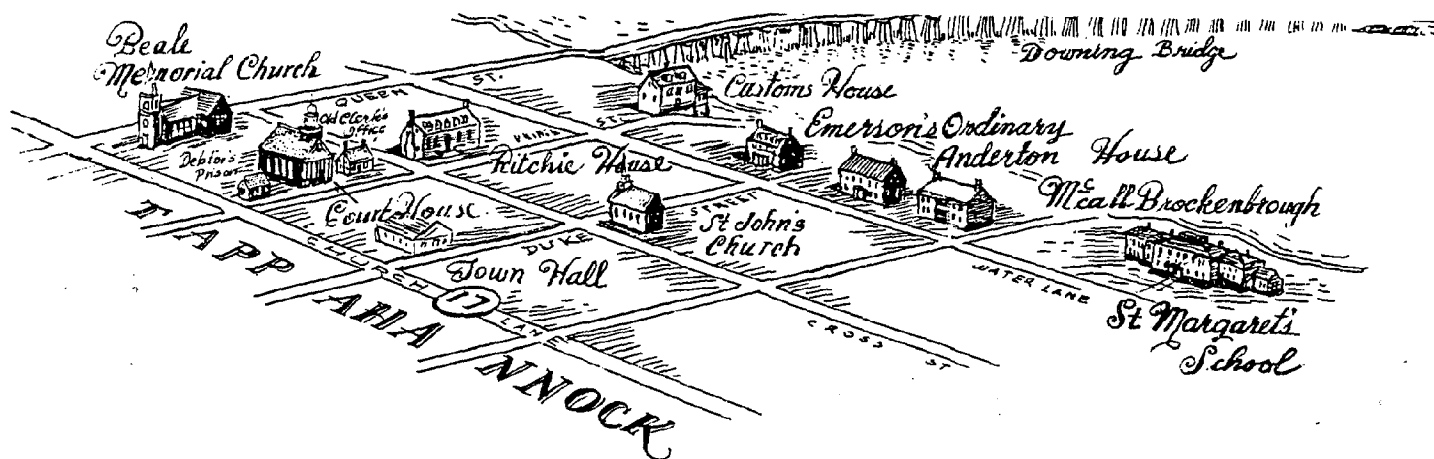


Tappahannock, Virginia

COMPREHENSIVE PLAN

December 1991



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red by: Redman/Johnston Associates, Ltd.

ACKNOWLEDGEMENTS

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Comprehensive Plan

Tappahannock, Virginia

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Chapter 1

THE FRAMEWORK FOR PLANNING

As Tappahannock grows and changes over the next twenty years, this Comprehensive Plan will serve as a guide for making public and private decisions regarding the Town's growth and development. The Plan is a culmination of a cooperative effort, pulling together the knowledge and skills of diverse citizens and staff. This Plan presents a future vision of Tappahannock into the year 2010 along with recommendations for bringing that vision to fruition. The ideas of the Plan are a distillation of the community's many desires, tempered by what seems feasible and reasonable. This Plan is not intended to be a static document. It should be reviewed and updated periodically to reflect new development trends, shifts in the economy, or changes in the community's goals and objectives.

Tappahannock is a special place with a unique character, culture and history that distinguishes this community from hundreds of towns throughout the country. This Comprehensive Plan particularly addresses the preservation and enhancement of these special qualities and that distinctive personality felt by the citizens who live and work here. This sense of uniqueness and pride of place are the guiding forces and strongest motivation for those who have contributed to the realization of this document.

DEFINITIONS AND PURPOSE

The Comprehensive Plan is an official public document adopted by the Town Planning Commission and the Town Council. The Plan is a general, long-range, policy and implementation guide for decisions concerning the overall growth and development of the Town.

The Plan is comprehensive because the elements cover the entire range of development issues which can be influenced significantly by the Town Council and other governing authorities and agencies. The Plan is general because the recommendations are broad, rather than narrowly defining decisions for land use at specific sites. The Plan is long-range because consideration is given to the problems and opportunities which may arise over the next twenty years. The Plan is dynamic because there can be amendments to adapt to new situations and meet new challenges.

Although adopted as an official public document, the Comprehensive Plan is not a development ordinance. This plan serves as a catalyst and guide to the establishment of, or revisions to, other ordinances or planning tools. These include the zoning and subdivision ordinances, and the capital budget. The Land Use Plan Map, included in this plan, serves to illustrate the mix and location of land uses where the Plan's policies and recommendations will be applied. This mapped information is general in nature and not appropriate for determining the suitability of specific sites for any specific use.

LEGAL BASIS FOR COMPREHENSIVE PLANNING

The preparation of a comprehensive plan is the legal responsibility of the Town Planning Commission under Virginia Planning Enabling Legislation, Title 15.1, Article 4, of the Code of Virginia, 1950, as amended. Any ordinance pertaining to the use of land or the growth and development of the Town should conform to the goals, objectives, and policies as they are presented in this Plan.

PAST COMPREHENSIVE PLANNING EFFORTS

The prior Comprehensive Plan was adopted in 1985. A subsequent planning effort was undertaken by the Town with the assistance of the Urban and Regional Planning Department of the Virginia Commonwealth University in 1989. This Plan is intended to build on those past efforts by updating pertinent data and background information and to expand on and focus the implementation of the Plan. The intended result is implementation strategies that will be acted upon within established time frames. Planning and zoning is administered by the Town Manager and plan implementation is primarily the responsibility of the Town Manager's office.

COMPONENTS OF A GROWTH MANAGEMENT PROGRAM

This Comprehensive Plan provides the basic framework and direction for all components of what may be considered the Town's overall Comprehensive Planning Program.

It is not a stand-alone document but is supported and, in turn, supports related Planning Program documents such as the ones listed below.

- Zoning Ordinance
- Subdivision Ordinance
- Capital Improvements Budget
- Comprehensive Water Quality Management Plan for the Middle Peninsula: An Information Search and Review, MPPDC, January 1989
- Soil Survey, September 1980

These documents and others, when used concurrently, are the basis for directing and managing growth in Tappahannock.

PROCESS FOR PLAN DEVELOPMENT AND ADOPTION

Preparation of this Comprehensive Plan began in late 1990 with the hiring of the planning consulting firm of Redman/Johnston Associates, Ltd. In February of 1991 the Planning Commission began working with the consultants and Town staff to formulate a new Plan. The Planning Commission worked to identify and discuss important planning issues and background information relevant to the Comprehensive Plan. This included a workshop to review and revise a set of draft goals and objectives for the Plan which originally drafted by the Planning Commission. Through an "Implementation Options Paper" which arrayed planning and implementation techniques available to the Town, as well as other planning background data, the Planning Commission formulated the basis for this Plan.

GOALS AND OBJECTIVES SETTING

The Tappahannock Comprehensive Plan is intended to capture a broad community vision of a future Tappahannock. Written statements that describe future expectations are necessary to describe that vision. These statements are intended to be easily understood and generally accepted among the residents and business interests in the Town.

Goals and objectives are found in this chapter and in the subsequent chapters for each functional area of the Plan, e.g., land use, transportation,

community facilities, etc. The goals and objectives formulated by the Town have been incorporated as a basis for the goals and objectives statements in this Plan. Some goals and objectives developed in the 1985 Comprehensive Plan process were retained. Others were carried-over from the Virginia Commonwealth University plan.

Goals are long-range, generalized statements that represent the ultimate desires of the Town. The situations and conditions called for in the goals would normally be achieved only through a sustained series of actions over a considerable period of time. The goal statements in this Plan are sufficiently broad to remain valid as people's values change over time. As these values change, the interpretation of the goals will change also. When this happens, the goals will remain in effect, but new objectives may be developed.

Objectives comprise a proposed series of broad policies that are more immediate and specific in nature than are the goals. Objectives are intended to be intermediate steps that are taken toward achieving the goals. For each goal, several objectives have been developed. The following are the general development goals of the Town.

- Goal: The fine assets of the Town, its people, and their life styles, its diversified business and industrial community and its small town historical charm and high quality of living shall be preserved and improved.*
- Goal: All future development in the Town shall be carefully guided in order to achieve and maintain the highest quality living environment possible.*
- Goal: All future development in the Town shall be located and designed in such a way that it compliments existing development and provides maximum choice for residents and businesses.*
- Goal: The Town shall strive for public participation in the planning and decision making process to ensure that the wishes of the community are translated into appropriate courses of action.*

ORGANIZATION OF THE PLAN

The Comprehensive Plan is organized into eleven chapters. These chapters deal with all aspects of land use in the Town. Following this introductory chapter, Chapter 2 highlights past trends and future projections of

population and housing. Chapters 3 through 10 are the Plan Elements. Each of these chapters includes a discussion of background and analysis, identification of issues, a statement of goals and objectives, and a summary of implementation recommendations pertaining to each of the functional areas of the plan. Chapter 3 presents the central theme of the report, the Land Use Plan, which designates how, when, and where growth should occur. The other sections include discussions of Economic Development, Transportation, Community Facilities and Services, Housing, Parks and Recreation, Natural Resources Protection, and Downtown Revitalization and Urban Design. The final chapter of the Plan, sets forth implementation techniques including details concerning necessary actions and responsibilities for implementing the goals and objectives of the Plan.

Chapter 2

BACKGROUND FOR PLANNING

REGIONAL SETTING AND DEVELOPMENT TRENDS

Tappahannock is an incorporated town located in the eastern portion of Essex County, Virginia. The town is situated on the shores of the Rappahannock River within the concave of the urban crescent formed by the metropolitan areas of Washington, D.C., Richmond, and Hampton Roads. In less than three square miles of land area, Tappahannock exhibits many positive features including a waterfront, a historic downtown, residential subdivisions, schools and other public facilities, an airport and industrial center, a business corridor and extensive wetland areas. These characteristics combine to make Tappahannock a regional commercial, industrial, and employment center while keeping a rural, small town feeling.

Settled in the 1600s, the town was first called New Plymouth and grew as a port and trade area due to its proximity to the beautiful Rappahannock. Tappahannock, which currently serves as the county seat, was first incorporated in 1926. Additional territory was annexed in 1939, 1966, and again in 1976. According to the 1980 census, Tappahannock encompassed an area of 2.75 square miles and had a population of 1,882.

Population projections for the Middle Peninsula region predict that by the year 2030, the population will double the 1980 census count (Middle Peninsula Planning District Commission (MPPDC), 1989). While the largest growth in population is expected to occur in the counties on the lower end of the peninsula, Essex County will nevertheless likely increase in population by about 4 percent over the next decade. Middlesex County and King and Queen County are projected to grow in population by 10 percent and 7 percent respectively (MPPDC, 1989). Directly across the Rappahannock River from Tappahannock, Richmond County's population is projected to grow at a 4 percent rate over the next decade (Richmond 1985). As a result metropolitan area residents from surrounding jurisdictions, primarily the Richmond area, will continue to be lured by the lower taxes, lower housing costs, small town character, and relative freedom from the kind of congestion evident in counties nearer to the Newport News, Hampton Roads, Richmond, and Fredricksburg. This exodus to the Town

of Tappahannock and Essex County will no doubt mean increased traffic on local highways, many of which are not still little more than country roads.

Indications of economic stability of the Town of Tappahannock can be seen by looking at data for the county and region. The unemployment rate for both Essex (~3 percent) and the Middle Peninsula (~3 percent) match the state average, and is well below that of the Northern Neck average of 8.5 percent (MPPDC, 1989). While unemployment rates are generally low for the region, income figures on a per capita, family, and median household level have historically been about 17 percent below the state average. This is partially due to the large number of retirees and elderly on fixed incomes, and also partly due to the high salaries found in northern Virginia which skew the average (MPPDC, 1989). Another consideration could be that a large portion of the population may be under-employed, a common phenomenon in areas where many people have historically derived their income from farming and seafood harvesting.

Perhaps most impressive is Essex County's per capita taxable sales for 1988. Essex ranked 29th among all localities, and 6th among all counties in the state with \$8,275 per capita sales from which state and local sales taxes were collected (Center for Public Service, 1989). As the primary commercial and retail center in the County, Tappahannock contributes greatly to the favorable ranking.

Other factors showing economic growth in the region are an increased work force and rising income averages. In addition there has been an increase in the housing market in the Middle Peninsula. Comparing increases in households and populations since 1980, the number of households has risen 41 percent, while population has increased by 21 percent (MPPDC, 1989). Two factors play a role in this phenomenon. First, the region is within 30 to 60 minutes travel time to the major metropolitan centers of Hampton Roads, Richmond, and parts of Northern Virginia. This allows new residents reasonable commuting time to job centers. Second, the waterfront amenities of the region have attracted many retirees from outside the area to locate here to enjoy the rural and water-related lifestyle.

The Town of Tappahannock and the County of Essex maintain a good working relationship working together to address mutual concerns. There are several reasons for this cooperation. First, the town serves as the governmental seat for the county, affording ease of communication and visibility among the leaders of each. Next, most of the county's health and public facilities are located in the town. This central location of schools, library, health department and social services, provides ease of access for

both town and county residents. Also important is the fact that the civic and business interests of the town and county are not exclusive of each other. In addition, the Middle Peninsula Planning District Commission provides a forum for cooperation among local governments, including Tappahannock and Essex. This regional cooperation will likely continue to be an important asset in the future as the General Assembly's Commission on Local Government Structure and Relationships explores incentives for public service consolidation among local jurisdictions.

In summary, Tappahannock serves as a regional center for the County of Essex as well as portions of the middle and northern neck peninsulas. The business and commercial activity in the town benefits the area by providing employment and a strong tax base. Being the seat of county government, Tappahannock residents enjoy easy access to county services and administrative offices.

POPULATION TRENDS AND PROJECTIONS

Recognition of the amount, distribution and timing of population growth and development are fundamental to the Town's achievement of Growth management objectives. These factors are, in turn, directly related to the cost of providing the facilities needed to support the new population and also determine non-residential growth facility needs of the Town.

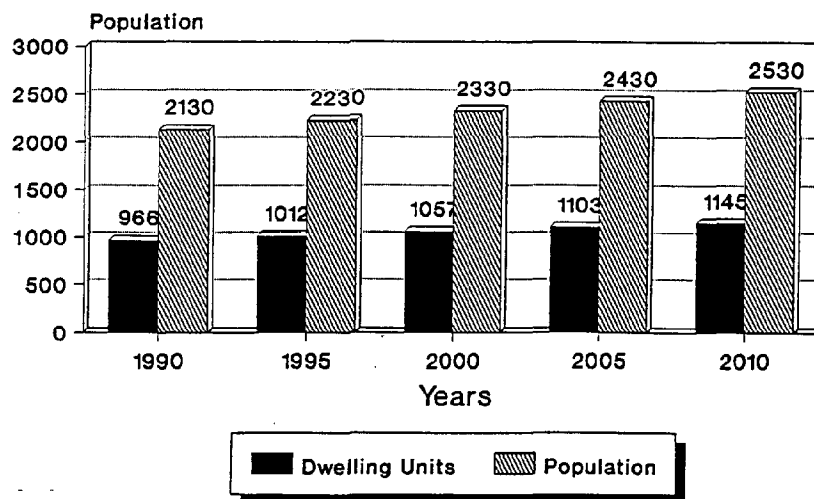
It is believed that the 1990 Census was not a reliable source of population estimates since the 1990 Post Census Review figure showed the Town to have lost 150 dwelling units since the 1980 Census. Consequently, Redman/Johnston Associates (RJA) has made a current estimate of housing and population. Using a 1980 Census housing unit counts of 875, RJA added the total number of dwelling units occupied during the 1980s to obtain 1990 total. That number was reduced by a 10 percent vacancy rate and multiplied by the 1990 Census household size of 2.45 to obtain a total 1990 population of 2,130. Based on these figures it appears that Tappahannock had an average annual growth rate of 1.7 percent from 1980 to 1990.

A continued development trends scenario is one in which Tappahannock's occupied housing inventory grows at about the same level as it has during the 1980s, approximately 9 new dwellings per year. The population and housing projections shown on the following graph indicate that, by 2010, there would be 1,150 dwellings and about 2,530 people in the Town. Such a growth pattern would correspond to the continuing attractiveness of Tappahannock as a place to live and work.

The following kinds of factors will influence whether such a continued growth scenario is high or low:

- The economic growth pressures of the "urban crescent" between the Newport News and Norfolk Metropolitan areas, Richmond and northern Virginia.
- Employment opportunities in Tappahannock and Essex County.
- Construction of a Route 17/360 bypass or truck route alternate within the planning period.
- Expansion of sewer and water facilities in the Town and surrounding County service area over time.
- Growth of commercial services.
- The influence of major regional transportation improvements (Washington Bypass or I-95 corridor modifications) on regional traffic and growth patterns.
- Implementation of growth management and development strategies.

Population and Dwelling Units 1990 to 2010 (Projected)



Redman/Johnston Associates, Ltd

GROWTH MANAGEMENT PLANNING CONSIDERATIONS

The potential growth of Tappahannock over the next 20 years underscores the need for attention to growth management. At least 500 new residents in approximately 200 new households will locate in the Town during the next 20-year period. The form, pattern and distribution of new development needed to accommodate this growth in population, together with the qualities of commercial and industrial development to meet these residents' shopping and employment needs, will influence a number of factors which taken together will strongly influence the future quality of life in the Town.

Cost of Public Services

Among the factors which influence quality of life are the costs to provide requisite public services to Town residents, including constructing community facilities necessary to house many of these services. The public facilities and services included include schools, roads, police protection, fire protection and provision of adequate water supplies and wastewater treatment and solid waste management facilities.

Sense of Community and Small Town Character

While the future costs of Town services are of obvious and tangible import, a number of other more subtle Town qualities can also be influenced by the amount, form, distribution and quality of growth that takes place in the Town.

Quality of the Natural Environment

Tappahannock's natural environmental assets include an extensive shoreline, broad estuarine river, forested areas, and scenic vistas of the Rappahannock. These features create a setting of notable beauty. Ironically, the development which accompanies population growth can threaten the natural features which attract people to the area.

The consumption of land by development has resulted in the loss of some of these important environmental features, and can diminish the environmental quality of the Town and its aesthetic appeal. As development proceeds, floodplains, wetlands, upland natural areas, steep slopes, and shoreline areas are altered and wildlife habitats are lost. As woodlands are cleared for development, watersheds are denuded, soil is washed into streams and rivers, and upland wildlife habitats reduced. Improper development in floodplains often results in both property and natural environmental damage from increased flooding. The loss of wetlands may

result in increased runoff, erosion, siltation, water pollution, and the loss of shellfish, fish and other wildlife habitats.

Chapter 3

LAND USE

Background and Analysis

General Development Patterns

Rapid residential, commercial and industrial growth has occurred throughout Tappahannock in recent years. A major apartment complex has been completed on the waterfront near downtown and new residential subdivisions have been built in the southeastern section south of Hoskins Creek. Route 360/17 south of Hoskins Creek has become a major commercial corridor serving the adjacent counties in the region and as such has become a boon to Tappahannock. Care must be taken that the character of the Town does not continue to be dominated by the "strip" development which detracts from the Town's rural atmosphere. Along with the recent addition of the Canon plant, the industrial park in the western portion of town has been expanded across the town's boundary into Essex County.

A substantial amount of town land is used for public facilities. Such facilities include county public schools, town and county government administration buildings, the municipal airport, the sewage treatment facility, limited river access areas, and additional land which is leased to the Virginia Department of Transportation.

Undeveloped land throughout the town provides for future expansion of all land uses. Lands bordering the town are also largely undeveloped and allow expansion both for industrial use to the west and residential use to the southeast and north. Isolated non-conforming pockets of industrial, residential and business use must be accessed for their limited future development in order to form compatible land uses. The Purdue granary is one example of an industrial use that is not compatible with wetlands surrounding the area.

The existing land use has been influenced by the large tracts of wetlands, associates with Hoskins Creek, which cut through the center of town. The same situation exists in the northern part of town along Tickners Creek. These lands have been undevelopable in the past and are now restricted from

development by current wetland protection laws. This has created extensive open space for a town the size of Tappahannock. Steep slopes to the southwest just outside the town's borders prohibit large scale development and add to the stock of undeveloped open space lands. New environmental soil conservation laws will also tend to limit future development in this area.

The table below illustrates how land is utilized within the town compared to other uses.

Table 3-1

Existing Land Use Within Tappahannock	
<u>Land Use</u>	<u>Percent</u>
Undeveloped	48
Public	10
Residential	20
Business	15
Industrial	7

Several opportunities present themselves for Tappahannock's future. There are pockets of undeveloped land along the Route 360-17 business corridor, that if left undeveloped, could would relieve the monotony of typical strip commercial development that often harms the rural town atmosphere of Tappahannock. Future expansion could take place south, out to Bray's Fork and along the Route 627/Airport Road corridor. Undeveloped lands to the southeast and north, out Route 17, provide an area for future residential expansion.

Finally, the extensive wetlands in and around Tappahannock are protected by state and federal wetlands laws which will assure open space opportunities well into the future.

Through the land use analysis the following assets have been identified:

- The combination of wetlands, steep slopes, county public school lands and airport has provided the town with a large proportion of land for open space which maintains the character of a rural town.
- Route 360/17, a major north-south highway, has provided a large business corridor for economic vitality.

- Large tracts of undeveloped lands on the Route 627/Airport Road corridor provide flat and easily accessible lands for industrial use.
- Undeveloped lands exist for potential residential expansion to the south of Hoskins Creek.

Various land uses throughout the town have created non-conforming uses with the adjacent lands. These include:

- The industrial use at the mouth of Hoskins Creek.
- The business use at the Tickners Creek/Route 17 area.
- The industrial use between the mobile home park and the residential area across from the airport.

Developable Lands Analysis

Table 3-2 shows the result of a developable lands analysis where existing land use and the Resource Protection Area (RPA) lands (See Chapter 5) were subtracted from the total incorporated area. The developable areas are broken down by planning districts described in the implementation section of this Chapter. From the results of this analysis it can be determined that there is adequate land area within the Town to accept the projected growth over the next twenty years without creating a land monopoly. These acreages are used in subsequent chapters to estimate residential build-out in the Town and to estimate sewer demand during the planning horizon.

Table 3-2
Developable Land by Selected Planning District (1)
Tappahannock, Virginia

<u>Planning District</u>	<u>Acres</u>
Residential Suburban	
114 Mobile home units	
34 Platted subdivision lots	
Unsubdivided parcels	91
Mixed Residential Cluster	70
General Commercial	87
Industrial	172

NOTES:

- (1) Only includes planning district with significant amount of developable lands rather than scattered infill areas.

Source: Redman/Johnston Associates, Ltd., 1991

GOALS AND OBJECTIVES

The Tappahannock Land Use Plan expresses the Town's goals, objectives and policies concerning the type, location, intensity and quality of public and private land use.

Goal: *Expand business use while retaining a rural small town atmosphere.*

Objectives:

Expand the U.S. 17 Commercial District (east side) in the Town to provide greater depth.

Provide for conservation land use on undeveloped lands adjacent to, and across from the Southern States buildings which include lowlands from the Hoskins Creek wetlands areas.

Prohibit further expansion of business use at the mouth of Tickners Creek and industrial use under the Thomas J. Downing Bridge.

Utilize undeveloped lands to their fullest potential. Utilize undeveloped lands to their fullest potential. This includes using the Town's airport should it become available in the future for other uses.

Goal: *Increase industrial land use to retain economic potential for Tappahannock.*

Objectives:

Expand future industrial use past the airport, along the Route 627/Airport Road corridor.

Include the existing airport as an industrial land use if it becomes available through the development of a new airport.

Industrial Zoning should be designated along a truck by-pass around the Town.

Goal: *Expand residential land uses to provide housing for future residents.*

Objectives:

Expand further residential use north out Route 17, and to the west and east of the Route 360/17 business corridor.

Goal: *Produce a desirable residential environment for all residents of Tappahannock*

Objectives:

Protect residential neighborhoods from encroachment by commercial and industrial activities.

Require landscaping for future non-residential development within the Town for greater aesthetic appeal.

Require buffers between incompatible land uses.

Require commercial and office property abutting residential areas to provide measures designed to reduce detractive impacts and nuisances to the residential areas. Improvements should be sought in existing situations whenever permits are applied for to permit expansion or alterations.

Protect residential neighborhoods from through traffic by providing for a carefully considered and coordinated plan for highways, streets and intersections.

Implement improved, performance-based development standards and revised site plan review procedures to improve the quality of future development and redevelopment in the Town.

Acquire the land under the Thomas J. Downing Bridge and develop an urban park to improve the downtown environment.

Goal: *Land use patterns within the Town shall preserve the present character and contribute to the conservation of land, effective delivery of services and an attractive, harmonious mixture of land uses.*

Objective:

Single-family and multi-family residential, commercial industrial and residential uses shall mix harmoniously within the Town with less intense uses being buffered from the other uses by appropriate setbacks and landscaping.

Goal: *The Town shall discourage development which would place an unnecessary burden on local residents or create undesirable consequences and living environments.*

Objectives:

Objective analysis of physical conditions shall be made to determine that prospective development can be located safely.

The developer shall provide necessary public services designed exclusively for the benefit of the new development.

IMPLEMENTATION RECOMMENDATIONS

The Planning Districts

The Land Use Plan Map (Map 3-1) delineates areas deemed by the Town to be appropriate locations for private land uses, such as residential, commercial, and industrial uses and public uses such as parks. The Tappahannock Land Use Plan designates ten (10) general areas or Planning Districts (see Map 3-1). The Planning Districts were derived from a combination of determinants including: existing land use patterns; projected growth and development trends; the natural capacity and suitability of the land to support development; the availability or proposed future availability and adequacy of development infrastructure (roads, sewer and water), and the goals, objectives and policies expressed by the Town. Each district description outlines the general type, intensity and character of development that should occur within the district.

Residential Districts

The primary existing and planned residential areas of the Town have been categorized into the three separate districts, Residential, Town Scale Residential, and Mixed Residential Cluster. Although the goals, objectives and policies for residential development are equally true in each district, as residents in residential neighborhoods have similar requirements, the existing character of each district differs, both as a function of design and density.

Town Scale Residential Districts

Town Scale Residential includes those existing residential neighborhoods which exhibit urban characteristics, such as a close proximity to the downtown core, and a manner of addressing the street which instills a urban feel. These existing areas generally exhibit recognizable historic qualities and are subject to pressure for changes in land use. In addition, this category includes existing and proposed developments with urban densities. Densities in existing Town Scale Residential areas range from four to six to dwelling units per acre.

The purpose of the Town Residential classification is to recognize the unique problems associated with existing urban residential neighborhoods, particularly older neighborhoods and to provide appropriate areas for infill development at similar densities.

In the case of the former, the primary aim of the Town is to protect the existing character of those residential neighborhoods from encroachment by adjacent non-residential uses and from incompatible intensification of residential uses within that may have a deleterious effect on its character and quality.

Residential (Suburban) District

Existing suburban neighborhoods in Tappahannock are typical of such communities built in the latter half of this century. For the most part these areas consist of detached single family units. Suburban Residential areas have densities ranging from two to five dwelling units acre.

The purpose of the Suburban Residential District classification is twofold. In existing residential area the primary purpose is to identify residential neighborhoods that need protection from encroachment by incompatible, non-residential uses. At the edge of these districts, the objective is to minimize the impacts of more intense, non-residential uses that adjoin residential neighborhoods. This includes ensuring that provisions are made for landscaping of future non-residential development and for buffers between incompatible land uses. In the context of the Transportation Plan, these neighborhoods should be protected from through traffic.

For those vacant lands that occur in these Districts the purpose of the classification is to identify areas wherein the Town will foster additional development of a Suburban Residential character.

Mixed Residential Cluster District

The Mixed Residential Cluster District is to provide for areas within the Town where higher density and more intense development can be accommodated. These areas are presently served or can be readily served by sewer and water facilities. Development in this District will differ from traditional forms of development in providing a comprehensive approach to site planning. This form of development will permit the planning of a project and the calculation of densities over the entire development, rather than on an individual, lot-by-lot basis. It also involves a process which revolves mainly around site-plan review, in which Town officials have considerable involvement in determining the nature of the development. This form of development is characterized by a unified site design (Master Plan) that addresses the number of housing units, the manner of clustering buildings and providing common open space, the distribution of density, and the mix of housing types and land uses. Development of new sites adjacent or near to established neighborhoods would be required to buffer

the edges to minimize impacts on nearby established neighborhoods. This approach acknowledges existing development patterns and recognizes historic development conditions. In short, higher residential densities or mixed use will be permitted only in such areas where infrastructure in the form of water, sewer and transportation systems would not be adversely impacted or could be accommodated within a defined geographic cell.

BUSINESS DISTRICTS

General Commercial District

The General Commercial District includes the entire Route 17 highway corridor from Warner St. to Brays Fork. Where developed, these areas exhibit the general visual characteristic of highway corridors along which piecemeal "strip" development has occurred. Uses include retail sales and business service establishments such as community shopping centers, fast food restaurants, and service stations. This corridor is the primary entrance point to the Town from the south.

A large portion of the General Commercial District is already developed. These existing commercial uses have an established form and require a different treatment than will future development. Areas of existing commercial use may need to be further broken down in the zoning ordinance to provide more distinct treatment of these existing developed commercial areas. The business district created should provide different treatments for the range of use from neighborhood business to highway oriented commercial uses and establish access control and landscape or buffer performance standards appropriate to their redevelopment or infill development over time. Where possible, service roads or access management policies should be established in existing commercial areas adjacent to the major transportation routes to minimize the effects of local traffic on the capacity of the roads to carry thru-traffic capacity which is the primary function of these routes.

Undeveloped areas within the General Commercial District such as the area around Route 698 on the other hand provide an opportunity for significantly improving the quality of commercial development within the Town. Site plan review and approval procedures for these areas should be required. This offers several advantages in coordinating new activities with existing ingress and egress points along the local street system. Traffic controls can be provided in accordance with anticipated volumes. On-site parking facilities and internal traffic patterns are also controlled via the site plan review process. The more detailed zone mapping in this district should

emphasize the configuration zones to achieve a greater depth-to-frontage ratio in dimensions.

The purpose of the General Commercial District is to recognize areas of the Town that, due to their historic development pattern or current zoning, form a more or less continuous commercial corridor along major highway routes. Vacant land in the District is intended to provide sufficient space in appropriate locations for additional future commercial service activities which would generally serve a wide area and need to be located along existing major thoroughfares. For the most part, uses in this District are not characterized by extensive warehousing, frequent heavy truck activity, open storage of material, or nuisance factors of dust, odor, and noise associated with manufacturing.

Central Business District

The Central Business District, which has historically been the center of commerce and business in Tappahannock, contains a mix of public institutions, as well as business, service, and commercial establishments which comprise a significant portion of the Town's economy.

The Central Business District is an urban area with the dominant feature being architecture; i.e., buildings enclosing spaces, and the spaces are places of intense human interaction. Privacy in urban environments requires enclosures, patios, or rooms. In order to provide the intensity and diversity of choices that make urban centers people-magnets, high densities are essential. It remains the classic urban design-type of environment in which buildings define and enclose spaces. The Central Business District in Tappahannock is an example of urban environment whose scale is in keeping with the rural qualities of the County in general. A mix of commercial shopping facilities, service industries, offices, public and institutional buildings, other intense non-residential uses, and town scale residential are typical uses.

The purpose of the Central Business District designation is to recognize the unique role of the Central Business District in Tappahannock's land use and to continue to provide for a compatible mixture of commercial, cultural, institutional, governmental, and residential uses in a compact, pedestrian oriented, traditional town center that serves as the focal point for surrounding residential areas. The primary land use and community facility objectives for the CBD are to maintain and enhance the CBD as a center of governmental, professional, and mercantile activities in the County in the face of changing consumer preferences.

Industrial District

Included in this District are those areas of the Town which have been developed for industrial uses and vacant land planned for business and industrial expansion in the future. A characteristic of this District is large sprawling buildings with associated parking areas. Due to the large parcel sizes upon which they are located, their visual impact is somewhat lessened. The existence of undisturbed natural areas surrounding these uses also helps soften adverse visual effects. Generally these areas are located near the existing Town airport.

The purpose of the Industrial District is to establish appropriate areas that will be held out for light and medium industrial uses, and necessary supporting accessory uses and facilities. Site should be large enough to be designed as industrial parks that complement surrounding land uses by means of appropriate location of buildings and service areas, attractive architecture, effective buffering, and substantial site landscaping.

Business and Employment District

In recognition of the need to continue to provide additional, diverse job opportunities for residents of Tappahannock and Essex County, it is proposed that areas be reserved for development into business and employment clusters or parks. This district is located in the County on the northwest of the existing industrial area and would be served by the proposed bypass. This district coincides with an area being considered by the County and is roughly four hundred acres, of which some three hundred appear suitable for development.

This area, like the Industrial District, should require sites to be large enough to be designed as industrial parks that complement surrounding land uses by means of appropriate location of buildings and service areas, attractive architecture, effective buffering, and substantial site landscaping.

RESOURCE PROTECTION DISTRICT

The Resource Protection District includes those existing natural areas in the Town which are likely to remain in their natural state, or if used will serve as parkland. These areas include slopes in excess of 25 percent, the 100-year floodplain, Resource Protection Areas (RPA) associated with the Chesapeake Bay Preservation Act, perennial and intermittent streams and stream buffers, nontidal wetlands, and town parklands.

The purpose of the Resource Protection District is to recognize general areas, where sensitive natural features and other development constraints limit uses or where special land use development requirements are imposed for the express purpose of protecting and enhancing water quality in the Chesapeake Bay and its tributaries and maintaining or protecting sensitive wildlife habitats. Included in this classification are areas best suited to open space or low intensity recreation uses. Permitted development in these areas should be strictly regulated, to ensure minimum adverse environmental impacts, or limited, with special attention given to maintaining natural conditions.

HIGHWAY CORRIDOR DISTRICT

The Highway Corridor District is intended to address architectural and aesthetic controls as well as special access and buffering requirements along the Town's major highway.

The Highway Corridor District is an area within which certain specific public policies relating to protection of Highway functions and landscape aesthetics, would be administered by the Town through overlay zone regulations in the Zoning Ordinance. Views afforded to drivers and passengers, whether residents, workers or visitors, traversing the major transportation routes of the Town provide a lasting visual and, therefore mental, impression of the Town's character. Although the visual experience probably forms only a small part of a person's overall experience in the Town, it, nevertheless, is of special public concern and requires public attention if the Town's image is to be a positive one now and in the future.

Not all development in Tappahannock requires the same level of public scrutiny. The most critical visual areas lie along the major transportation routes since they are shared by all citizens and tourists. Hence, corridors of 500 feet from the right-of-way of the major transportation route rights-of-way are identified for specific regulatory provisions.

The visual character today along these corridors is diverse, ranging from areas primarily rural, natural, and scenic to areas with disorganized and cluttered roadside development. The intent of the policies for the Highway Corridor is not to preclude the diversity that already exists; but, rather to encourage and better articulate the variety of visual experiences along the highway corridors of existing and proposed routes classified as major roads in the Town.

The purpose of the Highway Corridor District is to protect and improve the quality of visual appearances along these linear corridors and to provide

guidelines to ensure that buffering, landscaping, lighting, signage, and proposed structures are internally consistent and of a quality which contributes to the Town character.

Future development of lands within the Corridor should be subject to the policies specific to the particular Land Use District in which they lie (and ultimately the particular zoning district in which they occur), as well as the following policies that are specific to the overlay corridor. These policies are not intended to restrict or prevent the construction of buildings within each Corridor, nor to require the removal of existing structures. The Corridor policies are not setback requirements, although certain minimum setbacks will be required to protect highway rights-of-way and maintain sight clearances for traffic safety.

The corridors along U.S. 17 for a distance of 500 feet from the right-of-way are designated as the Highway Corridor Overlay District. Other routes such as the proposed bypass may be established in the future as determined appropriate.

Policies specific to the Highway Corridor include:

- Buffering requirements to screen unattractive buildings from view and which provide for a mix of canopy, understory tree and shrub level plantings will be more substantial in the Corridors.
- Special standards for signage height, design, size, materials, and lighting to maintain and enhance visual qualities will be required.
- Special consideration of new development within this district including assessment of visual impact of development, assessing pre-development visual conditions and how the proposed development will affect them will be made.
- Consideration will be given to subject new development within the Highway Corridor to review by a Corridor Review Committee (CRC) or an architectural review committee which would make recommendations to the Planning Commission.
- Service roads or at a minimum joint access drives should be required where they would enhance safety and achieve efficient access control within the Highway Corridor District.

- Landscaping should be used to soften lighting and signage impacts and to be located in groupings to identify entrances to sites.

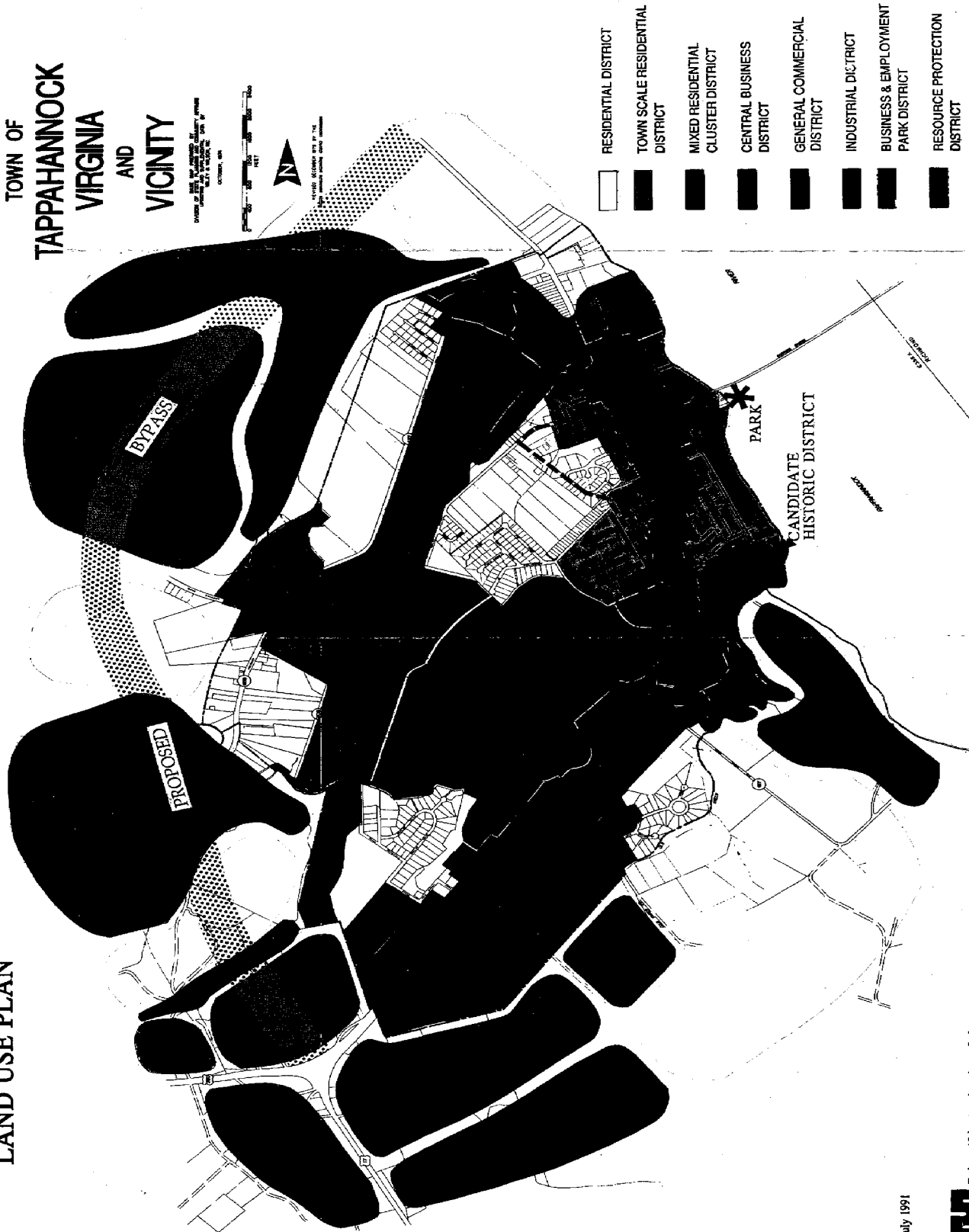
LAND USE PLAN

TOWN OF TAPPAHANNOCK VIRGINIA AND VICINITY

DESIGNED BY REDMAN/JOHNSON ASSOCIATES, LTD.
FOR THE TOWN OF TAPPAHANNOCK, VIRGINIA
OCTOBER, 1991



1" = 100' (AS SHOWN ON MAP)



- RESIDENTIAL DISTRICT
- TOWN SCALE RESIDENTIAL DISTRICT
- MIXED RESIDENTIAL CLUSTER DISTRICT
- CENTRAL BUSINESS DISTRICT
- GENERAL COMMERCIAL DISTRICT
- INDUSTRIAL DISTRICT
- BUSINESS & EMPLOYMENT PARK DISTRICT
- RESOURCE PROTECTION DISTRICT

July 1991



Redman/Johnson Associates, Ltd.

Chapter 4

TRANSPORTATION

Although the Virginia Department of Transportation (VDOT) has primary responsibility for the highway system, Tappahannock is a strong partner in transportation planning. This occurs because of its role in identifying highway improvement needs and its policies and regulations which guide land use and development in the Town. Tappahannock's growth along with a general increase in travel throughout the region will mean more traffic on local highways. Thus transportation has become a growth management issue for the Town and clearly indicates that Tappahannock's transportation system for the year 2010 will require special consideration.

This element of the Comprehensive Plan sets the framework for addressing this issue. The goals and objectives statement contained in this chapter provides the general guidance for developing more specific policies and implementation approaches. Background for transportation planning is provided through an assessment of the existing transportation network, of highway capacity, of safety conditions and of planned improvements and an identification of pertinent issues, problems, and opportunities. Finally, this element uses the current traffic situation in Tappahannock as the basis for developing short and long term strategies to satisfy year 2010 needs.

BACKGROUND AND ANALYSIS

Safe and efficient transportation systems for the movement of people and goods remain fundamental to the continued economic growth and development of small urban areas such as Tappahannock. Although the town is relatively urban in nature, the actual population (1,890 in 1980) is neither over 5,000 persons to place it in the urban places category, nor is it over 3,500 to qualify Tappahannock for a separate state-funded small urban area transportation plan. With considerations for certain social and environmental issues, transportation planning for the town of Tappahannock is an integral part of this comprehensive planning process.

For purposes of analysis, the study area extends only to the corporate limits of Tappahannock, except in those areas affected by the proposed bypass/truck route. Within the town and the immediate area, all air, water,

and surface transportation facilities publicly maintained and/or operated have been considered.

Tappahannock is fortunate to have not only an operating airport, but a navigable waterway, as well as a major river crossing. Primary highway transportation routes intersect in the central business district, and this has been both the bane and the boon to town commerce.

The Town of Tappahannock is served by the Bowling Green Residency within the Fredericksburg Construction District of the Virginia Department of Transportation (VDOT). VDOT maintains an area maintenance shop within the corporate boundaries of the town. This land is leased to VDOT by the Town of Tappahannock. As the town does not maintain its own roads, this small VDOT shop performs the actual work in addition to regular assignments.

Functional Classification of Highways

The skeletal framework of the County's highway system are the arterial and collector highways shown on Map 4-1. The map also reveals that the majority of the highway system is composed of local roads and secondary highways primarily functioning to provide access to individual properties. The state's classification is based on the Federal Functional Classification of Highways which further classifies highways as rural or urban based on the proportions of vehicle miles of travel and road mileage. Characteristics of the broad classification of highways are as follows.

Principal Arterial: Carries a high volume of traffic for intra-state, inter-county and inter-city travel. Traffic on this type of road normally has the right-of-way except in areas of high hazard, where controls are used.

Minor Arterial: Carries a high volume of traffic for intra-county and inter-community travel. These roads normally serve the higher classification roads providing access to and from the arterial.

Major Collector: Serves intra-county and inter-community travel, but at a lower volume, and usually connects to an arterial to provide access to the surrounding land. Access is not directly from this road but from a sub-road connected to the collector. They may serve community shopping areas, schools, parks and cluster developments.

Minor Collector: Serves intra-community travel at a volume below the major collector. Provides access to the land using lower order roads and sometimes direct access from itself.

Route 360/17, Church Lane, provides the only means of arterial access for east/west and north/south through traffic. Route 360/17 also serves as local traffic access in the central business district and the business corridor area. By performing this dual function without a through traffic relief facility, Route 360/17 is often overloaded at peak hour operation. Route 360/17 is currently functionally classified as a principal arterial. The only other federal aid functionally classified road is Route 627, Airport Drive, in the industrial park area. It is classified as a major collector.

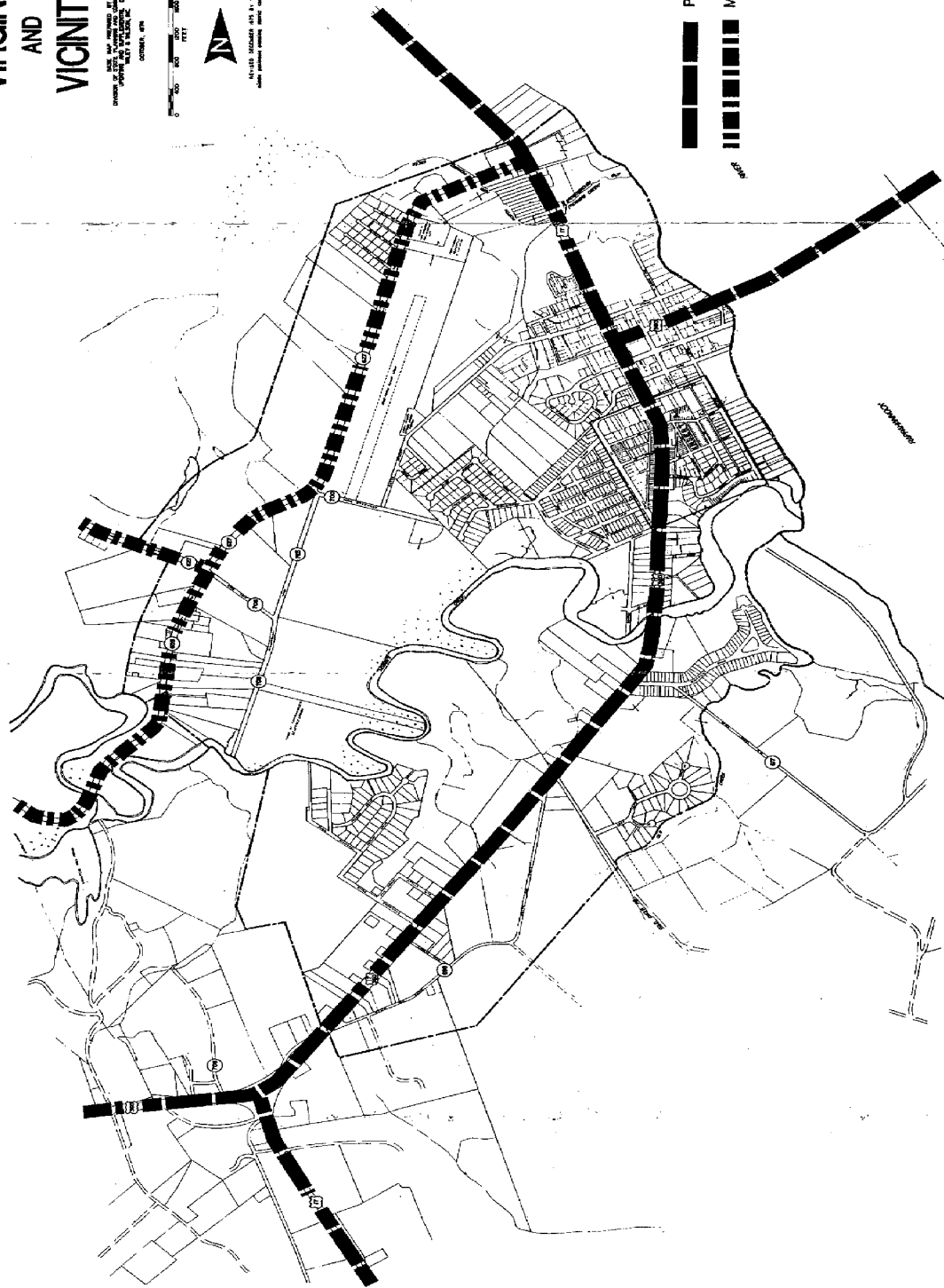
Traffic Volumes and Trends

Total average daily traffic (ADT) on U.S. 17 through the Town exceeded 22,000 vehicles per day in June of 1988 as surveyed by the Fredericksburg District office. These volumes reflect the importance of this route as a major arterial highway serving the Town.

**TOWN OF
TAPPAHANNOCK
VIRGINIA
AND
VICINITY**



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Table 4-1 shows Average Daily Traffic Trends of Primary Highways in the Tappahannock area from 1981 to 1989. Traffic volumes on these highway sections increased by 4 to 6 percent per year during this time period, a growth rate that far exceeds the annual growth rate of the Town and County population during that same time period. It is evident that the recent development trends in the Town, County and region are resulting in increased travel on the County's primary highway system. If these traffic trends continue the major roadways serving the Town and beyond will be operating at or above capacity as they are currently configured. Table 4-2 shows that truck traffic from 1981 to 1989 increased at approximately the same rate as the overall traffic volume.

Only 17 percent of Tappahannock traffic is considered through traffic according to the VDOT 360/17 Corridor Study. As 83 percent of traffic actually stops in town for a duration of 30 minutes or longer, then the town serves as a destination for most motorists. This further reinforces the notion that the town is "hub" for the region.

The Table 4-3 below shows trends in average daily traffic for primary roads in the Town. The average annual percent increase in traffic well exceeds the rate of growth for dwelling units. Many routes have experienced traffic increases of 10 to 17 percent a year. If these trends are projected into the next twenty years, the traffic will exceed those levels for which VDOT is currently planning.

CAPACITY ANALYSIS

"Level of service" (LOS) is often used as a measure of system performance in transportation planning analysis and to define public policy concerning highway performance. (See Appendix A for a definition of level of service descriptors.) They are also used in traffic impact analysis to determine local traffic impacts of proposed developments. Definitions of level of service differ for intersections and roadway segments, for city streets, and for controlled access highways. In urban and suburban areas, where intersections are closely spaced, traffic signals usually govern arterial and street capacity. U.S. 17 through Tappahannock is an example of this situation. Thus, in urban and suburban locations roadway adequacy is assessed at intersections in the traffic impact analysis process. Another related measure of highway capacity is the volume to service volume (VSV) or volume to capacity ratio as used in Table 4-5.

Table 4-1
Average Daily Traffic on Primary Routes

Route	From	To	1981	1989	% Change
17	Rt. 624, Caret	Tappahannock	5,990	8,255	38%
17/360	Tappahannock	Brays Fork	11,530	17,190	49%
360	Rt. 624, W/ Warsaw	Tappahannock	7,010	9,310	33%
17	Brays Fork	Center Cross	4,835	7,180	49%

Table 4-2
Average Daily Truck Traffic on Primary Routes

Route	From	To	1981	1989	% Change
17	Rt. 624, Caret	Tappahannock	587	775	32%
17/360	Tappahannock	Brays Fork	1,083	1,480	37%
360	Rt. 624, W/ Warsaw	Tappahannock	567	840	48%
17	Brays Fork	Center Cross	484	590	22%

Source Table 4-1 and 4-2: "Average Daily Traffic Volumes on Interstate, Arterial and Primary routes, VDOT, 1981 and 1989 editions.

Table 4-3
Projected Growth in ADT on Highways
Without By-Pass

Route	From	To	1981 (3)	1988 (2)	% Change	2010 (1)	% Change
Rt. 17	Rt. 360E	NCL Tapp.	6,815	15,230	123%	21,790	43%
Rt. 17	Rt. 360E	Rt. 617	12,610	22,460	78%	30,520	36%
Rt. 360	Rt. 17/360	Rich. Co. Ln.	7,585	13,640	80%	18,140	33%

(1) Virginia Statewide Highway Plan, Fredricksburg District

(2) Rt. 17 and 360 Corridor Study, VDOT 1988

(3) Summary of Accident Data, VDOT 1982

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Intersection level of service is on a six-level scale with "A" being the highest, and "F" being total gridlock or complete failure. The overall level of service for the intersections in the Town is currently LOS B. Level of service B means the average delay per vehicle stopped at an intersection ranges between 5.1 and 15 seconds. Normally, intersections with a level of service less than "D" in the peak hour are considered deficient. All of the intersections in Tappahannock are considered adequate by VDOT standards; however, the time/delay runs were averaged over peak and non-peak hour operation (2 p.m. to 6 p.m.) and may not reflect the peak hour of use operations. With this in mind, the time and delay studies reveal a northbound through trip from corporate limits to corporate limits to be 5 minutes and 15 seconds in duration. A southbound trip of the same distance takes 5 minutes and 10 seconds on average during this four-hour period. Major causes for delay were determined to be left turning vehicles and traffic signals. Additional signalization has been installed since this study.

The intersection of 360/17, Preston Street and T-1007, Earl Street, would appear to warrant a traffic signal in that the residents of the Dangerfield area must travel a circuitous route in order access U.S. 17 in the morning peak hour; however, none of the volumes standards are met, and the intersection does not have an abnormal accident rate. Table 4-4 shows the growth in traffic volumes at the intersection of Church Lane and Queen Street. Though there has been some fluctuation in the counts, the overall increase from 1980 to 1987 has been significant. The traffic flow at this intersection will soon cause it to operate at LOS F during peak hours.

Table 4-4
HISTORIC TRAFFIC DATA
Church Lane and Queen Street

<u>Year</u>	<u>U.S. 17N</u>	<u>Rt. 360E</u>	<u>U.S. 17/360</u>
1980	11,183	6,905	14,935
1981	11,587	7,147	15,640
1982	12,013	7,571	16,456
1983	8,375	6,612	12,751
1984	9,512	8,477	14,117
1985	11,348	4,905	11,862
1986	10,537	7,734	16,368
1987	13,290	8,512	18,305
Change 1980-1987 ->	18.84%	23.27%	22.56%

Source: VDOT Primary Route Count Program - Stations 6000 and 6092
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Traffic projections made by the Virginia Department of Transportation (VDOT) indicate that the average daily traffic on U.S. 17 through Town will increase from its current level of 22,000 vehicles per day to 30,500 vehicles per day by 2010, assuming no alternative route is built. This would indicate the need for additional capacity on the Town's arterial system. In addition, it is clear that the Town needs to make judicious use of the existing highway systems to ensure that the remaining capacity is not prematurely depleted as a result of poor access control, particularly along the major arterial corridors.

Based on the Roadway Inventory contained in the Virginia Statewide Highway Plan, the Town's highway system generally contains excess capacity to accommodate future growth. However, current and projected volume to service volume (VSV) ratios indicate that U.S. 17 requires close monitoring, particularly if a bypass is not constructed on schedule. Table 4-5 lists key highway sections with the existing VSV and projected 2010 VSV. Rt 17 is projected to exceed its design capacity within the planning horizon if a bypass is not built. Route 627 (Airport Rd.) is currently operating at its design capacity and is projected by VDOT to be at a VSV ratio of 1.2 within the next 20 years even if the bypass is built.

Safety

Annually, the Traffic Engineering Division of VDOT monitors and summarizes motor vehicle accidents that occur along various road sections. The accident, injury and death rates are calculated by dividing the total number of accidents, people injured, or people killed by the annual vehicle miles of travel at a location. Rates are expressed per 100-million vehicle miles of travel. The accident rates for "high accident" primary and secondary highways in the Town are shown on Tables 4-6. The accident rate is used for establishing priorities only and not for comparing the safety performance of different intersection and road design types.

High-accident road sections, for the purpose of this analysis, will include those road sections that exceed the State average accident and injury rates. The highest accident rate-road sections within the Primary System, ranked by accident rate, are shown on Table 4-6. The highest accident and injury rates on a Primary Road in the County occur on the U.S. 17 corridor in Tappahannock. The highest accident rate roads within the Secondary System are also shown on Table 4-6. These streets deserve a closer analysis to determine if there is a definable pattern or cause for the accidents that may be addressed through design modification or increased capacity.

Table 4- 5
Projected Capacity on Key Highways
Without By-pass

Route	From	To	DSV (3)	1988 (2)	PVSV (4)	2010 (1)	FVSV (5)
Rt. 17	Rt. 360E	NCL Tapp.	24,000	15,230	0.63	21,790	0.91
Rt. 17	Rt. 360E	Rt. 617	24,000	22,460	0.94	30,520	1.27
Rt. 360	Rt. 17/360	Rich. Co. Ln.	32,463	13,640	0.42	18,140	0.56

With By-pass

Route	From	To	DSV (3)	1988 (2)	PVSV (4)	2010 (1)	FVSV (5)
Rt. 17	Rt. 360E	NCL Tapp.	24,000	15,230	0.63	9,360	0.39
Rt. 17	Rt. 360E	Rt. 617	24,000	22,460	0.94	16,020	0.67
Rt. 360	Rt. 17/360	Rich. Co. Ln.	32,463	13,640	0.42	18,140	0.56

(1) Virginia Statewide Highway Plan, Fredricksburg District, VDOT

(2) Rt. 17 and 360 Corridor Study, VDOT 1988

(3) Design Service Volume from Virginia Statewide Plan

(4) Present Volume to Service Volume Ratio

(5) Future Volume to Service Volume Ratio

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Using 1983 to 1987 Virginia accident data, the Town of Tappahannock has a higher than average motor vehicle accident rate. The town rate is 441 accidents per hundred million vehicle miles of travel contrasting to the Virginia Statewide rate of 330 accidents per hundred million vehicle miles of travel.

Seventy percent of the motor vehicle accidents within the town of Tappahannock are minor "fender bender" incidents. The actual severity of

the accidents is not worse than the statewide average; however, even a minor accident can seriously impede traffic flow during peak hour demand periods.

Speed limits on Routes 360/17 within the town limits are as follows:

Location	Posted Speed
South corporate limit to Hoskins Creek Bridge	45 mph
Hoskins Creek Bridge to Earl Street	35 mph
Earl Street to Marsh Street	25 mph
Marsh Street to north corporate limit	45 mph

The recent traffic engineering study by the VDOT Fredericksburg District traffic engineer reveals the posted speed limits are exceeded by 85 percent of the motorists by an average of 5-7 miles per hour. An opportunity for revenue enhancement exists through increased law enforcement efforts. Other town speed limits are 25 mph except where otherwise posted. This creates a safety hazard, particularly in the downtown area.

Highway Improvements

Through its Six Year Improvement Program, VDOT sets priorities for the funding and construction of improvements to the Primary and Urban Highway Systems in Tappahannock. The FY 92 Thru 97 Program has identified no funding for projects within the corporate limits of Tappahannock.

The Town and the State have jointly developed a Capital Improvement Program for the Secondary Highway System. Proposed funding for this six year program includes the widening and construction of curb and gutter on Marsh Street (Route 657) west of Markham Terrace (Route 1019).

Other Transportation Facilities and Services

Bus Service

Bus service is no longer available in Tappahannock; however, tour buses frequently pass through enroute to other destinations. This situation limits transportation opportunities for low-to-moderate income groups, as well as other transportation dependent groups such as the elderly and handicapped.

Rail Transportation

No rail service is available for the Town of Tappahannock. As might be expected the 1990 Virginia Statewide Rail Plan lists no proposed extension of rail service to Tappahannock. The nearest rail services are those offered in Richmond, Ashland, or Quantico. Direct access is not available in Tappahannock.

Air Transportation

The Tappahannock Municipal Airport has 580 square feet of terminal space, 30 patron parking spaces, and is home base to 13 single engine aircraft, 1 multi-engine aircraft, and 1 helicopter. Tappahannock's airport engages 10,000 operations per year (1988 data), but has been designated for elimination due to hazards which disqualify the facility from federal funding. The airport tower is owned by the Virginia Elastic Company, and the runway also serves as an access road to the plant located nearby.

Nearly all of Essex County is currently within a 30-minute drive to an airport of some type. The Tappahannock Municipal airport is one of 29 local service airports throughout Virginia. A local service airport is one with "known forecasted development limitations or expansion constraints." These limitations or constraints include environmental, air, space, topography, proximity of similar services, land use incompatibility, ownership status, financial infeasibility, conflicts with surrounding development, and low activity projections. The Tappahannock Municipal Airport has a relatively short runway and narrow width (2600 feet by 75 feet) and has electronic navigational aids. It is planned for replacement during the next decade by a larger regional facility, possibly located in Caroline County.

Projected operations for the Tappahannock Municipal Airport, if it stays active, are 12,927 in 1993 and 14,388 in 1998. The sharp increase in demand of nearly 44 percent (2.6 percent per year) demonstrates a need for aviation facilities in this area. The Virginia General Assembly passed legislation creating the Tappahannock-Essex County Airport Authority. This Authority is charged with overseeing the development and operation of a new airport. A site location study is currently ongoing.

There are no heliports in Essex County. The nearest helicopter is a private one in Gloucester County which services a medical facility. A medical heliport could be an asset to the hospital just outside of the town.

Water Transportation

Presently, water navigation on the Rappahannock is predominantly private pleasure craft. Public ramps are maintained at Dock and Prince Streets. Commercial transport to Newport News from Tappahannock is limited to some light barge activity, although potential exists for the expanded use of this waterway for transport.

Pedestrian Access

Pedestrian access in town is marred by the location and condition of the sidewalks. Sidewalks are located directly adjacent to the Route 360/17 roadway, and given the high traffic volumes on the facility, create an unsafe condition for pedestrians. While many of the sidewalks are in poor condition, most intersections do provide curb cut ramps for persons with physical disabilities. Many of the side streets do not have sidewalks or, if they do, they, too, are directly adjacent to the roadway. Although modern pedestrian crossway signalization has been installed at the intersection of 360/17 and Route T-1005, Prince Street, much could be done to improve access for foot traffic. Few well-marked crosswalks exist in Tappahannock.

Thoroughfare Roads

The Draft 2010 Statewide Highway Plan from VDOT indicates a corridor for possible preliminary engineering work on a bypass route to relieve traffic on Route 360/17 during the next six-year phase. Several alternatives for a bypass have been considered in a recent planning study. Alternative A, as recommended by the VDOT staff, would utilize the existing bridge channeling through traffic around the central business district and industrial park, therefore, providing much needed access between the four corners of the town.

The possible elimination of heavy truck traffic in the Central Business District (CBD) has given the bypass proposal unusual citizen support. The presence of and growth in heavy truck traffic is substantiated by both the District produced Traffic Engineering Study, and the 360/17 Corridor Study technical documents. This type of citizen support must continue throughout the preliminary engineering and construction phases, as well as the initial planning phase. It is not uncommon for bypasses and other projects of this nature drag on for several decades, particularly when there is heavy citizen opposition.

Wetlands issues, such as mitigation, may cause problems for the bypass project. With the adoption of the new Chesapeake Bay Preservation Act, the

cost of constructing any roadway east of Interstate 95 has suddenly skyrocketed.

GOALS AND OBJECTIVES

Overall Goal: The Town's transportation network shall be made adequate to serve residents and through traffic.

Highways

Goal: Relieve congestion, reduce noise, and increase safety on the Tappahannock street system.

Objectives:

Reduce the duration of through traffic on Route 360/17 in Tappahannock by routing it around the commercial strip area instead of through the heart of the town.

Reduce through heavy truck traffic in the central business district by the creation of alternative routing.

Internal Circulation

Goal: Improve internal circulation for the local residents of Tappahannock.

Objective:

Decrease traffic on the 360/17 corridor.

Improve access to major local destinations in different areas of the Town.

Improve emergency service and hospital access for the Town, especially the industrial park area.

The Town shall identify and make recommendations on necessary improvements and expansions to the road network.

All new streets in proposed developments shall comply with and, as appropriate, include sections of roads, streets, and intersection

improvements shown in the Tappahannock Transportation Plan element.

Streets and sidewalks necessitated by new subdivisions shall be provided by the developer and shall meet the minimum standards of the State Department of Highways and Transportation.

Ensure that the new truck bypass is designed and regulated by VDOT as a limited access facility and that all new development that fronts on the new bypass is required to construct appropriate frontage roads and/or provide an internal circulation system that minimizes new curb cuts.

Improve access to and from the Dangerfield area.

Pedestrian

Goal: *Improve pedestrian circulation and safety throughout the town.*

Objectives:

Improve existing pedestrian sidewalks and footpaths.

Increase pedestrian crossing opportunities across Church Lane (Route 360/17) at such locations as Queen St.

Encourage pedestrian access ways where none currently exist.

Other Modes

Goal: *The Town will work with the County to locate and construct an airport facility which is convenient to Town services and serves industry located within the Town.*

Goal: *The Town shall explore mass transportation facilities for its citizens.*

Objective:

To address the lack of public transportation in the County, the Town will work with the County to explore rural transit options for transportation disadvantaged groups such as elderly, hand-icapped etc.

IMPLEMENTATION RECOMMENDATIONS

Implementation is broken into two subsections: the Policy Statement and the Transportation Plan. The Policy Statement provides a framework to strategically adapt the County's transportation system to address specific development problems unique to a given locale. The Transportation Plan identifies both needs and planned improvements in order to create a transportation network that is consistent with the objectives and implementation of the Land Use Plan.

POLICY STATEMENT

The transportation plan cannot succeed without proper support and leadership from Town government. The following implementation strategies establish the policy framework from which the Town will create and maintain a functioning transportation system within the context of planned growth in the Town.

- **Preplanning Rights of Way** — The Town should begin platting rights-of-ways for new roads and streets when the land use patterns allow. The annual Capital Improvements Budget should include funds for the preliminary design of proposed road improvements not included in the State's Six Year Improvement Program so that adequate rights-of-ways can be reserved. This will also permit the coordinated completion of the improvement if undertaken by different entities such as private developers. Expansion of the Town street system should be pre-planned based on the Land Use Plan and new developments required to conform to this plan.
- **Increased Coordination of the Land Use/Transportation Planning Process** — More emphasis should be placed on coordination between the Town, VDOT, and MPPDC staffs on matters related to planning and programming improvements and transportation systems management. There are several steps that can be taken to improve the current transportation planning process: the State and Town should work very closely together to evaluate the transportation system implications of the Town's new comprehensive plan; elected officials should be major participants in this process; and coordinated State and Town transportation management policy should recognize the need to expand upon the current level of commuter ridesharing in order to reduce single-occupant vehicles. This is particularly important at the intersection of arterial and major collector highways serving adjacent commutersheds and U.S. 17.

- **Quality of Service/Adequate Public Facilities Standards** — The Town's Level of Service (LOS) policies establish a recognizable basis for evaluating alternative plans and/or policies. LOS policies provide the basis and criteria on which to evaluate alternatives and to determine capital requirements. With establishment of LOS policies, the Town makes a clear statement to developers and reflects the public's expectations about the quality of highway service it expects to achieve or maintain as growth occurs. With level of service established, the Town then has a policy based, quantified capacity measure from which to assess the traffic impacts of new developments. Whether or not a particular development will generate traffic that will exceed the capacity of the road can be determined from analysis, and the question of road impacts is then no longer subjective.
- **Traffic Impact Analysis** — As part of the Zoning process and implementation of the LOS Policy, the Town should require a traffic impact analysis of all major new projects. This analysis will be used to determine if post-development traffic levels and patterns will be consistent with the Town's Transportation Plan and highway policies and will minimize potential safety and congestion problems. At a minimum, the traffic analyses should include a description of past and present roadway conditions, existing roadway capacity, traffic accidents, existing and projected traffic volumes (ADT and peak a.m. and p.m. traffic), existing and projected levels of service, and existing and proposed sight lines based on facts and reasonable generation factors for the site and the immediately affected road networks and intersections. Where the Town has short-term planned improvements scheduled, it may permit such improvements in the traffic impact analysis. The Town should adopt precise standards for the preparation of these analyses.
- **Access Management** — An access management program should be created, initiated, and supported by appropriate ordinances to ensure that access is not unnecessarily provided along key road links or near major intersections, particularly along the designated Highway Corridor District.

The following techniques should be considered in managing access to principal corridor roadways.

- Limit the number of conflict points by installing physical barriers, modifying driveways, and installing signals at driveways, etc.

- Separate basic conflict areas by regulating the minimum spacing of driveways, by spacing driveways optimally in the permit authorization stage, by consolidating access for adjacent properties, by buying abutting properties, by denying access to small frontage parcels, and by requiring access via collector streets, i.e. service roads, etc.
- Minimize the need to decelerate in traffic through the geometric designing access points.
- Remove turning volumes or queues from sections of the through lanes by pavement marking alterations, geometric design modifications, right-of-way acquisition (including acquisition for such techniques as constructing a service road or bypass road), or requiring adequate internal site circulation.
- Adopt guidelines for access type and minimum spacing of intersections.

Zoning and Subdivision provisions should require that development project design minimize left turn movements or conflicts both on the site and in the street.

Driveways should be designed to achieve clear sight lines based on design speeds as adopted by VDOT. Site access and circulation should conform to the following standards:

- Where reasonable access is available, the vehicular access to the site should be arranged to avoid traffic use of local residential streets situated in or bordered by residential districts.
- The road giving access to the site should have sufficient traffic carrying capacity and be suitably improved to accommodate the amount and type of traffic generated by the proposed development.
- Where necessary to safeguard against hazards to traffic and pedestrians and/or to avoid traffic congestion, the Town should require that provisions are made for turning lanes, traffic directional islands, frontage/service roads, driveways, and traffic controls within the road.

- Access driveways should be designed with sufficient capacity to avoid queuing of entering vehicles on any road or street.
- **Highway Corridor Overlay Zoning** — Overlay zoning brings to an area additional requirements and standards above those of the underlying zone. Special transportation related improvements in the Highway Corridor District shown on the Land Use Concept Plan should include access controls and transportation impact analysis for high-volume uses.
- **Integration of Land Uses** — Integrating housing into overall design of large scale employment centers will help reduce the need to travel. Building homes within or immediately adjacent to the work place not only reduces vehicle miles of travel, but also presents opportunities for workers to walk or bike to work. Flexibility in zoning may be provided to permit such large scale mixed-use development through floating zones. To minimize noontime travel, the types of uses that should be permitted in a mixed-use project should include retail and customer service activities, eateries, convenience retail, financial services, gas stations, photocopy centers and consumer merchandise.
- **Proffers** — In terms of highways, the Town will indicate the need for dedication of rights-of-ways for new roads, for road extensions, and widening of existing highways through the Transportation Plan and Capital Improvements Program. At a minimum, proffers should address these transportation needs.
- **Fiscal Impact Analysis** — The development of a per-unit fiscal impact of residential and commercial development would provide a rational basis on which to except proffers from developers. It is intended that the fiscal impacts be calculated for roads. Though impact fees are not expressly authorized for Tappahannock, the detailed impact analysis will establish the basis for such fees once the Town is enabled by the State legislature. State enabling legislation does allow for the voluntary funding of off-site road improvements and reimbursements of advances by the governing body (Section 15.1-466 E of the Code of Virginia). The standards for determining the reimbursement in State law are basically the same as those that govern the development of impact fees. The fiscal impact analysis should be used as a basis for proffering under this statute. An Impact Fee system, requiring developers to pay for area-wide transportation improvements based on the estimated amount of traffic their project will generate, should also be evaluated.

- **Right of Way Reservation and New Road Construction** — The Town will preserve rights-of-way for road improvements consistent with the Transportation Plan Map and the State capital improvement programming.
- **Transit Development** — The Town needs to encourage the development of an adequate bus service for the transportation disadvantaged.
- **Transportation Management Strategies** — The Town should encourage innovative mechanisms for addressing transportation issues, including private cooperation, and financial support by developers and the business community. Some of the Town's larger employers, such as the Canon Plant, who want to reduce the number of employees who drive to work during peak hours have the option of implementing relatively low-cost transportation management strategies that would reduce the number of peak-period vehicle trips. The industrially designated areas along Airport Rd. and the proposed bypass offer an opportunity for employers to initiate their own transportation programs that would help extend the capacity of U.S. 17 and the intersecting streets.

Transportation management strategies selected by employers generally provide employees with incentives either to use alternative commute modes or to commute during non-peak hours. These include:

- instituting flexible or staggered work hours;
- facilitating carpool and vanpool formation;
- setting aside preferred parking locations for carpools and vanpools;
- providing company-chartered commuter bus service;
- charging employees for parking;
- building on-site bicycle paths and safe storage areas; and
- providing transit passes or other forms of transit subsidy.

Not all businesses will immediately understand how they can benefit from trip reduction. Educating the private sector is an important part of developing and selling the concept of transportation systems management.

Planned Improvements

Map 4-2 summarizes the identified highway deficiencies in the Town in terms of capacity as well as safety. The Transportation Plan Map (Map 4-3) shows the improvements, both planned and needed, to address the identified deficiencies and other transportation objectives. The following are highlights of the plan map.

Planned Improvements—The Plan includes transportation improvements already programmed by the State such as Marsh Street work.

Identified Needs—The Plan identifies transportation improvements that are needed but not already included in the State's Six Year Improvement Program. They include the following:

- **U.S. 17 Bypass** — To accommodate the anticipated increase in traffic volume on U.S. 17, a bypass facility is indicated. It is envisioned that this would be a controlled access highway primarily for through traffic. The proposed route is derived from the work done by the Fredericksburg Office. It uses elements of each of the Alternatives evaluated. The proposed route is an attempt to balance the Town's economic development and land use objectives with the pure transportation objectives of moving people and goods for the least cost.
- **Airport Road** — This road has been identified as being at capacity and will therefore require an upgrade in capacity as an immediate need even if the bypass is built.
- **Hoskins Creek Bridge - U.S. 17** — Rehabilitation and reconstruction of this facility is warranted.
- **Church Lane and Queen Street** — Being the critical intersection in Town, it will need continuous monitoring and transportation system management throughout the planning period.
- **Downing Bridge** — Has been identified as needing rehabilitation reconstruction during the 20 year planning horizon.

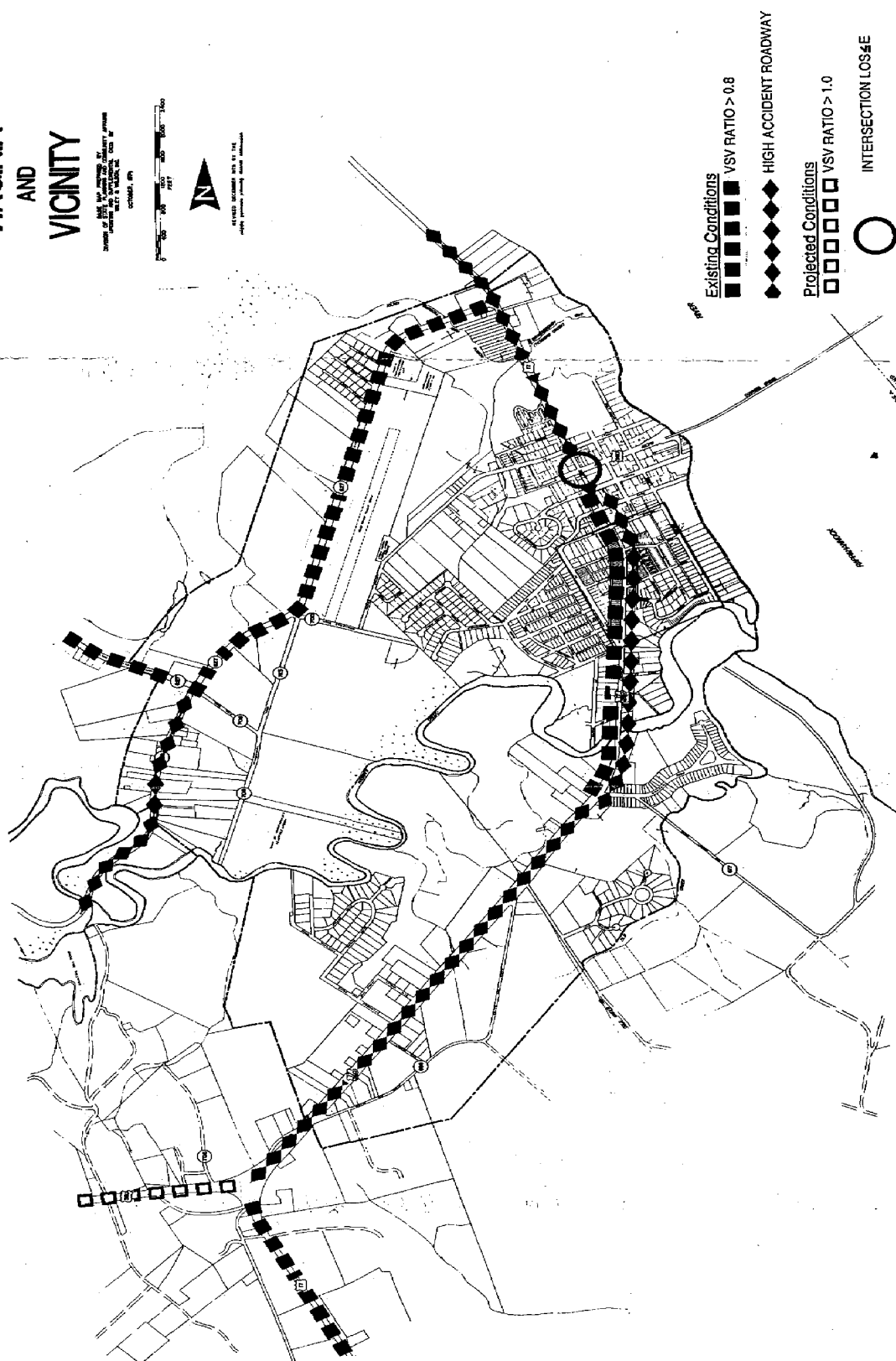
In addition, the Transportation Plan includes intersection and road section improvements that will improve local traffic circulation and extend the Town's block system into outlying areas, e.g., as shown on White Oak Drive.

**TOWN OF
TAPPAHANNOCK
VIRGINIA
AND
VICINITY**

SALE MAP PREPARED BY
DIVISION OF STATE PLANNING AND COMMERCE AFFAIRS
UNIVERSITY OF MARYLAND, COLLEGE PARK, MARYLAND
OCTOBER, 1978



THE 10 414 WINTERBORN CLUB



July 1991

TRANSPORTATION PLAN

TOWN OF TAPPAHANNOCK VIRGINIA AND VICINITY

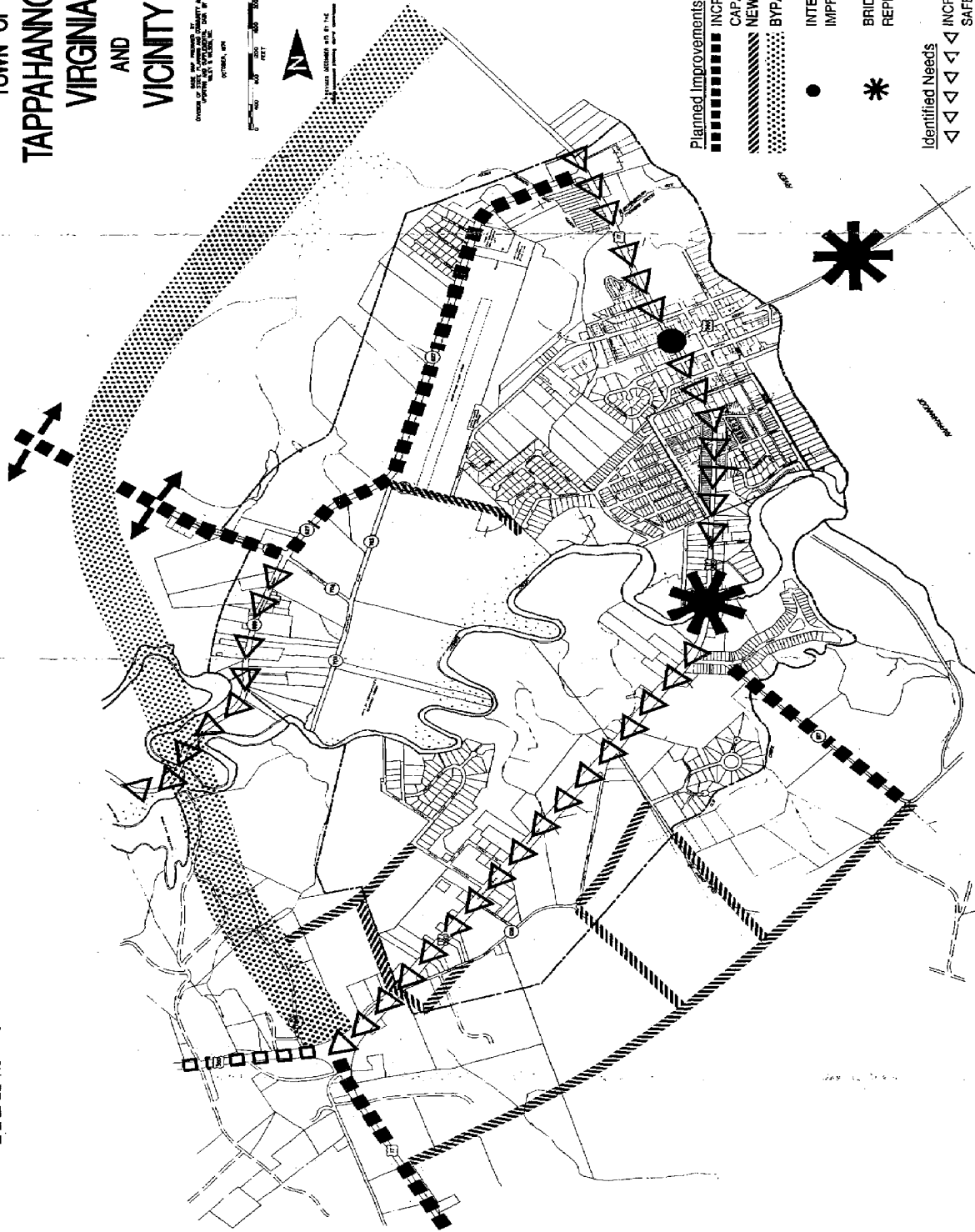
DESIGNED BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION

APPROVED BY THE BOARD OF SUPERVISORS

DATE: 10/1/91



STREET NAMES ARE IN ITALIC



- Planned Improvements**
- THICK DASHED LINE: INCREASED HIGHWAY CAPACITY
 - DIAGONAL HATCH: NEW ROAD
 - DOTTED LINE: BYPASS CORRIDOR
 - SOLID DOT: INTERSECTION IMPROVEMENT
 - ASTERISK: BRIDGE REPAIR OR REPLACEMENT
- Identified Needs**
- TRIANGLE: INCREASED HIGHWAY SAFETY
 - RECTANGLE: INCREASED HIGHWAY CAPACITY

July 1991



Redman/Johnson Associates, Inc.

Chapter 5

ENVIRONMENTAL PROTECTION

BACKGROUND AND ANALYSIS

Soils

Tappahannock is situated mainly on soils of the Tetotum-Tomotley-State Association. This soil association occurs typically at lower elevations of Essex County, on the river terrace paralleling the Rappahannock River. Soil conditions are a major determinant of future development, as soil characteristics affect excavating, road building, the design and construction of buildings and foundations, and the location of sanitary facilities. A fluctuating high water table, characteristic of the Tetotum-Tomotley-State Association, is the major limiting factor of these soils for development. The availability of central sanitary facilities in the Town allows for development in all but the wettest (Tomotley) soils of this association; subsurface drainage and proper surface water drainage may eliminate problems associated with the Tomotley soils.

The remaining area of the Town is on soils of the Rappahannock-Molena-Pamunkey Association. This soil association occurs at elevations below 15 feet, primarily along Hoskin's Creek and Tickners Creek. The soil association is predominantly Rappahannock soils, which are not suitable for any type of development because of flooding, high water table, and high organic matter and sulphur content. These Rappahannock soils are the tidal marsh areas which serve as a buffer zone along the waterfront, filtering runoff entering the waterways, minimizing shoreline erosion and serving as wetland wildlife habitat.

More detailed maps, at a scale of 1:20,000, showing individual soil boundaries within the association, are available at the Soil Conservation Service office.

Shoreline

Shorelands are a limited resource which is, for the most part, nonrenewable. Shoreline erosion control has been the responsibility of private property owners and assistance to them in coordinating efforts is a recently developed

service. It is desirable to preserve beaches for their beauty and recreational function and for protection of the fastland.

The entire Rappahannock shoreline in Tappahannock has been artificially stabilized, contributing to further erosion downstream. This is a temporary, and often ineffective means of beach protection. In order to reestablish or maintain existing beaches, the only course of action currently available would be a program of beach nourishment and structures specifically designed to trap moving sand at particular sites. Detailed study of the area involving a cost benefit evaluation would be necessary prior to initiation of any coordinated effort or unified solution.

Water

Water activities which serve as major attractions to tourists as well as present and potential residents of the area, are dependent upon high standards of water quality. Runoff from ground areas, sewage treatment discharge, leaching of septic tank effluent and construction activity along the shoreline all affect water quality. Tappahannock residents take pride in the beautiful Rappahannock and support its preservation. By policy of the Virginia Department of Health, Bureau of Shellfish Sanitation, an area of one-half mile radius from the mouth of Hoskin's Creek, in the Rappahannock, is restricted from commercial fishing of oysters and clams due to the presence of the sewage treatment plant near Hoskin's Creek. This does not affect the enjoyment of water sports and activities, as the Rappahannock has been noted as one of the most beautiful rivers in the East.

Adequate groundwater supply for present and future residential, commercial, and industrial uses exists in the upper artesian and principal artesian aquifer systems. The upper artesian aquifer system occurs 150 to 200 feet below surface, consistently, and is a good source of domestic water supply. Currently, water of good quality is being tapped from this system for individual use around Tappahannock. Tappahannock's central water system is drawn from the principal aquifer occurring at depths greater than 200 feet. Though it is costly to bring to the surface, this aquifer has potential for unlimited use of good water quality.

Development Constraints Analysis

To develop an understanding of which lands in the Town will have severe or potential development constraints the resources of the MPPDC were drawn upon to develop an Environment Constraints Map (Map 5-1). This map shows the resources associated with the Resource Protection Areas (RPAs), hydric soils and steep slopes.

A hydric soil is one that in its undrained condition is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation (plant life growing in water or in a substrate that is at least periodically deficient in oxygen as a result of excess water content). Because this identification includes soils that are either drained or undrained, not all hydric soils are wetlands and thus possess a severe constraint to development. Determination of the presence of wetlands in the Town will ultimately require field verification.

The steep slopes identified in the Town occur along the banks of Hoskins Creek and are not a significant factor in the development of the Town. The Resource Protection Areas (RPAs), defined later, do represent areas of severe constraint to development.

Map 5-1

Town of Tappahannock Delineation of Environmental Constraints

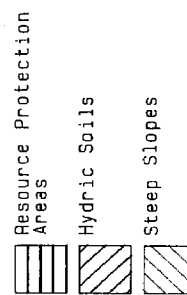
Scale : 1 inch = 0.25 Miles = 1,300 Feet

0 0.25 0.5
Mile

0 1,300 2,600
Feet

Prepared by Redman/Johnston Associates, Ltd., 1991

Map prepared by: Middle Peninsula Planning District Commission, 1991



Data Sources: U.S.S. Digital Line Graph,
Department of Conservation and Recreation Virginia Database, and
F.T.S. National Wetland Inventory

GOALS AND OBJECTIVES

Goal: *Provide protection for the environment.*

Objectives:

Maintain and protect the extensive wetlands and steep slopes in and around Tappahannock for open space.

Goal: *Ensure that shoreline structures are maintained and that erosion is minimized.*

Objectives:

Update shoreline situation report and correct any failing shoreline stabilization structures.

Protect the non-hardened shoreline through available laws and regulations.

If shoreline stabilization is necessary, the use of rip rap should be used.

Goal: *Manage the negative impact on water quality from all point sources of pollution.*

Objectives:

Enforce existing point source pollution laws and regulations.

Expansion of the town's sewage treatment plant should be anticipated relative to future demand.

Identify opportunities for developers to construct stormwater management facilities to eliminate the impact of some existing as well as proposed discharge of untreated effluent into the Rappahannock River.

Goal: *Reduce or eliminate the negative impact of nonpoint source pollution on water quality.*

Objectives:

Minimize impervious groundcover for all development projects.

Require implementation of urban "Best Management Practices" throughout the town, as found in the Erosion and Sediment Control Handbook of the State Division of Soil and Water Conservation.

Enforce existing laws and regulations to reduce nonpoint sources of water pollution.

Goal: *To protect the water quality, flood prevention, and habitat values of the town's tributary streams.*

Objectives:

Identify projects which could negatively impact tributary streams and enforce available laws and regulations to minimize this impact.

Avoid channelization of any tributary stream within the town's jurisdiction.

Continue to protect Tappahannock's floodplain from development and removal of vegetative cover.

Goal: *Limit land development and land disturbing activities on highly erodible, highly permeable, and hydric soils by enforcing available laws and regulations.*

Objectives:

In order to avoid the negative impact of individual septic systems on water quality, require any new development within the town to be connected with the sewage treatment plant.

Provide strict enforcement of the Erosion and Sediment Control Law for all land disturbing activities.

Goal: *Ensure there is no net loss of Tappahannock's remaining wetlands due to their ecological importance.*

Objectives:

Identify all projects potentially impacting wetlands and their functions and eliminate the possibility of or minimize by mitigation their destruction and damage through available law and regulations.

Goal: *The Town's natural resources shall be recognized as assets and therefore receive adequate protection.*

Objectives:

Water sources, marshes and swamps shall be recognized as assets and protected from pollution and where necessary restored to acceptable levels of quality by carefully regulating future shoreline activities.

Marshes and swamps which contribute to storage, erosion control or life support of wildlife shall not be drained, filled, or constructed upon.

Destruction of trees during construction and development shall be kept to a minimum and the planting of new trees and vegetation shall be fostered.

IMPLEMENTATION

The Chesapeake Bay Preservation Act

The primary tool for implementing the resource protection objectives of the Town is the Chesapeake Bay Preservation initiative. The Chesapeake Bay Preservation program launched by the state in 1988 establishes a baseline for protection of Town resources who disturbance or overutilization can and often have adversely impacted water quality in those Bay system tributaries that border and penetrate the Town.

In response to recent interstate regional agreements between Virginia, Maryland, Washington D.C., and Pennsylvania to clean-up the Chesapeake Bay, the State of Virginia has adopted the Chesapeake Bay Preservation Act

which mandates all Tidewater Virginia localities to establish program, plans, and ordinances to protect and improve Bay water quality. These "local programs" must be in conformance with the Chesapeake Bay Preservation Area Designation and Management Regulations adopted by the Virginia Legislature in September, 1989.

Purpose of the Act

The purpose of the regulations is to protect and improve the water quality of the Chesapeake Bay, its tributaries, and other state waters by minimizing the effects of human activity upon these waters and implementing the Chesapeake Bay Preservation Act, which provides for the definition and protection of certain lands called Chesapeake Bay Preservation Areas, which if improperly used or developed may result in substantial damage to water quality of the Chesapeake Bay and its tributaries.

The regulations establish the criteria that Tappahannock has used to determine the extent of the Chesapeake Bay Preservation Areas within its jurisdiction. The regulations establish criteria for use by the Town in granting, denying, or modifying requests to rezone, subdivide, or to use and develop land in Chesapeake Bay Preservation Areas. Regulations identify the requirements for changes which local government like Tappahannock must incorporate into their comprehensive plans, zoning ordinances, and subdivision regulations to protect the quality of state waters pursuant to the Chesapeake Bay Preservation Act.

The purpose of the Tappahannock Chesapeake Bay Preservation Program Comprehensive Plan Element is to collect and analyze data, explore issues and alternatives, and develop policies and implementation strategies, providing a basis to take local action to protect and improve the water quality of the Chesapeake Bay, its tributaries, and other state waters.

Data Collection and Analysis

The Chesapeake Bay Preservation Program for Tappahannock relies on the collection and analysis of water and land use data and characteristics. The information sources utilized for the adoption of the program are those which are the best in accuracy and currently available. Recognizing that in some areas data may be incomplete or on a reduced level of accuracy, the County/Town, in conjunction with the Chesapeake Bay Local Assistance Department (CBLAD) and the Middle Peninsula Planning District Commission (MPPDC), will strive to produce future inventories and studies to best reflect the current and changing characteristics of the lands and waters.

The goal of the inventory of natural and manmade features is to identify the areas within the Town which require and should be considered for preservation under the Chesapeake Bay Preservation Act (CBPA) regulations. These areas include: tidal wetlands, nontidal wetlands connected by surface flow and contiguous to tidal wetlands or tributary streams, tidal shores, floodplain, highly erodible soils, highly permeable soils, other nontidal wetlands, and other lands whose characteristics may have a significant impact on water quality protection.

Tappahannock contracted with the MPPDC to produce an inventory of the land categories identified above. The MPPDC utilized the following information sources in conjunction with an automated geographic information system to analyze, compile, and map the inventoried features:

- United States Geological Survey - Digital Line Graph: includes tidal wetlands, tributary streams, tidal shores, roadways, and county boundaries.
- U.S. Fish and Wildlife Service - National Wetlands Inventory: includes tidal and nontidal wetland and classification of each.
- Virginia Geographic Information System - Digital Information of the U. S. Department of Agriculture Soil Conservation Service Soil Survey of Essex County, Virginia: includes soil characteristics necessary to determine permeability and erodibility of soils.
- Federal Emergency Management Agency - Flood Insurance Rate Map: includes 100-year event floodplain for Essex.

The MPPDC has published the Comprehensive Water Quality Management Plan for the Middle Peninsula which provides water quality and issues data, analysis, and policy review. Specifically, the two elements of the Management Plan provide information relevant to Middle Peninsula localities' on-site wastewater treatment, potable water supply, boating facilities, living resources, waterfront access, existing land use and water quality (including pollution sources), and a general economic analysis of the region.

Other documents referenced directly or through familiarity include the CBLAD's Local Assistance Manual; the Virginia Institute of Marine Science's (VIMS) Shoreline Situation Report for Essex County; and other federal, state, and local studies.

Resource Protection Areas

Resource Protection Areas (RPAs) perform natural pollution control functions. Biological activities and physical characteristics in these areas are especially effective in controlling runoff, trapping sediment, and recycling nutrients and pollutants. Components of RPAs are certain wetlands, tidal shorelines, and buffer areas.

Wetlands benefit water quality by acting as a filter in trapping and holding nutrients, microbes, and other pollutants which come from upland runoff. Wetlands also act as a sponge by slowing down fast moving erosion water, absorbing the energy of it for flood control and storm damage protection, and acting as a buffer against coastal erosion from wave action.

The tidal shoreline interface where water meets the land is the scene of dramatic changes caused by the natural forces of wind and water. Tidal shore stability is generally governed by three main determinants; the amount of beach material, the intensity of natural and human forces, and the stability of sea level. The occurrence of tidal shore erosions is considered a natural process and becomes a serious problem only when human structures and activities unnaturally intrude into this process.

Buffer areas are zones of undeveloped vegetated land that are managed to reduce the impact on water quality of land disturbing operations in adjacent areas. Vegetated buffer areas provide a wide variety of environmental benefits, including sediment control, nutrient assimilation, stream back stabilization, in-stream temperature maintenance, flood control and protection, groundwater recharge area protection, and runoff volume reduction.

The components of the RPA are prescribed by Virginia statute, with the local option to include other lands within the RPA designation as necessary to provide a high level of protection to the quality of state waters.

Tappahannock has designated a RPA which consists of all tidal wetlands; nontidal wetlands, including impounded lakes and ponds connected by surface flow and contiguous to tidal wetlands or tributary streams; tidal shores; and an additional buffer area of 100 feet in width, except where reductions are allowed, so located within its jurisdictional boundaries. The extent of the Town RPA is shown on Map 5-1. The RPA serves the purpose of protecting environmentally sensitive land and water areas from the adverse effects of human activities to thus improve and protect the quality of water both locally and regionally.

The intent of RPA designation is to limit land disturbance and development to only those activities classified as "water dependent" or otherwise exempted in the Town Chesapeake Bay Preservation Area Overlay District. The integrity of the RPA and associated mechanisms with the CBPA Program will serve the goal of preserving those features most associated with the high standard in quality of life in Tappahannock, namely clean water and attractive landscapes for the beneficial use by both society and the natural ecosystem.

The implementation of the RPA goals will be through an overlay district contained in the Tappahannock Zoning Ordinance. The zoning ordinance will include a general designation RPA map in addition to the performance criteria to be included on specific site plans. The subdivision, erosion and sedimentation control, and floodplain ordinances will also include provisions to preserving water quality as related to CBPA. To truly provide for successful implementation, it is necessary to improve the capacity of both the county staff and general public through supporting educational opportunities related to Chesapeake Bay Program enforcement and management.

Resource Management Areas

The Chesapeake Bay Preservation Act and Criteria Regulations establish the Resource Management Area (RMA) as the landward component of Chesapeake Bay Preservation Areas. Lands to be considered for designation as RMA include the following: nontidal wetlands, floodplain, highly erodible soils, highly permeable soils, and other lands at local discretion.

RMAs are important in terms of water quality primarily because if improperly used or developed, they could release significant amounts of non-point source pollutants into the surface and ground water systems. The regulations do not limit the types of land use and development that may occur within the RMA. Instead, a variety of performance criteria will be applied to any proposed use or development within RMAs to ensure that those land disturbances that do occur will minimize the adverse impact on water quality. The performance criteria apply to stormwater control, on-site sewage disposal, and land disturbance/stabilization.

The designation of RMAs in Tappahannock has been based on the consideration of the sensitive land types listed above and described below.

Floodplain are areas which are subject to predictably recurring overflows from nearby bodies of water, including streams, rivers, bays, and oceans. A floodplain acts as a natural reservoir for such an overflow by storing excess

water and thus reducing the volume and speed of the flood water's effects downstream. The removal of natural vegetation through land development within a floodplain diminishes the natural flood control capacity of the area. The result can be an increase in non-point source pollution of the water body through severe soil erosion.

Highly erodible soils, if improperly disturbed or exposed, can contribute to water quality degradation through sedimentation and siltation of water bodies. In addition, nutrients and toxicant may be attached to soil particles which can be transported and released to the aquatic environment through erosion.

Highly permeable soils transmit water at such a rate that there is a potential for surface pollutants such as nutrient, sand, other chemicals, and sewage wastes to infiltrate, undergraded, into the nearby surface water and groundwater systems. This possibility of the highly permeable soil becoming a "highway" for pollutants indicates the need for management of development in these areas.

Local designation of other lands to be included in the RMA classification is based on several factors, including the distribution of the other land types listed above, the hydrology of the locality, and the general characteristics of the landform in the locality. The regulations of the CBPA also require the RMA to be contiguous to the RPA.

Tappahannock has chosen to designate the entire Town as a Resource Management Area (RMA). The extent and distribution of the land features considered as RMA components are such that few areas of the Town are lacking one or more of these features. It is also recognized that all lands within the Town are contained within the Chesapeake Bay watershed and activities upon these lands can act to impact the water quality of the Bay. In order to maintain the goal of high water quality within the Town, County and region, the policy of the Town is to include all lands as RMAs when those lands are not designated as RPAs.

The implementation of the RMA goals will be accomplished by specific provision in the Town zoning, subdivision, erosion and sedimentation control, and floodplain ordinances. Implementation will rely on an effort to improve the capacity of staff and general public through supporting educational opportunities related to managing and enforcing the Chesapeake Bay Program.

Development Suitability

The lands and waters within Tappahannock are varied in characteristics and natural function. Features such as topography, hydrology, soil type, vegetation, and geographic location all serve to influence land development. With the advances in construction methods and materials and sewage disposal technology together with the increase in population and property values, land which once may have been considered undevelopable is being engaged for development pursuits.

The Chesapeake Bay Preservation Act has highlighted the concern of land disturbing activities which cause water quality degradation through non-point source pollution. In addition, the use of methods of limiting or preventing non-point source pollution, such as Best Management Practices (BMP's), indicate that there are reasonable means to manage the potential impacts of most development. To further explore the compatibility of development to the land site, an additional step of analyzing the suitability and capacity of the site is needed.

Perhaps the most obvious factor to consider when analyzing a site for development suitability is the characteristics of the soils present. Soils play the important role of determining weight loading capacities, on-site sewage treatment assimilation, erosion potential, and vegetation growth.

An additional factor of importance is the location of "poorly" or "marginally" developable soils in relationship to streams, water bodies, and wetlands. Development on such soils, in close proximity to designated RPAs, can produce negative impacts on water quality.

A development suitability analysis can provide the necessary detailed information on both the most and least desirable portion of a parcel for development. With this information in hand, the Town and the land developer can arrive at the development design solutions which presents the highest compatibility of the use and the environment.

Consideration has been given to the extent of analysis needed to determine the suitability of a site for development. A detailed, site-specific soils survey would provide the information necessary to match the suitability with the uses proposed for the site. The topography and hydrology of the site should be of a detail such that overland sheet flows of stormwater can be predicted. A knowledge of the vegetation and wildlife habitat is important for a site as well as for the surrounding areas. The comprehensive analysis of all these

features can lead to development sensitive to the natural resources of Tappahannock.

To preserve the development rights of land owners, options to mitigate impacts and utilize BMPs should be allowed. It is envisioned that the level of detail of the suitability analysis will provide the owner with the information to balance the management options presented by the site.

Tappahannock has determined a comprehensive development suitability analysis to be necessary to the optimum function, design, and environmental preservation of land development sites. The comprehensive development suitability analysis should include a detailed inventory of soils with the capacities for on-site sewage treatment, weight loading, erosion potential, and vegetation growth documented. Discussion of wildlife habitat and other significant environment should be included. Mitigating factors, such as the use of BMP's should be included. This analysis should be conducted for all proposed development exceeding 10,000 square feet in land disturbance within Chesapeake Bay Preservation Areas.

The requirement to conduct a comprehensive development suitability analysis will be implemented through the Town's plan of development procedures, including zoning and subdivision ordinances.

Waterfront Access and Boating Facilities

The Rappahannock River and Hoskins Creek are resources belonging to the citizens of Virginia. The use of these waters for recreation and commerce are traditional and acceptable as the economic base for the area. With the subdivision of large tracts of waterfront property into numerous smaller lots, each under private ownership, comes the competing interests of those owners seeking privacy and the upland residents and tourists seeking use of the waters. The increasing use of our waterways leads to concern of environmental damage due to improper or reckless activities causing pollution or habitat destruction. This concern leads to the need for greater management capability over waterfront access and uses.

There are two broad uses involved in the waterfront issue. First, the use of the waterfront for boating access, whether it be at a marina, a boat dock, ramp and pier, or car-top boat landing. Second is the utilization of the shoreline and near-shore areas for recreational activities such as swimming, bank fishing, nature studying, and picnicking. Either public or private facilities can provide these activities. Both boating and shore recreation are allowed exemption as "water dependent facilities" under the requirements

of the CBPA, provided that non-water dependent components are located outside of the RPA.

Boating access to the tidal waters of Tappahannock is provided at boat ramps at Dock and Prince Street and at the private marina in Town. The management of waterfront access options and opportunities concerns the competing interests of costs of public facilities and private facilities and the protection of the environment. Opportunities for developing a waterfront park are discussed in Chapter 9, Parks and Recreation.

Tappahannock has determined that boating facilities should be located only where: there is sufficient water depth, without frequent dredging; there are not public or private shellfishing grounds which would be impacted; there is adequate tidal flushing; there are suitable soils for sanitary facilities or connection to a municipal sewer system; there is limited harm to fish and wildlife habitat; and there are compatible existing land and water uses nearby.

Existing marinas and boat repair facilities are encouraged to adopt operational procedures consistent with BMPs. When existing marinas remodel or expand their facilities, structural BMPs should also be constructed. For proposed boating facilities, BMPs should be required as a condition of development approval.

The Town, with the County, should study the needs for waterfront public access in conjunction with state, federal, regional, and private agencies. The Planning District Commission should be encouraged to assist local efforts in planning water access, open space, and park facilities which will benefit education and habitat vital to water quality. In addition, when regional projects such as a regional airport, park, or solid waste landfill are being planned, there should be an open space/recreation/natural habitat component included in the development.

Existing Pollution Sources

Pollution discharges can be defined as either point or non-point in their origin. Point source inputs represent discharges from discrete and identifiable points, i.e., discharge pipes, and play a major role in determining the quality of surface waters. Such sources include both municipal and industrial dischargers which may contain an array of toxic and nutrient material. Often these discharges tend to vary in chemical and physical composition as well as fluctuate in their concentrations. The resulting impact to surface water could easily set up a menu of scenarios depending on receiving water conditions.

The other major category of physical, chemical, and biological factors impacting surface water quality is known as non-point sources. This category is by far the most significant in terms of its impact to surface water quality in the Middle Peninsula Planning District. Basically, non-point sources encompass all those inputs to surface water which cannot be identified as having originated from a discrete discharge point. Nationwide, non-point source pollutants are responsible for 73% of the oxygen demand, 84% of the nutrients, 98% of the bacteria counts, and 99% of suspended solids in surface waters.

The Virginia Water Control Board (VWCB) regulates existing point source pollution dischargers. Essex has little role in the enforcement of existing permit conditions however, compliance is tied to land use ordinance approvals.

The Town Chesapeake Bay Preservation Program, Erosion and Sedimentation Control Ordinance, and participation in the activities of the local Soil and Water Conservation District are means of local management of non-point source pollution. A periodic review of the effectiveness of these local ordinances can determine where changes or amendments may be needed to achieve the goals of reducing non-point source pollution. To that end, the Town should review all land use ordinances at least every five years to determine effective management of point and non-point source pollution sources. The Town will also seek assistance from the Chesapeake Bay Local Assistance Board (CBLAD), VWCB, Division of Soil and Water Conservation, MPPDC, and other state and federal agencies to produce an inventory of land uses at such a degree of accuracy so as to provide management and modelling parameters necessary for effective control of pollution sources in the future.

Redevelopment of Intensely Developed Areas

The designation of Intensely Developed Areas (IDAs) is intended to address the unique land use patterns and water quality impacts of heavily urbanized areas. Such areas are characterized by industrial, commercial, residential, and institutional uses which are spatially concentrated, heavily trafficked, and largely devoid of natural vegetation. Development within these areas is usually confined to either redevelopment of previously developed sites or construction on small, vacant, or "infill" parcels. The concentration of intensive uses and prevalence of impervious surfaces in these areas may contribute a variety of non-point source pollutants, such as hydrocarbons and heavy metals, to surface waters.

The goal of designating IDAs is to focus development in areas where it is already concentrated and supported by existing infrastructure, while improving water quality. In recognition of the fact that the IDA is largely devoid of natural vegetation, activities within the IDA may be exempt from having to establish or maintain the full buffer areas within RPAs.

The CBPA regulations provide that IDAs may be designated in "areas of existing development and infill sites where little of the natural environment remains..." and "...provided at least one of the following conditions exists:

- Development has severely altered the natural state of the area such that it has more than 50% impervious surface;
- Public sewer and water is constructed and currently serves the area. This condition does not include areas planned for public sewer and water;
- Housing density is equal to or greater than four dwelling units per acre."

The designation of IDAs is intended to allow reasonable development where development already exists or surrounds a site, while at the same time providing at least a 10% reduction in stormwater runoff transported pollutants. This reduction can be achieved through a variety of means, including: creation of vegetated buffer areas to the greatest extent possible, reduction of impervious areas, and use of water quality BMPs.

The identification of areas which qualify for IDA designation in Tappahannock has revealed insignificant land area to justify the delineation as part of the local Chesapeake Bay Preservation Program. Individual hardship cases can be handled through the present exception and variance procedures outlined in the Town Zoning Ordinance.

Through not identifying areas for IDA designation at the present time, the Town reserves the option to make such designation in the future should the need arise and conditions of an area justify such designation consistent with the intent of the Chesapeake Bay Preservation Act. Should such designations be made in the future, the implementation of the IDA overlay district will be accomplished through the application of the zoning, subdivision, and erosion and sedimentation control ordinances and the development review and approval procedures of the Town.

Local Program Development

The performance criteria for land use and development established in the Town Chesapeake Bay Preservation areas overlay zone district currently being reviewed by the State prior to Town adoption are hereby included as part of Tappahannock's Comprehensive Plan. In addition to designation of Town Chesapeake Bay Preservation Areas, the Town will incorporate these criteria into its subdivision regulations, and erosion and sediment control ordinance. The Town will also establish a development review and approval process for building permit issuance for development within designated Chesapeake Bay Preservation Areas. The Town will also establish administrative and enforcement procedures as part of its overall Local Program for Chesapeake Bay Preservation.

IMPLEMENTATION RECOMMENDATIONS

The following is a list of specific measures the Town should undertake to achieve its environmental quality goals and objectives set forth in this Chapter.

- The Town should adopt a Local Program for Chesapeake Bay Preservation which contains the program elements and performance criteria for land use and development as outline in this chapter.
- The Town should limit future development in this Plan's Resource Protection District to low intensity residential uses, passive park and recreation uses, and water dependent uses.
- The Town should continue to require evidence of all federal, state and local environmental and health permits as a condition of development approval.
- The Town should prohibit development within floodways and floodplain which limits natural water storage capacity. Use of floodway fringe areas for recreational, other non-structural uses and open space should be encouraged.
- Performance standards and controls are recommended to permit development design flexibility and to adapt to variable site characteristics. New environmentally sensitive development regulations are needed which recognize and protect natural site functions. Environmentally sensitive features such as wetlands and critical plan

and wildlife habitats should be explicitly protected and buffered from development activities.

- Open space requirement should be put into effect. The extent to which a site can be covered by impervious surfaces should be limited. Requirement should specify minimum areas that must remain undisturbed and available for stormwater infiltration and site vegetation.
- No net change in runoff should be allowed at development sites. Drainage techniques normally channel stormwater runoff away from the structure and off the site. The volume and velocity of stormwater runoff leaving a developed site should be no greater than pre-development levels, primarily for adjacent property protection and non-source point pollution control.
- Natural vegetation and trees should be preserved during development. Site clear-cutting for development purposes should be expressly prohibited. Mature trees should be protected. If tree removal is unavoidable, replacement should be established. Where vegetation is removed, temporary grass seeding should be required for erosion control if the site remains untreated for more than two months.
- There should be zoning incentives to promote cluster development. Cluster development makes wise use of land resources and is environmentally sensitive. The Town development ordinances should be updated to provide greater incentives for clustering.
- Slope regulations should be enacted. A steeply sloped site cannot support the same development density as a flat site without severe disturbance. Permitted density should be used only on portion of a site not characterized by steep slopes. Grading activities should be limited in proportion to slope vulnerability.
- The Town should coordinate with state and federal agencies and non-profit conservancy organizations to protect environmentally sensitive lands through acquisition and/or protective easement programs.

This chapter discusses the characteristics of environmentally sensitive Town lands and waters. It describes some of the important reasons for protecting the various natural features which comprise and contribute to the quality of the Town's environment. Recommended actions are stated which should achieve Town goals and objectives. Particular focus is accorded to

Comprehensive Plan requirements of the recently enacted Chesapeake Bay Preservation Act and Regulations.

The environmental attributes of Tappahannock strongly influence quality of life. The condition of the environment must be evaluated in terms of the potential impact upon the daily activities and the standard of living of the community. Environmental resources should be protected on behalf of the economic well-being of the general public with regard to both individual property interests and collective taxpayer investments. The quality of Tappahannock's environment is one of the factors which makes the Town such a desirable place to live and work. The intent of Town environmental protection measures is not to stop development, but rather to ensure the compatibility of development with the continued productivity and value of environmentally sensitive land and water areas.

Chapter 6

HOUSING

In this chapter housing characteristics and demographic trends will be examined to provide the background for evaluating alternative implementation strategies necessary to achieve Town's housing objectives.

BACKGROUND AND ANALYSIS

This section identifies the characteristics and trends of the Tappahannock housing market.

The housing in Tappahannock consists mostly of single family dwellings. The 1985 Comprehensive Plan for Tappahannock broke down housing types into single family, multi-family and mobile homes. (See Table 6-1) Based on 1980 census data, approximately 69.8% of the total year round housing stock consisted of single family homes. Multi-family homes accounted for 24% of the total year housing stock in Tappahannock. Finally, mobile homes comprised 6.2% of the total year round housing stock. The number of mobile home parks in the Town has not changed since 1980. The present trailer park which is located across from the airport, consists of 54 units and the park covers an area of 23.4 acres.

Table 6-1

TABLE 1 - HOUSING TYPES - 1980

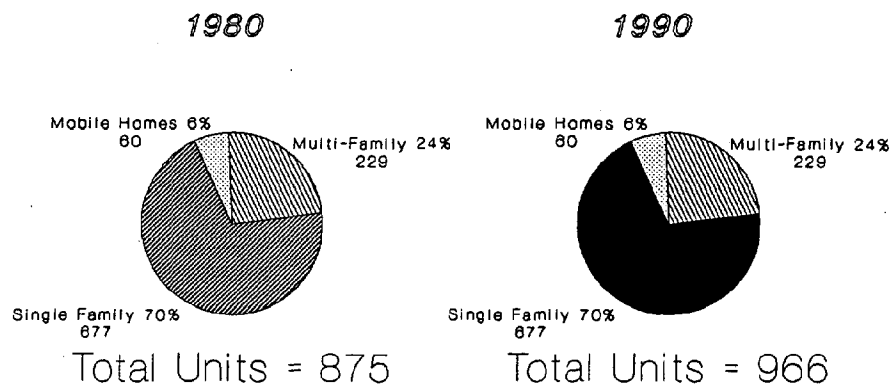
<u>Type</u>	<u>No. of Units</u>	<u>Percent of Total</u>
Single Family Dwelling	61	70%
Duplex	41	
Apartment	169	
Total Multi-Family Dwellings	210	24%
Mobile Homes	54	6%

1985 plan reported that 61.8% of the homes were owner occupied and 28% were renter occupied. Compared with 1970 census figures, this showed a slight increase in owner occupied dwellings (59% in 1970), and a decrease in renter-occupied dwellings (33% in 1970). Vacant housing accounted for 7.8% of the housing stock in 1970 and 10.2% in 1980. The census data indicates that the demand for rental housing decreased along with the rise in vacant housing.

Analysis of the trend in housing unit types from 1980 to 1990 (see Figure 6-1) reveals the following characteristics. First, it is obvious that the dominant unit has remained the single-family detached home. Toward the end of the decade, the multi-family and townhouse market has been active. The Comprehensive Plan and associated Town policies will, ultimately, influence where future housing is located in the Town as well as the mix of types of housing.

Figure 6-1

Dwelling Units by Type 1980 to 1990



Redman/Johnston Associates, Ltd.
July 1991



Assessed Valuation

The assessed value of the Tappahannock housing inventory is shown in Table 6-2. The housing valuation was grouped to provide levels of analyses for low, middle and upper income lots to evaluate the distribution of housing types in the Town.

TABLE 6-2
ASSESSED VALUE OF EACH PROPERTY CONTAINING
RESIDENTIAL UNITS

<u>Range of Assessed Value</u>	<u>Number of Units</u>	<u>Percent of Total</u>
Class 1 Single Family, Urban		
Under \$50,000	181	50%
\$50,000 - \$100,000	120	33%
Over \$100,000	60	17%
Class 2 Single Family, Suburban		
Under \$50,000	6	60%
\$50,000 to \$100,000	4	40%
Class 3 Multi-Family Suburban		
Under \$50,000	17	50%
\$50,000 - \$100,000	6	18%
Over \$100,000	11	32%

The significance of the above percentage breakdown is the even distribution of low, middle, and upper income housing in all three housing classes. This implies a balanced community with homes for all levels of income within the Town limits.

The high percentage of class 1 housing below the assessed value of \$50,000 indicates there is a sufficient number of single family, low income housing units. In fact the number of housing units in all the income ranges creates a well balanced mix for the Town as a whole. However, with the development of the new South Tech plant, an affiliate of Canon, and other industries

locating in the Town, a shortage of housing may result in the future. The General Affairs Manager of South Tech stated in an interview conducted on November of 1989, that there was an abundant supply of resale housing and new construction in the Town for management personnel who have moved to Tappahannock. Further, the firm hired approximately 200 people and most of these employees commute from outside of the Town limits.

Because of the South Tech relocation, most of the housing units appraised between \$80,000 - \$90,000 have been absorbed by new residents. It has been observed, however, that there are infill lots in existing subdivisions which are available for future development. This factor is important because more single family housing will be needed to support the possible work force moving into Tappahannock due to commercial and industrial development. In an interview conducted on October of 1989, a realtor indicated that there are at least two large parcels of vacant land behind Essex Square that are available for development. Although the available land is an asset to the town, the selling price of the units may exclude lower to middle income families.

The Rappahannock Apartments are one of a small number of low income multi-family housing developments in Tappahannock. The Section 8 Housing Certificate/Voucher Program provides rent subsidy assistance to qualifying low-income households. A representative from the Middle Peninsula section of this program indicated that 30 applications are available for Tappahannock residents. Currently, 29 of the 30 are being used and not one of the participants had trouble locating available rental units. According to the Farmers Home Administration, who provides loans to lower- middle income people, there is not shortage of available units for anyone who applies for a loan and is eligible for subsidized housing. This indicates that there is a sufficient number of low income housing in the town of Tappahannock.

Housing Conditions

To evaluate housing in Tappahannock from a land use standpoint, a knowledge of the structural condition of the housing inventory in the Town is important. To meet its housing objectives, the Town of Tappahannock initiated a Rehabilitation Planning Program. The Program was designed to identify and address substandard housing units and assist the Town in applying for financial support from either the state or federal government to improve those units. The program is conducted by the Middle Peninsula Planning Commission and the Northern Neck-Middle Peninsula Area Agency on Aging which serves as an acting housing authority along with

the State Department of Housing and Community Development. The program is to pinpoint the need for housing improvements in low and middle income households because "they live in either single family, detached frame houses built prior to 1970 or in multi-family frame houses built prior to 1970".

The report for the planning grant stated that some of the low - middle income residents live in houses that are well constructed but they lack modern enhancements such as adequate heating and insulation, ventilation, lighting, electrical wiring, fire resistance and sanitary facilities. The program determined that 25% of the houses are rental units. In addition, 1.6% of the units lacked complete bathroom facilities, 1.2% of the units were not on the public sewer system and approximately 1% lacked complete kitchen facilities. These numbers are relatively low compared to Countywide figures.

A survey was conducted in June of 1989 which revealed that there were a significant number of homes in need of rehabilitation. Though the census data is somewhat old, little has been done to improve these substandard units. Also it can be assumed that these households are on the lower end of the economic scale and have few resources to improve their homes or move to more suitable housing. At the present time, the area between Virginia Street and Airport road has been targeted for improvements.

The overall housing situation in Tappahannock has a good mix of housing values as observed through the data collected. Table 6-3 represents the potential number of dwelling units that can be built within the corporate limits at the residential densities proposed in this Plan. The potential for 900 housing units well exceeds the past demand of 9 units per year for the foreseeable future. Although there exists land for residential development, future economic growth will likely create a demand for additional housing at all income levels.

Table 6-3
Residential Buildout by Selected Planning Districts (1)
Tappahannock, Virginia

Planning District	Acres	Average D.U.s/a	D.U.s
Residential Suburban			
114 Mobile Home units	n/a	n/a	114
34 Platted subdivision lots	n/a	n/a	34
Unsubdivided parcels	91	3	273
Mixed Residential Cluster	79	7	490
		TOTAL	911

NOTES:

- (1) Only includes planning district with significant amount of developable lands rather than scattered infill areas.

Rental Housing Subsidy Programs

Affordable rental housing in Tappahannock is subsidized through the following:

Department of Housing and Urban Development (HUD)

1. Section 221 (d)(3) provides mortgage insurance to help finance the construction or substantial rehabilitation of large multi-family (5 or more units) rental or cooperative housing projects for low and moderate income families.
2. Section 8 Existing Certificates and Moderate Rehabilitation Housing provide assistance on behalf of households occupying physically adequate, moderate-cost rental housing of their own choosing in the private market. Federal payment per unit equals the difference between the government-established Fair Market Rents and thirty (30) percent of the tenant's income. This Program is administered through the Rental Assistance Office.
3. Section 8 New Construction and Substantial Rehabilitation subsidizes rents of lower-income households occupying public and privately developed projects. Federal payment per unit equals the difference

between the government-established Fair Market Rents and thirty (30) percent of the tenant's income. In Tappahannock, this Program is administered through the Rental Assistance Office.

Farmers Home Administration (FmHA)

Section 515 of the Housing Act of 1949 authorizes FmHA to make or insure loans to finance the purchase, construction, or rehabilitation of rental and cooperative housing in rural areas for occupancy by the elderly, the handicapped, or low and moderate income families. The purchase of a site and the provision of essential housing-related facilities may be included in a loan where appropriate. The 1983 amendments to the Act require that, to the extent that rental assistance programs are available, all units must be occupied by very low income persons (income below 50% of the median).

GOALS AND OBJECTIVES

Goal: *Maintain the existing mix of the assessed housing values in the Town of Tappahannock.*

Objectives:

Encourage housing development, single or multi-family, dependent on lot size.

Encourage development of infill housing in existing subdivisions to maintain the housing balance.

Continue programs which identify substandard housing.

Goal: *Efficient, high quality and attractive residential development and sound housing for all residents shall be encouraged.*

Objectives:

The Town shall ensure that developers of subdivisions provide streets, drainage facilities, curbs, sidewalks, easements and recreational area or open space necessary to serve the residents of such subdivisions.

Goal: *The Town shall respond to the local need for housing families of all incomes.*

Objectives:

The Town shall encourage that poor housing be brought up to minimum standards or replaced where renovation is not feasible through available Federal, State and local programs.

The Town shall explore alternative means of meeting the housing needs of low, moderate and fixed income residents.

The Town will consider techniques for affordable housing including incentives for private developers to produce affordable housing and provisions for planned manufactured housing communities

IMPLEMENTATION RECOMMENDATIONS

There are a variety of implementation alternatives available to local governments for the provision of affordable housing. The following implementation techniques have been selected to implement the Town's identified objectives.

Flexibility in Housing Types — Foster land use patterns that reduce unit land costs and encourage flexibility in housing types. This can be achieved through planned residential development and cluster development provisions in the Town's zoning ordinance. This strategy will also be implemented by one of the basic concepts of the Land Use Plan which is to allow maximum flexibility in configuring lots into clusters rather than relying on minimum lot sizes to determine the desired density. This flexibility also allows for maximizing efficiency in providing infrastructure to the homesites. The Land Use Plan allows for multi-family housing to be permitted in the Mixed Residential Cluster District and other appropriate locations without increasing overall permitted densities.

Use Federal and State Programs — Continue to use Federal and State programs to help meet Tappahannock's housing needs. The following housing programs should be used by the Town to assist residents with low to moderate incomes.

- **Congregate Housing Loan Program** — Funds from this program are specifically for projects which provide housing for such low or

moderate income disabled or elderly persons. The project should have no more than 30 units and provide central kitchen and dining facilities. Loans of up to \$250,000 per project are available at an interest rate of 2% for a 15 year period. Non-profit organizations, private corporations, and governmental entities are eligible for the loans. This program is offered through the Department of Housing and Community Development.

- **Virginia Housing Partnership Program** — Tappahannock is eligible to apply for either a block grant or grant for specific project under this program. Eligible activities include single and multi-family rehabilitation, energy loans, and funding for emergency home repairs.
- **Virginia Housing Production Program** — Loans are provided to non-profit organizations or for-profit developers to construct single-family homes and multi-family housing.
- **Small Cities Community Development Block Grant (CDBG)** — Funds are passed through the State Department of Housing and Community Development for a variety of housing related projects such as housing rehabilitation programs.
- **HUD Section 236 Program** — subsidizes mortgages for rental housing projects and provides rent supplements which are subsidy payments to the owners of private rental housing on behalf of lower-income tenants.
- **HUD Section 202 Housing for Elderly and Handicapped** — provides direct loans for the development of rental housing for the elderly and handicapped. Projects also receive Section 8 subsidies.
- **HUD Section 8 Housing Vouchers** — provides rent subsidy payments to be based on a newly established payment standard rather than on actual unit rents. The standard is to be based on the Fair Market Rents set for the Section 8 Existing Housing Program. Families renting units above or below the new payment standard will pay more or less than 30 percent of adjusted income for rent.

Bonus Densities for Affordable Housing — Grant bonus densities to planned development projects to encourage the provision of more affordable housing. It is recommended that in order to encourage the production of

housing for low-income residents, the density of development within certain districts may be increased with the following guidelines:

- No more than a bonus of one additional dwelling unit per acre above the permitted density.
- The units provided must meet all conditions with regard to income qualifications and other standards that may be established by the Town to ensure that the units are bonified affordable housing.

The bonus for low-income housing should not be permitted where subsidized units constitute more than 20 percent of a development, except in the case of a development of less than 10 dwelling units.

Mobile Homes—Continue to permit mobile homes as a means of providing affordable housing with the needed performance standards to insure their use creates a safe, sanitary and comfortable living environment. Mobile homes, or manufactured housing, tend to be less expensive than most other types of single family homes and, consequently, serve as a practical alternative to affordable housing. Within the Tappahannock Zoning Ordinance, Subdivision Ordinance and other applicable ordinances, mobile home subdivisions and mobile home parks will be required to meet all the same standards as required for other single family dwelling detached development. For example, road standards that apply to conventional housing will also apply to mobile home parks. Mobile homes will continue to be permitted in mobile home parks and subdivisions through conditional zoning.

Accessory Apartments — Permit accessory apartments under certain conditions with adequate safeguards to protect the character of the existing residential neighborhoods. This strategy will stimulate new, moderate cost rental housing for both young and elderly households while preserving large, older homes and allowing elderly homeowners to stay in their homes. Among the conditions of approval for accessory apartments is that the accessory apartment be “clearly subordinate to” the main unit. This will be achieved by requiring that the apartment be less than a specified percentage of the square footage of the original house. Another condition is that conversions should not be permitted in new housing. Finally, the house should have at least one owner occupied resident and should, from the exterior, appear to be a single family residence.

Fixed Floor Area Ratio — A fixed floor area ratio for single family residential structures in a planned residential development will allow smaller homes to

be built on smaller lots. Housing costs can be contained in the small lot single family developments by tying the size of the dwelling unit to the size of the lot by a maximum floor area ratio per lot. This will ensure that the scale of the house is consistent with the lot thus preserving the less dense residential character sought in single family detached housing.

Commercial Apartments — Permit commercial apartments in the moderately intense commercial use zones such as the central business district. This type of housing represents a lower cost option for builders since there is no land value associated with the dwelling units. In addition to providing more affordable housing, locating residential uses in commercial areas also provides for the more efficient use of existing infrastructure and government services and greater accessibility to jobs. Because the apartments are primarily occupied during the hours that commercial uses are normally left vacant — the night and early morning hours — greater use is made of existing parking lots. The Town should tie increased lot coverage or floor area ratios to the provision of second floor residential units as an additional incentive to increasing affordable housing stock.

Housing Code — Adopt and enforce a housing code to remove substandard conditions of rental housing.

Self Help — Encourage the formation and operation of Self-Help groups. One such organization is the Habitat for the Humanities. The Town might consider providing money for these organizations.

Designing for Economy — Designing for economy can be achieved without sacrificing marketability. The Town should pro-actively educate builders on techniques proven to save money and, when possible, reduce standards that will save money without sacrificing structural strength or aesthetic quality. In most cases current Town building codes permit cost saving designs; however, there are opportunities for the Town to relax standards. The Town needs to evaluate the building code to ensure that unnecessary impediments are not preventing the use of economical designs.

Housing Trust Fund — The Virginia Housing Development Authority (VHDA) and Virginia Department of Housing and Community Development (VDHCD) will be administering such a State fund to be used as a revolving loan fund to induce the development of low and moderate income housing statewide. A housing trust fund can be both a generator and a conduit of funds for the development of affordable rental housing.

To create a flexible Housing Trust Fund as a mechanism to help fund affordable rental housing, the Town should consider the following:

- Designing a housing trust fund that will be a stable source of financing. Sources could include proffers in the form of cash contributions from developers, donations from corporations, county government contributions, and real estate transfer taxes.
- Designating uses for housing trust funds such as interest rate buy-downs for projects meeting affordable rental housing criteria, second trust financing, land cost buy-downs, water and sewer tap fee reductions, rent supplements, and seed money for non-profit developments.
- Actively pursuing state enabling legislation, as necessary, to allow the use of housing trust funds and certain revenue sources for affordable rental housing.

In the end, it is the inability of the market to easily accommodate the needs of all the residents of Tappahannock that underlies the entire housing issue. The housing problem is also one that cannot easily be solved. The federal government and others have been grappling with this issue for decades. Despite these efforts, it is still a major problem, and certainly one that will not be solved by this Plan. The best that can be done is to work at the housing issue from a variety of directions and to seek incremental gains.

Chapter 7

ECONOMIC DEVELOPMENT

BACKGROUND AND ANALYSIS

Tappahannock's Local Economy

The Town of Tappahannock and Essex County have experienced a significant decline in the unemployment rate between December 1983 (Comprehensive Plan 1985) and August 1989 (the Virginia Employment Commission). Unemployment fell from 8.9 percent in 1983 to 2.5 percent 1989. The data also reveals that the absorption of available labor is reflective of the trend for the Commonwealth of Virginia during the same period (from 5.5 percent to 3.0 percent).

The major industry in Tappahannock in 1980 was Manufacturing. At that time, 41 percent of all workers in Essex County were employed in some kind of manufacturing industry. However, by 1986 this figure dropped 31.7 percent of all workers. Retail trade over the same time period gained by 5.7 percent to hold a share of 31.5 percent of all workers. Service industries, more specifically health services, increased from 15.7 percent share of workers in Essex County in 1980, to a 19.3 percent share in 1986. While manufacturing was the dominant industry in 1980, by 1986 retail trade held an equal status with manufacturing as a dominant industry.

The shift in employment coincides with the general trend which has occurred in the United States over the past twenty years. The United States is shifting from an industrial based economy to a more service oriented economy. It is evident by the shift in employment from manufacturing to retail trade and services that Tappahannock is also experiencing this trend but at a rate less than the United States as a whole.

Tappahannock saw a decrease in employment from 1980 through 1982. During that same time period the area also experienced a loss of population. These decreases can be attributed to the recession that occurred in the early eighties. By 1983, however, Tappahannock began to see increases in employment figures. This trend continued through 1986. Although the population remained constant over that same time period, the ratio of

population to workers decreased. Generally, employment in Tappahannock has been increasing at a rate higher than that of the population.

Basic Industries

The economic base analysis in the 1985 and VCU plans indicates Tappahannock's economic base is expanding. In 1980, there were 11 basic industries in Tappahannock. By 1986, there were 14. Retail trade gained two basic industries while manufacturing gained one. It is important for a community to have a diverse economic base. If a community is dependent upon a few industries, then those industries will largely affect the economy of that community. If an industry is doing poorly, then the economy of that community will do poorly. On the other hand, if the economic base is diverse, then the downturn of one industry will not greatly affect the community's economy.

While Tappahannock's economic base is becoming more diverse, most of the basic industries experienced an increase in export employment from 1980 to 1986. This increase occurred even though the population of the area has generally remained constant. "Textile mill products" is Tappahannock's most important industry because it is the community's largest export employer. Manufacturing industries in general account for 724 jobs, therefore it is Tappahannock's most important industry type.

Export employment as a whole decreased 9.6 percent in Tappahannock from 1980 to 1986. This decrease can be attributed to the recession the United States experienced in the early eighties. The largest single loss of export employment occurred in the manufacturing industry "transportation equipment."

The economic base analysis shows that Tappahannock's economy is becoming more stable. There was an increase in the number of basic industries from 1980 to 1986, and most of those industries saw an increase in export employment. This expanding economic base is stabilizing Tappahannock's economy by allowing it to become less dependent on one industry. The new Cannon plant which recently opened in Tappahannock is presently employing over 100 persons. This business will help stabilize the economy further because it will create more export employment.

The economic base analysis also shows that Tappahannock is a regional center. Export employment was present in six retail trade industries. Since production in these industries exceeds local demand, consumers are coming into Tappahannock to purchase these goods. Unlike manufacturing industries that produce a good which most likely be sold outside the area,

retail trade products are sold within the immediate area. Tappahannock is becoming more of a regional center than it was in 1980. There has been an increase in employees, export employment, and base industries in retail trade as a whole.

Tappahannock has become more service sector oriented since 1980. This trend is one that the United States is experiencing as a whole. Although the manufacturing industry has the most expert employment in Tappahannock, the retail trade industry has gained substantially in that area since 1980. Retail trade also added two more basic industries and saw a 9 percent increase in employment figures through 1986. Since Tappahannock is becoming more of a regional center, the retail trade sector has probably increased even more since 1986.

Business Corridor

The Town of Tappahannock is an active trade center for the region which is reinforced by the crossroads of Highways 360/17. Also, the fact that sixty-three percent of retail and business services along the corridor is regional and thirty-seven percent is local activity is another factor that reinforces the statement that Tappahannock is clearly an active trade center for the region.

The rents along the corridor are important as they differ according to their location. The downtown area, the rents are much lower ranging from \$600 to \$650 per month for businesses. However, the rents along the corridor are much higher from \$950 to \$975 per month towards the shopping centers. Even though rents are much higher along the corridor, businesses continue to locate along the Highways of 360/17 because of better visibility and access for shoppers.

The three existing shopping centers of Tappahannock create a regional center for the Town. The Rappahannock, White Oak Village, and Essex Square shopping centers all provide convenient shopping for the neighborhood, community, and regional area. All three shopping centers have an appropriate mixed use which establishes a well developed regional center. This appropriate mixed use is a combination of at least three revenue producing uses from retail, office, and restaurant facilities. The most typical tenants in regional shopping centers are fast food services, family stores, and card and gift stores. All of these tenant types are available in the shopping centers in Tappahannock.

The central business corridor of Tappahannock plays an important role to its businesses, shoppers, and the community. The data represents a greater

portion of the regional retail and service businesses being conducted along the corridor which provides a stable economy for the community. Presently, the corridor has produced a valuable and active center for conducting regional business activities. These shopping centers offer a wide variety of services for local and regional shoppers, this is important to the community because it brings in new money to the local economy. This past trend represents growth in retail trade at the local and regional level that will remain strong and stable in the future.

Downtown

The downtown district is a primary retail and service provider for the local community with some retail services directed towards the regional community. A review of the business inventory suggests that nearly sixty percent of the consumer base is derived from the local community. Approximately twenty-six percent are a mix between local and regional users and thirteen percent are dedicated to the regional markets (VCU 1989 Plan).

The distribution between local and regional service providers could become more equal if plans are developed which encourage more tourist interaction in the downtown area. It is interesting to note that the composition of the regional market is primarily retail in orientation, such as furniture stores and antique shops which account for a large percentage of the downtown retail business uses. The balance of the regional offerings include services such as restaurants, medical services and building contractors.

The local market on the other hand is comprised of professional services such as realtors, banks, lawyers, insurance offices, local government offices, and hair salons/barber shops. A small percentage of uses are dedicated to specialty retail uses such as children's clothing, books, crafts and bridal accessories.

The downtown business district, which by design is oriented towards the pedestrian consumer, provides goods and services for the local community. The quantity of undeveloped land is limited and the number of building vacancies are limited, through many structures are not fully occupied or oriented towards the window shopping consumer. The expansion of the parking capacity should be considered when implementing a downtown redevelopment plan.

Industry

The economic base analysis suggests that the industrial sector accounts for approximately one-third of Tappahannock's employment. The manufacturing industries located in Tappahannock are export industries. These industries are an important part of the town's economy, not only because of the large numbers of persons they employ, but also because of the very nature of export industries. Export industries produce more goods than local consumers demand, therefore, goods are exported to larger geographical markets and the cost of producing goods are distributed.

Incentives which make Tappahannock an attractive location for development are the low business tax rates for the area, with real estate taxes at \$ 0.60 per \$100 of assessed value for the county and \$0.15 per \$100 of assessed value for the Town, and the relatively low cost of labor compared to more urbanized areas.

At present, most of the labor demand is for unskilled or semi-skilled workers. This currently poses no problem. However, with the potential for attracting industries which demand workers with a higher skill level, the present labor force could prove to be a disincentive. Vocational/technical training is not offered through Essex County High School. Rappahannock Community College in Richmond County offers courses in areas such as civil engineering, drafting, computer science, and mechanical engineering. However, with the current job market in Tappahannock, students in these disciplines have limited incentive to stay in the area to seek employment and typically look elsewhere.

The current mix of textiles, lumber and building materials, and automotive manufacturing is good, but can be improved upon with diversification. In the event of an economic recession, Tappahannock would certainly suffer economic hardship. Industries which supply lumber and building materials and automobile parts would see a drastic decline in demand for goods. While clothing is not usually considered a luxury item, consumers would try to make do with what they already have for longer periods of time. Therefore, the town should encourage the location of new industries which will not be as affected should a recession occur.

GOALS AND OBJECTIVES

Goal: *Maintain positive employment growth in industries which export products to regional and national markets.*

Objectives:

Encourage diversified, light industrial developments.

Promote Tappahannock in conjunction with the County as an attractive and available location for small or light industries.

Goal: *Maintain the mix of retail and service business along the business corridor.*

Objective:

Encourage the location of new businesses along the business corridor where vacancies are present during the next two to five years.

Goal: *Efficient and attractive commercial development within the Town shall be promoted to strengthen the Town's economic base and provide necessary jobs for local residents.*

Objectives:

Existing businesses shall be encouraged to maintain and improve their appearance so as to preserve the attractiveness of the central business district, and shopping centers.

New businesses shall be encouraged to cluster around existing business areas where common off-street parking and adequate lighting, drainage, and traffic flow are available.

Industrial development within the Town shall be encouraged in order to strengthen the economic base and provide necessary jobs.

The preservation and expansion of existing industries shall be encouraged.

Industrial activities should be located at the designated industrial sites within the Town.

Light industry located within the Town shall be limited to those which cause no environmental problems including air and water pollution or which would be disharmonious with the natural setting of the Town.

IMPLEMENTATION RECOMMENDATIONS

Commercial Development

The Town of Tappahannock is clearly an active trade center for the region that needs to be maintained for its future role in stabilizing a strong local economy. The economic development plan for the commercial corridor area will be done in three phases which include organization of public/private partnerships, promotion of retail and service businesses, and economic structuring of the existing assets of the corridor retail and service area.

The first phase in the process is the development of a community organization. This would be an organization of public/private partnerships that consist of community leaders who, on a voluntary basis, will be working in conjunction with the Chamber of Commerce. This organization is important as it organizes the economic entities of the Town to develop a plan for local and regional retail and service businesses. The organization of businessmen, civic leaders, and town officials will facilitate the implementation of the Plan's commercial development objectives and provide a forum for promoting public/private partnership.

The strategy for the highway corridor commercial is to provide adequate amounts of appropriately zoned land and improve the physical appearance and attractiveness of the corridor. The land use analysis described in Chapter 3 revealed that even with the proposed expansion of the general business district shown on the Land Use Map, the Town only has 87 acres of undeveloped commercial lands along the corridor within the corporate limits. For this reason it is recommended through the Land Use Plan that additional areas adjacent to the General Commercial District be proposed outside the corporate limits. These areas are generally located around the Rt. 17 Rt. 360 intersection. Improvements to the business properties along the commercial corridor will be achieved through the provisions of a highway corridor zone. As properties are rehabilitated and redeveloped they would be encouraged to come into compliance with appearance and landscaping requirements.

The strategy for downtown is proposed in three phases: (1) to promote the existing businesses so as to maintain their location in the district when

feasible; (2) to actively attract new business which will compliment the existing businesses and meet its changing role as an office, specialty retail and governmental center; and (3) to market the downtown as a service provider for tourist attractions.

In order to maintain the present business and encourage the location of new ones, the downtown businesses should establish a development organization. This group would be established from within the existing framework of the Chamber of Commerce. Membership in this association would be voluntary and the membership should be open to non-Chamber members.

The focus of this group would be to work with the town staff and merchants to address the image, promotion and viability of the downtown area. Some of the programs could include:

- (1) the establishment of a logo for participating businesses which can be printed on the shopping bags, letterhead, street banners, etc.
- (2) maintain an up-to-date listing of all available store space to facilitate expansion or relocation efforts;
- (3) work with the town staff to implement design guidelines to promote a unified image of downtown district as discussed in Chapter 10;
- (4) sponsor events such as an arts festivals or outdoor music productions in the summer, and a sidewalk sale (this may include closing a portion of the roadways in order to accommodate the pedestrian traffic);

The Central Business District (CBD) will remain the focal point of community life in Tappahannock. The CBD currently serves as a government, office and specialty retail center. Commercial activities in the CBD are going through a metamorphose from general retail to smaller, upscale, tourism-oriented specialty retail shops mostly catering to out-of-town tourists. The historic character of the CBD has made it an attractive location for specialty retail oriented towards the area's tidewater heritage. The majority of general commercial retail activity which serves Tappahannock and Essex County residents has, over the years, moved from the CBD to outlying, adjacent shopping centers. The emphasis in the Central Business District needs to be on complimenting the General Business on the highway corridor with specialized retailing, office and selected service activities rather than competing with like products and services.

Industrial Development

The industry Plan will be developed in two phases: (1) attracting new businesses and (2) enhancing work skills. The first phase will capitalize on the existing industrial park. The existence of an already developed industrial park with infrastructure needs, provided by the Town should serve as an incentive to attract new industries to the area. New industrial development should be limited to the area in and immediately surrounding the designated industry park area. Remaining parcel sizes in the industrial park will limit new development. New development requiring a large parcel size must be located outside the Town limits in Essex County.

While the current mix of industry is good, the mix can be improved upon with diversification. Diversification will provide some protection of jobs in the event of an economic recession. Firms which do not compete with existing employers for labor should be targeted. Since currently the largest industrial employers are textile manufacturers, automotive manufacturers, and lumber suppliers, new development in these industries should not be encouraged with the exception of expanding existing operations or the development of "feeder" industries. Feeder industries are industries which supply technology, parts, or supplies to an industry which then produces the goods.

Examples of target industries include food and related products, furniture and fixtures, paper and allied products, printing and publishing, fabricated metal products, machinery, electric and electronic equipment, and instruments and related products. One area with great potential is manufacturing industries which combine manufacturing facilities with a showroom to sell goods directly to local and regional consumers and tourists, in addition to exporting goods to regional and national markets.

If the suggested truck route linking the industrial park with Route 17 is built, development in the industrial park area and corridor has the potential to expand. It is essential that growth be controlled and planned so that the existing services will not be overwhelmed. Efforts to relocate the existing airport will make opportunities for an expanded and diversified industrial base.

First and foremost, the Town of Tappahannock and Essex County must examine the current situation and decide if they want to attract new industrial development. Since the unemployment rate in the Town and surrounding counties is low, Tappahannock can afford to be very selective in targeting new industrial development and can limit new development to

clean industries which will not pollute the environment and which will improve the quality of life.

In recognition of the need to provide additional, up-graded and diverse job opportunities for residents of Tappahannock, it is proposed that several areas be reserved for development into industrial clusters. Proposed land areas are sufficient to meet future needs of the community. A variety of sites are necessary to permit the location of industrial uses which provide employment opportunities. Several industrial clusters are necessary to provide for the location of industry according to their specialized needs while protecting the environment of the community.

Proposed industrial lands were selected based upon a series of principals. These are:

- A variety of industrial sites should be available in several concentrated locations near collector and arterial highways.
- The character and aesthetics of adjoining residential areas should be preserved by requiring industrial activities to meet strict performance standards.
- A variety of job opportunities should be encouraged within the Tappahannock Area with varying land uses requirements.
- Industrial locations should provide large land areas suitable for horizontal expansion, of sufficient size to provide on-site storage, parking and landscape areas.
- Industrial lands should be so located as to minimize any adverse influence on adjoining land uses and in consideration of the environmental attributes of the area.
- All industrial activities should be served by a complete array of community facilities.

The Land Use Plan Map suggests the concentration of industrial activities in several key locations north of the corporate limits as the best method of preserving the character of development in both the Town and surrounding urban areas. All activities should be served with community facilities and situated with direct access to either arterial highways or major collector routes.

To encourage the development of industrial activities to high standards, industrial park development should be encouraged. Where development occurs in an area on a fragmented basis, uniform standards should be established which will assure that virtually all industrial uses are located in a park like setting. Because of the compact nature of existing industrial development in the urban-core and its predominantly residential character future industrial activities within the corporate limits should be limited to small, light industries.

Industrial Development Clusters

The cluster concept can be implemented for industrial activities through establishment of industrial parks. An industrial park is planned location for industrial activities developed in accordance with a Comprehensive Site Plan. Implementation of the Site Plan assures compatibility of industrial operations with surrounding areas. A park like atmosphere is created which provides an attractive buffer between industrial uses and other neighboring land uses. If properly developed, the industrial parks provide a pleasing working environment for employees of Tappahannock's firms.

To assure establishment of a scenic and pleasant working atmosphere, several basic elements should be included in the Site Plan. The park should be of sufficient size to offer sites for a broad spectrum of industrial activities. Minimum land units should guarantee sites which can accommodate building restrictions such as proper setbacks, land to building ratios, architectural provisions, parking requirements, use restrictions, and extensive landscaping requirements.

The park must provide a full array of community services to occupants. Streets should be designed to facilitate truck and employee traffic with direct access to arterial highways. Electricity, water, sewer and gas must be available to complete facilities.

Attractiveness of the industrial center is assured primarily through covenants established by the developer in accordance with public standards. Subdivision ordinances, consistent with local zoning provisions, establish lot sizes and setbacks. A part of the local approval procedure is the review of operations. Proper maintenance of the park can be provided by a park association composed of occupants, by the developer if he retains partial ownership or by public controls.

Because of its potential for attracting employee and truck traffic, access to the park is controlled by public policy. Internal street layouts are consistent with Town plans and policies as a method of reducing conflicts at major

intersections, particularly if the traffic stream includes a high percentage of trucks. In general, industrial clusters should be located with direct access to arterial or collector routes.

An industrial park can be a valuable asset to a community if well planned, controlled, and maintained. With substantial landscaping and land use controls, the park not only reduces potential detrimental effects from industrial activities, but also provides an attractive setting which can preserve and enhance the natural features of the area.

Resources Available

There are resources available for implementing economic development efforts other than the organizational strategies already described. These include a number of state programs that include financing, infrastructure, and training.

- 1. Community Development Block Grants**

CDBGs are available to eligible cities, counties, and towns for industrial or commercial revitalization, site development, access road construction, railroad span construction, and water and sewer projects.

- 2. Economic Development Revolving Loan Fund**

The Economic Development Revolving Loan Fund provides loans to Industrial Development Authorities (IDAs) within communities eligible for Community Development Block Grant non-entitlement funds. The loans may be re-lent to private businesses within the IDA service areas.

- 3. Tax Increment Financing**

The purpose of the Tax Increment Financing (TIF) program is to remove blighted conditions by improving the real estate tax base and by attracting private investment to the area. A local government may adopt TIF by passing an ordinance designating a blighted area as a development project area. This may be useful in redeveloping the area associated with the existing airport.

4. Virginia Revolving Loan Fund

The Virginia Revolving Loan Fund (VRLF) provides loans to assist eligible Virginia localities in efforts to create or retain permanent jobs. The loans may be used for asset financing for manufacturing and related uses and may include the acquisition of land and buildings, development or redevelopment of real estate, rehabilitation and renovation of buildings, and purchase of equipment and other fixed assets. The loans may be used for on-site and off-site public facilities supporting manufacturing and related uses.

5. Industrial Access Road Program

Virginia Department of Transportation (VDOT) administers a program to assist in constructing industrial access roads to serve new and expanding manufacturing or processing companies. The program may be used to improve existing roads, construct a new road, and to maintain the access road after completion as part of the secondary highway system or road system of the locality.

6. Shell Building Initiative

This initiative provides funds for selected cities and counties to construct industrial shell buildings to attract basic employers to the community. The funds are awarded on a competitive basis. The Virginia Supplemental Retirement System has agreed to loan sufficient funds for the initiative to the Virginia Department of Economic Development (VDED). VDED will then loan the funds for a shell building to a selected locality and the Commonwealth of Virginia will make the interest payments on the loan. Upon the sale or lease of the building by the locality or at the end of five years, whichever is first, the locality will repay the principal and interest to the commonwealth.

7. Industrial Training Programs

The Industrial Training Division of the Virginia Department of Economic Development will prepare and coordinate an industrial training program tailored to meet the specific needs of new or expanding companies seeking to increase employment in Virginia. Industrial training will recruit prospective trainees, provide specialists to analyze job training requirements, develop and implement training programs, conduct "Train the Trainer" programs,

arrange for adequate training facilities, and prepare instructional audiovisual materials for in-depth training orientation. These services are provided at no cost to the employer and may be helpful in meeting the Town's job retention objectives.

Chapter 8

PUBLIC FACILITIES AND SERVICES

Ensuring that the provision of community services and facilities is phased with the demand or need is a major component of growth management. Community facilities and public services are those minimum facilities and services the Town provides for the common good. Generally, public facilities include land, buildings, equipment and whole systems of activity provided by the Town on the behalf of the public. The quality of public facilities contributes to the quality of life in the Town. Some facilities, such as clean drinking water and adequate sewerage disposal are necessities; others, such as theaters and parks, are highly desirable for cultural and educational enrichment.

BACKGROUND AND ANALYSIS

Tappahannock provides a variety of public services and facilities for its residents which include water supply, sewage disposal, solid waste disposal, libraries, and public safety. The provision of these services facilitates growth and development, however, the absence of services or facilities does not effectively deter unguided growth. Rapid residential and commercial development places a burden on the Town to meet service and facility needs.

A survey of existing services and facilities, in conjunction with population and economic data on which to base projections of need, provides an indication of what future improvements and additions might be necessary. In order to accurately anticipate needs, all projected figures should be updated constantly as new population and economic data become available. This section will focus on identifying existing and projected capacity of community facilities to identify the issues and problems of providing these services in the context of the Town's projected growth rate and geographic distribution. To begin capacity analysis of the facilities based on growth, we will generally use the population projections shown in Table 2-1 to the Year 2010. If other projections are used, they will be so noted. The following is a discussion of the existing capacities and levels of service for selected community facilities and services as well as projected demands. Planned facilities included in the Town's annual financial planning process are noted.

Water Service

A number of laws control the use and quality of water in the Commonwealth of Virginia. A state-operated water allocation system defines water rights. This takes place within the state's judicial system and use of the Riparian Doctrine, which allow for landowners to make reasonable use of the water resources adjoining their land. Secondly, the Groundwater Act of 1973 allows the Water Control Board to designate management areas in which water withdrawals are regulated. This allows the Board to state ownership and have control of the water beneath a landowners parcel of land. Areas outside of those management areas are controlled by common law. Thirdly, the State Water Control Law mandates the protection as well as the restoration of state waters. The standards are continuously reviewed and revised as appropriate. Fourthly, the State Health Department is in charge of ensuring that all public drinking water supplies are pure, provides guidance to determine if a water supply or waterworks permit is to be issued, and assists applicants in completing all necessary paperwork pertinent to water supply. These are just some of the laws and agencies who help protect and regulate water.

The Comprehensive Water Quality Management Plan for the Middle Peninsula: An Information Search and Review, MPPDC, Jan. 1989 contained the following discussion of groundwater in the Tappahannock Area:

"the MPPD was divided into development zones based on groundwater availability characteristics and withdrawals. Essentially, the west-central MPPD (zone E) appears to have the greatest potential for development. This is due to the large capacities of groundwater available (5-15 million gallons per day) from the upper artesian and principal aquifer systems."

Wiley & Wilson, consulting engineers, completed a review of the Tappahannock water system in 1989. Their review included current water demands, capacity of existing supply wells, water storage requirements, and the capacity of existing water storage facilities. Their review was made based on two different conditions, normal and "worst case." Normal conditions included average daily water requirements, recommended fire flows, and both wells in service. The worst case analysis included maximum daily water requirements, recommended fire flows, and the larger well out of service.

Water Use

Based on the Town's billing records in 1987, there were 748 users in the Town requiring an average daily flow of 302,740 gallons (210 gpm). Based on the records for the Town's two existing supply wells, Well #1 pumped a daily average of 102,206 gallons (71 gpm) with a maximum day of 178,677 gallons (124 gpm) in October 1987. Well #2 pumped a daily average of 201,007 gallons (140 gpm) with a maximum day of 258,700 gallons (180 gpm) in June 1987. Hence, the average daily use is approximately 210 gpm and the maximum daily use is approximately 305 gpm.

Water Supply

The Town presently has two water supply wells. Both well have had pump tests run on them within the past 18 months. Well #1 had a sustained yield of 160 gallons per minute (gpm) and Well #2 had a sustained yield of 320 gpm.

Existing Storage Facilities

The Town presently has two water storage tanks, a 500,000 gallon tank at Tidewater Memorial Hospital and a 75,000 elevated tank in Town for a total of 575,000 gallons of storage. The overflow elevations are the same for both tanks.

Storage Requirements

The water supply and storage requirements must meet the recommended fire flow demands, plus normal daily operating storage needs, plus an emergency reserve. The recommended fire flow duration for Tappahannock (based on the "Guide for Determination of Required Fire Flows" from the Insurance Services office) is 2 hours at a flow of 1,500 gpm, a total flow of 180,000 gallons. The recommended operating storage is 15 percent of the average daily water consumption. For the 1987 average flow of 210 gpm, 15 percent of the average daily use is 45,360 gallons. The emergency reserve is designated as 25 percent of the total of these numbers of 56,340 gallons.

Based on these criteria, the required storage under normal conditions is 281,700 gallons. The available effective storage which can be provided with existing facilities includes 575,000 gallons of storage plus 480 gpm of pumping for two hours (57,600 gallons), less the 45,360 gallons of daily operating storage. The available storage is 587,240 gallons which more than adequately meets the requirements.

As a check, the same analysis was performed under "worst case" conditions. For the required storage, the same fire flow duration (180,000 gallons) was used, but a maximum daily use of 305 gpm was used. Fifteen percent of this maximum daily use is 65,880 gallons. The emergency reserve of 61,470 gallons was calculated in the same way. The required storage under worst case conditions is 307,350 gallons. the available effective storage under worst case conditions would include 575,000 gallons of storage plus only the smaller well (No. 1) pumping 161 gpm for two hours (19,320 gallons) less the 65,880 gallons of maximum daily operating storage. The available storage is 528,440 gallons which is, even under worst case circumstances, more than adequate.

Conclusions

1. The Town's water usage rate varies from a daily average rate of 210 gpm to a maximum daily rate of 305 gpm.
2. The Town has 575,000 gallons of water storage capacity.
3. The required storage is 307,350 gallons under the "worst case" conditions.
4. The Town's water storage facilities are adequate for the foreseeable future.
5. The Town has two water supply wells, one with a sustained yield of 160 gpm and one with a sustained yield of 320 gpm.
6. The Town's water supply is not adequate with the larger well out of service.

Recommendations

The Town should proceed with the drilling of a new well to supplement the existing wells and to provide standby capacity when one of the existing wells is out of service. The well should be located in the southern section of town for the following reasons:

- The area is developing rapidly and the water demands are increasing.
- Both of the existing wells are located in the old part of Town and are far removed from the area.

- There is one main transmission line that connects the existing well with this area. If the Town has a major line break, this areas will be out of water.
- The well will be close to 500,000 gallon storage tank.

Town labor forces make connections and maintain the system and Federal loans and grants have been utilized for expansion of the system as needed. Daily water consumption is approximately 200,000 gallons. Present well and storage capacity should be sufficient for the expected demand for some time unless industrial uses are greatly increased. New industrial connections may require an additional well.

Solid Waste

Presently, the Town of Tappahannock employs two full-time and two part-time personnel to operate the curbside and greenbox collection of solid wastes (MPPDC, 1989). Generally, there is residential collection twice a week and commercial collection four times a week. Based on estimates by the Planning District Commission, there are about 3,000 tons of waste generated per year in the town. Seventy percent of this is from commercial and industrial sources (MPPDC, 1989). Collection costs the Town \$55,000 per year and disposal is to the Essex County land fill (MPPDC, 1989).

Essex County operates its own landfill which has an estimated capacity of 20 to 40 years (MPPDC, 1989, VPPSA, 1989). The County is currently a member of the Virginia Peninsula's Public Service Authority which operates as a regional solid waste authority. This Public Service Authority will provide a regional approach for implementation of forthcoming waste management plans to target recycling rates of 10% by 1991, 15% by 1993, and 25% by 1995. The draft regulations specify that each city, county town, regional, planning district, or public service authority must comply with these regulations.

A town and county may join in the implementation of the requirements, however, it is unclear exactly what role a Town may have in this Public Service Authority. In addition to the proposed recycling regulations, the Virginia Department of Waste Management has adopted regulations concerning the design and operation of landfill facilities. Ultimately the landfill and recycling requirements will demand a greater level of solid waste planning and coordination for each locality. The higher level of sophistication will drive up the cost of solid waste collection and disposal for the Town of Tappahannock.

Two trucks collect trash throughout Tappahannock on a regular schedule and disposal is done at the county landfill.

Safety and Emergency Services

The Sheriff's Department, located in Tappahannock, is staffed by the Sheriff, five road deputies and four jailers. The department operates five automobiles and one van, all of which are radio equipped. The department cooperates with other counties in the Middle Peninsula in minimum classroom and on-the-job training and in emergency services operations. An addition to the original building houses six offices.

The Town operates its own Police Department which includes four patrolmen in addition to the Chief who enforce the law within the Town limits. Jailing is handled through the County Sheriff's department. The department operates two radio-equipped patrol cars.

A single volunteer organization, the Tappahannock-Essex County Volunteer Fire Department, serves Essex County from a new facility located in Tappahannock. The Department of fifty-four members is equipped with a 250 gallon mini-pumper, two 500 gallon pumpers, two tankers — 1,500 gallon and 2,500 gallon, a C.D. pump, as well as one hook and ladder truck. Traveling as far as 21 miles to either end of the County, with no satellite stations, the fire department averages twenty calls per month consistently throughout the year.

The County-Town rescue squad is composed of thirty-seven members operating three rescue vehicles, a crash truck, and a boat. Office records show an average of fifty-five calls per month during the 1983 calendar year. The units are dispatched county-wide from the Town Office during office hours and from the county Sheriff's Department all other times. This unit, as well as the fire department, is financed primarily from private donations.

Library

The Essex Public Library is operated by the County in a facility located in the old elementary school complex on Route 17 north of Tappahannock. The library is open Monday 9:30 - 9:00; Tuesday through Friday, 9:30 - 5:00; Saturday, 10:00 - 1:00.

The library contains 12,000 volumes and is mainly funded by the County. Some additional funding comes from the Town of Tappahannock, the State, Federal grant-in-aid monies and private donations.

Table 8-1 SEWAGE TREATMENT DEMAND AT BUILD-OUT OF PLANNED INTENSITIES TAPPAHANNOCK, VIRGINIA					
Planning District (1)	Acres	Average D.U.s/Acre	D.U.s	Per Unit Demand (GPD)	Total Demand (GPD)
Residential Suburban					
114 Mobile Home Units	n/a	n/a	114	275	31,350
34 Platted subdivision lots	n/a	n/a	34	300	10,200
Unsubdivided parcels	91	3	273	300	81,900
Mixed Residential Cluster	70	7	490	275	134,750
General Commercial	87	n/a	n/a	1,000 per acre	87,000
Industrial	172	n/a	n/a	3,000 per acre	516,000
TOTAL					861,200
NOTES					
(1) Only includes planning districts with significant amounts of developable land rather than scattered in fill.					
Source: Redman/Johnston Associates, 1991					

Sewer

Located south of the industrial park, the sewage treatment plant has a capacity of 400,000 gallons per day (gpd) with the ability to accept peak flows of 1 million gallons per day (mgd). Additional land is owned at the site for future expansion. Based on current average daily flows of approximately 200,000 gpd, the plant has an excess capacity of 200,000 gpd.

One of the most critical planning issues for both the Town and the County is the provision of utility services, especially sewer, to the County Development Service District adjacent to the Town. Table 8-1 estimates the sewer capacity that would be needed to service the incorporated areas according to the land use plan in Chapter 3. It is easy to see from the table that the remaining capacity of 200,000 gpd can be consumed by the build out of remaining undeveloped lands in the Town. Even if the growth that is

projected to occur during the next 20 years happens the treatment capacity will be depleted. Consequently, the service of County areas around the Town will ultimately require Town treatment plant expansion or other alternatives during the planning horizon.

Government Services

Offices of the county government are located in Tappahannock in and around the county courthouse. The Town utilizes the services of the county building inspector for enforcing the Uniform Statewide Building Code within the Town.

Town offices on Duke Street house the Tappahannock administrative offices and police department. From these offices are administered all local ordinances, water and sewer system operations, a day-time fire and rescue dispatching, trash collection and all regular Town operations. Additional space within this building is available for expansion, as needed.

GOALS AND OBJECTIVES

Goal: Adequate and efficient public services and facilities shall be ensured for all Town citizens.

Objectives:

The Town shall continue to maintain and improve its central water and sewer systems.

The Town shall continually monitor its waste collection system to ensure that adequate service is provided to Town residents.

The Town shall be conscious of the value of its library, rescue and fire services and encourage the support and improvement of them.

The Town shall provide adequate police protection for its citizens.

Insure that adequate water and sewer facilities are available to accommodate planned growth while assuring that public facilities are expanded in a manner commensurate with local financial capabilities in accordance with the Comprehensive Plan, Capital Improvements Program, and other relevant plans and policies.

Develop a mutually acceptable policy to address extension of utilities to County areas.

Encourage recycling and reuse of refuse.

IMPLEMENTATION RECOMMENDATIONS

There are an array of alternatives available for achieving the objectives relating to the provision of public services and facilities to accommodate growth. This section provides a brief discussion of the general techniques recommended. More specific recommendations are included as needed for individual public services.

Intergovernmental Cooperation

The Development Service District established in the county's comprehensive plan is based on the premise that new development can be serviced most efficiently if it is limited to areas in proximity to the Town of Tappahannock. The key to the success of a development service district in the County is in the availability of services and capital improvements; therefore, the County has indicated through its comprehensive plan that it will work with the Town to provide adequate sewerage capacity, water, roads and schools in order for the district to accommodate anticipated County growth. It is essential, for example, that these areas have access to adequate sewer if they are to develop at the intensities called for in the County Plan, therefore, it will be imperative for the Town and County to begin meeting to establish County and Town expectations. Some of the issues to be resolved are:

- equitable funding mechanisms
- sources of revenue
- timetables for the extension of services
- safeguards to insure that existing and future Town residents have adequate services and facilities and that they in no way bear additional costs for the extension of services.

Capital Programming

The capital programming plan should be developed in conjunction with comprehensive plan and any agreements for utility extension made with the County. For example, a well designed capital improvements plan will

provide for the orderly extension of sewer and water at a rate needed to accommodate anticipated growth. The capital improvements plan will provide the vehicle for the Town to set priorities and to make the most efficient use of available funds. Capital programming is the tool which should be used to guide growth toward predetermined areas of the Town and County and at predetermined rates. The Town should use the capital improvements program to guide developers in proffering conditions for the provision of public facilities.

Voluntary Proffers

Voluntary proffers provide a direct means of obtaining the needed capital improvements to service new developments. Proffers should continue to be used to help defray the costs of expanding public services and facilities. Off site improvements of public facilities and dedication of land but not cash contributions can be used to offset the impacts of a proposed development associated with a rezoning. (Section 15.1-491.2 Code of Virginia.)

Fiscal Impact Analysis

The development of a per unit fiscal impact of residential and commercial development would provide a rational basis on which to accept proffers from developers. It is intended that the fiscal impacts be calculated for water and sewage facilities, parks, roads and schools, as well as, for more public welfare needs such as police, fire, and emergency medical facilities. It is intended that the impacts be calculated based on accepted methodologies and following the standards described below.

Generally, the court decisions upholding impact fees or development exactions require that they meet a three-part standard. First, new development must demand new capital facilities. Secondly, a rational nexus or close relationship must exist between this new development and the need for these new facilities. Finally, there must be some assurance that sufficient benefit accrues to the particular development that pays the fees. These tests are similar to the standards set forth by the Virginia General Assembly (Section 15.1-491.2 Code of Virginia) for voluntary proffering. Virginia courts have upheld the use of the proffer system when the above referenced standards are adhered to.

Though impact fees are not expressly authorized for Tappahannock, the detailed impact analysis will establish the basis for such fees once the Town is enabled by the State legislature. Tappahannock may now use, to some degree, impact fees for water, sewerage and drainage control. (Section 15.1-491.2 Code of Virginia.) Recognized fiscal impact assessment

techniques agreed upon by the Town and County will offer a basis for County contribution for the expansion of facilities and/or extension of services to county areas.

Adequate Public Facilities Standards

Adequate facilities standards will help control the development process by showing that sufficient infrastructure and services are present or will be provided. These standards can ensure that land development coincides with the location and timing of capital facilities. Standards for water, waste treatment, transportation, and educational facilities guide the development review process. "Acceptable" levels of service as established by the Town will serve as a basis for determining the impacts of development and for programming new capital facilities.

When a development is proposed, the adequacy of existing facilities should be considered for fire suppression, roads, schools, sewerage, storm drainage, and water. Minimum standards to determine adequacy need to be established for Tappahannock. For example, one of the criteria for determining the adequacy of sewer is that the interceptor is adequate to handle the peak flows calculated by the methodology set forth by the Town. The County should consider dividing itself into policy areas which have different levels of service required.

Though it is recognized that Tappahannock is not currently enabled to deny approval of subdivisions based on the lack of adequate public facilities, the State law (Section 15.1-466 E) does provide for the means of achieving

adequate facilities objectives voluntarily. The Town should pursue this technique in light of efforts by a growing number of Northern Virginia counties to gain the authority to more positively tie development approvals to the availability of public facilities.

Special Taxing Districts

Special taxing districts could be used by the County to provide certain additional public services for an area benefitting exclusively from such services. Essex County has the authority under the Virginia Water and Sewer Act to create Public Service Authorities for the purpose of providing any or all of the utilities and services described in the Act. This option exercised by the County would mean that the Town would deal directly with an authority as opposed to County government.

Annexation

Annexation is a viable way to serve areas adjacent to the Town with traditional municipal services. Application can be made to the Virginia Commission on Local Government for the requisite hearings and processing. If the County and the Town are in agreement on the area and terms of annexation there are several more streamline methods of annexation available to the Town. Legislation currently under study by the Virginia Municipal League and the Association of Counties would allow towns under 10,000 population to annex by ordinance. If this legislation passes, annexation will become a very workable tool for the County and the Town to service areas around Tappahannock.

The following annexation options are available to Tappahannock:

Boundary Line Adjustment by Agreement — (Article 2, Chapter 24, Title 15.1) Any two contiguous localities are eligible to effect a boundary adjustment by jointly petitioning the circuit court. There are no restrictions as to the size or character of the land area involved. This was used by Kilmarnock and Lancaster County about 1984.

Agreements Defining Town Annexation Rights — (Article 1.1, Chapter 25, Title 15.1) Any town located in a county which is not immune from city initiated annexations may enter into an agreement with its county defining the Town's future annexation rights. The agreement must provide that upon formal adoption by the town and county, the town will permanently renounce its right to become a city. The agreement must permit the town to annex at regular intervals by the adoption of a municipal ordinance. This was used by Warsaw and Richmond County about 1986.

Voluntary Settlement of Annexation — (Chapter 26.1:1, Title 15.1) Any city, county or town is eligible to enter into an arrangement with any other local jurisdiction to settle matters related to annexation, governmental transition, or immunity. Once the terms of the agreement have been negotiated by the local governing bodies, the proposed settlement must be submitted by the Commission on Local Government for review. In its review the Commission must consider whether the proposed agreement is "in the best interest of the Commonwealth," which also encompasses the best interest of the affected localities.

Municipally-initiated Annexation — (Article 1, Chapter 25, Title 15.1)

Any city not located in a county immune from city-initiated annexations or any town may annex territory from an adjacent county under the provisions of this article. Prior to petitioning the circuit court for review of a proposed annexation action, the municipality must first notify the Commission on Local Government of its intention to seek the annexation of territory from an adjacent county.

Citizen-initiated Annexations — (Article 1, Chapter 25, Title 15.1)

County voters or property owners may petition the circuit court to have their property annexed to an adjacent city or town. Citizen petitions requesting annexation of territory to an adjacent municipality must contain the signatures of 51 percent of the qualified voters or property owners in the annexation area.

* * *

In summary, services are localized within the Town limits and are convenient to citizens. As population increases, however, additional employees and departments will be necessary and additional departmentalization may be practical. Coordination with county programs may also provide more effective and efficient delivery of services as they become more complex.

Chapter 9

RECREATION

BACKGROUND AND ANALYSIS

Tappahannock does not own or manage any recreational facilities for the use of the Town residents. Future land use plans identify public and semi-public areas for a neighborhood park system and waterfront access sites for the public. The county owned sites are comprised of public schools and a public swimming pool, as well as the library and government buildings.

Schools are located primarily in the northern end of the Town. The high school is located on Airport Road, the middle school at the end of Marsh Street, and the elementary school adjacent to Route 17. Although these facilities form the majority of Tappahannock's public use facilities, they are not connected by a non-vehicular transportation facility, such as a bikepath or designated walking trail.

Water access is presently provided by two public boat ramps. One ramp is at the end of Prince Street, having poor access, inadequate parking, and no pier facilities. The other ramp is located on Hoskins Creek. The Hoskins Creek facility has both ample parking and a docking area; repairs to the dock are needed.

No public beach access to the Rappahannock presently exists in the Town. Other public access, if available, cannot be identified at this time. All public use facilities exist on the north side of Town, with none south of Hoskins Creek. Publicly owned land exists at the base of the Thomas Downing Bridge between the overpass and Prince Street, but is presently undeveloped.

Pilings from an historic wharf provide evidence of previous public access to the Rappahannock riverfront. This area however, has limited potential for a waterfront park facility.

The Town presently owns land and improvements along Route 360/17. A portion of this property is currently leased to the Virginia Department of

transportation for local office space. This land presently extends to Hoskins Creek, and could provide future recreational access. No land use plans presently exist which include public open spaces or parks south of Hoskins Creek. The presence of Hoskins Creek through town offers unique potential for a community or regional park site.

Privately owned recreation areas have been identified within the Town, and nearby in the surrounding region. Numerous marinas, a golf course, overnight camping, and a private membership park are within close proximity to Tappahannock.

Waterfront Park

The Town recognizes the opportunities for public shoreline enjoyment may be made available due to the proximity of the Rappahannock River. The following program for waterfront park development is presently under consideration at the foot of Prince Street.

Potential Waterfront Park Development actions would include:

- Acquire 2 parcels between bridge and condominiums for development as a passive urban park
- Provide limited parking for park
- Relocate oil facility away from waterside, and recover land as park extension with 2 parcels near bridge

Additional Activities Envisioned with this Proposed Park Concept

Farmers market, produce market, seafood emporium

Festival event for "kick-off" and annual follow-up

Antiques "Alley" in downtown

Dock activities: crabbing, fishing, walking, itinerant boat use

While opportunity for waterfront park development exists in this location, the site size is limited and the location of nearby residents suggests use should be limited to passive recreational offerings. This park concept is further discussed in the implementation recommendations of this sections.

Assets

- Many historic structures and landscape features of high aesthetic value throughout the Town.
- The Rappahannock River bordering Town holds significant promise for future access, vistas, active recreation, marine activity, etc.
- Presence of Hoskins Creek meandering through Town offers unique potential natural setting for passive recreation and aesthetic enjoyment.
- The upland area west of Town at the head of Hoskins Creek offers future potential for a park facility.
- The Town Dock on Hoskins Creek meets current access demand for boat use and could potentially be expanded and improved for mixed recreational use.
- Presence of commercial marina immediately north of Town suggests possible downtown/wharf boat link for visitors by water or potential use of part of the Marina site as a small waterfront park facility.
- Town history is strongly linked to the waterfront and creeks. The history suggests possible festival or special event focus to increase tourism into the downtown commercial district.

Problems Identified

1. Lack of parks and recreation facilities for Tappahannock.
2. Lack of publicly owned land south of Hoskins Creek, in the downtown and in the far western reaches of the Town.
3. Lack of pedestrian access between public spaces, particularly evidenced by the Route 360/17 safe-crossing problems and the airport crossing conflict between the middle and high school sites.
4. Lack of neighborhood parks denies the Town an important motivational tool for achieving developer-associated improvements for recreation in the Town comprehensive plan and zoning ordinances.

GOALS AND OBJECTIVES

Goal: *Develop and improve recreation services, facilities and programs for the citizenry of Tappahannock.*

Objectives:

Provide recreation programs in association with a system of neighborhood parks, pocket parks, public lands, playgrounds and open spaces.

Provide public access to the waterfront on the Rappahannock River or on Hoskins Creek or both.

Goal: *Provide safe public access for the residents of Tappahannock to public lands, government buildings, schools and open spaces and to a system of parks and facilities for recreation.*

Objectives:

Designate an urban trail system in the Town of Tappahannock utilizing the existing street system.

Provide expanded public access to public lands and open spaces for those areas of town not connected by the existing street system and for future development in the southern part of Town via an expanded trail loop system.

Goal: *Provide town residents with adequate recreation and open space facilities.*

Objectives:

Develop an urban park at the end of Prince Street as part of a Central Business District revitalization effort.

Encourage development of other neighborhood parks and playgrounds.

Explore possibilities for the acquisition, development and maintenance of waterfront acreage for public use.

Require developer provision of recreation and open space areas adequate to serve the needs prompted by subdivision and residential development.

Considerations for Park Development

1. Parks system should be explored that relates to the downtown waterfront park.
2. Existing schools should be incorporated into park planning for programs and facilities development.
3. A joint Town/County Park Authority should be explored as one approach to planning for future park facilities.
4. Every effort should be made to relate the downtown dock/park component to the historical record of wharves or docks for accuracy in restoration, if possible and practical.
5. Early park support and visibility could be enhanced by the introduction of an organized festival event, such as the Urbana Oyster Festival, and supported by service organizations. Food sales, proceeds, and commissions would be associated with vendor activity. A parade, contest, or water competition would complete the "Water Day" event.
6. Another boat trip venture, of a local nature and brief in duration, might be introduced and linked to a historical Town walk.
7. Seek funding mechanisms required for the downtown waterfront park development as a cooperative effort between the Town and Adkins Oil Co.

IMPLEMENTATION RECOMMENDATIONS

1. Designate existing publicly owned lands shown on the land use plan as park lands/open space lands.

These sites would include the elementary, middle and high schools, the Dock Street dock, the parcel under lease to VDOT, the government building sites and the Downtown statue, as well as the conservation lands associated with Hoskins Creek.

2. Designate and develop a waterfront park facility.

3. Establish a program to upgrade all park sites for appropriate public use as recreation facilities.

Enabling a Parks and Recreation Authority

A Parks and Recreation Authority can be developed to carry out the task associated with a system of open spaces for public use. Among the structures to consider for implementation are a Parks Authority, a Parks Commission, and a Parks and Recreation Department. A Parks Authority, whether it is a Town Authority or a Joint City/County Authority, is the political structure that sets rules and regulations, establishes development priorities and funding mechanisms, and provides for comprehensive management and overall system maintenance. A Parks Commission is comprised of community leaders and representatives from the Town citizenry who are tasked with development of specific actions, programs, and land use priorities that impact upon delivering recreation for the community at large. A Parks and Recreation Department would be responsible for the day-to-day operation and maintenance of facilities and for programming events and activities.

Utilizing Publicly Owned Land and Facilities

Given the history of excellent cooperation between Tappahannock and Essex County, it seems logical to presume that this cooperation will certainly extend to County-owned land located in the Town. For Tappahannock, this suggests with a minimum of public expense that the Town can anticipate reasonable access to adequate publicly owned land to form the basic "spine" of a system of parks and open spaces for public use.

The Town owns the Dock Street dock, the prominent statue downtown as a street focus, and the parcel currently leased to VDOT near Hoskins Creek. While the Town holds other properties as well, these parcels appear most suitable for inclusion in a system of parks and open spaces.

The County operates the three schools, as well as the library and the downtown government buildings and grounds, all of which are suitable for inclusion in the proposed system.

The airport facility has strong potential for a mixed-use designation, which could in the future make some portion of that land area available for use in a system of open spaces and parks.

The considerable wetlands areas that adjoin Hoskins Creek provide an extremely rare and exciting conservation land area, highly suitable for

inclusion into the proposed open space system. This large area presents a great opportunity for use as a passive observation area for wildlife and the natural environment, as well as an excellent location for pedestrian use and access via the urban trails system.

Leasing/Acquiring Additional Public Lands

While the inventory of publicly owned land in Tappahannock is substantial, a comprehensive and balanced system of parks and open spaces implies the need for additional lands. This is particularly acute in the case of the need for a waterfront access park facility downtown, and similarly important in the Town at or south of Hoskins Creek where no public lands are currently held except for the leased VDOT land.

Waterfront Park Facility Development

The property immediately south of the Downing Bridge at the end of Queen Street offers potential for a waterfront park site. Specifically, there are two small lots of green open space between the waterfront and eastern edge of the existing residential use, bounded on the south by the Atkins Oil property. Acquiring the described open space could serve to provide access for the public to the waterfront, and potentially serve as a vital interest component for a revitalized downtown commercial district. However, the site size and configuration will limit parking opportunities and water depths will preclude development of boating facilities. Recreational offerings that should be provided include passive uses such as picnic facilities, pedestrian seating and opportunities for enjoying views of the waterfront. More intensive uses on the site could be disruptive to the area's peaceful residential character and are not recommended.

Caution should be exercised before acquiring land, particularly the oil facility/tank storage area. Besides being a good location of a small urban waterfront park the oil tanks pose a potential threat to the environment via the Rappahannock River immediately adjacent to the site and the danger of an explosion or fire vis a vis the residential units that surround the site. A major spill or fire at the facility could have a catastrophic effect on adjacent area. Viewed in this context, the owner of Adkins Oil should perceive the company's liability at this location and seriously consider the advantages of re-locating the facility. The responsibility for the cost of relocation should be borne by the owner; however, the Town may work with the owner to identify an appropriate alternative site in the Town. Should the opportunity arise, the Town may also consider a land swap and development concessions such as building an access road to a new site or providing technical assistance to the owner in the re-location process. Prior

to taking title to the oil facility site, the Town should require that a full environmental analysis be conducted to determine if the site is polluted in any way and thus avoid any public liability for clean-up.

As an alternative or in addition, the Town may consider locating a passive waterfront park on portions of the June Parker Marina property. The existing marina could complement public recreation offerings and at the same time afford an opportunity to enhance the visual quality of this entry point to the town by creating a town gateway statement through park design.

Improvements to Land and Facilities for Park Use

While designation of publicly owned lands and the dedication of leased or acquired properties together provide a network of parks and open spaces, the facilities appropriate for a parks system will not necessarily be distributed evenly or satisfactorily given the current status of each parcel. Improvements to the sites and the addition of equipment and facilities is essential to meet the needs of the community in recreation programming.

Depending on the specific site and the programmed use, essential improvements would include:

1. Safety considerations: drainage, improved sod or groundcover, safe sidewalks, curb ramps, parking surfaces, traffic control devices for pedestrians, bicycle racks, and lighting.
2. Use considerations: signage, traffic flow pattern, traffic barriers, benches, tables, trash cans, waste spigots, lights, bathrooms, swing sets, jogging and exercise trail stations, and storage buildings.
3. Aesthetic considerations: trees for shade and definition, shrubs for space control definition, fences, planter boxes, flowers for beauty, hedges, preparation of vistas or views, etc.

The input of the citizenry in Tappahannock via the Parks Commission would provide valuable guidance for Town Leaders in assessing and inventorying existing facilities and developing a capital improvements budget for long term development and improvements.

Chapter 10

DOWNTOWN REVITALIZATION AND URBAN DESIGN

One of the key issues of the Tappahannock Comprehensive Plan is the enhancement of the visual appearance of the Town. This chapter includes a definition of the urban design districts and their attributes which can mean many different things to different members of the Planning Commission and residents. It will also identify the alternative methods available to the Town for protecting or enhancing community appearance and the legal basis for doing so. It is the intent of this chapter to focus on the Town's appearance by more clearly defining the Town's urban design districts and by evaluating the elements which can influence the appearance, and by offering a framework by which the Town's character will be, and can be preserved or enhanced.

BACKGROUND AND ANALYSIS

Through observation and evaluation, the three distinct design districts identified by the VCU plan were found to be appropriate for assigning different levels of treatment:

1. The Southern Business Corridor
2. The Northern Business District
3. The Historic District

The Southern Business Corridor is comprised of two miles of commercial land use along Route 360/17 in the southern section of Tappahannock south of Hoskins Creek. The Northern Business Corridor is situated along Route 360/17 between Hoskins Creek and the intersection of 360/17 in the northern section of town. The historic (business) district extends from Duke Street north to Queen Street and Route 360/17 west to the Rappahannock River.

The Southern Business Corridor

The Southern Business Corridor is easily identified by the commercial uses which incorporate numerous curb cuts into the road, front parking, and large signage. The commercial land use is geared toward convenience services for people passing through Tappahannock, and retail stores that attract customers both from the Town and surrounding counties. Since the Southern Business Corridor is automobile oriented, there exists large open spaces associated with the parking lots which contain little or no vegetation. The convenience stores oriented closer to Route 360/17 attract a number of customers for a short period time. Other stores are located further back and are oriented for customers spending longer periods of time. The recently constructed buildings in the Southern Business Corridor are one or two stories, large in scale, and built of concrete, metal, brick, and glass.

In analyzing the Southern Business Corridor it becomes apparent that two major problems exist. Numerous signs at different scales and styles tend to confuse motorists looking for a particular business. The great number of curb cuts onto Routes 360/17 create traffic conflicts due to the high volumes of vehicular traffic. The lack of vegetation gives the area a cold and utilitarian feeling.

It is important to resolve these conflicts since this design area is where tourists develop their first impression of Tappahannock while traveling north along Route 360/17. In addition, this section of Town is economically important because it draws people from surrounding areas for shopping.

The Northern Business Corridor

This design district is different from the Southern Business Corridor because the road narrows, the buildings are smaller in scale and are closer to the road. Entering into the area from the south across Hoskins Creek bridge provides the first view of water and activities associated with it including Captain Thomas's Cruise line and commercial crabbing boats. The bridge acts as a gateway into the Northern Business Corridor from the south, while a second gateway is formed by the stop light at the intersection of Route 360 and Route 17.

The signage is comprised of different sizes and styles; the lighting is oriented to the automobile. The sidewalks are narrow, close to the street, and are in a state of disrepair. All these problems combine to create an uncomfortable environment for the pedestrian.

The Historic District

Tappahannock has a rich development heritage from both a historical and an architectural perspective. Tappahannock has a number of structures which have been identified as being historically significant, the majority of which are located in the Old Town section around the Courthouse green. Many well preserved colonial structures are found throughout this district. The Old Debtor's Prison on the Courthouse green was built before 1769 and now serves as the Essex Treasurer's Office. Beale Memorial Church on the Courthouse Square contains the original walls of the 1729 Courthouse. Anderson House on the St. Margaret's campus is located on one of the oldest occupied tracks in Tappahannock, the Robert Coleman property.

While this heritage is only one of several things that attracts people to Tappahannock, it is too often taken for granted. As with other aspects of community character, the cultural richness of the Town is a commodity that cannot be replaced once destroyed. Historic areas should not be viewed as mere attractions for tourists, but as elements which enrich the experience of living in a community and make it more attractive for others. It is clear that the American work force now resists moving to communities that they perceive to be of low quality. The preservation of an area's historical heritage is an important economic development strategy because of its significant positive contribution to the quality of the community.

In general, the buildings and structures located within the historic district reflect a colonial design. The main street within the historic district is the portion of Prince Street east of Route 360/17. Two significant structures may be found within this section of Prince Street. One is a monument dedicated to Civil War soldiers from the region and other is the Essex County Courthouse Complex. Significant architectural examples can also be found on upper Prince Street to Falconia Circle and in Little Egypt.

The character of the historic district does not relate well with the character of either the northern or southern business corridors. Opportunities exist to carry the colonial theme to the highway corridor.

One of the concerns identified within the district is that many of the structures along Prince Street have either been altered or constructed in such a way that the colonial character is lost. Also detracting from the historic character is the inconsistent size and style of the signs used by the commercial establishments. Finally, there exist no strong or consistent visual linkages from one side of Prince Street to the other.

One of the opportunities offered within the Town's historic district is that the structures within the district are designed predominately in colonial architectural style. One of the most notable of these structures is the Essex County Courthouse and Government complex. The lawn which is surrounded by the complex forms a pleasing green space within the surrounding urban townscape.

The historic district contains many positive physical aspects. A vista of the Rappahannock River or the monument can be observed when standing along Prince Street and looking east towards the river or west towards the monument. The river and the monument also form the termini of an axis formed between the two. The visual element of the river end of the axis could be enhanced.

Although the style of several buildings within the historic district may not be the same, all structures blend well in terms of texture and color. Brick is the predominant material used to face the buildings. In addition to brick, wood siding may also be found. The colors of the paint used are also complementary, consisting mainly of warm earth tones such as tan, soft grey and white.

The historic district also contains many positive yet subtle features that are not readily identified but add to the picturesque atmosphere of the district. The chiming of the bell's in the courthouse complex along with the historic markers on the buildings serve to create a sense of time and place for the residents and visitors of the area.

The enhancement of the historic district is important for Tappahannock because of its regional history. A historic district is utilized for several purposes. Presently, it is an activity center for both local citizens and regional visitors and as such, it can attract tourism into Tappahannock which will help to strengthen the economic base of the community. Perhaps most importantly, it gives the Town and its inhabitants a unique sense of place and identity.

GOALS AND OBJECTIVES

Goal: *To maintain the mix of businesses which compliment the downtown character.*

Objective:

Encourage the location of new businesses in the downtown area while maintaining the present businesses.

Goal: *Enhance the character of the historic district.*

Objectives:

Encourage the renovation of building facades where appropriate within the historic district

The identification and preservation of historic landmarks shall be encouraged within the Town.

The removal or damaging of Historic buildings shall be discouraged and the restoration or improvement shall be encouraged.

Considerations of compatibility shall be given to areas adjacent to historic areas or buildings when proposed for conversion to uses which would damage or destroy the character of such historic areas.

Develop design standards for the historic district for all new construction and exterior renovations to existing structures.

Implement programs for the improvement of window and awning treatments to all structures within the historic district and the Northern Business Corridor.

Goal: *Enhance visual elements which would give the Town identifiable boundaries.*

Objectives:

Implement programs to improve and maintain the landscaping in all public places.

Provide continuity in color and style of all street furniture.

Implement standards for signage for all business establishments within the Town.

Strengthen the visual image of the Town's gateways located at Hoskins Creek and the monument within the historic district.

Create a visual gateway in the northern section of the Town.

Apply the positive architectural and other design elements which are found in the historic district to the Northern Business Corridor and the Southern Business Corridor where applicable in order that a sense of continuity exists within the Town.

IMPLEMENTATION RECOMMENDATIONS

There is little debate that the built environment plays a significant role in the quality of life a community enjoys. The purpose of the urban design element of the plan for Tappahannock is to provide a vision for the future and a framework for improving the Town's man-made environment. Such a vision includes well trimmed and landscaped public areas which enhance the style, color and texture for the surrounding buildings. The buildings themselves should complement one another and reflect the mark of history on the Town in their design. For example, the historic district represents Tappahannock's colonial past; the Northern Commercial Corridor, through its eclectic architectural style, reflects the Town's gradual economic growth and expansion. The Southern Commercial Corridor reflects Tappahannock's current regional economic importance through its newer and more modern architectural style.

Furthermore, the tourist visiting Tappahannock, should be able to recognize the boundaries of the Town by gateways that visually welcome them into the Town. Gateways also convey to the tourist that the Town is comprised of several different districts, each with its own identity and importance.

In short, the purpose of the urban design plan for Tappahannock is to reinforce the town's regional and historic importance as well as make the Town a more aesthetically pleasing place.

The Central Business District

The Central Business District encompasses the historic commercial area of the Town from the waterfront back to adjacent residential areas that compose the older residential neighborhoods of Tappahannock. Any effort to improve the visual quality of this area must of necessity deal with economic realities, i.e., the competitive nature of the large commercial centers located in the Town and the impact they have had on the economic viability of the older commercial district.

Revitalizing this area will require a concerted effort to attract shoppers and visitors to the downtown to purchase goods and services that cannot be obtained in the commercial centers, i.e., specialty items. Making the downtown an especially attractive area for visitors can best be achieved by capitalizing on the positive qualities of this area, e.g., the waterfront, the historic charm and the contrast it presents to the glitz of modern centers that strip U.S. 17.

In addition, the CBD must function well, as shoppers and tourists will not be attracted to the area if it is congested and lacks adequate and convenient parking. Street and intersections that provide local access must be managed so as to permit convenient access to the shops and other attractions of the downtown.

Finally, improving the downtown will require a commitment on the part of the Town and private sector, i.e., landowners, residents and merchants to undertake a program of improvement.

Working with representatives of these groups the Town should undertake a Central Business District planning effort. The Central Business District Plan should address ways of revitalizing the CBD and include an action agenda for immediate implementation by both the private and public sectors. Among other things the Plan should include a detailed development evaluation and plan for increasing public access to the waterfront starting with development of the recommended Prince Street Park.

Gateways

Gateways designating Tappahannock's Town limits should be erected along Route 360/17 in the southern portion of the Town, and along Route 17 in the northern section. The gateways should consist of signs which located within the median with appropriate landscaping. Such landscaping including low

plants and flowers in front of the signs and taller deciduous and evergreen trees behind.

The Southern Business Corridor

The visual elements of the Southern Business Corridor should be enhanced in several ways. Several varieties of trees should be planted in the median strip which will narrow the field of vision for those traveling on Route 360/17. By narrowing the field of vision, the traveler will be able to focus on what is ahead of him/her and will be less distracted by the intense activity which is surrounding them. Furthermore, the space in which people are moving is made smaller which identifies more closely with the general character of a small town. Help in enhancing this corridor may be achieved through a highway corridor overlay zone (see Chapter 3) and the Development Appearance Standards set forth below.

Development Appearance Standards

All future development within the identified urban design districts, except for single-family homes, should be subject to design review for compliance with minimum development appearance standards. These minimum standards that should be achieved are performance standards rather than inflexible and stringent criteria. The intent of these performance standards is to promote quality development that will compliment the community character of Tappahannock. One of the reasons for implementing these standards is, of course, to positively influence development aesthetics. However, this objective is justified by the greater goals of protecting and enhancing real estate values, fostering of civic pride, and improving the overall investment climate within the Town.

These standards are not intended to restrict imagination or development creativity, but rather, to assist in focusing on development design principals which should result in enhancing the visual appearance of the built environment in Tappahannock. The development appearance standards relate to such factors as: relationship of buildings to the site; relationship of existing buildings and site to adjoining areas; landscape and site treatment; building design; signs; and, maintenance. These standards should not be considered cost prohibitive or overly restrictive since they embody common sense design principles which were traditionally employed throughout the country prior to the advent of post-war suburbanization.

The following are recommended development appearance standards for future multi-family, commercial and industrial development in identified urban design districts of Tappahannock:

Relationship of Buildings to Site

- The site should be planned to accomplish a desirable transition with the streetscape and to provide for adequate planting, safe pedestrian movement, and screened parking areas.
- Site planning in which setbacks and yards are in excess of zoning restrictions is encouraged to provide an interesting relationship between buildings. Buildings in the downtown and community centers are encouraged to minimize front setbacks to enhance the traditional street/building relationships typically found in rural villages
- Parking areas should be treated with decorative elements, building wall extensions, plantings, berms, or other innovative means so as to screen parking areas from public ways.
- Without restricting the permissible limits of the applicable zoning district, the height and scale of each building should be compatible with its site and existing (or anticipated) adjoining buildings.
- Newly installed utility services and service revisions necessitated by exterior alterations should be placed underground wherever possible.

Relationship of Buildings and Site to Adjoining Area

- Adjacent buildings of different architectural styles should be made compatible by such means as screens, site breaks, and materials.
- Attractive landscape transition to adjoining properties should be provided.
- Harmony in texture, lines, and masses should be required. Monotony of design should be avoided.
- Adjacent incompatible land uses should be screened from one another by landscaping, berms, walls, and fences.

Landscape and Site Treatment

- Where natural or existing topographic patterns contribute to beauty and utility of a development they should be preserved and

developed. Modifications to topography should be permitted where it contributes to good appearance, or where it is necessary.

- Grades of walks, parking spaces, terraces, and other paved areas should provide an inviting and stable appearance for the pedestrian.
- Landscape treatment should be provided to enhance architectural features, strengthen vistas and important axes, and provide shade.
- Unity of landscape design should be achieved by repetition of certain plant varieties and other materials and by coordination with adjacent development.
- Plant material should be selected for interests in its structure, texture and color, and for its ultimate growth. Plants that are indigenous to the area and others that will be hearty, harmonious to design, and of good appearance should be used.
- In locations where plants will be susceptible to injury by pedestrian or motor traffic they should be protected by appropriate curbs, tree guards, or other devices.
- Parking areas and traffic ways should be enhanced with landscaped spaces containing trees or tree groupings.
- Where building sites limit planting, the placement of trees in parkways or paved areas should be required.
- Screening of service yards and other places that tend to be unsightly should be accomplished by use of walls, fencing, plantings, or combinations of these. Screening should be effective in winter and summer.
- In areas where general planting will not prosper, other materials such as fences, walls, and pavings of wood, brick, stone gravel, and cobbles should be used. Carefully selected plants should be combined with such materials where possible.
- Exterior lighting, when used, should enhance the adjoining landscape. Lighting standards and building fixtures should be of a design and size compatible with the building and adjacent areas. Lighting should be restrained in design and excessive brightness avoided.

Building Design

- Architectural style should not be restricted. Evaluation of the appearance of a project should be based on the quality of its design and relationship to surroundings.
- Buildings should have good scale and be in harmonious conformance with permanent neighboring development.
- Materials should have good architectural character and should be selected for harmony of the building with adjoining buildings. Materials should be of durable quality. Materials should be selected for suitability to the type of buildings and the design in which they are used. Buildings should have the same material, or those that are architecturally harmonious, used for all building walls and other exterior building components wholly or partly visible from public ways. In any design in which the structural frame is exposed to view, the structural materials should be compatible within themselves and harmonious with their surroundings.
- Building components, such as windows, eaves, doors, parapets, should have good proportions and relationships to one another.
- Colors should be harmonious and should use only compatible accents.
- Mechanical equipment or other utility hardware on roof, ground, or buildings should be screened from public view with materials harmonious with the building, or they should be so located as not to be visible from public ways.
- Exterior lighting should be part of the architectural concept. Fixtures, standards, and all exposed accessories should be harmonious with building design.
- Refuse and waste removal areas, service yards, storage yards, and exterior work areas should be screened from view of public ways.
- Monotony of design in single or multiple building projects should be avoided. Variation of detail, form, and siting should be used to provide visual interest. In multiple building projects, variable siting of individual projects should be used to prevent a monotonous appearance.

Signs

- Every sign should have good scale and proportion in its design and in its visual relationship to buildings and surroundings.
- Every sign should be designed as an integral architectural element of the building and site to which it principally relates.
- The number of graphic elements on a sign should be held to the minimum needed to convey the sign's major message and should be composed in proportion to the area of the sign face.
- The colors, materials, and lighting of every sign should be restrained and harmonious with the building and site to which it principally relates.
- Each sign should be compatible with signs on adjoining premises and should not compete for attention.

Maintenance - Planning and Design Factors

- Continued good appearance depends upon the extent and quality of maintenance. The choice of materials and their use, together with the types of finishes and other protective measures should be conducive to easy maintenance and upkeep.
- Materials and finishes should be selected for their durability and wear as well as for their beauty. Proper measures and devices should be incorporated for protection against the elements, neglect, damage, and abuse.
- Provisions for washing and cleaning of buildings and structures, and control of dirt and refuse should be incorporated in the design. Configurations that tend to catch and accumulate debris, leaves, trash, dirt, and rubbish should be avoided.
- Provisions for landscape maintenance and replacement should be added.

The Historic District

The historic district of Tappahannock is a distinctive place reflecting the colonial history of the Town in its architecture and design character. The civil war monument will serve as a gateway into this district. As a gateway

the island in which the monument sets should be enhanced with plants and flowers and/or attractive masonry work. This will draw attention to the monument as a focal point. If illuminated, the monument's importance as a landmark and gateway would not diminished at night.

In addition to the general appearance standards presented above, the scale of design within the historic district is geared towards the pedestrian. As such, special emphasis on details will be placed on the urban design plan for this area. The street furniture will reflect a colonial character with street lighting designed to replicate traditional gas lamps. The benches and trash containers will also reflect the style used in colonial periods. The sidewalk planters will consist of a uniform style and will be rigorously maintained.

The character of the storefronts themselves will be enhanced. Mullions and shutters will be used in windows which again will reflect the Town's colonial past and reinforce the pedestrian scale of the area. Flower boxes located in store fronts can help to beautify the streetscape and will also enhance any window displays utilized by stores in this district. Awnings of a uniform style can be utilized by the stores located in the historic district.

Protection and Preservation Programs

Outsiders, whether they go to a new place as tourists or as potential residents, will be attracted to a community that seems to respect itself and to have character and individuality. Tourists spend money with local merchants, and new residents spend even more. Local industry and business, if they recruit from outside the region, benefit, too, if it can be shown that the community is a good place to live. Historic preservation enhances the community character and shows that the community has pride and self-awareness. There are several methods available by which communities can make historic preservation a reality. While much has been done to preserve local architecture and history, many opportunities still exist to further preservation effort programs.

A number of existing programs provide assistance in protection or preservation, offer tax benefits, provide professional historical/architectural consulting, and so forth. More detailed information on programs including the National Historic Landmark, National Register of Historic Places, Conservation and Preservation Easements, and Historic Overlay Districts can be found from various historic preservation organizations and such publications as Virginia's Heritage: A Property Owner's Guide to Resource Protection, published by the Virginia Department of Conservation and Historic Resources.

National Historic Landmark — A historical resource is generally a site over fifty years old. The criteria for determining these sites has been established by guidelines set forth by the Secretary of the Department of the Interior. A district, site, building, structure or object can be considered a historic resource. The criterion is that the resource must be noted to be significant in American history, architecture, archeology, engineering or culture.

One of the highest honors for a property owner to have bestowed upon their property is the designation of National Historic Landmark. This program, run by the National Park Service, is the primary Federal means of recognizing the exceptional national significance of historic properties. This program is also one of the major tools used to scrutinize proposals for additions to the National Park System and to select nominations to the World Heritage List.

In recognition of the historic significance of a property, the owner receives a certificate of designation and a plaque bearing the name of the property and attesting to its national significance. In return, the owner agrees to display the plaque publicly although not required to grant public access to the property. Ownership and use of the property is not changed by being listed as a National Historic Landmark. Instead, an honor is granted.

National Register of Historic Places - In 1966, Congress established the National Register of Historic Places as the Federal Government's official list of properties, including districts, significant in American history and culture. In Virginia, the Register is administered by the Virginia Landmarks Register. Some benefits resulting from a listing in the National Register include the following:

- National recognition of the value of historic properties individually and collectively to the Nation.
- Eligibility for Federal tax incentives and other preservation assistance.
- Eligibility for a Virginia income tax benefit for the approved rehabilitation of owner-occupied residential buildings.
- Consideration in the planning for federally and state assisted projects.

Listing does not interfere with a private property owner's right to alter, manage or dispose of property.

Virginia Landmarks Register — The Virginia Division of Historic Landmarks (VDHL) surveys historic buildings, structures and archeological sites to determine eligibility of being listed on the Virginia Landmarks Register. As with being on the National Register of Historic Places, listing does not limit or regulate the property owner in what can or cannot be done with the property. In order to be considered for listing on the National Register or having an easement on the property to be accepted by the VDHL, the site usually must first be listed on the Virginia Landmarks Register.

Virginia Historic Preservation Easement - A state-held historic preservation easement monitored by the Virginia Division of Historic Landmarks (VDHL) is an excellent means of perpetually preserving a historical structure and property for future generations. Regulations state that easements may be assignable to other parties or run with the land. The benefits for a property owner to donate his land to the VDHL include income, estate, inheritance, gift and property tax benefits. In exchange, the owner gives the VDHL the final word regarding proposed alterations. However, for properties whose fair market value is largely based on the value of development rights, this method of preservation may not be the most financially expedient for the property owner or for the VDHL.

Local Historic Overlay Zone — A third, but separate, type of designation is the locally-zoned historic district which is an overlay on the existing zoning ordinance of a specified area. This district, allowed by the Code of Virginia, Title 15.1, Chapter 11, Article 9, Section 15.1-503.2, is designed to maintain the visual character of the community. It may allow an appointed Commission to monitor changes, alterations and demolition of buildings and structures of architectural or historic significance. In Tappahannock, the governing position could be filled by the Town Council or an appointed board. The main purpose of such zoning is:

- to safeguard the heritage of the Town by preserving the District therein which reflect elements of its cultural, social, economic, political or architectural history;
- to stabilize or improve property values in such a District;
- to foster civic beauty;
- to strengthen the local economy;

- to promote the use and preservation of Historic Districts for the education, welfare and pleasure of the residents of the county or municipal corporation.

Monitoring of historic buildings and structures by a Historical Committee under the supervision of the Town Council is done so that property owners can gain recognition and protect the special character of their historic neighborhood. There are well-publicized design guidelines that the Committee would employ when assisting the applicant in obtaining a certificate of approval for alteration or new construction. The government supports these

owners' efforts through tax benefits and other programs. By creating such districts, a community can look forward to being able to maintain its identity in the face of advancing new developments.

The following criteria should be used when making the determination to designate an area eligible for classification as a Historic Overlay District.

A. Historic and Cultural Significance

The historic resource:

1. has significant character, interest or value as part of the development, heritage, or cultural characteristics of the Town, County, State, or Nation;
2. is the site of a historic event;
3. is a site that has yielded, or may be likely to yield, information important in prehistory or history;
4. is identified with a person or a group of persons who influenced society; or,
5. exemplifies the cultural, economic, social, political, or historic heritage of the Town and its neighborhoods.

B. Architectural and Design Significance

The historic resource:

1. embodies the distinctive characteristics of a type, period, style, or method of construction;
2. represents the work of a master craftsman, architect, or builder;
3. possesses high artistic values;
4. represents a significant and distinguishable entity whose components may lack individual distinction; or,
5. represents an established and familiar visual feature of the Town, due to its singular physical characteristics or landscape.

Non-Profit Preservation and Conservation Organizations

A number of organizations exist throughout the State of Virginia whose aim is to preserve and conserve archeological and historical resources. These include, but are not limited to, the Archeological Society of Virginia, the Association for the Preservation of Virginia Antiquities and the Council of Virginia Archaeologists. Individuals can contact the Virginia Department of Conservation and Historic Resources in Richmond for a more complete listing of existing organizations.

CHAPTER 11

IMPLEMENTING THE PLAN

The Comprehensive Plan is intended to capture a vision of the future Tappahannock. As such it provides a basis for a wide variety of public and private actions and development decisions which are to be undertaken in the Town over time. It is not a static document because a community is not static, but one which provides general guidelines to the local community in order that piecemeal improvements or day to day decisions can be properly evaluated against their long-range impact upon the community and their relationship to existing settlement patterns.

The Plan and, in particular, the Land Use Element indicates the proposed general or conceptual development pattern of the community projected to 2010. However it is not a detailed blueprint. Local conditions, values, and philosophies change as a result of economic and political pressures and the Plan must subsequently be responsive to these changes. The Plan is not a document which encourages regimentation. It is, however, a guide which encourages patterns of development which permit orderly and economical growth of the community in a manner which can be more efficiently served with a variety of governmental services and facilities. Implementation involves the concerted actions of both Town elected officials and certain appointed boards. This chapter addresses two aspects of plan implementation that need additional treatment: Administration and Enforcement; and Development Standards and Design Guidelines.

ADMINISTRATION AND ENFORCEMENT

One of the most important, yet often neglected, issues to be considered in the formulation of the Comprehensive Plan, Zoning Ordinance and Subdivision Regulations is administration and enforcement. Even the most well conceived plans and ordinances will lose effectiveness (and in some cases be invalidated) without consistent and equitable administration and enforcement. The responsibility for administering and enforcing the Comprehensive Plan and its associated ordinances and regulations rests primarily with the Town Council, Planning Commission, Board of Zoning Appeals and the Town staff. Each group has a different role in administration and enforcement. Their roles need to be defined and understood in the context of this Plan.

Implementation Plan

The actions needed to guide construction of plan implementation tools, particularly the preparation of new land use and development regulations, as well as operational features of future administrative structure are summarized below:

1. Where possible, use clear measurable performance standards in ordinances to minimize interpretive confusion.
2. Where uses are subject to Board of Zoning Appeals special exception approval, enumerate minimum standards by use and improve the criteria or standards which the Board uses as a yardstick to determine the appropriateness of a given use in the respective zoning district.
3. Reduce the number of special exception uses where possible by establishing clear standards by which they may be permitted by right and subjected to established standards.
4. Establish a policy for reasonable time frames for review of rezoning applications, special exception uses, subdivisions, and uses subject to site plan review and approval.
5. Establish clearer administrative procedures documenting applicant, staff and approval authority responsibilities for processing rezoning, special exception uses, subdivisions, and uses subject to site plan review and approval. Minor site and subdivision plans should be approved by the authority of the Town Manager; however, the major site plans and subdivision plans should be reviewed and approved by the Planning Commission.
6. Utilize standard forms and checklists for ministerial and administrative procedures which clarify for all parties various application submission requirements, improvement guarantees, and inspection procedures.
7. Review and refine rules of procedure for use by the Town Council and Boards for all zoning forms of action which require public hearings.
8. Provide adequate budget and staff as well as training and support for administrative procedures and inspection functions, and attempt to coordinate and/or integrate inspection and administrative functions to the maximum extent possible.

9. Revise the penalty section of the Zoning Ordinance to allow civil penalties for less serious violations.
10. Require the annual revision to the Town's Capital Improvements Program to be coordinated with the Comprehensive Plan and any recommended amendments resulting from the annual review of the Plan and planning process.
11. The Plan should be reviewed and updated every four (5) years.

DEVELOPMENT STANDARDS AND DESIGN GUIDELINES

This section addresses many aspects of development design. Development design can be generally defined as the management of the visual and physical development of the built environment. Primary emphasis is placed on the preservation of the Town's character. The intention is to respond to growing public concern about the increasing transformation of Tappahannock's traditional townscape to sprawling suburban residential and strip commercial development similar in nature to the land use pattern ringing most of the metropolitan centers throughout the Hampton Roads region and the nation. Concern is that, if measures are not taken now, Tappahannock could become conventionally suburban, with only vestiges of the traditional townscape remaining.

Managing development design to maintain and enhance the aesthetics of the Town is an important component of Tappahannock's Comprehensive Plan. Application of development design standards is appropriate anywhere human features are present, and where the physical and visual properties of development can significantly influence the character of the Town's suburban areas, as well as urban areas. Development design guidance, or the lack thereof, significantly affects real estate values, community pride, a sense of obligation to private property, personal enjoyment and satisfaction, and the overall investment climate in Tappahannock.

This section will discuss and recommend various approaches to positively influencing the development design of areas throughout Tappahannock.

Density and Intensity Regulations

Density and intensity regulations control growth by regulating the number of units that may be built on a particular site or by regulating the intensity of that development. Zoning is the traditional technique used to set density and intensity standards. Density standards are typically applied to

residential development, where growth is managed by limiting the number of homes that may be built per acre as opposed to regulating lot size. Intensity standards are more often applied to commercial, office, and industrial developments and are related to the bulk and height of buildings permitted in a particular area.

Intensity is a broader standard of measurement than density. The intensity of a building or a development on a parcel of land refers to the impact it has on neighboring land uses. The greater the intensity of development, the greater the impact and potential for nuisances. For example, greater intensity may result in decreased open space, increased runoff from paved surfaces, increased bulk and height of buildings, increased traffic with associated noise and congestion, increased exterior lighting visible from neighboring property, and other nuisances.

Tappahannock's Zoning Ordinance identifies various density within the same zoning District, which ends up producing development with different characters adjacent to each other. Table 11-1 illustrates the varying densities currently permitted for different dwelling types.

Table 11-1
Permitted Densities
(Dwelling Units Per Acre)
Tappahannock Zoning Ordinance

	<u>Single Family</u>	<u>Town Houses</u>	<u>Apartments</u>
R-1	4.1	12.5	12.5
R-2	7.4	13.8	13.8
R-3	4.8	13-14	13-14
R-A	—	—	20-40
PC-1	8.0	12.0	12.0
MH-1	6.0	—	—

The somewhat incongruous densities permitted in Tappahannock are an issue that needs to be resolved as part of the Town's effort to enhance and preserve the character of its neighborhoods. It is recommended that the effective densities be modified to conform to the intent of the Town's comprehensive plan districts and that the densities are generally uniform throughout each planning district.

Zoning Districts

The land use plan and zoning map serves as an additional tool that can be used to regulate growth. Together, they indicate the appropriate land use for parcels and areas of land throughout the Town. It is recommended that the Town reorder the zoning districts, if necessary, to ensure compatibility among land uses and meet other the identified objectives of the Town. It may also be necessary to revise the permitted uses within residential zones to ensure that compatibility among land uses is achieved.

Performance Standards

Performance standards address how the land uses are placed on the ground rather than what is placed on the land. A wide variety of performance standards can be used to control community character, many of which are discussed in other sections, such as bufferyards, landscaping, and density. In addition to these performance standards, it is recommended that standards for other development related elements be incorporated in the zoning ordinance, e.g., minimum open space requirements. Open space requirements will be varied by the character to be preserve or enhanced. For example, a 15% open space ratio may be adequate for townhouses in an urban setting, but 40% may be needed to preserve the character of a particular suburban area.

Single Family Cluster

More flexibility in the zoning ordinance for the cluster options that do not by themselves change the overall density permitted in the zoning district is encouraged. While the minimum lot size will be reduced, gross density would remain that of the existing zoning district. This type of zoning is a positive influence to any attempt to preserve character and still permits some development. Cluster development is recommended for use, particularly when it preserves the small town character and valued natural areas.

Planned Developments

It is the intent that the planned development provisions in the Town continue to permit a variety of dwelling unit types within the same development and to permit much more intense clustering. It is not the intent of this plan to permit a higher density by right than the underlying zoning district, however additional density may be made available through bonus densities. Bonuses could be granted for such things as providing additional developed parkland or some other amenity that is in excess of that required or for addressing affordable housing needs.

Residential Planned Developments should permit and even encourage the elements found in traditional neighborhoods so that the new developments become extensions of the Town rather than isolated pockets of residential development. The planned developments should be tied to the older parts of Town by a street and sidewalk system. Development should be permitted to be oriented around neighborhood services and accessible by pedestrians. A degree of mixed residential and commercial should be permitted in the neighborhood centers within planned developments.

Landscaping and Tree Preservation

Implementation of landscaping and tree preservation objectives should address the three broad issues relating to landscaping in Tappahannock. One is the apparent absence of street tree requirements in single family and townhouse developments. Two is the lack or lack of quality of landscaping in the commercial areas. Three is the practice of clear cutting mature woodlands for development rather than designing with tree preservation in mind.

First, the Town should require a minimum number of trees per linear feet of street. A minimum standard of a 10 foot tree every 25 to 35 feet planted in a minimum tree space of five to seven feet is recommended. Townhouse development should provide equivalent plantings in planting islands to break up the large expanses of parking.

Second, the Town should require minimum landscape area - expressed as a "landscape surface ratio (LSR)" - for commercial development. Minimum LSRs of 15% to 20% should be used in the Town setting. Requirements for parking lot landscaping should be very specific for different planning district within the Town. Interior landscaping standards should specify the number of planting islands per number of parking spaces with a minimum number of shade trees to be provided.

Third, the Town should place limits on clearcutting of mature woodlands. Cutting of a certain percent of stands of trees of a certain diameter should be prohibited unless for a valid purpose such as roads, buildings, parking, etc. The Town should include tree preservation recommendations which include the protection of existing trees during construction.

Section 15.1-14.2 of the Virginia Code allows Tappahannock to adopt an ordinance providing for the planting and replacement of trees during the development process. The law appears to prescribe the minimum as well as maximum tree canopies for towns; however, there is some language to

suggest that a town could require less stringent regulations. Use of this provision will require State agency interpretation of the law.

Bufferyard Standards

One of zoning's most important functions is the division of land uses into districts that have similar character and contain compatible uses. All uses permitted in any district have generally similar nuisance characteristics. In theory, the location of districts is supposed to provide protection, but in Tappahannock this is not the case because uses as diverse as single-family residential and commercial can occasionally be found adjacent to one another. Bufferyards can be used to minimize the negative impact of any redevelopment or future use of vacant land on neighboring uses.

A bufferyard is a combination of setback and a visual buffer or barrier and is a yard or area together with the planting required thereon. Both the amount of land and the type and amount of planting specified for each bufferyard requirement are designed to minimize nuisances between adjacent zoning districts to ensure the desired character along public streets and roads. The planting units required of bufferyards can be calculated to ensure that they do, in fact, function as "buffers".

Bufferyards should be required to separate different zoning districts from each other in order to eliminate or minimize potential nuisances such as dirt, litter, noise, glare of lights, signs, and unsightly buildings or parking areas, or to provide spacing to reduce adverse impacts of noise, odor, or danger from fires or explosions.

BUFFERYARDS

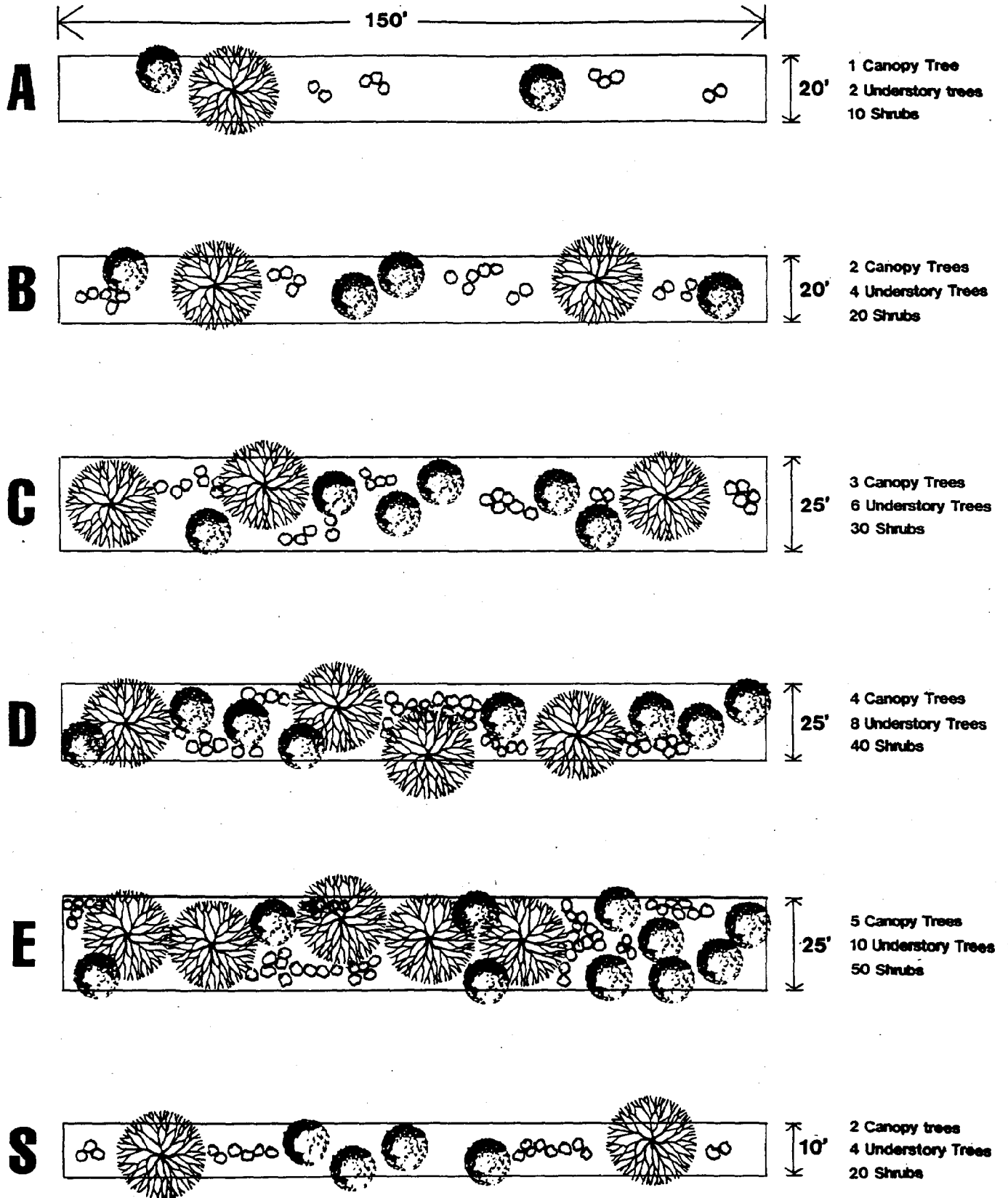


Figure 11-1

