

Part III: A Plan for Rowley's Future



*Rowley Master Plan
Final Report*

June 2003

INTRODUCTION

Rowley's overall vision for the future is to remain a small, semi-rural, coastal community with great natural and scenic beauty. Residents would also like the Town to maintain its historic, rural feel and appearance as well as its sense of tradition and small town character. The community supports creating housing opportunities for all of Rowley's residents. Rowley would like to maintain quality public services and facilities. Finally, Rowley would like to attract compatible businesses to the Town. The following Plan for Rowley's Future is a set of recommendations and policies designed to help the community achieve this vision.

"Like many other people in Town, I moved here because Rowley is so small it feels like you just stepped back in time."

-- Response to Questionnaire

The Plan for Rowley's Future includes recommendations for each of the Master Plan elements:

- Land Use and Growth Management
- Open Space, Recreation, and Natural Resources
- Historic Resources
- Economic Development
- Housing
- Public Facilities and Services
- Transportation

The recommendations are consistent with the major findings of the Master Plan Committee's community outreach efforts which included public meetings, questionnaires, interviews, and written comments. The Master Plan, by itself, does not change the Town's zoning or other local policies. To implement the Master Plan, the Town, through Town Meeting and its various boards and commissions, will need to make the policy changes recommended in the Master Plan over the upcoming months and years. **Part III** includes a detailed and comprehensive list of recommendations. The Implementation Plan details actions that the Town should take over the next five years (**Section 17**).

10. LAND USE AND GROWTH MANAGEMENT

A central component of the Master Plan is determining the desired future use of land in each section of the Town. This was accomplished using a two-step process. First, information on existing development patterns and land characteristics as well as public input were synthesized into the Land Use Suitability Map (**Map 10-1**). This map illustrates those sections of the Town that are capable of supporting residential and business development as well as those areas that are already developed, unbuildable, or less capable of supporting development. For example, based on public input emphasizing the importance of natural resources and scenic views, those lands adjacent to salt marshes and in scenic locations were identified as “Less Capable of Supporting Development” (the light blue color on **Map 10-1**).

Second, based on the Land Use Suitability Map, the Zoning and Regulatory Plan (**Map 10-2**) was created. The Zoning and Regulatory Plan illustrates the recommended future land uses in each section of the Town. The recommended land uses are based on public input from the master planning process as well as the physical, environmental, geographical, historic, and economic features of land in each section of the Town. This Zoning and Regulatory Plan, the centerpiece of the Master Plan recommendations, is supported by other recommendations in **Sections 10-16** of the Master Plan.

The Zoning and Regulatory Plan is intended to serve not only as the basis for new zoning regulations in the Town of Rowley, but also as a blueprint for future development and conservation efforts. Residents, developers, and Town officials can consult the Zoning and Regulatory Plan as follows:

- **The Town of Rowley** can use the Zoning and Regulatory Plan to help steer new development projects and conservation efforts into the most suitable areas of the Town. In addition, the Zoning and Regulatory Plan will help the Town evaluate whether any particular zoning change, policy change, or private or public project that comes before the Town for review is consistent with the Town’s overall long-term goals. Having such a long-term plan significantly strengthens the Town’s position should it encounter legal or political challenges in relation to land use issues.
- **Residents and Landowners** can use the Zoning and Regulatory Plan to identify the intended future plan for land located in their neighborhood.
- **Property Owners and Developers** can use the Zoning and Regulatory Plan to identify acceptable locations for development and economic growth, and other locations where such growth is discouraged. The Zoning and Regulatory Plan is an indicator to developers that density, design, and permitting requirements will be more favorable to their project in areas the Town has identified as capable of supporting new growth, and significantly more rigorous in areas the Town has identified as less capable of supporting development.

10.1 Zoning and Regulatory Plan

The Zoning and Regulatory Plan identifies ten different land use categories ranging from business and industrial to low-density residential, as summarized in **Table 10-1**, which follows. For each of the Zoning and Regulatory Plan areas, the following sections identify the existing characteristics as well as the recommended future planning and zoning objectives for the area.

**Table 10-1
Summary of Zoning and Regulatory Plan**

Zoning and Regulatory Plan Districts	Acres	% of Town	Developable Acres	% of District That is Developable
Central Business	82	0.7%	8	9%
Central Residential	461	3.9%	157	34%
Residential	251	2.1%	92	37%
Outlying Residential	6,798	57.5%	2,733	40%
Coastal Conservation	3,537	30.0%	223	5%
Business/Light Industry	522	4.4%	150	29%
Retail	165	1.4%	31	19%
Total	11,816	100.0%	3,393	
<i>Scenic (Overlay)</i>	<i>1,209</i>	<i>10.2%</i>	--	--
<i>Flood Plain and Watershed Protection (Overlay)</i>	<i>3,986</i>	<i>31%</i>	--	--
<i>Municipal Water Supply Protection (Overlay)</i>	<i>2,925</i>	<i>23%</i>	--	--

10.1.1 Central Business District

Issue – Current zoning allows retail and business development to occur throughout the Central District. With 543 acres of land, the Central District has the potential for a substantial amount of new business and retail development. During the Master Plan process, however, residents stressed their desire to maintain the historic look and quaintness of the town center and to avoid widespread business development in this area. Residents were rightly concerned that significant amounts of new business and retail development would alter the appearance of the center and increase traffic volumes. In addition, the Central District includes several established residential neighborhoods. Allowing business development in these neighborhoods could adversely affect their character and generate excessive traffic on what are now quiet residential streets.

“The town center sets the tone for the entire community and states emphatically just how residents view their town and themselves.”

--Response to Questionnaire

Action Recommended – To ensure that new business development in the town center is compatible with existing land uses and with residents’ desires for the area, the existing Central District should be split into two separate areas: a Central Business Overlay area and a Central Residential area. The Central Business Overlay area extends along Main Street (Route 1A) from Pleasant Street in the north to the Ipswich town line in the south, and includes much of the Rowley Center Historic District. The Central Business Overlay area is approximately 82 acres in size—small enough to minimize the potential for excessive business and retail development, but large enough to provide ample space for existing and new small-scale business enterprises. Reducing the amount of land in the town center that is available for business development will help to preserve the existing look and feel of the center and limit the potential for

significant traffic increases. See **Section 10.2.1** for a discussion of recommended use, intensity, setback, and design policies in the Central Business Overlay area.

10.1.2 Central Residential District

Issue – As discussed above, the Town currently allows retail and business use throughout the 543-acre Central District, which includes many of the older, established residential neighborhoods situated in and around the town center. Several of these neighborhoods are included in the Rowley Center Historic District. Allowing the construction of business and retail uses in these historic neighborhoods invites conflict and could have a significant impact on the quality of life of residents living in these neighborhoods.

Action Recommended – The Zoning and Regulatory Plan divides the existing Central District into two separate areas: a Central Business area and a Central Residential area. Under the Zoning and Regulatory Plan, new retail and business uses will no longer be allowed in the Central Residential areas surrounding the town center. Suggested land uses within the Central Residential area include single-family housing, some types of multi-family housing (see **Section 14**), and bed and breakfast establishments. Existing business uses in the Central Residential area will become pre-existing, nonconforming uses. Under State law, these businesses can continue to operate indefinitely and even expand if acceptable to the Town.

10.1.3 Residential Districts

Issue – Rowley currently has three small residential-zoned areas along Haverhill Street. These districts allow multi-family housing by special permit and the minimum lot size is 60,000 square feet. The majority of land in these areas has already been developed.

Action Recommended – Changes are not recommended to the boundaries of the Residential District. However, to address Rowley's housing needs, the Town should allow and encourage additional housing options in the Residential Districts, such as two-family dwelling units, senior housing, and modestly-scaled, multi-family housing. These areas are suitable for a mixture of housing types because of their good accessibility and relative proximity to shops and services on Route 1. See **Section 14** for additional discussion of recommended housing policies for these areas.

10.1.4 Outlying Residential District

Issue – Currently, most of Rowley's residentially-zoned land is located in the Outlying Residential District. Allowed uses are mainly limited to single-family housing and agriculture, and the minimum lot size is 60,000 square feet. The land in this district is highly variable—ranging from gently sloping uplands suitable for development to scenic and environmentally-sensitive areas that are much less suitable for development. Many residents feel that recent housing developments in this district are incompatible with their vision of the Town's character.

Action Recommended – The Zoning and Regulatory Plan recommends splitting the Outlying Residential District into two areas: a Coastal Conservation area and a new, smaller, Outlying Residential area. Of the 10,335 acres in the existing Outlying Residential District, it is recommended that 6,798 acres remain Outlying Residential while 3,537 acres be re-designated Coastal Conservation (see **Section 10.1.5**).

Within the remaining Outlying Residential area, three main policies are recommended to guide development into compatible patterns:

1. Provide a substantial incentive for developers to use the Open Space Residential Development (OSRD) bylaw and to provide a fraction of the housing units (e.g., 10%) as affordable. A reduction in the base density allowed by right in the Outlying Residential District is recommended from one dwelling unit per 60,000 square feet to one unit per two acres (80,000 square feet). However, a developer may still build at a net density of one unit per 60,000 square feet if they follow the OSRD bylaw and 40,000 square feet if the developer provides affordable housing. These alternatives provide a win-win policy because it offers developers a substantial density bonus while encouraging better development and without increasing overall buildout relative to current levels. The Town should also consider including a provision to exempt smaller (3-5 unit) subdivisions from the 80,000 square foot provision.
2. Adopt a Scenic Overlay District (see **Section 10.1.8**) to further guide development in sensitive areas.
3. Adopt additional policies to reduce the visual and environmental impacts of new development (see **Sections 10.2.2**).

10.1.5 Coastal Conservation District

Issue – The Town’s salt marshes and surrounding uplands are a critical environmental resource that provide regionally-significant animal habitat as well as scenic and recreational values. Although there is little potential for the wetlands themselves to be developed, excessive development of the adjacent uplands could reduce the area’s wildlife habitat and scenic values.

Action Recommended – The Zoning and Regulatory Plan recommends that approximately one-third of the existing Outlying Residential District (3,537 acres) be re-designated Coastal Conservation to provide an additional level of protection to the environmentally-sensitive lands in the northeast section of the Town (see **Map 10-2**). The goals of the Coastal Conservation area are twofold:

1. Minimize development on small upland pockets that could adversely affect the wetlands.
2. If and when the remaining large buildable parcels of land in the area are developed, encourage a development layout and design that is compatible with the area’s scenic quality and natural resources.

To accomplish these goals, the base minimum lot size in the Coastal Conservation area should be three acres (120,000 square feet). However, the Town should offer an incentive to property owners to build at a net density of one unit per 60,000 square feet (the same density as is currently allowed in the Outlying Residential District) provided the development is built as an OSRD.

10.1.6 Business/Light Industry Districts

Issue – During the public workshops, residents suggested that the Town should encourage a balance of retail, office, and light industrial uses. In May 2002, the Town divided its Commercial zoning district along Route 1 into two new districts: Business/Light Industry and Retail. The creation of two separate areas protects Rowley from becoming a major regional retail destination.

Action Recommended – The Zoning and Regulatory Plan maintains the Business/Light Industry districts created in 2002. Most of this land is located along Route 1, with a second smaller Business/Light Industry area located on Route 133 in the vicinity of I-95. Uses allowed in this district include offices, warehousing, research and development, wholesale, and light manufacturing.

The Master Plan examined the possibility of expanding the Business/Light Industry area. However, the community did not identify a need to expand the Business/Light Industry District through the Master Planning process and thus no expansion is recommended.

10.1.7 Retail District

Issue – As discussed above, the Town recently split the pre-existing Commercial District into the Business/Light Industry District and the Retail District. The Retail District, located near the intersection of Route 1 and Route 133, contains 165 acres of land zoned for retail and other uses. The Town has stressed the need to provide retail opportunities for the local, not regional, market. Therefore, in 2002 the Town also limited the maximum size of a retail establishment in the Town to 40,000 square feet.

Action Recommended – To maintain a balance of retail and industrial uses along Route 1, the Town should maintain the Retail District as created in 2002.

Issue – The Zoning Bylaw currently allows by special permit Adult Uses in the Route 1 Retail District. Adult Uses are not consistent with the Town’s goal of encouraging community-oriented businesses in the Route 1 area.

Action Recommended – Provisions for Adult Uses should be included in the Business/Light Industry District located on Route 133 adjacent to Route 95.

10.1.8 Scenic District (Overlay)

Issue – According to Rowley’s residents, the Town’s numerous scenic roads and landscapes are an important contributor to the quality of life in Town. However, there are no regulations or bylaws to protect the Town’s scenic resources. New development, if not sensitively designed and sited, could spoil these scenic resources.

Action Recommended – The Town should consider adopting a Scenic Overlay District that provides additional design and development guidelines for projects in scenic areas. As an overlay district, the Scenic designation would be superimposed over the base districts and provide additional protection measures in scenic areas. The underlying uses would remain unchanged. The Scenic Overlay District shown on **Map 10-2** includes the following scenic lands in Rowley:

- **Areas Within 500 Feet of a Scenic Road:** These lands are visible from scenic roads and development within this 500-foot band greatly affects the character of the road.
- **Prominent Ridgelines:** Defined as lands above 145 feet in elevation, these high points in Town are visible from numerous locations.

- **Steep Slopes:** Sheer faces of steep hillsides (exceeding a 25% slope) are also very visible. Attention is often drawn to areas with large elevation changes, making these locations particularly important to Rowley's scenic character.

Within the Scenic Overlay District, the Master Plan recommends a combination of incentives, regulations, and development reviews to create new development that blends naturally into the Town's landscape. The Planning Board can incorporate these policies into a new Scenic District Bylaw. In terms of incentives, the bylaw should provide landowners and developers additional options for siting driveways and curb cuts to improve access while minimizing visual impact (see **Section 10.2.2**). Regulations in the Scenic Overlay District should include greater residential building setbacks (e.g., 150 feet) and a requirement to retain at least 50 feet of natural vegetation along the roadside. In addition, the Town should review new development in the Scenic Overlay District to minimize its visual impact. For example, if a property owner seeks to develop an old farm field, new houses recessed into the treeline at the edge of the field would be much less visually obtrusive than houses positioned in the middle of the field.

Action Recommended – In addition to the Scenic Overlay District, the Town can adopt a Scenic Roads Bylaw pursuant to Chapter 40, Section 15C of the Massachusetts General Laws. The Scenic Roads Bylaw only applies to work within the road right-of-way, such as road maintenance work and curb cuts. See **Box 10-1**.

Box 10-1: Scenic Roads Bylaw

A Scenic Roads Bylaw provides a process for reviewing work proposed within the right-of-way of any designated Scenic Road. Rural roads are often meandering roads with stone walls, large shade trees, tight curves, and limited visibility. Projects to alter these roads—whether routine maintenance, installing a new driveway, or reconstructing a section of the road to improve safety—can significantly affect their character by removing these defining features.

Massachusetts General Laws, Chapter 40, Section 15C allows communities to designate roads in a community as scenic. This section of the M.G.L. requires the Planning Board to hold a public hearing and review all work proposed within the right-of-way of a designated Scenic Road. State roads cannot be designated as Scenic Roads (although State roads *may* be included in the Scenic Overlay District, which is a local zoning designation). The following roads have been identified as scenic and are recommended for Scenic Road designation:

Main Street	Boxford Road	Stackyard Road
Hillside Street	Glen Street	
Wethersfield Street from Newburyport Turnpike to Dodge Road		
Dodge Road from Wethersfield Street to Haverhill Street.		

10.2 Land Use Policies

This section provides additional information on some of the recommendations for land use and development practices within the Zoning and Regulatory Plan Districts.

10.2.1 Central Business District

As discussed above, the Zoning and Regulatory Plan recommends that the Town reduce the potential for new business development in the town center to help preserve this area's existing character. To help

maintain the quaint historic character of the town center the Town should consider the following additional policies.

Uses

Issue – Automotive repair establishments and filling stations are currently allowed by special permit from the Board of Selectmen. These uses are not consistent with the Town’s goals of encouraging limited specialty shops and service-oriented businesses, and discouraging traffic in the town center.

Action Recommended – Throughout the public process, residents have repeatedly voiced a desire to maintain a quiet village center and encourage specialty shops and service-oriented businesses. Therefore, the Master Plan recommends prohibiting filling stations, and storage, service and repair of motor vehicles in the Central Business and Central Residential areas and instead directs them to the Retail District on Route 1. Existing automotive uses in the town center would become non-conforming uses. Under State law, they would be able to remain indefinitely and even expand, if approved by the Town.

Intensity of Use

Issue – Retail uses are currently limited to a maximum size of 5,000 square feet in the Central District. However, there is no size limitation on any other non-residential uses (consumer service establishments, offices, restaurants, antique and handcraft shops, research laboratories and facilities and overnight lodging) allowed in the Central District. Therefore, the potential exists for significant new commercial activity throughout the Central District—both along Route 1A and in the surrounding neighborhoods. This situation is at odds with the community’s goal of attracting only small-scale businesses to the town center.

Action Recommended – In addition to reducing the amount of land available for non-residential uses in the town center (see **Sections 10.1.1** and **10.1.2**), the Town should reduce the potential size of such uses to help retain the historic look and quaintness of the center. For example, the Town could limit the size of **all** non-residential establishments in the Central Business area to 5,000 square feet. This is consistent with the size of existing buildings on Main Street, most of which are less than 5,000 square feet in size.

Setbacks

Issue –New non-residential developments, often use the front yard for parking, which isolates the building from the street and creates an unbroken mass of asphalt next to the street. Buildings located closer to the road with parking to the side or rear can help to define the street line and create a sense of scale to the street. A maximum building setback would help maintain this more traditional development pattern in the town center.

Action Recommended – In the Central Business District, the Town should establish a 20-to-30 foot minimum front yard setback and a 40 to 50 foot maximum setback to encourage development to be consistent with the historical development patterns of the center. The Town currently prohibits structures or parking in the setback area, so adopting a maximum front yard setback would effectively require the placement of new parking lots to the side or rear of buildings in the town center. To encourage pedestrian activities, outdoor seating and patios could be allowed within the front yard. A special permit procedure is recommended to allow the setback requirements to be varied based on unique circumstances.

10.2.2 Residential Development

To attract quality residential development, the Town's zoning bylaw should include a range of alternatives to conventional subdivision development as well as requirements and methods to improve the appearance of new development. Providing several alternatives gives a developer or the Planning Board the ability to select the most appropriate tool for the unique circumstances of a given project.

10.2.3 Open Space Residential Developments

Issue – To date, the Open Space Residential Development (OSRD) Bylaw has not been used. The bylaw's density requirements are partially responsible. To encourage the use of the OSRD Bylaw, the Town should consider providing density bonuses. In addition, the Town could potentially use the bylaw to provide housing opportunities for Rowley's seniors and low- and moderate-income residents.

The current bonus offered for providing affordable housing in an OSRD is too low. The current bylaw requires 1.5 affordable units for each 1 bonus unit. For example, in a 27-unit development that obtains a 15% or 4-unit bonus (31 total units), 6 affordable units (or 20% of the total units) would be required. The bonus actually reduces the number of market rate units from 27 to 25, thus reducing the developer's profit. In addition, a bonus incentive does not exist for creating senior (55 years or older) OSRDs.

Action Recommended – The OSRD Bylaw includes flexible design standards that allow for the creation of permanently-protected open space and better-designed development. Many communities use similar bylaws as an alternative to conventional "grid" subdivision development. The bylaw requires the issuance of a special permit by the Planning Board. This special permit process provides design flexibility but also gives the Planning Board the latitude to negotiate alternative designs and, if the design proposed is not acceptable, to deny the proposal.

The Town should eliminate the current affordable housing incentive structure and instead create a substantial density bonus for developers who build OSRDs with 10% of units as affordable housing.

To provide housing opportunities for Rowley's older residents, the Town should add provisions to encourage senior (persons 55 and over) Open Space Residential Communities. The size of the elderly units should be limited to two-bedrooms.

Box 10-2 illustrates how these policies might affect actual development proposals in Rowley.

Box 10-2: Incentives for Open Space and Affordable Housing

Outlying Residential District

Scenario	Overall Density	On a Hypothetical 50-Acre Tract		
		# of Units	# Affordable Units	Acres of Open Space
Existing Zoning – Standard Development	1 per 60,000 sf	31	0	0
Proposed Zoning – Standard Development	1 per 80,000 sf	21	0	0
Proposed Zoning – Incentive Development (With OSRD)	1 per 60,000 sf	31	0	25+
Proposed Zoning – Incentive Development (With OSRD and 10% Affordable)	1 per 40,000 sf	40	4	25+
Proposed Zoning – Incentive Development (With OSRD and Senior -55+)	1 per 40,000 sf	40	0	25+

Coastal Conservation District

Scenario	Overall Density	On a Hypothetical 50-Acre Tract		
		# of Units	# Affordable Units	Acres of Open Space
Existing Zoning	1 per 60,000 sf	31	0	0
Proposed Zoning – Standard Development	1 per 120,000 sf	14	0	0
Proposed Zoning – Incentive Development (With OSRD)	1 per 60,000 sf	31	--	25+

To further encourage the use of the OSRD bylaw, the Town recently adopted provisions to require applicants for subdivisions that are greater than 5 units and/or 5 acres in size to submit an OSRD plan. The applicant may also submit a conventional subdivision plan if they wish. Requiring the submission of the OSRD plan makes the special permit requirement less of a disincentive for developers.

10.2.4 New Dwelling Unit Limitations

Issue – In 1996, the Town adopted a New Dwelling Unit Limitation zoning bylaw. The bylaw limits the rate of development of single-family dwellings on both a townwide basis and a development-by-development basis. The bylaw is due to expire in 2006.

Action Recommended – The Town has recently voted to make this provision permanent. The dwelling unit limitation will continue to allow the Town to moderate year-to-year swings in the rate of single-family dwellings that can occur.

The Town has also voted to exempt permanently-protected affordable housing from these limitations.

10.2.5 Reduced Frontage Lots and Common Driveways

Issue – The Town has expressed an interest in limiting the number of new roads and subdivisions built throughout the community. Reduced frontage lots provide a low-density alternative to conventional subdivisions while also giving a property owner the ability to create a limited number of lots.

Action Recommended – To provide an alternative to new subdivision roads, the Town should consider adopting a reduced frontage lot provision. Reduced frontage lots, otherwise known as “flag lots” or “pork

chop lots,” can help maintain the rural appearance of Rowley’s roads by locating development further from the road and providing a lower density alternative to conventional subdivisions. **Figure 10-1** shows how this result is achieved. In a conventional development scenario, a developer first creates as many Approval Not Required (ANR)¹ lots as possible along existing roads (**Figure 10-1a**). A subdivision road is then constructed to develop the back land (**Figure 10-1b**). Subdivision roads typically cost between \$150 and \$200 per linear foot to construct and require regrading and the removal of significant vegetation. By using a reduced frontage lots provision, landowners can access their back land to build a limited number of homes in a private setting without constructing new subdivision roads (**Figures 10-1c** and **10-1d**). The resulting development has less environmental and aesthetic impact on the Town.

Reduced frontage lots with at least 30 feet of frontage and 200% or 250% of the ordinarily required lot area are recommended. Allowing for the creation of reduced frontage lots through the Approval Not Required process as outlined in **Box 10-3** can further encourage reduced frontage lots.

Box 10-3: Sample Reduced Frontage ANR Requirements (“Estate Lots”)

The Planning Board may endorse an "Approval Not Required" Plan showing lots in a residential zone for which the required lot frontage is reduced to not less than thirty (30) feet provided the following requirements are met:

- A) The lot being divided was created prior to [the adoption of current zoning]; and
- B) The lot is being divided into not more than three (3) lots; and
- C) No part of the lot is less than thirty (30) feet in any dimension; and
- D) The Planning Board determines that:
 - 1) Existing drainage patterns will not be disrupted by the construction of a driveway on the reduced width portion of the lot;
 - 2) The grade of the reduced width portion is less than 10%;
 - 3) Cut and fill on the portion with reduced width will not exceed five (5) feet vertically;
 - 4) The sight distance at the intersection with the street exceeds one hundred fifty (150) feet in both directions;
 - 5) 200% [or 300%] of the lot area required for the Rural Residential zoning district is located behind the nearest parallel line to the street which first meets the minimum full lot frontage requirements;
 - 6) The reduced width portion, as measured from the street line to the nearest parallel line to the street which first meets the minimum full lot requirements, is 500 feet or less in length. Lengths greater than 500 feet shall require the submission of a supplementary plan that shows the proposed location, construction, and profile of the driveway to provide access to the building area of the lot. Said driveway shall be designed and constructed for the full length to the following minimum standards: a) the access drive shall be constructed to a width of 12 feet with 6 inches of compacted gravel; and b) the grade of the access drive shall not exceed 10%;
- E) When, in the opinion of the Planning Board, site conditions such as topography, slope, or shape warrant, a drainage analysis shall be submitted and approved by the Highway Surveyor prior to the endorsement of the plan by the Planning Board; and
- F) The Building Inspector shall require the access drive to be constructed prior to the issuance of a certificate of occupancy.

Common driveways used with standard development or in conjunction with reduced frontage lots can reduce the number of curb cuts created by new development and also limit the visual and traffic impacts associated with a series of individual driveways located on a road. **Figures 10-1c** and **10-1d** include

¹ Under Massachusetts State Law, a lot with frontage on a public road can be developed without Planning Board review, as long as it has the minimum area and frontage required by zoning and meets other basic health and safety standards. The other main type of residential development (besides ANR development) is “subdivision” development. Under this development method, a developer must seek Planning Board review and approval to create a new roadway to access the interior of a lot that does not have frontage on an existing public street.

common driveways in the development scheme. Currently, the Zoning Bylaw does not specifically allow or prohibit the use of common driveways. The Town should include a common driveways provision in the Zoning Bylaw that specifies standards for common driveways as well as a limit on the maximum number of lots served by a common driveway. When reviewing projects, the Planning Board and Zoning Board of Appeals should encourage the use of common driveways in all developments.

10.3 Design, Layout, and Review of New Development

The Master Plan recommends the following policies to improve the quality of new development in Rowley and minimize any negative aesthetic and environmental impacts. These policies are intended to provide a fair and consistent development review process and a set of standards that will apply equally to all development projects (or, in some instances, all projects of a certain type or size).

10.3.1 Design Review/Appearance Code

Issue – During the Master Plan process, residents expressed a desire to maintain a high aesthetic quality for new commercial, retail, and industrial development, especially in and near the town center. At the same time, any new regulations intended to improve appearance must be flexible enough so as not to unduly burden existing or prospective businesses from building in Rowley.

Action Recommended – The Town should consider establishing a Design Review Board and an Appearance Code to guide the design of new, non-residential projects in the Town. The Design Review Board² reviews the building design, building material, and landscape treatments of proposed non-residential projects with reference to a published Appearance Code. The Board then provides a non-binding advisory report to the actual permit granting authority (Planning Board, Zoning Board of Appeals, Building Inspector, etc.). In practice, developers are often willing to revise their building and site plans based on the Design Review Board's suggestions. The Design Review process is a complement to the existing Site Plan Approval process, not a replacement. Site Plan Approval addresses technical criteria such as conformance with zoning, proper drainage, and safe access. Design Review focuses on aesthetic criteria.

The Appearance Code is a written document that identifies what types of building designs, building materials, and landscape treatments are preferred in the Town. In Rowley's case, preferred designs would probably be consistent with the Town's traditional development patterns and historic structures. The Appearance Code gives developers an up-front idea of what the Town is looking for and ensures that the Design Review process is as objective as possible.

10.3.2 Landscaping Provisions

Issue – As discussed above, one of the Town's goals is to encourage the design of new development to be developed in a manner that is environmentally and aesthetically compatible with its surroundings. Proper landscaping can help meet this goal, but Rowley currently relies on an informal negotiation process to require landscape improvements as part of development projects.

² A Design Review Board typically consists of five members appointed by the Selectmen. Members of the Design Review Board should include individuals familiar with design, construction, and real estate, such as architects, landscape architects, lawyers, realtors, and contractors. The Board should include a nominee of the Planning Board and a nominee of the Historical Commission.

Action Recommended – The Town should adopt additional provisions for minimum landscaping requirements for parking lots and buffer areas to the zoning bylaw (see **Box 10-4**). The intent of these provisions is to establish a **minimum acceptable** level of effort; the Town can and should still require or encourage additional landscaping.

Box 10-4: Sample Parking Lot Landscaping Requirements

Parking lots that abut public ways shall be separated by a minimum twenty (20) foot strip of landscaping, which shall contain at least four (4) trees per two hundred (200) linear feet that may be expected to reach a mature height of greater than thirty (30) feet.

Parking lots shall contain visual relief from vast expanses of unbroken pavement and cars. In parking areas exceeding one-quarter (1/4) acre, trees greater than six (6) feet in height shall be provided at a rate of at least one per twelve (12) parking spaces. These trees shall be placed in vegetated islands at least eight (8) feet wide and spaced with reasonable regularity throughout the parking lot. At least half of these trees shall be of a species expected to mature to a height greater than thirty (30) feet. Landscaping in islands shall be protected from damage from parking cars and snow removal operations.

A Registered Landscape Architect or other qualified licensed professional must certify to the Building Inspector prior to the issuance of a final occupancy permit that the required landscaping has been properly installed in accordance with the approved site plan, the Zoning Bylaw, and acceptable landscape practices.

10.3.3 Subdivision Rules and Regulation Modifications

Subdivision Roadway Standards

Issue – New subdivision roads in Rowley are generally not consistent with the appearance of existing roads in the Town. For example, the Town now requires 26 feet of pavement width, two sidewalks and granite curbing. The Planning Board often waives strict compliance with these requirements. Most of Rowley’s existing roads are less than 22 feet wide and in some cases are only 16 to 18 feet wide. Wide subdivision roads are not only inconsistent with historical development patterns in the Town, but also create more surface water runoff and cost more to maintain.

Action Recommended – The Planning Board should promote subdivision designs that are more in keeping with the Town’s existing roads and rural character. See **Box 10-5** for suggested practices, which can be achieved either by modifying the Subdivision Rules and Regulations or by granting waivers depending on the circumstances of individual projects.

Box 10-5: Suggested Changes to the Subdivision Development Practices

The Planning Board should consider the following changes to the development standards in Rowley’s Subdivision Rules and Regulations to promote development in keeping with the Town’s rural character:

Design Element	Existing Regulation	Suggested Practice
Right-of-Way Width	55 feet for minor residential streets	50 feet for minor residential streets
Roadway Pavement Width	26 feet for minor residential streets	18-20 feet for minor residential streets
Sidewalks	2 sidewalks	1 sidewalk or meandering path next to offset roadway (see Figure 10-2)
Erosion Control	--	Establish standards in Box 10-7
Stormwater Regulations	--	Establish standards based on DEP Policy (see Section 11.2.3)

Erosion Control and Re-Planting Requirements

Issue – During the Master Plan process, many residents expressed concerns about erosion, sedimentation, and deforestation resulting from new developments.

Action Recommended – To require more environmentally-sensitive development, the Planning Board should add the following revegetation requirements (**Box 10-6**) and erosion control standards (**Box 10-7**) to the Subdivision Rules and Regulations.

Box 10-6: Sample Requirements for Replanting Disturbed Areas

The developer shall limit the amount of vegetation that is removed from a site to the minimum amount that is required to accommodate the proposed buildings, roads, driveways, sidewalks, walkways, and associated grading. The developer shall be responsible for replanting all disturbed areas with trees, shrubs, groundcover, or loam and seed, except as may be required for drainage catchment areas. The intent is to minimize disturbance of natural vegetation during construction, and to reforest those disturbed areas with indigenous or compatible species whenever possible, or to supplement that planting with attractive species. The planting shall conform to the following number of plants per 1000 square feet of disturbed area. Species listed below are suggestions, but the Planning Board may allow other species as well.

Category	Species	Size	Spacing	Plants/1000 SF
Deciduous Shade Tree	Quercus rubra	2.5-3"	20' on center	2.88
Deciduous Flowering Tree	Malus hupehensis	2.5-3"	15' on center	5.15
Evergreen Tree	Pinus resinosa	10'- 12'	20' on center	2.88
	Pinus resinosa	8'- 10'	15' on center	5.15

In landscaped areas, the spaces between trees shall be planted with shrubs, ground cover, or grass based on the following guidelines.

Category	Species	Size	Spacing	Plants/1000 SF
Deciduous Shrub	Comptonia peregrina	Pots	3' O.C.	128
	Cornus stolonifera	2'-3'	5' O.C.	46.1
Evergreen Shrub	Juniperus chin. sargentii	12"-15"	4' O.C.	72.5
	Calluna or Erica Species	Pots	3' O.C.	128
Ground Cover	Euonymus fortunei	12"-15"	5' O.C.	46.1
Four inches of loam and seed				

Particular attention shall be placed on matching plant species with on-site soil and drainage characteristics. The above lists of species are for the developer's use in estimating the level of effort to replant the site. Equal numbers of other similar species may be substituted for those listed above in the appropriate category. Greater numbers of plants of smaller size may be submitted to the Planning Board for their consideration. Areas between plants shall be stabilized with loam and seed. Final determination of the plant species and groupings shall be at the discretion of the Planning Board. The developer is responsible for the maintenance and care of plantings. A one-year guarantee from the time of installation is required. Invasive plant species listed in "A Guide to Invasive Plants in Massachusetts," as amended, shall not be used.

The following temporary and permanent erosion control measures should be added to both the Subdivision Rules and Regulations and the zoning bylaw. These provisions will minimize the potential for erosion during construction and after the development is completed.

Box 10-7: Recommended Erosion Control Language

Minimize Site Disturbance

During the construction of the roadway and drainage systems, disturbance of the site shall be minimized. Construction equipment and trucks must stay within the areas of proposed work as shown on the approved plan.

Temporary Stabilization

Temporary vegetation, mulching, or other protective measures must be provided for areas that will be exposed for one or more months. These temporary measures must be applied immediately after disruption. Temporary measures include seeding with rye grass or other annual grasses, jute netting, spreading straw mulch, or any other method acceptable to the Board. The Board may require a specific type of temporary stabilization for any given area within the development. If a disturbed area will be exposed for longer than one year, permanent grasses or other approved cover must be installed. In disturbed areas, if the surface material is not suitable for planting seed, a minimum of four (4) inches of loam must be added prior to seeding.

Temporary Sediment Control for Drainage

Temporary sediment controls are required for unpaved roads, paved roads where curbing has not been installed, drainage inlets, and drainage outfalls. Temporary sediment controls are also required for all unpaved driveways and disturbed lots that slope toward the road. Temporary sediment control devices include silt fences, filter strips, double row staked hay bales, silt traps, sediment basins, and crushed rock berms. Temporary sediment control devices must be placed along roadsides where runoff may occur and around storm drain inlets and outfalls. The Board may require a specific type of temporary sediment controls. All sediments must be removed from the roadway and other collection areas at least weekly.

Permanent Stabilization

For all areas where the natural vegetation is disturbed, a plan detailing the proposed re-vegetation of the site must be submitted. Areas where the horizontal disturbance is less than eight feet must be treated with a perennial grass mixture or sod, at a minimum. In areas where the horizontal disturbance is greater than eight feet, additional vegetation including shrubs and trees is required. The size, quantity, species, and spacing shall be in accordance with the Board's replanting requirements (see **Box 10-6**). When posting a bond or other surety for the installation of loam, seed, sod, shrubs, trees, or other vegetation, the money shall be held for two growing seasons.

A minimum of four (4) inches of topsoil free of roots with a minimum organic matter content of 2% and a texture of sandy loam is required for areas that will be seeded. The loam must be raked and free of roots, stones, and twigs.

If the Board or its representative questions the installation or quality of the required stabilization material, they may request an inspection by a registered landscape architect. If the installation or the material used is found to be inadequate, it must be replaced. This inspection shall be at the developers' expense.

Responsibility

The developer is responsible for preventing all erosion and the build-up of sediment within the area disturbed due to the construction of the road and drainage system.

10.4 Other Policies

10.4.1 Special Permit Granting Authority

Issue – Typically, the Zoning Board of Appeals should be the Special Permit Granting Authority (SPGA) for area and dimensional requests. As the reviewing authority for subdivisions, the Planning Board typically has considerable experience with site design and layout issues. Therefore, the Planning Board is often given the SPGA designation for projects subject to site plan review. The Board of Selectmen customarily has limited special permit oversight. Under Rowley's current Bylaw, the Board of Selectmen has special permit oversight for certain uses (e.g., service stations and entertainment facilities) that are subject to site plan review by the Planning Board. Designating the Planning Board as the SPGA for such proposals can streamline what is currently a duplicative and inefficient process.

Action Recommended – Recommended changes to the Special Permit Granting Authority provisions of Rowley’s Zoning Bylaw include:

Box 10-8: Suggested Changes in Special Permit Grant Authority		
<u>Special Permit</u>	<u>Current SPGA</u>	<u>Suggested SPGA</u>
Soil Suitability	Board of Selectmen	Conservation Commission (see Sections 11.2.1 and 11.2.2)
Filling Stations; establishments for the sale, storage, service, and repair of motor vehicles	Board of Selectmen	Planning Board
Overnight lodging	Board of Selectmen	Planning Board
Dance halls, theaters, skating rinks	Board of Selectmen	Planning Board
Bars, taverns, and restaurants	Board of Selectmen	Planning Board
Flood Plain District	Board of Selectmen	Planning Board

11. OPEN SPACE, RECREATION, AND NATURAL RESOURCES

Residents strongly emphasized goals related to the protection of Rowley's open space, natural resources, and semi-rural character during the Master Plan process. In addition, residents have identified the need for additional recreational facilities.

The Town has already taken several significant steps to protect open space and natural resources. Most notably, the Town has protected several high priority parcels, prepared an Open Space and Recreation Plan, and passed the Community Preservation Act. However, as development continues, the Town needs additional protection measures to preserve its existing character and natural resources.

11.1 Land Conservation Activities

11.1.1 Acquisition and Restrictions

Issue – Between 1991 and 1999, the Town lost approximately 65 acres of farmland and 240 acres of forestland to development. Additional land conversions occurred during the period of rapid development between 1999 and 2001. Given that the Town has almost 3,000 acres of developable land in the Outlying District, this trend is likely to continue in the coming years. Unless the Town and others protect significant amounts of open space, Rowley will lose more of its rural character as the remaining open spaces, forests, and farmlands are developed.

Action Recommended – The Town, through its Open Space Committee, has already established land conservation priorities (**Box 11-1**). At this time, key unprotected parcels include the Herrick Dairy Farm, the three King Grant properties, and several other forested areas. The Open Space Committee should continue to work with landowners to develop options for protecting these lands from development, possibly through conservation restrictions and agricultural preservation restrictions.

In addition to outright purchase or development restrictions, the Town should continue to pursue other techniques for land conservation such as Open Space Residential Developments (see **Section 10.2.2**). This method uses the power of the real estate market to protect open space. Without such “leveraged” protection techniques, the amount of open space lost to development may outstrip the amount of land that the Town is able to protect. **Box 11-2** describes a range of land conservation techniques that Rowley can use.

Box 11-1: Land Conservation Priorities

- Critical environmental concern
- Scenic views (especially roadside)
- Hilltops
- Watershed and wellfield protection
- Potential greenbelt, wildlife corridor, trailway
- Riverside Open space and access points (including tributaries)
- Agricultural lands
- Passive and active recreation lands
- Large and contiguous open space parcels
- Open space with historic significance
- Parcels that abut protected land
- At-risk parcels (e.g., recent death of owner)
- Willingness of owner
- Forested lands

Box 11-2: Tools for Land Conservation

A. Outright Acquisition

Outright acquisition provides the highest amount of protection for a piece of property. In addition, the group that purchases the property is able to control how it is used or managed. However, outright acquisition is usually the most expensive technique, as well. Funding mechanisms for outright acquisition include:

1. Town funding from a one-time appropriation, an annual contribution to a land protection fund, or the Community Preservation Act.
2. Grant funding: for example, through the State's Self-Help program administered through the Division of Conservation Services.
3. Private conservation organization such as the Trustees of Reservations or the Essex County Greenbelt Association.
4. Donations or "bargain sales" from landowners seeking to conserve their land or gain income tax benefits.

B. Restrictions and Easements

Restrictions and easements limit the future use of land by restricting or prohibiting development. However, the land continues to be owned and operated by a private owner. If the restriction on development is in perpetuity, this mechanism provides as much protection for land as outright acquisition. In addition, it can cost less than outright acquisition and offers more flexibility to meet the needs of the landowner. For example, a restriction could be negotiated that allows a landowner to continue to farm or log the land, live on the land, or even build another house on the property.

Funding can come from the same mechanisms as for outright acquisition. In addition, grant funding is available from various State programs including the Agricultural Preservation Restriction program, which purchases easements from farmers to restrict future development (see below).

C. Temporary Protections

The State's Chapter 61, 61A, and 61B programs offer tax incentives for landowners to keep their property in active forestry, agricultural, and recreation use, respectively. However, these programs offer no long-term protection for land. See **Section 3.7.2** for additional discussion of these programs.

D. Other Tools

Other land conservation tools take advantage of the economics of land development to protect open space as part of new development projects (usually residential). As long as the open space is protected with a suitable conservation restriction, this form of open space protection is as good as outright acquisition. These tools include:

1. **Open Space Residential Developments:** See **Section 10.2.2** for recommendations on improving Rowley's Open Space Residential Developments Bylaw so that developers will be more inclined to use it.
2. **Other Zoning Tools:** The Scenic Overlay District (**Section 10.1.8**), reduced frontage lot provisions (**Section 10.2.2**), and a Density of Development Bylaw (**Section 10.2.2**) are other zoning policies to increase the amount of open space in new developments, even if the overall development density remains the same.
3. **Limited Development:** In a limited development project, a conservation group (usually a nonprofit but sometimes a government body) first purchases a piece of land they would like to conserve as open space. Then, a portion of the site that is least important for conservation purposes is carved off and sold as high-end real estate such as a "country estate." The proceeds from this sale, which can sometimes equal 50% of the purchase price or more, are used to repay money borrowed for the land purchase or used to fund future conservation efforts.

11.1.2 Partnerships for Land Protection

Issue – In recent years, Rowley has successfully partnered with State agencies such as the Division of Conservation Services, the Department of Environmental Management, and the Division of Fisheries, Wildlife and Environmental Law Enforcement, and non-profits such as the Essex County Greenbelt Association and the Massachusetts Audubon Society to protect several hundred acres of land in Town.

These partnerships have allowed the Town to leverage local funds to protect additional acres. Partnerships not only provide funding, but also provide management and maintenance assistance.

Action Recommended – The Town should continue to work with State agencies and private, non-profit groups on land protection efforts. Leveraging local funds through grants and partnering will result in the protection of greater amounts of land.

11.2 Access and Use of Open Space

11.2.1 Trail Development and Mapping

Issue – Rowley has numerous public open spaces that are not easily accessible because they lack well-maintained trails. Development of a trail system would provide better access to Rowley's open spaces. In 2001, the Town hired a trails consultant to develop a trail plan to connect several parcels in Rowley with open spaces in Boxford and Ipswich.

Action Recommended – The Town is implementing a trail development system on several parcels. Following the trails consultants' recommendations, The Town is developing and adopting maintenance plans for these trails. The Town will need to identify funds to supplement existing grant money to develop these trails. Second, whenever possible, the Planning Board and Zoning Board of Appeals should work with developers to include trail easements through new developments, connecting to existing or proposed trails. Third, if key trails require segments on private property to complete a usable trail network, the Town, perhaps through the Open Space Committee, should work with the private landowners to see if they would be willing to grant a trail easement. Finally, a trails map should be prepared to encourage the use of these recreational assets.

11.2.2 Land Management Plans

Issue – Land protection without proper land management is often insufficient to protect the values for which the property was purchased. For example, an unmanaged farm field will revert to woodland if not mowed, or invasive species may choke wetlands. In addition, the Self-Help program administered by the Executive Office of Environmental Affairs' Division of Conservation Services requires towns to develop and implement management plans for parcels acquired with Self-Help money. The management of Town property is an on-going focus of the Open Space Committee. The committee has recently prepared a management plan for the Hunsley Hills property. However, Rowley needs to implement comprehensive plans to manage and monitor other open space and conservation parcels. Successful management plans will help secure future State funding for additional land purchases.

Action Recommended – Using the recently prepared plan as a guide, the Town should continue its efforts to prepare and implement management plans for all its conservation land. The Town has already allocated some money for the management of certain parcels. The Town may need to appropriate additional funds to implement the management plans in the future. See **Section 11.4.2** for additional discussion on managing land for habitat value.

11.2.3 Natural Resource Education

Issue – Some teachers in the Rowley schools educate local students about the Town's natural resources such as marshes and vernal pools, and discuss local resource protection issues. This education teaches

children about the importance of the natural environment in Rowley and also helps educate adults as children discuss their school activities with parents and relatives.

Action Recommended – The Town, through the Conservation Commission, should work with the schools to expand environmental education offerings by teaching children about the value of vernal pools, the Great Marsh, the Parker River/Essex Bay Area of Critical Environmental Concern (ACEC), and other important natural resources. The School Department should expand its existing natural resource education programs. The Pine Grove School is located adjacent to several significant natural resource areas that students could study as part of a natural resource study curriculum.

11.3 Water Resources

11.3.1 Wetland Protection

Issue – While the Massachusetts Wetlands Protection Act provides significant protection for wetlands in Massachusetts, many communities have chosen to supplement this Act with local wetlands regulations to provide additional protection, as well as greater local control over the review of projects proposed in or near wetlands. The Massachusetts Wetlands Protection Act does not cover certain important resources such as isolated wetlands, buffer zones, vernal pools, and historic and archeological resources.

Rowley's existing Soils Suitability Bylaw (Section 7.1 of the Zoning Bylaw) offers some additional protection to the Town's wetland resources beyond the protections contained in the Wetlands Protection Act. The bylaw requires a special permit from the Board of Selectmen for any structure or paved parking area proposed on an area of "wet" (Medisapristis, Scarboro, Ipswich or Westbrook) soils. As a condition of approval, the Board of Selectmen regularly imposes conditions relating to drainage and erosion control. In practice, this bylaw functions as a *de facto* local wetlands regulation, since it regulates land with soil types that are commonly associated with wetlands.

Action Recommended – A local wetlands protection bylaw would be a stronger and more precise way to protect wetlands in the Town than the Soils Suitability Bylaw. Therefore, the Town should consider revoking the Soils Suitability Bylaw and instead adopt a local wetland protection bylaw administered by the Conservation Commission. This bylaw should complement the protections already provided in the State Act by including the following provisions:

- **Isolated Wetlands:** The local bylaw should apply to **all** wetlands, even isolated wetlands not covered under the Wetlands Protection Act.
- **Buffer Zones:** Some communities have chosen to adopt a no-build buffer zone of 25 feet or 50 feet around the edge of wetlands. This is stricter than the State Act, which ordinarily allows activities within the wetland buffer zone subject to an Order of Conditions. Given Rowley's valuable salt marsh resources, the plan recommends a no-build buffer of at least 25 feet.
- **Vernal Pools:** Vernal pools are a particular type of isolated wetland that provides the only breeding habitat for several rare amphibian species, as well as habitat for other animals. Ideally, a 100-foot no-build buffer should be provided around vernal pools, since the amphibian species that breed in these pools also require adjacent upland habitat to survive during the adult stage of their life cycle.

- **Historic and Archaeological Resources:** Some communities have adopted provisions specifically to protect the historic and archaeological resources sometimes found adjacent to water bodies.
- **Filing and Review Fees:** Establishing a local bylaw allows the Conservation Commission to charge additional application fees to help defray the cost of reviewing projects that fall under the bylaw's jurisdiction. In addition, the bylaw can require the applicant to pay for the reasonable cost of a technical expert (consultant) to review the applicant's wetland flagging and/or project plans.

If Rowley chooses to adopt a local wetlands protection bylaw, the most effective approach is to adopt a non-zoning bylaw. Under such a bylaw, the delineation of wetlands would be determined through field studies conducted on individual sites, based on a set of hydrological, vegetation, and soils characteristics. This is preferable to creating a townwide wetlands map, which would be expensive to create, and not totally accurate since wetland boundaries can shift over time.

If the Town prefers to keep the existing Soils Suitability Bylaw rather than adopting a local wetland protection bylaw, several changes are recommended to strengthen this bylaw. First, the existing bylaw does not include any criteria for evaluating a special permit application. The Town should adopt a process requiring applicants to pay for an independent review of their development proposals to ensure compliance with the bylaw. Although it has not been a problem to date, reasons for approving or denying a permit applicant could be a source of future litigation. Second, the Town should also consider designating the Conservation Commission (not the Board of Selectmen) as the reviewing authority for the Soils Suitability Bylaw.

11.3.2 Flood Plain and Watershed Protection District

Issue – Rowley's Flood Plain and Watershed Protection District currently is not mapped but is defined by elevation. Without a properly delineated zoning district, enforcing the provisions of the bylaw remains a problem.

Action Recommended – The Town should describe the Floodplain and Watershed Protection District as all special flood hazard areas designated as Zone A, A1-30, and V1-V30 on the Town's Flood Insurance Rate Maps Firm and the Flood Boundary and Floodway Maps. As noted in **Section 10.4**, the Planning Board should be designated as the Special Permit Granting Authority for this district.

11.3.3 Nonpoint Source Pollution

Issue – Rowley is fortunate to have a system of clean and relatively unaltered surface water resources, including the Mill River, the Rowley River, and their tributaries. The greatest threat to Rowley's surface water resources is from nonpoint source pollution (or polluted runoff), which derives from a range of sources including runoff from roads, farms, lawns and gardens, golf courses, septic systems, parking lots, and other developed land uses. Nonpoint source pollution can adversely affect lakes, streams, aquifers, and coastal waters through the growth of weeds, algae blooms, and the introduction of other types of contamination.

Action Recommended – Nonpoint source pollution is diffuse, derives from numerous sources, and is often the accumulated result of many small actions whose origins may be difficult to trace. For this

reason, an effective program to control nonpoint source pollution typically requires several strategies in combination, and must include the participation of individual property owners. The selection of these strategies often needs to occur on a case-by-case basis, and requires weighing the cost or burden of a given strategy against its likely environmental benefit. Recommended strategies for Rowley include:

- **Adopt Townwide Stormwater Management Standards:** Townwide minimum stormwater management standards should apply to all new development requiring drainage systems and should address removal of suspended solids, stormwater infiltration, and peak discharge rates. The DEP's Stormwater Management Policy is a good model that Rowley could adopt locally. Most of DEP's standards are "performance standards" that allow the engineer to select the most cost-effective technique to achieve the given standard. Appropriate documentation requirements and review procedures should be included as part of such a bylaw. See **Box 11-3** for a summary of stormwater management Best Management Practices (BMPs) recommended by DEP.
- **Promote Better Design:** Rowley's Subdivision Rules and Regulations and Open Space Residential Development Bylaw should promote site layouts that minimize impervious surfaces such as roadways and driveways. These regulations should also promote the retention of natural vegetation, since lawns generate a significantly higher runoff rate and pollutant load than undisturbed forests.
- **Work with Large Landowners:** Farms and golf courses have traditionally been major sources of nonpoint source pollution due to their use of agricultural and horticultural chemicals, as well as farm wastes. However, in recent years many farms and golf courses have become models for low-impact, environmentally-responsible management of turf, crop, and pasture land. The Town should help landowners build on these past successes by working with farm and golf course landowners to help them develop effective alternatives to using large amounts of toxic chemicals.
- **Environmentally-Responsible Town Activities:** Maintenance and management of roads and other paved surfaces have a significant effect on local water quality. The Rowley Highway Department, in conjunction with the Conservation Commission, should assess the Town's current programs for road de-icing and identify any opportunities to reduce the impact of road management activities on water quality.
- **Public Education:** Because nonpoint source pollution is primarily the result of small, individual actions, public education is essential for addressing the problem. The Town should help increase its residents' knowledge of local water resources and the steps they can take to protect them. One way to do this is to distribute informational brochures on topics such as recycling; the proper use and maintenance of septic systems; low-impact lawn and garden care (proper use of lawn/garden chemicals, as well as organic and non-chemical alternatives); and information for homeowners who abut wetlands about how to protect these areas. The Conservation Commission and the Board of Health could develop such information jointly and distribute it at low cost in the Town's mailings, utility bills, and on the Internet.
- **Natural Buffers Around Water Bodies:** Natural vegetated buffers surrounding surface water bodies can serve as an effective barrier, preventing pollutants from entering the water bodies. The Massachusetts Rivers Protection Act restricts development within 200 feet of any perennial river or stream, and, if properly enforced by the Rowley Conservation Commission, will ensure adequate buffering around the Town's perennial streams. For water bodies that are not protected by the Rivers Protection Act, such as ponds and intermittent streams, the Town should attempt to establish buffers of natural land around these bodies. This is particularly important for seasonal

drainage channels that fill with water during major storms, when sediment and pollutant loads are large. The Planning Board can encourage the protection of buffer lands as part of its review of proposed subdivisions and required buffers of Open Space Residential Developments.

Box 11-3: Massachusetts DEP Approved Best Management Practices

Best Management Practice	Total Suspended Solids Removed	Maintenance Requirements	Life Expectancy
Detention Pond, Wet Ponds, Constructed Wetlands	70-80%	Annually check outlets and sediment depths	20+ years
Drainage Swales	70%	Annually check for flow restrictions	20+ years
Infiltration Technology	80%	Monthly inspections to check for clogging	20+ years
Filter Technology	80%	Monthly inspections to check for clogging	3 to 5 years for filter material
Sediment Traps	25%	Monthly checks for sediment build up	20+ years
Water Quality Inlet	25%	2 times per year	50 years
Deep Sumps/Hooded Catch Basins	25%	2 times per year	50 years
Street Sweeping	10%	4 times per year	100+ years
Filtration	80% (based on manufacturer's claims)	Check quarterly for sediment build up and clogging	3 to 5 years before filters need changing
Advance Oil/Sediment Separators	80% (based on manufacturer's claims)	2 times per year	50 years
Advance Hydrodynamic Vortex Swirl Separators	80% (based on manufacturer's claims)	2 times per year	50 years
Deflective Separation Systems	80% (based on manufacturer's claims)	Monthly	50 years
Storm Treat*	80% (based on manufacturer's claims)	Annually	20 years

Source: Massachusetts Department of Environmental Protection.

11.3.4 Septic System Management

Issue – Many lots in the town center are less than 10,000 square feet and some are less than 5,000 square feet. All lots are serviced by individual on-site septic systems. Residents and Town officials are concerned about the condition of these systems and their long-term impact on the environment. Improperly maintained or failing septic systems can pollute adjacent water bodies and present a serious health risk to residents.

Recommended Action – The Town should encourage homeowners to regularly maintain their septic systems. The Department of Environmental Protection recommends that septic tanks be pumped out every three-to-five years to prolong the life of the system. At this time, the Town does not need a wastewater management plan for the town center. However, if homeowners do not properly manage private septic systems or they begin to fail, the Town will need to establish a septic system management program requiring routine system maintenance, routine inspections, identification of failing systems, and upgrades for systems that fail inspection. Financial and technical assistance is available through various State programs to help offset the cost of system repairs and upgrades.

11.4 Habitat and Ecosystems

11.4.1 Protection of Large Contiguous Parcels

Issue – Healthy wildlife habitats and ecosystems depend on large, contiguous areas of undeveloped land. Ideally, these undeveloped areas should represent the breadth of natural habitats occurring within a town, and should be connected with undeveloped corridors of protected land. The fragmentation of open space will reduce wildlife habitats, and, over time, wildlife and plant species currently found in Rowley may disappear.

Action Recommended – Protected open space in the Town consists of a few large contiguous blocks (e.g., Georgetown-Rowley State Forest and the surrounding area, and the salt marsh) as well as other parcels scattered throughout the Town. The Zoning and Regulatory Plan also identifies the Coastal Conservation District as important plant and wildlife habitat. Although this area may be subject to some development, the Town should adopt zoning, such as the Coastal Conservation District, and other policies that minimize development's impact.

11.4.2 Identifying and Protecting Critical Habitat Areas

Issue – Many critical wildlife habitats exist in Rowley --such as vernal pools-- but remain unidentified and unprotected. Responses in the questionnaire clearly indicate that Rowley's residents place a high priority on protecting the community's natural resources. Once the Town has identified these resources, it can take steps to protect them such as educating property owners on their value; acquiring land to preserve their habitat; and monitoring their efforts.

Action Recommended – In addition to regulatory measures, the work of local volunteers can protect habitats. The Natural Heritage and Endangered Species Program (NHESP) has established procedures through which local volunteers, such as biologists and amateur naturalists, can identify and certify vernal pools. Volunteers can also document evidence of rare and endangered species that will assist in the identification of Rare Habitat and Priority Sites as designated by NHESP. In 2001, the Open Space Committee began work to certify vernal pools in Rowley. In the first year of these efforts, the State has certified eleven pools on State and municipal properties. The Town should continue to identify vernal pools, collect relevant data, and apply for State certification of vernal pools throughout the Town.

The Conservation Commission should work with property owners on a voluntary basis to identify and protect vernal pools on private property. In addition, Rowley should consider adopting a local wetlands protection bylaw that protects vernal pools and the 100-foot buffer around vernal pools. The bylaw should state that, as the State certifies additional vernal pools in the future, they are subject to the bylaw.

The Conservation Commission can promote wildlife movement by minimizing fencing in conservation areas, particularly where open space parcels are adjacent to one another.

11.4.3 Land Management

Issue – Simply protecting land against development is inadequate to ensure that the land will continue to function as habitat for native plant and wildlife species. For example, as a result of pollution as well as soil and hydrological disturbance, the species composition in many of Massachusetts's wetlands are

altered so that invasive species such as *Phragmites* reeds and Purple Loosestrife have crowded out native species.

Action Recommended – The Town, through the Conservation Commission, should promote ecologically-sound land management through the following steps:

- Develop and implement management plans for existing Town-owned conservation properties to maximize their value for native plant and wildlife species. The management plans should be modeled after the plans recently prepared for the Hunsley Hills and Pingree Farm properties.
- Work with volunteers to monitor invasive species on conservation lands in Rowley, and develop eradication plans if necessary. For example, the Essex County Greenbelt Association and Massachusetts Wildflower Association are involved in programs to remove invasive plant species from the Upper Mill Pond. Dozens of volunteers helped to remove the invasive aquatic plant commonly known as the water chestnut. The volunteers removed 248 cartloads of weeds from the pond. The Association will continue to manually remove weeds for the next several seasons, to prevent new plants from developing.

11.5 Active Recreation

11.5.1 Meeting Existing Recreational Needs

Issue – Rowley’s various youth athletics programs have grown rapidly in recent years. More than 50% of the questionnaire respondents rated Rowley’s current recreational facilities as either fair or poor, indicating that the current fields are inadequate to support existing demand for both practice fields and game fields. To meet current as well as future needs, the Town needs to develop additional fields over the next several years.

Action Recommended – The Recreation Committee should establish a five-year action plan identifying actions to develop additional recreational facilities, including identifying potential parcels for acquisition. To develop a successful program, the committee should coordinate its activities with other Town boards such as the Board of Selectmen, Community Preservation Committee, and Open Space Committee. **Box 11-4** identifies action items that the Recreation Committee should undertake over the next five years. The Recreation Committee should also explore developing shared regional facilities. Rowley, Newbury, and Salisbury already share the fields at the Triton Regional School. In addition, the Manter Field in Newbury offers opportunities for shared regional facilities.

Box 11-4: Recreation Committee Priorities

- Identify all programs/expected programs
- Identify existing facilities (including those in Newbury and Salisbury if a Triton Youth sport)
- Identify number of participants in each (total as well as number of Rowley residents)
- Show five-year trend in participation, and anticipated future demand
- Identify total space needs to accommodate demand for each sport
- Identify issues such as need to rest fields, sports that cannot share the same field, etc.
- Identify shortfall in field space by sport
- Identify strategy for adding space to meet need (e.g., not only identify parcels, but identify phasing)
- Explore regional solutions and shared facilities with other nearby communities
- Include strategy for improving land once purchased
- Develop and present a Five-Year Plan to Selectmen and ask for help (realizing that the Recreation Committee will need to take the lead, but that the Committee may not be the appropriate lead for land negotiations)
- Identify candidate parcels for purchase

12. HISTORIC RESOURCES

Rowley has already taken several important steps to identify and protect its historic resources. The Historical Commission and volunteers have identified more than 200 historically significant properties, created two historic districts and added several structures and sites to the State and National Registers of Historic Places. During the Master Plan process, residents noted that the greatest threats to Rowley's historic resources are inappropriate development, deteriorating vacant structures, and a lack of volunteer support. To further protect and adaptively reuse Rowley's historic resources, the Master Plan recommends the following provisions.

12.1 Community Preservation Act

Issue – The Town has adopted the Community Preservation Act (CPA). The funds generated through the CPA provide a significant opportunity for the Town to protect its historic resources. The Town must use a minimum of 10% and can use a maximum of 80% of the CPA funds for the preservation of historic resources, which could include purchasing, restoring and rehabilitating significant historic structures and landscapes.

Action Recommended – The Rowley Historical Commission should evaluate the Town's historic resources and prepare a prioritized list of projects for potential funding to the Community Preservation Committee. Examples of potential projects include: stabilizing the 1642 Stone Arch Bridge and acquiring threatened structures such as the Reindeer Tavern and Maugerville Migration property (see **Section 4**).

12.2 Demolition Delay Review

Issue – Currently, the Town does not have the ability to regulate the demolition of privately-owned buildings, even in the Historic Districts. The owner of a historic building can demolish the building without seeking Town approval. As Rowley's rural and historic character is closely tied to its historic buildings. The loss of these buildings would diminish this character.

Action Recommended – The Town should adopt a Demolition Delay Bylaw to allow a period of time (typically 90-120 days) to review requests to demolish historic structures. During the demolition delay period, the Town can work with the property owner to identify alternatives to demolition. If the owner submits a proposal that either addresses the Town's concerns or is determined acceptable, the Town may waive the delay period. If the Town and the owner cannot develop an acceptable alternative, the owner may demolish the structure once the delay period expires.

12.3 Historic Preservation Tax Incentives

Issue – Renovations to historic properties can be costly and may result in higher property taxes for the landowner. These costs represent two disincentives to maintaining and restoring historic structures.

Action Recommended – To encourage the renovation of historic buildings, the State has adopted legislation allowing towns to phase in increases in property taxes for renovated historic properties over a five year period (M.G.L. Chapter 59, Sec. 5J). Under this provision, towns may adopt a bylaw known as

the Local Option Property Tax Assessment. Rowley should accept this provision as a way of encouraging the owners of historic properties to rehabilitate their property according to appropriate historic standards. To be eligible for this tax break, the rehabilitation must conform to standards of the Massachusetts Historical Commission.

12.4 Signage

Issue – Signage can be an important contributor to the overall character of an area, particularly in a historic area such as the town center. Currently, there is no incentive for business owners in Rowley to construct aesthetically-pleasing or historically-compatible signs. In the Central District, the zoning bylaw allows one 10 square foot building sign for each business and one 40 square foot freestanding sign for each building. The bylaw permits businesses in the Retail and Business/Light Industry districts to have a 10 square foot sign attached to the building and a freestanding sign that is either 80 square feet or has a maximum area equal to 5% of the area equal to the building's height times the building's length, whichever is greater.

Action Recommended – To encourage more attractive signage, the Town should modify the zoning bylaw language to provide incentives for businesses to erect historic signs constructed of traditional or traditional-looking materials. **Box 12-1** includes recommended language for defining sign design.

A policy to encourage traditional signs could take one of two forms. One option is to allow larger signs if the sign is made of traditional materials. Alternatively, the Town could maintain the existing maximum size for signs but require a special permit for any non-historic sign.

Box 12-1: Signage Design Criteria

Historic Sign: An identification sign that is characterized as follows:

- Shall be constructed of painted or natural finish wood or equivalent appearance and shall use painted, routed, or raised letters.
- Shall be placed so as not to interrupt the significant architectural features of a building including but not limited to the window openings, cornice line, and roofline.
- Shall be indirectly lit.
- All signs that an establishment erects shall display a consistent style and lettering.

12.5 Protection for Sites on Private Property

Issue – Most of Rowley's historic resources are located on private property. These resources range from colonial-era houses, to historic barns, to historic sites. While the Town does not have the authority to mandate the protection of these sites and structures, it can work with developers to identify these resources early in a development process and protect some of these resources from demolition.

Action Recommended – The Open Space Residential Development (OSRD) Bylaw may be used to permanently protect historic properties. Through the subdivision review process, the Planning Board should require developers to identify historic resources, such as barns or other structures or cellar holes, on initial plans and to preserve these resources to the maximum extent possible.

12.6 Essex National Heritage Area

Issue - The Town is working with the Essex National Heritage Commission to establish a Scenic Byway Corridor along Routes 133 and 1A.

Action Recommended – The Town should continue to work with the Essex National Heritage Commission and neighboring communities to protect the natural and historic character of these roads by developing a corridor management plan. The Town should continue to seek local and State funds to install signs identifying significant sites within the corridor.

12.7 Additional Historic Designations

Issue – The first step toward protecting historic resources is to identify these resources. In many cases, once property owners become aware of the historical significance of their properties, they will take steps to protect and enhance these attributes.

Action Recommended – The Historical Commission should continue its efforts to identify and protect Rowley's historic resources through existing State and Federal programs.

13. ECONOMIC DEVELOPMENT

During the Master Plan process, participants voiced general consensus about the role that economic development and economic activities should play in Rowley. In particular, economic development should:

- yield net tax revenues to help support Town services;
- offer employment and entrepreneurial opportunities to Town residents;
- provide convenient goods and services for local residents, but not for the regional market; and
- be consistent with the Town's existing character and natural environment.

The following suggested policies will help the Town attract the types of business development that are consistent with these goals. **Box 13-1** illustrates economic development recommendations.

13.1 Attracting Desirable Economic Development

13.1.1 Light Industry and Office Development

Issue – The types of businesses that have located along Route 1 in recent years have brought clean industry to Rowley. These businesses offer a range of job opportunities, including jobs for unskilled workers, machine operators, and other skilled laborers. Office jobs provide employment opportunities for a wide range of skill levels from clerical to executive/professional.

Action Recommended – Through the Board of Selectmen, Rowley should seek to attract office, high technology, and light industrial uses to the Business/Light Industry District on Route 1. The Town should also continue to attract office development to the Forest Ridge commercial park.

13.1.2 Community-Serving Retail

Issue – Rowley houses a regional shopping center that attracts shoppers from as far away as Gloucester. As noted in the Master Plan goals, most residents would like future shopping opportunities to focus more on meeting the needs of local residents. Larger stores or shopping centers are considered undesirable in part because they will attract out-of-town customers, adding to already-congested conditions along Route 1. Community-focused retail establishments will create jobs for unskilled low- and moderate-income workers as well as part-time jobs for students and others.

Action Recommended – In 2002, the Town changed its zoning to limit the maximum size of a retail establishment to 40,000 square feet, thus eliminating the potential for large regional shopping developments. This policy is appropriate and should remain in place. In addition, the Rowley Chamber of Commerce should seek to attract specific types of consumer-oriented businesses that the Town desires, such as bookstores and cafes.

13.2 Promoting Tourism

13.2.1 Rowley as a Tourist Destination

Issue – Rowley’s historic buildings and landscapes, coastal areas, and antique stores are all assets that the Town can use to attract tourists to the Main Street (Route 1A) corridor. In Rowley’s case, a modest tourism industry could provide a low impact form of economic development. Tourism is probably the best way to increase the customer base for local businesses in the town center, thus allowing this area to remain viable.

Action Recommended – The Rowley Chamber of Commerce, in conjunction with other nearby communities and the Greater Newburyport Chamber of Commerce and Industry, should actively promote Rowley as a tourist destination. See **Box 13-2**.

Box 13-2: Suggested Tourism Development Strategies

To promote tourism, the Town should consider the following measures. The Rowley Chamber of Commerce is the most logical group for taking the lead role on most of these initiatives.

- Prepare brochures and maps identifying tourist-related businesses and points of interest in the community as well as the region.
- In conjunction with the Historical Commission, construct a visitor’s information kiosk on the Town Common.
- Sponsor and advertise historical and civic events. Such events could coincide with other events occurring in the region.
- Encourage development of a bookstore in the town center with an emphasis on local history.
- Establish walking tours, which may require the implementation of trails, sidewalks, or other pedestrian facilities in the town center.
- Develop a uniform system of directional and informational signage to identify sites of interest and local businesses.
- Promote the establishment of additional overnight accommodations to encourage people to visit Rowley. Unique accommodations such as bed and breakfast establishments should be encouraged.

13.2.2 Bed and Breakfasts

Issue – Hotels, motels and inns are currently only allowed by special permit in the Central District. Creating additional small-scale overnight accommodations will help establish Rowley as a tourist destination. Visitors will enjoy spending a night or a weekend in a historic house or neighborhood.

Action Recommended – To encourage additional tourism through overnight accommodations, the Town should consider making bed and breakfast establishments an allowed use in the Central Business and Central Residential districts, and a special permit use in the Outlying and Residential districts. The size can be regulated based on number of rooms or percent of building use. See **Box 13-3** for a sample bylaw provision pertaining to bed and breakfast establishments.

Box 13-3: Bed and Breakfast Establishments

Bed and Breakfast: A private owner-occupied residence with one to four guestrooms. The bed and breakfast is subordinate and incidental to the main residential use of the building. Individual guests are prohibited from staying at any particular bed and breakfast establishment for more than twenty-one (21) days in any one-year period.

Signs in Residential Districts: For each bed and breakfast, one small unlighted announcement sign not exceeding three square feet in area may be attached to and parallel with the front porch or wall of the building.

Parking Requirements: Bed and breakfasts shall provide one parking space per guestroom plus two spaces for the residence. Spaces shall be located to the side or rear of the building and shall be screened from adjacent properties by a four-foot high wood or masonry fence or by sight-obscuring vegetation of the same height.

Bed and Breakfast Regulations: Bed and breakfast operations shall be subject to the following regulations:

- a. The only meal to be provided to guests shall be breakfast, and it shall only be served to guests taking lodging in the facility.
- b. Rooms used for sleeping shall be part of the primary residential structure and shall not have been specifically constructed for rental purposes.
- c. No exterior alterations are allowed other than those required by law to ensure the safety of the structure.
- d. The bed and breakfast operation shall not use more than fifty percent (50%) of the floor area of the principal residence. Common areas such as kitchens are not included in this calculation.

13.3 Home Occupations

Issue – Currently, Town bylaws limit home occupations to uses that solely employ residents of the home. Slightly broader provisions will encourage additional low density and low impact economic development in the Town.

Action Recommended – The Town should consider broadening its home occupations provisions to allow for up to four employees. **Box 13-4** includes suggested bylaw language.

Box 13-4: Suggested Home Occupation Bylaw Provisions

Home Occupation: An accessory use which customarily is carried on entirely within a dwelling unit, and is incidental and subordinate to the dwelling use and which shall:

1. Not occupy more than 25% or 800 square feet, whichever is less, of the dwelling unit(s) used;
2. Not employ more than 4 employees;
3. Not cause any change to the outside appearance of the building or premises, or other visible evidence of conduct of such home occupation;
4. Not include sales of merchandise other than that produced on the premises;
5. Not generate traffic in greater volumes than would normally be expected in a residential neighborhood. Any need for parking generated by the conduct of such home occupation shall be met off the street and other than in a required front yard;
6. Not use any equipment or process that creates noise, vibration, glare, fumes, odors, or electrical interference detectable to the normal senses off the lot.

14. HOUSING

The majority of Rowley's existing housing stock consists of detached single-family homes. There are few provisions that encourage other types of housing in the Town. In addition, only a few homes are placed on the market each year, limiting both housing availability and choice. During the Master Plan process, the community stressed the need to encourage a wider range of housing opportunities to meet the needs of all of Rowley's residents. At the same time, however, residents expressed concerns about over-development and the impacts of high-density housing. Finally, residents identified Chapter 40B housing developments as a potential threat to the Town to the extent that they often occur on less-than-suitable parcels. This guidance suggests that the Town should proactively encourage a mix of housing types, including affordable housing that may be built at a relatively small scale. Housing recommendations are explained below and also illustrated on **Map 14-1**.

14.1 Rowley Housing Committee

Issue – The Master Plan identifies the need to provide affordable housing opportunities for all of Rowley's residents. Funds currently exist for affordable housing through the North Shore HOME Consortium (see **Section 6.5.1**) and the Community Preservation Fund. The expenditure of these existing funds has been and will continue to be difficult without a group or agency responsible for addressing the housing needs of the community.

Recommendation – The Board of Selectmen should create a Housing Committee charged with exploring affordable housing alternatives for Rowley's families and seniors. The committee should work with HOME to utilize available funds to benefit Rowley residents. The committee should also develop a list of priority projects to submit to the Community Preservation Committee for funding.

14.2 Additional Housing Resources

The Housing Committee should utilize the following housing resources to provide affordable housing for Rowley residents.

14.2.1 The Massachusetts Rental Voucher Program

The Commonwealth provides rental assistance through the Massachusetts Rental Voucher Program. Qualified renters can use State-funded "mobile" vouchers anywhere in Massachusetts and "project based" vouchers are available only in specific apartments. Local housing authorities and regional non-profit agencies can administer these vouchers.

Eligibility: Persons can earn no more than 200% of the Federal poverty level (\$35,300 for a household of 4 persons as of April 2001). Income limits vary based on the size of the household.

Rents: "Mobile" vouchers vary based on income. Project-based voucher holders pay 30% of their income for rent or 35% if heat is included in the rent. The voucher makes up the difference between market rate rents and tenant income.

Contact: Local housing authorities and regional non-profit agencies.

14.2.2 Massachusetts Alternative Housing Voucher Program

The Alternative Housing Voucher Program provides rental assistance to people with disabilities under age 60 who either live in, or are eligible to live in elderly/ disabled State-assisted public housing.

Eligibility: The income guidelines are the same as above and applicants must be under age 60 and eligible to live in elderly/disabled State-funded public housing.

Rents: Recipients pay 30% of their income for rent if the rent includes heat and utilities, or 25% if some or no utilities are included in the rent.

Contact: Local Housing Authority or the Massachusetts Department of Housing and Community Development at (617) 727-7130, ext. 655.

14.2.3 Individual Self-Sufficiency Program

The Commonwealth by Community Teamwork, Inc., 167 Dutton Street, Lowell, MA 01852 and the Rowley Housing Authority administer this program. This housing program assists homeless individuals move into permanent housing and is comprised of two components: Resource Model and Development Model.

The Resource Model provides a homeless individual who has located a housing unit with financial assistance for such payments as a security deposit, first month's rent, payment for a utility arrearage, moving costs and a small monthly stipend for the payment of rent. To be eligible, an individual must be residing in a shelter at the time of application and be employed or participating in a vocational or employment training program. The maximum eligibility income is 80% of the area median and the maximum length of participation is twelve (12) months.

The Development Model provides non-profit and private property owners with financial assistance for the development of housing units that will be occupied by eligible individuals.

Contact: Department of Housing and Community Development at 617-727-7130 ext. 655.

14.2.4 Rental Assistance Resources for Individuals and Families:

The Department of Housing and Community Development manages a number of rental housing programs, information about which can be obtained by calling (617) 727-7130. The Massachusetts Housing Finance Agency (MHFA) also maintains a list of rental housing developments that it has financed. Many of these units are reserved for low- or moderate-income persons. A list of MHFA rental properties can be obtained by calling (617) 854-1185.

14.2.5 Homeownership Opportunities

There are a variety of programs available to help low- or moderate-income people purchase a home. Most programs are limited to first-time homebuyers.

The State Soft-Second Mortgage Program

The Soft-Second Mortgage Program is a State-funded program that helps households earning approximately \$48,000 or less purchase their first homes. The program requires a minimum 5% down

payment. The State will subsidize a second mortgage on behalf of the homeowner with a conventional mortgage.

Contact: Massachusetts Housing Partnership at (617) 338-7868 or the Department of Housing and Community Development at (617) 727-7824.

Local Homebuyer Programs

The State annually awards funds to certain communities and non-profit agencies that operate local first-time homebuyer programs. The State uses these funds to make loans to first-time homebuyers with incomes at or below 80% of the area median income (\$50,200 for a family of four in the greater Boston area).

Contact: Department of Housing and Community Development at (617) 727-7824. Information is also available at DHCD's website at www.state.ma.us/dhcd.

The Massachusetts Housing Finance Agency (MHFA)

MHFA is a quasi-public State agency that provides below-market rate mortgage financing for first-time homebuyers, and other products (such as lead paint abatement and home improvement loans) for homeowners with moderate incomes.

Contact MHFA at (617) 854-1020 or on the web at: www.mhfa.com.

14.3 Community Preservation Act for Affordable Housing

Issue – The Town has adopted the Community Preservation Act (CPA). The Town must use a minimum of 10% and may use a maximum of 80% of the funds to provide affordable housing in the community.

Action Recommended – The Town should use available CPA funds to create and preserve affordable housing. The following lists a few examples of policies that the Town could use. Using the Local Initiative Program described below, the Town could create housing that counts toward the Town's Chapter 40B affordable housing inventory.

1. Use a portion of the Community Preservation funds to purchase land and offer it at below market rate (with deed restrictions in perpetuity) for the development of affordable housing units. Once the Town purchases a parcel that it deems suitable for affordable housing, the Town could request proposals for the development of affordable housing from non-profit and for-profit housing developers. A contract would be granted to the successful bidder to construct such housing in a manner acceptable to the Town and under the provisions of a Comprehensive Permit. (Through the request for proposals process, the Town could control the density, configuration, type, and design of the units.) Once constructed, the housing would be administered by the Rowley Housing Authority or other designated body to ensure that the dwellings are maintained in perpetuity as affordable housing; that is, that the annual shelter cost would not exceed 30% of the annual household income of a qualified household.³ These units could either be sold or rented to

³ The Department of Housing and Urban Development (HUD) considers families who pay more than 30% of their income for housing "cost-burdened" and may have difficulty affording necessities such as food, clothing, transportation and medical care.

qualified households. If sold, the deed should contain a provision that when re-sold, the sales price may not exceed the “affordable” home price at the time the unit is resold.

2. Use a portion of the CPA funds to purchase existing homes in the Outlying, Residential, and Central Districts that fit within the affordable housing criteria as they come on the market. Once the homes have been purchased, they may be sold to qualifying households with a deed restriction to ensure that they remain affordable in perpetuity. Alternatively, they could be rented to qualifying households. The Rowley Housing Authority or other designated body could oversee the purchase and administration of these homes.
3. Finally, a portion of the CPA funds could be used to start a program whereby the Town offers grants for home repair and upgrades to the owners of housing that fit within the affordable housing criteria in exchange for a deed restriction specifying that the unit shall remain affordable in perpetuity.

14.4 Local Initiative Program

Issue – Some newly-created, low-cost housing units may be excluded from a community’s Chapter 40B affordable housing inventory if they are not created through a housing program accepted by the DHCD.

Action Recommended – The Local Initiative Program (LIP) is a State housing initiative administered by DHCD to encourage communities to produce low- and moderate-income housing. The program also provides technical and other non-financial assistance to cities or towns interested in developing housing through their conventional zoning process to serve households at or below 80% of the area median income.

The Town, through the Board of Selectmen, can use LIP to provide affordable housing that is of a design and size acceptable to the Town. A LIP project can be submitted by the Town or in partnership with a private developer, and may occur on private or public property. The Board of Selectmen must approve of the development before it can proceed under this program. The affordable units created through a LIP project count toward the 10% affordable housing requirement of Chapter 40B. The Town should use this program as another tool to add to its Chapter 40B affordable housing inventory.

14.5 Multi-Family Housing Provisions

Issue – While the Town has recognized the need to offer a wider variety of housing opportunities to meet the needs of its residents, the Town’s zoning bylaw offers few viable options for building such housing. Multi-family housing is only allowed in the three small Residential districts on Haverhill Street and in the Central District, and much of this land is already developed. In the Residential district, a minimum parcel size of 20 acres is required to build multi-family housing. In addition, the multi-family housing special permit process requires four out of the five Planning Board members to vote in favor of the proposal. Given the difficulty of building multi-family housing under these provisions, it is not surprising that many developers seeking to build multi-family housing in Rowley have chosen to use the Chapter 40B Comprehensive Permit process to circumvent local zoning regulations.

Action Recommended – The Town should modify the multi-family zoning provisions to provide a viable alternative to Comprehensive Permit projects. First, the bylaw should include greater densities (4 to 8

units per acre) and should reduce the parcel size requirement in the Residential district from 20 acres to 5 acres. In exchange for the additional density, a portion of the housing units should be required to be affordable. Multi-family developments of fewer than four units in size should be allowed subject to site plan review in the Central District (excluding those areas within the Historic District). The bylaw could include provisions requiring that one of the units be deed restricted as affordable in perpetuity.

14.6 Senior Housing

Issue – Many of Rowley’s senior citizens would like to stay in the community where they lived and raised their families, but can no longer maintain a large single-family home. However, few alternative housing arrangements exist for seniors in Rowley. Without assisted living facilities or housing designed for seniors, many of Rowley’s older residents may be forced to seek living arrangements outside of the community.

Action Recommended – The Town should adopt a special permit provision to encourage the creation of senior or empty nester housing (residents 55 year of age or older) with affordable provisions in the Central Residential district, Residential district, and Outlying district. See the sample bylaw in **Appendix E**. Age restricted housing provides an alternative for seniors, and is a type of housing that has minimal impact on the school system.

14.7 Attached Housing Provisions

Issue – In-law apartments are small apartments typically attached to single-family homes, with a separate entrance, often used by the parents, children, or other relatives of the homeowners. In-law apartments can provide a low-density, affordable housing alternative. Currently, Rowley’s zoning bylaw allows in-law apartments by special permit from the Zoning Board of Appeals, but only in buildings constructed prior to 1990. The zoning bylaw also has a provision that allows by special permit the addition of one or more dwelling units to residential buildings in existence prior to May 1, 1981.

Action Recommended – To provide additional housing opportunities, in-law apartments and conversions to add no more than one additional attached unit per building should be allowed by special permit for all residential buildings, not just those constructed prior to a certain date. The Town could require the additional unit to be deed-restricted affordable in perpetuity.

Action Recommended – Two-family dwellings can provide another low-density, affordable housing alternative for the residents of Rowley. The current bylaw prohibits the construction of new two-family homes in the Town. To provide additional affordable housing opportunities, the Town should consider allowing two-family homes by right in the Central and Residential districts provided that one of the two units is deed restricted in perpetuity as an affordable unit. Two-family units could be allowed by special permit in the Outlying district, also subject to the affordability requirement. These provisions could add significantly to the Town’s affordable housing stock without substantially changing the character of the Town’s neighborhoods.

14.8 Tax Title Properties

Issue – From time to time the Town acquires property and buildings when owners fail to pay taxes. In appropriate cases, the Town can sell such property and return it to the tax rolls. The Town could also make such property available for family or senior housing with affordable deed restrictions. To date, the Town has not identified tax title lands or buildings appropriate for affordable housing.

Recommendation –The proposed Housing Committee should continue to monitor the status, availability, and suitability of tax title land. If the committee identifies a suitable property or building, it should seek Town Meeting approval to designate such land for affordable housing.

15. PUBLIC FACILITIES AND SERVICES

Rowley has recently committed funds to construct a new library and to make the Town Hall handicap accessible. In addition, the Town is exploring options to improve the Pine Grove Elementary School and to provide additional facilities for the Town's public safety departments. The following recommendations identify policies and initiatives that should be considered to maintain quality municipal services.

15.1 Town Charter

Issue – The Town does not have a Town Charter. A charter is essentially a town's constitution. It establishes the basic framework from which a community operates. It establishes the form, structure and organization of the Town, including the powers and duties of various officials. Currently, Town government operates under existing State laws and Town bylaws. Through the public process, residents have suggested that the Town consider increasing the number of Selectmen from 3 to 5 members. In addition, a number of autonomous departments and officials operate with minimal day-to-day oversight. Furthermore, the Town has more than 30 independent, volunteer committees and boards, each of which is charged with overseeing various and sometimes overlapping elements of town government. A periodic review of a Town's governmental framework allows the Town to adjust its form of government to meet the ever-changing needs of the community. The Town can establish a charter through either a Home Rule Petition or a Special Act approved by the State legislature. The Charter Review Process is detailed in **Box 15-1**.

Action Recommended - Through a charter review process, the Town should examine its governmental structure and consider board and commission changes (such as increasing the number of Selectmen) and consolidating various municipal functions. The charter review process calls for the creation of a Charter Review Commission. The Commission would review the current governmental framework and present recommended changes. Ultimately, adoption of a charter requires a townwide vote.

Box 15-1: Charter Review Process

Home Rule Method

- Petitions are filed to place a question on the ballot to elect a Charter Commission. (The petition must be signed by at least 15% of the Town's registered voters). The petition shall state "Shall a commission be elected to frame a charter for the Town of Rowley?"
- Charter Commission candidates file election papers and an election ballot is presented at the same time as the charter review question (the Commission shall consist of 9 members).
- If approved at the election, the Commission holds a series of public hearings and meetings and prepares both a preliminary and final report.
- The Commission submits a plan to the voters for consideration. The petition must state "Shall this town approve the new charter recommended by the Charter Commission summarized below?"

Special Act Method

- The Town may adopt a charter by requesting the State legislature pass a special law. The Town must first approve the charter through Town Meeting.
- Once approved by the Town, it is filed by a member of the legislature and passed by the State legislature.
- Special acts may require final acceptance by the local voters.

15.2 Boards and Committees

Issue – As stated previously, the Town has no fewer than 30 boards, committees, and commissions. Many of these groups have little or no communication with each other or other community groups. To properly address the Town’s growth and development issues, communication between these groups is essential. For example, in many cases, the Planning Board, Board of Health, Zoning Board, and Conservation Commission review development proposals. Better communication between these groups would enhance municipal functions. Furthermore, to identify and prepare for the impact of development on Town services, communication between the Planning Board, Board of Selectmen, and the Finance Committee is equally important.

Recommendation – As the chief elected officials, the Board of Selectmen, Planning Board, and School Committee should meet annually to set Town goals for following year. In addition, Rowley’s boards, committees and commissions should meet jointly on an annual or bi-annual basis to discuss and address in a unified and cohesive manner issues confronting the community. For large development projects, special joint meetings should be scheduled to identify issues relating to infrastructure, permitting and environmental protection. A coordinated approach will ensure that the issues are properly addressed and also streamline the review process for the project proponent.

15.3 Town Planner

Issue – The Town is fortunate to have many residents who dedicate a considerable amount of time to address the community’s many planning and zoning issues. However, a Town Planner can provide the day-to-day professional resources necessary to undertake careful review of development projects and implement the recommendations outlined in the Master Plan, Open Space and Recreation Plan, and other planning initiatives. The Town Planner should be a department head position functioning under the direction of the Planning Board. The Town Planner would provide technical assistance to the Planning Board and other Town boards and committees with regard to subdivision design, site plan review, and zoning analysis. Other responsibilities would include budget preparation, master plan development, and grant writing and administration. The planner would also respond to public inquiries, meet with developers to review potential development projects, maintain and update the master plan, coordinate the project review process with other boards and commissions, research bylaws, statutes and planning practices, and make recommendations on bylaw changes to the Planning Board. The planner would serve as a resource to the Planning Board, Board of Selectmen, Community Preservation Committee, Open Space Committee, Recreation Committee, and Zoning Board of Appeals. In recent years, the Town has funded a Town Planner position; however, the amount allocated for this purpose has proven insufficient to attract qualified applicants.

Action Recommended – To attract qualified applicants, the Town should consider increasing the funding for the Town Planner position. Alternatively, the Planning Board and the Conservation Commission should consider pooling their resources by hiring a full time Town Planner/Environmental Agent (should both positions become available) to serve both the board and the commission. The Planning Board and other Town boards should continue to hire consultants, using funds obtained from developers, to review specific development proposals. In addition, at least until the Town hires a qualified Town Planner, the Town should provide funding to the Planning Board to hire consultants for projects that do not involve specific development proposals (e.g. public outreach and review of zoning bylaws).

15.4 Capital Improvements Program

Issue – The Town currently does not have a long-range capital planning process or capital improvements program (CIP). A CIP is critical because it allows a town to plan for and fund major capital expenditures such as new buildings and facilities over the upcoming five-year period. A capital improvements program also coordinates community planning, financial capacity, and physical development. A capital improvements program typically is composed of two parts:

- **Capital Budget** - The capital budget is a projected expenditure plan for capital items (tangible assets or projects that cost at least \$10,000 and have a useful life of at least five [5] years).
- **Capital Program** - The capital program is a plan for capital expenditures that extends five [5] years beyond the capital budget.

Development of a CIP helps provide sound fiscal and capital planning. It also requires the involvement and cooperation of all municipal departments. For that reason the Board of Selectmen typically have the responsibility for overseeing the CIP process. The Board of Selectmen should appoint a CIP Committee to recommend the capital budget and program to the Selectmen and Town Meeting.

Action Recommended – The Board of Selectmen, as the Town’s chief policy-setting board, should initiate a capital planning process to create a prioritized 5-year CIP. To create such a plan, each department should first develop an individual 5-year plan for the capital improvements that the department desires (including any land acquisition necessary to accommodate future public facilities). The Town, through a **long-range capital planning committee**, should then review and prioritize all such requests and develop an overall projection of future capital needs for the Town. The committee should also review each individual proposal to determine whether it is consistent with the Master Plan.

Once all the individual departments’ projects have been tabulated and ranked, the committee should prepare a CIP to identify recommended capital projects, estimate the cost of each project, and identify the departments responsible for implementation. A timetable for funding and implementation can then be aligned with the Town’s fiscal capacity to bond or otherwise fund these projects over time. The CIP should also identify the future use of to-be-vacated Town properties such as the current Town library. Once the Town adopts a CIP, the committee must review and update it every year so that the CIP always looks five years into the future.

15.5 Location of Public Facilities

Issue – Public facilities are an essential part of a town’s long-term development, and their placement has significant implications for this development. Communities that locate their schools, post office, Town Hall, and other municipal buildings and social service functions near a town center can help to reinforce the vitality and importance of this center. In recent decades, many communities have located new facilities—particularly schools—outside of their town centers because they were able to find suitable sites elsewhere for a lesser cost. (State programs for school financing also contributed significantly to such decisions). In the long run, however, many towns have found that locating public facilities in rural sections of the Town has had significant costs of its own, such as promoting sprawl, consuming open space, and requiring expensive bussing for bringing students to schools.

Action Recommended – Whenever possible, new public facilities should be located in or near the town center. Locating facilities in the center will help reinforce the importance of the center and provide a customer base for local retail and service businesses. Sidewalks linking facilities to the town center are equally important. Of course, public safety facilities should be located so as to provide quick emergency response times to all parts of the Town.

15.6 Public Safety Facility

Issue – As noted in **Section 7.5**, the current public safety facilities are not adequate to address the long-term space and facility needs of the departments who use them. To date, efforts to fund the construction of a public safety facility have been unsuccessful, in part because of the cost of the proposed facility. However, the need for an adequate public safety facility will continue to be an issue as the community continues to grow.

Action Recommended – The Town must continue to explore economically-viable options to provide a long-term solution to address the safety, space, and communication needs of the Town’s public safety operations.

15.7 Water Supply

15.7.1 Identifying Potential Wellhead Locations

Issue – As noted in **Section 7.3**, Rowley does not have an adequate water supply to meet its long-term needs. The Town also needs additional water storage facilities for fire protection and to provide an adequate water supply during extended droughts.

Action Recommended – As noted in **Section 7.3**, if the Town needs additional water sources, it will be forced to explore costly alternatives such as deep bedrock wells. Conservation measures will help to minimize the problem but the Town must also identify and protect potential wellhead locations for future generations. The Water Department, Board of Selectmen, and Open Space Committee should work together to identify and acquire additional land for potential well sites and storage facility sites.

15.7.2 Water Conservation Measures

Issue – Conservation is a much less expensive technique for meeting future water demands than permitting and developing new water supplies. This is especially true in Rowley, since few viable new water sources exist.

Action Recommended – To reduce water demands and maximize the amount of time until the Town needs new water supplies, the Town recently adopted a Water Conservation Bylaw. The Town should continue to support and enforce both voluntary and mandatory conservation measures, including education, bans on outdoor water use, water restriction bylaws, and modified fee structures with increased rates for high water consumers. The Massachusetts Department of Environmental Protection recommends the conservation measures described in **Box 15-2**.

Box 15-2: Suggested Water Conservation Policies

1. *Educate the public about water conservation techniques, including:*

- Information on the impacts of dry conditions on the water system and the environment.
- Information on the current status of Rowley's water supply so consumers can understand the changing situation - either for better or worse.
- Tips on water conservation techniques for consumers.
- Explanation of any water use restrictions that are or may be imposed, including the purpose of the restriction and clear statements of what is and is not allowed
- Setting up a low water use landscape area at Town Hall to provide an example of an alternative to a water-guzzling green lawn.

2. *Bylaws and Outdoor Watering Restrictions:*

- Pass a bylaw that empowers the Town to limit or ban outdoor watering. (A model bylaw is available from the DEP.)
- Limit outdoor watering to one or two days per week, or ban outdoor use if the situation warrants.
- Limit watering to the hours when evaporation is the lowest (e.g. 4 am to 6 am).
- Require hand held hoses. Prohibit in-ground sprinklers in new developments unless they are fed from private wells.
- Limit outdoor car washing.
- Limit the filling of swimming pools.

3. *Contact the largest commercial and industrial water users in the community:*

- Restaurants: Ask them to supply water upon request only, put stickers on bathroom mirrors, run only full dishwasher loads, and retrofit kitchen fixtures.
- Commercial: Limit or stop watering lawns and landscapes. Request that the building owners or tenants conduct employee education including bathroom stickers, and retrofit bathrooms with low flow toilets and spring loaded valves on faucets.
- Industrial: Limit or stop watering lawns and landscapes. Undertake employee education and review heating and cooling systems to reduce water use.

4. *Water System Management and Emergency Preparedness:*

- Increase the frequency and intensity of leak detection activities and ensure prompt action to fix system leaks.
- Limit or delay flushing of water mains and hydrants.
- Check and/or develop interconnections with neighboring systems to provide for increased redundancy.
- Explore potential emergency sources of supply and work with the DEP on how these sources can be brought on-line if necessary.
- Report to the DEP if a water emergency is declared or if water restrictions are put into effect.

15.8 Land for Future Cemetery

Issue – There is enough cemetery land to meet the Town's cemetery needs for the next 15 to 20 years. However, in time this space will be depleted. As development occurs it may become difficult to purchase additional land suitable for cemetery purposes.

Action Recommended – The Town should identify and set aside land for its long-term cemetery needs.

15.9 Beautification Committee

Issue - During the planning process, individuals and groups expressed a willingness to participate in beautification projects on both public and private property. Programs such as MassHighway's Adopt a Visibility Site have been extremely successful beautification tools. Through this program, volunteers landscape, maintain, and improve various sites and highway segments throughout the State.

Recommended Action – The Town should establish a beautification committee. The committee can form partnerships with residents, civic organizations, and businesses to initiate beautification efforts such as municipal property landscaping, roadside landscaping, litter pick-up, uniform signage programs, and streetscape improvements.

16. TRANSPORTATION

As growth continues, the Town's transportation system will experience increased usage. Congestion will increase and safety concerns may arise. Maintenance costs will increase as wear and tear on the roads increase. This section outlines several steps the Town can take to address current and future transportation needs.

16.1 Roadway Infrastructure Program

Issue – The cost to repair and maintain roads and bridges increases almost exponentially as their condition deteriorates. In the long term, an aggressive maintenance schedule is a cost effective approach to roadway infrastructure maintenance.

Action Recommended – The Town should conduct a comprehensive review of the condition of all local roads, sidewalks, bridges, and culverts and establish a repair and maintenance schedule for these facilities.

16.2 Access Management

Issue – Tight control of vehicular access to and egress from land development along Route 1 is necessary to maintain the roadway's integrity as a "through" arterial.

Action Recommended - To promote efficient flow of through traffic on the Town's major arterials, the Town planning board should consider putting together an access management plan. Access management is a program of actions, strategies and policies to maintain the safety and capacity of roadways while providing adequate access to abutting land uses. The number of driveways as well as their design and spacing affects the quality of traffic flow and the safety of the drivers. Typical access management plan strategies that may be incorporated into the Town's zoning by-laws' policies and regulations for new development include:

- reducing the number and width of driveways;
- promoting shared driveways between two or more uses; and
- including turning lanes, where appropriate, in the design of driveway entrances.

A curb-cut inventory was conducted for the Town's commercially-zoned area along Route 1, from the Ipswich town line to Wethersfield Street. This inventory was conducted from aerial photographs taken in 2001. Route 1 over the entire commercially-zoned district between the Ipswich town line and Wethersfield Street has a total of 63 curb-cuts for a total curb-cut density of 27 curb-cuts per mile. Between the Ipswich town line and Route 133, Route 1 has a total of 23 curb-cuts, 18 of which are on the west side.

16.3 Pavement Management

Issue – Roadways in Rowley are paved or reconstructed based on one or a few people's knowledge of the condition of each roadway in the Town.

Action Recommended - The Town Highway Department should begin a pavement management program for its municipal roadways. Typically, small towns have a highway supervisor or senior-level engineer who maintains most, if not all, the base of knowledge of the conditions of roads in town either by paper records or by mental recall. Once this person leaves or retires the knowledge of pavement conditions is often lost. Pavement management involving a computer database can help alleviate this problem. MVPC can assist the Town with establishing and maintaining a computer-driven, pavement management program. State funds from Chapter 90, Section 34 (of the M.G.L.) can be used by the Town to establish a pavement management program for the preservation of facilities. Specifically, the funds can be used to reimburse the engineering time needed to inventory the roadway conditions, the time needed to catalog the conditions, and the computer hardware and software needed to maintain the pavement management program. Approval from the District 4 office of MassHighway must be obtained prior to work commencement.

In a broad sense, pavement management is a systematic program of maintaining a municipality's roadways, while they are in good condition, with low-cost preventative maintenance strategies to prolong the life of the pavement and defer the time at which more costly rehabilitation needs to take place. A good program first involves a comprehensive inventory of the pavement condition of all the Town-maintained roadways, and the warehousing of the data on computer database files. The database can be used to identify failure and poor condition roads, which will need to be reconstructed and rehabilitated to bring them to some acceptable minimum standard. This reconstruction and rehabilitation effort in the initial year will demand an initial funding outlay that is larger than the highway department's normal roadway maintenance budget. However, after all the roadways are brought to some serviceable condition, roads can be systematically programmed to be maintained with sweeping and surface treatments, such as crack seals, slurry seals, and chip-seals. Maintaining the roadways in the subsequent years demands a funding outlay that likely will be less than the highway department's normal roadway maintenance budget.

The specific tasks for the establishment of a pavement management program are:

- Inventory the condition of all roadway links, including the severity and extent of all pavement distresses so as to assign numerical grades to the conditions of the roadway links.
- Purchase computer hardware and software to be used explicitly for the pavement management program.
- Enter the geometry and condition of all roadway links into a pavement management computer program, such as Cartegraph's *Pavement View Plus* or VHB's *Road Manager*.
- Perform analyses of where and when pavement maintenance needs to be administered; determine the budget required for such a program.

16.4 Roadways and Intersections

Issue – Some highway facilities in Rowley do not adequately handle the traffic demands placed upon them as evidenced by their crash histories. This is most often due to insufficient traffic control and/or poor geometry.

Action Recommended - Certain spot improvements should be considered for roadway sections and intersections within Rowley to increase their capacity or enhance their safety by promoting orderly and efficient flow of traffic. Engineering studies must be performed before any roadway improvements are considered. Further study needs to be done of unsignalized intersections with high crash rates and excessive delay to motorists on the controlled approaches. Some of these intersections include Route 1 at Glen and Central Streets and Route 1A at Route 133. Signalization should be considered for both of these intersections, where at least one of the intersecting roads is a state highway. As shown in this plan, the intersection of Route 1 and Glen and Central Streets does meet traffic volume warrants for the installation of a traffic signal, according to FHWA's *Manual on Uniform Traffic Control Devices*. The intersection of Route 1A at Route 133 most likely meets the same warrants for signalization. An engineering study of the Route 1A at Route 133 intersection should consider alternate improvements to signalization, such as realigning the south and west legs of the intersection to make it the major street (with a curvilinear alignment) and making the north leg, Route 1A, the controlled approach.

16.5 Sidewalks

Issue – During the Master Plan process, residents noted a lack of sidewalks and walkways as a major concern in the community. Gaps remain in sidewalks that link pedestrians traveling from densely developed residences to nearby businesses and public gathering places downtown. Sidewalks provide a safe location for children and other residents to walk from neighborhood to neighborhood, and to the town center, shopping areas, and other destinations.

Action Recommended – In the town center, some roads have adjacent sidewalks for pedestrian circulation and some do not. The Town should include the provision of sidewalks in its plans for the reconstruction or refurbishment of roadways located in the town center. Any designs of roadways by third parties, not hired by the Town, should also include the provision of sidewalks. Sidewalks must be designed to be in compliance with the Americans with Disabilities Act (ADA). By providing walkways on newly refurbished roads in the town center, the Town will promote travel to and from land uses like the Rowley MBTA commuter rail station by a mode other than single occupancy vehicle. To accomplish this specifically for the MBTA station, the Town must construct sidewalks along roadway segments where they currently are missing, including:

- Railroad Avenue, between Ocean Avenue and the railroad station;
- Main Street, between north of Warehouse Lane and Railroad Avenue; and
- Cross Street, between Central Street and Jellison Road.

The Town-wide trail plan, which is presently being developed by the Rowley Open Space Committee, should plan for pedestrian linkages throughout the Town. The plan should fold in the area-wide plan for the Bay Circuit trail.

The Planning Board and Zoning Board of Appeals should negotiate with developers to provide sidewalks and walkways within developments as well as on public roads. Links between public facilities, schools, and developments also should be explored.

16.6 Bicycle Paths

Issue – Paths dedicated to bike use should be constructed for recreational uses as well as a commuting alternative for those people working and living in Rowley.

Action Recommended - The Town should undertake a study to identify the best location for bicycle routes within the Town. A starting point for this study should be the *Merrimack Valley Bicycle and Pedestrian Plan (1999-2001)*, prepared by MVPC in 2001.

16.7 Roadway Capacity

Issue – According to buildout projections, roadway segments such as Route 1, near the Ipswich town line, will be at their capacity.

Action Recommended - The Town should mitigate the traffic impacts of commercial development along Route 1. Traffic mitigation by developers should include travel demand management (TDM) measures including, but not limited to employers providing: flexible work hours to their employees to spread out the peak period traffic; and preferred parking for carpools and vanpools to reduce travel by single occupancy vehicles. As more development occurs in the commercially-zoned areas, TDM measures such as vanpools and carpools make more sense because trips can be made to and from employers that are in close proximity to one another.

16.8 Land Use Planning

Issue – Land development should be located in a manner that minimizes the number of vehicle trips generated on Rowley's streets.

Action Recommended - The Town zoning bylaw, recently amended in May 2002, zones most commercial uses to properties along Route 1, a through arterial. Additionally, a new retail zone was created for properties along Route 1, near its intersection with Route 133. Travelers from outside Rowley will most likely access these uses solely by Routes 1, 1A, and 133 without using any local roads. Future zoning amendments should not expand the commercial zones beyond their existing locations along Route 1 to keep traffic originating from outside Rowley and destined to the uses inside these zones off of the local roads.