

Old
Colony
Planning
Council

Regional Policy Plan:

A Guide For Shaping Our Communities And The OCPC Region

ACKNOWLEDGEMENTS

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TABLE OF CONTENTS

Acknowledgements

List of Figures and Tables

Regional Advisory Committee

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CHAPTER ONE	INTRODUCTION.....	1
CHAPTER TWO	REGIONAL VISION STATEMENT.....	5
CHAPTER THREE	REGIONAL GOALS, POLICIES AND PROGRAMS.....	7
CHAPTER FOUR	REGIONAL GROWTH AND DEVELOPMENT TRENDS.....	21
CHAPTER FIVE	THE REGIONAL PLAN PROCESS.....	43
CHAPTER SIX	SPRAWL DEVELOPMENT AND ITS IMPACTS.....	47
CHAPTER SEVEN	ALTERNATIVE DEVELOPMENT PATTERNS.....	55

References

Appendix SPRAWL AND GROWTH MANAGEMENT RESOURCE DIRECTORY

Zoning Districts and Regulations 1999

LIST OF FIGURES AND TABLES

Figures

4.1	Population Trends OCPC Region vs. State of Massachusetts.....	21
4.2	Percent Change in Population.....	22
4.3	Projected Population of the OCPC Region 1990-2020.....	23
4.4	Percent of OCPC Regional Growth 1990-2010 Based on OCPC Projections.....	24
4.5	Projected Population Growth.....	26
4.6	Land Development Status OCPC Region, 1991.....	27
4.7	Percent of Potentially Developable Acreage.....	28
4.8	Residential Building Permits Issued OCPC Region 1995-1998.....	29
4.9	Residential Building Permits Issued Massachusetts 1995-1998.....	30
4.10	Average Residential Permits Issued 1989-1998.....	33
4.11	OCPC Labor Force: Net Export of Workers by Community, 1990.....	32
4.12	Percentage of Labor Force Working Within Town, 1990.....	35
4.13	No Figure	
4.14	Income Data for OCPC Communities, 1990.....	36
4.15	No Figure	
4.16	Median Household Income OCPC Region.....	38
4.17	Poverty Status in OCPC Communities, 1990.....	37
4.18	Mode to Work OCPC Region and Massachusetts, 1980.....	39
4.19	Mode to Work OCPC Region and Massachusetts, 1990.....	40
4.20	Commuters Driving Alone.....	41

Tables

4.1	Number of Residential Permits: OCPC Region 1989-1998.....	31
4.2	Percentage of Workforce Employed Within Town, 1990.....	34
4.3	OCPC Employment Projections: 1990-2020.....	35
4.4	Poverty Status in OCPC Communities, 1990.....	37

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CHAPTER ONE

INTRODUCTION

Why a Regional Land Use and Transportation Policy Plan?

Regional planning agencies were established in order to address the many issues that cross town boundaries. These include water supply and quality, air quality, transportation, economic development, open space and agricultural preservation, conservation of natural resources and wildlife habitat, preservation of historic and cultural resources, and the impacts of sprawl development.

The OCPC Regional Plan has not been updated since 1976, and since then five communities have joined the OCPC district. The OCPC Regional Transportation Plan was most recently updated in 1994.

The purpose of the Regional Land Use and Transportation Policy Plan is to establish a framework to guide the Old Colony Planning Region communities in preparing regionally consistent master plans, open space plans, and zoning by-laws. The plan also provides strategies that communities may use to incorporate into their local planning efforts to address the impacts of sprawl and develop alternatives to sprawl in order to

guide future development.

The Regional Policy Plan also provides a means for consistency between state planning policies and activities and regional and local master plans, policies, and by-laws. State land use and development policies are discussed below.

Massachusetts Planning Policy

The Planning for Growth Initiative

In the spring of 1996, former Governor William Weld signed Executive Order 385, *The Planning for Growth Initiative*. This initiative promotes sustainable economic development with adequate infrastructure while encouraging a proactive approach to addressing the impacts of unplanned or inadequately planned growth and sprawl development on environmental quality and resources. This approach also seeks to minimize the adoption of new regulations to regulate or stop growth. Instead, *The Planning for Growth Initiative* encourages improved planning through streamlining of the regulatory process; inter-agency coordination and agreements,

incentives and assistance to communities, regional agencies and other organizations, and better advanced planning at the local and regional levels.

Executive Order 385 directs state agencies to:

- ◆ Evaluate the effect of their current regulations, policies, plans and practices on theirs and others' ability to facilitate sustainable development and to preserve environmental quality and resources and adopt necessary changes to achieve these objectives;
- ◆ Conduct their responsibilities with full consideration of adopted local and regional growth plans;
- ◆ Promote and assist with the rehabilitation and revitalization of existing infrastructure, structures, sites, and previously developed areas (and deemed to be preferable to developing new facilities or environmentally sensitive areas) unless supported by local or regional growth plans;
- ◆ Engage in the development of regional infrastructure plans for agencies responsible for the planning, funding, constructing or permitting of infrastructure facilities (i.e., transportation, water supply, waste water treatment and disposal, and solid waste management facilities);
- ◆ Agencies responsible for siting, designing, funding, constructing or permitting of infrastructure projects, public facilities or private development shall seek to Minimize the loss or degradation of environmental quality and resources; and agency must make specific finding, as a result of funding or permitting decision, that the decision is consistent with the requirements of Executive Order 385.

State Planning Goals

- ◆ To promote economic development which does not result in or contribute to the loss of environmental quality or resources.
- ◆ To encourage the reuse, revitalization or enhancement of existing infrastructure and to coordinate development of infrastructure with regional policy plans.
- ◆ To concentrate growth in suitable areas served by existing or planned infrastructure where further development will not imperil important environmental resources or degrade environmental quality.
- ◆ To identify and protect open space blocks or corridors, natural resources, and ecologically valuable habitats.
- ◆ To achieve consistency between local growth plans or zoning by-laws and regional plans.
- ◆ To advance interlocal/regional sharing of planning and administrative resources.
- ◆ To enhance local and regional coordination with other state initiatives, such as the Watershed Initiative, Brownfields Initiative, Regional Transportation Plans, or Open Space and Recreation Plans.
- ◆ To promote methods by which local growth plans/regional policy plans can be implemented.
- ◆ To enhance outreach about growth issues and ownership by communities of local and regional growth plans.
- ◆ To promote the collection and dissemination of information on land use, particularly information related to

measurement of the rate of land consumption for development and preservation, as well as the measurement of the total amount of land developed and preserved.

Southeastern Massachusetts Vision 2020 Project

The southeastern Massachusetts Vision 2020 Project is a regional growth management project that is concerned with the rapid growth and change occurring in this area of Massachusetts located between Boston, Cape Cod and Rhode Island. The project includes 51 cities and towns, including all communities in Bristol and Plymouth Counties and 4 communities in Norfolk County (Avon, Stoughton, Plainfield and Cohasset). The three regional planning agencies in southeastern Massachusetts are overseeing the project: the Old Colony Planning Council (OCPC), the Southeastern Regional Planning and Economic Development District (SRPEDD) and the Metropolitan Area Planning Council (MAPC).

The purpose of the project is to develop a vision for how the Southeastern Massachusetts region wishes to develop. It also identifies strategies and incentives to encourage compact development and minimize sprawl, to preserve and enhance farmland, natural resources and open space, to protect historical resources and to encourage economic development that is beneficial to the region. Copies of the Vision 2020 Report are available at the Old Colony Planning Council.

CHAPTER TWO

OLD COLONY PLANNING COUNCIL REGIONAL VISION STATEMENT

The Old Colony Planning Council envisions a region built on the best of the past development and growing in a compact way that saves land for the future and offers maximum choice in neighborhood character and convenient access to jobs, services and recreation. It would maintain the differences between city, towns, suburbs, countryside and wildlands within communities and across the region.

New development would reinforce or create compact, livable communities allowing residents to walk, drive or use transit for daily trips; have a mix of compatible uses and a range of housing types and neighborhoods for a diverse population; preserve existing open spaces and resource areas; and expand the economic base to meet the region's needs for employment and revenue.

Entering a community we would see scattered rural low-density housing, open space and a few businesses along the road. Most new housing would be in compact villages close to existing centers or near future mixed-use centers, not scattered along the road.

They would be framed by permanent streamside open spaces connected to major open areas and landscaped features. There would be houses with yards for playing children and gardening adults and some apartments or townhouses for households with different needs.

The commercial/civic centers at the heart of each village would be big enough to meet daily needs without driving, while being accessible enough for one-of-a-kind facilities to serve the whole community. At the regional scale we would find larger mixed-use centers (almost new towns across town lines) accommodating much growth in diverse housing around a larger existing or new commercial/civic cores and near transit stations.

Much employment growth will adjoin and complement existing centers or complement other uses in new centers.



CHAPTER THREE

REGIONAL GOALS, POLICIES and PROGRAMS

REGIONAL LAND USE AND DEVELOPMENT

Goals: *To guide future growth of our communities into priority development areas in order to provide for an orderly and efficient land use pattern; to preserve and enhance the attractiveness and quality of life of our communities; to allow for the efficient provision of public infrastructure and services; to develop, maintain and enhance an efficient multi-modal transportation system; and to implement long-term economic development objectives.*

Policies:

Policy 1: The Council shall designate *priority development areas* whose combination of land, infrastructure and services, accessibility, and amenities suit them to accommodate a significant portion of the region's anticipated growth. Priority development areas may include appropriate development of undeveloped sites or in-fill or intensification of existing activity centers. Priority development areas are

currently served by services and infrastructure or may be served in the future if they meet criteria established in regional plans. The Council shall work with the state, other regional planning agencies, and communities to provide incentives to focus development in priority development areas.

Policy 2: The Council shall effect *Policy 1* by encouraging and promoting new and intensified or revitalized *compact, mixed-use community centers* as the region's desired pattern for new growth (See *priority development areas* above). *Compact, mixed-use community centers* are designed to allow convenient pedestrian, bicycle and transit movement so that residents and visitors are not solely reliant on automobiles to get around. Community centers should also provide *lifecycle housing*, offering a range of housing choices of various sizes, types and costs; and a mix of business, commercial, civic, and cultural uses along with systems of parks, open space, and natural resource areas.

Policy 3: The Council shall work with communities, environmentalists, businesses and residents to designate *priority development area boundaries* in order to concentrate probable growth in compact, mixed-use centers and to protect the outlying areas generally considered more suitable for natural resource protection, wildlife habitat, agricultural uses, open space and recreation uses, and watershed/water supply protection. The establishment of priority development area boundaries offers predictability both to developers in terms of availability of infrastructure and services when needed, and to the public in terms of timing and limits on future obligations to provide these services.

Policy 4: The Council shall work with its member communities, other Regional Planning Agencies and the Southeastern Massachusetts Vision 2020 Task Force to develop and implement model development regulations and incentives supporting Southeastern Massachusetts' growth management objectives.

Policy 5: The Council shall work to pass state legislation increasing local and regional powers to guide development through compact, mixed-use development; clustering, site plan review, infrastructure sufficiency review, overlay districts, transfer of development rights and other innovative development and "*smart growth*" tools.

Policy 6: The Council, JTC, and MPO shall encourage the state to provide Regional Planning Agencies with resources needed to provide municipalities with technical assistance and support in preparation of Comprehensive /Master Plans and implementation programs.

Policy 7: The Council shall seek ways to increase housing diversity in terms of type, cost and tenure to meet the range of needs of all citizens.

Implementation Programs:

Program 1: The Council shall develop an *outreach program* to inform public officials, the development industry and citizens of the benefits of "smart growth" policies and programs and to gain their support for and participation in implementation of these measures.

Program 2: The Council shall work with other regional planning agencies, the Southeastern Massachusetts Vision 2020 Task Force, the region's legislative delegation, the state's chapter of the American Planning Association, and other interested parties to enact legislation to do the following:

- a. Modernize and strengthen state law regarding preparation of local and regional Comprehensive/Master Plans; develop guidelines that describe the content of Comprehensive/Master Plans and require that all communities and regional agencies prepare and update them;

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- b. Require that all zoning and other development regulations be consistent with Comprehensive/Master Plans;
 - c. Require that all local, regional, and state land use and capital improvement decision making is consistent with local and regional Comprehensive Master Plans;
 - d. Provide funding for communities and Regional Planning Agencies to prepare, adopt, and update local and regional Comprehensive/Master Plans, capital improvement plans, economic development plans, strategic or functional plans, and other short and long-range planning efforts;
 - e. Identify existing state and regional resources (e.g., MassGIS, etc.) that can be made available to communities and their planning efforts;
 - f. Provide funding to cities and towns to prepare and implement downtown revitalization plans, market and feasibility analyses, and traffic and parking studies;
 - g. Modernize the zoning enabling laws and include provisions for cluster zoning, and other “smart growth” development regulations by-right;
 - h. Require a current Comprehensive /Master Plan as a condition for communities to receive state grant funds.

Program 3: The Council shall work with communities, regional planning agencies and the Southeastern Massachusetts Vision 2020 Task Force to prepare and adopt development regulations that promote implementation of “*smart development*” principles. These principles support approaches such as mixed-use development, transit-oriented development, traditional neighborhood development, and village/town center development. Smart development principles also apply to strategies to revitalize existing city and town centers.

Program 4: The Council shall identify lands appropriate for *priority development areas* through buildout and site suitability analyses.

Program 5: The Council shall create a *regional action strategy for land use and housing* jointly with its constituent communities, other Regional Planning Agencies, the business community, environmentalists, the non-profit sector and other interests to deal with the lack of housing choices and affordability in Southeastern Massachusetts.

Program 6: The Council shall work with communities to allocate sufficient land for a range of future residential development in areas designated for growth, compatible with adjoining uses, and where it will not cause significant adverse impacts or unmitigated impacts to environmental resources.

REGIONAL TRANSPORTATION PLANNING

Goals: To plan and implement transportation projects designed to meet present and foreseeable needs; to support environmentally friendly, sustainable development patterns and livable communities; to conserve energy, preserve air quality and protect water quality; to support more efficient use of existing infrastructure in present activity centers; and to prevent adverse direct and indirect adverse impacts of project development and operations on the human and natural environments.

Planning and Land Use

Policy 8: The Council, Joint Transportation Committee (JTC), and Metropolitan Planning Organization (MPO) shall ensure that transportation system planning and programs are integrated with other planning efforts including land use, housing, open space and recreation, water and air quality, and economic development planning and implementation programs.

Policy 9: The Council, JTC, and MPO shall ensure that transportation plans and programs support the Region's desired land use pattern as stated in the land use policies.

Policy 10: The Council, JTC, and MPO shall ensure that transportation and land use plans and programs support integrated, multi-modal transportation strategies. These strategies should promote the use of alternative modes of transportation to the automobile, which include the use of transit, ridesharing, bicycling and walking (and land use patterns that support the use of these alternative transportation modes).

Policy 11: The Council, JTC, and MPO shall support a coordinated multi-modal transportation system serving new and existing residential, retail, service and employment centers.

Policy 13: The Council, JTC, and MPO shall encourage the preparation and adoption of Comprehensive /Master Plans by cities and towns that are consistent with regional land use and transportation plans and programs.

Policy 14: The Council, JTC, and MPO shall support Mandated local planning (with funding and other resources provided by the state) as a requisite for state grant funds.

General Infrastructure

Policy 15: The Council shall support improved east/west transportation movement in the region including roads and highways, and improved transit connections between community activity centers, employment centers and commuter rail stations.

Transportation Demand Management/Alternative Modes to Automobile

Policy 16: The Council shall seek to minimize the number of single-occupant vehicle trips throughout the Region by enhancing and promoting alternative transportation modes.

Policy 17: The Council shall support the development of neighborhood-based rideshare programs for the region.

Policy 18: The Council shall support creation of an information program for commuters regarding alternatives to commuting in single-occupant vehicles, and programs available to assist commuters in using these alternatives.

Policy 19: The Council shall encourage governmental agencies and institutions to consider the impacts on energy consumption, air quality, and the transportation system when evaluating potential sites for governmental and institutional offices and facilities. Whenever feasible, these offices and facilities should be sited in existing developed areas, commercial area revitalization districts, and near transit lines. Further, when feasible, the Council shall encourage the location of these offices and facilities within mixed-use developments that include commercial uses (e.g., dry cleaners, restaurants, grocery/convenience stores, etc.), childcare facilities and other uses that serve the office/facility population.

Policy 20: The Council shall encourage the use busses or van service between commuter rail stations, employment sites and commercial centers.

Policy 21: The Council shall promote the establishment of telecommuting centers to address air quality and traffic congestion issues.

Policy 22: The Council shall encourage businesses and industries to develop alternative employment policies such as flex time or telecommuting in order to minimize traffic congestion, fuel consumption and social impacts of peak hour commuting.

Policy 23: The Council shall consider the implications of an aging population on the existing transportation system and develop appropriate strategies to address current and future needs.

Policy 24: The Council shall develop transportation solutions for people who require public transportation but are not able to be served due to gaps in the system.

Transit Services and Infrastructure

Policy 25: The Council shall work with transit providers to maintain existing levels of service while supporting service expansion to meet projected needs.

Policy 26: The Council shall work with the MBTA, communities, property owners and developers to promote the construction of transit-oriented development adjacent to commuter rail stations.

Policy 27: The Council shall promote opportunities to develop and enhance transit services linking residential areas, employment centers, major shopping areas, educational facilities, major tourist and recreational destinations, commuter rail and AMTRAK.

Policy 28: The Council shall work with transit providers to address the special travel needs of the elderly, children, handicapped, and economically disadvantaged when planning and developing transportation services.

Policy 29: The Council shall encourage transit providers to serve routes linking schools, after-school child care facilities and programs, libraries, parks, and recreational sites to facilitate mobility of school-age children.

Policy 30: The Council shall continue to support and promote the expansion and enhancement of rail passenger service in the region and improved connections to other regions.

Policy 31: The Council shall encourage and promote bicycling and walking as viable modes of transportation and shall work to remove barriers to developing and maintaining bicycling and pedestrian systems.

Policy 32: The Council shall work with communities and other agencies and organizations to create and maintain a safe, convenient, and effective bicycle and pedestrian system that links residential, business and commercial, recreational and public uses, and transit.



Stoughton commuter rail station

Bicycle and Pedestrian Facilities:

Policy 33: The Council shall support construction of multiple use trails (e.g., the Bay Circuit Trail) and conversion of abandoned railroad rights-of-way for walking and bicycling trails.

Policy 34: The Council shall work with communities to ensure that circulation and site plans for development projects minimize barriers and create or improve access between uses for pedestrians, the disabled and bicyclists (e.g., cul-de-sac between neighborhoods).

Policy 35: The Council shall work with communities to encourage commercial, industrial, public and other property owners to provide bicycle lock-up and storage areas, shower and locker facilities, and other amenities as a means to encourage employees and customers to use bicycles as a transportation mode.

Policy 36: The Council shall encourage transit providers to make provision for bicycles on busses and trains and provide bicycle-parking facilities at train stations and transit centers.

Road and Highway Infrastructure:

Policy 37: The Council shall work with the state and communities to ensure that repairs and improvements are made to roads and bridges throughout the region in order to provide for a safe, efficient and adequate transportation network for the movement of people and goods.

Policy 38: The Council shall encourage and support the development of management systems to improve decision-making and establishing priorities. Support the following management systems: highway pavement; bridge; highway safety; traffic congestion; public transportation facilities and

equipment; and inter-modal transportation facilities and systems.

Policy 39: The Council shall consider transportation system management and investment strategies designed to make the most efficient use of existing transportation facilities.

Policy 40: The Council shall provide for the development of a series of measures gauging the effectiveness of transportation system management actions.

Policy 42: The Council shall encourage the establishment of pricing and design mechanisms that motivate users to more evenly space travel throughout the day.

Freight:

Policy 43: The Council shall work to improve the movement of freight, goods and services within the region and to other regions.

Policy 44: The Council shall work railroad companies to preserve existing rail freight service and promote extension of this service

Implementation Programs:

Program 7: The Council shall continue to support Regional Transit Authorities as locally controlled Political Subdivisions of the Commonwealth as established under MGL Chapter 161B.

Program 8: The Council shall continue to promote and support the following transportation funding programs:

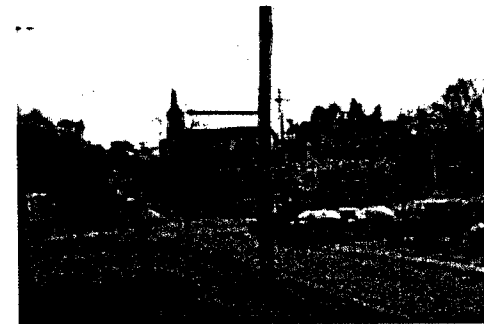
- a. Transportation Enhancement Program
- b. Transportation Demand Management (TDM) Program
- c. Mobility Assistance Program
- d. "Chapter 90" funding for local loads

Program 9: The Council shall continue to support the MPO structure ...

Program 10: The Council shall continue to support funding for the following road and highway improvement projects and participate in their planning and implementation:

- a. The Route 3 add-a-lane project from Weymouth to Duxbury;
- b. The completion of the Route 44 corridor project from Plymouth to Carver;
- c. The reconstruction of Route 18 in Abington;
- d. The construction of a connector road from Route 3 to the former South Weymouth Naval Air Station to support redevelopment of the site;

- e. The implementation of the Brockton Central Area Traffic study that recommended the conversion of one-way streets to two-way streets in order to support downtown revitalization;
- f. The implementation of traffic improvements in Stoughton Square to improve pedestrian and motor vehicle safety and traffic flow through the square.



Intersection of Rte.18 and Rte.123, Abington, MA

Program 11: The Council shall continue to seek funding each fiscal year through the Mobility Assistance Program for the replacement of obsolete para-transit vehicles.

Program 12: The Council shall continue to use the Regional Transportation Plan and the Transportation Improvement Program (TIP) as the primary means of identifying transportation needs and prioritizing transportation project funding for the region.

Program 13: The Council shall develop a public outreach program to ensure that the full spectrum of regional transportation needs are addressed.

Program 14: The Council shall continue to support and promote special transportation services for the elderly and disabled, including the volunteer transportation program of the Old Colony Planning Council Area Agency on Aging and Brockton Area Transit's Dial-A-BAT service.

Program 15: The Council shall encourage the shift of commuters from single-occupant vehicles to more efficient modes through the provision of incentives and disincentives, such as preferential parking for ridesharing and the elimination of subsidized parking.

Program 16: The Council shall encourage employers to develop trip reduction plans in order to provide employees with options to shift from single-occupant vehicles to carpools, vanpools and other alternative modes of transportation.

ENVIRONMENTAL QUALITY PROTECTION

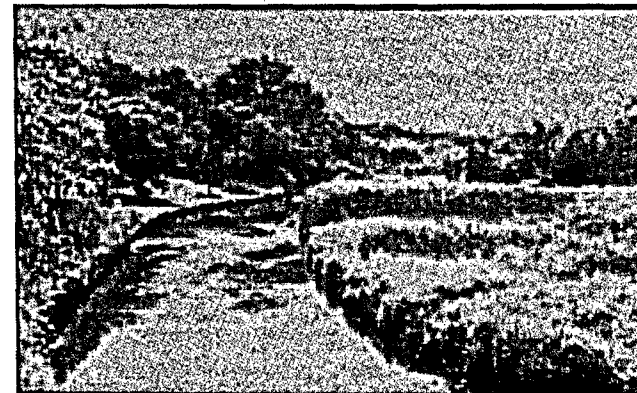
Goals: *To minimize and mitigate adverse impacts of transportation projects on the human and natural environments; to attain federally required regional air quality standards so as to be in conformity with the mandate of the Transportation Equity Act for the 21st Century (TEA-21); to develop transportation systems that support a sustainable pattern of development, protects and enhances environmental resources and quality, and promotes livable communities; to*

minimize the impacts of storm water runoff and non-point source pollution on water resources; to minimize and reduce noise impacts of transportation projects on adjoining uses; and to develop a transportation system that minimizes energy consumption.

Policies:

Policy 45: The Council shall support transportation improvement projects and programs that contribute to reducing the component gases (e.g., volatile organic compounds, carbon monoxide and other vehicle emissions) that adversely affect air quality, especially in areas not meeting state and federal air quality standards.

Policy 46: The Council shall encourage and promote research, development and implementation of more energy efficient forms of transportation.



Jones River in Kingston, MA

Policy 47: The Council shall work to ensure that noise impacts of transportation projects are appropriately mitigated.

Policy 48: The Council shall work with the state and local communities to protect watershed areas, wetlands, water supplies and other water resources from adverse impacts of transportation construction and maintenance projects.

Implementation Programs:

Program 17: The Council shall work with the state and local communities to adopt best management practices in order to protect watershed areas, wetlands, water supplies and other water resources from adverse impacts of transportation construction and maintenance projects.

Program 18: The Council shall encourage the inventorying of hazardous material movement through the region and encourage the development of effective hazardous material emergency response mechanisms.

Natural Resources and Open Space

Goal: *To maintain a quality of life for citizens of the planning community through conservation and preservation of natural resources and open space.*

Policies:

Policy 49: Designate Areas of Critical Environmental Concern and discourage infrastructure investment serving these areas.

Policy 50: Provide adequate recreation and open space for the future population of the region.

Policy 51: Increase state funding for open space and aquifer protection.

Policy 52: Protect and enhance natural resource systems and water supply sources.

Policy 53: Increase state funding to purchase land to be used for recreation and increase state operating funds to improve access to state parks and facilities within state parks.

Implementation Programs:

Program 19: Use of zoning regulations and land acquisition as tools to actively protect open space and environmentally sensitive areas from development.

Program 20: Prepare model zoning by-laws for preservation of open space.

Program 21: Encourage communities to develop a

current Open Space and Recreation Plan to protect open space and natural resources as well as make communities eligible for open space and recreation grant funding.

Program 22: Establish a Regional Open Space Plan in conjunction with a Regional Growth Management Plan.

Program 23: Increase protection measures for rare and endangered species through habitat preservation and habitat management plans.

Program 24: Increase the presence of state and national conservation organizations in the region.

Program 25: Target state and federal funding to prioritized open space and preservation needs consistent with local and regional Open Space Plans.

Water Supply and Water Quality

Goal: To protect, maintain and enhance existing and potential water supplies; to develop and maintain water supplies to meet the region's current and future needs; to preserve watersheds, wetlands, water bodies and aquifer recharge areas; and to promote best management practices in order to mitigate the any adverse impacts of development on water resources.

Policies:

Policy 54: Establish priorities for the maximum development of the region's water supply sources.

Policy 55: Improve the water quality and protect the natural features of the region consistent with environmental standards.

Policy 56: To support more efficient use of water through such means as conservation, leak detection and recycling measures.

Policy 57: Encourage intercommunity cooperation for water supply.

Implementation Programs:

Program 26: Establish buildout analyses as a basis for local water supply planning.

Program 27: Use zoning regulations and land acquisition as tools for protecting water supplies.

Program 28: Conduct watershed planning and link this planning to economic goals.

Program 29: Provide additional state and federal assistance for community-based watershed planning.

Program 30: Increase state funding for open space and aquifer protection.

Program 31: Link regional planning to the statewide

watershed planning initiatives.

Program 32: Encourage locally-initiated water supply plans.

Program 33: Develop a program to inform and educate water commissions and citizens about water conservation measures (e.g., water conserving landscaping, leak detection programs, etc.), and the link between land use and water quality.

Program 34: Help establish cooperative relationships between communities in order to develop new water supplies and improve water distribution.

Program 35: Continue to study the feasibility of connecting to the MWRA system and/or desalinization as a means to increase water supply.

Wastewater Management

Goal: To ensure the safe and efficient treatment, disposal or recycling of current and future wastewater.

Policies:

Policy 58: Encourage the development of Title 5 Management facilities to serve the long term needs of the OCPC communities.

Policy 59: To encourage and promote sewer system improvements including treatment, distribution and export.

Policy 60: Expansion of sewer systems to existing developed

areas.

Implementation Programs:

Program 31: Employ Title 5 Management Districts.

Program 32: Focus state and federal funding of wastewater treatment to existing systems that support concentrated development patterns.

Program 33: Develop a tax incentive program for septic system improvements.

Planning Resources, Education, Training and Capacity

Goal: To provide the planning resources necessary to support efficient growth management within the region's communities.

Policies:

Policy 61: Increase community planning capacity through expanded technical assistance and new funding.

Policy 62: Increase regional planning capacity through expanded resources at the state level and for the Regional Planning Agencies.

Policy 63: Create new and accessible technical information

sources and educational programs for local planning officials and citizens.

Implementation Programs:

Program 34: Increase the availability and usefulness of Geographic Information Systems (GIS) in developing land use policies and decisions.

Program 35: Develop partnerships between public and private organizations in developing GIS databases and mapping.

Program 36: Create model-zoning ordinances.

Program 37: Create model comprehensive planning and revise the state statutes to provide for a more useful framework for such efforts.



Old Colony Planning Council in Brockton, MA.

CHAPTER FOUR

REGIONAL GROWTH AND DEVELOPMENT TRENDS

Introduction

This chapter documents some of the salient growth trends in the Old Colony Region, as well as the effects that this growth has on the area.

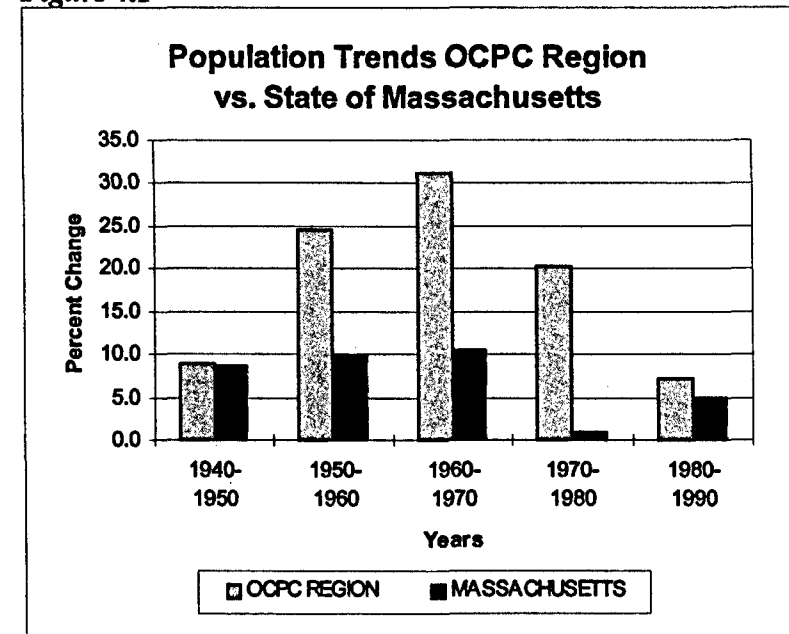
Over the course of the past fifty years, the landscape of the Old Colony Region has undergone profound changes. The expanding geographic scope of the economy has resulted in an ever-growing metropolitan area. Strip commercial development, and residential subdivisions are replacing farmland and forestland at alarming rates. The traditional population centers of the region have experienced years of disinvestment as developers, shoppers, and homebuyers turn their attention to the ex-urban fringe of Southeastern Massachusetts.

Population Trends

The number of people in the Old Colony Region has continued to grow over the past fifty years. Due to road and highway improvements, people are willing to drive longer distances to

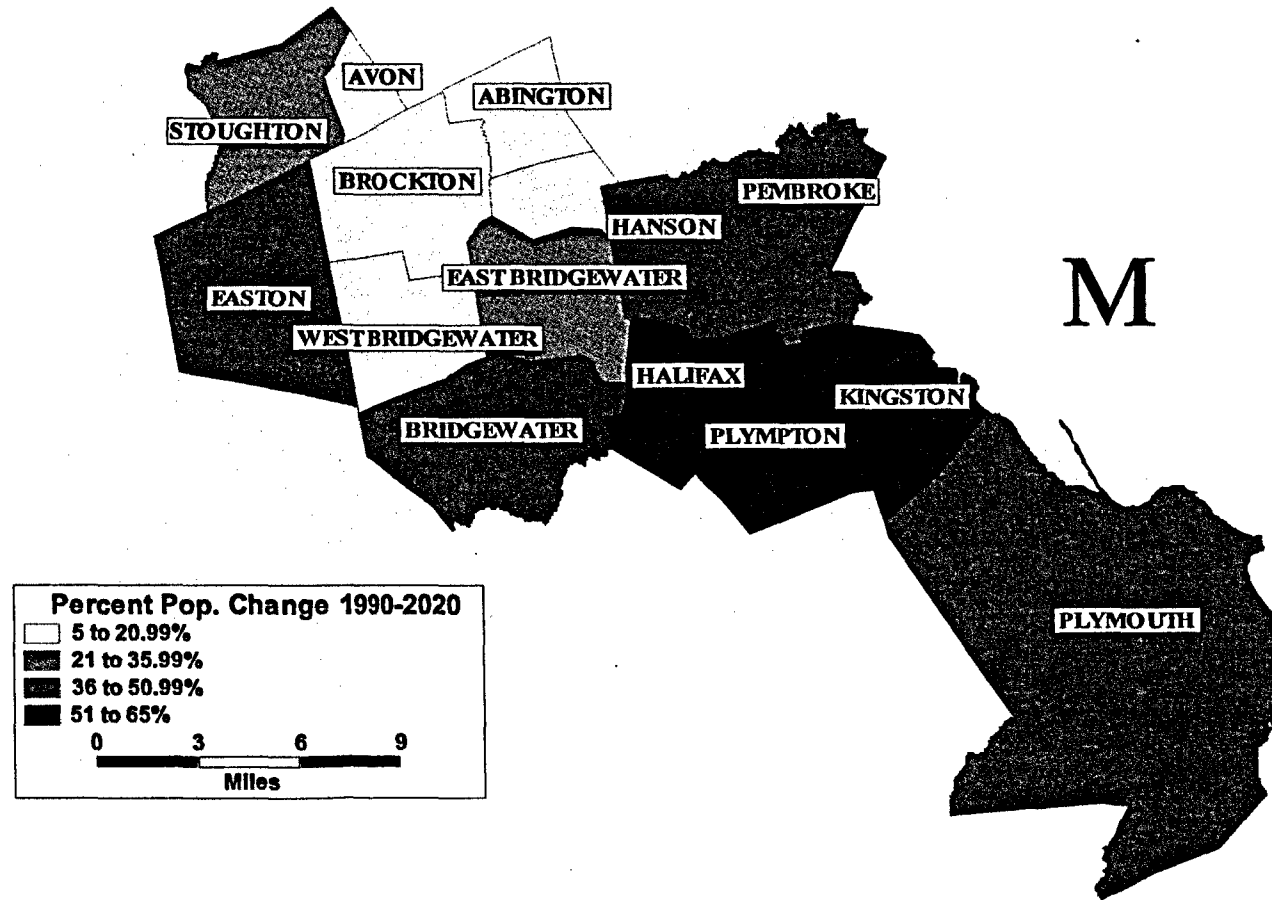
work. In addition, many companies have relocated to suburban office parks. The result of these changes is that population of once rural towns is swelling, at the expense of the environment and the economies of older urban areas.

Figure 4.1



Source: U.S. Census.

FIGURE 4.2
Map of % Change in Population



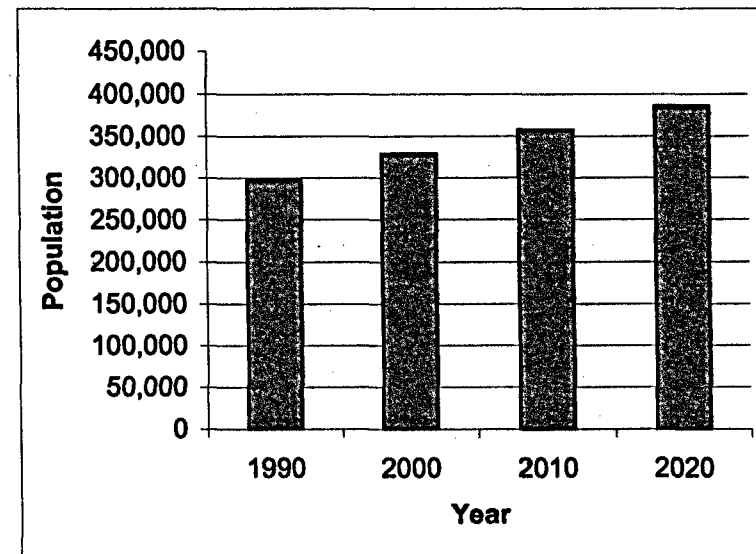
Over the past fifty years, it is the small rural towns that have experienced the most development. These communities have been at the receiving end of the outmigration of households from the Greater Boston area. The reasons for this phenomenon are social and economic. People desire privacy and get it at the expense of public life. Reliance on property tax for most local financing means that towns scramble to attract commercial development in order to increase their tax bases.

Population Projections

The exodus from urban areas is expected to continue. Population projections by OCPC assume a continuation of current trends, consistent with land availability and needed infrastructure, with the region gaining in population.

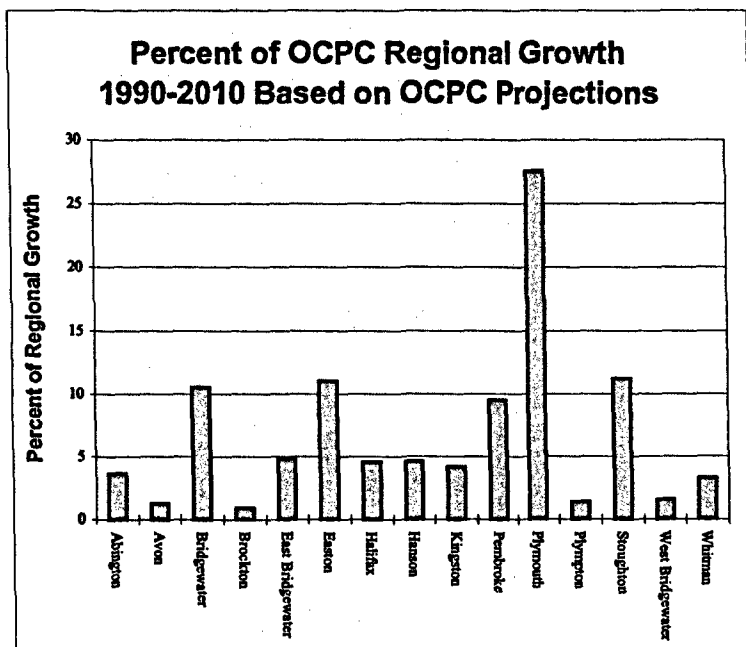
Figure 4.3

Projected Population of the OCPC Region 1990-2020



Source: OCPC. 1997 Long Range Regional Transportation Plan.

Figure 4.4



Source: OCPC, 1997 Long Range Regional Transportation Plan.

As the above figure shows, the town of Plymouth, with its vast amounts of open land, and highway and rail access, is expected to account for the largest share of the region's growth. Brockton, the traditional center of the Old Colony Region, accounts for the smallest share of growth. Figure 4.5 also displays these projections.

While traditionally the economic center of the Old Colony Region, the City of Brockton, accounts for the smallest share of projected growth.

Land Use Trends

The most common form of development in the Old Colony Region is sprawl. Virtually all recent residential development consists of single family houses on large lots. This pattern ensures that unnecessary amounts of open space and forested land are consumed every year. "Unnecessarily" large lots can be considered those which exceed the space needed for building site, yard area along with sewage disposal and/or private wells. In the most sensitive Zone 2 recharge areas for new public wells State regulations limit discharges from conventional septic systems to 440 gallons/acre/day, requiring an acre for a four bedroom house with an assumed 2 persons per bedroom. In sewerred areas the "need" for privacy and play space may depend more on site design than on sheer space.

As of 1991, 64% of the region's land was still considered potentially developable according to MASS GIS land use data files. Potentially developable land includes agriculture, forest, and open space, as defined by MASS GIS. The amount of potentially developable land is based on aerial photographs taken by MASS GIS. Since property lines are not visible, their estimates may overcount developable land by including

apparent open space owned by governmental agencies (hospitals, prisons, etc.) or the undeveloped portions of residential, commercial or industrial properties. Developable land may also be undercounted due to the exclusion of wetlands, which may be used to meet lot requirements.



Rt 18 in Whitman, MA.

Figure 4.5
Map of projected population growth

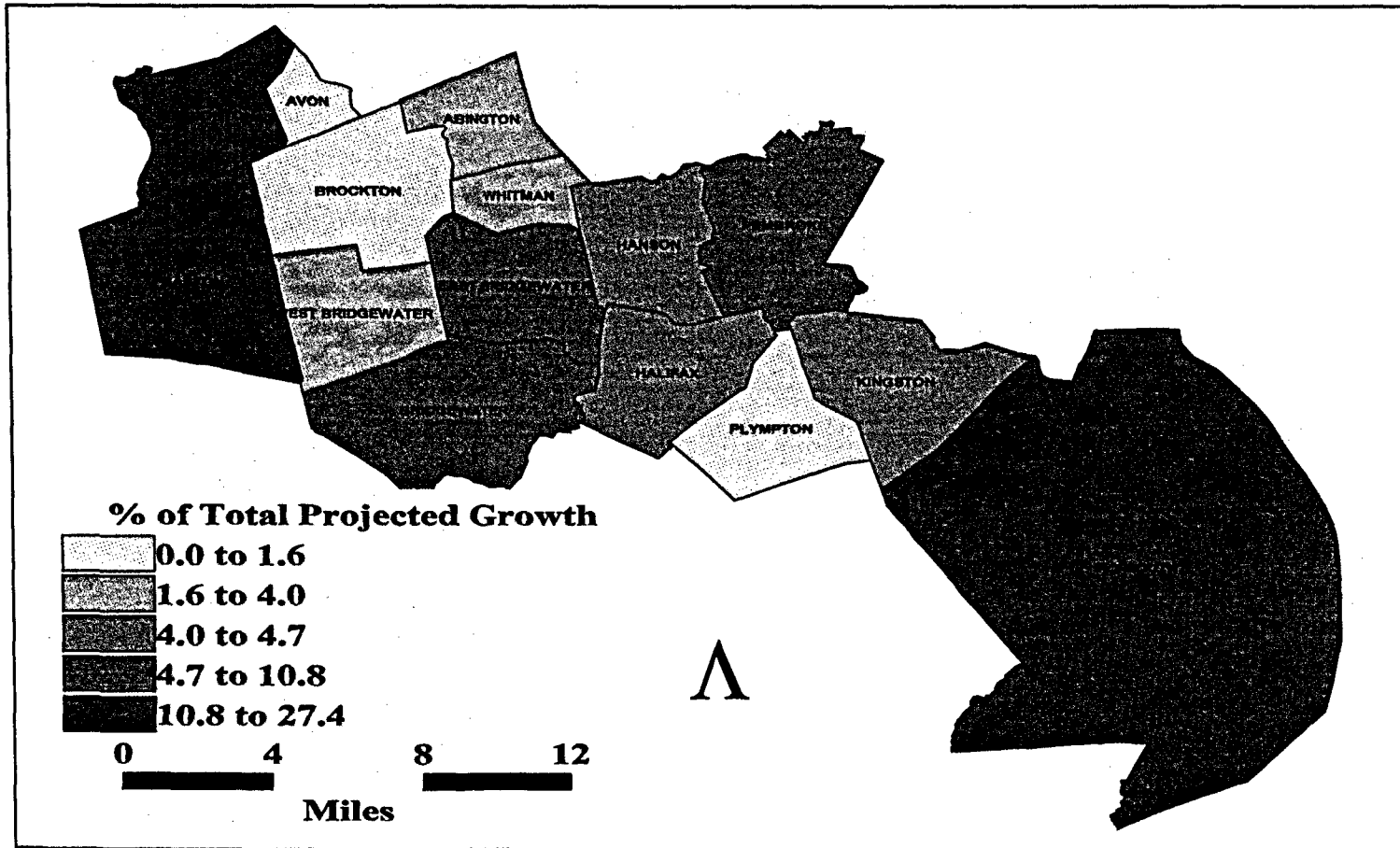
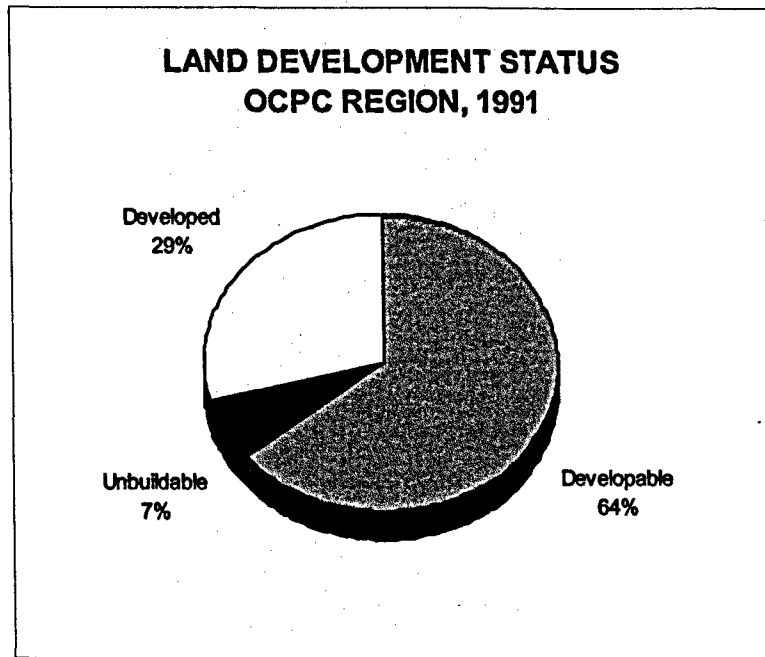


Figure 4.6



Source: Mass GIS 1991 Land Use Data Files.

Sprawl development in the Old Colony Region ensures that unnecessary amounts of open space and forested land are consumed every year.

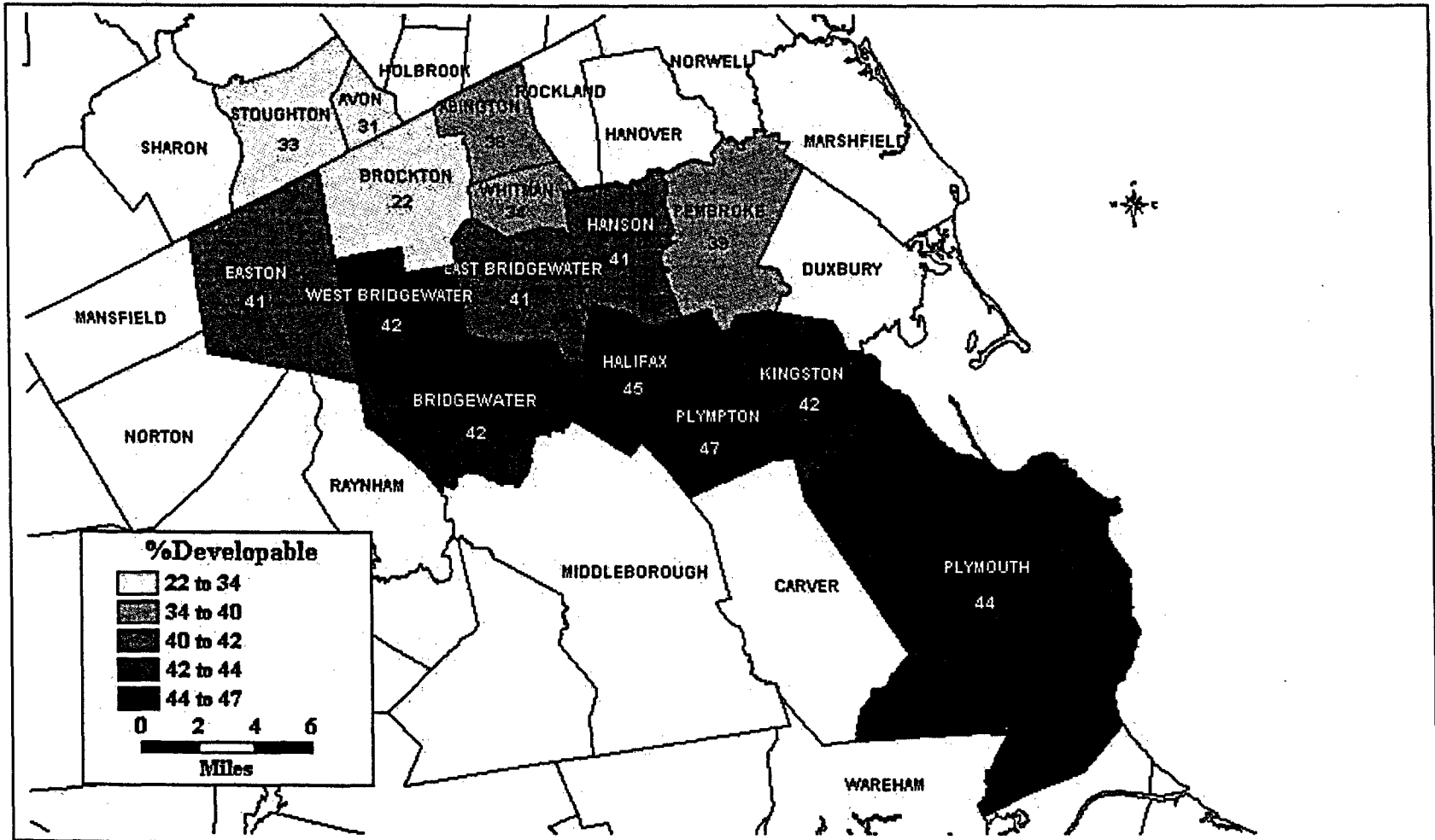
Figure 4.7 shows the percentage of developable acreage within each community in 1991. As the map shows, the towns of Plymouth, Plympton, and Halifax contain the greatest percentage of developable land. The city of Brockton contains the least amount of developable land at 22%.

Building Permits

The vast majority of residential building permits over the past ten years have been for the construction of single-family homes. While single family homes address the demands of many homebuyers today, the development of large lots in remote areas of the region contributes to the loss of open space and community character that is threatening the region. The failure of local communities and developers to provide an alternative choices to single-family living also creates an environment where many local residents (especially senior citizens) may not be able to afford much of the housing. Table 4.1 summarizes residential building permits in the region for the ten years from 1989 to 1998. The number of building permits issued per year in the Old Colony region has increased from 793 in 1989 to 1,197 in 1998 (51%). Over this ten year time period, 9,214 new residential building permits were issued, at an average rate of 921 per year. Over 22% of residential permits granted over this period were in the town of Plymouth.

Figure 4.8 and 4.9 show the percentage of residential building permits issued from 1995 - 1998 that are for single or multi-family dwellings. In the Old Colony Region multi-family uses

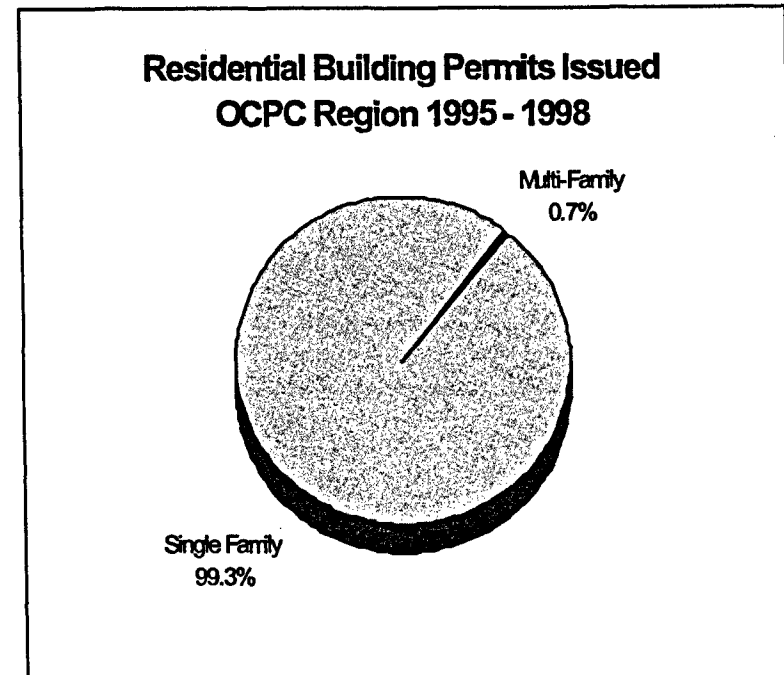
Figure 4.7
Map of % of Potentially Developable Acreage



accounted for 0.7% of building permits compared to 2.5% in the entire state.

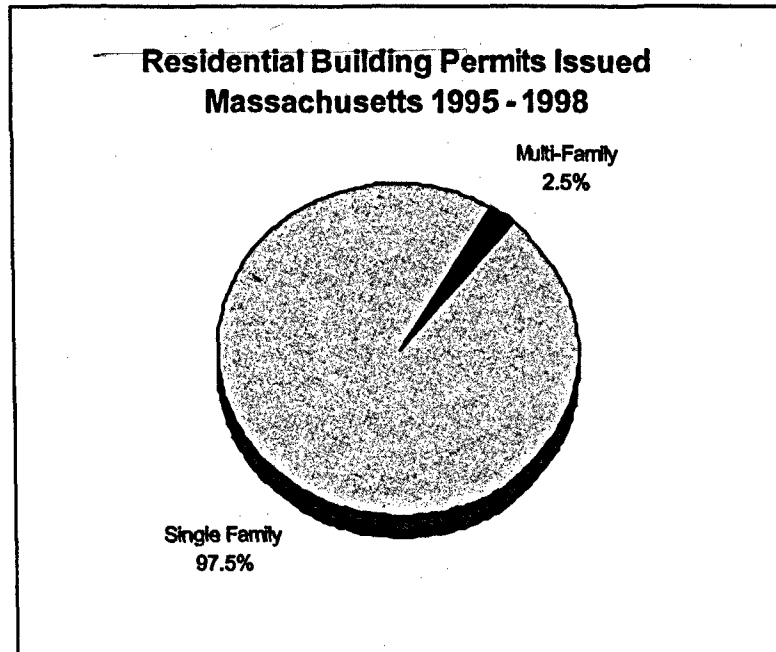
The diminishing opportunities for rental housing is apparent when comparing the current multi-family construction with the existing housing stock. Census figures indicate that 31.4% of the region's housing stock was considered "multi-unit" in 1990 and rental units accounted for 28.9% of the region's housing stock. However, only 0.7% of all residential building permits were issued for multi-family housing in the past three years, showing that this need is not being met. As older rental units age, new development is not being constructed. As a result, those households who cannot afford single-family homes are faced with a decreasing supply of housing, and concentrated in a limited geographic area.

Figure 4.8



Source: Bankers and Tradesman, January 1999 (1995-1998).

Figure 4.9



Source: Banker and Tradesman, January 1999

Figure 4.10 shows the average number of residential building permits per year from 1989 - 1998. Due to its physical size (the largest in Massachusetts) and the growth pressure associated with a coastal environment and recent transportation improvements, Plymouth has seen an average of 209 residential building permits per year.

The Towns of Bridgewater and Easton have seen the second and third amount of building permits per year (134 and 88 respectively). On average, the town of Avon has seen the least residential development at 6 permits per year.

Table 4.1**NUMBER OF RESIDENTIAL BUILDING PERMITS: OCPC REGION 1989-1998**

Community	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	10 Year % Change	10 Year Total	% of Total OCPC Building Permits	10 Year Average
Abington	23	29	69	62	65	62	53	21	18	16	-30.4	418	4.5	42
Avon	14	8	2	2	3	6	4	6	9	1	-92.9	55	0.6	6
Bridgewater	202	54	69	173	158	126	141	147	116	156	-22.8	1,342	14.6	134
Brockton	65	51	43	30	38	16	28	27	37	61	-6.2	396	4.3	40
E. Bridgewater	78	49	73	38	66	55	56	70	67	64	-17.9	616	6.7	62
Easton	57	46	57	107	125	134	102	98	78	76	33.3	880	9.6	88
Halifax	n/a	n/a	n/a	n/a	n/a	n/a	10	41	84	41	N/a	176	1.9	44
Hanson	33	23	25	34	30	28	27	22	45	50	51.5	317	3.4	32
Kingston	77	65	85	78	97	90	56	114	87	95	23.4	844	9.2	84
Pembroke	44	71	71	93	84	77	59	124	49	58	31.8	730	7.9	73
Plymouth	57	274	176	177	171	137	163	280	314	336	489.5	2,085	22.6	209
Plympton	24	7	10	n/a	17	12	7	9	9	9	-62.5	104	1.1	12
Stoughton	41	61	76	51	33	61	47	48	85	123	200.0	626	6.8	63
W. Bridgewater	10	9	20	20	18	17	22	10	10	31	210.0	167	1.8	17
Whitman	68	n/a	6	14	18	46	63	70	93	80	17.6	458	5.0	51
OCPC Region	793	747	782	879	923	867	838	1,087	1,101	1,197	50.9	9,214	100.0	921

n/a = not available

DATA SOURCES: 1989-Housing Units Authorized by Building Permits, U.S. Bureau of the Census as compiled in the OCPC Community Information and Data Book, 1992, p. V-5.

1990-1994-Community Building Inspectors in OCPC Community Information and Data Book, 1995, p. IX-3.

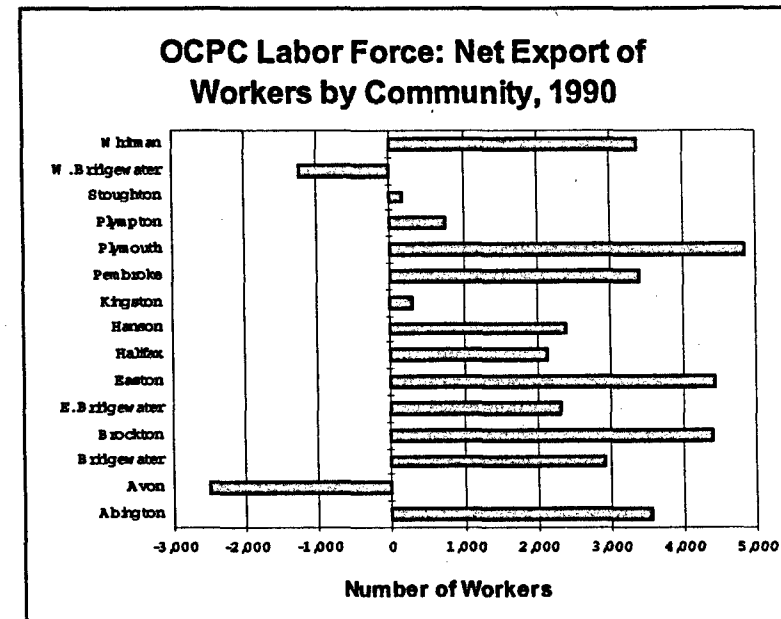
Employment

The Old Colony Region is basically residential, relying on the Boston Area for much of its employment. The region as a whole exports more workers than it imports. This is also the case at the local level, with most communities having more workers than jobs within their borders. Even when there are far more jobs than people, as is the case in the town of Avon, most people find suitable work elsewhere, regardless of the jobs/housing balance.

Figure 4.11 shows the net export of workers by community in the Old Colony Region. The chart compares the number of residents commuting out of the town with the number of commuters entering the town from elsewhere. Subtracting the number of people commuting *in* from the number of people commuting *out* gives the numbers shown in *Figure 4.11*. A positive number shows that more people are leaving than coming in (more people than jobs). A negative number shows that more people are coming in than leaving (more jobs than people).

Only two communities, Avon and West Bridgewater, import more labor than they export. The city of Brockton, which is the traditional economic center of the region, shows a relative dispersion of employment. Only 19,511 commute into Brockton, while 24,945 commute out. In total, the city has 42,079 workers, and only 36,675 jobs (1990).

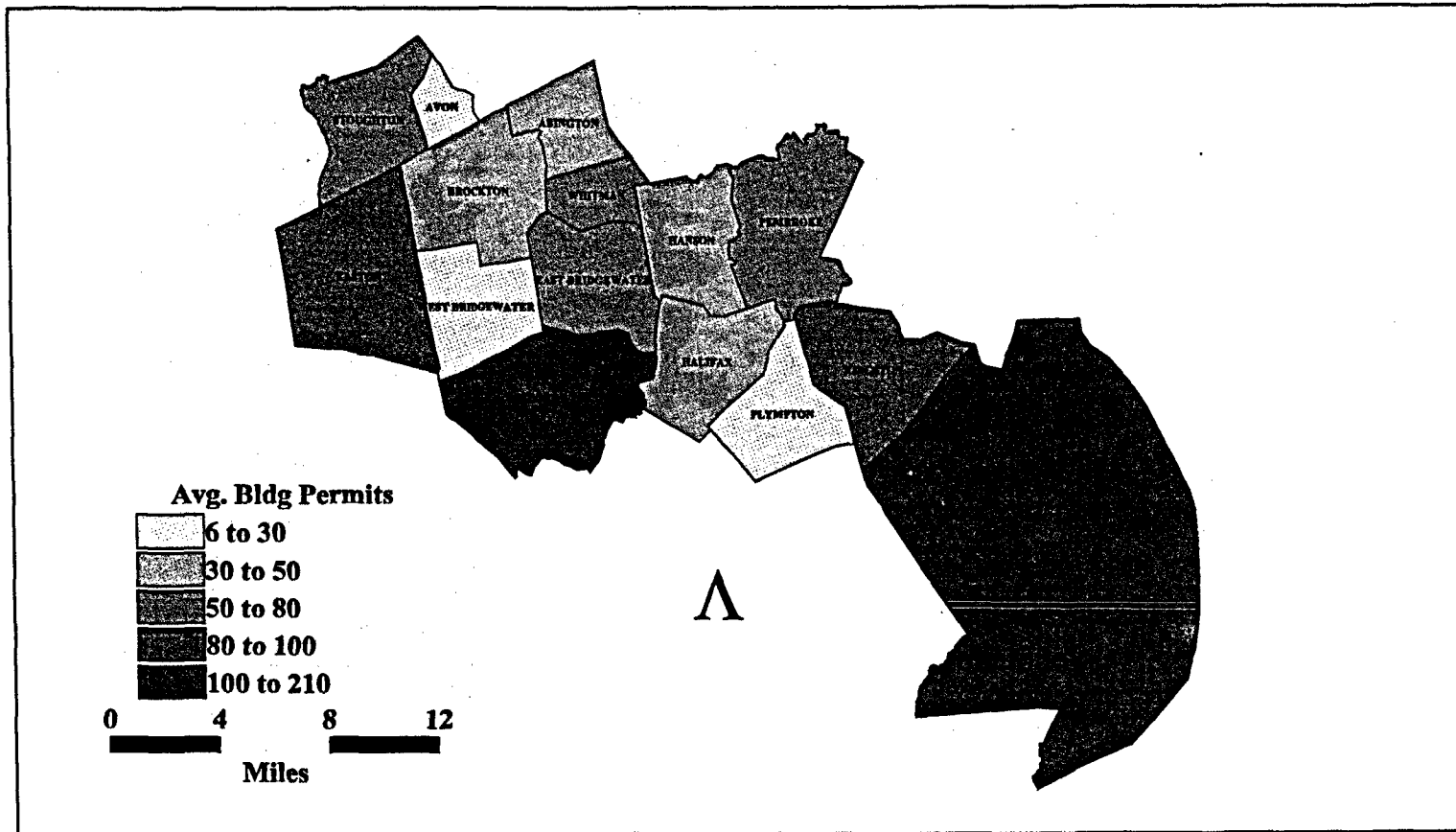
Figure 4.11



Source: U.S. Bureau of the Census, 1990. Census Transportation Planning Package.

Figure 4.10

Average residential building permits 1989-1998



A high percentage of a community's labor force working in town reflects a balance of housing and jobs. The Old Colony Region's new role in a larger economy is evident through these figures. No community has over 50% of its workforce employed within town. This is in contrast to the employment patterns of the late nineteenth, and early twentieth centuries, when residential areas were developed around employment centers. Today, mainly due to transportation improvements, a company's workforce can span an entire metropolitan area.

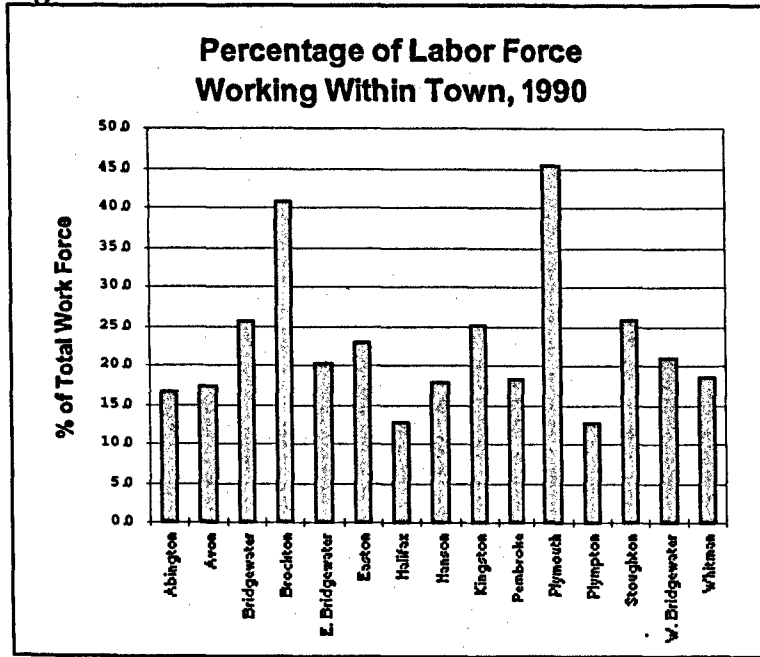
Many suburban communities, today, are characterized by a small percentage of residents working in town, as most people commute to job centers in the central city or suburban office or industrial parks. This pattern results in disadvantages for those households which cannot afford reliable transportation. Table 4.2 and Figure 4.12 show the percentage of the labor force working within town for the fifteen Old Colony Region communities. Brockton and Plymouth contain the greatest percentages of residents working within town. These communities possess the greatest concentration of employment in their downtowns, and the greatest concentration of multi-unit housing. Residents of these communities can more easily live within a close distance of jobs.

Table 4.2

PERCENTAGE OF WORKFORCE EMPLOYED WITHIN TOWN, 1990			
Town	Total Labor Force	Working in Town	% of Total
Abington	7,207	1,202	16.7
Avon	2,336	405	17.3
Bridgewater	9,905	2,532	25.6
Brockton	42,079	17,164	40.8
E. Bridgewater	5,743	1,168	20.3
Easton	10,727	2,453	22.9
Halifax	3,250	411	12.6
Hanson	4,688	835	17.8
Kingston	4,654	1,170	25.1
Pembroke	7,569	1,391	18.4
Plymouth	21,519	9,778	45.4
Plympton	1,263	159	12.6
Stoughton	14,032	3,624	25.8
W. Bridgewater	3,309	696	21.0
Whitman	6,608	1,224	18.5
OCPC Region	144,889	44,212	30.5

U.S. Bureau of the Census. 1990. Census Transportation Planning Package.

Figure 4.12



Source: U.S. Bureau of the Census. 1990. Transportation Planning Package.

Regional Employment Projections

Projections indicate that the number of jobs in the Old Colony Region is expected to increase over the next twenty years. These projections are an extension of past trends into the future, and do not take into consideration future land constraints, or economic cycles. As Table 4.3 shows, the

Town of Plymouth is expected to have the greatest share of the region's new jobs (30.9%). One main reason for Plymouth's development boom is the availability of vacant land in the community along with highway access. This pattern is apt to continue as access improves with the re-opening of the Plymouth Line of the Old Colony Railroad. The town of Stoughton is expected to contain the second largest percentage of the region's new jobs at 14.8%.

Table 4.3

OCPC EMPLOYMENT PROJECTIONS: 1990-2020

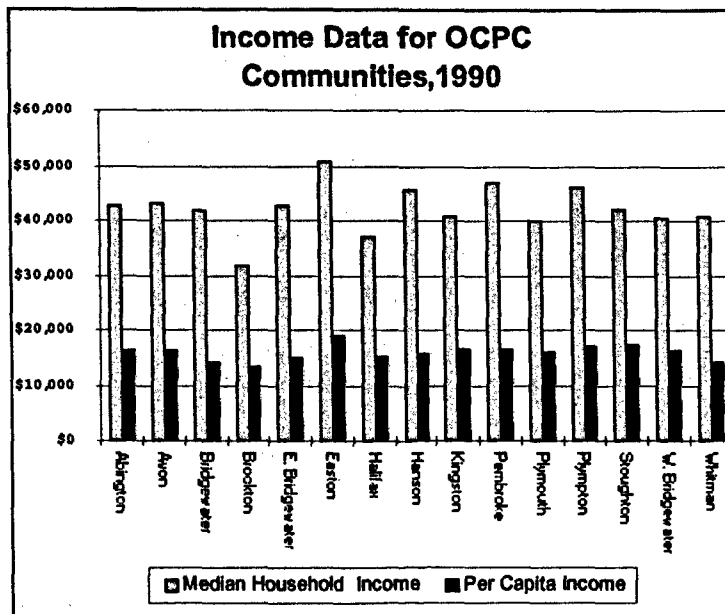
Community	1990	2020	Number of Jobs Created	Number of Jobs Each Year	% of New OCPC Jobs
Abington	3,306	3,440	134	4	0.4
Avon	4,975	6,665	1,690	56	5.5
Bridgewater	5,061	5,821	760	25	2.5
Brockton	38,584	42,269	3,685	123	12.1
E. Bridge.	3,333	2,558	-775	-26	-2.5
Easton	5,855	7,400	1,545	52	5.1
Halifax	615	1,255	640	21	2.1
Hanson	1,706	2,047	341	11	1.1
Kingston	4,656	7,569	2,913	97	9.5
Pembroke	3,832	7,000	3,168	106	10.4
Plymouth	16,054	25,469	9,415	314	30.9
Plympton	481	541	60	2	0.2
Stoughton	13,181	17,700	4,519	151	14.8
W. Bridge.	4,922	7,076	2,154	72	7.1
Whitman	2,843	3,103	260	9	0.9
OCPC Region	109,404	139,913	30,509	1,017	

Sources: Massachusetts Department of Employment and Training (DET)
Metropolitan Area Planning Council (MAPC)

Income Data

Over the course of the past fifty years the great majority of residential and economic development has occurred beyond the limits of established urban centers. As a result, older cities, such as Brockton, have declined economically. In many neighborhoods, nearly every family that could afford to move to the suburbs did so, leaving behind neighborhoods of concentrated disinvestment and poverty. Income data for the communities in the Old Colony Region reflect this trend. Figure 4.14 shows median household income and per capita income for OCPC communities.

Figure 4.14



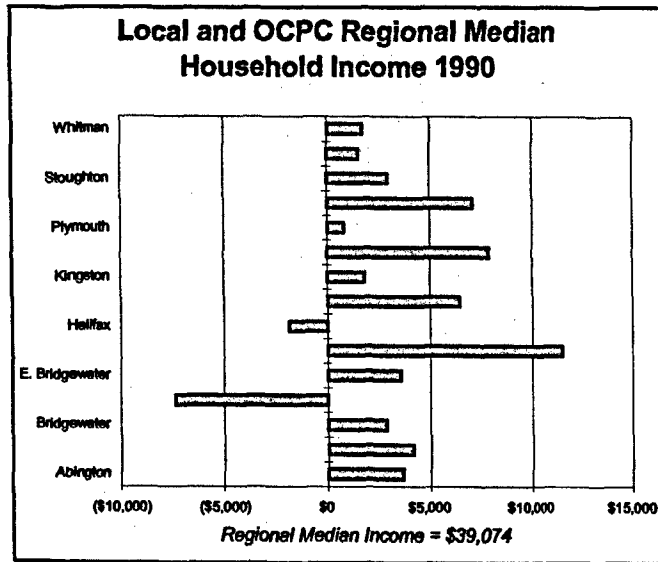
The City of Brockton has the lowest median household income in the region (\$31,712) and the lowest per capita income (\$13,455). The town of Easton has the highest median household income (\$50,647) and the highest per capita income (\$19,016).

Figure 4.16 charts the differences between local and OCPC regional median household income. Communities with a positive difference have median incomes above the regional median. Communities with a negative difference have median incomes below the regional median.

The City of Brockton has the largest difference between local and regional median household income. The 1990 median household income of the city of Brockton is almost \$7,500 below regional median household income. This fact reflects the disinvestment that has taken place in Brockton in favor of its suburbs. Median household income in the town of Easton is approximately \$11,600 above the regional median household income.

In addition to median income, the percentage of the population below the poverty level gives a more accurate presentation of economic distress. Table 4.4 and Figure 4.17 present poverty status information for OCPC communities in 1990.

Figure 4.17

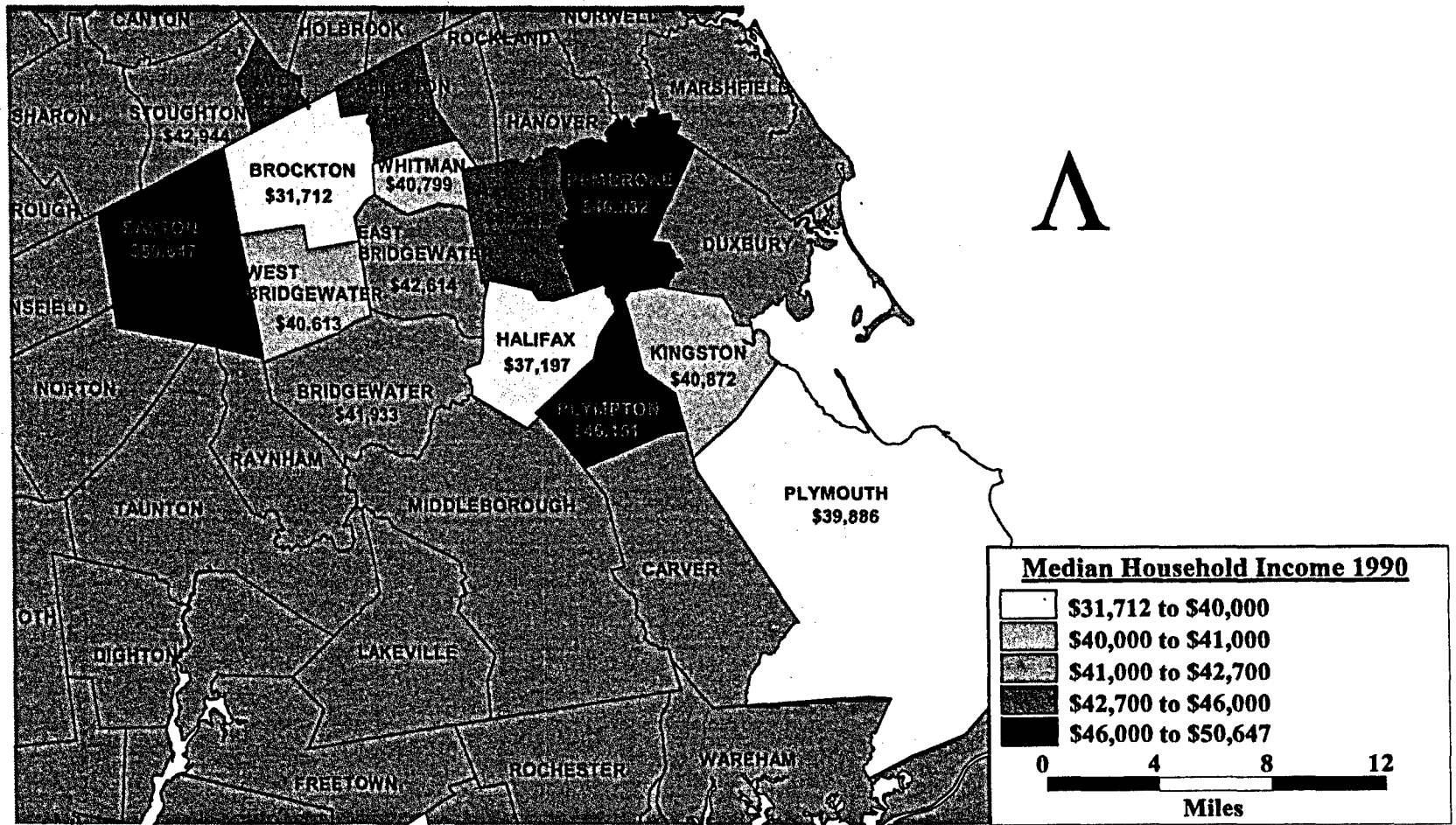


Source: U.S. Bureau of the Census.

Table 4.4

POVERTY STATUS IN OCPC COMMUNITIES, 1990				
	Total People Below Poverty Level	Total Population	Percent Below Poverty	% of Total OCPC Residents Below Poverty Level
Abington	616	13,817	4.5	2.9
Avon	188	4,558	4.1	0.9
Bridgewater	808	21,249	3.8	3.7
Brockton	12,396	92,788	13.4	57.4
E. Bridgewater	425	11,104	3.8	2.0
Easton	738	19,807	3.7	3.4
Halifax	247	6,526	3.8	1.1
Hanson	211	9,028	2.3	1.0
Kingston	452	9,045	5.0	2.1
Pembroke	593	14,544	4.1	2.7
Plymouth	2,534	45,608	5.6	11.7
Plympton	62	2,384	2.6	0.3
Stoughton	1,261	26,777	4.7	5.8
W. Bridgewater	326	6,389	5.1	1.5
Whitman	753	13,240	5.7	3.5
OCPC Region	21,610	296,864	7.3	100.0
Massachusetts	519,339	6,016,425	8.6	-

Figure 4.16
Map of median household income



As a whole, the Old Colony Region contains a smaller percentage of people below the poverty level (7.3%) than does the State of Massachusetts (8.6%). The city of Brockton possesses the largest percent of residents below the poverty level at 13.4% (12,396 people). The town of Plympton has the smallest percentage of people below the poverty level at 2.6%.

Transportation Patterns

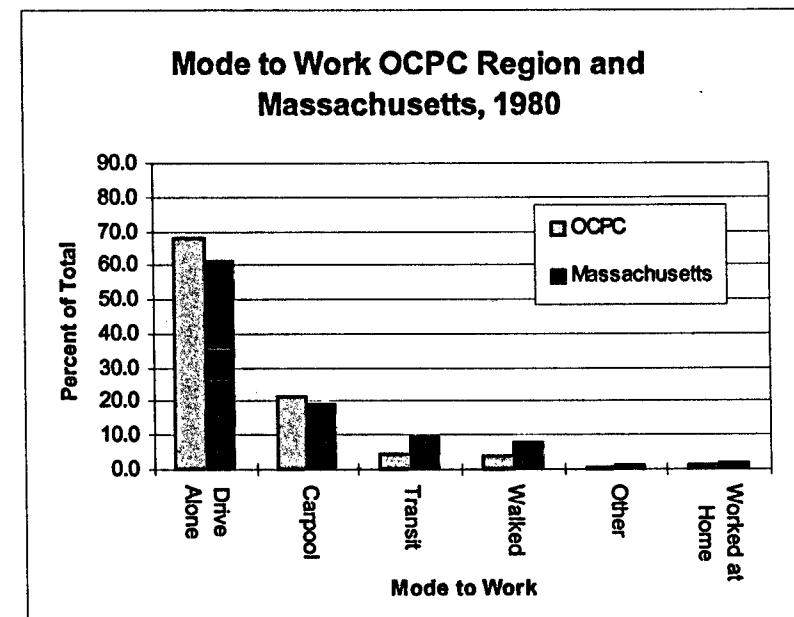
Over the ten year period from 1980 to 1990, single-occupancy automobile usage dramatically increased in the Old Colony region. While the number of working people in the region increased from 119,909 in 1980 to 144,888 in 1990, the number of people carpooling, taking transit, and walking all decreased. Low-density land uses, roadway improvements, and cheap gasoline prices, led to more and more households driving more and more cars. Transit and walking have become less feasible to individual households as land uses become more scattered, and the regional economy loses its geographic concentration.

The results of this automobile dependency are increased traffic congestion, increased pollution, as well as higher costs to individual households, and state and local highway departments. Region-wide data on travel behavior since the restoration of the Old Colony Rail Line does not exist. It is yet to be seen whether the new service will have a significant impact on the region's commuting patterns. The number of people working at home increased by approximately 1% in both the region and the state. This number should increase in

the future as telecommunications and computer technology improve.

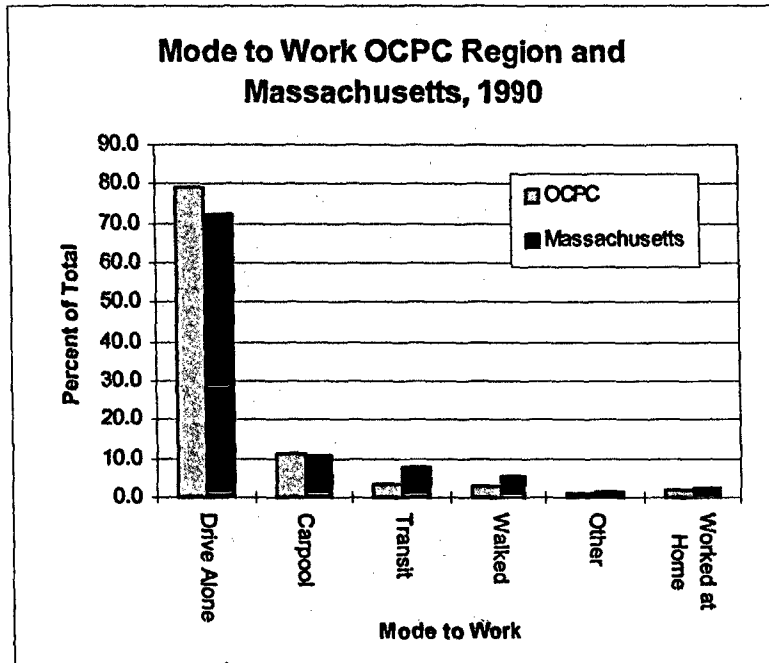
Figure 4.18 and Figure 4.19 compare mode to work data for the OCPC region and the State of Massachusetts for the years 1980 and 1990.

Figure 4.18



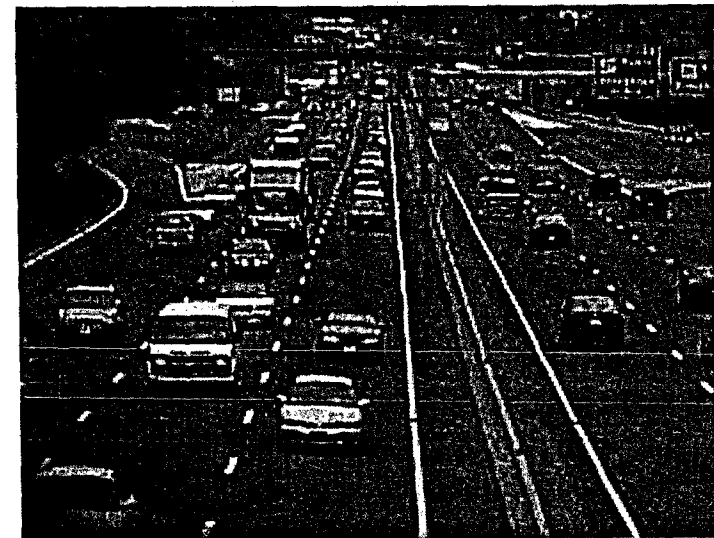
Source: U.S. Bureau of the Census. 1990. Census Transportation Planning Package.

Figure 4.19



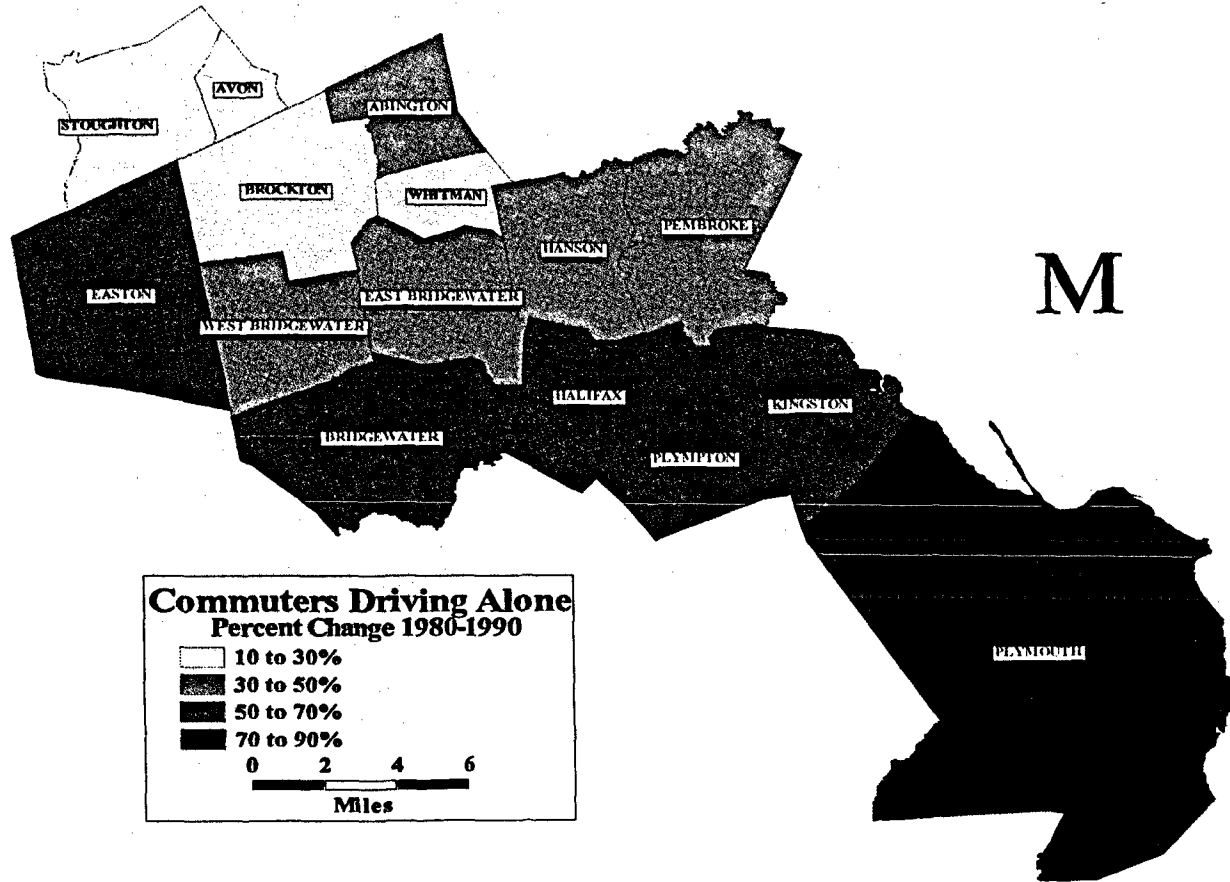
Source: U.S. Bureau of the Census, 1990. Census Transportation Planning Package.

Transit and walking have become less feasible people as land uses become more scattered, and the regional economy loses its geographic concentration.



Route 24 at Stoughton/Brockton Line

Figure 4.20
Map of commuters driving alone



Transit has many advantages over the automobile from a regional perspective. These benefits include the following:

- Transit reduces the number of vehicles on the road and the number of vehicle miles traveled. Transit can reduce traffic congestion by reducing the number of automobiles
- Transit usage also decreases the amount of pollution in the air and groundwater caused by heavy automobile usage.
- Increased transit services provide transportation for the “non-mobile” population, those who do not own an automobile due to cost or physical handicap. Transit especially benefits teen-agers and the elderly (as well as their families) who do not drive as much as the rest of the population.
- Transit provides a focus for new economic development. The transit-oriented development (TOD) concept stresses development around light rail stations. Development consists of “village centers” - mixed use, high-density developments, which provide commercial, residential and other uses all within walking distance to the station.
- Transit also provides a method of managing growth for suburban and rural communities. Municipalities can concentrate growth around transit stops, while protecting other areas from sprawling development.
- Transit can strengthen the competitive advantage of existing transit-friendly centers.

Increased transit services provide transportation for the “non-mobile” population, those who do not own an automobile due to cost or physical handicap.



BAT Intermodal Terminal in Brockton, MA.

CHAPTER FIVE

THE REGIONAL PLAN PROCESS

Regional Advisory Committee

OCPC established a Regional Advisory Committee (RAC) for the purpose of advising the Planning Council on development of regional goals, objectives, and plan implementation strategies. In addition, the RAC reviewed and commented on draft versions of the Regional Plan.

The Regional Advisory Committee was made up of local officials, business people, and residents representing a broad range of perspectives. The Council recruited town officials including members of the Boards of Selectman, planning boards, zoning boards of appeal, and conservation commissions; environmentalists, real estate and development professionals, representatives of community organizations and other residents of the region to participate in the planning process. The members of the Regional Advisory Committee and others who participated in the planning process are listed in Appendix One.

Development of Regional Land Use Plan

Two planning tools the Council is using in developing the land use plan are the buildout analysis and the land suitability analysis. The buildout analysis provides a figure for the theoretical total amount of residential and other development that can be built in a community when considering development constraints and zoning. The results of the buildout analysis are reported as number of units of housing or number of square feet of commercial or industrial space. The purpose of the land suitability analysis is to determine the potential range of land uses given the physical characteristics, location, access, context with adjacent land uses, and other factors such as market conditions, etc. Both of these planning tools benefit from the use of geographic information systems (GIS), or computerized mapping. The Council had to update the 1991 MassGIS land use information to 1999 conditions for each of OCPC's 15 member communities.

During this phase of the study, planning staff conducted land use surveys in each of the communities in order to identify new developments such as subdivisions, Approval Not Required (ANR's) lots, condominium and apartment complexes, etc. Also, changes in other land use patterns such as commercial and industrial lands, etc., were noted.

After completing the land use survey for each community, OCPC staff met with town staff including representatives of Planning Boards/Town Planner, Assessors Office, Building Inspectors, and Zoning Boards of Appeal to obtain detailed information regarding new development since 1991. Information obtained included subdivision name, location and street names, date approved, number of lots and lot sizes, total acreage, status of the project, number of units built, copy of locus map and assessors maps and other pertinent information.

The information collected from the land use surveys and meetings with town staff was turned over to the Council's GIS Specialist for processing. The new data was then combined with existing MacConnell data provided by the Executive Office of Environmental Affairs/MassGIS. In sum, this was accomplished by creating new map polygons and inserting them in the existing database, and further altering existing map polygons where appropriate. Each map polygon has an associated data table connected to the graphic data, which provide information such as land use codes, subdivision names, approval dates and area, were then updated. Finally, the Massachusetts Highway Department Road Inventory File

was also updated to reflect new subdivision roads. The process as been time consuming and complex because of the hundreds of land use changes and new roads that had to be added to the database.

Land Suitability/Buildout Analysis Process

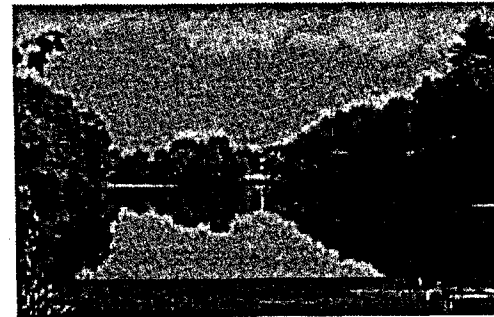
Land suitability and build-out analyses were performed for each community in the OCPC region using GIS. For both analyses, land is classified as either developed, un-developable or potentially developable. Undevelopable land has development constraints such as permanently protected open space, waterbodies, wetlands and floodplains, steep slopes, etc. Potentially developable land has minimal development constraints and would allow some type of urban development.

For the buildout analysis, all developed land and land with development constraints is deducted from the total land area to determine the remaining buildable land in the region. A factor of 10 to 15 percent is then deducted to account for roads and sidewalks, easements, and land dedications. Zoning is then applied to the net buildable land to determine the approximate number of housing units or square footage of commercial and industrial space if the community were to fully buildout.

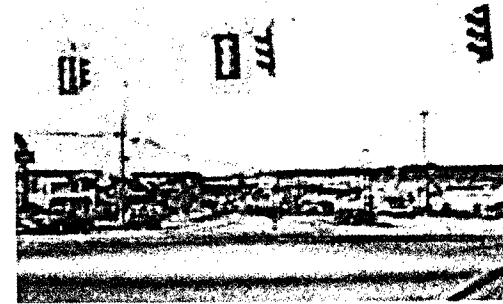
As stated before, the land suitability analysis is used to determine potential uses of land based on its characteristics. The information gained from the land suitability analysis was use to develop the regional land use plan. Land suitable for

urban development was developed by analyzing the following characteristics:

- wetlands and 100 feet buffer around wetlands
- water bodies
- 100 year floodplains
- state river protection act buffer of 200 feet
- public water supply watersheds
- Aquifer protection overlay zones
- Zone II public wellhead protection areas
- wildlife habitat
- active agricultural lands
- steep slopes over 15%
- Current land use, including residential, commercial, industrial, transportation, open space
- publically owned open space
- public and private recreation lands
- public sewer and water infrastructure
- major highways
- public transit routes
- Major employers and employment centers
- community zoning



A Pond in Easton, MA



Merchant's Park in Avon, MA

CHAPTER SIX

SPRAWL DEVELOPMENT AND ITS IMPACTS

What is sprawl?

So, what is sprawl? There seems to be no consensus on a definition. As one commentator has stated, "Like obscenity, you may not know exactly how to describe [sprawl], but you know it when you see it. It's a matter of degree. It's hard to say exactly where sprawl begins and ends (Schmidt: 1998)." H. Bernard Waugh defines sprawl as "...the ugly in-between-not people-oriented enough to feel urban, but not open enough to feel rural! (Stafford: 1999)" The American Heritage Dictionary (Houghton Mifflin: 1985) defines sprawl as "haphazard growth or extension outward, especially that resulting from new housing on the outskirts of a city." Another source states that "...sprawl is the continual use of more land than is necessary to accomplish a given development goal. Sprawl is the consumption of resources and land in excess of what is needed to create a comfortable, livable and functional city (Thompson: 1993)." Finally, sprawl is defined as "...random development characterized by poor accessibility of related land uses such as

"Like obscenity, you may not know exactly how to describe [sprawl], but you know it when you see it. It's a matter of degree. It's hard to say exactly where sprawl begins and ends (Schmidt: 1998)."

housing, jobs, and services like schools and hospitals. Among these undesirable land use patterns...are...commercial strip development, low-density residential developments, and scattered, isolated developments that leapfrog over the landscape (Reid Ewing in Schmidt: 1998).

As the following characteristics illustrate, sprawl occurs at many scales, regional, community, and project. These range from development at the edge of the region to development at the edge of a community, to anti-pedestrian site development within a project. All of these reflect the increased more diverse automobile-oriented accessibility, undermining traditional central places and expanding feasible living areas.

Characteristics of Sprawl Development

- *Low density and intensity of development*
- *Primarily automobile access*
- *Design of buildings and layout of site are oriented to automobiles/motor vehicles*
- *Poor access and mobility for pedestrians, transit users, and bicyclists*
- *Land consuming, uses more land than needed to accommodate development*
- *Single-use zones, no mixed uses*
- *Scattering of non-residential uses to edge of or away from traditional Central Business District because scattered sites work from a narrow perspective.*
- *Little or no connections between uses, especially pedestrian connections*
- *Long distances between buildings because of zoning setback and parking requirements*
- *Parking lots are predominant feature of landscape*

Sprawl vs. growth

Many people believe that any action by a community to prevent or restrict sprawl development is an effort to stop economic development or growth of a community. Sprawl is not the same thing as growth. Growth is an increase in the quantity of something, such as population, number of jobs, or dollar value of sales tax revenues. Sprawl is a matter of location and density and can occur as much or more from migration as from actual regional growth. It reflects development at the edge of a



Illustrates impact of sprawl; residential and commercial land uses clearly separated by a heavily traveled avenue with little or no connection between the two.

community or a region as well as an increase in the amount of land consumed per person or other unit of measure (Vaugh and Northrop: 1999). There are many communities in Massachusetts where the rate of land consumption (amount of land developed) far exceeds the rate of population growth. This is an indicator of sprawl development.

"Urban sprawl is endemic throughout the United States, and there is widespread concern over its potential environmental and public health impacts. Many of the nation's cities are consuming land faster than their populations are growing, pushing the specter of urban and suburban pollution farther into rural corridors." Charles Schmidt, Author, "The Specter of Sprawl"

What are the causes of sprawl?

Sprawl development has been an issue debated in communities across the nation over the past 30 to 40 years. It is a product of local, state, and governmental policies that have supported the movement of people out of cities into what have become the suburbs. These suburbs have been carved out of rural areas that were once farmland or forested areas. Sprawl is also the product of the marketing of the "American Dream" by the real estate and land development industry. This marketing effort has influenced thousands and thousands of individuals and families to make the trek outward from the city to suburbia in search of that single-family home on its own patch of grass-covered ground. Families and individuals were also influenced by the initially low cost of land and housing, government subsidized or guaranteed home loans, and the initially, congestion-free commute to work into the city, and later to other suburbs, by automobile on government subsidized highways.

This suburbanization trend over time has dispersed or decentralized population, businesses, and industry over wider metropolitan areas.

Why is sprawl bad?

Sprawl has become one of the nation's most important land use issues. Communities and states across the nation, from Maine to Maryland and Oregon to Florida, are trying to deal with the myriad impacts of sprawl development. Many national

organizations, such as the American Planning Association and the Urban Land Institute, are committed to addressing this important issue. There is also an expanding number of internet web sites now dedicated to the issue of sprawl and growth management.

Much of the impact of sprawl development is cumulative in nature and therefore we are unable to see the larger impacts on our communities' character, transportation systems, and environmental and fiscal health.



*Impacts of sprawl include commercial strip development with an overemphasis on impermeable parking area.
The Fiscal Impacts of Sprawl*

One impact of sprawl is its impact on our communities' fiscal

health. Maine is one of the few states (Maryland is another) that have prepared analyses of the impacts of sprawl development. In 1997, the State of Maine published the report "The Cost of Sprawl." The study identified the increased costs to the state, its communities, and its taxpayers of providing services resulting from sprawl development patterns.

"It just costs more, on a per unit basis, to serve families who are widely dispersed than it does to serve families who live in traditional neighborhoods." The Cost of Sprawl

The study found that local and state taxes in Maine have increased in three ways. First, it has required the development of new and redundant infrastructure in previously rural or undeveloped areas. This becomes particularly significant when the density becomes too high for on-site water and sewer systems. Second, it has increased the distance of service routes for police, fire, ambulance, road maintenance, and plowing and sanding. And finally, older cities and town centers were left with a declining and poorer population that had to pay higher taxes to maintain an under-used infrastructure.

A more detailed analysis made the following findings.

School Costs

The study found that between 1970 and 1995 the number of public school students (both elementary and secondary) decreased by 27,000. For the period between 1975 and 1995, the State of Maine invested a total of \$727 million for new

school construction and school renovations. Forty-six (46%) percent or \$338 million of that amount went towards the construction of new school capacity in fast-growing communities. The new school capacity in growth towns duplicated existing underutilized capacity in existing centers at a time when the overall school age population was declining. This was largely a cost of migration/sprawl, not of total growth.



New school under construction.

School transportation was found to be another area of high cost. In 1970, school transportation cost \$8.7 million, while in the 1990s it cost \$54 million to bus fewer students. The State of Maine picks up two-thirds of the school busing costs while local governments pay the balance. Part of the increased bus transportation costs can be attributed to state policy requiring fewer, larger consolidated schools and school districts, while the majority of the increased costs are due to sprawl development.

Transportation Costs

The study looked at transportation costs and more specifically the costs of building and maintaining roads. Maine's population increased less than 10% during the 1980s. During the same period, the study found that the total miles driven increased by 57% (over 40 million miles per year) and total highway expenditures by state and local governments increased by a third. For the period from 1987 to 1994, communities in Maine were accepting new roads at an average of 100 miles per year.

Even with increased budgets for roads and highways, local and state highway departments are struggling to keep pace with routine maintenance and repairs.

Police Costs

The study found that the costs of policing have gone up even though the crime rate in Maine decreased by 17% between 1980 and 1993. Police budgets for local, county and state agencies increased by 40 percent during the 1980's. The study explains that part of the increased costs can be attributed to crime following people to rapidly growing areas. Communities have had to add additional police patrols to serve new development in outlying areas. Each full-time patrol requires one police cruiser and four police officers at a cost of \$175,000 per year.

The Environmental Impacts of Sprawl

Sprawl development is one of the major policy challenges facing citizens and governments on the local, regional and state levels. It is linked to many of the community livability and environmental problems confronting our communities today.

Unchecked urban growth is linked to many environmental problems, including increased automobile emissions, deterioration of air and water quality, loss of rural lands, and a declining sense of community. The emerging consensus among citizens, planners, government officials, and environmental groups is that sprawl is un-sustainable, and coordinated land use planning strategies are needed to check its growth."

"The Specter of Sprawl" by Charles Schmidt, 1998.

Air Pollution

The automobile has become an absolute requirement to living in the suburbs. Two or more cars are needed to transport residents to work, school, shopping, recreation and other daily needs. This phenomenon is illustrated by data from the Federal Highway Administration which show that from 1980 to 1995 total vehicle miles traveled in the United States grew by 59%. This is a result of housing and jobs becoming more segregated and increases in the length and overall number of commuter trips.

Motor vehicles are typically the largest source of air pollutants

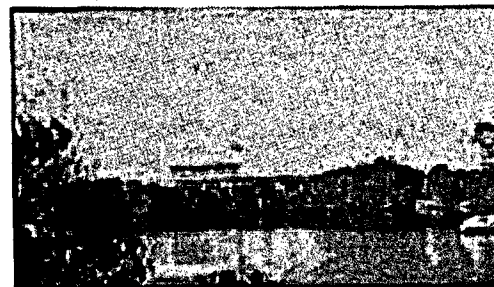
in many areas of the country. Air quality is impacted more by pollutants emitted from motor vehicles than by industrial plants or other stationary sources. It is estimated that 50% of all motor vehicle pollutants are emitted during two periods, starting the car (or cold start) and when the car is cooling down (hot-soak period). Motor vehicles are the primary source of ground-level ozone, the most serious air pollutant in the northeast. Air pollutants from motor vehicles are responsible for 20,000 to 40,000 annual cases of chronic respiratory illnesses, and 50-70 million respiratory-related restricted activity days per year.

While the quantity of pollutants emitted per motor vehicle has been decreasing due to improvements in emission control technologies, the sheer increase in the number of vehicle miles traveled and the number of vehicle trips (the number of cold starts and cool downs) threaten these air quality improvements.

Water Quality

Sprawl development also adversely impacts water quality and storm-water management capacity. Surface water quality is affected by the percentage of impervious (e.g., paved) surfaces in a watershed. Impervious surfaces prevent storm runoff from being absorbed into the soil and groundwater table. One effect is the lowering of the water table. Also, runoff from impervious surfaces can cause downstream flooding and sedimentation. Low density or sprawl development leads to storm runoff at rates 50% higher than compact urban development.

Urban runoff can also lead to degradation of surface waters. A 1994 EPA report indicated that 12-50% of all surface water pollution originates with urban runoff. This is because the contaminants from roads and parking lots typically include oils and other motor vehicle fluids, road salts, nutrients, sediments, and other hazardous and solid wastes.



An example of commercial development encroaching upon a water resource. Runoff from parking lot flows into pond resulting in contamination from toxins such as oil, gasoline and other motor vehicle fluids.

Community Character/Quality of Life

Sprawl has affected the character and quality of life of the Region's communities. Over time, transportation systems have influenced the development patterns of our communities. Historically, housing, commercial and industrial activity in Massachusetts developed in larger clustered, mixed-use villages. These were typically located near water-bodies, major roadways, crossroads or railroad stations. Mills and factories sprouted up in these areas because of the availability of power

for manufacturing and easy transportation of raw materials and finished products. Housing for workers was built within walking distance of the mills, factories and businesses in the commercial center. Merchants, craftsmen, and tradesmen located in the village centers in order to supply goods and services to support the needs of commercial and manufacturing concerns, residents and travelers.

The land use pattern was characterized by dense neighborhoods and buildings perched at the sidewalk's edge and flush against each other. This allowed for easy pedestrian access to different businesses and other destinations. The close-knit character of community provided opportunities for incidental contact and social interaction between people. The most noticeable impacts of sprawl development usually occur along a town's major arterial streets. Here residential properties, vacant land, or mom and pop stores are converted to larger commercial uses, usually regional and national retail and restaurant chains. Generally, the chains design their buildings with unique styles, colors and signage so that they can stand out amongst the commercial clutter along the roadway corridor. There has been little attempt to design buildings and sites that fit it with the local historical architecture and land use patterns. Chain store architecture ends up replacing the local architecture resulting in a loss of community character. Yet determined local boards can influence appearance, e.g., through site plan review as the Halifax Planning Board negotiated substantial modifications to the designs to its local Wal-Mart store.

Another feature of the chains is the extensive parking lots

which have become the predominant feature of the suburban highway corridor. Parking lots add distance between uses making walking, transit, bicycling and other modes of transportation (other than driving) ineffective.



*Results of Sprawl: The Changing Landscape
Single use areas such as industrial parks or retail commercial chains are replacing traditional mixed-use zones.*

CHAPTER SEVEN

ALTERNATIVE DEVELOPMENT PATTERNS

What can we do to prevent or reverse sprawl?

Many communities in the OCPC region have been experiencing significant growth over the last several years. This growth has led many communities to adopt development restrictions and growth controls to slow the rate of development. While many of these restrictions and controls manage the rate and density of growth they do little to manage the quality of development or prevent the impacts of sprawl development. One purpose of this plan is to present some alternative development tools that work towards preventing sprawl development and help make the use of alternative modes of transportation to the automobile more feasible for the public to use. This chapter discusses some of the various alternative development and growth management tools being used by communities throughout Massachusetts and other states.

Strategies to address sprawl

Planning Movements--

A number of general terms are used to describe the growing movement to develop alternatives to sprawl and to preserve

the traditional neighborhood. The many benefits and characteristics of these similar concepts are outlined below.

New Urbanism

New Urbanism is a movement that seeks to replicate the small town central business district and neighborhood land use patterns that were predominant in the United States prior to W.W.II. New Urbanists believe that the physical design and layout of communities, as well as the architectural elements of buildings, can be used to increase the feeling of community and neighborliness that is often found lacking in today's suburban developments. Modern development patterns, according to New Urbanists, cause segregation and alienation among people because of the separation of land uses and the isolation that it can cause.

New Urbanism focuses on the creation of pedestrian-scale and pedestrian-oriented communities as compared to the automobile-oriented subdivisions that are commonly built today. The New Urbanist community is designed to be a compact, mixed-use community with formal public spaces,

civic buildings and landmarks which serve as focal points. The mixed-use principle of the New Urbanist community accommodates retail and other businesses, public or civic uses, schools, and a range of housing including single, multi family, and accessory units. Lot sizes are much smaller than their suburban counterpart; and homes are designed with front porches and other architectural features that allow for informal and spontaneous contact between neighbors. The neighborhood is designed to create a pedestrian-friendly environment. The streetscape, public spaces, neighborhood services, schools and other residences promote a pedestrian network that is safe and comfortable.

New Urbanist development promotes the preservation of usable open space by designing compact neighborhoods with adjacent open space systems.

New Urbanist projects are built on sites ranging from abandoned shopping centers, such as Mashpee Commons in Mashpee, MA and Old Mills Shopping Center in Mountain View CA, to greenfields (or undeveloped) sites, such as Laguna West near Sacramento, CA and the Kentlands near Washington, DC.

Smart Growth

Smart Growth is a major initiative aimed at policies and decisions to acknowledge growth and guide it into compact development patterns, infill and redevelopment of existing and older suburban town centers rather than outlying areas. This approach would direct development back to areas already committed to urban use that already has public services and facilities.



Mashpee Commons: An Example of a New Urbanist project

Sprawling growth patterns drive up local property taxes because of the need to pay for new infrastructure improvements (e.g.; roads, sewers, water, schools, police, fire) as farmland and other undeveloped land is converted to residential, commercial and industrial land.

According to a report by the Clinton-Gore Administration, "Smart Growth represents efforts to promote new patterns of development that are:

economically smart...build upon past investment in existing communities; reduce congestion; and preserve prime farmland:

environmentally smart..encourage redevelopment of Brownfields; reduce threat to air and water quality and open space; and

socially smart...promote economic opportunity and encourage a "sense of community" and a "sense of place".

Sustainable Development

Sustainable Development is a strategy that produces enduring benefits that will strengthen the economy, protect and enhance the environment and improve the quality of life.

Urban sprawl is the inherently wasteful consumption of land, energy, and resources. At present rates of consumption, many local communities will have no permanent open land or options for future development within a generation

Thus, our present style of growth is not sustainable because it consumes increasing amounts of fuel, water, and land resources. The challenges of sustainable development is for decision-makers and individuals to develop and adopt guiding principles/policies to manage growth in ways that create strong and stable communities while protecting the landscape for future generations.

Responsible growth can be achieved by promoting growth of economic prosperity, land recycling, jobs, housing and time with family -- but not growth of pollution, poverty, commute time and loss of prime open space.

Livable Communities

Livable Communities is an effort to adopt programs and policies that lead to more efficient land-use patterns and to grow in ways that ensure a high quality of life and "sense of community".

Issues such as housing, jobs, public safety, and the like touch the lives of everyone. By strengthening local economies, cleaning up neighborhoods, securing safe streets, protecting the environment and our resources, communities can once again become a safe, attractive and affordable places where the family can live, work and recreate.

For more information on this topic refer to: A Report from the Clinton-Gore Administration, *Building Livable Communities for the 21st Century*.

**Common Characteristics of New Urbanism, Smart Growth,
Sustainable Development, and Livable Communities**

- *Preservation of the Traditional Neighborhood*
- *Economic Development*
- *Conservation of energy and natural resources*
- *Protect and enhance the environment*
- *Supports alternative modes of transportation*
- *Mixed Use Development – residential, commercial, civic uses*
- *Higher density neighborhoods*
- *Community designed to support the pedestrian and transit use*
- *Increased public space*
- *A greater diversity of housing types*

Alternative development patterns—

Transportation Oriented Developments (TODs)

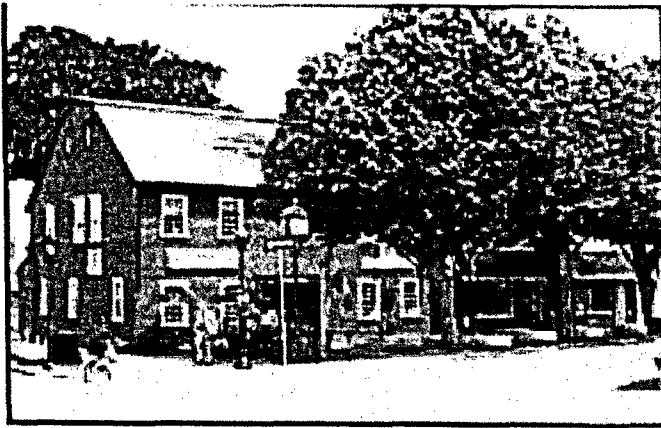
Transit-Oriented Developments, or “TOD’s,” is one way to accommodate growth in Southeastern Massachusetts while minimizing its negative effects on the environment and other aspects of the community. TOD’s approach seeks to integrate land use and transportation planning around transit stations, such as the Kingston MBTA commuter rail station.

Transit-Oriented Development is the practice of creating high density, mixed-use developments around a transit facility in an effort to manage growth, ease traffic congestion, and strengthen economical development.

TOD’s provide walkable communities where people are close to jobs and services. This close proximity affords residents an opportunity to use mass transit rather than relying exclusively on the automobile. It is most valuable when combined with compact mixed-uses so that trips to the TOD are multi-purpose. This is difficult when the stations are far from existing centers.

The Old Colony Planning Council staff recently completed a Transit-Oriented Development Concept Plan for the area around the Kingston MBTA station. The 130- acre site is industrially zoned and houses a sand and gravel operation. OCPC’s plan calls for a pedestrian (rather than automobile) oriented streetscape and development pattern that offers convenience to commuters, as well as employees and residents of the site. Residential, commercial, office, research and development, and recreational uses are all within walking distance to the station. The study shows that such a development will result in significant economic benefits to the town, in addition to creating a desirable and convenient living and working environment. The town of Kingston is currently working towards a TOD plan.

Opportunities also exist for transit villages on the Old Colony Middleborough Line - Brockton (Montello, downtown Brockton, Campello) and Bridgewater; the Plymouth Line – Abington, Halifax, Hanson, Plymouth, Plympton and Whitman; and the Stoughton commuter rail station.



An example of a pedestrian-oriented streetscape

Benefits:

- pedestrian oriented neighborhood
- close proximity to mass transit and increased opportunity to combine trips to a multi-use center
- diversity in housing
- business opportunities
- increase in tax base

Traditional Neighborhood Developments (TNDs)

The TND model is similar to Transit Oriented Development except for not being within walking distance of a train station.

Land uses in each neighborhood are also mixed with retail, office, school, residential all within walking distance of each other. In the TND development, traffic is dispersed with an interconnected road network allowing for a more efficient use of public transportation. Also, "since the entire project is designed with pedestrian accommodation as a major design feature, adequate facilities for walking to transit are assured" (ITE 1994). This design is counter to most suburban developments where buses cannot access the scores of cul-de sacs that adorn the landscape, and each dead-end has no direct connection to other neighborhoods or facilities. Many OCPC communities including Brockton, North Easton, Plymouth, Stoughton and Whitman have community centers that were designed as TNDs.

Benefits:

- promotes more flexibility in design
- pedestrian oriented
- close proximity to mass transit
- promotes affordable housing

Compact, Mixed-Use Development

This alternative pattern of development corresponds to the Transit Oriented Development (TOD) as well as the Traditional Neighborhood Development (TND). These two terms apply to a higher density neighborhood that includes homes, businesses, recreation facilities and schools. OCPC communities that exhibit these traits are Bridgewater, Plymouth, and Whitman centers.

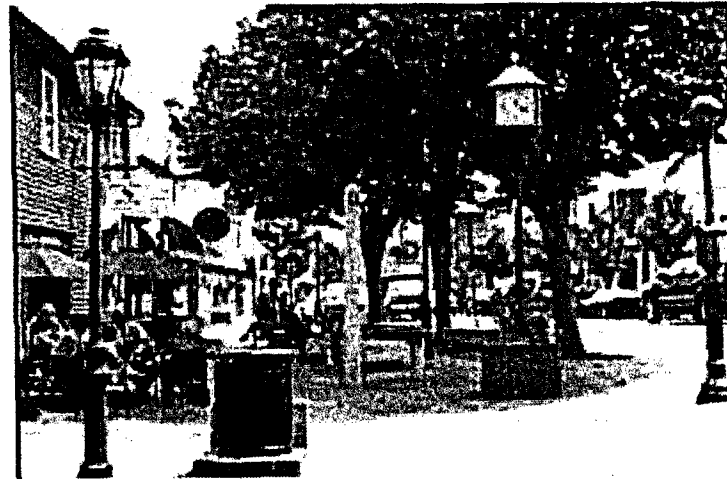
Benefit:

- to provide an alternative to the sprawl form of development
- to reduce the cost of roads and utilities
- to provide a pedestrian oriented environment
- to preserve and protect open space

Village Center Zoning

Village Center Zoning seeks to create a specific zoning district allowing the unique diversity of complementary uses found in the traditional village. Such zoning preserves the existing mixed uses of a village (residential, commercial, civic uses) while encouraging new construction and commercial uses that are compatible with size, scale and intensity of the village setting.

For example, the town of Plymouth implemented zoning changes for the village center after the town's Master Plan recommended concentrating development in the downtown area and a series of villages. Other communities in Massachusetts with *Village Center Zoning* include Acton, Amherst, Concord, Hudson, Northampton, and Walpole to name a few. The Cape Cod Commission, the regional planning agency on Cape Cod, drafted a Village Center Zoning bylaw that can be used as a separate zoning district or an overlay district.



Village Center Zoning in downtown Plymouth

For more information on this topic see -- American Planning Association, Planning Advisory Service, *Reinventing the Village: Planning, Zoning, and Design Strategies*, Report Number 430.

Downtown Revitalization

This is the preservation, rehabilitation and development of downtown areas to reclaim abandoned or underutilized city/town centers, and to accommodate growth by infill and redevelopment thereby minimizing further land consumption on the edge of existing centers or in other undeveloped areas.

For example, downtown Brockton is the most accessible place in the city by local streets and transit, but has lost most retail activity to surrounding shopping centers. Its revitalization program is building on its core financial, governmental and office functions, exemplified by a new courthouse and upgraded office and hotel space.

The traditional accessibility is being heightened by the Brockton Area Transit Authority's (BAT) new Intermodal Transportation Centre and closely inked MBTA commuter rail station, along with a proposed more flexible 2-way local traffic pattern and increased parking. These investments strengthen the downtown's role as a regional center while concentrating new development by putting most activities within walking distance of transit and of each other.

The overall revitalization program is maximizing opportunities to enhance economic development, increase employment and restore downtown Brockton. Other OCPC communities with downtown districts include Bridgewater, Plymouth, Stoughton and Whitman.

In August 1999, the Abington Board of Selectmen established the North Abington Revitalization Committee. The purpose of the committee is to develop a plan to revitalize North Abington business district.

There are a couple of programs that communities can contact for downtown or Main Street revitalization efforts.

The Massachusetts Housing and Community Development provides local technical assistance to communities working on revitalizing their downtown commercial districts through its Massachusetts Downtown Initiative Program.



An example of downtown revitalization in Brockton

The National Main Street Center is a downtown revitalization technical assistance program sponsored by the National Trust for Historic Preservation, which is based in Washington, DC. It provides assistance to communities throughout the United States. The City of Boston has established Main Street revitalization programs in 15 of its neighborhood commercial districts.

For more information regarding these programs, contact:
Massachusetts Department of Housing and Community
Development, One Congress Street, Boston, MA 02114
National Trust Main Street Center, 1785 Massachusetts
Avenue, NW, Washington, DC 20036
Ph: 202-588-6219 Web site: www.mainst.org/

Benefits:

- provides employment opportunities
- attracts new businesses in the town/city centers
- strengthens the local economy
- can provide housing for all income groups
- preserves and protects buildings of historical significance
- concentrates activities in a walkable and transit accessible central business district

Redevelopment of Brownfields Sites

Brownfields are idle or underutilized commercial, manufacturing and industrial sites where expansion, reuse or redevelopment requires cleanup of environmental contamination. Reclaiming brownfields can return contaminated sites to productive community uses near existing infrastructure and labor. Prospective developers, investors and lenders have faced major barriers to redevelop brownfield sites because of legal liability associated with the restoration of environmentally contaminated sites.

Promoting the redevelopment of brownfields, encourages developers to build on existing sites rather than to destroy "greenfields" (undeveloped sites) and further urban sprawl. At the same time, redevelopment will turn contaminated blighted areas into one of economic revitalization and development, increase tax base, create jobs, and promote a cleaner, healthier environment.

In June 1999, the Commonwealth of Massachusetts established The Governor's Office for Brownfields Revitalization (OBR).

The OBR offers free assistance to companies, buyers, developers and municipalities on all programs and incentives for brownfield projects. For example, the newly created Brownfields Redevelopment Fund provides state funding for loans and grants for site assessments and remediation actions.

For more information, contact The Governor's Office for Brownfields Revitalization at Ph: 617-973-8989 or Fax: 617-973-8797

To encourage cleanup and redevelopment of brownfields, the federal government offers grants, loans and other incentives. Federal programs have helped to achieve many success stories in our nation's cities with the restoration and reuse of Brownfields into recreational facilities (soccer fields, ballparks, golf courses, bicycle and pedestrian trails, parks), as well as business uses and housing.

For more information see -- US Environmental Protection Agency -- web site: www.epa.gov/brownfields/

Benefits

- Improve local economy
- Promote environmental clean-up and productive reuse of these sites
- Improve public health and safety
- Create jobs in urban areas

Inclusionary Housing Opportunities

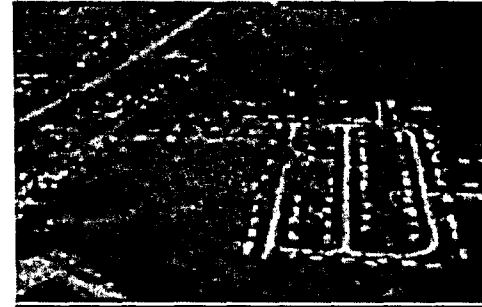
The Inclusionary Housing program is a local land-use incentive to encourage communities to support efforts by residential developers to set aside a number of housing units for affordable housing. This incentive zoning is intended for developers seeking to obtain a special permit for increased density housing or rezoning for multi-family units. It can help to restore the mixed income pattern of the traditional small community.

Benefits:

- a tool to increase affordable housing within the community
- opportunity for more diversity in the planned development

Open Space/Cluster Development

The purpose of Cluster Development is to preserve open space and provide an alternative to suburban sprawl. This concept allows a grouping of smaller residential lots on a large site as long as a required amount of acreage is set aside as permanent open space. In most communities, this concept requires a special permitting process whereby zoning requirements are reduced for minimum lot sizes, frontage and building setback. Often, overall densities remain the same. Hence, it is not a check on sprawl so much as a better way to develop. Still, if done at somewhat higher overall densities, it can slow sprawl.



This neighborhood exemplifies characteristics of cluster development; small house lots with large contiguous open space adjoining.

Benefits:

- preservation and protection of valuable open space
- reduces infrastructure costs (roads, utilities, maintenance, etc.)
- more flexibility and creativity in the design
- preserves the traditional New England neighborhood concept

Greenbelt Open Space Network

The greenbelt open space network is a connected pattern of permanently protected areas for park or recreation sites, conservation, agriculture, forest, etc. Sprawl development consumes large tracts of open land and fragments ecosystems and wildlife habitats.

This is an opportunity for communities to promote ideas/strategies to preserve and protect open space at the regional level for better growth management, to minimize further land consumption and foster a higher more sustainable quality of life.

The Bay Circuit Trail and Greenway is one example of a regional network. At this time, nearly 100 miles of walkable trail exists nearly completing an arc from Plum Island in Newburyport to Bay Farm in Duxbury.

Benefits:

- preserves and protects open space
- provides opportunities for recreation
- provides a forum to discuss and guide communities' physical development

Other Growth Control Measures

There are a number of methods/techniques adopted by communities in the Commonwealth to protect open space and to address growth management. But, we must do more.

The following list contains some of the growth management techniques and development controls that some towns have implemented to address this problem. And, since our communities operate under "Home Rule" government, most power to address preservation and growth is at the local level through developing appropriate bylaws and ordinances to meet the challenges of the future. Yet, coordinated actions are needed at the regional or at least at the sub-market scale.

Downzoning

Downzoning is a process by which the current zoning for a parcel of land is changed to allow for less intense use -- a business with less square footage, or a change from business to residential zoning. This does not protect the land from being developed and will increase land consumption for a given number of units-- but is a useful tool to consider when certain areas should not be developed as presently zoned.

Phased Growth/Permit Caps

A Phased Growth Bylaw works by capping the number of building permits issued for new construction each year or by requiring large scale residential subdivisions to be constructed in phases over a period of years. Ideally, the requirements are consistent with the desired long-term land-use pattern.

Site Plan Review

This advisory procedure is usually administered by the Planning Board with other Boards/Commissions depending on the project. Site Plan Review provides municipal review and oversight on projects such as large subdivisions, multi-family housing projects, commercial and industrial projects, and their impact on a number of concerns in the town: i.e., vehicular and pedestrian circulation, noise, design, water, sewerage, historical and archaeological sites, etc. Though not a yes-no project approval process, it can lead to significant improvements within a project.

Summary and Conclusion

Sprawl induced by perceived near-universal mobility and access is seen as inevitable by many people and to some is considered a sign of progress. Many of the alternative development patterns outlined in this report have been proposed over the years.

However, it has been very difficult to persuade communities to try them. The problem with recent development patterns is that they create traffic congestion on our rural roads, exhausts our natural resources, leads to the deterioration of traditional town centers as well as environmental degradation and loss of open space.

Communities are encouraged to implement growth management alternatives as well as to promote collaboration among neighboring jurisdictions to create regional strategies that address common problems such as transportation, air and water quality, efficient use of land, economic prosperity, environmental protection, affordable housing and other issues that transcend boundaries. Mutual cooperation results in benefits to the communities in cost-sharing, cost reduction and improving service quality.

Growth demands more services, space, resources and energy. To shape a positive future and to ensure the same opportunities for all, our decisions today must reflect our dreams for tomorrow and our memories of yesterday!

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APPENDIX: Sprawl and Growth Management Resource Directory

AZ US Urban Sprawl

<http://www.goldcanyon.com/us/urbansprawl.html>

Archives of articles on urban sprawl.

American Farmland Trust

<http://www.farmland.org/>

National organization working to stop the loss of farmland and advocate healthier farmland practices in the US.

American Planning Association

<http://www.planning.org/>

Tel: (312) 786-6344/FAX (312) 431-9985

Growing Smart Legislative Guidebook: Model Statutes for Planning and the Management of Change, Phase I and II Interim Edition and other reports.

Building Livable Communities

<http://www.livablecommunities.gov/>

This web site is a comprehensive guide to current tools and resources on federal programs available to help communities meet growth related challenges.

Commonwealth of Massachusetts

<http://www.magnet.state.ma.us/enrir/eoea.htm>

The Executive Office of Environmental Affairs (EOEA) web site contains information on Brownfields legislation, programs, contacts, etc.

Cyberbia

<http://www.cyberbia.org/>

Comprehensive internet resource directory relevant to planning and urbanism.

Global Environmental Options - Link Library

<http://www.geonetwork.org/links/index.html>

Links to over 500 sites related to sustainable development and the environment.

Housing Density, Urban Sprawl and Growth Management

<http://www.teleport.com/~mrtom/hdens.html>

Metropolis Unbound: The Sprawling American City and the Search for Alternatives

<http://epn.org/prospect/35/35geddfs.html>

A report on urban growth trends that shaped the American city-region.

Planners Web - Planning Commissioners Journal

<http://www.plannersweb.com/>

Preserve Net - Stopping Suburban Sprawl

<http://www.preservenet.com/politics/stopsprawl.html>

Smart Growth Network

<http://www.smartgrowth.org/>

Internet link to planning resources directory, database, and case studies related to smart growth.

Sprawl Resource Guide

<http://www.plannersweb.com/sprawl.html>

The Planners Web Site contains links that address sprawl and the techniques for dealing with it.

Sprawl Watch Clearinghouse

<http://www.sprawlwatch.org/>

Tel: (202) 974-5157/FAX (202) 466-2247

A resource center which provides information, advice and referrals on issues related to sprawl, smart growth and livable communities.

Sprawl Watch Clearinghouse

1100 17th Street, NW - 10th Floor

Washington, DC 20036

State of Maine Planning Office

<http://www.state.me.us/spo/>

This site provides planning, educational, federal, sprawl and land use resources as well as other links.

Sustainable Development

<http://www.sustainable.org/>

This web site contains: related resources, related reading, funding sources, and case studies on sustainable communities.

US Department of Energy - Center of Excellence for Sustainable Development

<http://www.sustainable.doe.gov>

Tel: (800) 363-3732/FAX (303) 275-4830

The Center provides information and services to communities on sustainable development.

Center of Excellence for Sustainable Development

US Department of Energy

Office of Energy Efficiency and Renewable Energy

Denver Regional Support Office

1617 Cole Boulevard

Golden, CO 80401

U.S. Environmental Protection Agency

<http://www.epa.gov/brownfields/>

EPA Office of Solid Waste and Emergency Response web site provides information on Brownfields Liability, Cleanup Issues, Brownfields Pilots, Partnerships and Outreach, and additional information.

Urban Land Institute

<http://www.uli.org/>

The ULI web site contains information on transportation, housing, finance, smart growth, urban revitalization as well as other links.

These web sites are intended as an information and resource guide for growth management and related issues - as of 9/1/99, all sites listed herein were active.

ABINGTON ZONING DISTRICTS AND REGULATIONS: 1999								
District	Name	Minimum Lot Size (sq. ft.)	Single Fam. Detached Allowed	Duplex Allowed	Multi-Fam. Allowed	Multi-Fam. Max Density (sq. ft./unit)	Cluster Allowed	Planned Dev. Allowed
R 20	High Dens. Res.	20,000	Y	SP	SP	1-8: 6,000/unit. 9-15: 5,000/unit. 16+: 4,000/unit. Min Lot 40,000	N	N
R 30	Medium Dens. Res.	30,000	Y	N	N	N/A	N	N
R 40	Low Dens. Res.	40,000	Y	N	N	N/A	N	N
GC	General Commercial	8,000	SP	SP	N	N/A	N	SP (Comm. Only)
HC	Highway Commercial	20,000	SP	SP	SP	1-8: 6,000/unit. 9-15: 5,000/unit. 16+: 4,000/unit. Min Lot 40,000	N	SP (Comm. Only)
I	Industrial	20,000	N	N	N	N/A	N	SP (Comm. Only)
FW	Flood Plain/Wetlands (overlay)	N/A	SP	SP	N/A	N/A	N	SP (Comm. Only)
WPD	Watershed Protection (overlay)	N/A	SP	N/A	N/A	N/A	N	N

Source: Town of Abington. 1995. Zoning By-Laws.

AVON ZONING DISTRICTS AND REGULATIONS: 1999									
District	Name	Minimum Lot Size (sq. ft.)	Single Fam. Detached Allowed	Duplex Allowed	Multi-Fam. Allowed	Multi-Fam. Max Density (sq. ft./unit)	Cluster Allowed	Planned Dev. Allowed	
R 25	Suburban Res.	25,000	Y	Y	SP	1-8: 10,000/unit. 9-15: 5,000/unit. 16+ 3,000/unit.	SP	SP	
R 40	Suburban Res.	40,000	Y	Y	SP	1-8: 10,000/unit. 9-15: 5,000/unit. 16+ 3,000/unit.	SP	SP	
B	Business	8,000	N	N	SP	1-8: 10,000/unit. 9-15: 5,000/unit. 16+ 3,000/unit.	N	SP (Comm. Only)	
C	Commercial	40,000	N	N	SP	1-8: 10,000/unit. 9-15: 5,000/unit. 16+ 3,000/unit.	N	SP (Comm. Only)	
I	Industrial	40,000	N	N	N	N/A	N	SP (Ind. Only)	
FP	Flood Plain (overlay)	N/A	SP	N/A	N/A	N/A	N/A	SP	
WP	Water Supply Protection (overlay)	N/A	SP	N/A	N/A	N/A	SP	SP	

Source: Town of Avon. 1983. Zoning By-Law (Amended to 1996)

BRIDGEWATER ZONING DISTRICTS AND REGULATIONS: 1999									
District	Name	Minimum Lot Size (sq. ft.)	Single Fam. Detached	Single Fam. Allowed	Duplex Allowed	Multi-Fam. Allowed	Multi-Fam. Max Density (sq. ft./unit)	Cluster Allowed	Planned Dev. Allowed
Res. A/B	Residential	43,560	Y	N	N	N	N/A	SP	N
Res. C	Residential	18,500	Y	Y	Y	N	N/A	SP	N
Res. D	Residential	18,500	Y	Y	Y	N	N/A	SP	N
Bus B	Business	10,000	SP	SP	SP	N	N/A	N	N
Ind A	Industrial	40,000	SP	SP	SP	N	N/A	N	N
Ind B	Industrial	40,000	SP	SP	SP	N	N/A	N	N
PD	Planned Development	5 Acres (1 Acre per unit)	Y	N	N	N	N/A	N	SP
MHEC	Mobile Home Elderly Community	50 Acres	Y	N	N	N	N/A	N	SP
CBD	Central Business	10,000	SP	SP	SP	N	N/A	N	N
SBD	South Business District	40,000	SP	SP	N	N	N/A	N	N
APD	Aquifer Protection (overlay)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FP	Flood Plain (overlay)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source: Town of Bridgewater. 1995. Zoning By-Laws.

BROCKTON ZONING DISTRICTS AND REGULATIONS: 1999								
District	Name	Minimum Lot Size (sq. ft.)	Single Family Detached Allowed	Duplex Allowed	Multi-Fam. Allowed	Multi-Fam. Max Density (sq. ft./unit)	Cluster Allowed	Planned Dev. Allowed
R 1A	Single Family Res.	30,000	Y	N	N	N/A	N	N
R 1B	Single Family Res.	30,000	Y	N	N	N/A	N	N
R 1C	Single Family Res.	30,000	Y	N	N	N/A	N	N
R 2	Multi-family Res.	1: 7,500/unit 2: 5,000/unit 3: 4,000/unit	Y	Y	Y	1: 7,500/unit 2: 5,000/unit 3: 4,000/unit	N	N
R 3	Multi-family Res.	1-3: same as R2. For multi-family: 1-3 = 12,000. 4+ = 2,000	Y	Y	Y	1-3: same as R2. For multi-family: 1-3 = 12,000. 4+ = 2,000	N	N
C 1	Neighborhood Comm.	None	N	N	N	N/A	N	N
C 2	General Comm.	None	N	N	N	N/A	N	N
C 3	Central Business	None	N	N	SP	1-3: same as R2. For multi-family: 1-3 = 12,000. 4+ = 2,000	N	N
C 4	Planned Shopping	None	N	N	N	N/A	N	Y
C 5	Office	10,000	N	N	N	N/A	N	N
I 1	Industrial Park	None	N	N	N	N/A	N	N
I 2	General Industrial	None	N	N	N	N/A	N	N
I 3	Heavy Industrial	None	N	N	N	N/A	N	N

BROCKTON ZONING DISTRICTS AND REGULATIONS, Continued: 1999								
District	Name	Minimum Lot Size (sq. ft.)	Single Family Detached Allowed	Duplex Allowed	Multi-Fam. Allowed	Multi-Fam. Max Density (sq. ft./unit)	Cluster Allowed	Planned Dev. Allowed
FPWWP	Flood Plain, Watershed, and Wetland Protection (overlay)	N/A	N/A	N	N	N/A	N	N

Source: City of Brockton. 1984. Zoning By-Laws. (Amended to 1997).

EAST BRIDGEWATER ZONING DISTRICTS AND REGULATIONS: 1999									
District	Name	Minimum Lot Size (sq. ft.)	Single Fam. Detached	Single Fam. Allowed	Duplex Allowed	Multi-Fam. Allowed	Multi-Fam. Max Density (sq. ft./unit)	Cluster Allowed	Planned Dev. Allowed
R 1	Low Dens. Res.	35,000	Y		N	N	N/A	SP	N
R 2	Med. Dens. Res.	20,000 (single), 35,000 (multi)	Y		Y	Y	1:15,000. Add 5,000 for additional units <6.	SP	N
R 3	High Dens. Res.	15,000 (single). add 5,000 for additional units	Y		Y	Y	1:15,000. Add 5,000 for additional units <6.	N	N
R 4	Historic Res. (overlay over R 2, R 3)	N/A	Y		Y	Y	1: 20,000/unit. 2-4: 5,000/unit	N	N
R 5	Adult Retirement PUD (overlay)	PUD: 30 Acres. 4,000/unit	SP		N/A	N/A	4 units/acre. Max 100 units Max 6/Bldg	N	Y
B 1	Neighborhood Bus.	25,000	N		N	N	N/A	N	N
B 2	Transitional Bus.	10,000	Y		Y	N	N/A	N	N
B 3	Highway Bus.	30,000	N		N	N	N/A	N	N
B 4	Commercial Center	80,000	N		N	N	N/A	N	N
B 5	Downtown Bus.	Bus: none. Res: same as R 2.	N		N	N	N/A	N	N
I 1	Industrial	35,000	N		N	N	N/A	N	N
M	Municipal	30,000	N		N	N	N/A	N	N
WP	Watershed Protection	N/A	N/A		N/A	N/A	N/A	N	N
FPWP	Flood Plain and Wetlands Protection (overlay)	N/A	N/A		N	N	N/A	N	N

Source: Town of East Bridgewater. 1956. Zoning By-Laws. (Amended to 1997)

EASTON ZONING DISTRICTS AND REGULATIONS: 1999								
District	Name	Minimum Lot Size (sq. ft.)	Single Fam. Detached Allowed	Duplex Allowed	Multi-Fam. Allowed	Multi-Fam. Max Density (sq. ft./unit)	Cluster Allowed	Planned Dev. Allowed
R	Residential	40,000	Y	SP	N	N/A	SP	N
R 1	Residential 1	40,000	Y	SP	N	N/A	SP	SP
B	Business	40,000	Y	SP	Y	3 bed: 60,000. Add 20,000 each bed. Max 10 bed/bldg.	N	Y (Bus.)
BN	Business Neighborhood	40,000	SP	N	N	N/A	N	SP
I	Industrial	40,000	N	N	N	N/A	N	Y (ind.)
E	Eleemosynary	Based on Permit from P. Board	SP	N	N	N/A	N	N
F	Flood Plain (overlay)	Restrictive Use	SP	SP	SP	N/A	SP	SP
M	Municipal / Open Space	None	N	N	N	N/A	N	N
A	Aquifer Protection (overlay)	N/A	N/A	N/A	N/A	N/A	N/A	SP (res. only)

Source: Town of Easton. 1973. Zoning By-Laws. (Amended to 1997)

HALIFAX ZONING DISTRICTS AND REGULATIONS: 1999									
District	Name	Minimum Lot Size (sq. ft.)	Single Fam. Detached	Allowed	Duplex Allowed	Multi-Fam. Allowed	Multi-Fam. Max Density (sq. ft./unit)	Cluster Allowed	Planned Dev. Allowed
AR	Agricultural / Res.	40,000	Y		SP	SP	1 unit/acre. Min. 10 acres	N	N
B	Commercial /Bus.	40,000	Y		SP	SP	1 unit/acre. Min. 10 acres	N	N
I	Industrial	40,000	N		N	N	N/A	N	N
I2	Industrial 2	40,000	N		N	N	N/A	N	N
C	Conservancy	40,000	SP		SP	SP	1 unit/acre. Min. 10 acres	N	N
FP	Flood Plain (overlay)	40,000	N/A		N/A	N/A	N/A	N	N

Source: Town of Halifax. 1990. Zoning By-Law. (Amended to 1994)

HANSON ZONING DISTRICTS AND REGULATIONS: 1999								
District	Name	Minimum Lot Size (sq. ft.)	Single Fam. Detached Allowed	Duplex Allowed	Multi-Fam. Allowed	Multi-Fam. Max Density (sq. ft./unit)	Cluster Allowed	Planned Dev. Allowed
AR	Agricultural / Recreational	40,000	Y	N	N	N/A	N	N
RA	Residential A	40,000	Y	SP (conversion only)	N	N/A	N	N
RAA	Residential AA	30,000	Y	SP (conversion only)	N	N/A	N	N
RB	Residential B	30,000	Y	SP	SP	Max 8 units.	N	N
B	Business	44,000	N	N	N	N/A	N	N
CI	Comm / Industrial	44,000	N	N	N	N/A	N	N
AWP	Aquifer & Well Protection	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source: Town of Hanson. 1994. Zoning By-Law.

KINGSTON ZONING DISTRICTS AND REGULATIONS: 1999									
District	Name	Minimum Lot Size (sq. ft.)	Single Fam. Detached	Single Fam. Allowed	Duplex Allowed	Multi-Fam. Allowed	Multi-Fam. Max Density (sq. ft./unit)	Cluster Allowed	Planned Dev. Allowed
R 80	Residential 80	80,000	Y		PUD only	PUD only	1-3: 40,000. 3+: add 10,000	SP	SP
R 40	General Residential	40,000	Y		PUD only	PUD only	1-3: 40,000. 3+: add 10,000	SP	Y
R 20	Residential 20	20,000	Y		SP	SP	1-3: 40,000. 3+: add 10,000	N	N
RM	Mobile Home Park	8,000 (each unit)	N		N	N	N/A	N	N
TC	Town Center	10,000	Y		Y	SP	1-3: 40,000. 3+: add 10,002	N	N
3ADD	3A Design	30,000	Y		Y	N	N/A	N	N
C	Commercial	40,000	N		N	N	N/A	N	Y
I	Industrial	40,000	N		N	N	N/A	N	Y
CIP	Comm./Ind. Park	40,000	N		N	N	N/A	N	Y
CON	Conservancy	80,000	SP		N	N	N/A	N	N
FP	Flood Plain (overlay)	N/A	N/A		N/A	N/A	N/A	N/A	N/A
WR	Water Resources (overlay)	N/A	N/A		N/A	N/A	N/A	N/A	N/A

Source: Town of Kingston. 1992. Zoning By-Law. (Amended to 1997)

PEMBROKE ZONING DISTRICTS AND REGULATIONS: 1999									
District	Name	Minimum Lot Size (sq. ft.)	Single Fam. Detached	Allowed	Duplex Allowed	Multi-Fam. Allowed	Multi-Fam. Max Density (sq. ft./unit)	Cluster Allowed	Planned Dev. Allowed
RA	Residential A	40,000	Y		SP (Conversion Only)	N	N/A	N	N
RC	Res. / Commercial	120,000	Y		SP	SP	4/Acre.	N	N
BA	Business A	40,000	Y		SP (Conversion Only)	N	N/A	N	N
BB	Business B	80,000	N		N	N	N/A	N	N
IA	Industrial	80,000	N		N	N	N/A	N	N
IB	Industrial	80,000	N		N	N	N/A	N	N
CP	Center Protection (overlay)	N/A	N/A		N/A	N/A	N/A	N	N
FPWP	Flood Plain, Watershed Protection (overlay)	N/A	N		N	N	N/A	N	N
WRP	Water Resources Protection	N/A	N/A		N/A	N/A	N/A	N	N

Source: Town of Pembroke. 1997. Zoning By-Laws.

PLYMOUTH ZONING DISTRICTS AND REGULATIONS: 1999								
District	Name	Minimum Lot Size (sq. ft.)	Single Fam. Detached Allowed	Duplex Allowed	Multi-Fam. Allowed	Multi-Fam. Max Density (sq. ft./unit)	Cluster Allowed	Planned Dev. Allowed
RR	Rural Residential	120,000. Village Density (SP) - 60,000	Y	N	N	N/A	SP	SP (high tech. only)
R 40	Large Lot Res.	40,000. Village Density (SP) 20,000	Y	SP	N	N/A	SP	SP (high tech. only)
R 25	Medium Lot Res.	25,000. Village Density (SP) 15,000	Y	SP	N	N/A	SP	SP
R 20SL	Small Lot Res.	20,000. Village Density (SP) 15,000	Y	Y	N	N/A	SP	SP
R 20MD	Mixed Density	15,000	Y	Y	N	N/A	SP	SP
R 20MF	Multi-family	20,000. Village Density (SP) 15,000	Y	Y	SP	8 Units/Acre	SP	SP
WF	Waterfront	20,000	N	SP	SP	8 Units/Acre	N	N
NC	Neigh. Comm.	20,000	N	N	N	N/A	N	SP
TC	Transitional Comm.	20,000	Y	Y	SP	8 Units/Acre	N	N
GC	General Comm.	20,000	N	N	SP	8 Units/Acre	N	SP (comm. only)
AC	Arterial Comm.	40,000	N	N	N	N/A	N	SP (non res. only)
MC	Mixed Commerce.	40,000	N	N	N	N/A	N	SP (comm. only)
I	Industrial	40,000	N	N	N	N/A	N	SP (Ind. or Comm.)
AP	Airport	40,000	N	N	N	N/A	N	SP (Comm. or Ind. Only)
LI/WF	Light Ind. Waterfront	20,000	N	SP	SP	8 Units/Acre	N	N

PLYMOUTH ZONING DISTRICTS AND REGULATIONS, Continued: 1999								
District	Name	Minimum Lot Size (sq. ft.)	Single Fam. Detached Allowed	Duplex Allowed	Multi-Fam. Allowed	Multi-Fam. Max Density (sq. ft./unit)	Cluster Allowed	Planned Dev. Allowed
AA	Aquifer Protection (overlay)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FP	Flood Plain	N/A	N/A	N/A	N/A	N/A	N/A	N/A
RD	Recreational Dev. (floating in RR, R40, R25)	250 Acres, 25,000 each lot	SP	SP	SP	8 Units/Bldg	SP	N/A
MWD	Municipal Waste Water District (overlay)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
OSMUD	Open Space Mixed Use Development (floating in RR)	2,300 Acres. 25,000 sq. ft. lots	SP	SP	SP	500 Unit Total	SP	SP
BB	Buttermilk Bay (overlay)	N/A	Y (if < 1 unit/70,000)	Y (if < 1 unit/70,000)	N	N/A	N/A	N/A
DH	Downtown Harbor	20,000	Y	Y	Y (if < 9 units). SP (if > 9 units)	8 Units/lot (SP for additional units of given floor area)	N	N

Source: Town of Plymouth. 1973. Zoning By-Laws. (Amended to 1998)

PLYMPTON ZONING DISTRICTS AND REGULATIONS: 1999								
District	Name	Minimum Lot Size (sq. ft.)	Single Fam. Detached Allowed	Duplex Allowed	Multi-Fam. Allowed	Multi-Fam. Max Density (sq. ft./unit)	Cluster Allowed	Planned Dev. Allowed
AR	Agricultural Res.	60,000	Y	Y	SP (Elderly Only)	Min. 10 Acres. Max 40 units. 1/4 acre/ unit.	N	N
B	Business	60,000	Y	Y	SP (Elderly Only)	Min. 10 Acres. Max 40 units. 1/4 acre/ unit.	N	N
LM	Light Manufacturing	60,000	Y	Y	SP (Elderly Only)	Min. 10 Acres. Max 40 units. 1/4 acre/ unit.	N	N
I	Industrial	60,000	N	N	N	N/A	N	N
FPW	Flood Plain/ Watershed (overlay)	60,000	N/A	N/A	N/A	N/A	N	N
H	Historic (overlay)	60,000		N/A	N/A	N/A	N	N
GP	Groundwater Protection (overlay)	60,000	N/A	N/A	N/A	N/A	N	N

Source: Town of Plympton. 1997. Zoning By-Laws.

STOUGHTON ZONING DISTRICTS AND REGULATIONS: 1999								
District	Name	Minimum Lot Size (sq. ft.)	Single Fam. Detached Allowed	Duplex Allowed	Multi-Fam. Allowed	Multi-Fam. Max Density (sq. ft./unit)	Cluster Allowed	Planned Dev. Allowed
R 30	Res. Suburban A	80,000	Y	N	N	N/A	SP	N
R 20	Res. Suburban B	55,000	Y	N	N	N/A	SP	N
R 15	Res. Suburban C	40,000	Y	N	N	N/A	N	N
R 8	Res. Urban	25,000 (single), 35,000 (other)	Y	SP	N	N/A	N	N
RM	Res. Multi-family	12,000/unit, + 2,000 per b.r.	N	Y	Y	12,000/unit, + 2,000 per b.r.	N	Y
CBD	Central Bus. District	2,500	N	N	SP	12,000/unit, + 2,000 per b.r.	N	SP
GB	General Business	10,000	N	N	N	N/A	N	Y (Bus.)
NB	Neighborhood Business	10,000	N	N	N	N/A	N	Y (Bus.)
HB	Highway Business	20,000	N	N	Y (conversion only)	12,000/unit, + 2,000 per b.r.	N	Y (Bus. or Ind.)
I	Industrial	80,000	N	N	N	N/A	N	Y (Bus. or Ind.)
FHW	Flood Hazard & Wetlands (overlay)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
WS	Watershed (overlay)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source: Town of Stoughton. 1970. Zoning By-Laws. (Amended to 1996)

WEST BRIDGEWATER ZONING DISTRICTS AND REGULATIONS: 1999								
District	Name	Minimum Lot Size (sq. ft.)	Single Fam. Detached Allowed	Duplex Allowed	Multi-Fam. Allowed	Multi-Fam. Max Density (sq. ft./unit)	Cluster Allowed	Planned Dev. Allowed
GRF	General Res. & Farming	30,000	Y	Y (conversion only)	Y (conversion only)	1,500 per person. Max 3 units	N	N
B	Business	18,750	Y	Y (conversion only)	Y (conversion only)	1,500 per person. Max 3 units	N	N
I	Industrial	2 Acres	Y	Y (conversion only)	Y (conversion only)	1,500 per person. Max 3 units	N	N
WRP	Water Resource Protection Zone (overlay)	N/A	Y	Y (conversion only)	Y (conversion only)	1,500 per person. Max 3 units	N	N

Source: Town of West Bridgewater. 1957. Zoning By-Laws. (Amended to 1994)

WHITMAN ZONING DISTRICTS AND REGULATIONS: 1999								
District	Name	Minimum Lot Size (sq. ft.)	Single Fam. Detached Allowed	Duplex Allowed	Multi-Fam. Allowed	Multi-Fam. Max Density (sq. ft./unit)	Cluster Allowed	Planned Dev. Allowed
A1	Single Res.	22,500	Y	SP	N	N/A	N	N
A2	Single Res.	18,000	Y	SP	N	N/A	N	N
GR	General Res.	10,000	Y	SP (conversion only)	SP	Min. 87,000 lot. 1 unit/6,000. Max 8 Units	N	N
HB	Highway Business	10,000	N	SP (conversion only)	SP	Min. 87,000 lot. 1 unit/6,000. Max 8 Units	N	N
GB	General Business	10,000	N	SP (conversion only)	N	N/A	N	N
LI	Limited Industry	15,000	N	SP (conversion only)	N	N/A	N	N
I	Industry	15,000	N	N	N	N/A	N	N
FP	Flood Plain & Watershed Protection (overlay)	N/A	SP	SP	N/A	N/A	N	N

Source: Town of Whitman. 1978. Zoning By-Laws. (Amended to 1997)