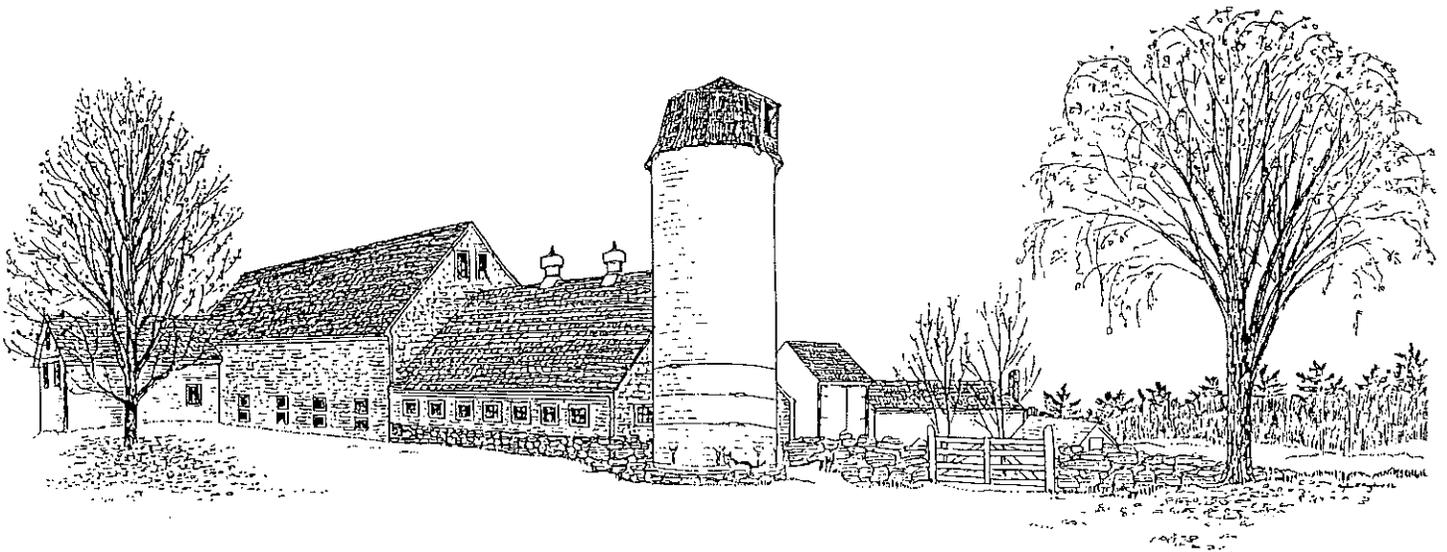


# A STUDY PLAN FOR THE TOWN OF CARLISLE



GENERATED BY THE CITIZENS OF CARLISLE

AND THE CARLISLE PLANNING BOARD

1995



Dated: April 19, 1995

## **A STUDY PLAN FOR THE TOWN OF CARLISLE**

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## **I. INTRODUCTION**

This Study Plan (the "Plan") is a guide for action by Town officials, boards and committees. It is a living document and part of an ongoing process with the flexibility to adapt to the needs of the community while maintaining the goals and values consistently emphasized by Carlisle citizens. As such, it can and should be updated and changed over time. All officials, boards and committees of the Town should refer to the Plan in discharging their responsibilities.

The Town, as a whole, values its traditions. To maintain and preserve those traditions, planning for change is necessary. Therefore, the Town initiated the community planning process. Long range planning is necessary to identify common concerns of Carlisle residents and plan for the future of the Town of Carlisle. These concerns should include all items of interest to the Town, such as its physical, social, economic or environmental aspects. A long range plan, a "Study Plan," will assist the Town and its residents make coordinated decisions that may affect each of these areas.

In 1990, the Massachusetts legislature redefined long range planning by Massachusetts municipalities to include "goals and policies for future growth and development," and urged an "interactive public process to determine values and goals." Section 81-D of Massachusetts General Laws Chapter 41 mandates that a "planning board established in any city or town . . . make a master plan of such city or town. . . ." That statute provides further that "[s]uch plan shall be a statement, through text, maps, illustrations or other forms of communication, that is designed to provide a basis for decision making regarding the long-term physical development of the municipality." Recent court decisions in the Commonwealth indicate that zoning bylaws and other land use regulations are more likely to withstand scrutiny if they further the goals or objectives set forth in the municipality's master plan or study plan. Since we consider this document part of an ongoing planning process, we have chosen to call it a "Study Plan" rather than a "Master Plan."

A master or study plan is necessary to ensure that the Town complies with state law so that, among other things, it will be eligible for funding or other forms of assistance from the State. More importantly, this Plan will also assure that future development in Carlisle is consistent with the goals and objectives of its residents. A locally devised plan is the only way to ensure that development within the Town is consistent with the local values and reflects the wishes of its citizenry.

State law requires that Carlisle's Plan contain the following elements: (1) goals; (2) land use; (3) housing; (4) economic development; (5) natural resources; (6) open space; (7) services; (8) services; (9) circulation; and (10) implementation. Through the interactive community planning process over the past several years, long-range goals were established and the values underlying those goals were defined. The values were refined and ultimately defined in such a

way that they led to the Plan sections set forth below. The major sections of the Plan are broken down into subsections which address smaller components of larger issues and satisfy State mandated criteria. Action recommendations were derived from the entire process, including the Community Planning Days, value statement discussions, Long Range Goals of the Carlisle Community endorsed at Town Meeting in 1993, Town boards, commissions and concerned citizens. The action recommendations are listed within each subsection or at the end of the section of the Plan.

#### **A. Carlisle Past to Present.**

Carlisle is a 15.4 square mile town with a 1994 population of 4,464 contained with approximately 1500 households. It is located about 25 miles northwest of Boston, between the Inner and Outer Beltways of Route 128 and Interstate 495 and between the radial Routes 2 and 3. The shape of the Town is nearly circular with all major roads converging at a hub at "Carlisle Center," the social, physical and historical focus of the community. All the Town facilities, including the elementary school, Town offices, police, fire, library, several churches, the post office and most of the Town's few businesses are located in the Center. The Center gives the Town a distinct sense of place and a cherished image through its cluster of 19th century buildings set off by surrounding open space reminiscent of earlier farming days. An Historic District protects the buildings and their immediate surroundings in the Center.

Carlisle has a long history of planning and self-rule. The Town prides itself on its aesthetics, senses of place and rural character. Like many small New England towns, it is a community in which residents value their life together, as well as their ability to pursue their own interests. Its community decisions are made in open Town Meeting and Town government is conducted by volunteer boards and committees which give direction to administrative decisions.

The dwellings in Carlisle are 92% owner occupied, single family homes. Its residents consist primarily of business people, professionals, and educators who commute to metropolitan areas and other suburban locations. The Town of Carlisle grew at a rate of 32% between 1980 and 1990. Because of sales of existing homes and population changes, more than half the people currently living in town did not live in town prior to 1980. (See Appendix, page I). In order to guide growth in the most appropriate manner consistent with the Town's values, zoning changes must be recommended for acceptance at Town Meeting from time to time. Therefore, having a Plan will provide a structure within which to effectively achieve the Town's own goals. Conversely, the lack of a Plan may have adverse implications for Town facilities planning and land use considerations.

The sense of rural atmosphere and experience in Carlisle is a result of many factors. Long range planning and zoning in the past included the following: (a) a decision years ago to zone most of the Town for primarily two acre residential lots; (b) reduced frontage four acre pork chop lots; and © the common driveway bylaw which creates a single access for up to six lots leaving

the frontage unspoiled. Preservation efforts included the following: (a) willingness of the Town to purchase strategic conservation land, including the Cranberry Bog (the last working cranberry bog in Middlesex County); (b) "no-build" wetland designations; © Carlisle Land Trust acquisitions; (d) Great Brook Farm State Park; (e) Chapter 61-A designation for farmland taxation; (f) the Conservation Cluster bylaw; and (g) the recently approved Senior Residential Open Space Community bylaw. Other factors contributing to the "sense of rurality" are the geography, including the large proportion of wetlands and the remaining farming community. Therefore, there is a "perception of rurality" which is greatly appreciated by townspeople and visitors alike, which creates in observers an overwhelming desire to preserve and enhance that sense of the rural aesthetic.

### **B. Early Planning Efforts.**

Because of the many participants in the planning process, it has had a long and interesting history in Carlisle. Town-wide questionnaires were conducted in 1970 and 1974 by the League of Women Voters and in 1985 by the Carlisle Master Planning Committee. A housing needs survey was conducted in 1988. Carlisle Communications, Inc., sponsored a Town-wide study in 1990. Based on these and other analyses, an Open Space and Recreation Plan was formulated by a joint committee of the Planning Board and the Conservation Commission in 1979, updated in 1985 and again in 1994. The 1985 Open Space and Recreation Report was endorsed by Town Meeting and has become the basis for recommendations to the Town for land purchases and conservation efforts.

Two master plans were formulated for the Town by consultants: the Benjamin report of 1960 and the John Brown report of 1975. While aspects of these reports have been implemented in a piecemeal fashion, neither plan was adopted or endorsed by the Town. In contrast, this Plan under consideration is a result of an ongoing volunteer effort and lengthy community participation process.

### **C. Community Participation in Recent Planning Efforts.**

#### **Carlisle's Vision of the Future**

In the late 1980's, the Planning Board, recognizing the need for a long range community plan, began the classic process of gathering information and determining the current and future needs of the Town. In 1992 and 1993, two Community Planning Days were held in an attempt to involve the entire Town in formulating goals for this plan. Few other towns have had such a long-term town-wide goal-based process.

The community goals, entitled "Long Range Goals of the Carlisle Community," which evolved from that process, were accepted at Town Meeting in 1993 and have been incorporated

into this Plan where appropriate. The first twenty (20) of those goals are set forth in the Appendix at pages ii-iii.

Following the April 1993 Town Meeting, a series of community meetings were held with all Town boards and interested townspeople to define, develop and determine the community values underlying the above goals. It was determined that each of the separate goals fit into one of four categories: Rurality, Community, Education or Safety. For example, the goal "to promote social and multi cultural events" represented the value of "community." The goal of "[e]ncouraging agriculture and farms" represented the larger concern for the "value of rurality."

These four basic values were reexamined and defined to ensure that they encompassed and represented the concerns and interests of the Town. Town officials, boards, committees and other parties in interest were provided with an opportunity to evaluate and comment upon the components of each of the values. As a result of that process, the community-based definitions of those values follow:

#### Value of Rurality

In Carlisle rurality connotes a harmony between natural and manmade environments. In order to enhance the visual quality of the Town and the perception of open space and rural characteristics, the following are desirable:

- encourage and protect agricultural uses;
- maintain, in an undeveloped state, large connected parcels for wildlife corridors and trails;
- protect natural and historical features;
- protect historical, social and aesthetic qualities of Town Center;
- encourage housing variety in size, style, and setback, with flexibility in the use of open space;
- maintain overall two acre density in order to protect the Town's natural resources;
- require roads which are sensitive to and preserve the natural environment and utilize the traditional components such as walls and fences.

### Value of Community

Community is a group of people who relate through their activities. They share commonalities:

- Mutual respect for differences, diversities, and degrees of participation;
- A sense of mutual caring;
- Inclusiveness of diverse population;
- Interest in the community;
- Desire for governmental policies to be set and directed by townspeople;
- Care for our environment, both manmade and natural;
- Desire for the opportunity to interact;
- The sense of community is enhanced by the appreciation for the Town Center as the physical, aesthetic, cultural, historic, and social core.

### Value of Education

Education is the facilitation of learning, both formal and informal. It promotes the lifelong process of:

- acquiring knowledge;
- experience;
- comprehension; and
- insight.

### Value of Safety

In a safe environment, one has a sense of personal security enhanced by the appropriate public safety services. Planning for safe travel includes:

- Managed vehicular and pedestrian traffic;
- Availability of transportation;
- Alternative modes of travel.

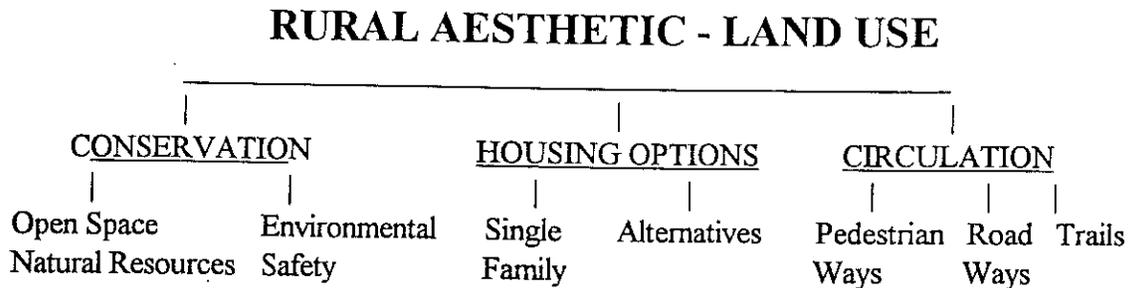
**Graphical Representation of Elements of Values**

The following is a graphical representation of the categories within the Values Statement. The two major headings of RURAL AESTHETIC - LAND USE and RURAL COMMUNITY are expressions of the two factors townspeople found the most important. Within the framework of the first major heading, RURAL AESTHETIC - LAND USE fall items from the value of rurality, such as conservation and open space, housing site planning and design, sensitivity to road design and the desire for trail linkages. The first heading includes the State mandated Plan items of land use, natural resources, open space, housing and circulation.

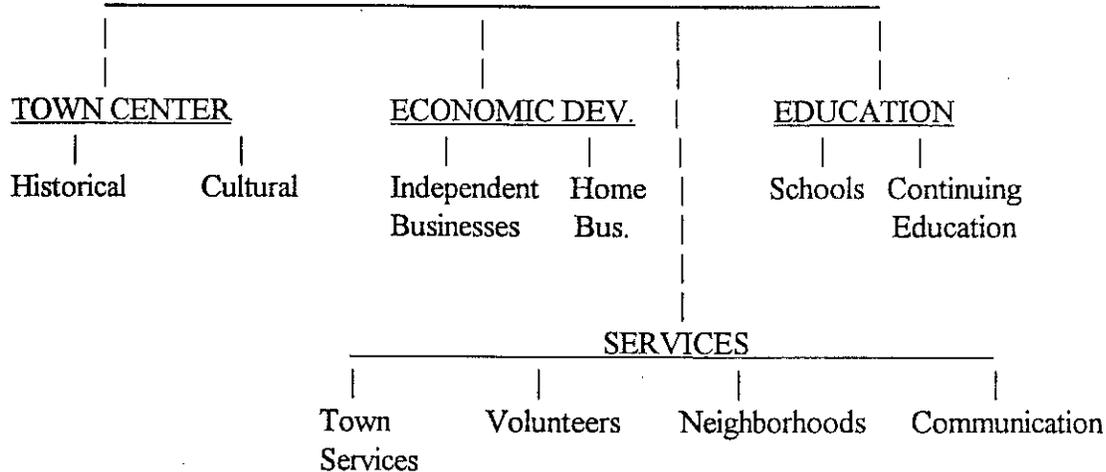
The second heading, RURAL COMMUNITY, encompasses the factors which create the sense of affinity within the Town, and is derived from the elements which comprise the values of community, education and safety. Because of the overwhelming emphasis on the importance of rurality, community is also modified by the term rural. In addition, the schools, the Town Center, the locations of businesses and the services offered by both volunteers and governments are within this heading. The State mandated elements of economic development and services are contained under this heading.

The graphical representation of elements of the Town's four values, then, becomes the format of the organization of this Plan.

**GRAPHICAL REPRESENTATION OF VALUE ELEMENTS**



# RURAL COMMUNITY



Another Community Planning Day was held in 1993. This Community Planning Day considered the values established at the public meetings held during the summer and fall of 1993 and the long-range goals in order to focus on implementations ideas. At that time, an abundance of ideas for implementing the goals and values evolved. The areas of greatest concern were:

1. Protect and preserve undeveloped land by purchase or other means;
2. Provide means of constructing housing alternatives for senior citizens;
3. Guide and restrain growth pressures.

The ideas generated at the 1993 Community Planning Day were placed into a community-wide survey and the recommendations in this Plan are a direct result of the townspeople's responses to that latest of Town questionnaires. An Interim Master Plan Report was made available at Town Meeting in 1994 in order to update and apprise townspeople of progress made in the Master Planning process.

## II. DIRECTIVES FROM THE COMMUNITY PLANNING PROCESS

That townspeople greatly value the rural appearance of Carlisle can be seen from the results of questionnaires of 1974, 1985, 1990, and 1994 and the Community Planning Days of 1992 and 1993. Residents consistently value the remaining natural views along Town roads, appreciate the rural vistas and enjoy the open spaces of Carlisle. The significance of this issue is so great as to take precedence over all other issues to townspeople. Although there has been a substantial turnover of residents, the significance of this issue has not changed in more than twenty years. Consequently, this Plan will recognize the RURAL AESTHETIC as one of the most important issues to Town residents.

## **A. RURAL AESTHETIC - LAND USE**

### **Conservation: Open Space & Natural Resources**

#### **EXISTING PHYSICAL AND ECONOMIC CONDITIONS**

Shaped by retreating glaciers about 20,000 years ago, Carlisle has a general elevation of 200 feet, with gentle slopes of four hills rising from the Concord River on the east and Spencer Brook on the southwest. Open vistas, farmland, rock outcroppings, small streams, and wetlands are the predominant features.

The 1994 Open Space and Recreation Plan ("OS& R") has inventoried and identified the open space, conservation and recreation areas in the Town and has recommended actions to maintain, enhance and expand these areas. Of the approximately 9900 acres in Town, approximately 2200 acres are permanently protected public and private conservation land, including parcels with permanent conservation restriction. The OS&R plan includes goals for protection of regional and Town-wide conservation and open space lands and a priority list of land to meet those goals. A target of 1,000 to 1,200 acres of additional protected open space is a goal of the report. The plan also details active and passive recreation needs and contains action plans for achieving those goals. This Plan, based on input from the Community Planning Days' emphasis on the rural aesthetic, endorses the OS & R endeavors to further detail and expand upon means of achieving the conservation goals.

Since 1970, conservation minded residents have used restrictions as a means of preserving and protecting large tracts of land. The use of the conservation restrictions allowed the landowner to keep his parcel intact, granted the landowner certain tax benefits, and preserved the parcel forever. There are several large tracts preserved in this manner. Some of the Town's own holdings are protected through conservation restrictions. Conservation restrictions are the means utilized to preserve the trails' linkages in Town. Recently, conservation restrictions provided a unique way to protect an "endangered species habitat" threatened by development.

One significant factor in the regulatory environment is that the options available to the Town are limited because of recent Supreme Court decisions. The ability of the Town, (through the issuance of special permits or otherwise), to impose conservation restrictions as a condition for approval is limited by the Just Compensation or Takings Clause of the Fifth Amendment to the United States Constitution. Recent decisions by the United States Supreme Court appear to elevate the rights of property owners, developers and builders by requiring that (1) there be a "rough proportionality" between the conditions imposed on permits and the impact of the project and (2) the government bears the burden of proving that a connection exists between the permit condition and the project impact. Land use boards generally impose three types of conditions on permits which include: (1) on-site conditions, (such as dedication of land), off-site conditions (such as construction or rehabilitation of streets), or (3) monetary conditions (such as impact fees) or linkage. The recent decisions in this area by the Supreme Court do not, however, represent the demise of the practice of placing conditions on

real estate development permits so long as permit-granting authorities take steps to support the conditions they seek to impose.

Carlisle is a predominantly residential community with few sources of revenues other than residential property taxes to support Town services. The school system is the most significant cost factor to the community which prides itself on its educational excellence and quality. Recent studies have shown that residential development is costly to a Town in terms of generating fewer property tax revenues than are utilized in terms of services by the new development. *See Is Land Conservation Bad for the Tax Base?*, Landlines (September 1993). Robert Burchell, professor at Rutgers University's Center for Urban Policy Research, an expert in fiscal impact analysis, has ranked different land uses on the basis of whether they are greater net revenue producers or greater net expenditure users. Based on Burchell's scale, conservation land falls in the middle, just above the break even point from a government's point of view. He concludes that open space is fiscally better than most forms of residential development, which usually have higher public costs than revenues.

In Carlisle, the average annual tax bill for a single family home is approximately \$5,300. Yet the annual cost of sending one pupil to Carlisle public K-8 schools is \$5,512 and the per pupil expenditure for the Concord/Carlisle high school is \$9,238. School expenses, excluding debt service, constitute approximately 54% and, including debt service, 65% of the Town's annual budget. Since new developments in Town have generated a greater number of school-age and preschool children, (1.3 on average), than does the average existing home in Town, (.4), it appears that Carlisle's recent experiences appear to support Burchell's conclusion that new development is more costly and its fiscal impact is greater on taxpayers. While there have been no definitive studies in Carlisle, a study entitled Lakeside Meadows Fiscal Impact Analysis by Community Planning Solutions for the Town of Westford in June 1994, compared the impact of the development of single family homes to the impact of acquisition of land for open space and water supply protection. It concluded that "[i]n almost all case, large home, single lot residential development has a somewhat negative fiscal impact to a municipality because of the number of school age children resulting from such development." The study went on to state that paying the debt service on a twenty year bond, for acquiring the land for conservation purposes, "may actually cost the Town of Westford less than absorbing the fiscal impact of the . . . development."

These principles are general in nature. In order to justify any particular acquisition of conservation land, the specific economic issues must be analyzed on a case by case basis. The priorities set forth in the Open Space and Recreation Report will be a guide to the Town for any recommendations for the purchase of conservation land. Of course, Town Meeting approval is necessary for the acquisition of any land by the Town.

## VISION OF THE FUTURE

Ideas generated by Community Planning Day participants urged that future development in Town be consistent with the values set forth in the first section. Participants wanted to protect our water supply by preserving an overall minimum two acre lot size, and to preserve and protect the remaining farms, farmland, vistas, approaches along main roads, undeveloped parcels of woodland and meadows, with particular emphasis on parcels which link trails and wildlife habitats. Furthermore, Town boards and commissions creating or maintaining goals and directing policy were urged to transmit the importance of preserving the rural aesthetic through their activities.

Efforts to educate townspeople in Carlisle of the advantages of placing conservation restrictions on their land are appropriate to facilitate the mandate for preservation of the "rural character" of the Town. Conservation restrictions can become a timely, cost-effective way for the Town to achieve the goal of rurality while preserving significant economic benefits for landowners.

In addition, the purchase of land by the Town for conservation may promote rurality and open space and provide other benefits to the Town. It is estimated that the full build out of the Town will be approximately 7,500 people given the current zoning and available buildable land. Of the Town's 9,900 acres, more than two thousand acres are still undeveloped and available for further residential construction. (See Population Projections in Appendix, pages iv-v). The population forecast produced by the Metropolitan Data Center of MAPC projects, in 2020, a total of 7,111. However, the larger figure projects full build out, whenever that may occur. Therefore, there will be considerable pressure for capital items such as schools, Town hall, library, recreational facilities, and other Town facilities, not including staff costs such as additional teachers and Town administrators. If the Town were not to grow, a similar level of facilities and services to those that currently exist might continue to suffice. It should be noted, however, that the current pressure for new Town offices and improvements to the school and library arise from the Town's existing needs.

It would appear that the purchase by the Town of land which is under development pressure may be quite cost effective over the long term, given that the necessity to provide services to that parcel will be virtually nonexistent. Although it will be necessary to bond the capital cost of the investment in the land, the costs are known, stable and have a definite expiration point, not unlike a fixed rate mortgage. However, the costs of new development in Carlisle are not unlike a variable rate mortgage in a time of escalating interest rates, with cash flow needs increasing and the ultimate costs unknown.

Therefore, the first and foremost action recommendations of this Plan are:

**ACTION RECOMMENDATION:**

**ENHANCE THE RURAL AESTHETIC OF THE TOWN AND MAINTAIN THE PERCEPTION OF RURALITY IN THE MOST REASONABLE AND ACHIEVABLE MANNER. ENCOURAGE THE USE OF CONSERVATION EASEMENTS, CONSERVATION RESTRICTIONS, PURCHASE OF DEVELOPMENT RIGHTS AND OTHER PRESERVATION MECHANISMS FOR THE PROTECTION OF SELECTED UNDEVELOPED PARCELS.**

BY:

1. UTILIZING THE PURCHASE OF DEVELOPMENT RIGHTS, CONSERVATION RESTRICTIONS AND EASEMENTS AS AN ALTERNATIVE TO THE OUTRIGHT PURCHASE OF TRACTS OF LAND FOR CONSERVATION PURPOSES, BY PERMANENTLY RESTRICTING THE MOST SENSITIVE PORTION OF UNDEVELOPED PARCELS TO PROTECT AND PRESERVE ITS CHARACTER AS A SCENIC AREA, OPEN SPACE, VISTA, TRAIL LINKAGE OR AS WILDLIFE HABITAT;
2. LINKING EXISTING PUBLIC LANDS THROUGHOUT THE TOWN IN SUCH A MANNER AS TO ENHANCE THEIR FUNCTION AND UTILIZATION, AS FOR EXAMPLE TRAIL EASEMENTS;
3. EDUCATING THE PUBLIC, PARTICULARLY LANDOWNERS OF LARGE PARCELS, OF THE ALTERNATIVES FOR THE DEVELOPMENT AND DIVISION OF THEIR LAND, WHILE ALLOWING FOR THE REALIZATION OF VALUE IN THE LAND BY THE LANDOWNER; PROVIDING LAND PLANNING AND DESIGN ASSISTANCE TO LANDOWNERS SEEKING MORE APPROPRIATE CONSERVATION ALTERNATIVES, AND EXPLAINING THE BENEFITS, INCLUDING TAX CONSEQUENCES OF THOSE ALTERNATIVES;
4. WORKING WITH THE CARLISLE CONSERVATION FOUNDATION, THE CARLISLE LAND TRUST AND THE COMMONWEALTH OF MASSACHUSETTS TO FIND MEANS OF PRIVATELY PROTECTING OPEN SPACE; AND

5. WORKING WITH THE CARLISLE TRAILS COMMITTEE TO IDENTIFY AREAS OF GREATEST IMPORTANCE WITH REGARD TO LINKING THE EXISTING NETWORK.

**ACTION RECOMMENDATION:**

**ACQUIRE OPEN SPACE PROPERTIES TO ENHANCE THE RURAL AESTHETIC IN KEEPING WITH THE RECOMMENDATIONS OF THE OPEN SPACE AND RECREATION REPORT AND REDUCE THE IMPACT OF NEW DEVELOPMENT ON THE PROVISION AND QUALITY OF TOWN SERVICES .**

**BY:**

1. ALLOWING FOR A MORE PHASED BUILD OUT OF DEVELOPMENT IN THE COMMUNITY;
2. PROTECTING THE AESTHETIC RESOURCES OF THE TOWN;
3. PROMOTING LAND BANKING LEGISLATION; AND
4. ESTABLISHING A "RESERVE" ACCOUNT FOR THE FUTURE PURCHASE OF CONSERVATION LAND BY THE TOWN.

There are currently sections of the Zoning Bylaw, Conservation Cluster Bylaw, and the Senior Residential Open Space Community By-Law which actively serve to protect the rural aesthetic. However, there are provisions in the foregoing land use regulations which are inconsistent with this ideal. Accordingly, the following recommendation is made.

**ACTION RECOMMENDATION:**

**EVALUATE AND UPDATE THE CONSERVATION CLUSTER BYLAW, ZONING BYLAW AND SUBDIVISION RULES AND REGULATIONS TO ENSURE THAT THE RURAL AESTHETIC IS GIVEN PARAMOUNT IMPORTANCE IN THE TOWN'S REGULATORY STRUCTURE.**

**BY:**

1. PRESERVING THE NATURAL/RURAL LOOK AND VISTAS;
2. ENCOURAGING ENVIRONMENTALLY SENSITIVE LAYOUTS

OF ROADWAYS AND SITING OF STRUCTURES SO THAT EXISTING STONE WALLS, LARGE TREES, FIELDS, NATURAL FEATURES AND PROPERLY MAINTAINED VISTAS ARE PRESERVED; AND

3. ENCOURAGING THE UTILIZATION OF ALTERNATIVE MECHANISMS FOR LAND CONSERVATION AND DEVELOPMENT, SUCH THE CONSERVATION CLUSTER BYLAW, WHILE AT THE SAME TIME ALLOWING FOR APPROPRIATE GROWTH.

### **Conservation: Environmental Safety**

#### **EXISTING CONDITIONS**

Groundwater is the most vital of resources to Carlisleans since all drinking water in the Town comes from private wells. Groundwater protection, then, is the primary concern under environmental safety.

Because the Town Center had significant problems with petroleum hydrocarbon and sodium groundwater contamination, a special report was commissioned to look at those problems and recommend possible solutions. A 1986 study entitled "Carlisle Groundwater Protection Study" dealt with issues of water resources and supply, geology and hydrology, private wells, water quality problems and contaminants, primarily of the Town Center. The report also developed guidelines for water supply protection and made recommendations for possible regulations pertaining to land use regulations for the Town Center. The recommendations set forth below were for the Town Center:

1. Groundwater monitoring for the sodium contamination in the center; and
2. Substitution of calcium chloride for sodium chloride as a road de-icer in the Town center.

The report also contained standard recommendations for all municipalities such as:

1. Regulation of underground fuel storage facilities;
2. Septic system maintenance programs;
3. Private well maintenance;
4. Proper disposal of household hazardous waste;

5. Land use and development guidelines, including tighter zoning regulations for the Town center, subdivision regulations dealing with groundwater protection, and site plan review for developments impacting groundwater resources.

Many of the recommendations of the study have been implemented and the Board of Health currently oversees several of the regulations which evolved from the study. For example, the Town has an annual "Hazardous Waste Day" so that residents may dispose of potentially hazardous materials in an environmentally responsible manner. A fuel storage tank removal program is in process. Recommendation #5 above is an area for further study by the Planning Board and other Town boards and commissions.

Groundwater contamination can be attributed to point and non-point sources. Point sources are those such as the salt deposit on the former DPW site in the Town center. Non-point sources of contamination are not readily attributable to a single source, and can include fertilization of crops or residential lawns, septic systems and acid rainfall. Non-point sources are also very difficult to regulate, but their effects are cumulative.

#### VISION OF THE FUTURE

A report published by the University of Massachusetts, entitled *Cross-Contaminant Effects of Environmental Policies: The Case of Groundwater Protection* by Elizabeth A. Mansager and Cleve E. Willis recommends that land use regulation is the best means to control non-point source contaminants. Since nitrates, sodium and volatile organic compounds are the primary contaminants in wells, and increase with higher densities of non-sewered residential land use, lower densities give greater protection to groundwater.

Groundwater resources will also be affected by recent developments on the State regulatory level concerning septic systems. Title V, which regulates the location, design and construction of septic systems, has been updated and may have the following effects on Town planning:

1. Values and concerns of Carlisle residents, (rather than specifications as to the location and design of septic systems), as expressed in this Plan must now be the basis for zoning bylaws;
2. Title V mandates that there be a greater sensitivity to water resources and wetlands as evidenced by setback requirements;
3. Title V permits alternative technology and thereby allows greater opportunities for more siting of septic systems;
4. There will be increased pressure on previously unbuildable land since new septic technologies are permitted;

5. Greater coordination will be required among all regulatory boards, but particularly the Board of Health and the Conservation Commission.

The hydrologic cycle is a closed system whereby disposal of waste water necessarily impacts upon the quality of groundwater and its use and consumption by Carlisle residents. The effects of the new Title V regulations will impact upon on the disposal side of the water use cycle. However, the basic concern in Carlisle is the source of water quality and quantity. Therefore, the above considerations lead to the following recommendation:

#### **ACTION RECOMMENDATION:**

#### **PROTECT RESIDENTS' DRINKING WATER, SAFEGUARD WATER SUPPLY, AND GROUNDWATER RESOURCES**

#### **BY:**

1. MAINTAINING MINIMUM HOUSE LOT AREA OF TWO ACRES TO PROTECT WATER SUPPLY;
2. STUDYING AQUIFERS TO DETERMINE LOCATION AND SOURCES OF GROUNDWATER;
3. PROTECTING SURFACE WATERS AND WETLAND FUNCTIONS THROUGH ONGOING REVIEW OF THE CARLISLE WETLAND BYLAW.

#### **Housing Options-Single Family**

#### **EXISTING CONDITIONS**

Carlisle is a residential community consisting of primarily single family homes. The average assessed value is \$331,600.00. Twenty-seven per cent (27%) of the population in 1990 was under the age of eighteen. Ten per cent (10%) was over the age of 60. There are eighteen low or moderate income housing units which comprise 1.2% of the total households in Carlisle.

The housing needs of Carlisle citizens have been reviewed by numerous interested groups and Town committees since a League of Women Voters questionnaire in 1970 identified a lack of the full range of housing options for low and moderate income and elderly persons in Town. An affordable housing study was conducted in 1988 and there appeared to be considerable interest in including a modicum of housing options in Town, particularly for seniors, while, at the same time, recognizing conservation and groundwater protection concerns.

The Town's Housing Assessment Committee ("HAC"), in 1987, submitted to the Executive of Communities and Development ("EOCD") a report in conformance with Executive Order 215. The HAC recommended a plan which included estimating the need for affordable housing and forming a Housing Authority to carry out a strategy for building the needed housing.

In examining the need for housing, the HAC segmented the following groups for affordable units: Town employees, the elderly and the children of Town residents. Based on projections of the population, the HAC estimated that it would need to provide up to 100 units in affordable housing ranging from one bedroom to four bedroom units. Under the requirements of Chapter 774 (Anti-Snob Zoning) the Town is subject to the exercise of Comprehensive Permits if the Town's low and moderate income subsidized units do not meet 10% of the housing stock.

### **Housing Options-Alternatives**

#### **Moderate Price Housing**

The Carlisle Housing Authority was established at Town Meeting in 1987 and has pursued various avenues to find means of constructing low and moderate income family housing.

#### **Accessory Apartments**

There are two types of apartments permitted in Carlisle. Under the Zoning By-Law, by right a single family dwelling existing before 1962 may be converted to a two-family dwelling provided that it otherwise satisfies the area and width requirements for the district. Since such a use is by right, there is no definitive data on the number of apartments created in this manner. In addition, by special permit, accessory apartments are allowed if they meet certain spatial and safety requirements. No more than seventy-five (75) will be permitted. Currently, only seven (7) permits have been issued. The purpose of the By-Law, which evolved from community planning input, is to increase the availability of moderately priced housing for Town employees, the young, the elderly, people of low and moderate income, and dependent relatives of Town residents by: providing an opportunity for homeowners who can no longer physically or financially maintain their single family homes to remain in homes that they might otherwise be forced to leave; making housing units available to low and moderate income households who might otherwise have difficulty finding homes within the Town; and providing a variety of housing to meet the needs of its residents.

#### **Housing for Seniors**

The Carlisle Village Court was built several years ago and contains 18 low and moderate income units for seniors. However, that has not met the full range of needs of Carlisle's senior residents. As a direct result of the participatory planning process, a new zoning bylaw was adopted at Town Meeting in 1994. A Senior Residential Open Space Community bylaw was established as a

response to the Town's expressed concerns about the preservation of open space and townspeople's deep regard for their senior citizens. The bylaw allows a tract of land to be so designated with requirements that:

1. One resident of each unit must be 62 years of age or older;
2. The dwellings must average no more than two bedrooms and must be less than 1400 square feet;
3. Open spaces are preserved at a ratio of 1.2 acres of open space for each dwelling unit;
4. Tract-wide, the density cannot exceed one dwelling unit per two acres;
5. The tract must be at least ten acres;
6. The units may be clustered in structures containing up to four units; and
7. An owners' association is required.

## VISIONS OF THE FUTURE

### **Moderate Priced Housing**

The lack of affordable land and the zoning requirements preclude the use of market factors in providing the housing. In the absence of substantial subsidies, affordable housing cannot be built under existing market conditions. Therefore, alternatives such as a not-for-profit corporation working with the Carlisle Housing Partnership would appear to be the best alternative for meeting the needs of the community.

### **Accessory Apartments**

It would appear that the bylaw is not well known and publicity and an educational effort should be considered to make more people aware of its potential.

### **Housing for Seniors**

The first Senior Residential Open Space Community has not yet been approved or constructed. This is a new bylaw which may need refinement in the future. The construction and approval process will be monitored, evaluated and improved as necessary.

## **ACTION RECOMMENDATION:**

**MEET THE NEEDS FOR HOUSING ALTERNATIVES FOR SENIORS, TOWN EMPLOYEES, CHILDREN OF TOWN RESIDENTS, AND OTHERS OF MODERATE MEANS OR FOR WHOM THE EXISTING HOUSING STOCK IS UNSUITABLE, IN THE INTEREST OF THE COMMUNITY AS A WHOLE.**

**BY:**

1. ENCOURAGING HOUSING FOR THE ELDERLY;
2. ENCOURAGING A POPULATION WHICH REFLECTS CULTURAL, INTELLECTUAL, AGE AND RACIAL DIVERSITY, VALUES CONSENSUS AND COMMUNITY AND INCLUDES LONG-TERM RESIDENTS, CHILDREN OF TOWN RESIDENTS, AND PEOPLE OF MODERATE MEANS;
3. MAINTAINING LOW DENSITY OVERALL; AND
4. PUBLICIZING THE EXISTENCE OF THE ACCESSORY APARTMENT SPECIAL PERMIT.

## **Circulation**

### **Circulation: Roadways**

#### **EXISTING CONDITIONS**

Carlisle's road system consists of five main roads which radiate outward from the Town Center and are heavily traveled. Roads at a distance from the center which connect these main routes are narrow and winding and have numerous cul-de-sacs and common driveways branching off to small neighborhoods. Recent years have shown a marked increase in commuter traffic on the main roads and several secondary roads used as short-cuts. In addition, with Carlisle's own population having doubled since 1980, residents themselves have generated increased vehicular traffic.

#### **VISIONS OF THE FUTURE**

Rather than rebuild Town roads to design standards for increased traffic, Carlisle residents support the reconstruction of major routes already in place nearby. Route 2A intersections have been redesigned. Route 3 expansion has been designed and partially funded. Improvements of Routes 2, 2A and 27 and the Concord rotaries are encouraged. High on the agendas of both Community

Planning Days was a strong support for a regional transportation plan.

Carlisle Town roads, as well as county roads, have been prioritized for surface repair and that program is in progress. Marked improvement over past pavement deficiencies is apparent. Community Planning Day participants urged continued enforcement of speed limits, increasing coverage, if possible, and regulating truck traffic and weights. Townspeople encouraged the trimming of brush at intersections and thinning of brush to improve roadside views.

Strongly emphasized by participants at all meetings and hearings was the desire to retain the character of the secondary roads in Town without straightening or widening them. They wished to urge designers to consider land contours and significant vegetation and natural features when constructing new roads.

**ACTION RECOMMENDATION:**

**MAINTAIN THE SCENIC QUALITIES OF OLD AND NEW TOWN ROADS WHILE MAKING THEM AS SAFE AS POSSIBLE, EXPLORE TECHNIQUES TO REDUCE COMMUTER TRAFFIC, AND PROVIDE SAFE WAYS FOR PEDESTRIAN AND NON-MOTORIZED TRAFFIC.**

**BY:**

1. SUPPORTING IMPROVEMENT OF MAJOR STATE AND COUNTY ROADS SURROUNDING THE TOWN THROUGH INFORMED REPRESENTATION IN THE MINUTEMAN ADVISORY GROUP ON INTERLOCAL COORDINATION ("MAGIC") AND THE METROPOLITAN AREA PLANNING COUNCIL ("MAPC").
2. ENCOURAGING IMPROVEMENT AND USE OF COMMUTER TRAIN SERVICE FROM EXPANDED PARKING AREAS IN LITTLETON, ACTON AND BILLERICA.
3. CONTINUING ROAD SURFACE REPAIR AND SIDE BRUSH TRIMMING OF TOWN ROADS; NEITHER WIDENING NOR STRAIGHTENING ROADWAYS.
4. SUPPORTING PLANNING BOARD DIRECTIVES TO SUBDIVISION ROAD DESIGNERS TO CONSIDER CONTOURS AND NATURAL FEATURES AND AVOID STRAIGHTAWAYS.
5. CONTINUING AND EXPANDING POLICE ENFORCEMENT OF

## SPEED LIMITS AND REGULATION OF TRUCK TRAFFIC AND WEIGHTS.

6. ENCOURAGING HOME BASED EMPLOYMENT TO REDUCE COMMUTER TRAFFIC WITHIN THE TOWN.
7. INVESTIGATING PERIPHERAL TRAFFIC FLOW CONTROLS TO LIMIT COMMUTER BACKUP IN TOWN CENTER.
8. SUPPORTING A REGIONAL TRANSPORTATION PLAN AND LINKAGE TO A REGIONAL BIKE PATH NETWORK.
9. SUPPORTING SCENIC ROAD DESIGNATIONS WHERE APPROPRIATE.

### **Circulation: Pedestrian Ways**

#### EXISTING CONDITIONS

There are no walkways along Carlisle's older roads, main roads and only segments of walkways in the Town center. Paved walkways in several subdivisions do not link to areas outside the immediate neighborhoods. Automobiles share the roadways with children, bicyclists, walkers and joggers.

There are mixed feelings about requiring walkways within subdivisions since some people feel they disturb the natural landscape at the edge of roads and create an appearance that is very different from the older roads. Carlisle's accepted Rules and Regulations Governing the Subdivision of Land distinguishes between two varieties of walkways: "Sidewalk" which means a paved walking surface adjacent and parallel to a road, and "Bike/Footpath" which means a meandering paved surface for bicycle/foot travel. The former stays within six feet of the roadway. The latter can meander significantly between trees and plantings to provide safe travel while retaining a natural look. Bright painting of the edge of vehicular lanes may provide adequate pedestrian/bike space in some instances.

#### VISIONS OF THE FUTURE

Goals and implementation ideas generated in the two Community Planning Days underlined the desire to provide safe surfaces for pedestrians and non-motorized traffic in such a manner as to blend in with the natural terrain, maintaining natural barriers such as trees, rocks and fences. It was also desired to provide pedestrian ways along roads within one mile of the Town Center.

## **ACTION RECOMMENDATION:**

**EXPLORE THE TRANSPORTATION TOOLS WHICH CAN PROVIDE SAFE PAVED PATHWAYS FOR PEDESTRIAN AND NON-MOTORIZED TRAFFIC WHILE MAINTAINING THE NATURAL TERRAIN AND SCENIC FEATURES OF THE AREA.**

BY FOCUSING ON PROVISION OF:

1. SAFE PEDESTRIAN WAYS ESPECIALLY ALONG ROADS WITHIN ONE MILE OF THE TOWN CENTER;
2. IMPROVED ROAD SHOULDERS FOR SAFETY OF PEDESTRIAN AND NON-MOTORIZED TRAFFIC;
3. PEDESTRIAN/BICYCLE WAYS THAT BLEND IN WITH THE NATURAL TERRAIN AND PRESERVE TREES, ROCKS, FENCES AND THE NATURAL APPEARANCE; AND
4. COMPLIANCE WITH THE CLEAN AIR ACT.

### **Circulation: Trails**

#### **EXISTING CONDITIONS**

Continued interest in trails is reflected in the increase participation of residents in walking, jogging, horseback riding, biking, cross-country skiing and snowshoeing. The need to connect neighborhoods is paramount to support this use of trails. As the Town develops, more of these linkages are lost through development. The Trails Committee, which maintains trails, has produced updated maps and increased their availability to the public. These also serve as initial interpretive guides to the public.

#### **VISIONS OF THE FUTURE**

If Town boards and commissions take the initiative with developers and landowners, the trails network as identified and documented by the Trails Committee can be preserved. Communication among the Conservation Commission, Planning Board, landowner and developer is crucial to meeting the Town's trail related goals. Incorporating the Carlisle Trails Master Planning map with Town goals and objectives will assist in preserving natural resources, vistas and access to our open spaces. (See Map in Appendix, page vi). Preservation of the access to those natural resources goes hand in hand with preservation of rurality.

Concerns for the protection of the historic and natural features of the linkages and their integration with the pre-colonial woodlands mandate a careful evaluation of development's intrusion into our community. Community Planning Days participants voted to preserve and extend trails as well as create more linkages across Town. The Town should focus on finding expert volunteers and methods to provide information on native American and colonial features, and botanical, geological and forestry data. State of the art trail construction over specimen ground cover and through wetlands with observation areas and bench seating would encourage year round multiple uses, including handicap access to appropriate trails, and foster an appreciation for the natural resources.

**ACTION RECOMMENDATIONS:**

**PRESERVE AND EXTEND THE TRAILS SYSTEM, CREATING MORE TRAIL LINKAGES ACROSS TOWN, ENCOURAGE RESEARCH AND INVESTIGATE FUNDING TO ANNOTATE HISTORIC AND NATURAL FEATURES AND INVESTIGATE INCENTIVES FOR LANDOWNERS TO DONATE TRAIL LINKAGE.**

**BY:**

1. COORDINATING EFFORTS TO CREATE A MORE EXTENSIVE TRAIL NETWORK ACROSS TOWN USING THE TRAILS COMMITTEE'S TRAILS MASTER PLAN;
2. PROVIDING PRE-DEVELOPMENT INFORMATION AND CONSULTATION TO LANDOWNERS REGARDING THE USE OF CONSERVATION RESTRICTIONS, ON AREAS IDENTIFIED AS CRITICAL TO CARLISLE'S EXISTING TRAIL NETWORK;
3. PROVIDING TOWNSPEOPLE WITH INFORMATION, AND OPPORTUNITIES FOR MAINTENANCE, PLANNING AND PRESERVATION OF TRAILS;
4. INVESTIGATING STATE-OF-ART TRAIL CONSTRUCTION PRACTICES AND MATERIALS FOR THE SENSITIVE GROUND COVER, WETLANDS AND HISTORICAL AREAS;
5. RESEARCHING RECOMMENDATIONS AND FUNDING SOURCES FROM ESTABLISHED CONSERVATION ORGANIZATIONS; AND

6. SUPPORTING THE TRAILS COMMITTEE IN PROVIDING  
EQUAL ACCESS AND YEAR ROUND USE OF TRAILS.

**B. RURAL COMMUNITY**

**TOWN CENTER**

**Town Center: Historic**

**EXISTING CONDITIONS**

More than any other aspect, a Town Center defines the overall character of a community. Carlisle's center is made up of both residential homes and as business establishments, but it still retains much of the character of an early 19th century New England village. It contains the Town common, from which the Carlisle Minutemen departed for the Concord Bridge on April 19, 1775; the Central Burying Ground, in use since 1784; and 34 structures, of which more than half were built prior to 1850. The physical look of the Town center is under the jurisdiction of the Historical Commission, which supervises the physical appearances of the dwellings. Any building construction or changes must first be reviewed and approved by the commission.

The center contains most of our services such as the Post Office, Fire Station, Police Station, Schools, Library, and Town Offices. It is the focal point for many Town events. Most of these services occupy buildings that were constructed or expanded within the past 10 years, accommodating the growth the Town experienced in the late seventies and eighties. The one exception is Town offices. Town government continues to occupy space in the library building and at a rented location. Determining a location for Town offices and providing for the needs of Town administration is long overdue.

The Town has little space within which to hold Town social events. The school and Sleeper Community Room in Carlisle Village Court are often used, but are not always available, appropriate, affordable or desirable for some events. The Town has been fortunate that the local churches are supportive and offer space when available.

**VISION OF THE FUTURE**

There has been support for some sort of community center in Town that could provide a place for meetings and social gatherings. The Town hall facility needs have become severe. The Town must confront the issue and decide upon the location and construction of a new facility immediately.

**ACTION RECOMMENDATION:**

**ENCOURAGE THE LOCATION OF THE TOWN OFFICE BUILDING IN THE CENTER OF TOWN, WHERE IT CAN PROVIDE A NUCLEUS FOR TOWN ACTIVITIES.**

**BY:**

1. PRESERVING THE HISTORIC BUILDINGS, GREEN AND UNDEVELOPED SPACES OF THE TOWN CENTER; AND
2. PROVIDING OPPORTUNITIES FOR CONGREGATING, INFORMAL GATHERINGS, CASUAL MEETING PLACES, ACCIDENTAL ENCOUNTERS AND LIMITED SERVICES WHILE RETAINING THE HISTORIC AND AESTHETIC LOOK AND FEEL OF CARLISLE.

**Town Center: Cultural**

Carlisle has traditional social events such the Strawberry Festival, Old Home Day, Fire Department Ham and Bean Supper, Sixth Grade Spaghetti Supper, Seventh Grade Play, church social events, and the Pig and Pepper Cook-Off. History related celebrations such as the Memorial Day Parade and the Patriots Day March to Concord round out the season.

**ACTION RECOMMENDATION:**

**EMPHASIZE THE TRADITIONAL TOWN CENTER FOCUSED ON THE VILLAGE GREEN**

**BY:**

1. PROMOTING TRADITIONAL SOCIAL AND MULTI CULTURAL EVENTS AS WELL AS ADDITIONAL OUTDOOR SUMMER ACTIVITIES, INFORMAL CONCERTS, MOVIE PRESENTATIONS, AND ART SHOWS IN THE TOWN CENTER;

2. PROMOTING GREATER COLLABORATION, COMMUNICATION AND COORDINATION AMONG GROUPS PLANNING TOWN SOCIAL EVENTS;
3. ENCOURAGING A POPULATION WHICH REFLECTS CULTURAL, INTELLECTUAL, AGE AND ETHNIC DIVERSITY; WHICH VALUES CONSENSUS AND COMMUNITY AND WHICH INCLUDES LONGTIME RESIDENTS, CHILDREN OF TOWN RESIDENTS, AND PEOPLE OF MODERATE MEANS; AND
4. PROMOTING AND ENHANCING A TRADITIONAL TOWN CENTER FOCUSED ON TOWN HALL AND GREEN CREATING A SENSE OF PLACE FOR TOWN EVENTS WHILE ALLOWING A LIMITED INCREASE IN COMMERCIAL SERVICES WITH SUFFICIENT PARKING.

## **ECONOMIC DEVELOPMENT**

### **Economic Development: Town Center or Other Businesses**

#### **EXISTING CONDITIONS**

Carlisle's economic structure is based primarily on residential taxes. A small business community does exist, comprised of both the visible commercial establishments and home based businesses. Businesses are taxed at the same rate as residential homes. Some further taxation is levied upon the assessed value of equipment for the business, but these contribute little in relationship to the overall tax base. The overall business community is small, and increasing taxation would generate few revenues and might drive businesses out of Town. Businesses as a whole contribute to the community in that they foster some local employment opportunities and the visible commercial establishments create a Town center and sense of place.

By this we mean that businesses in the center of Town help to define the Town center, physically. In addition, they provide convenient services to the Town and they contribute a cohesiveness to the community. Transacting business in these establishments presents an opportunity to run into a neighbor that you never seem to have time to talk to, or a chance to meet someone new while waiting in line. Giving these establishments your business also helps give a sense of contributing to the community.

The types of businesses in a town clearly define the character of the town. A Town Center can be old, historic, quaint, and picturesque, and it will enhance the overall stature of the rest of the

town. A highly developed or very run down center will have the reverse effect.

Businesses outside of the Town center have in general been a part of the local culture for many years, and are not considered invasive. Some such as Bates Farm (now Kimbal's Ice Cream ), are landmarks. There is little desire for more of these types of businesses. Most residents consider the center of Town the proper place for any new businesses.

### **VISION OF THE FUTURE**

In general, previous Town studies and the results of two community planning days, have indicated that the Town is satisfied with the current level of businesses in Town. There is little desire for expansion of businesses as a whole, but there has been some support for a limited increase in commercial services that can provide an environment for social interaction such as a coffee house or tearoom.

### **ACTION RECOMMENDATION:**

**WORK WITH LOCAL BUSINESS ORGANIZATIONS TO FOSTER AND ENCOURAGE THE VITALITY OF LOCAL BUSINESSES WHILE MAINTAINING THE OPEN SPACES AND HISTORIC ASPECTS OF THE CENTER.**

**BY:**

1. BROADENING COMMERCIAL SERVICES IN THE CENTER WITHOUT JEOPARDIZING SMALL TOWN AESTHETICS; AND
2. CONTROLLING THE GROWTH OF BUSINESSES SO THAT THE OVERALL CHARACTER OF THE TOWN IS NOT JEOPARDIZED.

### **Economic Development: Home Businesses**

#### **EXISTING CONDITIONS**

Under the Town's zoning-bylaws, the use of a portion of a dwelling or of an accessory building by a resident of the premises as an office, studio or workroom for the conduct of a profession or customary home occupation is permitted subject to conditions:

1. That the use is clearly incidental to the residential purposes;

2. That no more than three persons other than the residents are regularly employed there;
3. That no external changes are made;
4. That there is no stock in trade; and
5. That the residential appearance is maintained.

Home endeavors have grown to over 136 businesses now. They employ, on average 1.3 people. These businesses provide an opportunity for people to work from their homes for a variety of reasons. They also provide income for those parents who need to work, or like to work, but wish to be home with their children. These businesses provide some economic vitality to the community in that many of the occupations, such as marketing representatives, medical professions, software engineers and other computer oriented individuals are highly compensated professions. Their existence may also result in increased vehicular traffic in Carlisle, but will not add to commuter traffic. In fact, home businesses decrease commuter traffic and encourage more uniform volume throughout the day.

#### VISION OF THE FUTURE

The growth of these businesses has a potential benefit to the Town. These businesses are run by citizens who have a dual interest in their location as both a residence and office. They can participate in volunteer services, government, and other activities of the Town more easily than people who work out of Town. Advances in the telecommunications industry may increase "telecommuting" and thereby further reduce commuter traffic while making Carlisle more attractive to small entrepreneurial endeavors.

#### ACTION RECOMMENDATION:

##### **WORK WITH THE CARLISLE BUSINESS ASSOCIATION AND OTHER GROUPS TO ENCOURAGE THE GROWTH OF HOME BUSINESSES**

##### BY:

1. SUPPORTING HOME OCCUPATIONS WHICH PRESERVE OFF-SITE PERCEPTION OF RESIDENTIAL USAGE AND ARE ENVIRONMENTALLY NON-INVASIVE; AND
2. ENCOURAGING DIVERSITY IN TALENTS AND OCCUPATIONS.

## EDUCATION

### Education: Schools

#### EXISTING CONDITIONS

The philosophy of education for the Carlisle school system is based on the School Committee Vision/Mission Statement of November 1994. The vision is:

to develop a society of lifelong learners who possess the behaviors, skills and knowledge essential for contributing members of a democratic society and a global economy. The Mission is to structure the school in order to promote students' success by engaging them in meaningful tasks. When tasks are meaningful, students will invest their talents and energy and thereby gain the skills and knowledge which are valued by the larger society and which will enable them to thrive and compete in the 21st century.

The philosophy of education for the Concord/Carlisle school district includes a statement that "the responsibility of the educational system is to develop the integrated intellectual growth of the individual student in an environment that promotes understanding and right treatment of others and oneself."

Carlisle reputedly has one of the best K-8 school systems in the state. The school campus is located in the center of Town and has expansion capabilities for the next ten years. Six to seven classrooms can be added as originally planned.

The Concord Carlisle High School has also maintained its good reputation in the face of fiscal restraints. Minuteman Technical School has come under some scrutiny as to value relative to cost. Currently, there are 610 students in the K-8 system with at least 627 expected for the 1995-1996 school year. The reputation of the school system has had the effect of drawing young families into the community.

#### VISION OF THE FUTURE

The most significant impact of an expanding population is the pressure which will be felt in the school system. Since most of the tax revenues of Carlisle are devoted to the educational system, increasing expenditures will be required. The current campus buildings will be expanded as originally planned in the near future. The number of students from Carlisle attending the Concord Carlisle High School will fluctuate over time. Population projections for the Town, however, indicate that the number of students from Carlisle will increase.

The desire of the community to preserve and enhance our school system was made very clear by participants in the community planning days. Education was the second most important goal after

rurality contained within the "Long Range Goals of the Carlisle Community" report. There is a desire for better communication with the schools on its needs and goals as a school. In addition, there was the desire to give the community a chance to participate more in the planning and evaluation of its school's curriculum; possibly through an educational planning day. The educational planning day proposed by community planning day participants has occurred and a continuing effort is underway to carry out the results of the assessments. Another strong recommendation of community planning day was the maintenance of a low pupil to teacher ratio.

#### **ACTION RECOMMENDATION:**

#### **PRESERVE AND ENHANCE THE HIGH QUALITY OF OUR SCHOOL.**

BY:

1. ENCOURAGING GREATER DAY-TO-DAY INTERACTION BETWEEN RESIDENTS, SCHOOL BOARD, ADMINISTRATORS AND STAFF;
2. IMPLEMENTING RECOMMENDATIONS WHICH EVOLVED FROM THE TOWN'S EDUCATIONAL PLANNING EFFORTS.

#### **Education: Continuing**

##### **EXISTING CONDITIONS**

Continuing education connotes lifelong learning and the opportunities for that to take place. Carlisle considers itself to be an educationally oriented community, focusing on intellectual pursuits and a diversification of ideas and interests. Many citizens participate in continuing education programs that are offered through several local programs, principally in Concord and through the Concord/Carlisle Adult Education Program. A limited number of choices are offered within Carlisle, mostly by citizens conducting a course out of their home, or by a church group using the churches' facilities. Overall the number of choices is quite small.

All the local programs offered are individual or group initiated offerings. One obstacle to running any group is having space enough to conduct the activity, whether it is a computer programming course, a quilting bee, or social discussion.

##### **VISION OF THE FUTURE**

The community, through Community Day Planning activities, has expressed a desire to expand the number and type of programs available. Having rooms or halls available to the general public and

administered by a Town employee would encourage more activities. Some of the ideas would be community sings, dances, nature walks, and book talks. Other educational needs have been expressed by the Council on Aging, Extended Day and other public and private organizations in Town.

**ACTION RECOMMENDATION:**

**SUPPORT THE INCLUSION OF MEETING SPACE FOR THE PURPOSES OF SOCIAL AND EDUCATIONAL FUNCTIONS IN THE PLANS FOR NEW TOWN OFFICES, LIBRARY OR OTHER TOWN FACILITY**

**SERVICES**

**Services: Volunteers**

**EXISTING CONDITIONS**

Volunteers are the policy making entities in the community and generously staff both elected and appointed boards, committees and commissions which govern the Town. The Town's business is conducted by these groups which give direction to administrative decisions and determine the character of the Town. A variety of expertise is required as well as a serious commitment to long evening meetings, paperwork and field inspections. The number, importance and complexity of issues and state requirements require the assistance of professional staff in many cases. Volunteers have earned our respect and support for their selfless efforts, their understanding of issues and their capability in dealing with them, and the training they acquire.

**Services: Town Services**

**EXISTING CONDITIONS**

Town Administration, Employees and Departments

The elected and appointed positions for Administration and Finance, Health and Regulatory Services, Environment and Recreation are listed in the annual Town Report. The Board of Selectmen is the elected head of government and acts through an administrative professional.

Safety and Human Services

Police Service: Carlisle Police Department

The Police Department consists of nine full-time officers supplemented by eight part-time special officers occupying a 5,000 square foot building completed in 1987. Both the International

Association of Chiefs of Police and the Federal Bureau of Investigation recommend two full-time police officers for every 1000 residents. Anticipating a maximum build-out of 7500 residents, the police force would be fifteen full-time officers at that time. The current facility would accommodate the increased personnel with some additional parking.

#### Dispatch Service: Communication Department

The Police and Fire Chiefs co-direct the Communication Department of one Head Dispatcher, two full-time dispatchers and four part-time dispatchers. The office space is adequate for future needs, although the communications equipment may need upgrading.

#### Fire Service: Carlisle Fire Department

Carlisle's Fire Department is a "call" department. Trained townspeople respond to the fire signal and telephone notification. It has five fire trucks and an ambulance; firefighters and EMT's are on call, and the system is tied into the Paramedic Regional Service covering fourteen towns. It has liaison with the Regional Hazardous Materials equipment of Fire District #4. The fire station was completed in 1986.

#### Department of Public Works: Roads, Transfer Station and Cemetery

The Department of Public Works operates a variety of vehicles housed in a maintenance and service building which also contains the Superintendent's office. The DPW is responsible for road maintenance and repair including brush trimming and snowplowing, as well as waste management/recycling at the Transfer Station, and for maintenance of the cemeteries.

The sanitary landfill was replaced by the Transfer Station in 1973. The recycling facility there handles aluminum, cardboard, glass and newsprint and generates income to offset the costs of disposal of other items. Residents also sort plastic, tin cans, waste oil and mixed paper as well as recyclable items in the swap shed. The remaining compacted waste material is brought to the Northeast Solid Waste Committee (NESWC) for incineration. Hazardous waste collections sponsored by the Board of Health have been conducted since 1985.

The DPW maintains not only the historic Central Burying Ground in the Town Center, but also the Green Cemetery, which has been in use since 1840.

#### Library: Gleason Public Library

The library trustees have recently completed a study which defines the library's role in Carlisle and identifies current and future needs. The plans which have been made as a result of the study are based on the following considerations: The high utilization of the library and the Town demographics which point to continued high use; the superiority of the current location and the constraints of the site;

the need to make the building handicapped accessible and compliant with the Americans With Disabilities Act requirements; the current overcrowding, particularly of children's areas, the administrative work space and adult reading area; the inability to accommodate current and future technology needs; and the physical limitations of the spaces themselves. Funds for a study of the feasibility for renovation and expansion and for the development of a schematic design concept were approved at Town Meeting of 1994.

### Council on Aging

The Council on Aging ("COA") serves a necessary and valuable function for the growing population of elders in Town. The mission of the COA is threefold:

1. Coordinate state, federal and local programs for the senior population based on community participation, local needs and resources;
2. Respect the dignity and independence of Carlisle's older citizens and encourage participation in events which promote their well-being; and
3. Serve as advocates for the elder population.

The specific programs provided by the COA include health services, education, information referral, advocacy, and social programs and activities. Because health care, financial, legal and lifestyle issues are of paramount concern, assisting seniors on these issues is a major thrust of the COA.

In 1990, there were 433 Town residents over the age of 60. The Metropolitan Data Center of MAPC projects that 934 seniors will be Town residents in the year 2000, an increase of 113%. Since the COA currently serves about 35% of the Town's elders, there will be continued and increasing pressure to meet the needs of this segment of the population.

### Youth Commission

This five-member group of volunteers oversees monthly gatherings at the school for all middle school students, public and private. It provides sports activities in the gym and music and dancing in the exercise room.

### Other Human Services

1. The American Red Cross Bloodmobile visits Carlisle in May and October. Many residents participate in several programs offered.
2. Carlisle Post Office: United States Government Postal Service. The Carlisle Post Office not only provides all mail services required, but also serves as the Town's

informal gathering place to share news and information with neighbors.

## VISION OF THE FUTURE

Population projections indicate that Carlisle could go from approximately 4500 residents to 7,500 citizens at full build out. This long-term increase of 67% will require additional infrastructure, strain public services and put enormous pressures on the educational facility in particular. Careful planning with regard to the priority of capital expenditures and the provision for human services needs to be made. In order to recognize the importance of the rural aesthetic, guide the pace of development, and provide for the increasing needs, several earlier recommendations have been made in this Plan. However, it is of paramount importance to recognize and plan for future demands for human services as well.

## ACTION RECOMMENDATION;

**PLAN FOR AN ADEQUATE LEVEL OF FACILITIES AND SERVICES TO SUPPORT TOWN AND VOLUNTEER ORGANIZATIONS AS WELL AS THE TOWN'S SERVICE PROFESSIONALS.**

BY:

1. UNDERTAKING APPROPRIATE PLANNING FOR CAPITAL FACILITIES; AND
2. RECOGNIZING THE FISCAL RESTRAINTS WITHIN THE TAX STRUCTURE OF THE COMMUNITY.

**Services: Neighborhoods**

## EXISTING CONDITIONS

Concern for others, local interaction, camaraderie and personal enjoyment characterize Carlisle's neighborhoods. Gatherings include: fundraisers for local organizations, coffees to meet candidates or discuss local issues, receptions for new neighbors, the *Mosquito* sponsored trash parties. Neighbors participate in activities adding to the structure and warm sense of community in congenial settings for cultural and recreational events. Clubs are a primary tool for the teaching and socialization of young people.

## VISION FOR THE FUTURE

Neighborhood interactions and participatory community events are viewed very favorably by

townspeople. Accordingly, encouraging design solutions for neighborhood gathering places for adults and children is appropriate.

**ACTION RECOMMENDATION:**

**PROMOTE A STRONG SENSE OF COMMUNITY THROUGH THE DESIGN OF COHESIVE NEIGHBORHOODS AND PUBLIC GATHERING PLACES, AND ENCOURAGE AND INVITE NEIGHBORS TO TAKE PART IN SOCIAL AND CULTURAL TOWN ACTIVITIES.**

**BY:**

1. PROMOTING A SENSE OF SELF THROUGH INTERACTIONS WITH OTHERS;
2. RESPECTING THE VALUE OF PRIVACY AND PERSONAL GOALS; AND
3. INCREASING PERSONAL SAFETY THROUGH FAMILIARITY WITH OTHER TOWNSPEOPLE.

**Services: Communications**

**EXISTING CONDITIONS**

Communications within the Town take place through formal and informal means. The *Carlisle Mosquito*, is the Town's unique and beloved newspaper. Local cable TV is also available for items of local interest. The Red Balloon School, a nursery school currently located at the Unitarian Church, publishes a phone book/directory full of detail on local organizations and information. Other communication media include the Town's fire signal system, bulletin boards at Daisy's Market, the Post Office, the Transfer Station, the Library and the Town rotary.

**ACTION RECOMMENDATION:**

**ENCOURAGE COMMUNICATION THROUGHOUT THE TOWN TO KEEP RESIDENTS INFORMED AND INVOLVED IN THE COMMUNITY.**

**BY:**

1. SUPPORTING THE TOWN NEWSPAPER, *THE CARLISLE MOSQUITO*, BY READING IT AND BY VOLUNTARY DONATIONS AND CONTRIBUTIONS OF TIME;

2. ENCOURAGING GREATER PARTICIPATION IN TOWN EVENTS, CULTURAL OFFERINGS, AND SERVICE OPPORTUNITIES THROUGH WRITTEN PUBLICATIONS, WORD OF MOUTH AND PERSONAL INVITATION; AND
3. EXPLORING NEW STRATEGIES TO BUILD COMMUNITY CONSENSUS AND IMPLEMENT PLANS.

### **III. CONCLUSIONS, DIRECTIONS AND IMPLEMENTATIONS**

#### **A. LAND USE PLAN**

Town of Carlisle Zoning Map. (See Appendix, page vii).

#### **B. UTILIZATION OF STUDY PLAN**

This Plan is a living, evolving document and part of an ongoing process of discussions and community participation. We anticipate that it will adapt to the changing needs of the community while maintaining the goals and values consistently emphasized by the citizens of Carlisle: it can and should be updated and changed over time. It will be used as a policy and planning tool in order to give guidance for local decision making purposes. Town boards, commissions and interest groups will have a document for reference purposes which can be used to guide short term deliberations and long term planning actions.

The ACTION RECOMMENDATIONS which evolved from this process are the following:

- \* Enhance the rural aesthetic of the town and maintain the perception of rurality in the most reasonable and achievable manner. Encourage the use of conservation easements, conservation restrictions, purchase of development rights and other preservation mechanisms for the protection of selected undeveloped parcels.
- \* Acquire open space properties to enhance the rural aesthetic in keeping with the recommendations of the Open Space and Recreation Report and reduce the impact of new development on the provision and quality of Town services.
- \* Evaluate and update the Conservation Cluster By-Law, the Zoning bylaw and the Subdivision Rules and Regulations to ensure that the rural aesthetic is given paramount importance in the town's regulatory structure.

- \* Protect residents' drinking water, safeguard water supply, and groundwater resources
- \* Meet the needs for housing alternatives for seniors, town employees, children of town residents, and others of moderate means or for whom the existing housing stock is unsuitable, in the interest of the community as a whole.
- \* Maintain the scenic qualities of old and new town roads while making them as safe as possible, explore techniques to reduce commuter traffic, and provide safe ways for pedestrian and non-motorized traffic.
- \* Explore the transportation tools which can provide safe paved pathways for pedestrian and non-motorized traffic while maintaining the natural terrain and scenic features of the area.
- \* Preserve and extend the trails system, creating more trail linkages across town, encourage research and investigate funding to annotate historic and natural features and investigate incentives for landowners to donate trail linkage.
- \* Encourage the location of the town office building in the center of town, where it can provide a nucleus for town activities.
- \* Emphasize the traditional town center focused on the village green.
- \* Work with local business organizations to foster and encourage the vitality of local businesses while maintaining the open spaces and historic aspects of the center.
- \* Work with the Carlisle Business Association and other groups to encourage the growth of home businesses.
- \* Preserve and enhance the high quality of our schools
- \* Support the inclusion of meeting space for the purposes of social and educational functions in the plans for new town offices, library or other town facility.
- \* Plan for an adequate level of facilities and services to support town and volunteer organizations as well as the town's service professionals.
- \* Promote a strong sense of community through the design of cohesive neighborhoods and public gathering places, and encourage and invite neighbors to take part in social and cultural town activities.
- \* Encourage communication throughout the town to keep

- \* Encourage communication throughout the town to keep residents informed and involved in the community.

### **C. THE NEXT STEP**

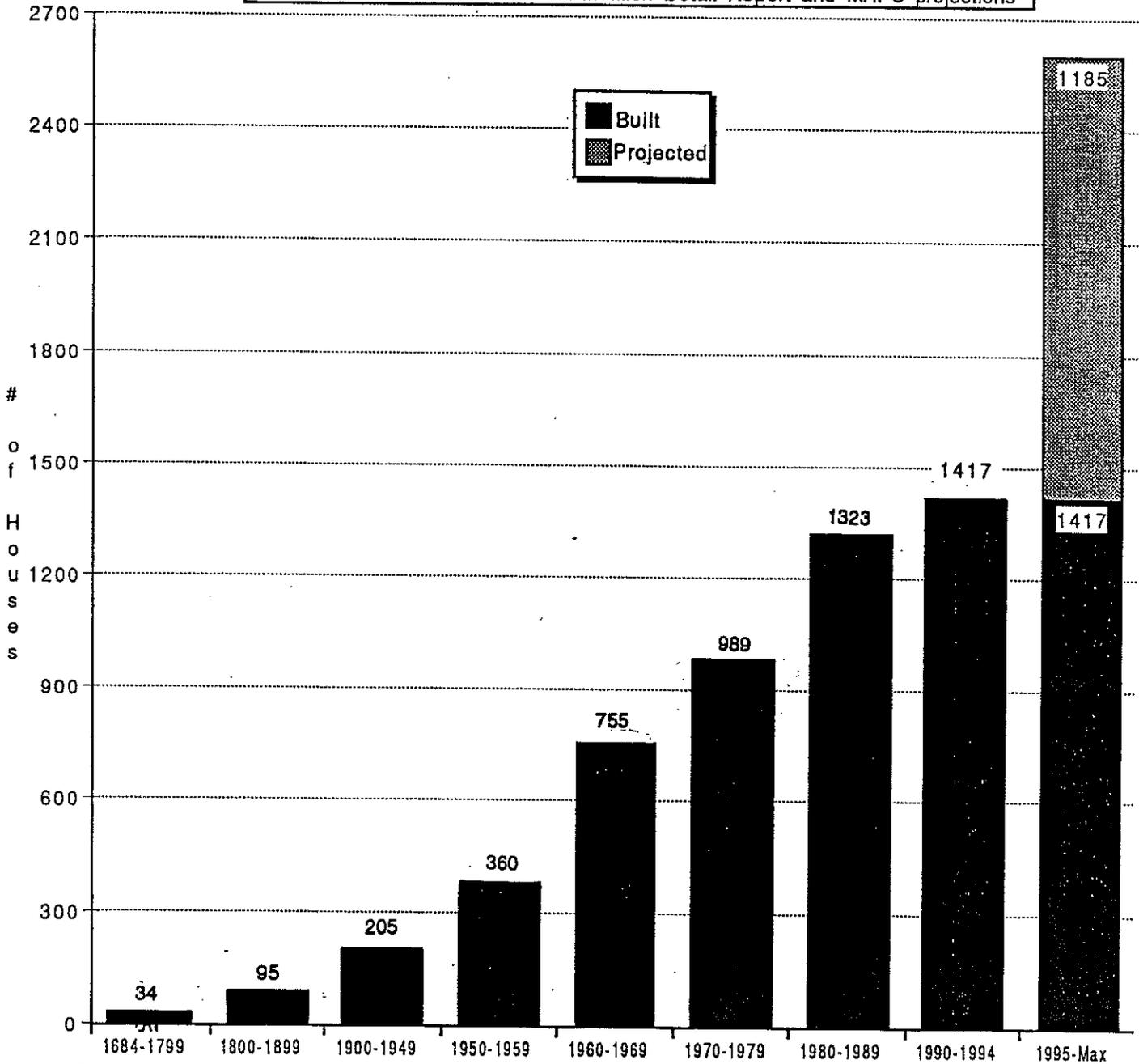
In the coming months the Planning Board intends to formulate implementation strategies to achieve these recommendations. All townspeople are invited to join in these discussions and share their expertise. Conservation Cluster revisions may be one of the first issues to be addressed.

Community planning participants overwhelmingly desire to preserve rurality and maintain the level of excellence in the schools. To achieve both these goals, the Town will need to expend a significant amount of public funds. Obviously, since the Town has limited tax revenues and because the townspeople have also expressed a desire to limit tax increases, these goals may create potential conflicts. It is essential for planning purposes to prioritize the Town's needs and desires in these two particular areas in the near future as well as to evaluate the remaining action recommendations and commence their implementation.

APPENDICES

### Houses Built in Carlisle

Data from Carlisle Assessors' Certification Detail Report and MAPC projections

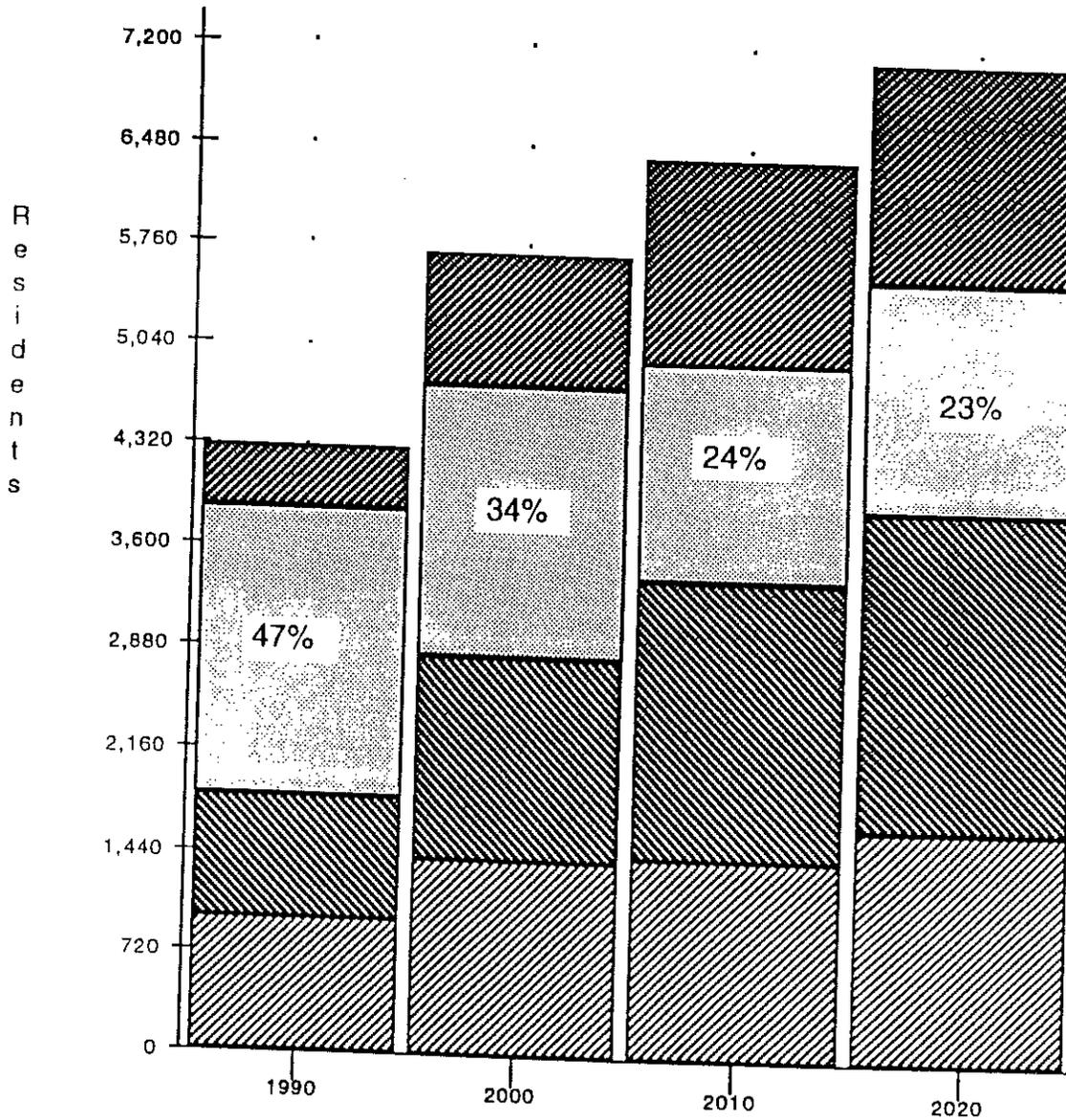


**“Long Range Goals of the Carlisle Community”  
in order of priority as accepted at April, 1993 Town Meeting**

1. Preserve the natural/rural look and vistas.
2. Preserve and enhance the excellence and high quality of the schools.
3. Encourage a population which reflects the cultural, intellectual, age, and racial diversity; values consensus and community; and includes long-time residents, children of town residents, and people of moderate means.
4. Support a regional transportation plan.
5. Encourage small-scale higher density projects while maintaining overall 2-acre zoning (which protects water supply).
6. Foster a community with minimum centralization and maximum volunteer participation.
7. Protect land for wildlife.
8. Promote social and multicultural events.
9. Provide economic vitality with cottage industry: home occupations which preserve the off-site perception of residential usage and are environmentally non-invasive.
10. Build bike trails.
11. Encourage agriculture and farms.
12. Preserve and make publicly accessible large blocks of land around town for passive recreation.
13. Preserve a traditional town center focused on town hall and green, with commercial services and sufficient parking to provide a sense of place for town events, and beautify the town center.
14. Maintain low density.
15. Encourage elderly housing.

16. Encourage private recreational facilities.
17. Use town buildings to achieve goals where appropriate.
18. Engender a community of self-reliant people who call for minimum government and public services, support private town-wide activities, and personally protect the environment.
19. Emphasize trails.
20. Contain taxes.

### Population Growth by Age Group



0-19 yrs    20-34 yrs    35-59 yrs    60+ yrs

▨ Students    ▩ Young Adults    ▤ Adults    ■ Retirees

## **Carlisle Population Projection Under Current Regulatory Environment**

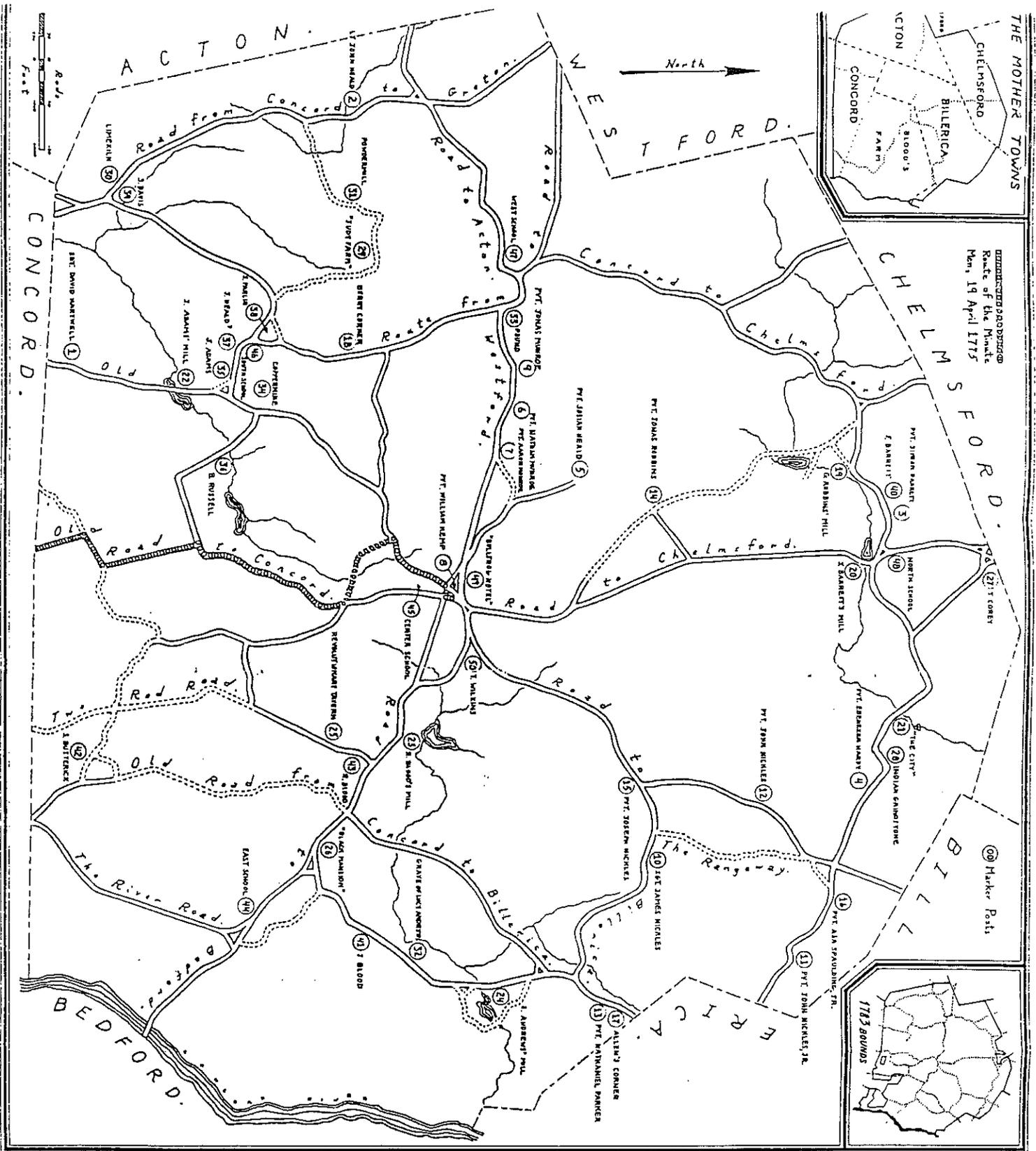
March 27, 1995

This model estimates Carlisle's Population at such time as all the available land is developed. The model assumes that all current town, state and federal regulations and laws continue unchanged. No attempt is made to determine when this population level will be reached nor does it determine the rate of growth of the town at any time.

Based on the current regulations and the current land use, a model was constructed which projected that the town's population will be 7500 when fully developed.

The model starts with the current land use. Of the town's 9900 Acres, 2477 Acres are used by town, state or federal entities and 5312 are occupied by residences or permanent conservation restrictions. Assuming that the land needs for Department of Public Works is proportional to the length of roads in town to be maintained, that the land needed for recreation is proportional to the town's population, and that any additional town offices, libraries and schools will be built on land currently owned by the town, an additional 33 acres of town land will be needed. Thus 2078 acres of land are now available for development under current regulations.

Based on the observation of recent developments in town, 0.4 households are built on each acre developed. Thus to the existing 1500 households, an additional 830 households can be built in town. Assuming that the average number of residents per household remains the same, the resulting population is 7500 residents at the time of full build-out of the town.



# TRAILS IN CARLISLE

# ZONING DISTRICT MAP, CARLISLE, MASS.

## ZONING DISTRICTS

- RESIDENCE A (1 acre, 150' frontage)\*
- RESIDENCE B (2 acres, 250' frontage)\*  
\* add 2 acres for Park Chop lots with 40' frontage - see Sec.A.A.2.
- RESIDENCE W (see RES. A DETAIL)
- BUSINESS (see DETAILS B.1-3)
- CARLISLE CENTER BUSINESS (see DETAIL)
- WETLAND/FLOODHAZARD (Overlay District)  
Not shown on this map; see 1"=200'  
Assessors Maps on file with Town Clerk.

## STATUS OF WAYS

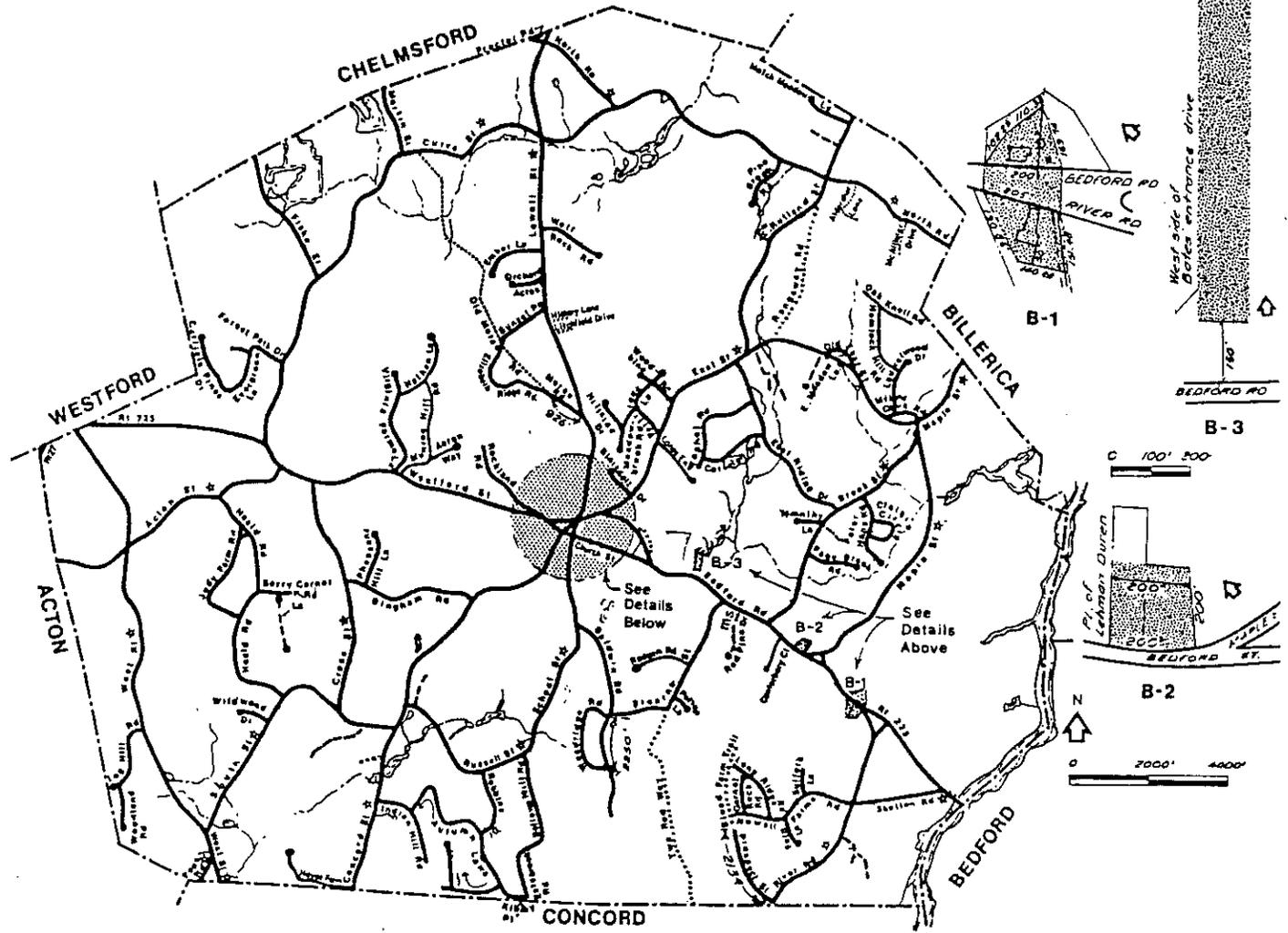
- Accented Town Way
- Private Way
- Private Way
- Scenic Road (G.L.Ch.67)

## HISTORY:

- Zoning Map adopted March 1962
- Wetland District adopted May 5, 1
- Zoning Map reworked April 1979
- Residence W District adopted April 1, 1980
- Wetland/Floodhazard District adopted April 2, 1980
- Zoning Map revised, April 1, 1981
- Map Updated, January 1, 1988

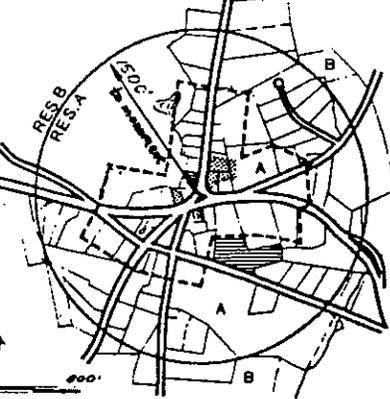
## BUSINESS DISTRICT DETAILS B.1-3

BUSINESS DISTRICT  
Approximate location of lot lines  
from 1988 Assessors Maps



### RESIDENCE A DISTRICT DETAIL

- Lot lines as shown on 1988 Assessors Maps
- RESIDENCE A
  - RESIDENCE B
  - RESIDENCE W
  - CARLISLE CENTER BUSINESS\*
  - HISTORIC DISTRICT\*
  - \* see relevant DETAILS



### HISTORIC DISTRICT DETAIL

Notes: Historic District adopted June 16, 1969. This is not a zoning district; see Town Bylaws, Article IX, for applicable regulations.



### CARLISLE CENTER DETAIL

Owners as shown on both 1962 and 1933 Zoning Maps. Lot lines as shown on 1988 Assessors Maps

