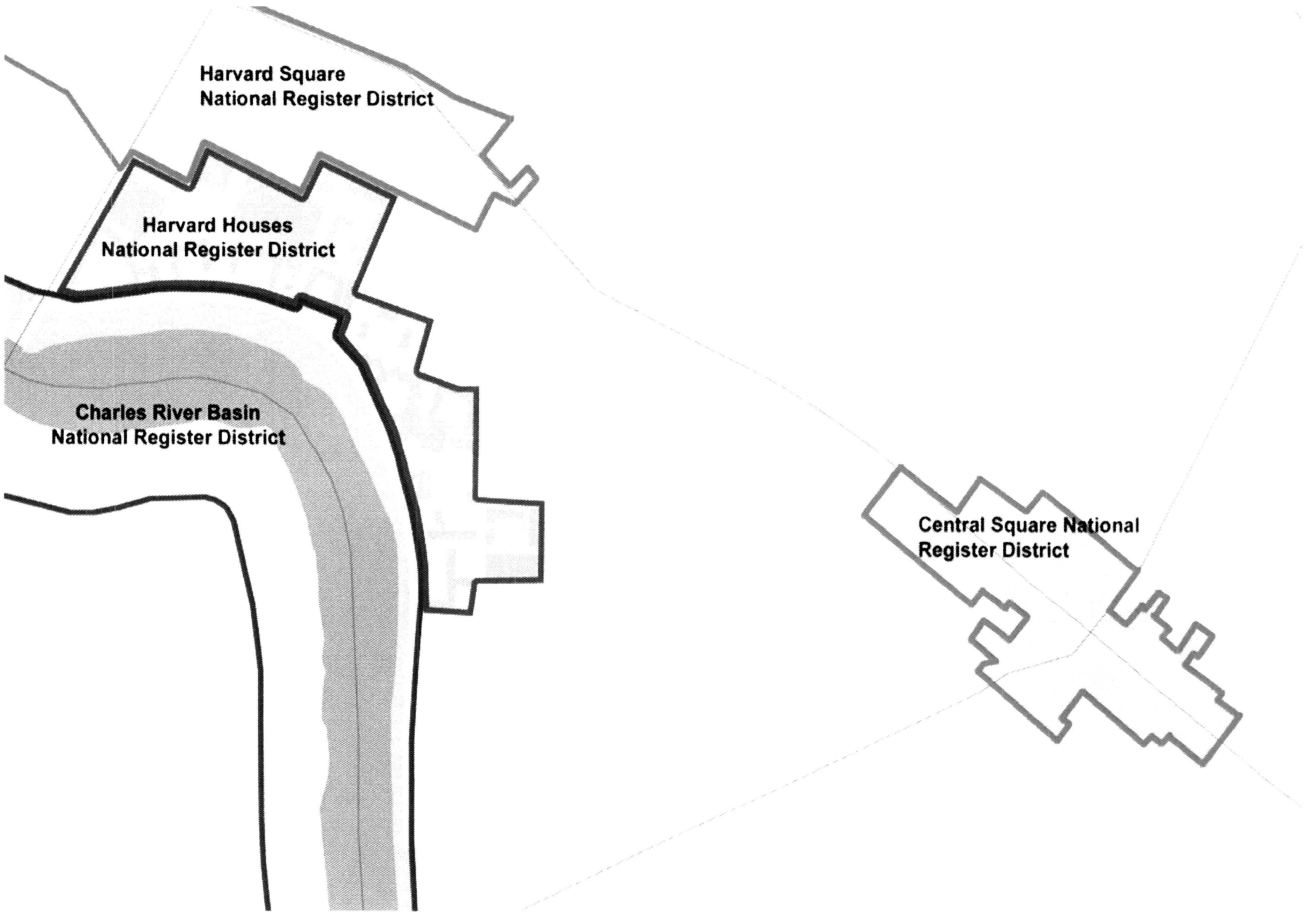


Figure B.3 National Register Districts

Conservation District Commissions oversee Neighborhood Conservation Districts.

The city has two Historic Districts and five Conservation Districts, one of which, the Harvard Square Conservation District, lies partially in Riverside. (See Figure B.4 Harvard Square Conservation District.) There are five local landmarks in Riverside:

- White Tower Restaurant, 25 Central Square
- George and Jeremiah Richer House, 1213 River Street
- Houghton Beech Tree, 1008 Mass. Ave.
- Farwell-Russell Store, 12 Bow Street
- Read Block, 1380-92 Mass. Ave.

In addition, there are ten historic properties covered by preservation easements held by the Cambridge Historical Commission. The properties with easements are primarily student clubs located near Harvard Square.

Chapter 91. Massachusetts General Law Chapter 91, adopted in 1866, protects the public's interest in the Commonwealth's waterways. The law and regulations are administered by the Massachusetts Department of Environmental Protection (DEP). Chapter 91 authorization is required for structures in tidelands, Great Ponds and certain rivers and streams. Structures requiring authorization include some waterfront buildings if on filled land or over water.

To obtain a Chapter 91 permit a project must be in compliance with Chapter 91 standards. The standards involve limits on building height, minimum open space requirements, density limits, public access requirements, engineering practices, environmental compliance, and some use limitations.

Chapter 91 applies in Cambridge to areas along the Charles River where land was his-

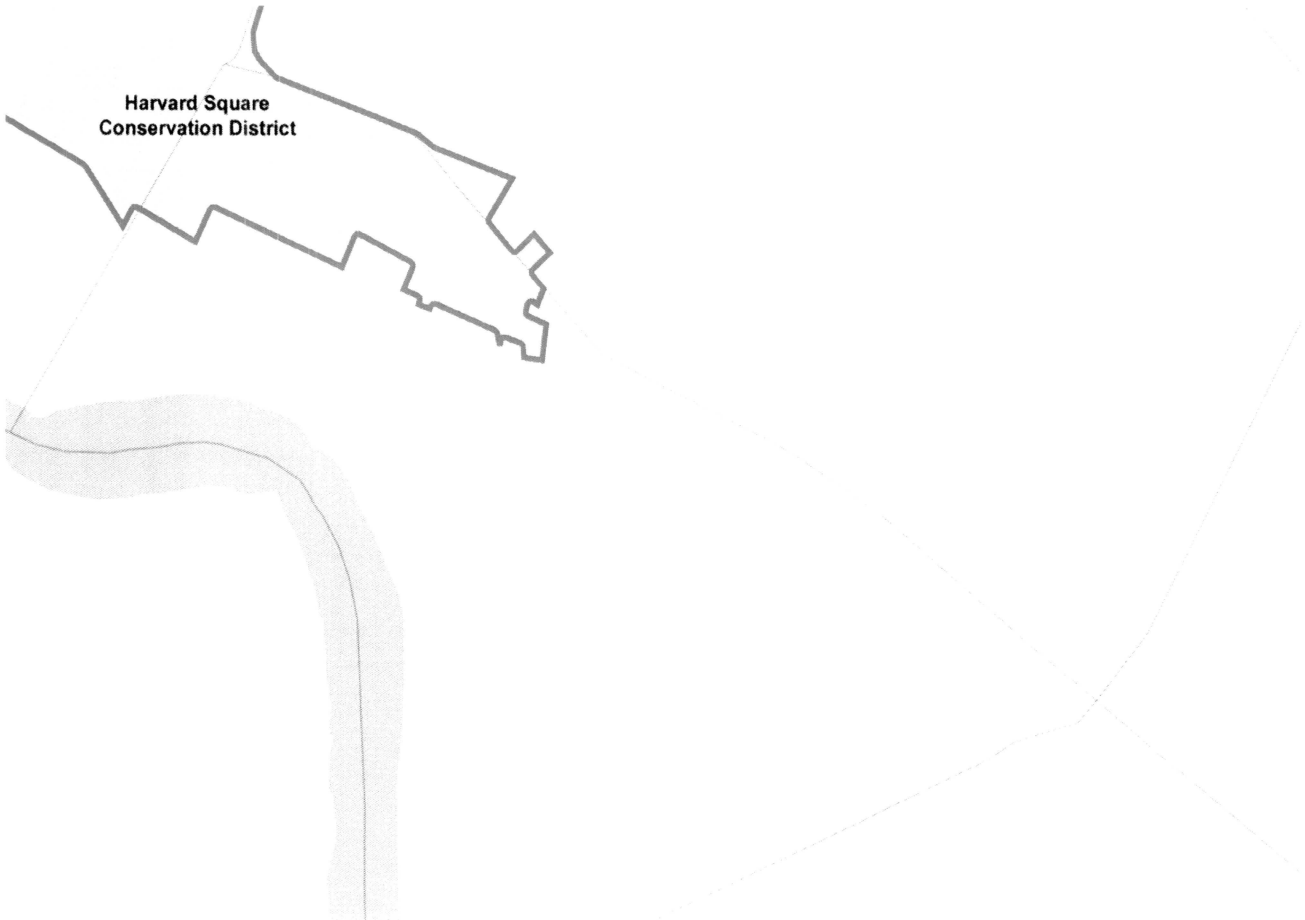


Figure B.4 Harvard Square Conservation District

torically subject to tidal action. In general, sites in Riverside that are located within 250' of the Charles River shore are subject to Chapter 91 jurisdiction. Any building within 100' of the shore cannot exceed 55' in height. From that line the height can increase two feet for every one foot further inland.

APPENDIX C - VISIONING WORKSHOP

A community-wide workshop for the Riverside Study was held on July 16, 2001 at the Cambridge Senior Center. Over 100 people attended. After an introductory presentation attendees divided into five groups to explore their visions for Riverside. The groups then reassembled and the group facilitators reported the results. Large format records of each group's vision statements were hung on the walls. Following the facilitators' reports those in attendance were given stars to apply to the statements they felt were most important. The following vision statements, comments and suggestions each received at least one star. The issues raised in the visioning workshop were taken into account by the Study Committee in drafting its recommendations.

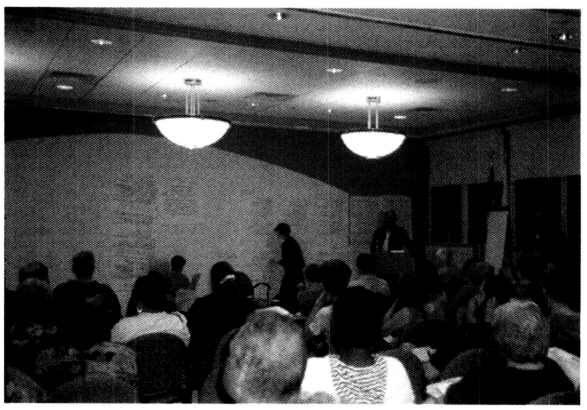


Figure C. 1 Visioning Workshop

Building Height and Density
- Low density
- Height/density restrictions
- C-1 scale of zoning (especially Athens and Banks, also whole neighborhood)
- Rezone Residence C - 35' height limit
- Against any kind of development

Housing
- Primarily residential
- Affordable housing
- Affordable rental housing
- Subsidized housing at 2 Mt. Auburn Street
- Promote local ownership
- More family housing
- Better use of existing housing stock

Commercial
- Small shops on River Street and Western Avenue
- More small shops/fewer chains
- More mom and pop businesses/grocery stores

Open Space
- Provide more open space
- Open space on Grant Street
- Triangle next to Police Station should be open for pedestrians to rest

Riverfront
- MDC should do landscaping along river
- MDC land maintenance
- Riverfront for the neighborhood - human scale/use

· MDC bridges in deplorable shape
· Make bridges comfortable for pedestrians

Community Facilities
· Create a cultural arts center
· Support community center
· Place for teens to hang out
· Teens/resources/activities
· King School is ugly
· Improve King School, King School maintenance
· Want flourishing schools
· Want community gardens
· Make community building (or some use) out of building by Corporal Burns Park
· Building in Corporal Burns Park should be used as a public amenity with toilets, food, drink. Building should be used by neighborhood

Institutional
· Harvard should divest itself of Riverside property
· Harvard/MIT access by community members
· Harvard could sell housing back to residents (particularly in Grant Street area)
· Harvard engulfing river as center point of campus

Streets/Sidewalks/Bike Paths
· Sidewalks should be maintained
· Fix crumbling sidewalks
· Brick sidewalks
· Big light fixtures above the tree canopy don't light the sidewalk and shine in people's windows. Redesign street lighting to put lights below tree canopy.
· Not enough lighting on Franklin Street
· Sidewalks/streets/bike paths
· Western Avenue beautified
· Pedestrian-only streets
· More bike paths
· Put wires underground
· Wooden fences, not wire

Traffic
· Better control of traffic
· Traffic a threat



Figure C. 2 Visioning Workshop

· Safety - more responsible cars, bikes, pedestrians
· Truck traffic/hazardous materials (get rid of)
· Putnam Avenue/reduce Sunday traffic
· Traffic on Putnam Avenue - Callendar Community Center
· Traffic calming on Western Avenue
· Traffic calming at major intersections
· Need safe way to cross Memorial Drive to river
· Traffic lights (4-5) on Western Avenue and River Street, speed limit 25 mph
· Extend Riverbend Park to Hyatt Regency - traffic would dissipate - create less cut - through traffic on Putnam
· Buses - squeaky brakes, fumes

Parking
· Franklin Street - police should use public transportation

Public Transit
· Make a monorail system

High Water Table/Sewers
· High water table a problem
· Get answers from City re. sewers overflowing

Social/Ethnic/Economic
· Ethnic and social diversity
· Maintain diversity; maintain neighborhood ownership
· People having contact with other people is good

· Jobs
· Use as business satellite sites
· Love the neighborhood

Mahoney's Site
· Park at Mahoney's
· Make Mahoney's a park (needed for neighborhood feel of river access)
· Mahoney's site as a park - not just for neighborhood - broader imagination as to who it serves
· Keep it a garden center

NStar Site
· NStar renovated and turned into a museum
· NStar could be the Harvard museum site instead of Mahoney's
· NStar site is important
· NStar could be used for housing
· Make community cultural center (museum and studios and community centers)
· Keep NStar parking lot on Putnam Avenue un-built

Banks, Grant, Athens Cowperthwaite Streets
· Opposed to Banks Street development
· Banks, Grant Street area should be rezoned as C-1 (residential and small local shops)

Process
· Communicate/collaborate with Cambridgeport



Figure C. 3 Visioning Workshop

APPENDIX D - PLAN ALTERNATIVES

At the outset of the planning process Riverside Committee members were already familiar with Cambridge zoning districts and voiced a strong desire to consider neighborhood plan alternatives as expressed through zoning districts, rather than more general categories. The Committee's final recommendations for zoning are presented in *Chapter 2 - Recommendations*. Included in this appendix are additional alternatives that were considered by the committee. Some alternatives illustrated were suggested by the consultant team and others by the Committee. Potential developments that would be most likely to result from the zoning districts are illustrated in Appendix F.

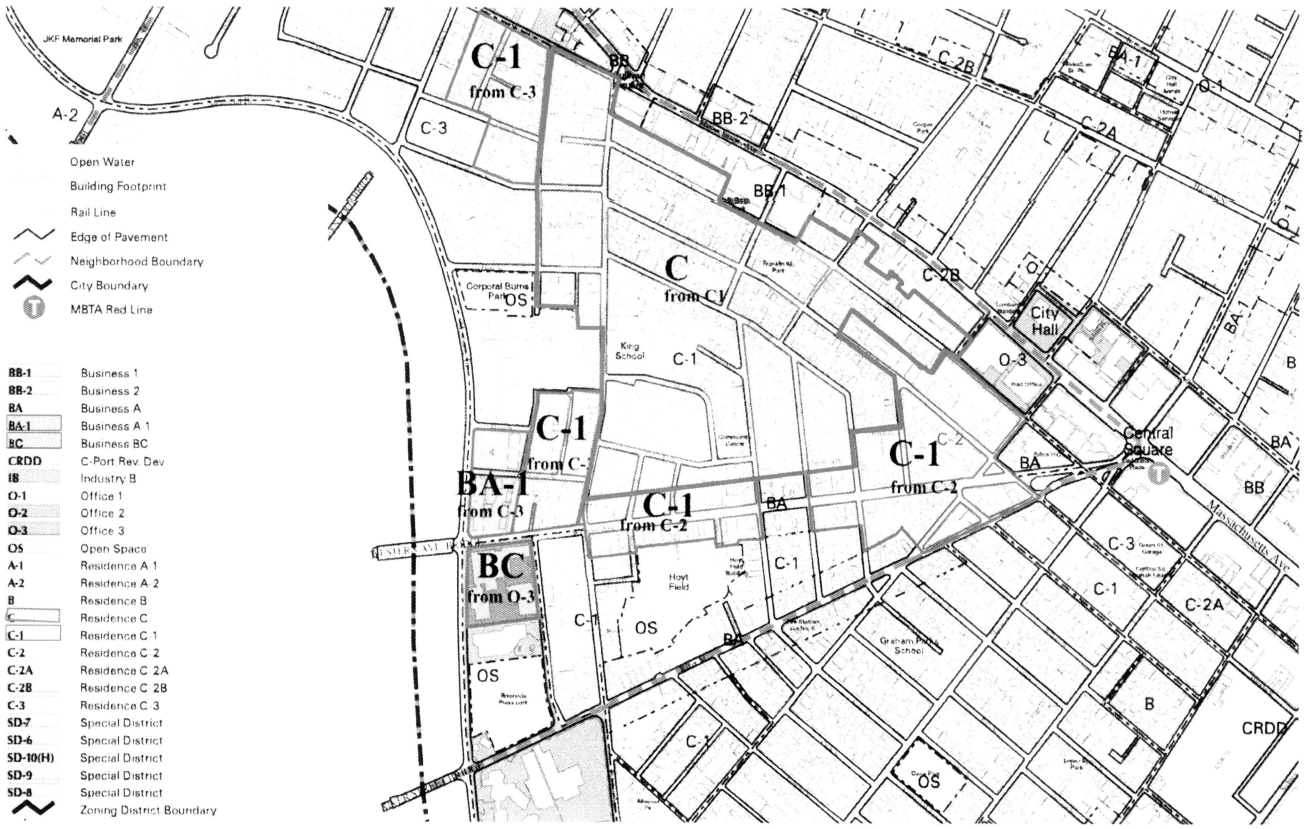


Figure D.1 Limited Growth Option

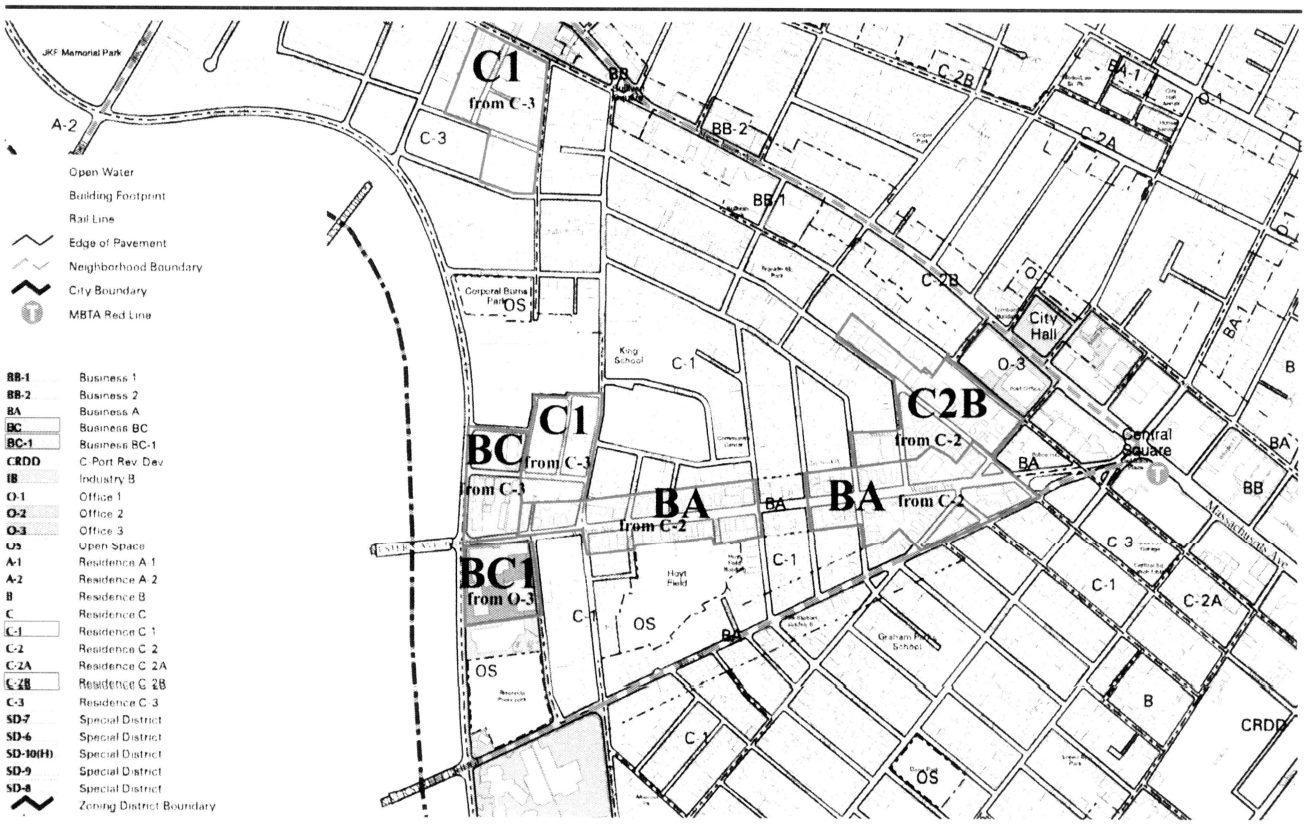


Figure D.2 Mixed Use Option

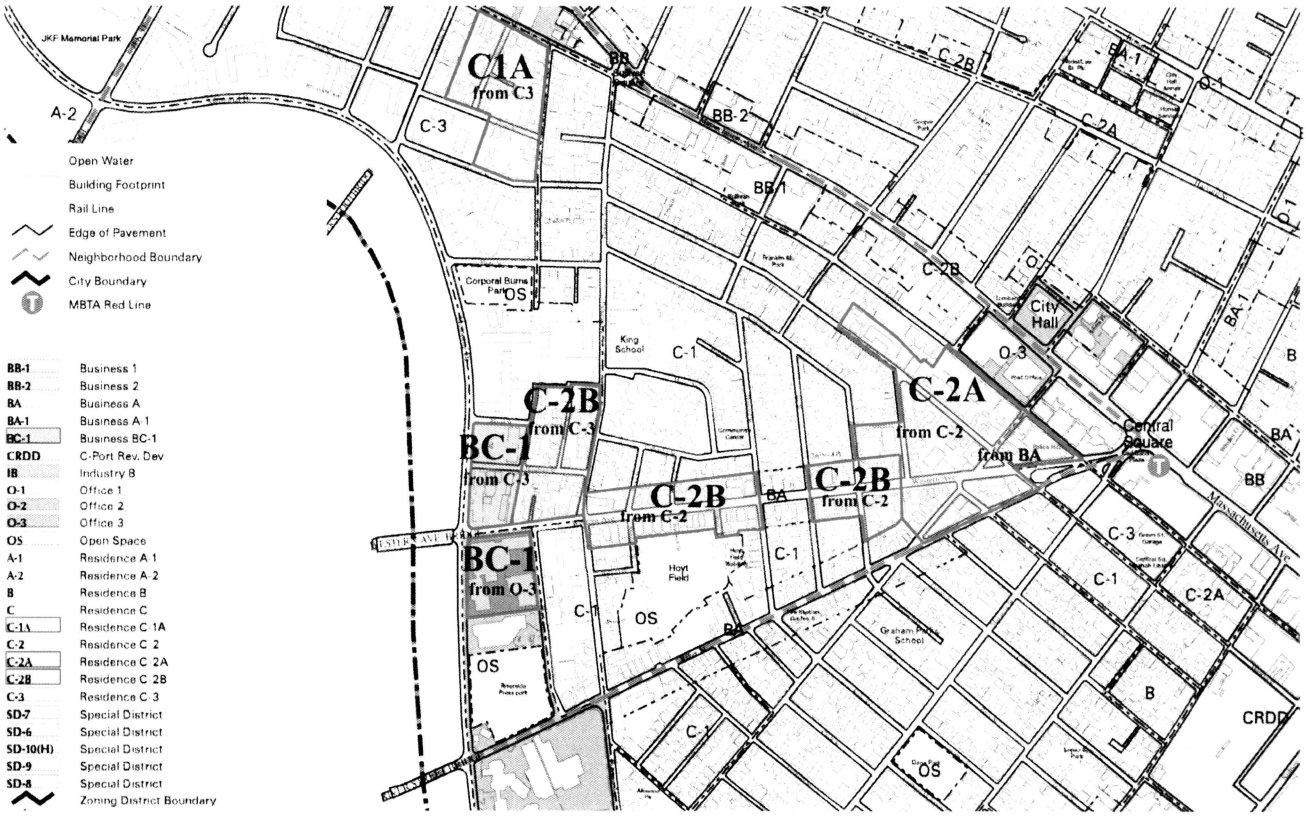


Figure D.3 Residential Incentive Option

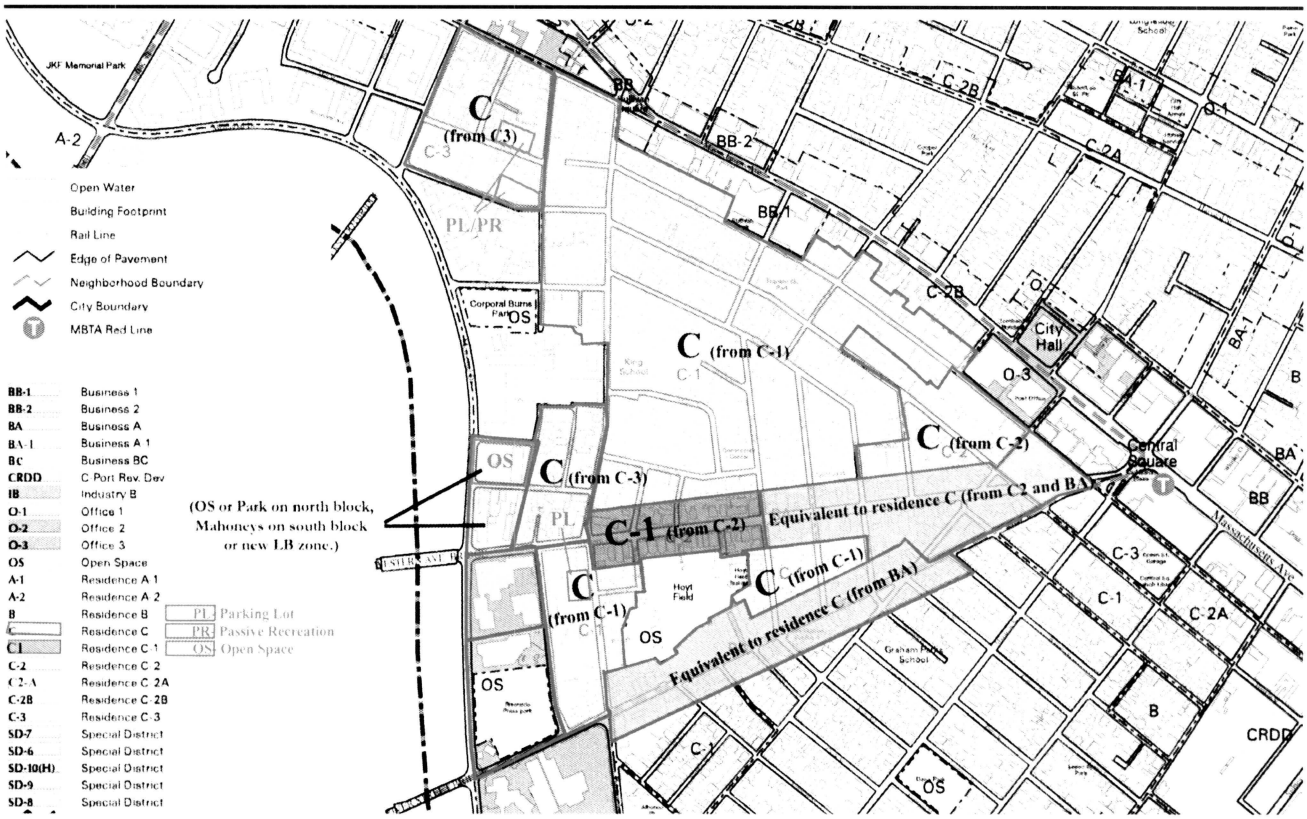


Figure D.4 Subcommittees' Option 1

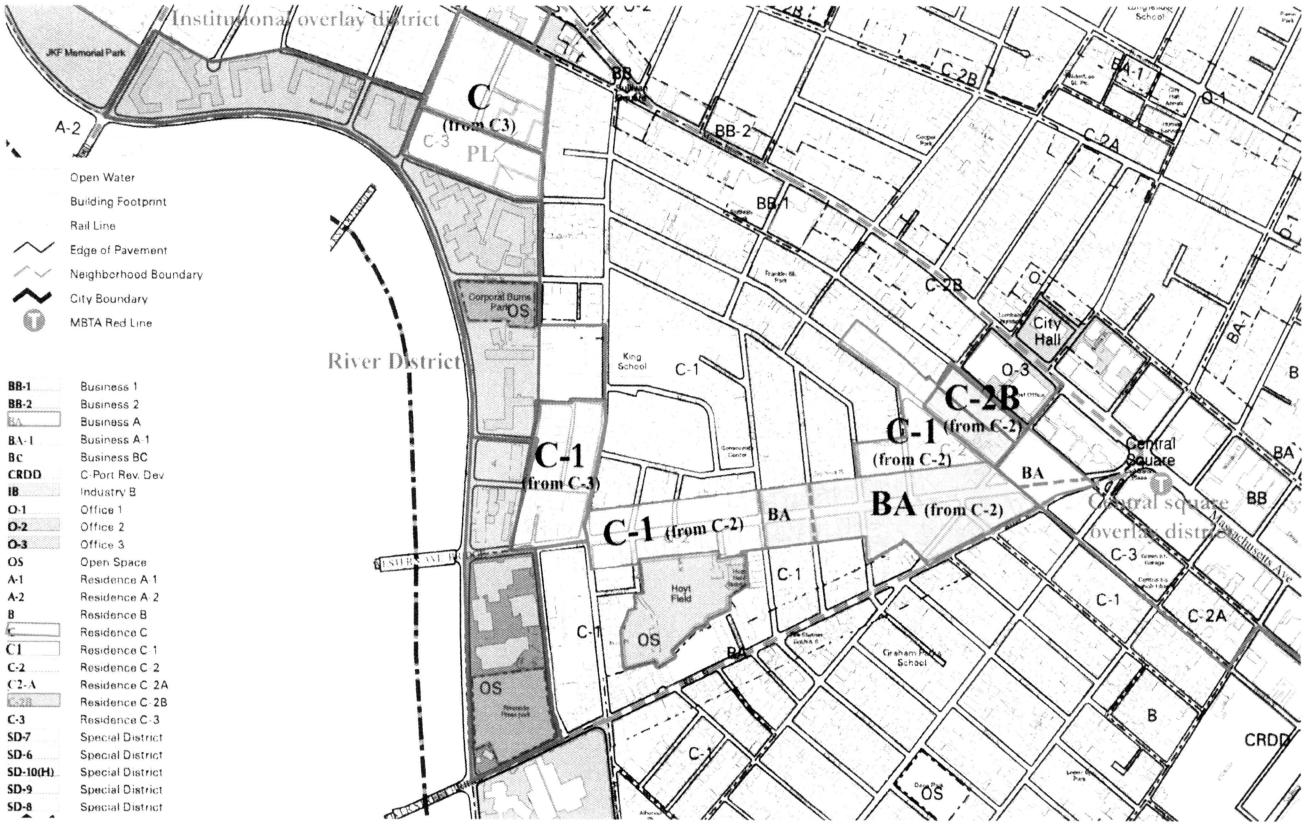


Figure D.5 Scenario A

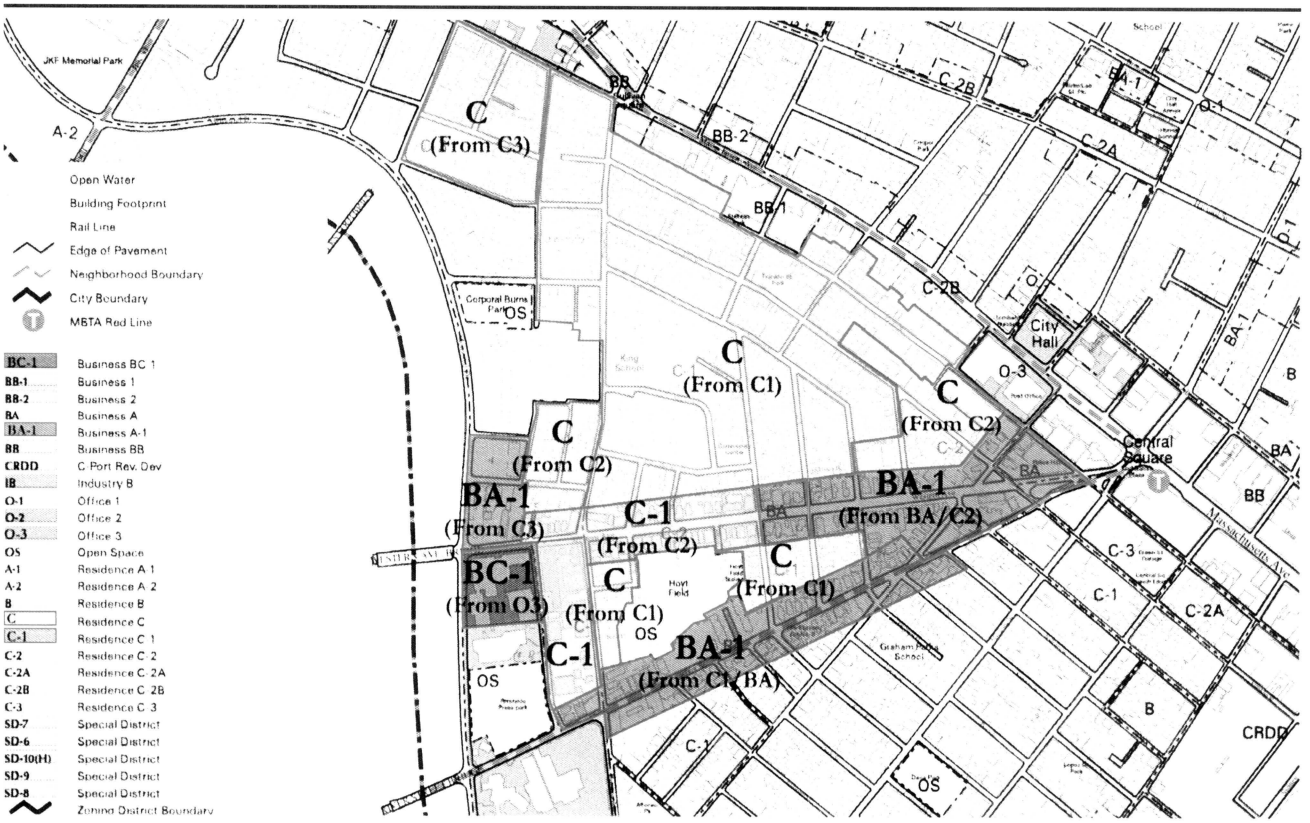


Figure D.6 Scenario B

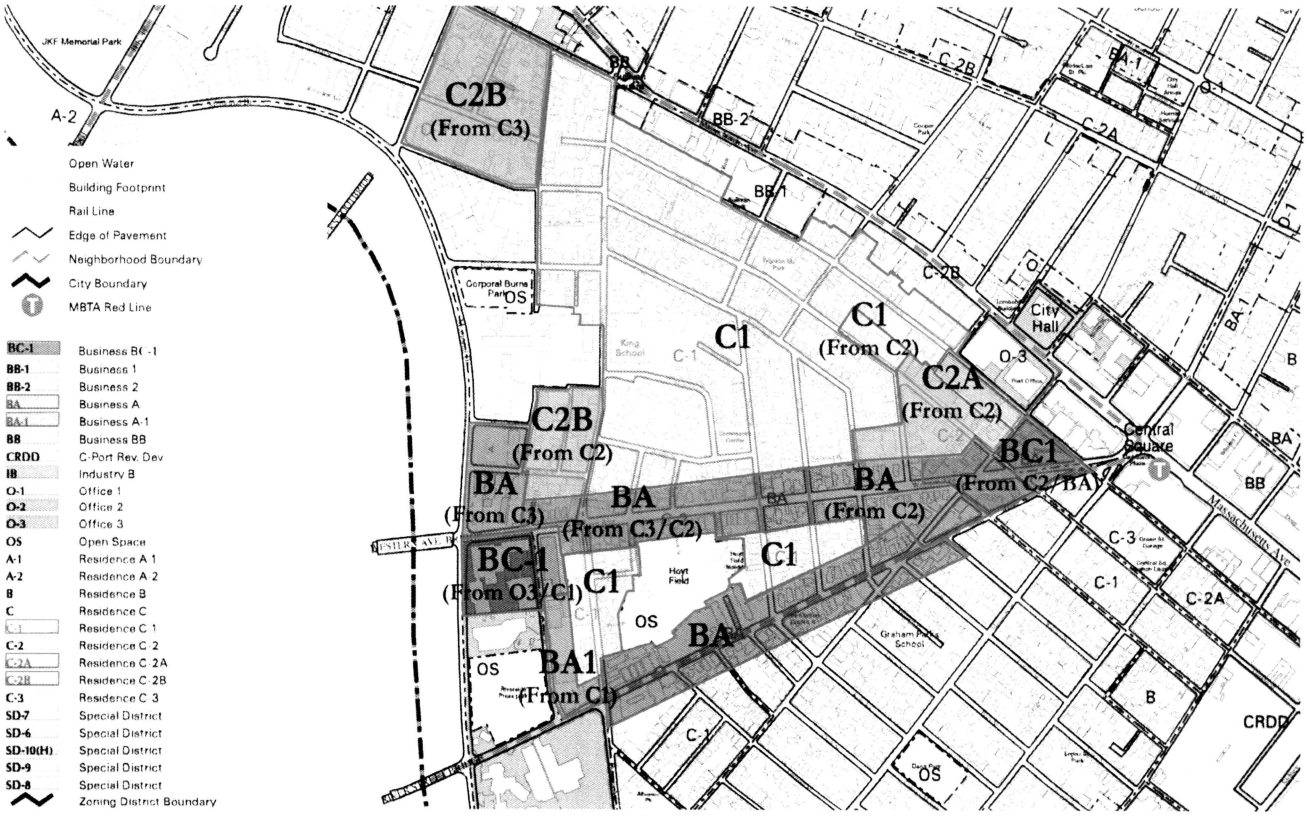


Figure D.7 Scenario C

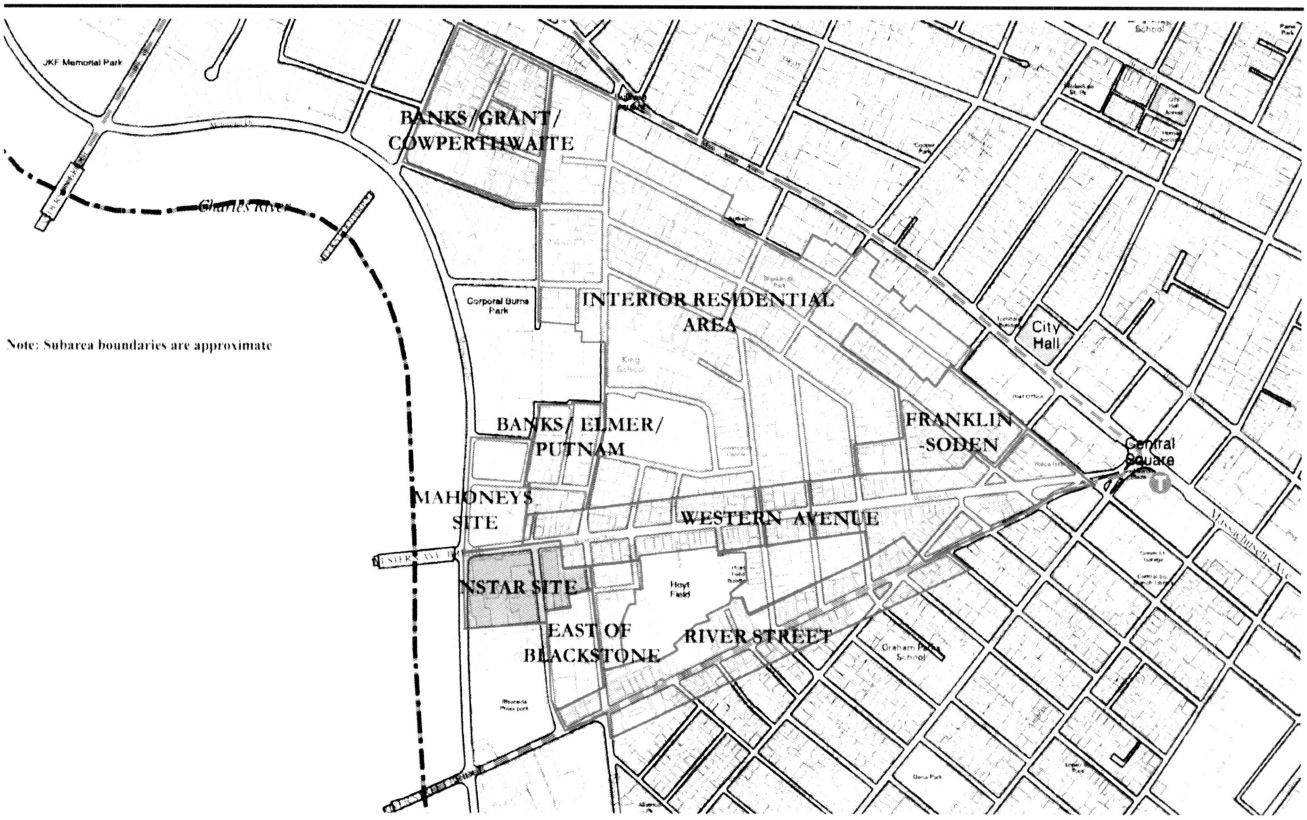


Figure D.8 Subareas Delineation

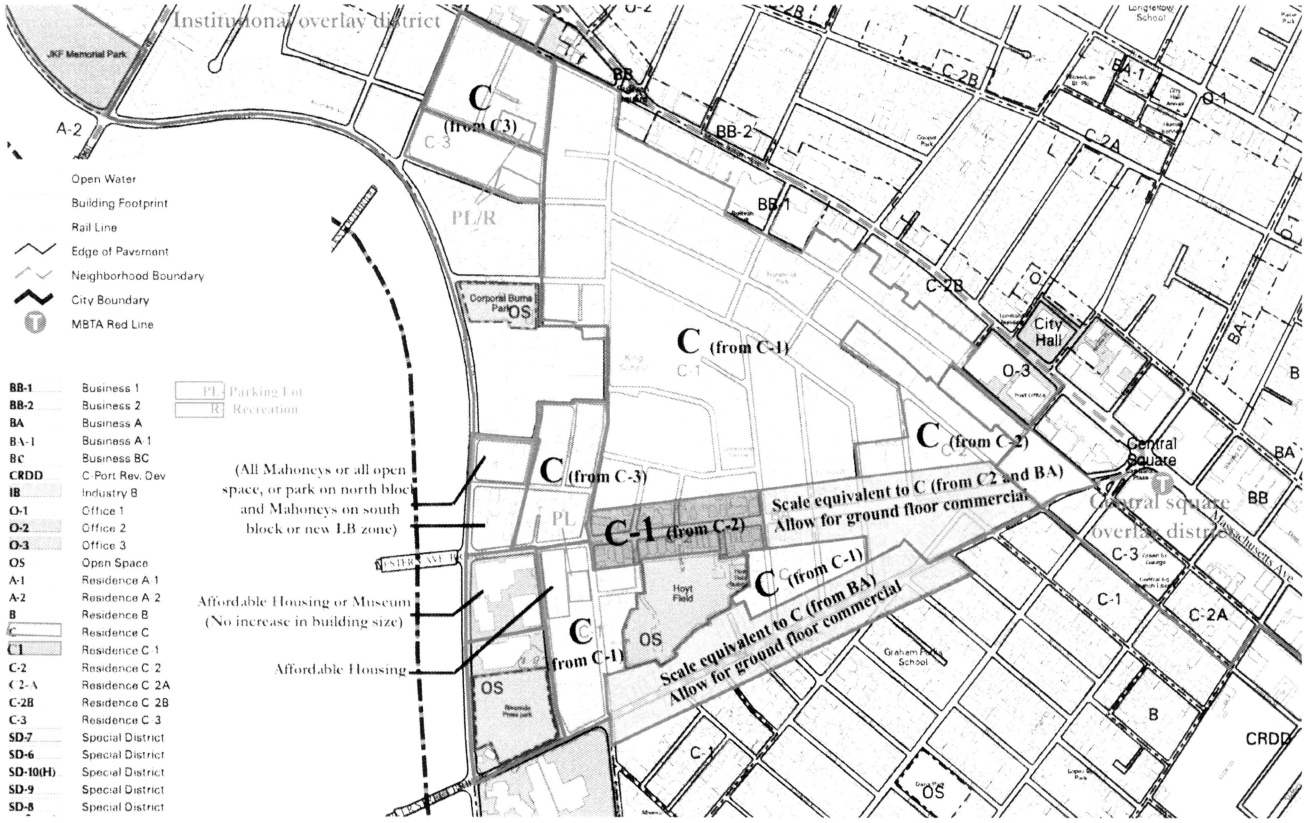


Figure D.9 Subcommittee's Option 2

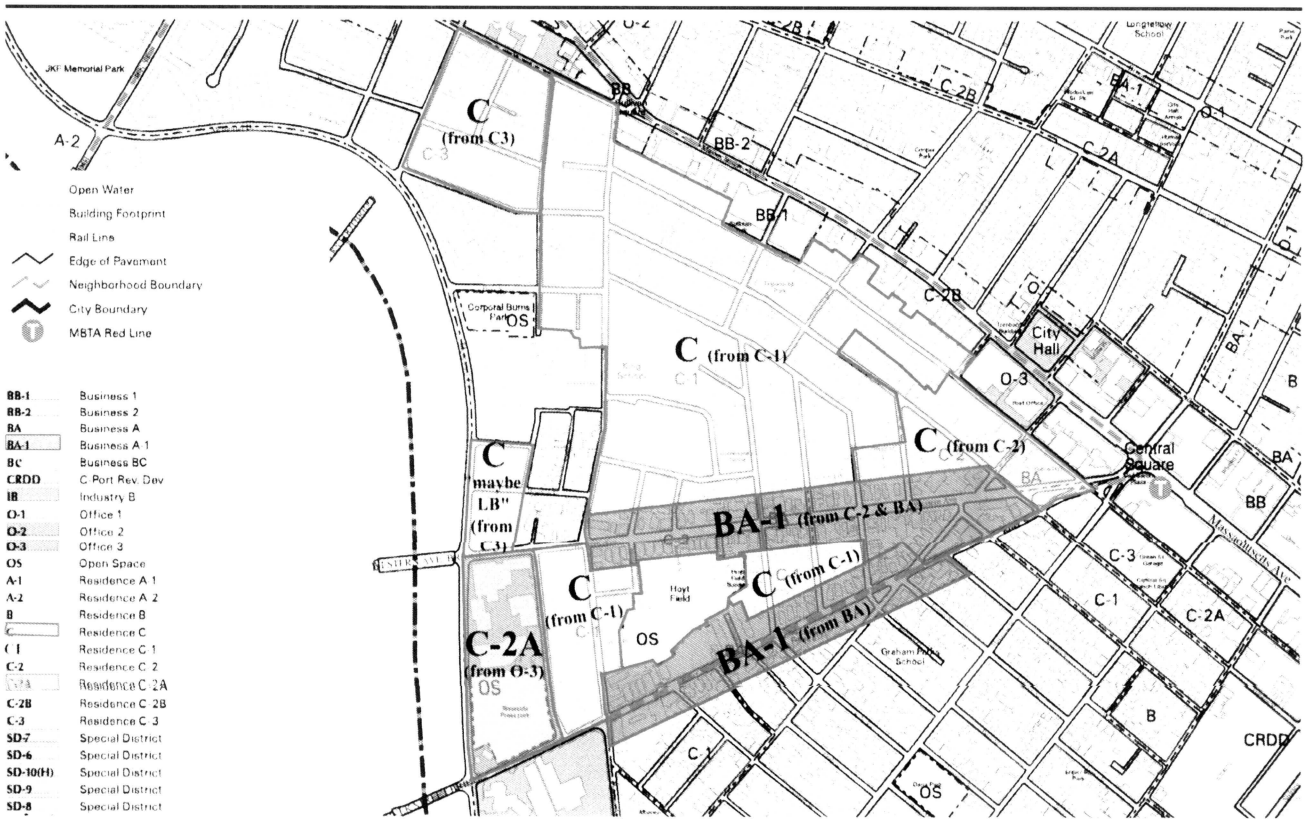


Figure D.10 Subcommittee's Option 3

APPENDIX E - OPPORTUNITIES AND CONSTRAINTS DIAGRAMS

The diagrams in Appendix E focus on the three special sites: (1) Mahoney Blocks; (2) NStar and (3) Banks, Grant, Athens, Mt. Auburn and Cowperthwaite streets. The diagrams were utilized at Committee meetings to stimulate discussion.

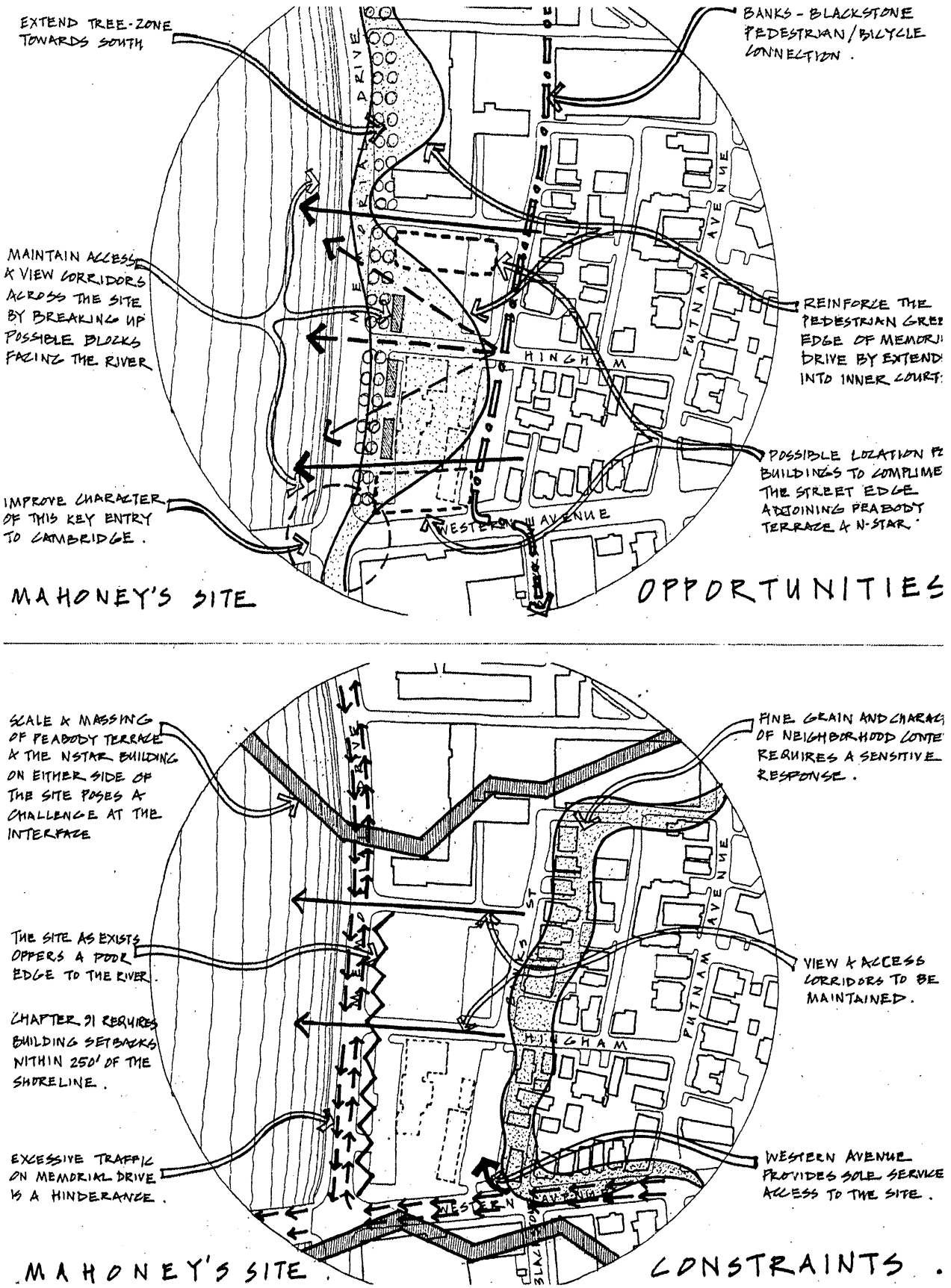


Figure E.1 Opportunities and Constraints for Mahoney Blocks

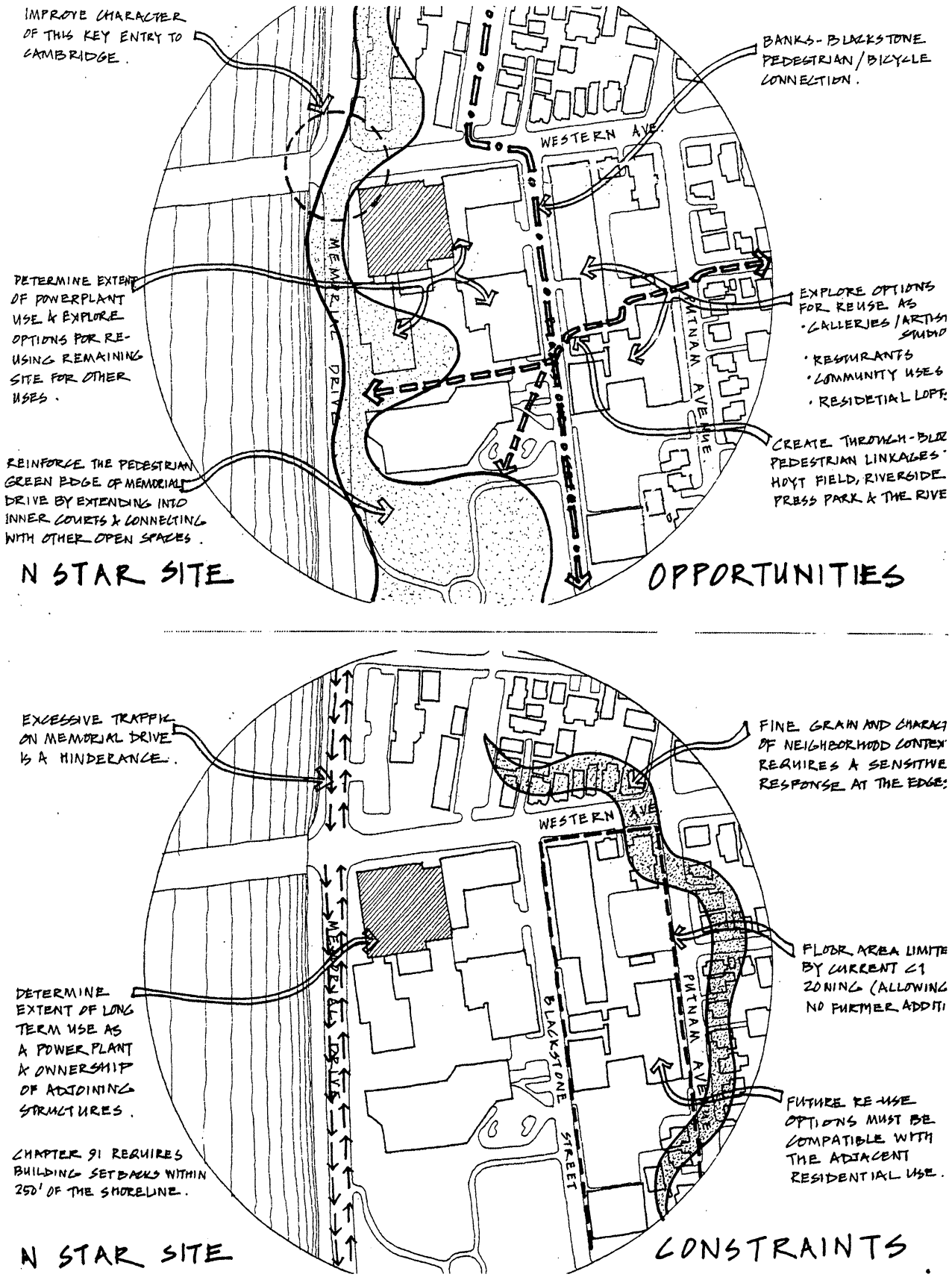


Figure E.2 Opportunities and Constraints for NStar site

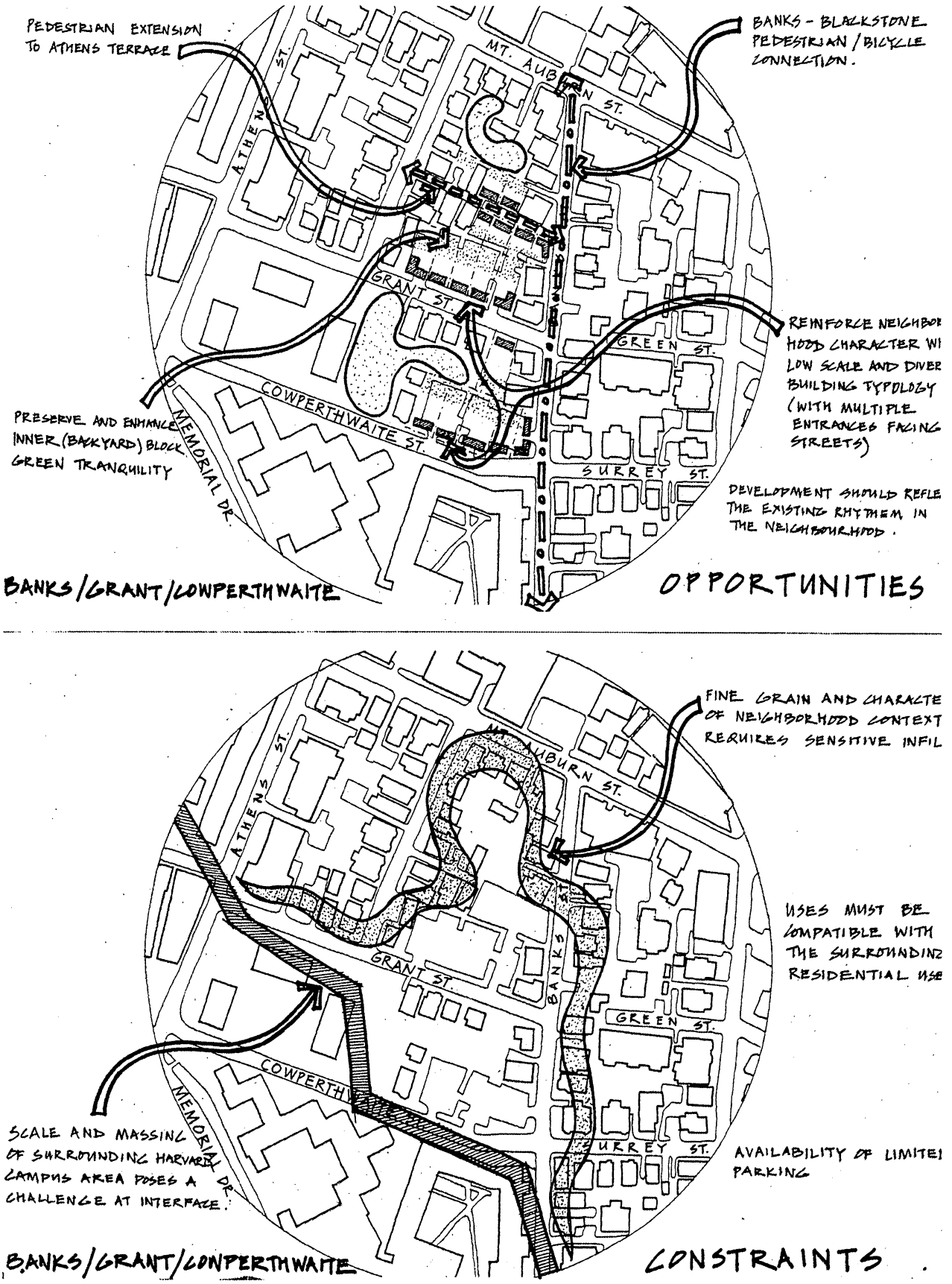


Figure E.3 Opportunities and Constraints for Banks, Grant, Athens, Mount Auburn and Couperthwaite site

APPENDIX F - ZONING OPTIONS

Appendix F includes illustrations for zoning options that were considered by the Committee. Illustrations for zoning districts recommended by the Committee appear in Chapter 2. Axonometric drawings and analogue photographs were used throughout the planning process to illustrate the types of development that could occur with the various zoning districts under discussion. The drawings and photographs present realistic (or even worst-case) scenarios, rather than what would be most desirable.

F.1 Area 1 - Mahoney Blocks

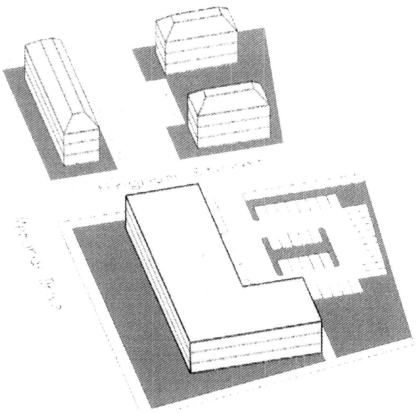


Figure F.1 C-1 (residential)



Figure F.1a C-1 analogue

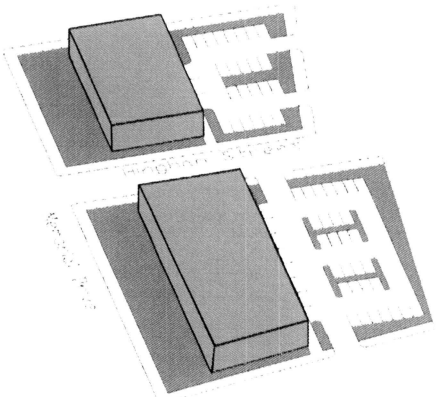


Figure F.2 LB (commercial)



Figure F.2a LB (commercial) analogue

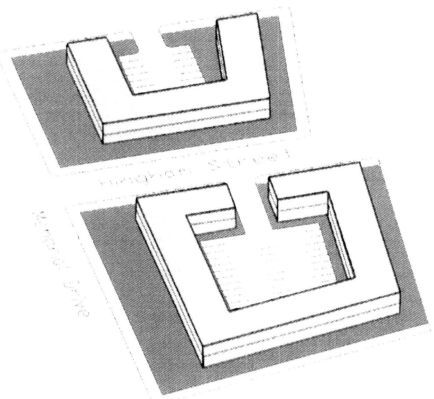


Figure F.3 LB (residential)



Figure F.3a LB (residential) analogue

F.1 Area 1 - Mahoney Blocks

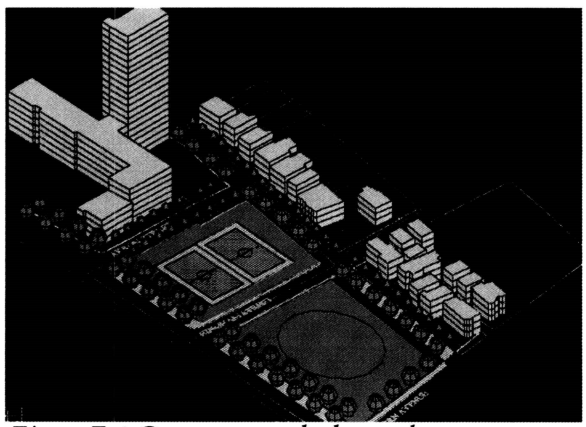


Figure F.4 Open space on both parcels



Figure F.4a Open space analogue

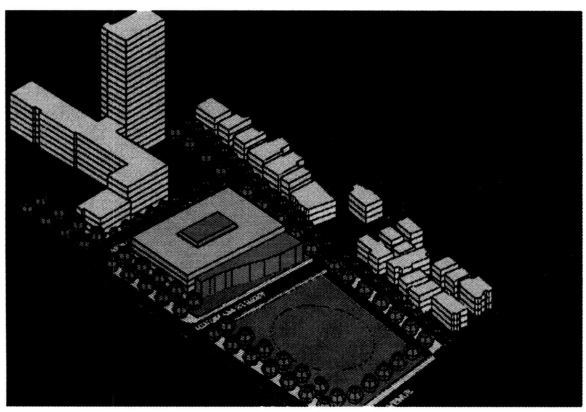


Figure F.5 Institution with open space

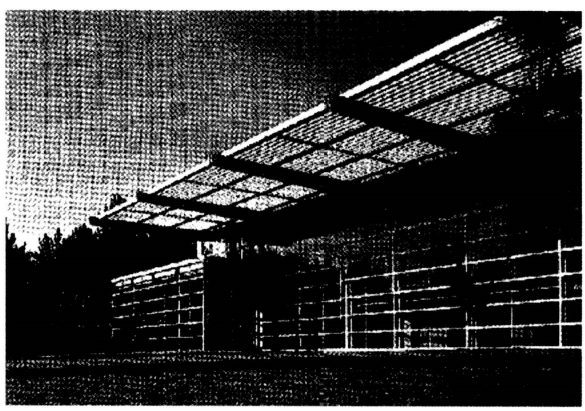


Figure F.5a Institution/open space analogue

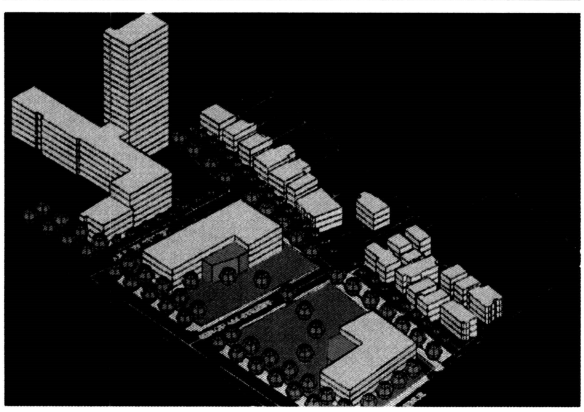


Figure F.6 Institution/open space on both parcels

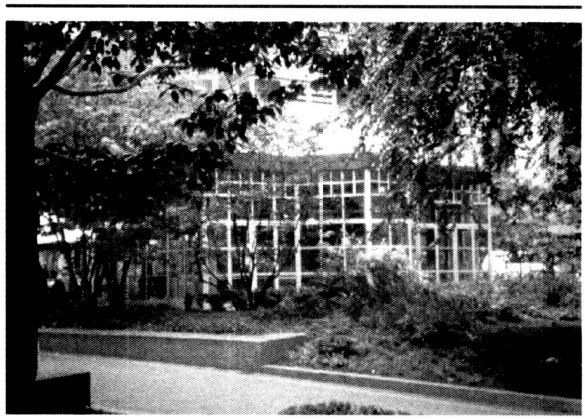


Figure F.6a Institution/open space analogue

F.1 Area 1 - Mahoney Blocks

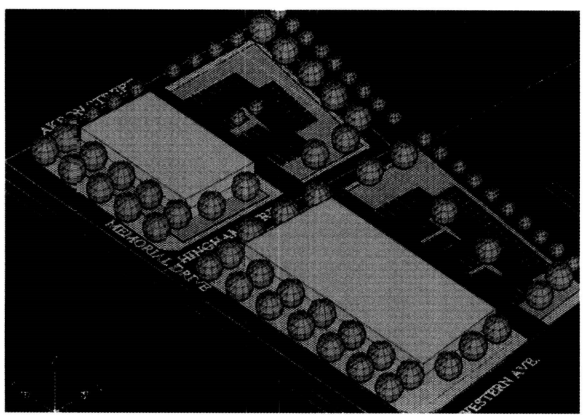


Figure F.7 BA-1, As-of-right (business)



Figure F.7a BA-1, As-of-right (business) analogue

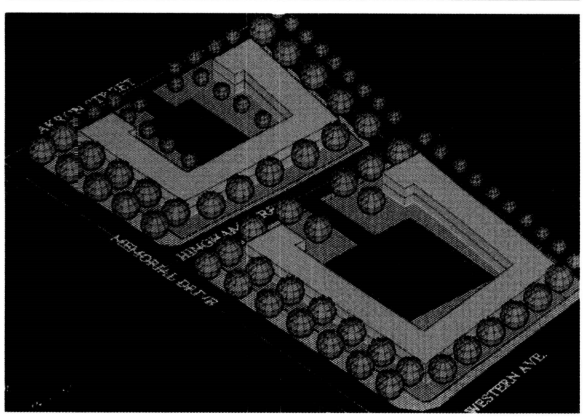


Figure F.8 BA-1, As-of-right (residential)



Figure F.8a BA-1, As-of-right (residential) analogue

F.1 Area 1 - Mahoney Blocks

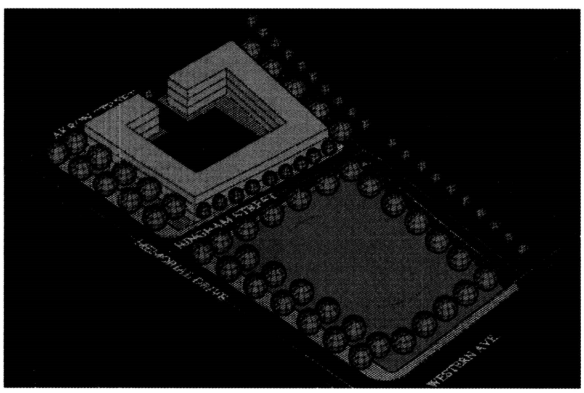


Figure F.9 BA-1, Special Permit (residential)



Figure F.9a BA-1, S. P. (residential) analogue

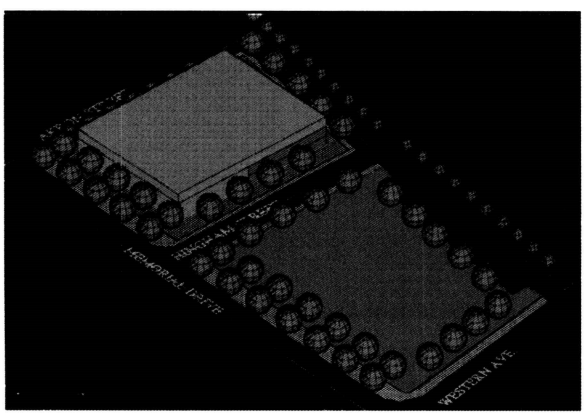


Figure F.10 BA-1, Special Permit (business-option1)



Figure F.10a BA-1, S.P. (business-option1) analogue

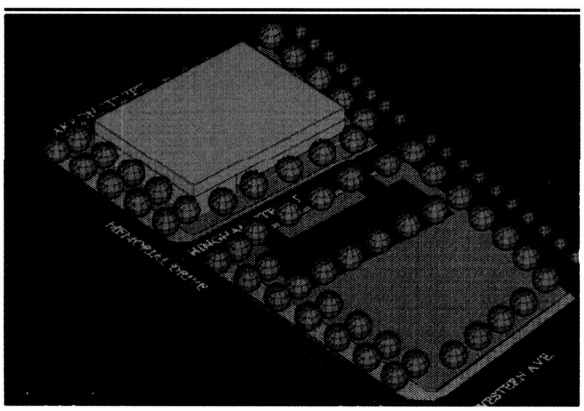


Figure F.11 BA-1, Special Permit (business-option 2)



Figure F.11a BA-1, S.P. (business-option 2) analogue

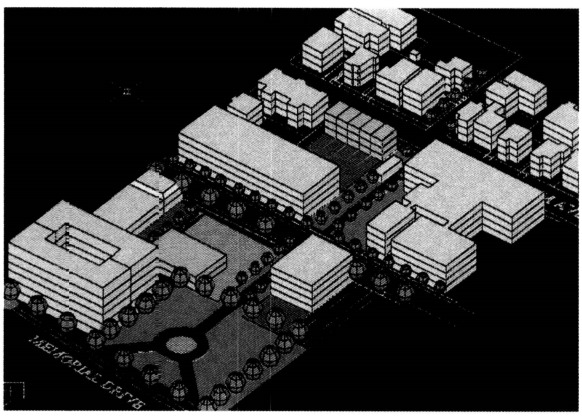


Figure F.12 Open Space/Mixed Use



Figure F.12a Open Space/Mixed Use analogue

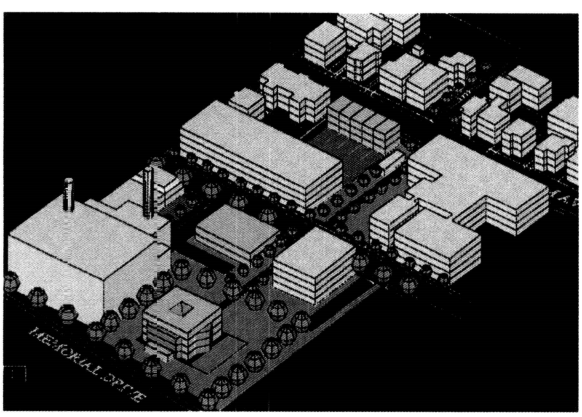


Figure F.13 Mixed Use



Figure F.13a Mixed Use analogue

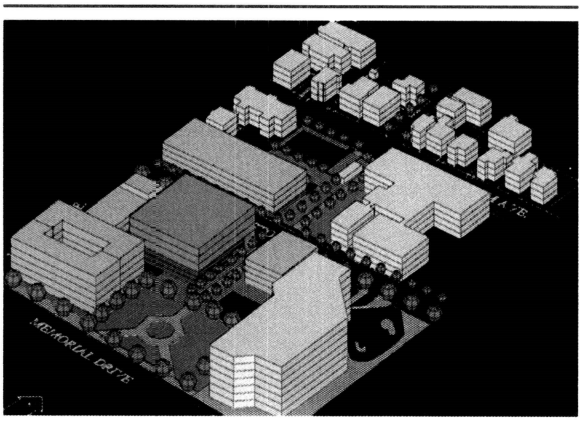


Figure F.14 Open Space/ Offices



Figure F.14a Open Space/Offices analogue

F.2.1 Areas 1 and 2 Combined - Mahoney and NStar Sites

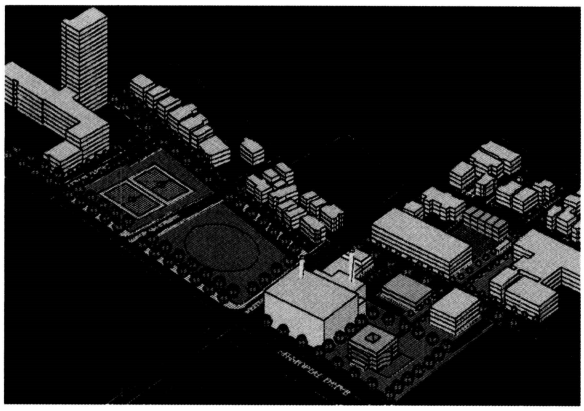


Figure F.15 Combined option 1

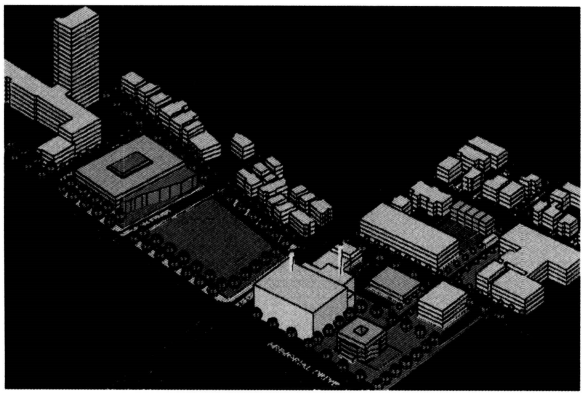


Figure F.16 Combined option 2

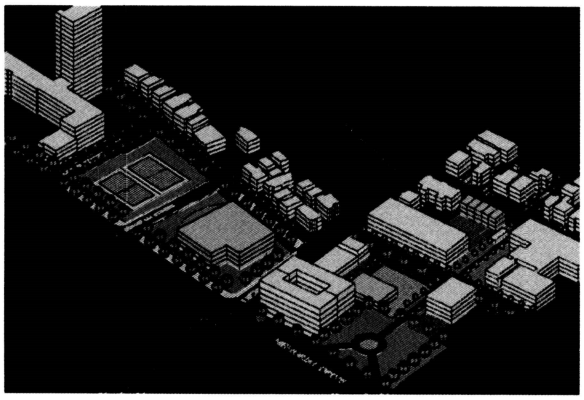


Figure F.17 Combined option 3

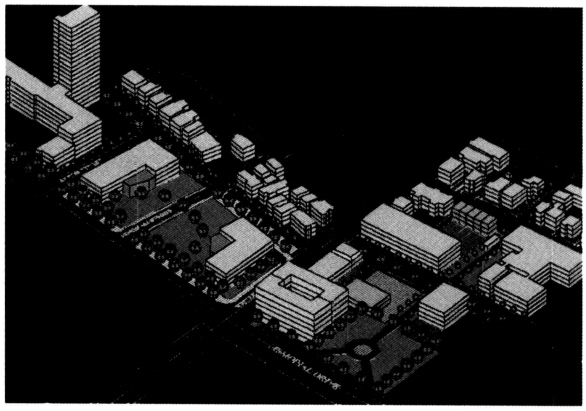


Figure F.18 Combined option 4

F.3 Area 3 - Western Avenue: Kinnaird, Green and Franklin Streets

Prior to the rezoning of the section of Western Avenue between Putnam and Howard streets as a result of the Qualls Harris Petition, the axons and analogues in F.4 were also applicable to Western Avenue.

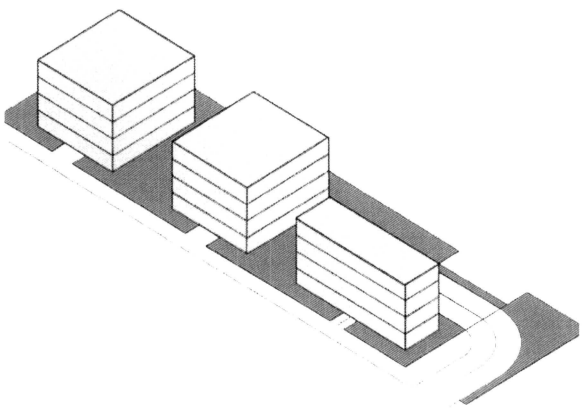


Figure F.19 C-2B (residential on YMCA Site)

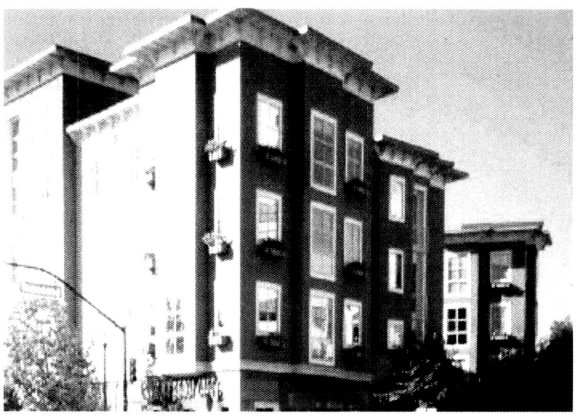


Figure F.9a C-2B (residential) analogue

F.4 Area 4 - River Street and a portion of Western Avenue

These axonometric drawings and analogue photographs were prepared for discussions of potential zoning changes on Western Avenue. They led, however, to the evolution of the NB district, which is recommended primarily for River Street

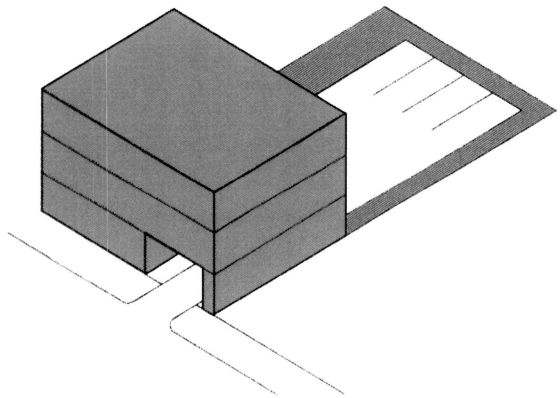


Figure F.20 BA (commercial)



Figure F.20 BA (commercial) analogue

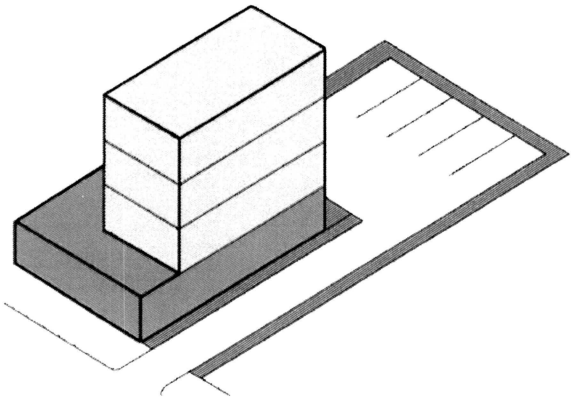


Figure F.21 BA (mixed use)



Figure F.21 BA (mixed use) analogue

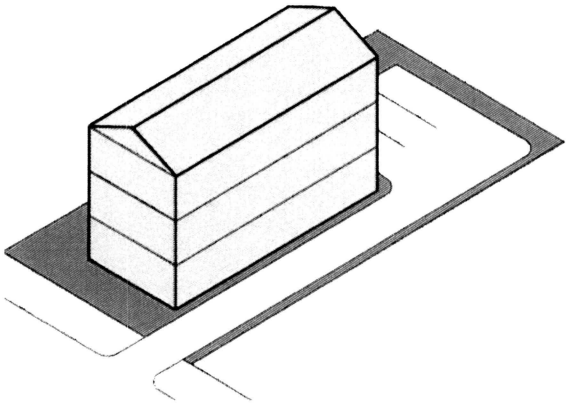


Figure F.22 BA (residential)



Figure F.22 BA (residential) analogue

F.5 Area 5 - Putnam and Western Avenues, Banks, Elmer and Hingham Streets

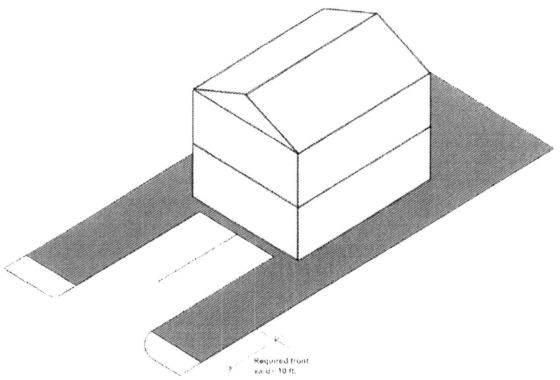


Figure F.23 C-1 (40' x 80' lot)



Figure F.23a C-1 analogue

F.6 Area 6 - Banks, Grant, Athens, Mt. Auburn and Cowperthwaite Streets

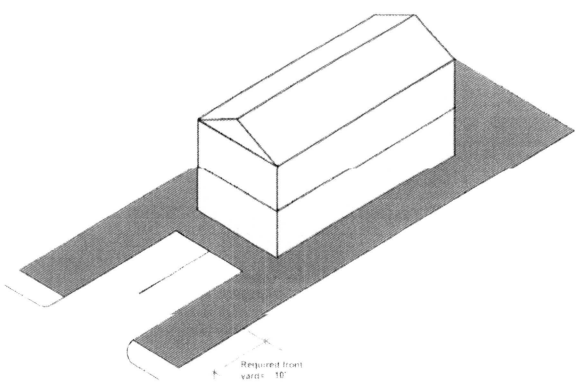


Figure F.24 C-1 (40' x 100' lot)



Figure F.24a C-1 analogue

APPENDIX G - RIVERSIDE COMMITTEE RECOMMENDATIONS; DISCUSSION OF PLANNING ISSUES

Area 1 - Mahoney Blocks
Proposed: Special Residence C-X District

Existing Zoning District. The blocks are currently zoned Residence C-3. It is a high density multifamily district that allows housing and institutional uses. Commercial uses are not permitted. An FAR of 3.0 and a height of 120 feet (potentially modified by state tidelands restrictions) are allowed. Yards by formula are required. The Residence C-3 District has been traditionally the university campus district and is the district that regulates development at the core of the Harvard and MIT campuses. The blocks have been zoned C-3 since 1943. (n.b. Wherever reference is made in this document to zoning districts, it should be understood that the regulations applicable in the past may be different from those applicable today, although the district name has not changed.)

Chapter 40A (state law governing local zoning authority) does not allow Cambridge to prohibit university or other institutional uses in a Residence C-3 district (See attached Regulation of University Uses flow chart to understand how Cambridge does regulate those uses). However, Cambridge has created eight Institutional Overlay Districts to regulate institutions within the limits imposed by Chapter 40A. The Mahoney Blocks are not within any of those Overlay Districts . The nearest is the Harvard, Radcliffe, Lesley *Institutional Overlay District.* Its boundary encompasses the River Houses and Peabody Terrace portions of the Harvard campus but stops at Akron Street. The fact that the Mahoney Blocks are not within the Institutional Overlay District indicates that at the time of the establishment of the District (1981), the Mahoney Blocks were not, as they are not now, in active institutional use. At the same time, the fact that the Blocks are designated Residence C-3 allows institutional or university uses on them, subject only to the dimensional limits imposed by the district.

Existing Development Character. The site is entirely owned by Harvard University. It is currently occupied by a retail nursery and garden center and has been so used for decades. The current use is non conforming in the district. Only a few small buildings exist on the southern parcel, with the tallest probably no higher than 20-25 feet. The FAR is probably no greater than 0.10 on that block. Some parking unrelated to the nursery use occurs on the eastern edge of the southern parcel.

The Blocks are surrounded by an urban environments having quite varied urban character. Therefore, an appropriate development policy direction for this site may not be immediately self-evident. To the north is Peabody Terrace, a housing complex for mar-

ried Harvard Graduate students, which in scale and form is typical of the kind of development the Residence C-3 district was meant to permit before a height limit was imposed in 1997. The tallest structures are 180 feet or more in height but the complex is only about half as dense (in terms of allowed Gross Floor Area) as the Residence C-3 district allows.

To the west the blocks are open to Memorial Drive, the riverfront greenway and the river itself.

To the south is a dense complex of industrial buildings of some architectural interest. Their scale is generally fairly modest with the exception of the power plant itself, which is about 70 feet in height; other buildings are in the 35-45 foot range. Existing FAR is about 1.20.

To the east is a neighborhood of wood frame three story residential buildings, fairly typical of the residential Riverside neighborhood generally, if somewhat more densely built up. While not higher than 35 feet with one exception, the residences have an average FAR of perhaps 1.0

Proposed District. The Committee has chosen the residential neighborhood to the east as the starting point for formulating its recommendation. The new district (Special Residence C-X District) is meant to serve the following objectives:

- Residential development at a low density (both as to height and FAR)
- Increased amount of open space to maintain the current sense of openness between the existing neighborhood and the river (through low FAR and building height, but also through a high open space requirement and extra wide yards).
- Prohibition of dormitories (and other intensive institutional uses). Such a prohibition is only possible if the district is residential with a dwelling density of one unit per 1,200 square feet or more of lot area (the criteria established by the General Court by which Cambridge can regulate institutional uses in residential neighborhoods).

The Committee recommends a variation of the current Residence C district, with an FAR of 0.6, a height of 20-24 feet, and 20 foot setbacks for all yards. Single, two-family, multifamily and townhouse development is permitted. Thirty percent of the site must be at grade Green Area Open Space.

The Committee's preferred use for both blocks is as a public park. Recognizing that goal cannot be achieved through zoning, the Committee included certain special permit provisions in the proposed zoning to entice a private property owner through development incentives to partially fulfill that objective. By special permit the new district allows an FAR of 1.0, a height of 35 feet, reduction of yard requirements to zero in most cases, and allows transfer of development potential from the Western Avenue block to the block abutting Peabody Terrace. Such additional benefits are only allowed if the south block is devoted almost exclusively to open space accessible to the general public.

Alternatives Considered. A number of alternate zoning schemes were examined and in the end rejected.

Harvard University presented the details of the proposed museum use: one building on each block, connected underground across Hingham Street. The proposed project has an FAR of less than 2.0, a height of fifty-five feet, at-grade landscaped setbacks of forty feet around all sides of the buildings, constituting about 50% of the area of the Blocks. The parking is underground. The majority of the Committee considered the proposal too dense although some members did not object to the use itself.

Alternate massing sketches were also presented by the University illustrating possible housing development of the Blocks at FAR densities ranging down from 3.0 to ca. 1.75. The majority of Committee members rejected such schemes based on the height and scale of the illustrated development.

The Committee also considered variations on the recommended special district that would have allowed retail use in addition to housing. However, any non-residential district would automatically have to allow university uses and dormitories by state law. The dormitory possibility was not acceptable to most Committee members. On the other hand retail uses of the right kind (i.e. small in scale and serving the neighborhood or users of the riverfront) were generally thought to be appropriate. Nevertheless, in the end, the decision was not to open the door to dormitory use or large scale retail operations (e.g. Osco Drug) or other inappropriate retail activity no matter what its scale.

Applicability of Growth Policies. The Growth Policies identified by the Planning Board as having some relevance to this proposal are discussed below.

Land Use Policy 5 suggests that institutional expansion should be limited to existing areas of institutional use or suitable abutting areas identified as appropriate as indicated by inclusion within an Institutional Overlay District. These blocks have been owned by Harvard University for decades and have been zoned C-3, which in part has played a role in the zoning ordinance as a campus zone, for forty years or more. They have been in retail use for a similar length of time (excluding the parking lot on Western Avenue). The site was excluded from the adjacent Institutional Overlay District adopted in 1981, indicating that the city anticipated high density housing (e.g. 808 Memorial Drive) at this site.

Land Use Policy 6 suggests that densities allowed on the central campuses of the universities should be sufficient to accommodate needed expansion and thus not encourage expansion of academic activities into new territory in neighborhoods and commercial districts. Recent citywide rezoning efforts have generally eschewed changes to the Residence C-3 district's regulations (establishment of a height limit being the only recent exception) for this very reason. Considerable infill has been occurring on both the Harvard University and MIT campuses consistent with the policy objective. On the other hand, large areas of the two campuses constitute cultural and environmental amenities of both local and national significance that cannot be maintained with unrestricted building expansion. The Mahoney Blocks present the competing policy options fairly clearly. In the end the Committee recommendation asserts that the campus should stop at Akron Street and that development on these blocks should be more clearly a part of the community at large in use, form and spirit.

Institutional Policy 53 addresses the loss of tax revenue through conversion of tax paying property to tax exempt uses. The Blocks' current tax liability is probably rather modest given the limited activity now on the site. Luxury housing construction within the limits of the Residence C-3 district would clearly dramatically increase revenue to the city. Lowering the density of permitted tax-paying uses would likely reduce that revenue stream somewhat. Conversion to academic use would take the property off the tax rolls.

Urban Design Policy 59 urges that land use and zoning regulations reflect the city's urban design and environmental objectives. The purpose of this rezoning exercise is to define those objectives for this specific location in 2002, sixty years following the previous choice. Discussion above suggests that several, widely varying urban design visions are possible at this location. Each has merit but with quite different physical implications.

Urban Design Policy 62 addresses the need to provide adequate transitions between differing scales and kinds of development. The Mahoney Blocks provide a textbook example of a complex urban environment where many considerations come into play when establishing the appropriate regulatory formula for future development. The Committee has chosen to treat some past development (e.g. Peabody Terrace) as an aberration not to be transitioned from. Its choice is made to protect the existing older residential neighborhood by extending and completing it with building forms of similar use, height and design.

Open Space Policy 69 identifies private open space as a valuable asset to the city as a whole, whether it is accessible or not, and urges its protection. It also suggests that active public use of such spaces should be encouraged where possible. The policy grows out of an appreciation of features such as the visually and sometimes physically accessible lawns and gardens of the Harvard River Houses, Harvard Yard, and Holyoke Plaza in Harvard Square as well as the accumulated leafy back yards found on the interior of many residential blocks in the city. That policy idea might be extended here to include the open, landscaped feeling that is inherent in the operation of a garden center like Mahoney's. Implied in the statement is a caution that the value of open space is not always in its immediate physical accessibility and that, as alluded to above, increased construction on campus sites carries with it a significant cost in the loss of such open space amenities. It also suggests that leveraging private development to secure publicly accessible open space should be considered wherever feasible. This policy, in this particular context, suggests the need to look at any proposal on the Mahoney Blocks in a much wider context while focusing in on the very small details of the regulations being proposed.

Previous Planning Initiatives. In the mid 1980s, the Planning Board expressed concern about the scale of development allowed in the Residence C-3 district as it might be played out on these Blocks. At the time the district was even more permissive as development was then not subject to any height limit. The Board advanced a proposal to rezone the blocks to a Residence C-2A district designation (FAR of 2.5 and a height of 60 feet) but no final action was taken.

The Citywide Growth Management Advisory Committee selected this Area 1 and the adjacent Area 5 for review with an eye toward adjustments in zoning appropriate to achieving an adequate transition between the existing neighborhood environment and the potential scale of development allowed in the Residence C-3 district on the Mahoney Blocks.

The Riverside Neighborhood Study also identified the need for review of the zoning applicable to this corner of the neighborhood.

Area 2 - NStar Site
Proposed: Special Residence C-Y District

Existing Zoning District. The site is currently zoned Office 3. This is a high density office and multifamily district that allows general office and research and development uses in addition to housing and institutional activities. Retail uses are not permitted (nor is the power plant, which is not a allowed use anywhere in the city). An FAR of 3.0 for housing and 2.0 for office uses applies, with a height of 120 feet (potentially modified by state tidelands restrictions) for residential uses and 90 feet for all others. Yards by formula are required. The site was zoned high density business in 1943, rezoned to high density office in 1961. The Office-3 designation was created in the mid 1970s when the Zoning Ordinance established a series of

three office districts from what had previously been a single district.

The site is not located within any Institutional Overlay District.

Existing Development Character. The site is densely built up with a functioning steam generating power plant and ancillary buildings that have served the utility function in the past. Some of the ancillary buildings are not actively used now and most of them are no longer needed to service the power plant. The current power generation use is non conforming. Most buildings are likely nonconforming as to setbacks, which are determined by formula, because they are at or close to the property line. The FAR of existing buildings is around 1.20.

The site abuts Area 1 to the north. To the east, other ancillary NStar industrial buildings are present in the Blackstone Block. That entire block was recently rezoned from Office 3 to Residence C-1. To the south is the 1970s vintage Technology Center office building, with a height of about 70 feet. To the west, the site is open to Memorial Drive, the riverfront greenway and the river.

Many of the buildings on the site have architectural merit or historical interest.

Proposed District. The Committee has recommended a new district (Special Residence C-Y District) meant to serve the following objectives:

· Residential development at a low density (both as to height and FAR) should existing structures be demolished or at a higher density through the conversion of those existing non-residential buildings to housing.
· Prohibition of dormitories (and other intensive institutional uses), which can only be accomplished if the district is low density residential. The district has the same dimensional and use characteristics of the proposed zoning for Area 1 without any of the special permit options: an FAR of 0.6, a height of 20-24 feet, and 20 foot setbacks for all yards. Single, two-family, multifamily and townhouse development is permitted. Thirty percent of the site must be at grade Green Area Open Space.

Alternatives Considered. A number of alternate zoning schemes were examined by the Committee.

Alternate approaches were considered that would have allowed higher density and greater height on portions of the site (FAR of 2.0, height of 85 feet). Those options were intended to encourage partial redevelopment of the site to secure open space on it, and public access through it, from Blackstone Street to the river. As in Area 1 there was also an interest in allowing limited retail activity to serve both the neighborhood and people out for a stroll along the river promenades.

Again as in Area 1, potential dormitory use was of concern. Because any non-residential district must allow university functions and dormitories, a non-residential district was unacceptable to most Committee members. The Committee was also not strongly in favor of more development on the site but was generally in favor of residential reuse of the existing buildings.

There was considerable early discussion of the possibility of building out the University museum program, proposed for the Mahoney Blocks, on this site through conversion of existing buildings. The feasibility of such a reuse (or any other reuse) may be constrained by the continued operation of the steam power plant, the steam from which is needed by the University.

Applicability of Growth Policies. The Growth Policies having some relevance to this proposal are discussed below.

Land Use Policy 5 suggests that institutional expansion should be limited to existing areas of institutional use or suitable abutting areas identified as appropriate by inclusion within an Institutional Overlay District. This site is not within an Overlay District nor adjacent to any university campus. The Committee did explore possible university museum use on this site but strongly objected to dormitories.

Land Use Policies 9 and 10 speak to creative reuse of older industrial districts with the encouragement of mixed use and a significant component of housing. Land Use Policy 12 encourages the preservation of the city's historic resources. The recommended zoning encourages preservation of the historic buildings (as they are already more dense than the new district would allow) and their reuse to housing (particularly through special provisions recently adopted that ease the conversion of industrial buildings to housing). It does exclude, however, the option of a wider range of commercial uses. Land Use Policy 8 relates the density of development to the availability of transit service. This site, now zoned as one of the highest density mixed use districts in the city, is poorly served by bus or other non-auto transportation services. The rezoning would significantly lower the overlay density of development permitted and prohibit the highest traffic generating uses (i.e. office and retail activities) from this car-dependent location.

Urban Design Policy 59 urges that land use and zoning regulations reflect the city's urban design and environmental objectives. Again this rezoning exercise is an attempt to define what those objectives should be at this specific location in 2002, sixty years after high density development was anticipated at this site. The recommended zoning provides powerful incentives to retain the existing buildings and reuse them for housing (or their continued use for the activities now present in them).

Urban Design Policy 62 addresses the need to provide adequate transitions between differing scales and kinds of development. With the preservation of the existing building pattern on the site, the existing building relationships with its neighbors are retained. The Office 3 district would allow substantial redevelopment of the site (perhaps subject to Historical Commission review) and the construction of buildings as tall as 120 feet, or twelve residential stories. Suitable transitions would be more difficult to achieve in those circumstances.

Open Space Policy 69 identifies private open space, whether accessible or not, as a valuable amenity to the city and urges its protection. There is no such open space on this site currently, although there are open areas for parking and circulation. However, the establishment of public pedestrian connections through this site to the river and the establishment of publicly accessible open space and plazas within the existing building complex were considered desirable by the Committee; the proposed zoning, however, does not provide any incentive to make that happen.

Previous Planning Initiatives. Changes adopted through the Citywide Rezoning Petition reduced the density of non-residential development in the Office 3 district from 3.0 to 2.0 and the height permitted for non residential buildings from 120 feet to 90 feet.

Area 3 - Western, Kinnaird, Green, and Franklin
Proposed: Residence C-1 District

Existing Zoning District. Area 3 is currently zoned Residence C-2. This is a medium density multifamily residential district that allows all forms of housing and institutional uses. An FAR of 1.75 is permitted with a

height of 85. Yards by formula are required. Area 3 has been so zoned in its current configuration since 1961. Prior to 1961 portions were zoned C-2 as far back as 1943. Other portions along the River Street corridor were zoned Business A from 1943 to 1961. Existing retail or other commercial activity in the area is now non-conforming.

The area is not located within any Institutional Overlay District.

Existing Development Character. Area 3 is substantially residential in character. Sites previously used for industry along Franklin Street have mostly been converted to housing. Some ground floor retail activity, probably established when that corridor was commercially zoned, continues along River Street. A large parking lot fronting on Green Street, owned by the YMCA, is the largest undeveloped site within the area.

In scale, the residential pattern is split between low scaled wood frame construction (about 35 feet high) at moderate to high density. Masonry high-density housing is distributed between late 19th and early 20th century apartment buildings of four or five stories and higher-rise apartment construction dating from the last forty years. These buildings are usually about 85 feet in height. The average density of occupied sites within Area 3 is 1.20.

The area is bordered by the Central Square commercial district to the east and neighborhood scaled residential development elsewhere.

Proposed District. The Committee has recommended designation of the area as a Residence C-1 district, the prevailing zone in the abutting neighborhoods to the east and west. An FAR of 0.75 is permitted with a height of 35. Yards, by formula, are required. The density allowed is one unit per 1,500 square feet of lot area. All residential uses are permitted but institutional uses are severely restricted.

The Committee has made its recommendation in order to preserve the significant inventory of low scale frame housing now common in the district, and to prohibit further erosion of that character through redevelopment to larger scaled buildings. The large scaled, high-rise masonry apartment buildings already present in Area 3 are not the norm for future development desired by the Committee. In neighborhoods with varied development characteristics it is not unusual to establish a zoning norm less than the greatest intensity of development exhibited in the district.

Alternatives Considered. Several alternatives to the Residence C-1 designation were considered. All involved the Residence C-2B district. That district differs from Residence C-2 in that the permitted height is forty-five feet rather than eighty-five feet and special green area requirements apply to some required yards. Those alternatives were:

- Rezoning the entire area Residence C-2B
- Rezoning the portion of the Area between Franklin and Green Street to Residence C-2B
- Rezoning the half block abutting Green Street to Residence C-2B.

There was some sentiment on the Committee favorable to the notion that portions of Area 3 close to Central Square and close to subway service could support higher density housing for urban design, housing and transportation policy reasons. The larger scaled and taller buildings present tend to be concentrated in the blocks nearer to Central Square. In the end the Committee preferred to maintain for the future the generally prevailing neighborhood building norm reflected by the limitations established in the Residence C-1 district.

Applicability of Growth Policies. Relevant Growth Policies are described below.

Land Use Policy 1 suggests that existing residential neighborhoods having an identifiable built character should be preserved by directing future change in that same direction. Housing Policy 26 urges that existing neighborhoods be preserved at their current density, scale and character. Identifying "current density, scale and character" and "identifiable built character" is not always simple when, as is typical of most Cambridge neighborhoods, development patterns shift from lot to lot and street to street. As is true here, and in Mid-Cambridge and Cambridgeport, there is often a mixture of low buildings that can be either moderately or very densely built up on their lots, as well as taller buildings of uniformly high density. The task at hand is to select which of those clusters of characteristics (setbacks, unit density, height, FAR) should be chosen to shape future development. The Committee has chosen to limit future development to moderate density, low scaled housing, which is compatible with much of what already exists and which is predominant in the adjacent neighborhood blocks.

Land Use Policy 8 relates the density of development to the availability of transit service. A reasonable argument can be made that the portions of Area 3 close to Central Square should be developed to higher densities.

Urban Design Policy 59 urges that land use and zoning regulations reflect the city's urban design and environmental objectives. Current zoning policy has been in place for forty years or more. Circumstances have changed and there is now an opportunity to take a second look.

Urban Design Policy 62 addresses the need to provide adequate transitions between differing scales and kinds of development. The higher densities permitted now in the Area 3 complicate any effort to develop compatibly with adjacent neighborhood blocks.

Previous Planning Initiatives. In the mid 1990s the Planning Board considered the possibility of recommending a similar zone change to the City Council. Various configurations of Residence C-1 and C-2B were discussed. However, no specific recommendation was made at that time.

Area 4 - River Street and a Portion of Western Avenue
Proposed: Neighborhood Business District

Existing Zoning District. Area 4 consists of one block on Western Avenue between Jay and Howard Streets and several blocks along River Street from Williams Street in the east and Putnam Avenue on the west. The two areas are currently zoned Business A. This is the highest density neighborhood business district; it allows a range of retail and office uses in addition to all forms of housing. An FAR of 1.0 for retail and office uses and 1.75 for housing are permitted. Commercial uses are limited to a height of 35 feet; housing is permitted at 45 feet. Yards, by formula, are required for housing but only a 20 foot rear yard is required for commercial uses. Area 4 has been similarly zoned in both areas since 1943.

The area is not located within any Institutional Overlay District.

Existing Development Character. While a wide range of commercial uses are permitted, both areas are predominately residential in character. The retail activities that are present tend to be located in small commercial extensions onto older wood frame residential buildings. Few sites are in exclusive commercial use. The actual pattern of development differs little from the residential lots abutting in the neighborhood. Most structures are used residentially, wood framed, about 35 feet tall, and freestanding on their own lot.

The FAR density is about 0.97.

Area 4 is bordered by Area 3 to the north and east and the residential neighborhoods of Riverside and and Cambridgeport elsewhere.

Proposed District. The Committee has recommended the creation of a new residential/retail district that would be the retail analog to the Residence C-1 residential district and the Office 1 office district: i.e. an FAR of 0.75, a height of 35 feet, yards by formula, and a dwelling unit density of one unit per 1,500 square feet of lot. However, retail activity would be permitted in a building containing residential uses, but only on the first floor or basement. It could constitute no more than 40% of the GFA of the structure.

The Committee has made its recommendation in order to preserve the significant inventory housing and freestanding buildings that characterize these areas, while offering the opportunity to expand small neighborhood-serving commercial activity along the streets. The proposed regulations are intended to allow retail activity at a neighborhood scale without encouraging the transformation of the street from a residential extension of abutting blocks to a full fledged retail district of streetwall buildings and large stores.

Alternatives Considered. Two alternates were considered: retention of the existing district or rezoning to Residence C-1. The Committee viewed the new district as a reasonable compromise to preserve existing housing while allowing limited retail activity in the form that currently exists along River Street and Western Avenue.

Applicability of Growth Policies. Relevant Growth Policies are described below.

Land Use Policy 1 suggests that existing residential neighborhoods having an identifiable built character should be preserved by directing future change in that same direction. Along River Street and this portion of Western Avenue the current zoning regulations would permit their evolution from relatively seamless extensions of the residential blocks immediately abutting, to commercial streets in the image of Cambridge Street and Massachusetts Avenue in Agassiz and North Cambridge. The Committee does not wish to see such a wholesale transformation of these streets. Continuation of the present into the future is desired. Housing Policy 26 makes very much the same point.

Economic Development Policies 47 and 48 address the need to strengthen and reenforce the character of existing retail districts rather than expanding them. It is the Committee's view that these BA districts are not now retail districts within the meaning of these two policy statements. Only limited and very modest retail expansion is desired here. The primary goal is to retain a significant housing presence in these to locations.

Urban Design Policy 59 urges that land use and zoning regulations reflect the city's urban design and environmental objectives. Current zoning policy has been in place for sixty years. While to date that zoning has not fostered the creation of a dense commercial street, if that is not the city's policy intent the current zoning should be modified.

Urban Design Policy 62 addresses the need to provide adequate transitions between differing scales and kinds of development. Transitions are very difficult to manage between commercial uses and the immediately abutting residential housing in narrow commercial districts like the Business A district along River Street. Noise, trash, odors, parking lots, etc. all can have a negative impact on nearby residences with little physical room to buffer them. In this particular context, lowering the intensity of potential commercial activity would be the best way to ensure minimal conflict.

Previous Planning Initiatives. In the mid 1990s the height premium granted to housing in the Business A district was reduced from 85 feet to 45 feet. In addition special green area requirements were imposed on certain yards in the Residence C-2B district, which serves as the dimensional guide to residential development in a Business A district.

Area 5 - Putnam and Western Avenue, Banks, Elmer and Hingham Streets
Proposed: Residence C-1 District

Existing Zoning District. Area 5 is currently zoned Residence C-3. It is a high density multifamily district that allows housing and institutional uses. Commercial uses are not permitted. An FAR of 3.0 and a height of 120 feet is permitted. Yards, by formula, are required. The zone has been traditionally the university campus district and is the district regulating development at the core of the Harvard and MIT campuses. The site has been zoned C-3 since 1961. From 1943 to 1961 the entire area had been zoned Residence C-1, except that the frontage on Western Avenue was designated Business A.

The area is not located within any Institutional Overlay District.

Existing Development Character. The area is nearly entirely residential in use. The prevailing development type consists of freestanding wood frame structures two to three stories high. Only one large multifamily structure is present on a previously commercial site redeveloped to housing in the 1980s. While individual structures tend to be modest in size, the built density is relatively high at 1.14.

The area is bordered by Area 1 (the Mahoney Blocks) to the west, the parking garage and low rise elements of Peabody Terrace to the north, Putnam Gardens public housing and residential neighborhood blocks to the east, and the NStar facilities and some housing on the Blackstone block across Western Avenue to the south.

Proposed District. The Committee has recommended designation of the area as a Residence C-1 district, the prevailing zone in the abutting neighborhood blocks to the east. An FAR of 0.75 is permitted with a height of 35 feet. Yards, by formula, are required. The density allowed is one unit per 1,500 square feet of lot area. All residential uses are permitted but institutional uses are severely restricted.

The Committee has made its recommendation in order to preserve the scale of the present neighborhood.

Alternatives Considered. The Committee did not consider alternate approaches.

Applicability of Growth Policies. Relevant Growth Policies are discussed below.

Land Use Policy 1 suggests that existing residential neighborhoods having an identifiable built character should be preserved by directing future change in that same direction. Housing Policy 26 urges that existing neighborhoods be preserved at their current density, scale and character. Existing "scale and character" and "identifiable built character" are easily matched in spirit with the dimensional provisions of the recommended Residence C-1 district. However, the density of development is actually higher than allowed in the C-1 zone, partly because many lots are small, setbacks are modest and probably uniformly non-conforming even under the C-3 formula provisions. This is not unusual in Cambridge neighborhoods. A survey of the the density of development in the blocks in the Riverside neighborhood already zoned C-1 will show a wide range from .71 to .94 (in those blocks recently analyzed by CDD). The Committee believes that the bundle of dimensional requirements of the Residence C-1 district more closely reflects the desirable development pattern in this neighborhood for the limited future development that is possible there and for

any future redevelopment of currently built up sites. It is the kind of policy choice the city has made in many very similar neighborhoods in the eastern part of the city.

Urban Design Policy 59 urges that land use and zoning regulations reflect the city's urban design and environmental objectives. Current zoning policy has been in place for forty years. When put in place in 1961 it was a clear choice to turn away from the neighborhood as it had developed in the 19th century (and as was reflected in the C-1 district then regulating development in the area) in favor, it would appear, of future redevelopment of its blocks to much higher density and perhaps as a location for expansion of the University campus. This is an opportunity to take a second look at that choice made four decades ago.

Urban Design Policy 62 addresses the need to provide adequate transitions between differing scales and kinds of development. The higher densities permitted now in the Area 4 would complicate any effort to develop compatibly with adjacent neighborhood blocks across Putnam Avenue in the event of significant redevelopment of lots in this small cluster of blocks.

Previous Planning Initiatives. In the mid 1990s the Planning Board recommended this change to the City Council. Testimony at the public hearing suggested delaying any action until a zoning recommendation could be made for the Mahoney Blocks as well. No action was therefore taken.

Area 6 - Banks, Grant, Athens, Mt. Auburn and Cowperthwaite Streets
Proposed: Special Residence C-Z District

Existing Zoning District. Area 6 is currently zoned Residence C-3. It is a high density multifamily district that allows housing and institutional uses. Commercial uses are not allowed. An FAR of 3.0 and a height of 120 feet is permitted. Yards by formula are required. The zone has traditionally served as the university campus district in the Zoning Ordinance and is the district regulating development at the core of the Harvard and MIT campuses. The site has been so zoned since 1943.

The portion of the area between Grant and Cowperthwaite Streets is located within the Harvard, Radcliffe, Lesley Institutional Overlay District.

Existing Development Character. The area is entirely residential in use where buildings are present on lots. Two large parking lots owned by Harvard University are representative of the other prominent use present. The prevailing development consists of freestanding wood frame structures, two to three stories high. Lot sizes and lot widths are commonly substandard (ca 4,000 square feet, sometimes less, with a width of 40 feet). The overall density is about 0.75 when the few larger apartment buildings are excluded.

The area is bordered to the west and south by Harvard University dormitories. They are generally large in scale, moderately to quite dense and ranging from 40 to 110 feet in height as they directly abut Area 6. To the east across Banks Street are standard Riverside residential blocks. To the north across Mt. Auburn Street is the Harvard Square business district where the St. Paul's Church complex and the Reversible Collar Factory building are the immediate neighbors.

Proposed District. The Committee has recommended designation of the area as a new district that would be a variation on the Residence C district. It would have the usual Residence C dimensional provisions: an FAR of 0.60 with a height of 35 feet; yards by formula; one dwelling unit per 1,800 square feet of lot area; and a 36% open space requirement. All residential uses are permitted but institutional uses are severely restricted.

The special features of the district are intended to provide incentives (and some explicit restrictions) to encourage a traditional pattern of development on the large vacant parking lots that front on Cowperthwaite and Grant Streets, among others. The objective is to see housing with two or three units constructed in regular rows along existing streets, infilling vacant spaces in a traditional manner. To prevent large townhouse or multifamily structures, each lot in the district can only have one principal structure on it, containing no more than two units, and containing no more than 3,000 square feet of Gross Floor area. Variations on this kind of limitation are now in force in Residence A and B districts. These limitations require subdivision of large lots if the full, or nearly full, development potential of those lots is to be achieved.

To encourage those subdivided lots to be located on streets (fairly easy to achieve in this context) dimensional requirements for lot size, setbacks, lot frontage, FAR and dwelling units are relaxed if a lot fronts on a street within a specific width range and the building is in close proximity to the street. The relaxed standards would apply to the smaller subdivided lots, but the general density limits of the original large lot could never be exceeded.
The recommendation would eliminate the Institutional Overlay District now present on the Cowperthwaite/Grant Streets block.

Alternatives Considered. Harvard University, owner of many of the frame houses in the area and of the large parking lots, developed a schematic zoning proposal in consultation with immediately affected neighbors in the Banks Street area. It suggested new housing construction well below the density allowed in the C-3 district, with building heights varying from 35 to 60 feet depending on existing building context, and with a detailed set of architectural guidelines to ensure that new construction would be compatible in design with the existing character of residential buildings already in the area. The new housing would not be for undergraduates. The proposal was presented to the Committee, most of whose members considered it too dense and too permissive as to height.

Both the standard Residence C district and the standard Residence C-1 district were considered as options. Strong incentives to replicate current building patterns on these city blocks and to secure some additional open space were a strong desire of most members of the Committee; the special C district was therefore the preference.

Applicability of Growth Policies. Relevant Growth Policies are described below.

Land Use Policy 1 suggests that existing residential neighborhoods having an identifiable built character should be preserved by directing future change in that same direction. Housing Policy 26 urges that existing neighborhoods be preserved at their current density, scale and character. Existing "scale and character" and "identifiable built character" is quite different from that possible with new development constructed within the building envelope permitted by the Residence C-3 district. A Residence C, C-1 or the proposed Special Residence C-Z district each would more precisely reflect the character of existing development in Area 6. Preservation of any semblance of the small scaled residential neighborhood that exists today, in a somewhat tattered form, cannot be assured in the long run if development is guided by the present C-3 district regulations.

Land Use Policy 5 suggests that institutional expansion should be limited to existing areas of institutional use or suitable abutting areas identified as appropriate as indicated by inclusion within an Institutional Overlay District. Since 1943 this entire area has been zoned Residence C-3 (at least until 1981 the de facto institutional district in the Zoning Ordinance). It is under that zoning that uni-

versity campus expansion has progressed east through Riverside in the 1960s, 1970s and 1980s, replacing housing similar to those seen now in Area 6 with large dormitories and other student housing. Harvard University has for a long time been a major owner of land and buildings in Area 6, suggesting an intent to keep open the option of expanding university functions into it if that proved desirable. In 1981, when policies affecting institutions were again comprehensively studied by the City, the Residence C-3 district was retained and unaltered but the newly created Harvard, Radcliffe, Lesley Institutional Overlay District was only applied to the Cowperthwaite to Grant Streets block in the area. In 1981 the City was not specifically urging the preservation of the Area 6 as it was then constituted, but did seem to suggest that expansion of university related activities should only occur on the Cowperthwaite/Grant Streets block. Twenty years later the question is again posed as to what city policy should be for Area 6.

Land Use Policy 6 suggests that densities allowed on the central campuses of the universities should be sufficient to accommodate needed expansion and thus not encourage expansion of academic activities into new territory in neighborhoods and commercial districts. See the discussion for Area 1, which is as relevant to Area 6.
Area 6, but less so for Area 1, lies at the very edge of the University's core residential campus. In the past there seemed to be an expectation that the campus would sweep away the small, frame dwelling neighborhood as the campus expanded. It is a logical location for that to happen. However, despite the current zoning envelope, Area 6 has preserved a character over the past twenty years that has come to be viewed more favorably with time by its residents and the city more generally. The right choice for the future is not nearly as clear as it may have been in 1943, 1960 or 1981. At this new juncture in time the majority of the Committee endorses preservation and enhancement of the existing pattern of low scale housing over expansion of the University campus.

Institutional Policy 53 addresses the loss of tax revenue through conversion of tax paying property to tax exempt uses. It is very possible that the University's plan for the vacant parcels in Area 6 would be tax paying affiliate housing. The current tax status of the vacant lots is not known.

Urban Design Policy 59 urges that land use and zoning regulations reflect the city's urban design and environmental objectives. In the Residence C-3 district the Citywide Rezoning Petition would impose minimal transition requirements for some development over 25,000 square feet and would require project review for projects of 50,000 square feet or more where they abut a public street. The Citywide Growth Management Advisory Committee recognized that those measures were not sufficient to manage transitions along Banks Street. That area was therefore identified as one requiring further study.

The purpose of this rezoning exercise is to look more comprehensively at the issues than even contemplated by the Citywide Committee. Several, quite different urban design futures can be envisioned for this location. Each has merit but with quite different physical implications.
Urban Design Policy 62 addresses the need to provide adequate transitions between differing scales and kinds of development.
The higher densities permitted now in the Area 6 complicate any effort to develop compatibly with adjacent neighborhood blocks across Banks Street and within the area itself between existing homes likely to remain and new development possible in the future.

The Committee has chosen to take its lead from the development on the east side of Banks Street and the existing pattern within the Area, not the institutional development along DeWolfe and Cowperthwaite Streets.

Open Space Policy 69 identifies as a valuable asset to the city as a whole private open space, whether accessible or not, and urges its protection. See the discussion in Area 1.

Previous Planning Initiatives. The Banks Street interface was identified as a critical transition area by the Citywide Growth Management Advisory Committee.

APPENDIX H - PARKING

1. Data from the Traffic, Parking and Transportation Department regarding residential parking in Riverside

2. Inventory of housing units, on-street parking and off-street parking in Riverside conducted by Riverside residents

3. April 5, 2002 Memo from Russell Higley, City Solicitor, to Robert Healy, City Manager, re: Whether Harvard students residing in dormitories are eligible for resident parking permits

City of Cambridge
Traffic, Parking and Transportation Department

Riverside Housing Units & Group Quarters			
Census Data	**1990**	**2000**	**2002**
All Housing Units	3,647	3,877	--
Occupied Housing Units	3,365	3,738	--
Dormitory Residents	3,757	3,571	--
Estimated Cars	2,653	--	--
District 7 Parking Passes			
Resident Permits - Total	--	--	2,009
- Households	--	--	1,972
Peabody Terrace	--	--	124
DeWolfe St. Housing	--	--	14
- Dormitory Residents	--	--	37
Vistor Passes	--	--	1,991
- Households	--	--	1,972
Peabody Terrace	--	--	129
DeWolfe St. Housing	--	--	12
- Dormitory Residents	--	--	19
Resident's Parking Census			
Total	--	--	3,000
- On Street	--	--	1,500
- Off Street	--	--	1,500

Notes:

1.) The boundaries of District 7 are JFK - Mt. Auburn - Mass - River - Memorial Drive.
2.) "Dormitory Resident" permits are only the 3,323 students in the River Houses of Mather, Dunster, Leverett, Quincy, Winthrop, Lowell, Eliot and Kirkland.
3.) "Estimated cars" is based on the 1990 auto ownership information for Riverside.

	Citywide	Riverside	
No Cars	28%	37%	1235 units
1 Car	52%	52%	1743 units
2 Cars	17%	9%	319 units
3+ Cars	3%	2%	68 units

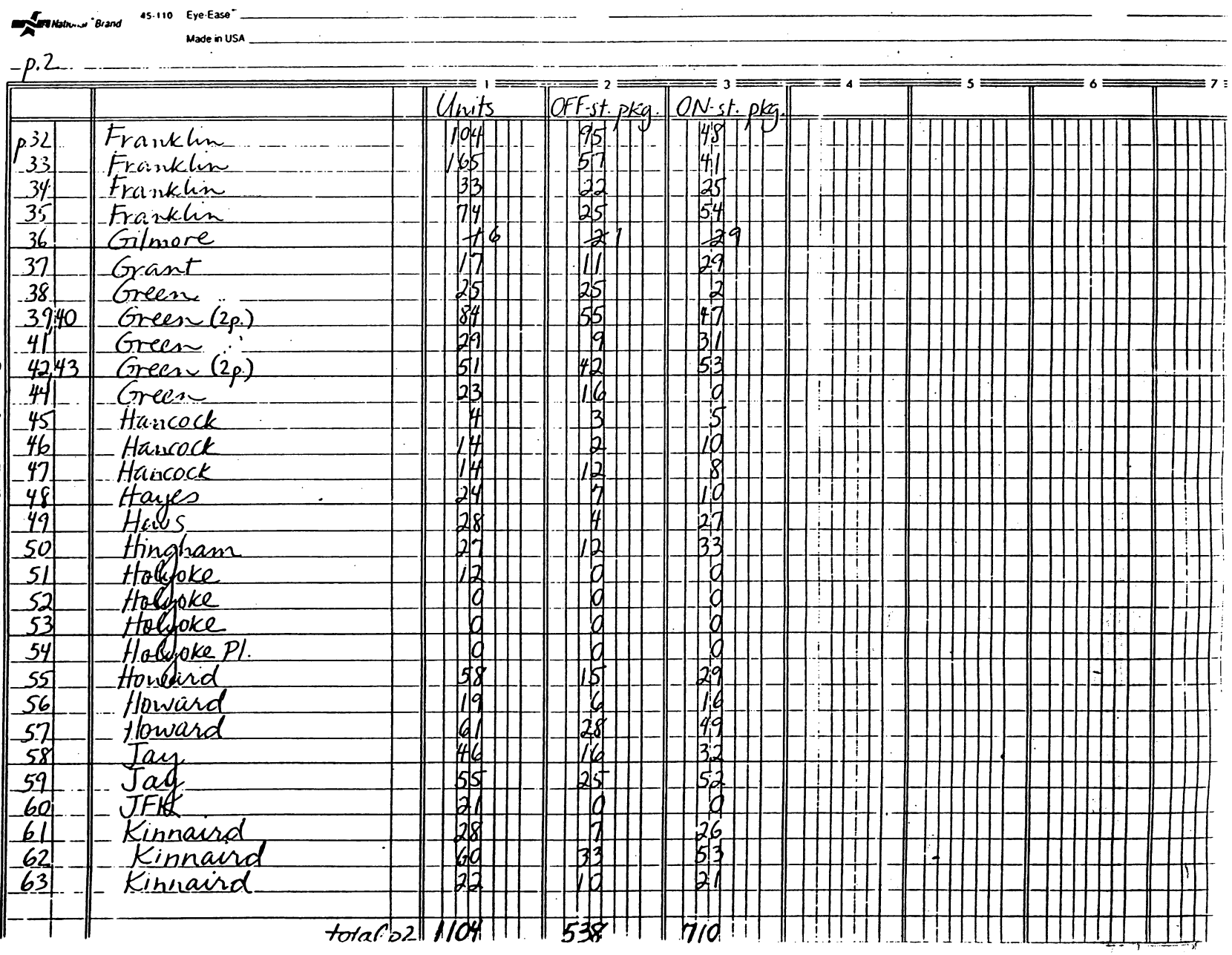
Units with no car	1,235	
Units w/ 1 car -	1743 cars	
Units w/ 2 cars -	638 cars	
Units w/ 3+ cars -	272 cars	(assumed 4 cars per unit)
Total cars	2,653	

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p. 1

			1 Units	2 OFF-st. pkg	3 ON-st. pkg	4	5	6	7
1	p.1	Akron	0	0	11				
2	2	Arrow	10	2	0				
3	3	Athens	32	11	26				
4	4	Athens Terr.	8	0	0				
5	5	Auburn	11	0	12				
6	6	Ballard Pl.	12	7	8				
7	7	Bancroft Pl.	3	62	20				
8	8	Banks	69	38	16				
9	9	Banks	38	33	18				
10	10	Banks	3	1	8				
11	11	Banks	30	9	16				
12	12	Bay	0	0	0				
13	13	Bay	18	6	17				
14	14	Bay	9	5	13				
15	15	Bedrkstone	17	12	39				
16	16	Bow	0	0	0				
17	17	Bow	4	0	0				
18	18	Bow	0	0	0				
19	19	Callender	13	6	30				
20	20	Callender	5	2	29				
21	21	Cowperthwaite	4	0	0				
22	22	DeWolfe	0	0	0				
23	23	Dodge	20	10	9				
24	24	Dudster	0	0	0				
25	25	Dunster	0	0	0				
26	26	Dunster	0	0	0				
27	27	Dunster	0	0	0				
28	28	Elmer	37	34	2				
29	29	Flagg	0	0	18				
30	30	Flagg	33	8	21				
31	31	Franklin	11	2	2				
32		total p 1	377	188	295				



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p.2

			1 Units	2 OFF-st. pkg.	3 ON-st. pkg.	4	5	6	7
1	p.32	Franklin	104	95	48				
2	33	Franklin	165	57	41				
3	34	Franklin	33	22	25				
4	35	Franklin	74	25	54				
5	36	Gilmore	~~16~~	~~21~~	~~29~~				
6	37	Grant	17	11	29				
7	38	Green	25	25	2				
8	39,40	Green (2p.)	84	55	47				
9	41	Green	29	9	31				
10	42,43	Green (2p.)	51	42	53				
11	44	Green	23	16	0				
12	45	Hancock	4	3	5				
13	46	Hancock	14	2	10				
14	47	Hancock	14	12	8				
15	48	Hayes	24	7	10				
16	49	Hebs	28	4	27				
17	50	Hingham	27	12	33				
18	51	Holyoke	12	0	0				
19	52	Holyoke	0	0	0				
20	53	Holyoke	0	0	0				
21	54	Holyoke Pl.	0	0	0				
22	55	Howard	58	15	29				
23	56	Howard	19	6	16				
24	57	Howard	61	28	49				
25	58	Jay	46	16	32				
26	59	Jay	55	25	52				
27	60	JFK	21	0	0				
28	61	Kinnaird	28	7	26				
29	62	Kinnaird	60	33	53				
30	63	Kinnaird	22	10	21				
31									
32		total p.2	1104	538	710				

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p. 3

			1 Units	2 OFF-st. pkg.	3 ON-st. pkg.	4	5	6	7
1	p. 64	Kinnaird	36	20	35				
2	65	Linden	0	0	0				
3	66	Magee (incl. all Putnam Gardens)	145	35	55				
4	67	Mass. Ave.	10	0	0				
5	68	Mass. Ave.	128	0	0				
6	69	Mass. Ave.	238	157	0				
7	70	Mass. Ave.	144	111	0				
8	71	Mass. Ave.	135	93	0				
9	72	Mass. Ave.	7	0	0				
10	73	Mass. Ave.	106	0	0				
11	74	Mass. Ave.	0	0	0				
12	75	Mass. Ave.	0	0	0				
13	76	Mass. Ave.	41	0	0				
14	77	Mass. Ave.	0	0	0				
15	78	Mass. Ave.	0	0	0				
16	79	Memorial Dr.	0	0	0				
17	80	Mill	0	0	0				
18	81	Mill	0	0	0				
19	82	Montague	3	0	9				
20	83	Montague	3	1	12				
21	84	Mt. Auburn	175	42	0				
22	85	Mt. Auburn	0	0	0				
23	86	Mt. Auburn	0	0	0				
24	87	Mt. Auburn	0	0	0				
25	88	Mt. Auburn	0	0	0				
26	89	Pleasant	0	0	0				
27	90	Pleasant	11	2	1				
28	91	Pleasant	22	0	3				
29	92	Pleasant	28	3	31				
30	93	Plympton	0	0	0				
31	94	Plympton	0	0	0				
32		total p. 3	1232	464	146				

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p4

			1 Units	2 OFF-st. pkg.	3 ON-st. pkg.	4	5	6	7
1	p95	Plympton	3	1	0				
2	96	Pond Pl.	4	0	0				
3	97	Putnam Ave.	37	14	16				
4	98	Putnam Ave.	32	21	13				
5	99	Putnam Ave.	19	14	16				
6	100	Putnam Ave.	20	7	11				
7	101	Putnam Ave.	12	3	6				
8	102	Putnam Ave.	15	8	7				
9	103	Putnam Ave.	59	31	29				
10	104	River	0	0	0				
11	105	River	8	0	4				
12	106	River	30	0	0				
13	107	River	16	13	8				
14	108	River	13	8	8				
15	109	River	11	8	5				
16	110	River + Mildred Hamilton Pl.	49	41	21				
17	111	River	18	0	12				
18	112	River	6	0	1				
19	113	River	0	0	0				
20	114	Riverside Pl	10	0	7				
21	115	Sellers	0	0	0				
22	116	Soden	84	57	38				
23	117	South	0	0	0				
24	118	South	0	0	0				
25	119	Surrey	22	15	17				
26	120	Western Ave.	0	0	0				
27	121	Western Ave.	0	0	0				
28	122	Western Ave.	15	1	10				
29	123	Western Ave.	65	26	25				
30	124	Western Ave.	17	6	12				
31	125	Western Ave.	22	13	13				
32		total, p4	587	283	285				

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p.5

			1 Units	2 OFF-St. pkg.	3 ON-St. pkg.	4	5	6	7
1	p.126	Western Ave.	8	6	14				
2	127	Western Ave.	79	12	65				
3	128	Western Ave.	26	6	18				
4	129	Western Ave.	24	12	16				
5	130	Western Ave.	25	1	18				
6	131	Winthrop	1	0	0				
7	132	Winthrop	6	0	0				
8		total, p.5	169	37	84				
9									
10		Total, p1-5	3469	1510	1520				
11									
12		Total, Rounded off:	3500	1500	1500				
13									

Russell B. Higley
City Solicitor

Donald A. Drisdell
Deputy City Solicitor

Nancy E. Glowa
First Assistant
City Solicitor

Arthur J. Goldberg
Supervising Legal Counsel

Legal Counsel
Birge Albright
Vali Buland
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Nancy B. Schlacter
Christine E. McGinn

CITY OF CAMBRIDGE
Office of the City Solicitor
795 Massachusetts Avenue
Cambridge, Massachusetts 02139

April 5, 2002

Robert W. Healy
City Manager
City Hall
Cambridge, MA 02139

Re: ***Whether Harvard students residing in dormitories are eligible for resident parking permits***

Dear Mr. Healy:

As you know, the Director of Traffic, Parking and Transportation, Susan Clippinger, has requested legal advice regarding the question of whether or not she has authority to deny resident parking permits to Harvard students residing in Harvard dormitories.

Under the present law a resident of Cambridge whose motor vehicle is registered in Massachusetts and principally garaged in Cambridge, is entitled to receive a resident parking sticker. The sticker allows a resident's motor vehicle to be parked in any posted residential area of the City. *See* St. 1961, c. 455, § 3(a), as amended by St. 1962, c. 786, § 7, St. 1972, c. 340, St. 1977, c. 239 and St. 1981, Chapters 166, 424 and 585.

The constitutionality of the Cambridge resident parking sticker program was upheld against a challenge by non-residents in *Commonwealth v. Petralia*, 372 Mass. 452 (1977).

In summary, a Harvard student (or a student at some other college or university) is entitled to receive a resident parking sticker if he or she is a Cambridge resident and his or her automobile is registered in Massachusetts and principally garaged in Cambridge. A full-time student would certainly be entitled to establish his or her domicil or residence in Cambridge while living in a college or university dormitory. *Hershkoff v.Board of Registrars of Voters of Worcester*, 366 Mass. 570 (1974). Many students living in dormitories have established their residency in Cambridge and are registered to vote here in local, state, and federal elections. Pursuant to the relevant statutes cited above, the student would also be required to demonstrate that their automobile is registered in Massachusetts and principally garaged in Cambridge. Applications for automobile

Telephone (617) 349-4121 *Facsimile (617) 349-4134* *TTY/TTD (617) 349-4242*

insurance require identification of the locale within which the automobile is principally garaged, which affects, among other things, the cost of insurance for the vehicle.

Upon a demonstration of compliance with these statutory criteria, a student living in a dormitory is entitled to a resident parking permit in the same manner as any other resident of the city, and in my opinion, the Director of Traffic, Parking, and Transportation could not deny the permit.

Very truly yours,

Russell B. Higley
City Solicitor

cc. Susan Clippinger, Director of Traffic, Parking, and Transportation

APPENDIX I - TRAFFIC ANALYSIS

1. May 15, 2002 Memo from Susanne Rasmussen, Director of Environmental and Transportation Division, to Riverside Study Committee re: Transportation Impact Analysis

2. May 13, 2002 Memo from Barry Pell, Rizzo Associates, to Susanne Rasmussen, Director of Environmental and Transport Division, re: Riverside Transportation Analysis

CITY OF CAMBRIDGE
COMMUNITY DEVELOPMENT DEPARTMENT

BETH RUBENSTEIN
Assistant City Manager for Community Development

SUSAN M. GLAZER
Deputy Director for Community Development

Memorandum

To: Riverside Study Committee

From: Susanne Rasmussen, Director
Environmental and Transportation Planning Division

Date: May 15, 2002

Re: Transportation impact analysis -- **UPDATED VERSION**

Attached is a memo from Barry Pell of Rizzo Associates, summarizing the results of his transportation analysis for the Riverside study area. The memo is an update of the analysis provided in a memo to the Committee dated April 24, 2002 and includes all twelve intersections that were to be analyzed. The analysis of the additional intersections has not altered any of our conclusions regarding the traffic analysis.

As noted in the earlier memo, this analysis was based on 20-year projections for build out scenarios both under existing zoning and under proposed zoning developed by the Riverside Study Committee as of April 10, 2002. From these build out projections, estimates of expected traffic volumes were developed and assigned to the street network and their impact on intersection performance analyzed. While the analysis represents a reasonable projection of future impacts of development in Riverside, the results are best understood as providing a picture of the relative, rather than absolute, impacts associated with the two zoning scenarios[1].

Analysis of Daily and Peak Hour Trips

Key findings regarding project daily and peak hour trips:

- The projected number of **new daily traffic over a 20-year period is essentially the same for both the existing zoning and the Committee's proposed zoning**, roughly 2,600 trips.

- While daily trips are similar, **under the proposed zoning scenario more of the trips will occur during the peak hour**. Approximately

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[1] The projections only include traffic generated as a result of development in Riverside. Traffic increases resulting from development elsewhere in Cambridge and outside Cambridge were not factored into this analysis.

10% more of the vehicle trips will occur during the peak hour under proposed zoning (411 new trips) compared to existing zoning (374 new trips).

Intersection Analysis

A total of 12 intersections within the Riverside study area have been analyzed. Critical movement analysis was used to estimate how the intersections would perform in the future. Critical movements have been estimated for the critical or PM peak hour. The definition of critical movement volume at an intersection is the sum of all conflicting traffic movements expressed in vehicles per hour (see attached graphic for an illustration of "conflicting movements"). Intersections with 1,500 or fewer vehicles per hour are considered to operate adequately, i.e. motorists will on average wait no more than two light cycles to get through the intersection. Once the threshold is exceeded, intersection operation starts to deteriorate.

Key findings regarding intersection operation:

- Of the twelve intersections analyzed, **the intersections of Memorial Drive/Western Ave., Memorial Drive/JFK St. and Soldier's Field Rd./River St. currently exceed the critical movement threshold.**

- **Only one additional intersection is projected to exceed the threshold in 20 years** as a result of the projected development under existing zoning. No additional intersections are projected to exceed the threshold in 20 years under the proposed zoning.

- **Intersection performance in 20 years will not significantly worsen under either zoning scenario compared to current conditions**, with only a maximum 5% difference in the number of critical movements at the most heavily impacted intersection (Western Ave and Memorial Drive).

- **There is little difference in intersection performance between the existing zoning in 20 years and the proposed zoning in 20 years.** Only four intersections vary by more than 1% and the intersection which differs the most between these scenarios (Putnam Ave and River Street) has 1.6% more critical movements under existing zoning than under the proposed zoning.

Memorandum

To: Susanne Rasmussen, Director
Environmental and Transportation Planning Division

Fr: Barry M. Pell, P.E.

Re: **Riverside Transportation Analysis**

Dt: May 13, 2002

As per your request, Rizzo Associates, Inc. has evaluated the issue of background (non-neighborhood) traffic growth as it affects the critical sum analysis. There are two alternative approaches to analyzing this growth. One alternative is to consider background growth as entirely outside the Riverside neighborhood (i.e., other Cambridge neighborhoods and other cities and towns). With this approach, future intersection volumes will increase by 10 percent (one-half percent annually for 20 years) *plus* traffic from remaining zoning in the Riverside neighborhood. In this alternative, intersection traffic growth will be greater than 10 percent.

The second alternative is to consider that the study intersections will grow in volume by 10 percent *total*, including whatever traffic is generated by future development from within the neighborhood. In this alternative, anticipated traffic growth at intersections will be exactly 10 percent.

Rizzo Associates. Inc. has applied the second alternative, since traffic volumes in Cambridge have historically increased at an annual average rate of one-half percent, from *all* development.

Based on this approach, Table 1 summaries the critical sum analysis for the Riverside study intersections in Cambridge and allocates the 10 percent background growth between the components generated by the Riverside neighborhood (under proposed zoning) and outside the Riverside neighborhood.

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A TETRA TECH COMPANY

Table 1 Critical Sum Analysis

Intersection	Existing	Future[1]	% Background Growth: Development in Riverside	% Background Growth: Other Growth
Memorial Drive/JFK	1,690	1,859	2.2%	7.8%
Memorial Drive/DeWolfe St.	1,010	1,111	3.3%	6.7%
Memorial Drive/Western Ave.*	1,654	1,819	6.7%	3.3%
Memorial Drive/River St.*	1,451	1,596	4.5%	5.5%
Sullivan Square	1,429	1,572	1.3%	8.7%
Putnam Ave./Western Ave.	1,224	1,346	1.5%	8.5%
Putnam Ave./River St.	1,190	1,309	1.8%	8.2%
Green St./River St./Western Ave.	990	1,089	0.4%	9.6%
Central Square	1,492	1,641	0.5%	9.5%
Massachusetts Ave./Pleasant St./ Inman St.	1,237	1,361	0.1%	9.9%

*With modified operation, presently under construction by the MDC

[1] With 10 percent growth (one-half percent for 20 years)

Please call me with any questions.

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APPENDIX J - ADDENDUM FROM HARVARD UNIVERSITY

HARVARD UNIVERSITY

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ADDENDUM TO THE RIVERSIDE NEIGHBORHOOD STUDY

January 2003

Introduction

As a property owner in the Riverside neighborhood, Harvard University has been a participant in the Riverside Study Committee process since its formation in 2001. This process was initiated after Riverside residents petitioned for a development moratorium in an effort to halt Harvard's planning of an art museum to be built on a parcel on Memorial Drive that has been owned by the university since 1926. Harvard participated on the Committee with the objective to:

- Address the community's concerns regarding the impacts of development of university property, and to
- Create appropriate transitions between institutional development and lower scale abutting neighboring neighborhoods.

Throughout the process, Harvard focused on ways that university utilization of its own land could be achieved in a manner that both meets Harvard's academic and institutional needs and also responds to neighborhood interests. The university found, however, that the goal of appropriate and mutually beneficial university development was not embraced by the Riverside Study Committee; rather, the Study Committee focused on zoning that prevented all new institutional uses on Harvard-owned property. The Study Committee vigorously pursued proposals to create all open space at the site and investigated the option of a City taking of the property through eminent domain for use as a park. The Study Committee considered a "horticultural zone" in which only horticultural uses would be allowed on Harvard-owned property and also considered zoning the site as an open space district. The Study Committee was advised by the City that these zoning options would not stand up to legal scrutiny. The Study Committee dismissed the university's interests as a property owner to utilize its property for institutional purposes and recommended zoning that prevented all new institutional uses on Harvard-owned property. As a result of the Study Committee's hostility toward Harvard's museum proposal, the university withdrew the proposal

recognizing that intense community opposition made the project infeasible since many City and state approvals would be required for the project to succeed.

For these reasons, and because the University's position was in the minority and not reflected in the Study Committee's recommendations, Harvard University respectfully submits this addendum.

The Case for Opposing Riverside Study Committee Zoning Recommendations

The university opposed the Study Committee's final downzoning recommendations (that were later put forward as the Carlson petition) because the intention was to so severely restrict development that it would effectively prevent all new institutional use on Harvard's Riverside properties. Zoning recommendations should have allowed institutional development that respects the scale and context of existing surrounding buildings and addresses project impacts.

Severe Downzoning Rather than Transition Zoning:

The Study Committee recommendations called for severe downzoning rather than transition zoning of Harvard property. Instead of bridging height differences between districts that currently permit tall buildings - and areas characterized by lower-scale residential buildings, the recommendations severely constrain allowable heights. Even prior to the formation of the Study Committee, Harvard had proposed voluntary height restrictions of University property that grew out of a community process that Harvard initiated in 1999. The proposal significantly reduced heights from the allowed 120' to 65', 45' and 35' with the lowest heights nearest to the neighborhood edge and the higher building heights (a reduction of nearly half of the existing height) adjacent to taller institutional buildings. In voluntarily offering height restrictions of Harvard's property at Banks, Grant and Cowperthwaite streets, the university was supporting the transitional zoning criteria established by the Citywide Growth Management Advisory Committee. Transitional zoning was recently adopted by the City Council for the Hammond Street edge after Harvard initiated a similar consultative community process. The Study Committee rejected the transition recommendations for Banks, Grant and Cowperthwaite streets.

The Study Committee's recommended dimensional restrictions are inappropriate, because they do not reflect the size and character of surrounding structures in the urban riverfront context, and in fact impose more severe constraints on development than in any other zoning district in the City. At 870-888 Memorial Drive, which Harvard currently leases to Mahoney's Garden Center, and at Blackstone Station that generates steam for the majority of the university's campus, the Study Committee's downzoning recommendations would result in an 80% reduction in allowable height and FAR. The Committee's recommended dimensional controls would create significant nonconformities at Blackstone Station and would effectively prohibit use of Harvard's 870-888 Memorial Drive site for institutional housing. At Harvard's property at Banks, Grant and Cowperthwaite streets, the downzoning proposals would result in an 80% reduction in allowable height and a 71% reduction in allowable FAR.

Exclusion of All New Institutional Use on University Land:

The Study Committee's downzoning recommendations are not consistent with any proposed university use and would prohibit educational institutional uses on property Harvard has owned for decades. In the Banks/Grant/Cowperthwaite Street area, which is contiguous to the Harvard campus, institutional uses would be prohibited on all Harvard-owned land outside of the Institutional Overlay District. The resulting Carlson petition called for the removal of land that Harvard has owned for more than 30 years from the Institutional Overlay District, which further unreasonably restricts the university's ability to use its existing property.

At 870-888 Memorial Drive, which Harvard has owned for 75 years, the university presented analyses of the impact of both museum and housing development. The proposed museum would have created limited impacts in this area: It was designed at less than half the height and less than half the FAR allowed by current zoning. To keep the overall height of the museum low, a significant portion of the museum space was proposed underground. The museum was designed so that approximately 50% of the site was landscaped green space. In addition, a museum use would have negligible effects upon the existing traffic levels of service, as determined by both the traffic consultant engaged by the university and the traffic consultant to the Cambridge Community Development Department. In response to the Study Committee's desire to see further traffic reductions and greater open space, Harvard studied graduate student housing (including 15% affordable community units) as an alternative use and presented studies to the Study Committee. The development of graduate student housing would generate less traffic than either the existing commercial use, or the proposed museum use and also increase opportunities for landscaped areas to be planned as an amenity. However, under the Study Committee's downzoning recommendations, neither the museum nor housing alternatives could be accommodated due to severe dimensional controls and use restrictions. Furthermore, the Study Committee' downzoning makes it infeasible for the university to develop the property, which will the have the sad effect of eliminating community affordable units that would have been built if Harvard were able to develop its property. In fact, the Study Committee recommendations would reduce the amount of community affordable housing that could be built by approximately 85%.

At Blackstone Station, the Study Committee recommendations called for prohibition of institutional uses and permitted only a narrow range of low-density residential uses for a complex of unique industrial buildings that would require significant flexibility to facilitate their redevelopment.

The Role of the University in Mitigating Traffic and Parking Impacts

The Riverside Study Committee focused on many traffic, transportation, and parking issues in their discussions and final report. As the largest employer in the City of Cambridge, it is important to understand the many efforts that Harvard undertakes to ease traffic and parking problems and to encourage students, faculty and staff to use alternative modes of transportation.

Harvard Generates Less Traffic than Commercial Uses:

More flexible academic schedules and work hours result in less intensive traffic patterns than other traditional businesses. For example, one-third of Harvard's Cambridge-based employees are non-peak-hour commuters. Non-peak commuters reduce traffic congestion by distributing traffic impacts, including transit, vehicular, and pedestrian. Just in the past year and as a result of expanded transportation demand management initiatives, the university reduced single occupant vehicle ("SOV") use translating into a reduction of 2,579 commuter trips into the campus area and a 5.5 percent increase in public transit usage. The university also provides a free campus shuttle service and has a comprehensive CommuterChoice program to encourage faculty and staff to use alternative means of transportation. Employees at Harvard are eligible for a 40% discount on monthly MBTA passes.

Almost 75 percent of employees who are commuters living within Boston's Inner Ring suburbs use alternative transportation modes to work. The high rate of alternative mode used by Harvard's employees demonstrates the university's commitment to reduce the number of auto trips made by SOVs into its Cambridge campus and to increase trips by high occupancy vehicles ("HOVs") such as trains, buses, vans, carpools. More than 25 percent of Harvard's commuting population uses public transit to get to work, leaving their cars at home. In addition, Harvard has a high bicycle and walk-to-work rates, 8 and 32 percent respectively. Harvard's walk rate is nearly eight times the Massachusetts' walk rate.

Very Few Harvard Undergraduates Park in Cambridge:

Harvard undergraduates are discouraged from bringing a car to campus and must register to park in Allston. Except for disabled students, undergraduates are not allowed to park their cars in Cambridge with a Harvard University parking permit. When studied by the City this year, only 37 City parking permits had been issued to the 3,300 undergraduate students living in the River Houses.

Harvard's Shuttle Service Helps Reduce Car Trips:

The Harvard University Shuttle Service operates bus service during the academic year (except during holiday and semester breaks) providing safe, convenient transportation throughout the Cambridge and Allston campuses. The Shuttle reduces trips and limits the need for students to have a car. Shuttle bus rides are free to all members of the Harvard community, including faculty, staff and students. Fully accessible vehicles also operate year round to transport persons with mobility impairments.

Conclusion

As a participant in the Riverside Study Committee and as a landowner in Riverside, Harvard could not support the Study Committee's recommendations that so severely restrict development that all new institutional use on Harvard's Riverside properties is effectively prevented. Over the past years Harvard has undertaken efforts on many levels, from initiating and participating in planning processes to create transition areas, to instituting new transportation programs and creating a new Riverside community garden -- each with the goal to improve the quality of life for both the Harvard community and Riverside residents. Given that Harvard has long-term stake in the vitality and health of this neighborhood, we hope that future planning and development in Riverside can meet the interests of both the university and the neighborhood.

S-169 5/09

Final Report of the Riverside Study Committee

May 9, 2003