

BEDFORD COMPREHENSIVE PLAN

Produced by:

**The Bedford Comprehensive Plan Steering Committee and
Bedford Planning Board with the assistance of consultants:**

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Contents

- 1. Goals**
- 2. Land Use**
- 3. Housing**
- 4. Economic Development**
- 5. Natural and Cultural Resources**
- 6. Open Space and Recreation**
- 7. Services and Facilities**
- 8. Circulation**
- 9. Implementation**
- 10. Appendix (General Law Chapter 41: Section 81D)**

The “Town of Bedford Open Space and Recreation Plan” and the “Comprehensive Affordable Housing Plan, Town of Bedford” are included by reference as part of this plan.

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Chapter 1

GOALS AND POLICIES

A Vision is a consensus as to where the Town wants to be in the future, whereas Goals and Policies provide a sense of direction in obtaining the Vision. A clear realistic statement of the community vision, goals and policies is needed to provide a basis for the master plan and for citizen input.

BEDFORD VISION STATEMENT

The Town of Bedford envisions its small-town character enhanced over the next twenty years as it moves into the twenty-first century. Both the historically significant architectural resources and the beauty of the center of Town distinguish this character. The center of Town is a functional area that emanates from the Town Common at The First Parish Unitarian Universalist Church and as the central focus of town includes governmental, educational, recreational and public assembly activities supplemented by small shops and businesses. The Town sees its architectural heritage preserved and the center of Town strengthened as the central community focus, and that in Bedford:

- Traffic congestion is alleviated;
- The Great Road is a linear, pedestrian-friendly environment with street trees, attractive signage and stores in scale with the environs and close to the street;
- A system of sidewalks and trails provides a network within and between neighborhoods, commercial areas, and public facilities;
- Substantial open space is preserved supporting small-town character, providing balance to developed areas, and protecting our natural resources;
- A range of activities for social interaction and services for social needs is provided, with particular emphasis on specific activities for youth and seniors;
- Active and passive recreational needs are met for residents of all age groups and physical capabilities;
- Superior public education is provided by a diverse educational program; and
- Housing choices for different types of units are available and affordable for all.

BEDFORD GOALS AND POLICIES STATEMENT

Bedford residents and officials achieved broad consensus on several goals, which serve as an expression of our basic community values. The policies are guidelines for the development of more concrete recommendations in the Comprehensive Plan to attain the goals. Together these goals and policies serve as a publicly accepted, long-range policy statement, which provides direction toward achieving our Vision of Bedford's future.

I. Implementation Goal

The Comprehensive Plan will be a functional document, used on a daily, continuing basis to implement the policies and actions necessary to ensure that our goals are implemented and our vision is realized.

Policies:

- All Town Boards and Departments conduct periodic reviews of their programs, actions, rules, and regulations, and assess their consistency with the Comprehensive Plan in their annual report.
- The Planning Board make an annual assessment of progress towards implementation of the Comprehensive Plan and provide a Report to the Town at Annual Town Meeting.
- Explore public/private alliances to achieve goals of the Comprehensive Plan.

II. Small Town Character and Civic Appearance Goal

Preserve and enhance Bedford's small town character, emphasizing the beauty of civic spaces and buildings as the Town incorporates inevitable change and growth.

Policies:

- Develop the Town Common area into an obvious physical focal point for the Town, creating a more apparent Bedford Center of Town, safe and pedestrian-friendly, a functional center for family and social activities.
- Reinforce pride of Bedford's small town heritage through preservation of its historic and cultural properties and sites, strengthening of its Historic District through the high standards required by the Historic District Commission during its permitting process, education of its past, and a collection of its records and artifacts.
- Transform the Great Road strip into a linear commercial park through reorganization and pedestrian orientation to include street trees, sidewalks, green spaces, shopping adjacent to the sidewalks, attractive signage, and parking to the rear.
- Acquire or preserve important open spaces along major roads and within neighborhoods and develop a program to preserve and replace shade trees to enhance the small town New England atmosphere.
- Enhance appearance of roadway entries into Bedford in a way that instills town pride.

-
- Develop design guidelines for new development and redevelopment directed toward preserving and reinforcing small town character and aesthetics.

III. Land Use and Growth Management Goal.

Plan and manage growth with the objectives of maintaining a balance of land uses, enhancing small town character, and improving quality of life in Bedford.

Policies:

- Ensure the highest quality design and construction of public facilities and all commercial uses through required design review and building inspection services.
- Provide for a balance of land uses to meet the needs of the widest range of family economic situations and individual living choices.
- Acquire open land to control growth, maintain small-town character, meet needs for housing, and provide passive and active recreation.
- Regularly review planning practices and zoning bylaws to insure that the most effective techniques are being used to achieve Town goals.
- Review development proposals to consider the impacts of development.
- Maintain strong planning relationships with Bedford's large institutions including Hanscom, Middlesex Community College, and the Veteran's Administration facility.
- Support and encourage regional cooperation to devise solutions for regional problems such as traffic, Hanscom, public transportation and flood control.
- Work with the Police Department and DPW to develop and implement measures to slow traffic and create quieter, cleaner, more livable communities.

IV. Housing Goals

Encourage a diversity of housing options providing for a multi-generational population of families with a wide range of income levels.

Policies:

- Protect and preserve the design character and scale of existing older neighborhoods.
- Encourage a range of affordable housing options in small clusters throughout the Town targeted toward also providing housing for young families and retired families.
- Encourage development of affordable housing by working with non-profit developers using the LIP (local initiative program).
- Explore town purchase of property for affordable housing.
- Explore regulatory options for encouraging, supporting, and requiring affordable housing.
- Meet and exceed state guidelines for affordable housing.
- Maintain a reasonable residential tax rate

V. Economic Development Goal

Maintain the economic job diversity and strong tax base in Town since it fosters a wide range of opportunity for people of different income levels while maintaining an emphasis on growth technology industries to provide new future job opportunities which can be accommodated through redevelopment and intensification of existing commercial properties.

Policies:

- Reconfigure existing retail areas to be pedestrian friendly and prevent additional strip malls.
- Develop assets such as Depot Park, bikeways, and Old Town Hall to improve quality of life and attract tourists who will contribute to the local economy.
- Develop a plan for aesthetic improvement of the Sheldon block, as it is fundamental to the image of the Town.
- Establish more public parking in the center of town looking to areas behind businesses.
- Establish and enforce aesthetic standards in commercial areas throughout Town, but especially along the Great Road.
- Promote mixed use, such as retail, in industrial and commercial areas with the objective to lessen traffic around town.
- Improve town and business communications to encourage the kind of community-enhancing development the town welcomes.
- Maintain a competitive commercial tax rate while controlling commercial development south of Rte. 3 to preserve the quality of life for town residents.

VI. Open Space and Natural Resources Goal

Acquire and preserve open space to protect natural resources and natural systems; link these tracts by greenways, trails, and/or bikeways; and develop an interconnected multi-use trail system connecting passive and active recreation areas to each other as well as to other areas such as residences, retail stores, offices, and industry.

Policies:

- Protect and preserve water resources, wetlands and important wildlife habitat.
- Protect and promote remediation of aquifer recharge areas for existing and future water supply.
- Increase public awareness, appreciation, and use of Bedford's conservation lands, streams, and ponds.
- Promote a cooperative and regional approach to open space and natural resource protection.
- Maintain, manage, and enhance access to public open spaces.
- Preserve large tracts of undeveloped lands in perpetuity.
- Acquire additional open space to provide buffers between incompatible land uses, serve neighborhood needs, and protect natural resources.
- Establish funding mechanisms providing immediately available funds for purchase of open space.

VII. Recreation Facilities and Services Goal

Obtain the necessary suitable land for passive and active recreation and develop appropriate facilities to provide opportunities for active and passive, formal and informal participation in recreational activities by all age groups and abilities.

Policies for Recreation Facilities and Services:

- Continue to evaluate the condition of existing facilities, their utilization and determine the optimum and maximum scheduled use for each field or facility.
- Provide for a broad range of recreation programs from competitive sports events or leagues to free play and sports instruction for youth and adults of all ages.
- Maintain a plan for recreation programs that is matched to use of facilities and thereby determine the maximum capacity for each program.
- Maintain a program for protection, use, maintenance and upgrade of recreational public resources such as Fawn Lake, Springs Brook Park, etc.

Policies for Potential Field House:

- Develop the means to address additional recreation needs of all residents with particular focus on activities for youth and adults such as a Field House containing a swimming pool and other sports facilities.
- Explore cost effective ways of designing and managing the facility including having the facility built as part of a school building program.
- Encourage use of the facility for youth and adult leagues as well as family and open recreational opportunities.

VIII. Public Facilities and Service Goals

Provide residents with responsive and efficient governmental services, a wide range of public facilities, and the necessary public utilities to support desired quality of life.

Policies for Public Services:

- Improve public input to governmental affairs by providing frequent and varied opportunities for public participation in order to maintain the small town feeling and encourage a sense of ownership and responsibility.
- Improve communication and coordination among town officials, school administrators, employees, and especially residents.
- Increase staffing levels of certain departments to help Town be more proactive.
- Actively encourage citizens to volunteer for committees, attend Town Meeting and public hearings, and to run for elective office.
- Seek economies in the delivery of services, e.g. through shared service arrangements with other municipalities or aggregating electric purchases.

Policies for General Public Facilities:

- Maintain a high degree of public safety within the Town, including provisions for police, fire, and emergency services.
- Maintain and upgrade public facilities, including parks, in accordance with a maintenance schedule and contemporary needs.
- Provide for expanding space needs of Town departments, including archiving records.
- Restore Old Town Hall to productive use, public or private.
- Purchase land now for projected town facilities in the future since the Town is approaching full buildout.
- Provide support for facilities and development of the arts to enhance the quality of life in Town.

Policies for School Facilities and Services:

- Support improvements in the quality of education and school building facilities in order to promote excellence in public education and fully meet the community's responsibility to provide for the next generation.
- Maintain and upgrade school building facilities including the provision of current technological equipment.
- Hold all administrators, teachers, students, and parents to high expectations and continue to move toward exceeding state and local standards.
- Provide educational facilities and learning plans for all ages implementing the attitude that learning is a continuous lifetime process through a strong and expanding adult education program.
- Enhance communication to increase community support for education.

Policies for Improving Community Center Facilities and Services:

- Develop the means to address the social and emotional needs of all residents with particular focus on activities for youth and seniors, such as a Community Center containing a teen club, aerobics/dance facilities, and administrative offices for Town services.
- Explore cost effective ways of designing and managing such a facility including upgrading the existing town center, or reconstructing a new facility on the site or at another location.
- Encourage the opportunity for multi-generational interaction while also providing retreats for both teens and seniors.
- Provide for a broad range of activities from meals and social occasions to crafts, learning and games.
- Provide administrative offices for town services such as the COA and community organizations such as the Babe Ruth League.
- Provide space for town based organizations to meet.

IX. Traffic/Transportation Goal

Construct, maintain and control a safe transportation system that provides for acceptable overall and peak hour levels of service on roadway segments and intersections, that

promotes alternatives to automobile travel, and that generates conditions more consistent with the desired small town atmosphere.

Policies:

- Develop solutions to tame traffic on the Great Road with a view to maintaining acceptable overall levels of service for on- and off-peak hour conditions.
- Improve methods of traffic flow to get around Bedford.
- Keep through traffic off quiet residential streets.
- Create a walkable, pedestrian-friendly community by expanding, maintaining and plowing the network of sidewalks; in congested areas such as the Center of Town and Great Road provide sidewalks on both sides of the street shielded from the roadway by street trees.
- Build and maintain bikeways and walking/jogging paths throughout Town as an alternative mode of transportation and for recreation.
- Advocate for employers in the town to encourage their employees to use public transportation, ride sharing, and other transportation demand management techniques.
- Actively participate in regional transportation planning organizations and efforts.

Chapter 2

LAND USE

Introduction	2
Overview of Development	3
Demographic Profile and Projections	4
Town Census	
Decennial Census	
Sex	
Age	
Race	
Buildout Analysis	8
Summary of Commercial and Industrial Buildout Analysis	
Summary of Residential Buildout Analysis	
Alternative Development Scenarios	13
Proposals and Recommendations	14

List of Figures

Figure 2-1 Locus Map.....	1A
Figure 2-2 Current Zoning Map.....	4A
Figure 2-3 Current Land Use	4B
Figure 2-4 Vacant Land	10A
Figure 2-5 Development Constraints.....	12A

LAND USE

Introduction

This chapter places Bedford in its regional setting, describes current land use patterns, offers a demographic profile, and then projects demographic and development trends, including commercial-industrial and residential Buildout analyses based on existing policies, alternate development scenarios, and proposals and recommendations.

As shown on Figure 2-1, Bedford is located fifteen miles northwest of Boston and is part of the Boston Metropolitan Area. The town is bounded on the north by Carlisle and Billerica, on the east by Burlington and Lexington, on the south by Lincoln, and on the west by Concord.

Bedford has a total area of 13.87 square miles and a land area of 13.74 square miles. The 1999 local Bedford census records a population of 12,696. Based on this census, Bedford supports a population density of 924 residents per square mile, relatively in the middle in comparison to the surrounding communities.

Population Density

<u>Town</u>	<u>Residents per Sq. Mile</u>
Carlisle	305
Lincoln	362
Concord	611
Bedford	924
Billerica	1,408
Lexington	1,922
Burlington	1,936

Population figures for Bedford as reported by the U.S. Census for 1970, 1980, and 1990 have traditionally been overstated by a large amount because the military personnel and their dependents living on Hanscom AFB were all reported to live in Bedford, while the family housing on the base is, in fact, primarily in Lincoln. The Bachelor Officers Quarters, however, are in Bedford. The above population density figures do not include either, (except for approximately 100 base personnel who have registered to vote in Lincoln and except for those in the Hanscom Air Force Base Mobile Homes and Bachelor Officers Quarters who have sent back census cards to the Bedford Town Clerk.)

Overview of Development

Figure 2-2 displays the current zoning within the town of Bedford.

Bedford, whose history is rich, retains evidence of its heritage in the pattern of its uses of land. The oldest homes lie along the original agrarian roadways that run between Bedford and its neighboring communities. Many of these homes were surveyed and documented in a Community-wide Historic Properties Survey performed by the Bedford Historic Preservation Commission in 1998 and published by the Bedford Historic Society in 1999. The town has one National Register District, the Old Bedford Center Historic District, with approximately 100 historic properties.

There are 4,616 households in Bedford, housed, in 4,059 residential units. Of these, 3,419, or 84 percent, are classified as "Single Family." The table, Summary of Existing Residential Uses, shows the distribution of housing in Bedford. This table is based on Assessors data and other supplementary housing counts. Military housing does not have as great an impact on Town services as other housing.

Summary of Existing Residential Uses, 2002

<u>Type</u>	<u>Units</u>
Single Family	3266
Condominium	322
Multi-Family	692
Mobile Homes	216
Single Room Occupancy (SRO)	<u>27</u>
Total	4716

While 12,996 people live in Bedford, approximately 23,000 persons work at the various commercial, industrial and institutional facilities within the town giving Bedford one of the highest jobs-to-homes ratios in the state, 5:1. This results in strong support for its tax base, but is also a major contributor to the most vexing problem in town, extremely congested traffic, mornings, evenings and mid-day.

Bedford's major business district flanks the town's center on both sides of the main thoroughfare, The Great Road. Industrial uses have long adjoined the now abandoned railroad right-of-way in the center of town. With the coming of town planning and zoning in the mid-20th Century, new industrial development was mainly relegated to the east side of town, on the far side of Route 3, a highway that was built in 1958 and is now a major commuter route.

Bedford is home to several federal and state installations that have helped to shape our town. Hanscom Field/Hanscom Air Force Base, which occupies a significant area of Bedford's south, and the Edith Norse Memorial Veteran's Hospital, located in the relative center of town, contribute to employment opportunities in Bedford while significantly adding to the demand for other development. The uncertain futures of both institutions contribute to both the challenges

and opportunities that may confront the town. Middlesex Community College opened a large campus in the northern end of Bedford on land that had been owned by a seminary and convent. The west edge of Bedford along the Concord River is and will remain undeveloped as part of the Great Meadows National Wildlife Refuge.

There are 126 properties in commercial use, occupying a total land area of 17.2 million square feet (396 acres) and a total building area of 6.4 million square feet.

There are 74 industrial properties, a total of nearly 1 million square feet of developed industrial space on a land area of 21.6 million square feet (496 acres).

Figure 2-3 shows the array of land uses, which have resulted from the combination of pre-zoning law "grandfathering" and subsequent increasingly controlled development. The Land Use Map, which had last been updated for Bedford's 1985 Comprehensive Plan, has been updated to include development that has occurred since that time. Significant areas of new development include:

New residential developments at Bedfordshire, Shawsheen Ridge, Governor Winthrop Estates, Hayden Highlands, Homestead Estates, Huckins Farm, Revolutionary Ridge, Bedford Meadows, Sweeney Ridge, and Page Hill.

Commercial development along the Great Road such as Great Road Village and 200 Great Road.

Industrial development in the Crosby Drive/ Middlesex Turnpike area.

Bedford is in the process of converting to a comprehensive Geographic Information System (GIS). When fully operational, this GIS mapping capability will combined the various Town databases such as the Assessor's database, the DPW's and the Town Clerk's, and enable the Town to access all the within databases to create combinations of reports and maps using all the data. As part of this comprehensive planning effort, preliminary maps have been generated on the GIS.

Demographic Profile and Projections

For most communities, ascertaining an accurate population count is a straightforward task. Not so in Bedford, since the U.S. Postal Service assigned a Bedford zip code to Hanscom Air Force base housing actually located in Lincoln.

Bedford's population, as reported by the U.S. Census, showed strong growth in the early to mid-1900s, climbing from 2,603 in 1930 to 5,234 in 1950. Between 1950 and 1960, Bedford experienced extremely rapid growth: the town's population more than doubled, going from 5,234 in 1950 to 10,969 in 1960. Growth continued in the following decade, reaching 13,513 in 1970, a 23.2 percent increase.

Bedford's apparent growth over this period was in large measure caused by the rapid expansion of Hanscom Air Force Base which introduced 1,061 units of relatively high density family housing (since reduced to 858) in the period of 1958 to 1970. There followed a significant decrease (22%) of the base population since its zenith that further confuses the picture presented by the "official" population figures. Additionally, the on-base residents will hereafter be reported as Lincoln residents, beginning with the 2000 Census.

Because of this difficulty in using the official decennial census, two analysis have been conducted:

- A first analysis is based on Town of Bedford Sources
- A second analysis is based on corrected Decennial Census figures.

Town Census

Using the official census, it is claimed that Bedford's population remained relatively stable since 1970, declining slightly in the early 90's and returning to 12,996 by 1990. Projections by the Massachusetts Institute for Social and Economic Research (MISER) predict a stabilization of Bedford's population at about this current level. The experience of those living in Bedford as well as the census data collected by the Town Clerk – which excludes the base housing in Lincoln – do not support either the claim or the forecast, at least in the near term. Correcting the "official" figures with an estimate of the persons residing on base would reduce them by about 2,350 for 1970 and 1980 and by some lesser amounts in 1960 during the base build up and in 1990 as the military presence on base was being reduced. The following table depicts the Bedford population in the 90's, as determined by the Town Clerk.

Population Change 1991-1999

<u>Year</u>	<u>Population</u>	<u>Change</u>	<u>%</u>
1991	11,310	-	-
1992	11,520	210	1.9
1993	11,440	-80	-0.7
1994	11,626	186	1.6
1995	11,745	119	1.0
1996	11,961	216	1.8
1997	12,157	196	1.6
1998	12,401	244	2.0
1999	12,696	295	1.6

Source: Town of Bedford Town Clerk

Since January 1993, the town population has steadily increased, coinciding with the current cycle of robust economic times and new residential development. In the last six years the population increased by an average of 209 persons per year, with a high of 295 and the low of 96. Over the

eight-year period from 1991 to 1999, there has been a total population increase of 1,386 persons or a 12.3% increase above the 1991 population.

Of at least as much importance to the future of Bedford is the dramatic shift in the age profile of the town. The table below depicts the percentages of Bedford's population by age group as reported in 1980, 1989 and 1999. (The 1980 data source is MISER. The 1989 and 1999 data comes from Bedford's Town Clerk. No two of the three data sets were compiled using the same age break points, so some small errors may be present in the individual entries in the table, which was derived from graphical analysis. However, the overall picture displayed by the table is accurate.)

Population Age Profiles

<u>Age Group</u>	1980	1989	1999	1980	1989	1999
	<u>Percentage</u>	<u>Percentage</u>	<u>Percentage</u>	<u>Persons</u>	<u>Persons</u>	<u>Persons</u>
0-5	5.4%	4.4%	4.9%	579	513	622
6-10	10.1%	6.7%	7.6%	1,083	780	965
11-15	8.4%	5.7%	5.8%	900	664	736
16-20	8.0%	6.7%	5.2%	858	780	660
21-25	7.6%	8.5%	4.1%	815	990	521
26-30	7.5%	8.4%	4.4%	804	978	559
31-35	7.6%	8.3%	6.2%	815	967	787
36-45	14.8%	15.4%	17.8%	1,587	1,794	2,260
46-55	11.2%	13.3%	14.3%	1,201	1,549	1,816
56-65	11.2%	10.3%	11.5%	1,201	1,200	1,460
66-75	5.0%	6.5%	9.0%	536	757	1,143
Over 75	3.2%	5.8%	9.2%	343	656	1,168

The proportion of young adults in Bedford's population is shrinking, and our percentage of senior citizens is increasing, with both trends apparently continuing into the future. Young families supported by blue-collar wage earners or professionals at the bottom of their career ladders can no longer afford to live in Bedford. Higher earning 35-45 year old professionals who are joining an aging established population are replacing them. This increasingly dominant generation of professionals has tended to delay the start of raising a family and is now creating new growth in the school-age population. The consequence to the town has been the need to enlarge all of Bedford's schools. Further, the population growth and the demographic shift have joined to create a dramatic increase in the need for town services. They have also created an extraordinary upward pressure on real estate values, which has placed a severe financial burden on the town's fixed-income seniors.

Decennial Census

The following data for the 2000 US Census and for the 1990 corrected data does not include the Hanscom AFB housing in Lincoln. These data, coupled with regional, confirm the major trends revealed by the town data, and allow comparisons with the Metropolitan Region and with the MAGIC sub-region.

Population

Total population	1990	1990 corrected	2000	% Change corrected
MAPC region	2922934	2922934	3066394	4.9%
MAGIC	135331	135331	144695	6.9%
Bedford	12996	11916	12595	5.7%

Bedford's population is growing faster than the region as a whole, but slower than the MAGIC sub-region.

Sex

In 1990, Bedford had a larger male population than the female (unlike the usual lower percentage generally found in the country). In 1990 the population in Bedford was 52.8% male and 47.2% female. This may be explained by local institutions with a predominantly male population, such as Hanscom Base or the VA Hospital. However this unusual inversed balance has turned in 2000 with a slightly higher percentage of females at 50.2% compared to 49.8% male.

Age

Bedford's median age is increasing at a fast pace relative to the other regions in the State such as the MAGIC or MAPC sub regions.

		Median age	Under 20 years	20 to 34 years	35 to 64 years	65 years and over
		(percentage of the population)				
MAPC region	1990	32.94	24%	29%	34%	13%
	2000	36.15	25%	23%	39%	13%
MAGIC	1990	36.25	25%	22%	41%	12%
	2000	39.12	28%	13%	45%	13%
Bedford	1990	36.87	22%	25%	39%	14%
	2000	42.1	25%	12%	45%	18%

The fact that the median age rose from 36.9 to 42.1 years does not summarize a more complex reality where the percentage of the youth increases, but where the number of young adults drastically falls.

¹ In 1990 Census Bedford figures included Block 906 E, which is actually mostly part of Lincoln. These figures have been corrected by subtracting this Block, in order to obtain a sensible 1990/2000 comparison.

Race

Bedford has followed the general trend with an increase of its Asian and Hispanic population, with figures close to the rest of MAGIC subregion. Still, Bedford remains less diversified than other areas of the Metro region, with a white population at 91% compared to 81% for the Metro region.

		White	Black or African American (percentage of the population)	Asian	Hispanic or Latino (of any race)
MAPC region	1990	87.4%	7.1%	3.2%	4.5%
	2000	81.2%	7.5%	5.4%	6.4%
MAGIC	1990	94.6%	1.5%	3.2%	1.8%
	2000	90.8%	1.3%	5.5%	2.0%
Bedford	1990	93.7%	2.7%	3.1%	1.5%
	2000	91.2%	1.7%	5.4%	1.8%

Buildout Analysis

The buildout analysis for Bedford identifies current land use patterns and estimates the potential for future development under existing zoning. This analysis was conducted in two parts: a commercial and industrial buildout analysis and a residential buildout analysis, which are summarized below.

The analysis was based on parcel-based data obtained from the Bedford Assessor's records, an accurate, authoritative and comprehensive source of data. In this database, property is classified according to a statewide use code established by the Massachusetts Department of Revenue. Estimates of future development potential are made by applying the allowable intensity of development (generally based on the "floor area ratio" in commercial and industrial zones and on minimum lot size requirements in residential areas) against the available square footage. Land that cannot be built upon because it is or is proximate to wetlands is removed from consideration.

Summary of the Commercial and Industrial Buildout Analysis

The commercial and industrial buildout analysis looked at all existing commercial and industrial properties and assessed the potential for future development on both undeveloped and underdeveloped parcels. There are 38.8 million square feet of area zoned commercial or

² This table only shows the figures for the races with highest population in Bedford. The sum of these figures can be under 100% as well as over.

industrial property upon which there are already approximately 7.4 million square feet of developed space, 6.4 commercial and 1.0 industrial. When wetlands are subtracted from the site areas and the applicable FAR densities of allowable development are applied, an additional 3.0 million square feet of commercial and 1.4 million square feet of industrial space could theoretically be developed.

Summary of the Residential Buildout Analysis

The residential buildout analysis is based on an estimate of the total area of currently vacant or underutilized residential parcels. Included are certain parcels which are not presently categorized by the Assessor's code as residential, but which could be subject to residential development. They are listed with Use Codes 601 and greater in the table, Residential Development Potential at Full Buildout found in the Appendix. They include large open space parcels and "Chapter 61" land (i.e., forested land, agricultural land, and recreational land). While it is not likely that all of this land will be developed for residential use, this analysis establishes a theoretical maximum development potential of single-family dwellings built under current zoning.

The residential buildout analysis identified all vacant residentially zoned lots and all residentially zoned parcels larger than 200,000 square feet (4.6 acres). The analysis assumes that any parcel that large with only a single residential unit on it can be further subdivided. Wetlands were subtracted to provide a net land area before the yield of potential lots was estimated.

The two zoning districts in Bedford where larger tracts of undeveloped land exist are in the Residence R (60,000 square foot lots) and Residence A (40,000 square foot lots). For the purpose of the analysis, a single prototypical minimum lot size was assumed to be 50,000 square feet, with an additional 20% added to allow for roads, lot configurations and topographies. Thus, for the purpose of this analysis, the unit area that is required to support the development of a single new house is assumed to be 60,000 square feet.

The total residential land area made up of parcels greater than 200,000 square feet is 37,045,018 square feet, or 850 acres. The potential for residential development on these lands is 441 dwelling units. Add to this one residence for each of the 120 smaller, currently vacant lots and the total potential buildout of residential units in Bedford is 561.

To cover all possibilities, an additional calculation identified the potential for development on the large institutional parcels in Bedford, Hanscom Field, the VA Hospital, Middlesex Community College, and the Old Causeway Road property owned by Harvard University.

One critical facet of residential development not included in the potential listed below is the effect of potential Chapter 40B comprehensive permit developments. If permitted, these developments, which are allowed increased housing unit density, could increase the development total by as many as 769 units, if Bedford has yet to meet its affordable housing quota of 10% set by state law, and if suitable parcels are made available for such development.

The table below summarizes the results, of the residential buildout analysis, including what is statistically possible for the unlikely conversion of the large institutional properties.

Summary of Residential Development Potential

	<u>Land Area</u>	<u>Lot Yield</u>
Developable Lots > 200,000 SF	37,045,018	441
Developable Lots < 200,000 SF	<u>6,567,039</u>	<u>120</u>
Total	43,612,057	561
Other Large Parcels:		
Harvard University	3,428,172	39
VA Hospital	7,799,853	116
Middlesex Community College	7,716,653	107
Hanscom Field	36,429,228	592

Note: To include these other large parcels in the buildout for the Town would be irresponsible and alarmist. The lot yield shown assumes that all the existing structures are demolished and the entire area subdivided into single-family lots. Hanscom Field is zoned Industrial Park (A), which does not permit housing except by special permit as a mixed use development and would require rezoning to permit residential use.

Figure 2-4 depicts land that is currently vacant, while Figure 2-5 shows the major development constraints and identifies vacant lots with an area greater than 10 acres.

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Vacant or Primarily Vacant Parcels Greater Than 10 Acres

Label	Area (sq. ft)	Address	Land Use**
1	524833	032 Chelmsford Road	Vacant Res
2	1035560	466 Old Billerica Road	Vacant Res
3	3422058	170 Middlesex Turnpike	Vacant Com
4	832148	463 Old Billerica Road	Vacant Res
5	908514	017 Harvard Drive	Vacant Res
6	631405	136 North Road	Vacant Res
7	652795	082 Carlisle Road	Vacant Res
8a*	1275479	057 Concord Road	Prim. Vacant
8b*	380836	005 Davis Road	Prim. Vacant
9	653881	135 Shawsheen Road	Vacant Res
10	1969891	350 Concord Road	Vacant Res
11	823502	015 Turf Meadow Road	Vacant Res
12	765605	022 Evans Drive	Vacant Res
13	2231985	381 South Road	Vacant Res
14	966505	444 Concord Road	Vacant Ind
15	886396	444 Concord Road	Vacant Ind
16	865716	175 Hartwell Road	Vacant Ind
17	2327810	180 Hartwell Road	Vacant Res
18	476170	056 Evergreen Avenue	Prim. Vacant
19	435692	093 Springs Road	Prim. Vacant
20	438078	251A Old Billerica Road	Prim. Vacant

Label	Parcel ID	Map Lot	Owner
1	108	008 0002	Greenwood, Moses Est. of
2	84	011 0025	O'Connor, Mary M. & Thomas J.
3	93	012 0017	The Gutierrez Company (under agreement)
4	94	012 0033	O'Connor, Mary M. & Thomas J.
5	1009	034 0021	Hughes Lumber Co. Inc.
6	1202	035 0005	Kazarian, Huratch & Stephen Tr
7	1263	044 0001	Kazarian, Huratch & Stephen Tr
8a*	1592	053 0004	Mancuso, John S. & Christine
8b*	1925	053 0002A	Murray, Patricia A. Tr
9	2300	056 0053C	Finn, Ann M. Et Al
10	4094	068 0102	Cerasuolo, Rose C. Tr
11	3621	069 0009	Brown, Nathaniel K. Tr
12	3511	070 0001	Brown, Nathaniel K. Tr
13	4087	072 0033	Eisenhauer, Charles E. Est. of
14	4216	074 0021	Mass Port Authority
15	4236	074 0021	Mass Port Authority
16	4099	076 0001	Raytheon Company
17	3637	076 0003	Brown, Nathaniel K. Tr
18	4141	079 0150	Yauckoes, Johanna
19	1889	054 0109	MacGann, Mary K.
20	733	029 0022	Ceppi, Michael F. & Jenny C.

* Parcels 8a and 8b are to be considered together, since they are the sites of the proposed Avalon Bay development.

** Prim. Vacant land use stands for single-family lot parcels bigger than 200,000 sq. ft., and thus considered as underdeveloped or 'primarily vacant'

Alternative Development Scenarios

Based on the town's current land use policies, the buildout analysis indicates a potential for substantial additional commercial and industrial development. The existing overall development pattern is characterized by dispersed single-family housing, commercial development concentrated along The Great Road and, on the periphery, the light industrial development that attracts additional workers. New development continuing along these paths is likely to result in significant additional traffic and to have other impacts that would contribute to a further deterioration of mobility and Bedford's small town character. Given the potential impact presented by the buildout analysis, comprehensive review of appropriate development control mechanisms (e.g., zoning bylaw) should be undertaken with the aim of encouraging alternative development scenarios that reflect residents' desires to maintain Bedford's small town character.

Land use policies are an important tool in controlling the impact of development. Dispersing small areas of neighborhood-level commercial development could help reduce traffic congestion and maintain small-town character. An example of this pattern of dispersed, neighborhood level commercial development is found in Lexington. Small-scale shopping areas are located at major intersections such as Waltham Street and Route 2A, Woburn Street and Lowell Street, and Massachusetts Avenue in East Lexington. The types of stores and services at these locations are small food/convenience stores, dry cleaners, a hardware store, deli, bakery, and small coffee shops or restaurant/take-out food shops. These commercial areas provide services at the neighborhood level, encouraging pedestrian access and, by providing an alternative to shopping in Lexington center, helping to reduce traffic in the center of town.

There are opportunities to establish or reinforce small neighborhood shopping areas in Bedford. These shopping areas could be distributed throughout town, at major intersections in residential areas or near major activity centers such as Middlesex Community College and the VA hospital or on Middlesex Turnpike. These commercial areas could provide pedestrian access to buy a gallon of milk or a loaf of bread in residential areas, or for office complexes on Middlesex Turnpike, alternative lunch choices, banking services, or a place to get a haircut.

The scale, site layout, and architectural and landscape design of these commercial areas should reflect the character of the surrounding area. The objective in identifying potential locations for these shopping areas was to provide a commercial area within one mile of most neighborhoods. An appropriately scaled building might be of a size on the order of the recently constructed mini-mart at the junction of Carlisle and North Roads. While it might be larger, the "neighborhood" scale intent limits construction of what could be interpreted as a new "strip mall."

Provisions for limited convenience retail in conjunction with new office or industrial developments are to be encouraged. Zoning laws must be changed and developers offered incentives to incorporate such commercial uses within any new complexes in order to move forward on such change in Bedford.

Proposals and Recommendations

To address the vision of the Town and the goals that were derived from it, the following development related steps are recommended.

2-1. Maintain Small Town Character of Bedford

The foremost recommendation is to enhance the small town character that is valued by Bedford residents. The center of town and the town's historic resources should be preserved as the central focus of the community and their aesthetic qualities should be protected.

2-2. Reinforce the Integrity of Existing Residential and Commercial Areas

Existing residential neighborhoods should be protected from incompatible development and through traffic. The appearance of commercial areas should be upgraded. Native and disease resistant shade trees, shrubs and flowers should be abundant features of the streetscape in all districts.

Changes to the Bedford Zoning Bylaw are required to enhance the commercial areas along The Great Road area and the town center. These changes would focus on improving the aesthetics and accessibility of these areas through streetscaping and parking improvements. Both commercial buildings and parking facilities should be configured and clustered to encourage walking from store to store. Buildings should be located at the front of the site with parking to the rear. The visibility of new and existing parking areas should be buffered and landscaping within parking areas should be developed to reduce the visual impact of large parking lots. Streetscaping improvements, including native shade trees, planters, and benches would help to establish a pedestrian friendly environment.

2-3. Promote Mixed Use to Improve Balance Among Land Uses

A mixed-use pattern of land uses would tend to reduce traffic congestion on local roadways and encourage pedestrian and bicycle access. The development of small well-defined neighborhood commercial areas distributed throughout Bedford could be developed in combination with smaller residential units, public transportation and neighborhood parks.

The development of convenience retail uses within new commercial and industrial developments should be encouraged to serve the needs of their occupants and nearby residential areas. Bedford passed an industrial mixed use provision at the 2002 Annual Town Meeting. Mixed use provisions should be expanded to cover locations such as the Depot Park area as well as elsewhere in town.

2-4. Monitor and Control the Rate and Overall Level of Development

The buildout analysis indicates that there is the possibility of significant future development in Bedford. Both the rate of development and overall level of development should be monitored to assure that adequate public services and facilities are available and that traffic, parking and other impacts are not detrimental to Bedford's character. Proactive adjustments to the FAR, parking requirements and other zoning regulations and subdivision rules and regulations should be made as necessary to moderate the level of development.

2-5. Promote Small Businesses Along The Great Road

Amend the Zoning Bylaws to promote only small retail and professional services along The Great Road business district verses large office uses.

2-6. Preserve Open Space

Purchase open space and development rights or obtain conservation easements in order to contain growth and maintain small town character.

2-7. Purchase Land for Municipal Uses

Purchase land suitable for development of municipal facilities that will be needed in the future for schools, playing fields, watersheds etc. To address the vision of the Town and the goals that were derived from it, the following land purchase related steps are recommended.

The need for major capital expenditures for the DPW Facility, the Town Center and the High School has been documented. Solutions currently being discussed do not require land purchase.

Desirable open space land purchases for conservation and recreation use are identified in the Town's approved Open Space and Recreation Plan. Considerations for additional playfields are summarized in Chapter 6. Proposed purchases are typically brought before the Town Meeting for approval when specific parcels in the plan come on the market. The importance of the parcels in question and the financial condition of the Town at that time are usually determining factors as to whether the parcels in question are purchased. Bedford, through its recent approval of participation in the State's Community Preservation Act, will be accumulating some funds for open space purchases.