

ROANOKE COUNTY, VIRGINIA

2005 COMMUNITY PLAN



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Acknowledgments

Thanks are due to the many citizens of Roanoke County who participated in this long-range planning process and contributed to the development of the 2005 Community Plan. Without their support, assistance, ideas, visions and recommendations this Plan could not have been accomplished.

Think globally, act locally.
--Rene Dubois

The concept of the public welfare is broad and inclusive. The values it represents are spiritual as well as physical, aesthetic as well as monetary. It is within the power of the legislature to determine that the community should be beautiful as well as healthy, spacious as well as clean, well-balanced as well as carefully patrolled.

--William O. Douglas

We shape our buildings, and afterwards our buildings shape us.

--Winston Churchill

Falling in love with a locality can be as powerful an emotion as falling in love with a person. In some form it lasts a lifetime.

--Daniel Doan, author

A community is not just the proper physical arrangement of buildings and roads..... A community is also a state of mind.

--Thomas Hylton, author

It is always best to start at the beginning and follow the yellow brick road.

--The Wizard of Oz

ROANOKE COUNTY COMMUNITY PLAN

The Roanoke County Community Plan consists of three volumes:

Volume 1: Roanoke County Community Plan, effective date March 22, 2005

Volume 2: Roanoke County Community Plan - Citizen Participation, 1997

Volume 3: Roanoke County Demographic and Economic Profile, September 1996

In addition, the Roanoke County Community Plan is comprised of the following special studies and plans that have been previously reviewed and approved by the Planning Commission and adopted by the Board of Supervisors:

- A. The Route 419 Frontage Development Plan originally approved by the Board of Supervisors in February 1987, with the substitution of the new future land use map from the 1998 Community Plan.
- B. The Roanoke River Corridor Study adopted by the Board of Supervisors on December 18, 1990.
- C. The Conceptual Greenway Plan, Roanoke Valley, Virginia, adopted by the Board of Supervisors on April 22, 1997.
- D. The Roanoke Valley Regional Stormwater Management Plan adopted by the Board of Supervisors on March 24, 1998.

The Roanoke County Community Plan references the following supporting documents that provide additional information and data:

- 1. Roanoke County Public Library Five-Year Plan, 1996
- 2. Economic Development Strategy, May 1992
- 3. Economic Development Strategy, 2000 and Beyond
- 4. 1997 Comprehensive Facilities Study of the Roanoke County School System
- 5. Roanoke County Capital Facilities Plan
- 6. County of Roanoke Six Year Secondary System Construction Plan and Six Year Primary System Improvement Program
- 7. Clearbrook Overlay Design Guidelines Ordinance – December 19, 2000
- 8. Colonial Avenue Corridor Guidelines
- 9. Dixie Caverns Interchange Guidelines

10. Hanging Rock Interchange Guidelines
11. Williamson Road/Hollins Guidelines
12. 11/460 West Guidelines

For additional information, please contact:
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The Community Plan can also be accessed from the Roanoke County Home Page
www.RoanokeCountyVa.gov

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CHAPTER 1

INTRODUCTION

The Roanoke County Community Plan is a blueprint for the future growth and development of the County over the next 10-15 years. It provides direction and guidance, for both the public and private sectors, in making decisions about land development, public services and resource protection. This Plan allows decision makers to study the long-term consequences of current decisions and recognize that today's actions will impact the County for many years to come.

The Community Plan is a planning document and reflects the community's goals and visions of what the future might be. It allows the Board of Supervisors to present a snapshot of the County's long range goals, policies and strategies to the community. This includes those involved in private land development, neighborhood organizations and civic groups, neighboring jurisdictions, County departments, commissions and boards and the general public. It also provides those in the land development process the opportunity to anticipate Board decisions and to actively work in concert with the Plan rather than in conflict with it.

The Community Plan is a public document, developed with a great deal of public participation. It encourages individual participation in public affairs and particularly the long-range planning process of the County. It also ensures citizens that decisions based on the Plan are well-thought out and in the best interests of the County as a whole.

The Roanoke County Community Plan was developed in accordance with Chapter 15.2 of the *Code of Virginia*, Local Planning Legislation, Article 3, The Comprehensive Plan, which requires that:

“The local (planning) commission shall prepare and recommend a comprehensive plan for the physical development of the territory within its jurisdiction.”

“At least once every five years the comprehensive plan shall be reviewed by the local (planning) commission to determine whether it is advisable to amend the plan.”

The foundation of this Community Plan is the community's vision for the future documented in the *Vision Report, The Changing Century - Roanoke County 2010*. The research, debate, discussion, thought and commitment that went into the visioning process are articulated and reflected in this Plan. The following components of the Plan support the community's vision:

- Land use, community facilities and resource preservation issues - These general, community wide issues affect the entire community.
- Future Land Use Guide - This chapter includes land use designations and policies.

- Community Planning Areas - The future land use maps are included in this chapter along with critical neighborhood issues and resources.
- Community Plan Implementation - The final chapter includes work item priorities.

THE COMMUNITY PLAN PROCESS

History

Roanoke County has a long history of comprehensive planning. In 1939 the County established the Planning Commission. Within the next year the county's first Community Plan was adopted and in 1941 the first zoning ordinance was in place.

In 1974 Roanoke County adopted the second Community Plan and in 1983 a general revision to that plan was begun. Two years later the third Community Plan was adopted by the County. The community lead visioning process was begun in 1995 and at its conclusion, in the summer of 1996, an intensive community involvement process was begun to develop the 1998 Community Plan.

Process

The community involvement process used in developing the Community Plan is, in many ways, as important to the credibility and value of the plan as the final document itself. The Plan must reflect the community's value and be open to all citizens of the County in order to be called a success. It cannot be a reflection of only a minority of viewpoints or special interest groups.

Over the past three years, Roanoke County has been involved in an extensive outreach program to involve its citizens in the development of a new Community Plan. The first component of this outreach program was the visioning process. In February 1995 the visioning process formally began with a community values survey. This scientifically-valid telephone survey questioned 500 county residents about public policy issues and assessed the relative importance of these issues. The visioning process continued throughout the spring and summer and eventually involved more than 800 citizens in the development of a vision of what Roanoke County could be like in the year 2010. This component of the citizen outreach program was concluded in June 1996 with the publishing of the *Vision Report, The Changing Century - Roanoke County 2010*.

The second component of the outreach program was to develop a neighborhood-based citizen participation element. This element was designed to identify issues at the neighborhood level and to relate the findings of the vision process to each neighborhood. To accomplish this task the Board of Supervisors appointed a Citizen Advisory Committee (CAC) consisting of 24 citizens - two from each of the twelve community planning areas. The CAC held their first meeting in August 1996. The charge to the CAC was to formulate a citizen participation process that would effectively involve a broad spectrum of county citizens in the comprehensive planning process. In addition, the goal was to develop a citizen involvement structure that would continue to be involved in county planning at all levels - from the development of neighborhood plans to

rezoning issues. The purpose was to integrate active, concerned citizens into the planning process thereby increasing the level of commitment to the long-range plan and ensuring future accountability to the plan.

The CAC met during the fall of 1996 and by December developed a citizen participation process. This process involved the creation of neighborhood councils in each of the county's 12 community planning areas. The CAC appointed local citizens and leaders of community-based organizations to serve on the councils. The CAC's objectives for the neighborhood council process were:

To assure that the Community Plan reflects the desires of the majority of citizens for the future of Roanoke County and to expand the sphere of influence the Community Plan will have in guiding decisions in the future for our Roanoke County community.

The neighborhood councils began meeting in January 1997. Over the next four months they worked to identify critical land use, resource preservation and public facility issues in their neighborhoods. These extensive lists of issues were later prioritized by council members. Secondly, the councils mapped cultural, historical and natural resources that added uniqueness, beauty and a sense of place to their communities. The final component of their work was to identify examples of design elements, located in their neighborhoods, such as building size and mass, building architecture, landscaping, parking design, signage, materials and colors that are visually appealing.

In May 1997 a community forum was held to exhibit the results of the neighborhood council process. This meeting was an open house with booths that displayed the work and maps produced by each council. Representatives of various special interest groups made presentations to the Planning Commission and the CAC.

The major components of the Community Plan reflect the results of the visioning process as well as the work of the CAC and neighborhood councils. The first component provides background, goals, objectives, issues and opportunities and implementation strategies in the areas of land use, community facilities and resource preservation. The second component is the Future Land Use Guide. Land use guidelines and policies that reflect the results of the visioning process are outlined. The third component is the Community Planning Area Analysis. This section takes an in-depth look at each of the 12 community planning areas around the County. Future land use maps are displayed in this section. The final chapter of the Plan includes implementation strategies.

PLAN UPDATES

Every five years the Community Plan will be reviewed and updated as necessary to ensure that it is consistent with the overall community vision. This review process will provide the opportunity to analyze and address changes in the community and to update statistical data and implementation strategies. It will also provide the opportunity to measure progress and make adjustments, where necessary, toward the implementation strategies recommended in the 1998 plan.

PLAN AMENDMENTS

The Roanoke County Community Plan is a general planning document that is subject to interpretation. It is intended to guide future land use development in the County but is not fixed in place. Therefore, proposed amendments to the Community Plan will be received and reviewed twice annually in the months of January and July. Amendments to the Roanoke County Community Plan may be initiated by any citizen, the Board of Supervisors, the Planning Commission, any county landowner or the Secretary to the Planning Commission.

Amendment applications must meet one or more of the following criteria:

- The subject property was misinterpreted or overlooked in the Community Plan.
- Significant changes have occurred in the condition of surrounding lands.
- The requested amendment will significantly enhance other goals of the Community Plan.

Amendment applications will be considered, based on the preceding qualifications. The Planning Commission will review the application, hold a public hearing and recommend to the Board of Supervisors whether to consider the amendment. The Planning Commission may, at their discretion, hold a community meeting or convene a meeting of the appropriate neighborhood council. If recommended by the Planning Commission, the Board of Supervisors will hold a public hearing and vote to accept, deny, or modify the amendment and forward its order to the Secretary to the Commission. The Board of Supervisors retains the right to initiate an amendment to the Community Plan at any time. Any amendment should be determined to be consistent with the remaining goals of the Community Plan and the overall community vision.

CHAPTER 2

VISION STATEMENTS

INTRODUCTION

In 1995 the citizens of Roanoke County initiated a strategic planning process called visioning. The purpose of this process was to build a vision for the future of Roanoke County that is based on community consensus and reflects the community's values.

In March 1995 a thirteen-member citizen Steering Committee was formed to administer and guide the vision process. The Steering Committee formed ten focus groups to discuss and prepare recommendations on the following topics: Agriculture and Forestry, Economic Development, Public Education, Technology, Resource Preservation, Transportation, Growth Management and Planning, Government Relations, Recreation and Culture and Housing. These focus groups involved over 200 citizen volunteers.

The focus groups met throughout the summer of 1995 and in the fall presented their recommendations to the Steering Committee and Board of Supervisors. There were five key issues, or principles of action, that emerged from the focus group reports. These issues cut across the thinking that County citizens brought to the vision process and are as follows:

COMMUNITY-WIDE THEMES

1. Regionalism - The County must take the lead in finding new and innovative ways to look beyond its political boundaries for solutions to the challenges of the next century.
2. Sustainability - Recognizing that our natural systems are vital to providing both economic needs and quality of life for all citizens, sustainable development has been incorporated into County planning -- meeting the needs of the present generation without compromising the ability of future generations to meet their own needs.
3. Community Identity - Roanoke County citizens identify very closely with their neighborhoods and school districts. Efforts must be made to preserve the elements of community identity that provide gathering places for the exchange of information and support.
4. Scenic Beauty - The mountains that surround the County provide a sense of place and are a source of beauty, recreational activity and inspiration. Steps must be taken to develop sound conservation policies for our dwindling farm lands, mountainsides and ridges, rivers and streams, soil and air. These resources are considered by many to be our region's greatest asset.
5. Quality of Life - The citizens of Roanoke County recognize that there exists a fragile balance between economic growth and prosperity and the preservation of a way of life that is cherished by many. Proactive steps must be taken to manage growth in a positive way - to act

conservatively and with deliberation when making decisions that will affect our high quality of

life and that of our children's children.

In addition to these five broad community-wide themes each focus group developed a vision statement that reflects their discussions about the future of Roanoke County.

VISION STATEMENTS

The following vision statements represent the work of the focus groups and are reprinted here exactly as they were developed by each group.

Government Relations

1. In 2010, Roanoke County is one of a group of regional independent counties and cities, that choose to practice - as an aggressive and proactive policy - broad based, regional collaboration and cooperation in: 1) meeting the current day-to-day needs of the citizens of Roanoke County, and 2) preparing for the challenges and opportunities of the future. In these cooperative efforts, Roanoke County government leads the way, thereby ensuring the prosperity and happiness of the citizens of Roanoke County.

Resource Preservation

1. In 2010, Roanoke County has incorporated principles of sustainability into County ordinances. These principles will maximize energy efficiency and minimize waste and pollution. To assist with this effort, the County has adopted and enacted local interpretations of the recommendations of the "Blueprint for Sustainable Development of Virginia," while bolstering industry through a variety of incentives to adhere to these standards.
2. In 2010, Roanoke County continues to support the educational efforts of Explore Park and includes environmental education in the public school curriculum.
3. In 2010, Roanoke County has enacted ordinances and programs to preserve the integrity of the surrounding mountains and open space. These include mountainside, ridgeline and natural resource protection.
4. In 2010, Roanoke County has identified the area's diverse flora and faunal resources by means of a comprehensive survey and makes use of this information in designating sites to be protected as preserves, parks, greenways and other natural corridors connecting critical habitats.

Chapter 2: Vision Statements

5. In 2010, Roanoke County has established tax incentives to encourage landowners to dedicate their mountain land for scenic and conservation easements. This has been supplemented by purchases of land by a Natural and Scenic Resources Foundation - a local land trust.
6. In 2010, Roanoke County has participated in a regional effort to identify and protect viewsheds along the Blue Ridge Parkway and the Appalachian Trail.
7. In 2010, Roanoke County has established sound growth management policies that preserve the region's scenic assets and natural resources while allowing residential development that includes open spaces, parks, cluster development and rural villages.
8. In 2010, Roanoke County continues to recognize the economic and scenic value of its farm lands and has actively participated in promoting the economic viability of the rural lifestyle.
9. In 2010, Roanoke County citizens exhibit a strong public and private sector commitment to the preservation of Roanoke County's distinctive cultural heritage -- its historic buildings and landscapes, archaeological sites and folk traditions. Recognizing that the architectural and archaeological records of this valley lend character and identity to our area, historic preservation has become an important tool for economic development. Through efforts to identify heritage resources, through cultural heritage education in the public schools and through cooperative efforts with other groups, the County has, over the last 15 years, set the standard for a sound preservation ethic.
10. In 2010, Roanoke County has implemented the "Recommendations for Planning" produced as a result of the architectural survey of 1991-1992. The County has also initiated a similar archaeological survey.
11. In 2010, Roanoke County community libraries have established local archives which house video and audio tape oral histories, copies of family trees, diaries, and pertinent newspaper articles and books that document each community's unique history.
12. In 2010, Roanoke County has mountain festivals, jamborees, fiddler conventions, story telling festivals, and pow-wows that are used to preserve interest in and knowledge of local folk traditions.

Housing

1. In 2010, Roanoke County has developed incentives and a sliding scale of fees to encourage affordable housing. Housing costs have been addressed by controlling utility connection fees, erosion control requirements and waste disposal options.
2. In 2010, Roanoke County has a diverse housing stock meeting the demands of current and future residents. Dwellings are available in a range of prices, styles and designs to accommodate students, single persons, the elderly and families. Alternatives to single

family ownership are being met by an adequate supply of apartments, duplexes, attached housing, senior services and nursing homes for rent.

3. In 2010, Roanoke County has managed a healthy economic growth while protecting and maintaining its natural resources. Through careful planning and orderly development, our natural resources have been protected to ensure the quality of life for future generations. Open spaces and greenways have been provided through the use of cluster development and innovative site design concepts.
4. In 2010, Roanoke County has taken a leadership role in valleywide cooperative efforts to hold the cost of public services to a relatively low level. Services have been extended, in a planned and orderly manner, to meet housing demands.

Transportation

1. In 2010, Roanoke County roads are well maintained. New roads are initiated and planned in cooperation with VDOT and with a high level of citizen participation. Transportation planning is carried out in conjunction with the County Comprehensive Plan. New roads are designed to accommodate large vehicles and incorporate new technology wherever possible. The design and construction of new roads are accomplished in an environmentally sensitive manner, protecting natural resources and minimizing various forms of pollution.
2. In 2010, Roanoke County, Roanoke City and Salem City have encouraged the growth of public transit throughout the Roanoke Valley. An active and successful public relations campaign has resulted in increased ridership. Public transit is now a vital link in the Valley's multi-modal transportation network.
3. In 2010, Roanoke County has incorporated the efficient movement of freight into the overall transportation system design. The new Inland Port has given southwest Virginia's industries a promising global connection.
4. In 2010, Roanoke County has incorporated the use of bicycle trails, pedestrian walkways and greenways into the transportation network.
5. In 2010, Roanoke County has embarked on a multi-purpose light rail project. This project serves as a valuable transportation and recreational facility for residents and visitors alike.

Growth Management and Planning

1. In 2010, Roanoke County growth management provides for greenways and open space as an integral part of communities and individual lifestyles.
2. In 2010, Roanoke County has addressed the impacts of strategies to provide for sustainability within growth management.
3. In 2010, Roanoke County communities have small commercial nodes and business opportunities that serve local areas. This strategy has encouraged and enabled citizens to use alternative forms of transportation such as pedestrian corridors, bicycle paths and public transit.
4. In 2010, Roanoke County allows flexibility, within a consistent framework of sustainable development, to encourage community redevelopment, commercial development, infill development and industrial revitalization while preserving neighborhood stability and property values. This planning process is successful due to extensive community and private sector involvement.
5. In 2010, Roanoke County transportation planning is an integral part of growth management strategies. Following through with a trend begun in 1995, Roanoke County citizens have continued to be pro-active participants in the transportation planning process.
6. In 2010, Roanoke County growth management strategies and sustainability are guided and measured by a system of benchmarks established with citizen input. This results in a highly involved citizenry who are knowledgeable in planning principles, who proactively participate in the planning process, and who believe they can influence the process.

Agriculture and Forestry

1. In 2010, Roanoke County has taken action to identify and establish distinct rural areas worthy of preservation that will balance the rights of property owners while protecting the productive value of rural lands.
2. In 2010, Roanoke County has implemented policies to tax rural land on its specific value for agriculture and/or forestry production.
3. In 2010, Roanoke County has taken action to reinforce the "right to farm" and there exists a high level of mutual respect among farmers, non-farm owners and rural visitors of individual property rights, responsibilities and privacy.
4. In 2010, Roanoke County has established markets for small- scale farm and forestry products that support and sustain a viable rural land-based economy and robust farmers'

markets in the Valley.

5. In 2010, Roanoke County continues to value, protect and preserve the scenic vistas, water resources and other important natural and cultural resources of the rural areas. There continues to be strong recognition that these resources are critical components of the quality of life of the region.
6. In 2010, Roanoke County has established and has been operating a level of public services, particularly fire and rescue, to the rural areas that is appropriate and consistent with the needs of an aging rural population.
7. In 2010, Roanoke County has established mechanisms so that rural residents are directly represented, consulted, advised and involved in their local government.

Economic Development and Tourism

1. In 2010, Roanoke County has played a major role in developing the Roanoke Valley into a center of industrial and commercial technology by adequately funding the Industrial Development Authority, enabling them to acquire property and providing the infrastructure to encourage economic growth.
2. In 2010, Roanoke County and the surrounding areas have become a natural playground for visitors and residents. The local governments have provided the necessary infrastructure to permit full usage and enjoyment of our scenic resources - both private and public - such as a regional greenway system, pedestrian-friendly roads, campgrounds and recreational vehicle parking areas. Strong incentives have been put into place to encourage developers to include dedicated lands and connected greenways in all new development projects.
3. In 2010, Roanoke County has taken the lead to preserve our most valuable natural asset, the scenic environment and natural ridge lines of the mountains surrounding the Roanoke Valley.

Recreation and Culture

1. In 2010, Roanoke County - through unique initiatives and as a result of reciprocal arrangements and partnership efforts with neighboring local governments and private entities- is nationally known as a preeminent East Coast recreational and cultural center and is the major recreational and cultural center on the Blue Ridge Parkway. Awareness of the County's unique and high-quality recreational and cultural programs is reflected in large audiences, a high level of individual participation and volunteer activity, broad-based financial support, a healthy citizenry and increased tourism.

Technology and Communications

1. In 2010, Roanoke County provides its citizens opportunities to interface with each other, the capability to access local and global community services through the latest communications technologies and encourages - through both public and private means - the use of the latest technologies to enhance the quality of life in the Roanoke Valley.
2. In 2010, Roanoke County encourages technological improvements/innovations in manufacturing, power transmission, communications, commerce and transportation to reserve and enhance the natural resources of the Roanoke Valley. Roanoke County facilitates a managed technological environment that balances education, productivity, social skills, health and the ecosystem.
3. In 2010, Roanoke County affords its citizens opportunities - through technical schools, extension programs, and a four-year college of higher learning - to obtain the technological skills required to work and function in a rapidly changing world.

Public Education

1. In 2010, Roanoke County provides access to world-class educational services to all citizens. The educational focus is to prepare learners for the work place and to develop in them characteristics of responsible, productive members of society for whom learning is a lifelong endeavor.

CHAPTER 3

LAND USE ISSUES

1. CITIZEN PARTICIPATION

Introduction

Roanoke County encourages citizen participation in all elements of the government. The challenge is to keep the level of citizen interest high and to make their active participation in the workings of their government as convenient and easy as possible.

The participation of an informed citizenry is a critical element in the success of this community plan and of other County initiatives. This plan reflects the hopes and desires of County citizens for the future and is dependent on their continued support, diligence and commitment.

Goal

To achieve the highest possible level of citizen participation in all elements of Roanoke County government by keeping our citizens informed and educated on public policy issues and by maintaining an open, democratic, and easily accessible governmental system.

Issues and Opportunities

- The Roanoke Valley government and public education television channel (RVTV) provides information on local government issues for Roanoke County, the City of Roanoke and the Town of Vinton in addition to broadcasting City Council and County Board of Supervisors meetings. It also provides a bulletin board of announcements concerning job opportunities, upcoming events, tax information, etc.
- RVTV is not available to the entire county population due to cable access constraints.
- For the most part, there are not major neighborhood concerns or county-wide problems that citizens feel a need to unite, organize or rally around.
- When seeking input on planning initiatives, such as revisions to the zoning ordinance, it is sometimes difficult to get a broad spectrum of comments from a variety of people, groups and organizations. For example, it seems that neighborhood-based and environmental-based groups are not as well organized or financed as other special-interest groups, that because of financial interests, are highly motivated to participate in such efforts.

- As shown every year in the citizen survey that the County conducts, the vast majority of County citizens are satisfied with the level of government services they are receiving.
- Civic leagues exist in all areas of the County and are effective in getting zoning violations remedied and organizing neighborhood crime watch efforts.
- Because of the general level of satisfaction with government services, the majority of County citizens tend to be reactive rather than proactive on public policy issues.
- The County has a Deputy Assistant to the County Administrator whose major job responsibility is to assist citizens in resolving problems they may be having with a County policy, requirement or regulation.
- The County holds all public hearings and community meetings in the evenings to allow the general public to participate in them.
- The County Administrator holds quarterly meetings with the civic league presidents.
- Community meetings are often held to obtain citizen input on rezoning petitions prior to the Planning Commission public hearing.
- The County has a web page that provides information on the county government and services and linkages to other regional, state and federal government sites.
- The Community Plan citizen participation process developed neighborhood councils consisting of citizens from each of the community planning areas.

Objectives

- A. Ensure that all citizens have full and appropriate access to information concerning their government.
- B. Encourage all citizens, of all ages, to participate to the fullest extent possible in public meetings and hearings.
- C. Provide assistance to any neighborhood or community area that wants to establish a civic league.
- D. Promote the use of the most effective and efficient methods to communicate issues and policies to the citizens and to receive their input and suggestions.
- E. Treat all citizens with the utmost respect and courtesy. Listen and respond promptly to their comments and suggestions.

Implementation Strategies

1. Enhance and expand the role of the neighborhood councils. Utilize these councils to gather neighborhood input on a variety of topics such as rezoning petitions, neighborhood plans and other local issues. (Obj. B, D, E)
2. Develop and fund a County Page quarter-page notice in the Roanoke Times. This could run once a month and would provide information on public policy issues, upcoming public hearings and community meetings, road projects, etc. (Obj. A, D)
3. Expand the coverage of RVTv. (Obj. A, B, D)
4. Develop a quarterly newsletter that covers Department of Community Development issues such as planning, zoning, progress toward goals of the community plan, stormwater, drainage, roads, etc. This should be posted on the Roanoke County Home Page and distributed to organizations, civic leagues, PTA's, neighborhood councils and a general public mailing list. (Obj. A, B, D)
5. Develop a network of contact people with all neighborhood and special interest groups so that they can be notified and involved in public policy issues. (Obj. A, B, C, D, E)
6. Encourage, as part of the application process, all rezoning petitioners to hold community meetings, unless exempted by the Zoning Administrator. (Obj. A, D)
7. Once a year, hold a meeting of the Board of Supervisors and Planning Commission in each magisterial district of the county - Hollins, Catawba, Windsor Hills, Cave Spring and Vinton. (Obj. A, B, D, E)
8. Roanoke County should provide its citizens the opportunity to interface with each other and the capability to access all community services through the latest communications technologies. (Obj. A, D)

2. DESIGN GUIDELINES

Introduction

Establishing design guidelines to promote quality development and enhance the unique character of communities within the County is an important component of Roanoke County's Community Plan. These guidelines are intended to facilitate development creativity and provide incentives for development design principles that will result in the enhancement of the visual appearance of the built environment in the County. They relate to such items as: site development, relationship of proposed land uses to adjoining land uses and buildings to adjoining buildings, relationship of buildings to their site, site layout, parking lots, landscaping, building design, lighting, and signs.

The results of the Neighborhood Council process re-enforce the idea of guiding development design with the following themes voiced by all the communities within the County:

- New development should incorporate a high standard of design including the following design elements: appropriate architecture, landscaping, and signage.
- Encourage neighborhood involvement in the design process associated with any development proposal through citizen meetings with developers.
- New developments should be designed and planned as cohesive communities.
- Incompatible land uses should be buffered from adjoining land uses.
- New developments should be required to design around existing, healthy stands of trees and/or individual specimen trees where possible, to preserve trees that are outside of the building envelope and to replace trees when existing trees must be removed.

Goal

All new and redeveloped sites are designed to be in harmony with their surroundings, improve the general appearance of the site and strengthen community identity.

Issues and Opportunities

- Design guidelines may provide a level of comfort with a proposed development that otherwise would not exist.
- Design guidelines may help assure that development reflects the unique characteristics of the community.
- The citizens of Roanoke County appear to be very supportive of design guidelines.

Objectives

- A. Develop and incorporate design guidelines for all future development in the County, excluding individual home sites and farm buildings.
- B. Involve citizens, businesses and community leaders in the creation of community specific design guidelines.

Implementation Strategies

- 1. Continue to support and expand as necessary the Hollins Village/Williamson Road redevelopment initiative using public funds as a catalyst to stimulate private investment.
- 2. Identify and ensure that the gateways into the County are attractive and enhance the community's identity.
- 3. Encourage through community meetings, public participation in the development of design guidelines for land in Roanoke County.
- 4. Provide education and outreach to the public emphasizing the importance of developing design guidelines for the County.
- 5. Be firm about goals, but flexible about how to attain them.

Land Use Designations

The Plan designates the following land use areas. Each designation has a set of design guidelines that pertain to development issues within that area.

Conservation - These areas are characterized by significant environmental and cultural features such as mountains, ridgetops, wildlife habitat, forests, rivers and lakes.

Rural Preserve and Rural Village - These areas are characterized by rural landscapes where protection of the rural character is desired.

Village Center - These rural village centers, where established crossroad communities are present, serve as focal points for the surrounding rural areas.

Neighborhood Conservation - These are established residential neighborhoods where conservation and continuation of the existing housing pattern are desired.

Development - These areas are characterized by new residential growth and a variety of housing types and densities.

Transition - These areas are corridors where current commercial strip development patterns exist or future development pressure is possible.

Core - These are commercial, retail areas where suburban centers of high intensity urban development are present or expected.

Principal Industrial - These are areas where high technology industries and research and development firms are present or may develop.

Scenic Corridors - These are areas encompassing a current or possible future designated scenic corridors.

Design Guidelines

Conservation

Certain areas within the County are designated as Conservation because of significant environmental and cultural features such as mountains, wildlife habitat, clean water resources or scenic beauty. The Conservation land use areas include part of the George Washington/Jefferson National Forest, the Appalachian Trail corridor, Havens State Wildlife Management Area, Carvin's Cove Reservoir, Spring Hollow Reservoir, Blue Ridge Parkway viewsheds, the higher elevations of Read Mountain and a County owned portion of Sugar Loaf Mountain. When the specific data is available, the viewsheds from the Appalachian Trail should be included in this designation. The primary goal of the following objectives and guidelines is to protect and preserve the inherent environmental and natural resources within the County.

Objectives

- A. To recognize existing areas within the County that fit under the Conservation land use areas and establish guidelines to protect and preserve them.
- B. Identify, evaluate and work to assure the preservation of wildlife habitats and corridors, natural landmarks, historic and archaeological sites, significant agricultural lands and examples of natural heritage. Maintain a registry of qualified areas and link decisions concerning land and easement purchases and new developments with the conservation framework established.
- C. Encourage the establishment of additional Conservation land use areas through conservation easements, greenways and parks that in the end result, create a network of interconnected Conservation areas.
- D. Provide assistance and incentives for land owners to maintain natural areas. Work with landowners and other entities to promote sound conservation practices and where

appropriate, establish cooperative management plans. Encourage private owners to investigate and utilize the preservation programs offered by other governmental entities and private foundations.

Guidelines

1. Use Conservation land use areas to preserve: critical ecosystems; scenic vistas; fish and wildlife habitats; natural resources and landmarks; outdoor recreation areas; cultural, historic and archaeological areas; connections and trails; access to public waters and other useable open space lands; scenic waterways or highway corridors; important forest lands, range lands, or agricultural lands; aquifer recharge areas and surface water.
2. Resource extraction should be carried out in a manner that preserves open space along stream corridors, minimizes the impacts on the land and is compatible with adjacent land uses. Reclamation plans should be reviewed and processes monitored to ensure the area's continued significance.
3. Isolated wetlands, stream corridors, lakes, drainage areas and their associated riparian areas should be preserved, protected and used for a variety of open space purposes such as landscape features, irrigation, water quality protection, buffers, wildlife habitat and flood control.
4. Development of any kind should be planned, designed and constructed to avoid or minimize the degradation of natural and cultural resources.
5. Minimize habitat fragmentation from the combined effects of development, roads, trails and an overall increased human presence.
6. Place adequate buffers around sensitive sites.
7. Restrict development of structures, such as residential, commercial or industrial facilities, on slopes greater than 20%. Allow passive recreational uses, such as picnic shelters, greenways and trails in these areas.
8. Restrict development within 100 feet of a water course, excluding passive recreational uses, water related recreational uses or incidental utility uses.
9. Significant scenic views should be preserved and a detailed inventory developed.

Rural Preserve and Rural Village

In those areas of Roanoke County designated as rural and/or agricultural where local officials and residents are looking for preservation options, certain design strategies can be followed. Through the use of these design strategies land will remain available for productive agricultural activities and open space, developers are not placed under any unreasonable constraints, and realtors gain a special marketing tool, in that rural views from the new homes will be guaranteed by the conservation easements.

Objectives

- A. While allowing future development, employ design strategies that leave land available for productive agricultural activities and open space.
- B. Preserve rural views and vistas.

Guidelines

- 1. Encourage cluster developments that set aside 50 to 70 percent of the parcel as open space, and preserve or incorporate existing site features into the overall design.
- 2. Require that rural subdivisions be buffered and set back from roadway view.
- 3. Decrease the number of new driveways fronting on public roads.
- 4. Decrease the obstruction of views by new developments by strategically locating buildings on the site. Locate buildings either in a wooded fringe at the edge of field or set back and buffer them from fields and public roads through the use of landscaping.
- 5. Buildings located on prominent mountain sides should use exterior colors and textures to aid in them blending into the landscape.
- 6. Discourage the siting of buildings on ridge lines.

Village Center

There are numerous Village Centers throughout the rural and suburban areas of Roanoke County. These centers are established crossroad communities which have traditionally served as focal points for the surrounding area. They play a functional role in providing homes, limited neighborhood- oriented commercial services and businesses, and civic buildings such as churches, post offices, fire stations and schools. Many of the Village Centers in Roanoke County contain historic structures and/or sites, which should be preserved through local historic district zoning. These Village Centers each have a unique character and sense of place with which local residents easily identify.

Objectives

- A. Collaborate with community members to develop design guidelines for Village Centers to protect and enhance the existing village character and historic qualities.
- B. Establish provisions which allow for limited mixed-use development in existing Village Centers, and permit the future development of additional Village Centers in appropriate locations throughout the County.

Guidelines

1. Design and build new construction to blend in with the existing buildings in the village. New construction should be compatible with the existing village in respect to height, size, character, massing, roof shapes, material, and door/window proportions.
2. Locate and cluster institutional services at Village Centers to enhance community identity.
3. When existing buildings create a characteristically close relationship with the street, retain this pattern in order to preserve the community's character.
4. Reduce the visual impacts of parking areas upon community character through placement, landscaping and buffering requirements.
5. Screen open storage areas, exposed machinery, and outdoor areas used for storage from roads and surrounding land uses.
6. Preserve roadside trees due to their important role in defining the character of a community and encourage the planting of new roadside trees.
7. Design exterior lighting and signs as integral architectural elements of the building and site.
8. Control lighting in both height and intensity to maintain village character. Shield luminaries to prevent excessive lighting and glare beyond lot lines.
9. Encourage compatibility or shared use of signs for adjacent businesses. Maintain good scale and proportion in sign design and in visual relationships to buildings, surroundings and views.
10. Encourage the re-use of historic structures.
11. Create historic district overlay zoning for appropriate village centers.

Neighborhood Conservation

Single-family neighborhoods are traditionally the most protected land uses. The strategic placement of non-residential land uses, such as parks, schools, libraries and churches (determined by neighborhood preference and need) can play a vital role in preserving and enhancing neighborhood character. Also, creative site planning practices can enhance the opportunity for attached housing to achieve compatibility with adjacent detached housing.

Objective

- A. Preserve and enhance the existing character of established neighborhoods through boundary protection and the addition of desired amenities.

Guidelines

- 1. Screen and buffer adjacent non-compatible land uses.
- 2. Incorporate greenways within neighborhoods as well as from neighborhoods to adjacent institutional services, other neighborhoods and commercial centers.
- 3. Encourage infill of vacant lots with similar density housing.
- 4. Any additions or changes to existing neighborhoods should be compatible with established (underlying) site patterns.
- 5. Allow well-designed low impact service oriented businesses to locate near neighborhoods.

Development

These areas of new residential growth have the most opportunity for innovative land development practices. Cluster developments with a mix of housing types and densities, limited retail support, and efficient layout of streets can prevent sprawl and create self-contained neighborhoods with combined living and working areas. These areas also respond to the current needs and demands of smaller families and energy/resource conservation. The protection and inclusion of environmental processes and natural site amenities, such as drainage systems and vegetation, should be priorities for all new developments.

Objectives

- A. Encourage the development of planned residential communities and cluster developments that protect and incorporate environmental features and resources within the developed area.
- B. Within the development areas, plan for an interconnected framework of greenways, parks and activity/retail centers.

Guidelines

1. Take an inventory of all environmental features and resources present on site in order to create a site development plan that is able to preserve and benefit from the existing natural features.
2. Use those existing site features to create a common framework within a mix of housing types and densities.
3. Retail support should be located in central locations, easily accessible by car, bike or foot.
4. Lay out streets in an efficient manner, but avoid creating main thoroughfares that can attract heavy amounts of traffic.
5. Neighborhoods should be easily identifiable; create gateways at major entrance points.
6. Create common recreational open space for all neighborhood residents.
7. Protect, and enhance when possible, scenic views to and from the site.

Transition

Certain roadways within the County have become or have the potential of becoming primary corridors where current strip development pressures exist. Within these corridors access and aesthetics should be controlled in order to avoid unappealing forms of commercial strip development and the resultant traffic congestion.

Objective

- A. Establish development and design guidelines for future development along designated key road corridors and gateways into the County.

Guidelines

1. Support and expand the public-private partnerships in the redevelopment of older commercial corridors in the County.
2. Establish provisions which discourage strip development along corridors and promote planned development nodes located at major road junctions.
3. Redevelopment of existing strip developments should stress the importance of reducing the number of entrances, coordinating signage and parking and increasing vegetative buffers.

4. Encourage the interconnection of parking lots and the reduction of driveways along primary, arterial and collector roads.
5. Coordinate vehicular and pedestrian movement among adjacent sites.
6. Preserve, enhance, and/or incorporate into the design natural site resources such as topography, vegetation, views to and from the site and drainage ways.
7. Plan the site to provide a desirable transition with the streetscape. Provide space for adequate planting, safe pedestrian movement, and screened parking areas. Provide an inviting atmosphere for the pedestrian through grades of walks, parking spaces, terraces, and other paved areas.
8. Buffer along rear property lines where development backs up to less intensive residential uses.
9. Design exterior lighting and signs as integral architectural elements of the building and site. Encourage compatibility or shared use of signs for adjacent businesses. Maintain good scale and proportion in sign design and in visual relationships to buildings, surroundings and views.
10. Ensure unity of landscape design by repetition of appropriate plants that are indigenous to the area through coordination with adjacent properties.
11. Buffer adjacent incompatible land uses by landscaping, earth berms, walls and fences or combinations of these elements. Use landscaping to enhance architectural features and viewsheds and provide shade.
12. Provide incentives to utility companies to place newly installed utility services and service revisions necessitated by exterior alterations underground where possible.

Core

Core areas by nature have the potential of becoming congested and visually cluttered districts. Therefore, it is essential that in these areas property owners establish common planning goals in new developments and redeveloping areas to ensure safe, accessible, and visually pleasing Core areas.

Objectives

- A. For each respective Core area, establish common characteristics that will ensure ease of travel and visual coherence.
- B. Encourage the redevelopment of congested Core areas.
- C. Encourage the development of high density residential that is integrated with commercial development.
- D. Create pedestrian-oriented Core areas to ease traffic congestion.
- E. Concentrate intensive commercial uses into one area rather than in long linear corridors.
- F. Develop strategies to accommodate large box retail uses.

Guidelines

- 1. Common links between adjacent sites and land uses should be made whenever possible to ensure connectiveness in these areas of high intensity urban uses.
- 2. Site-to-site movement for vehicles, pedestrians and bicycles should be easy and safe.
- 3. Encourage the interconnection of parking lots and the reduction of driveways along primary, arterial and collector roads.
- 4. Building size, shape, height, and materials should complement adjacent buildings.
- 1. Natural site amenities, especially slopes, trees and drainage, should be conserved to the maximum practical extent.
- 6. Create common areas as buffers along the edges of Core areas that adjoin less intensive land uses.
- 7. Designate and establish landmarks - public buildings, monuments, squares and mini-parks - to strengthen the identity of community Core areas.
- 8. Design exterior lighting and signs as integral architectural elements of the building, site and Core area. Encourage compatibility or shared use of signs for adjacent businesses. Maintain good scale and proportion in sign design and in visual relationships to buildings, surroundings and views.
- 9. Encourage the siting of communication antennae and dishes on existing or new structures rather than on stand-alone towers.

10. Research and develop design and site development strategies to accommodate large box retail uses and allow them to have a positive relationship to the surrounding community.

Principal Industrial

Through innovative planning practices, many industrial areas can become beneficial to adjacent areas, providing jobs for nearby residents and customers for commercial areas.

Objectives

- A. Create industrial districts that use environmental design practices in their development and become assets to surrounding neighborhoods.
- B. Encourage cluster developments within industrial districts, combining industries, support retail and open space.

Guidelines

1. Inventory existing site natural features and resources as a first step in development.
2. Protect and utilize natural features and resources wherever deemed helpful in combating the negative aspects that industrial developments create, such as noise, air emissions, waste discharge, and increased runoff.
3. Where industrial development is adjacent to residential areas, apply exceptional design measures to achieve compatibility.
4. Provide direct access to sufficient capacity public streets.
5. Avoid slopes in excess of 15% for building sites.
6. Take advantage of slopes to break up large parking areas.
7. Plan for trees in parking lots to provide shade (at least one per 20 spaces).
8. Consider the use of pervious pavement for large parking areas.
9. Provide buffering for adjacent land uses in the form of a vegetative screen, open space or a communal greenway.
10. Allow opportunities for industrial site employees' to use alternative modes of travel, such as biking or walking.
11. Encourage the siting of communication antennae and dishes on existing or new structures

rather than on stand-alone towers.

Scenic Corridors

Throughout the County there are important corridors where access, aesthetics and future development should be managed in order to preserve scenic rural views and vistas.

Objectives

- A. Preserve identified critical scenic views along the Blue Ridge Parkway, Appalachian Trail, Roanoke River and other scenic corridors. Vistas and overlooks should be protected from the encroachment of development and signage.
- B. Preserve the scenic integrity of important road corridors and historic sites throughout the County.
- C. Designate scenic routes throughout the County where development and design standards can be applied to protect important natural views and vistas.
- D. Create overlay protection zones for these scenic corridors.

Guidelines

- 1. Produce viewshed maps, as seen when traveling the corridor, to delineate the boundaries of the corridor protection area.
- 2. Limit the number of access points to adjoining properties by combining driveways.
- 3. Create a minimum 25 foot natural landscape buffer along the corridor.
- 4. Limit construction to relatively flat areas (less than 15%) on properties adjoining the road.
- 5. Consolidate small lots into large parcels to encourage unified development and site planning.
- 6. Within the scenic corridor, limit structure height to a maximum of 25 feet.
- 7. Identify major public view points in which prospective developers must develop in accordance with adopted design standards.
- 8. Discourage the placement of broadcast towers along scenic roads or in scenic viewsheds.

3. NEIGHBORHOODS

Introduction

Our basic instincts and human nature seek a sense of community, a sense of place where we live, work and play. In Roanoke County, neighborhoods are the backbone of the community. Residents of the County identify very closely to their own neighborhoods and especially to their elementary school districts. This is exemplified by the high attendance at elementary school Parent Teacher Association meetings and youth sports events, festivals and social events that are held at the neighborhood level.

The results of the 1995 visioning citizen survey showed that residents associate more closely with their own subdivisions and neighborhoods than with the County as a whole. This makes it very important to preserve community meeting places such as neighborhood schools, fire and rescue buildings, community centers and community stores. These meeting places serve the same function as neighborhood taverns in more urban locales. It also becomes more critical to preserve those natural, historical and cultural features of a neighborhood that lend uniqueness and that feeling of being home - a sense of place - to the area.

Many neighborhoods in Roanoke County are reaching middle-age - they were built in the late 50's, 60's and early 70's. These communities provide an abundant source of good, affordable housing to citizens throughout this region. It is important to preserve the stability of these areas by finding creative ways to maintain property appearances and housing integrity, thereby maintaining property values in these communities.

Some older Roanoke County neighborhoods will continue to feel pressure for redevelopment as large tracts of commercial property become harder and harder to find. It is important to encourage community redevelopment and infill development along appropriate road systems and in appropriate commercial service areas.

If we as a community are successful in managing growth - encouraging and directing growth toward those areas of the County that can support it - preserving viewsheds and open space and retaining an agricultural base, we need to recognize that there will be more and more pressure for infill development and the redevelopment of existing sites in the more urban areas of the County. This will require some changes in densities and uses in what used to be stable neighborhoods and must be done with appropriate design guidelines, citizen input and the involvement of commercial interests.

Goal

Continue to recognize the importance of Roanoke County neighborhoods and work to preserve the institutions and natural, cultural and historical features that help to define these communities.

Issues and Opportunities

- Many Roanoke County neighborhoods have active civic leagues and community watch programs. In addition, as a part of the Community Plan process, neighborhood councils were formed in each of the twelve community planning areas around the County.
- Roanoke County elementary school Parent Teacher Associations often have participation at the one-hundred percent level.
- There is a long-term tradition and commitment to neighborhood schools in Roanoke County.
- Many Roanoke County neighborhoods were built almost 40 years ago. These areas are, to some extent, beginning to show their age and require more and more maintenance and upkeep.
- The older neighborhoods in the County provide a good source of affordable housing.
- Some of the older Roanoke County neighborhoods, that are located in close proximity to commercial centers and primary road access, are subject to redevelopment pressures from commercial interests.
- Most Roanoke County neighborhoods are very dependent on the automobile with very limited pedestrian trails and sidewalks.
- County neighborhoods tend to be very stable.
- There are only a few neighborhoods in the County that have a mix of residential densities or commercial uses.
- The strong economic base of the County has meant that property values are steadily increasing.
- Youth sports events - such as little league, soccer and softball - are great opportunities for neighborhood friends and acquaintances to meet and greet.
- The Roanoke Valley provides a beautiful and relatively clean place to live.
- There are a good variety of housing options and price ranges in the County.
- Some types of housing and housing communities, such as cluster developments and mixed-use developments, are not widely available in the County.

- The County has a high quality of life that manifests itself in low crime, little traffic congestion, abundant natural resources and good schools.
- There are some areas of the County where substandard housing exists.
- There are not “housing maintenance or upkeep” provisions in the County zoning ordinance, County Code or Building Code. It is sometimes difficult to correct problems of this nature.

Objectives

- A. Protect the uniqueness and special characteristics of each Roanoke County neighborhood.
- B. Protect the scenic beauty of Roanoke County while allowing for appropriate economic development.
- C. Require land development patterns that preserve open space.
- D. Ensure that all Roanoke County citizens have access to safe and affordable housing.
- E. Protect the property values of all citizens.
- F. Promote the use of a “liveable traffic” design model - one that values neighborhood appearance, saleability and pedestrian friendly aspects of transportation equally with ease of traffic movements.
- G. Provide all County residents easy access to community parks, ballfields and greenways.
- H. Encourage alternative modes of transportation around neighborhoods such as walking and bicycling.

Implementation Strategies

1. Continue to support the concept of neighborhood schools, recognizing the important function they play in community identity. (Obj. A)
2. Continue to foster the neighborhood councils by expanding their role and developing neighborhood specific plans. (Obj. A)
3. Research the efforts of other communities and implement programs to assist in the maintenance and upkeep of our older neighborhoods. (Obj. E)

4. Develop planning strategies to guide commercial development, community redevelopment and infill development while preserving neighborhood stability and property values. (Obj. A, E)
5. Revise the County zoning ordinance and subdivision ordinance to encourage, where appropriate, sidewalks and greenways throughout new residential developments and connecting neighborhoods and commercial and institutional areas. (Obj. F, G, H)
6. As we work to preserve the more rural areas of Roanoke County, revise the zoning ordinance to allow slightly higher infill development in existing neighborhoods. (Obj. A, B, C, E)
7. Continue to seek community input on all rezoning requests. (Obj. A, E)
8. Encourage community meetings for all rezoning requests. (Obj. A, E)
9. Make the necessary revisions to the zoning ordinance and subdivision ordinance to allow by right, cluster developments and mixed use developments, where appropriate. (Obj. A, B, C, E)
10. Identify substandard housing and seek solutions to alleviate these conditions. (Obj. D)
11. Research the need for housing maintenance regulations to mitigate problems with unkempt property. Develop, if necessary, appropriate regulations. (Obj. D, E)

4. QUALITY OF LIFE

Introduction

To the residents that call Roanoke County home, this is a community with a distinctive character and an abundance of natural beauty. There exists a very intrinsic relationship between the natural resources that exist here - the mountains and ridgetops, forests and streams and breathtaking scenic views - and people's perception of quality of life here in the County.

In a citizen survey, conducted in early 1995, the majority of County residents said there is a high quality of life in Roanoke County and they are very interested in protecting that. For many people this quality of life manifests itself in the natural beauty and scenic resources of this area. Others appreciate the relatively low cost of living, the lack of formidable transportation and commuting problems and the high quality of public education. For whatever reasons, and there is a myriad of them ranging from low crime, good schools and scenic beauty to low cost of housing and cultural opportunities, the citizens of Roanoke County are very interested in protecting their quality of life.

During the visioning process many citizens expressed concern that those things that make Roanoke County "special" could vanish all too quickly without the proper long-range planning. Without well managed growth and development, we could trade in a sense of place and authenticity for a feeling of sameness and homogenization. Steadily and perceptibly, we could lose the distinctive qualities that trigger people's desires to live here, work here and visit here.

There are real and legitimate needs for jobs, tax revenues, a diversified local economy and housing opportunities. Yet there is also the recognition that we need to find more effective strategies that will enable our community to grow in ways that enhance and protect rather than degrade and threaten the quality of life that lends us distinction and character.

Goal

To achieve and maintain the highest possible quality of life for the citizens of Roanoke County.

Issues and Opportunities

The scenic beauty of Roanoke County is a major contributing factor to the high quality of life here.

- Other factors influencing the high quality of life include the low crime rate, relatively low cost of housing, ease of commuting and high quality public and private school systems.

- The citizens of Roanoke County place high value on the importance of their quality of life and are very protective of it.
- Many newer residents of the County have lived in other places where the quality of life may not have been as high or they experienced the degradation of that quality of life.
- The economic base of the county needs to continue to grow to support an increased demand for and cost of services such as public education.
- The existing rules and regulations for land development do not allow enough flexibility and creativity nor do they require site resource conservation.
- Neighborhood street design standards require excessive cut, fill and tree removal.
- Roanoke County has implemented a tree protection ordinance for public properties but does not have a tree protection ordinance for private lands.
- The existing zoning ordinance and subdivision ordinance do not have the mechanisms to protect mountainsides and ridgelines from inappropriate development.
- The School Board Blue Ribbon Committee has made extensive recommendations concerning physical facilities, which, if adequately funded, will help ensure the continuation of high-quality public schools in the County.
- Roanoke County has maintained, to the extent possible, the concept of neighborhood schools.
- The citizens of Roanoke County believe that the people here are basically friendly.
- Roanoke County is considered a good place to retire due to factors such as cost of living.
- Parks and greenways are seen as important quality of life issues.
- Automobile travel, including commuting to and from work during peak hours of the work day, is relatively easy.
- Parent/teacher associations enjoy a high level of participation at the elementary school level, sometimes approaching one-hundred percent.

Objectives

- A. Preserve the scenic beauty of the County while balancing the need for economic growth.

- B. Promote the location of clean, high-technology research and development firms in the Roanoke Valley.
- C. Maintain the concept of neighborhood schools.
- D. Provide access to community parks and greenways to all citizens.
- E. Provide cultural and recreational opportunities to citizens of all ages.
- F. Promote the use of good traffic planning concepts.
- G. Preserve, where appropriate, existing trees and encourage the planting of tree species that are native to the Blue Ridge region.
- H. Encourage innovation and creativity in land development.

Implementation Strategies

- 1. Develop and adopt more stringent regulations and incentives to protect natural resources in the County - including mountainsides, ridgetops, streams, rivers, viewsheds, open space, wetlands, forests, soils and wildlife. (Obj. A, E, G, H)
- 2. Ensure that future growth and development is consistent with the adopted Community Plan and enhances the quality of life of Roanoke County citizens. (Obj. A, B, C, D, E, F, G, H)
- 3. Modify and enhance design guidelines, incorporating incentives where feasible, to be applied to all future residential, commercial and industrial developments. (Obj. A, H)
- 4. Continue funding and support of the greenway system and develop a dedicated source of funding to support the system. (Obj. D)
- 5. Fully implement the recommendations of the School Board Blue Ribbon Committee for school construction and maintenance needs. (Obj. C)
- 6. Revise the neighborhood street design standards to give liveability, pedestrian/bicycle and retail friendly aspects equal footing with ease of traffic movements. (Obj. F)
- 7. Adopt a tree protection ordinance that applies to private properties. (Obj. A, G)
- 8. Ensure that future commercial and industrial parks receiving financial or tax incentives from the County are built as park-like environments and include strict design guidelines, greenways and open space. (Obj. B, D, H)

9. Revise the subdivision ordinance to encourage the dedication of greenway easements at the time a subdivision is platted. (Obj. D)
10. Continue to support and participate in the regional land trust - a publicly-supported charitable organization providing a voluntary means to promote the preservation of natural and cultural resources - and other statewide and national land trusts. (Obj. A, E, H)
11. Continue to provide a variety of housing options in a broad range of prices. (Obj. H)
12. Through zoning ordinance revisions, allow for increased housing density, while requiring the dedication of open space. (Obj. A, D, E, H)
13. Encourage the development and re-development of lands served by public utilities while discouraging through zoning ordinance revisions the development of lands without these services. (Obj. A, H)
14. Continue to preserve the nature and stability of existing single-family neighborhoods but allow infill development, appropriately designed, at slightly higher densities. (Obj. H)
15. Continue to work cooperatively with, and provide financial support to, cultural and recreational organizations which provide invaluable opportunities to County residents. (Obj. E)
16. Expand the Roanoke County park system so that neighborhood parks are accessible to all citizens. (Obj. D, E)
17. Expand and enhance the County-wide road beautification efforts. (Obj. A, G)

5. REGIONALISM

Introduction

Roanoke County is one of several local government units that make up the Roanoke Valley. The high quality of life that Roanoke County citizens have come to expect and deserve can continue and grow only if we practice, in a proactive manner, broad-based collaboration and cooperation with neighboring jurisdictions. Roanoke County should take the lead in these endeavors.

As we move into the next century, we need to begin to think of this geographic area as a cohesive unit rather than as many, often competing, parts. Many of the challenges of the twenty first century will know no geographic boundary line and will present all Valley citizens and local officials with opportunities to seek efficient and effective solutions. Critical issues such as economic development, natural resource preservation, transportation, cultural opportunities and housing require a regional perspective and regional solutions. We must find new and innovative ways to work together for the good of all.

Goal

To work in cooperation with all local jurisdictions to provide the highest quality services, in the most efficient and effective manner, to Roanoke County citizens.

Issues and Opportunities

- The formation of the New Century Council presents the opportunity to look outside our own county limits and develop a strong economic base that is competitive in the global marketplace.
- A coordinated regional approach is needed to attract high-quality targeted industries.
- The scenic beauty of this region is largely attributed to the mountains. Many of the significant mountain ridges and ranges extend beyond the boundaries of the County.
- The Roanoke Valley has the unique opportunity to develop a world-class bikeway and greenway system that is interjurisdictional and interconnected.
- The road infrastructure between the City of Roanoke and Roanoke County is very interconnected due to the “doughnut” configuration of the two localities.
- The County has many intergovernmental projects with the Town of Vinton, the Cities of Roanoke and Salem, Botetourt County and other neighboring jurisdictions such as fire and rescue facilities, libraries, sewer treatment plant and the airport.

Objectives

- A. Preserve the scenic beauty and natural resources of Roanoke County and the greater Roanoke Valley.
- B. Attract high-technology research and development firms to the Roanoke Valley.
- C. Promote a cooperative working relationship with neighboring jurisdictions.
- D. Promote communication and coordination with neighboring jurisdictions on planning issues.
- E. Promote Roanoke County and the greater Roanoke Valley as a tourist destination.
- F. Continue to participate in joint projects with neighboring jurisdictions to provide services to County citizens - such as communication facilities, libraries, fire and rescue facilities and water and sewer lines - in the most efficient manner.

Implementation Strategies

- 1. Fully support and participate in the New Century Council. (Obj. A, B, C, D, E, F)
- 2. Continue to support and participate in the Roanoke Valley Greenway Commission. (Obj. A, C, D, E)
- 3. Implement regional cellular tower policies to protect the region's viewsheds and mountaintops. (Obj. A, D)
- 4. Continue to support and participate in the Roanoke Valley Economic Development Partnership and the Industrial Development Authority. (Obj. B)
- 5. Continue to support and participate in the Roanoke Valley Convention and Visitors Bureau. (Obj. E)
- 6. Continue to notify adjoining localities when rezoning petitions impact property at the mutual boundaries. (Obj. D)
- 7. Continue to meet jointly with the governing bodies of adjoining jurisdictions. (Obj. C, D, F)
- 8. Encourage the Planning Commission to meet jointly, on an annual rotating basis, with planning commissions from adjoining jurisdictions as is currently done with City of Roanoke and the Town of Vinton. (Obj. C, D, F)
- 9. Continue to work cooperatively with the Fifth Planning District Commission on regional

planning projects. (Obj. C, D, F)

10. Continue to support and participate in regional, statewide and national land trusts. (Obj. A, C, D, E)
11. Seek opportunities to work with other jurisdictions to attract high-quality, clean, research and development firms to this region. Share in the costs of infrastructure and share the generated revenue. (Obj. B)
12. Expand the Roanoke County park system so that neighborhood parks are accessible to all citizens. (Obj. A, E)
13. Expand and enhance the County-wide road beautification efforts. (Obj. A)

6. ECONOMIC DEVELOPMENT PLAN

Introduction

Economic development is a dynamic public program in Roanoke County. This activity is defined as, “the process of creating wealth through the mobilization of human, financial, capital, physical, and natural resources to generate marketable goods and services.” The economic development process is of critical importance to the continued high quality of life in Roanoke County and the ability of the County to provide a high level of public services to citizens. Roanoke County’s economic development mission is:

“To attract and retain to the County quality jobs and investment that diversify the economy, broaden the tax base, and provide long-term employment opportunities for area residents.”

Roanoke County established an economic development program in 1985 and implemented an economic development strategy to establish the initial goals and objectives for implementation. Subsequently, the Board of Supervisors re-adopted an economic development strategy in 1987 and 1989, with business plans being adopted annually thereafter.

The Economic Development 5-Year Business Plan FY 2001-2006 adopted in July of 2000 was intended to complement the Economic Development Strategy and the 1985 Comprehensive Plan. The Business Plan focused on four economic opportunity areas into which economic activity would be promoted. The emphasis was to identify potential commercial and industrial sites that could be developed and marketed by the County as “product” for economic development opportunities, and then to attract new businesses to those sites. A series of public actions, including proposed capital improvements, rezonings and coordination with VDOT primary and secondary road planning were recommended to implement the Business Plan.

The Plan sets forth details of implementation activities and impact measures for the primary program areas of marketing and business recruitment, product development business retention and expansion and community/workforce development. The economic development goals and objectives are generally described below.

- 1. To market the County’s industrial/commercial property and attract compatible business and industry to the community, and to increase the commercial and industrial tax base and related employment opportunities.**
- 2. To encourage the retention and growth of local enterprise by creating and maintaining a positive business climate countywide.**
- 3. To create and maintain a marketable inventory of quality industrial/commercial real property sufficient to meet market demand.**
- 4. To promote and encourage regional participation in economic development activities, programs and services.**

Issues and Opportunities

- Competition among land uses for developable land: There is a limited amount of developable land in Roanoke County. Residential uses and tax-exempt activities are the major land uses competing with economic development for developable land. Potential commercial and industrial sites need to be identified, rezoned and reserved for future development.
- Identify economic opportunity areas: The 1992 Economic Development Strategy delineated the I-81 corridor, North County/Hollins Road, the Route 460 East Corridor, West County, Explore Park and the Southwest County/419 Corridor as economic opportunity areas. Since 1992, significant economic development activities have occurred in these areas. The following activities have occurred in the implementation of the Economic Development Strategy, and Business Plan:

I-81 Corridor – Coordinate with VDOT and Community Development to evaluate the impact on economic opportunity areas and ensure the preservation, creation and enhancement of marketable commercial/industrial property. Participate in interchange design and land use and coordinate any public policy changes necessary to encourage development in these areas.

North County/Hollins Road – The Hollins Road area development included the expansion of a Country Inn & Suites, a renovation of a Days Inn and the planned construction of a new Fairfield Inn. Staff continues to monitor and evaluate the interchange realignment at exit #146 for proposed I-81 development opportunities.

Route 460 East Corridor – The Valley Gateway Business Park and industrial shell building showed significant activity with the sale of 42 acres to Integrity Windows for a 200,000 s.f. manufacturing facility, employing 350 people, and a project investment of \$32 million. The shell building was contracted by a developer who seeks to occupy the facility with a suitable industrial tenant. Commercial development was also active with the attraction of a Wal-Mart Super Center, and a Lowe's Home Improvement Center. Staff will continue to identify and market developable property in this area to include the remaining Valley Gateway property and the Jack Smith Industrial Park.

West County – Phase I development of the County owned 456-acre Center for Research and Technology has been completed. Glenmary Drive has been reconstructed, and utility and road extensions along Corporate Circle have been implemented. Engineering design and related improvements to Phase II development have been also been completed and include a second extension of Corporate Circle, utility lines, the construction of a regional storm water management basin, lighting installation, and landscaping enhancements. Additionally, Novozymes Biologicals, a manufacturer of enzymes for agricultural products was recruited to the CRT as the first tenant in the Center. Their initial investment was \$12 million with the creation of 25 new jobs for a research and development and administration office. Their Phase II manufacturing facility is planned for construction in 2004.

Southwest County/419 corridor - New investment/construction included several commercial enterprises such as the 419 West Restaurant, Carlo's Brazilian Restaurant, Ruby Tuesday's and Fink's Jewelers. Other commercial developments occurred along Brambleton Avenue with Gold's Gym, Freddie's Sunset Grill, Blue Magnolia Restaurant and a Martin German Imports vehicle sales operation. Activity along Route 220 included a new Land Rover, Mercedes, Volvo and Jaguar dealership and the implementation of a 220 Clearbrook corridor overlay district.

Maps of the Economic Opportunity Areas are included in this section. These maps include existing commercial and industrial areas and potential economic opportunity sites for future use. Economic Opportunity Areas are intended to provide for future economic development, conform to future land use designations and be an overlay on the land use maps of the Community Plan.

- Product development for sites and buildings: Roanoke County needs an inventory of commercial and industrial sites in order to successfully compete in economic development. The identification of potential sites is the initial step in the process of converting an undeveloped property into a "ready to go" commercial or industrial site. The Industrial Development Authority of Roanoke County implemented a rezoning study of potential commercial and industrial sites in 1995-96 and rezoned 117 acres for such uses. While many of the county's commercial and industrial properties are now zoned appropriately, they are not considered to be "ready to go sites," due to the numerous development challenges that continue to exist on these sites. The Department of Economic Development remains actively involved in the Capital Improvement Plan process by recommending specific improvement projects for funding that will create ready to go sites for development. Many of these sites will not be developed until significant capital infrastructure improvements are undertaken by the County.

Historically, Roanoke County has initiated the location of publicly owned industrial parks such as Valley TechPark (177 acres) and the Roanoke County Center for Research and Technology (456 acres), and has participated as a partner in the development of Valley Pointe (52 acres in Phase I), Valley Gateway (108 acres), the Jack Smith Industrial Park (68 acres), and the Vinton Business Center (99 acres). Roanoke County also participated with The Greater Roanoke Valley Development Foundation to construct a 75,000 foot expandable shell building in Valley Gateway, and is participating with the development of Valley Pointe Phase II (180 acres). The County's role is to provide marketable commercial and industrial sites and buildings so that we can respond favorably and promptly to inquiries proposing expansions and relocations.

- Targeting business and industry: The Roanoke Valley Economic Development Partnership markets the Roanoke Valley as a business location and serves as a point of contact for companies seeking to relocate to or expand within the Valley. The Partnership has targeted automotive and transportation related, wireless communications, printing, biosciences/life sciences, medical devices, large office and corporate headquarters. Roanoke County concurs with this list and adds large commercial projects and technology based companies that pay salaries and wages in excess of the median wage rate for the region.

- Using quality measures to evaluate economic development opportunities: The series of community workshops held in the planning areas of the County confirmed that the quality of economic development is important to the citizens. If Roanoke County desires to continue to take advantage of its' premier location for retail, commercial and industrial growth which expands the tax base and creates new economic opportunity for it's citizens, then it must be accepted that land uses and zoning designations must logically change over time to accommodate this activity. It is however vitally important to consider the appearance of the proposed projects and the impacts on the local community when considering new projects in areas adjacent to existing residential areas. Economic considerations should not be the determining criteria for evaluating land use, rather it should be one of many factors considered as the County goes through its natural progression of economic growth. Roanoke County has a history of protecting the rights of its citizens and our natural resources that make this area a destination for families and businesses as evidenced by the following projects. Roanoke County pursued a design "charette" with the citizens residing adjacent to both the Vinton Business Center and the Roanoke County Center for Research and Technology. This process has resulted in a Master Plan that the County and Town recently qualified by hiring a marketing firm to review the economic feasibility of the various land uses proposed in the Master Plan. Retention of natural vegetation, site and building design criteria, open space preservation and the adoption of protective and restrictive covenants are some of the quality measures adopted in the Master Plan process which will not be compromised as development occurs.
- Assisting economic development through its public private partnerships: Roanoke County has adopted a public-private partnership policy to assist businesses with expansion and relocation opportunities. The policy was revised and adopted by the Board of Supervisors in 2002, which expanded the flexibility of the program to allow for incentives to be offered for retail businesses that provide significant revenue for Roanoke County. This action signifies the value of retail business operations and their positive impact on the County. Funds are annually appropriated to an economic development fund and administered for projects in accordance with the policy, which gives staff the ability to offer incentives to targeted businesses. The County will consider financing eligible public improvements and employee training costs as a partnership if there is a "payback" or return on investment from new taxes/fees generated by a commercial or industrial project. Typical partnerships involve extensions of water and sewer service and related utility connection fees. All projects are subject to the execution of a performance agreement between the County and the private entity to insure that a proposed development meets its investment goals. Partnership agreements are audited by the County staff to determine if the projected taxes and fees are being generated by a partnership project.
- Business Retention & Expansion: Roanoke County carries out an ongoing existing business visitation program to companies located within the County. These visits provide a confidential update of a company's products, markets, operations and growth potential. The goal is to retain and facilitate expanded investment and employment within Roanoke County. Existing businesses are eligible for public-private partnership assistance. The Economic Development staff also coordinates district roundtables, hosts a Business Partners TV show, and publishes a business newsletter. Coordination with other County

offices and State and Federal agencies to address issues raised by existing businesses is also a function of this program.

- Redevelopment Efforts: Roanoke County encourages redevelopment through a broad based community development approach that includes citizens, business and the County as partners. The County recognizes that redevelopment efforts should be primarily private sector driven, but is often approached with the involvement of both the public and private sectors. For example, Tanglewood Mall is in a state of decline due to high vacancy rates, and County staff is partnering with the mall management to offer assistance in attracting quality retailers as tenants.

County Staff is also assisting the Town of Vinton with revitalization efforts for their downtown area, and continues to support the marketing and development of the Vinton Business Center. Staff will also be participating in Vinton's comprehensive planning process in 2003.

Redevelopment efforts for the 460 corridor in West Salem have been delayed due to VDOT's postponing of a significant road widening project in this area. Delays have occurred due to funding considerations, and staff is prepared to assist with this project once funding is restored, and the project is renewed. The Dixie Caverns interchange at Exit #132 off of I-81 and the Hollins Exit #146 are also areas concentration for future development opportunities. Staff will continue to monitor and evaluate the land uses in these areas, and the corridor study to implement a work plan for future development/redevelopment initiatives. In many County redevelopment efforts, public monies are used to leverage private funds for property improvement and development. County staff serves as a partner and a facilitator in these projects, assisting all parties with accomplishing their goals.

- Assisting business startups, small business development and Workforce training: The Economic Development staff has many contacts in both the public and private sectors. The Commonwealth of Virginia, the Department of Business Assistance (DBA), the Service Corps of Retired Executives (SCORE), the New Century Venture Center, regional agencies (such as TAP), local colleges and universities and the regional Small Business Development Center (SBDC) are available to assist citizens seeking to start a business. County staff offers referrals to these resources, which contributes to the growth of new businesses in Roanoke County.

Objectives

- A. Strengthen existing business retention efforts and assist companies with expansion opportunities within Roanoke County.
- B. Attract new industry to the County that will enhance and diversify the industrial base.
- C. Identify potential commercial and industrial sites and pursue opportunities to add these properties to the "product" inventory of the County.

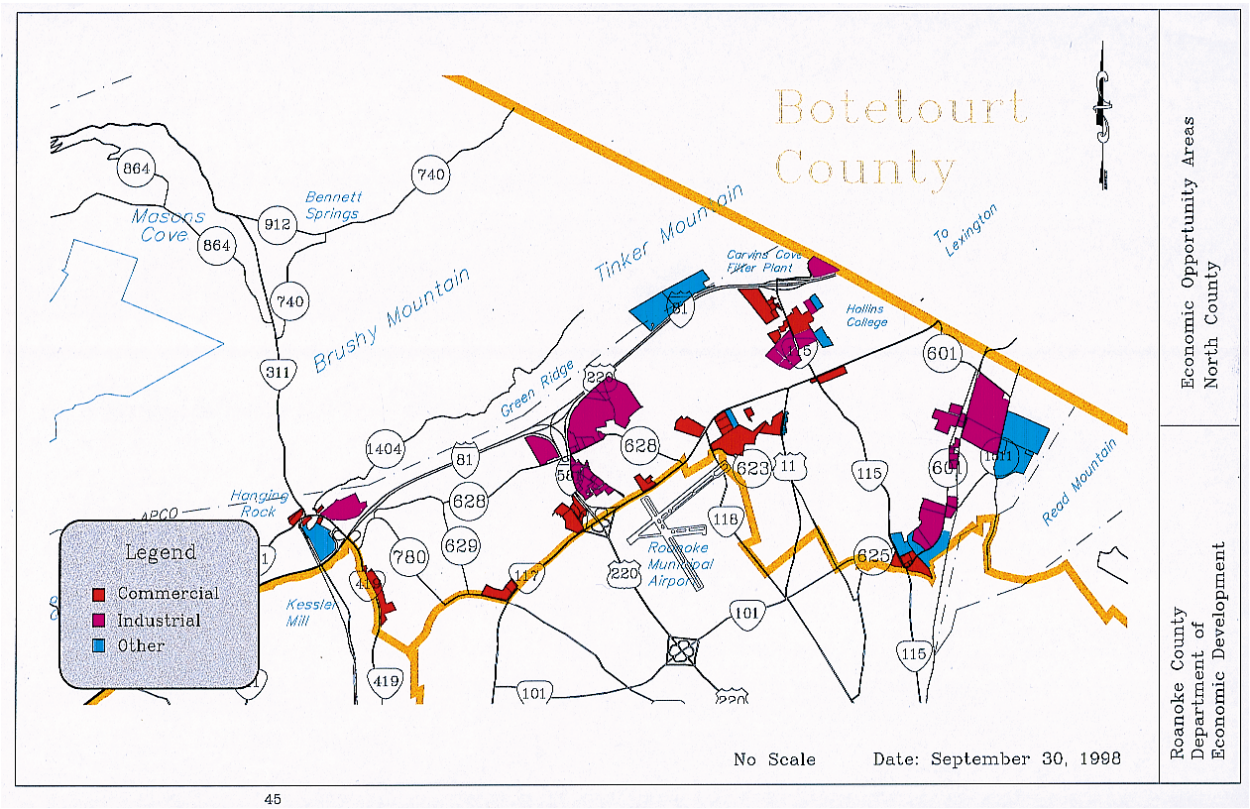
- D. Increase public awareness of business activities and their role in the economic base of Roanoke County.
- E. Identify areas for community development projects that will allow the citizens, businesses and County to jointly improve a geographic area.
- F. Identify potential public-private partnerships that will enhance economic development in Roanoke County.
- G. Evaluate and regulate the appearance of new commercial and industrial development, especially those developments adjacent to existing residential neighborhoods.

Implementation Strategies

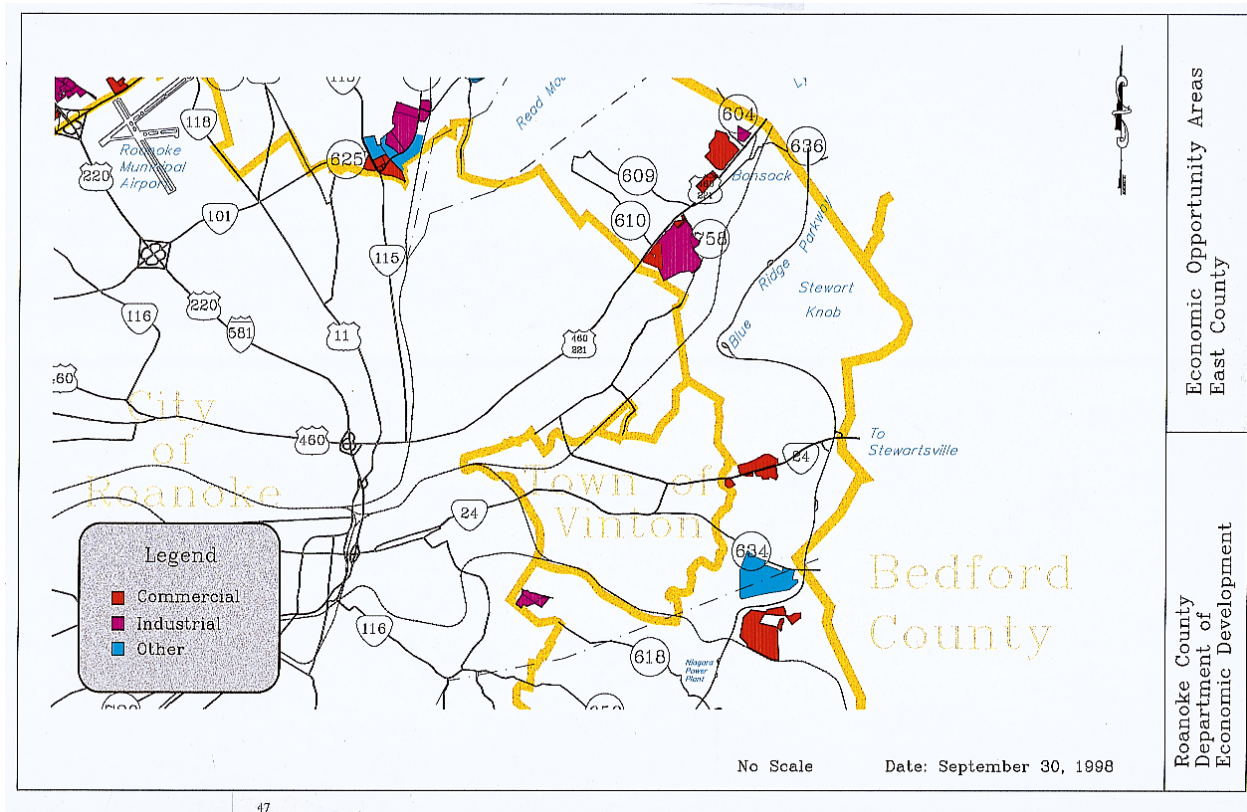
1. Implement the economic development program areas described in the Economic Development Business Plan including Business Retention and Expansion, Business Attraction, Product Development and Regional Cooperation. (Obj. A, B, C, D, E, F,)
2. Implement all three development phases of the Roanoke County Center for Research and Technology. (Obj. B, C, F)
3. Identify sites and opportunities for future business park development. (Obj. C, E)
4. Continue to monitor the I-81 Widening Project and the I-73 development process for economic opportunities. (Obj. C, E)
5. Redevelop the West Main Street (Route 460) corridor. (Obj. A, D, E, F)
6. Continue the land acquisition program to identify, reserve and rezone Economic Opportunity Areas for future development needs. (Obj. C)
7. Development of regional publicly owned business parks. (Obj. A, B, C, D, F)
8. Develop design guidelines for new commercial retail developments including “big box” retail structures, traditional shopping centers and the newer “life style” centers. Develop design guidelines for new industrial projects on a case-by-case basis taking into consideration the location of existing residential developments and valuable natural resources such as the Blue Ridge Parkway viewshed. The appropriateness of the design and the extent to which the developer is sensitive to the above mentioned items will be used as criteria when considering the use of financial incentives to spur development.

The following Economic Opportunity Area maps include existing commercial and industrial areas and potential economic opportunity sites for future use. The blue areas identified on these maps as “Other” are areas that have not been specifically identified at this time as future commercial or industrial areas. They are areas where, based upon their location, access or topography, some potential for future economic opportunity exists.

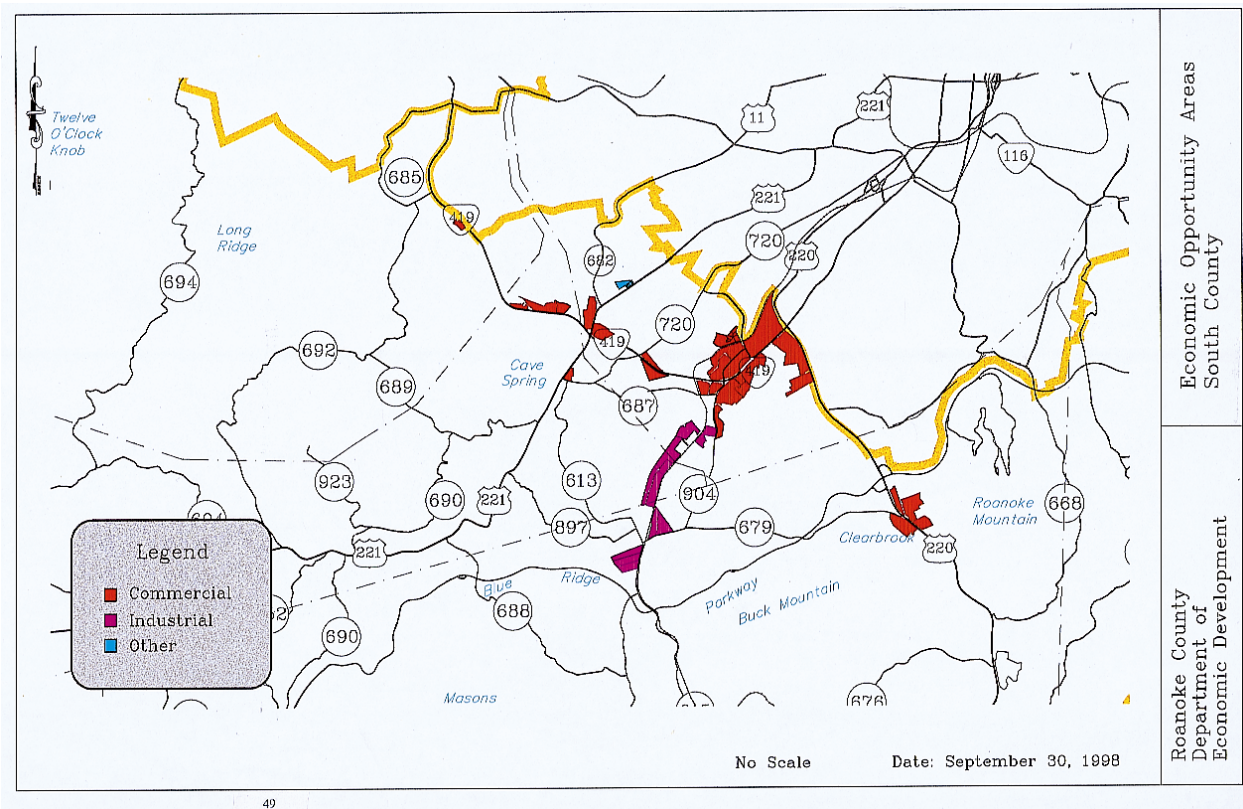
Economic Opportunity Area Map - North County



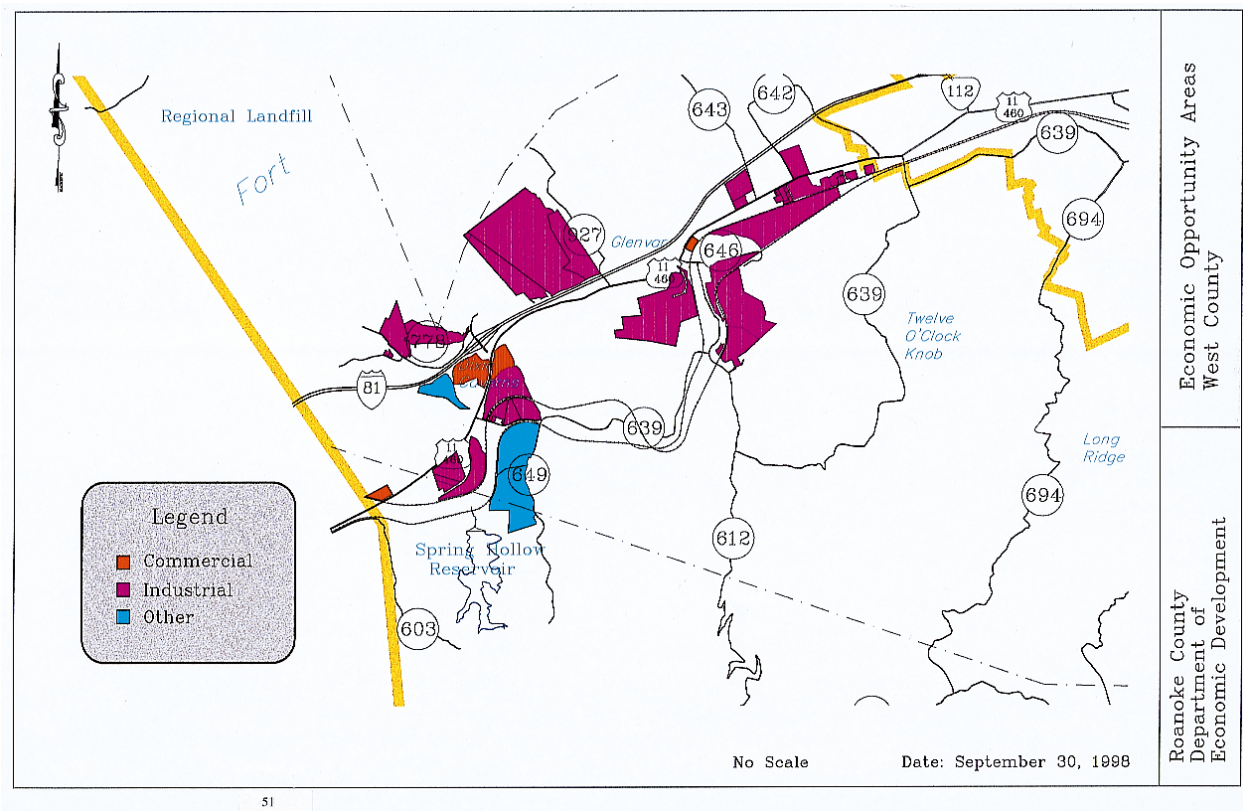
Economic Opportunity Area Map - East County



Economic Opportunity Area Map - South County



Economic Opportunity Area Map - West County



7. GROWTH MANAGEMENT & CAPITAL FACILITIES PLANNING

GOAL: To protect, preserve, enhance and effectively and efficiently utilize Roanoke County resources by:

- Guiding future growth and development to areas where land uses, facilities and infrastructure exist and are planned
- Promoting compact and contiguous development and infill development
- Focusing County infrastructure funding on these current and designated future development areas
- Protecting and enhancing the following resources: historic, cultural, agricultural, forestry, water, recreational and scenic.

INTRODUCTION

The growth management goal is to direct development into designated areas that have or will have the capacity to accommodate future growth. This goal will facilitate efficient service delivery in those areas while preserving rural resources in outlying areas.

To further this goal, the County land use map should delineate three areas of growth potential: 1) the primary growth areas of the County that are currently served by public water and sewer and where the majority of new growth should be encouraged; 2) the “future growth” areas directly adjacent to the primary growth area that should accommodate outward growth over a 5-year period of time and where the extension of public water and sewer can relatively efficiently be accomplished; 3) the rural areas where growth should be discouraged and public water and sewer services should not be extended. It must be recognized that the future growth areas should be periodically reviewed and updated.

While it is the goal of Roanoke County to focus new development in those areas that currently have existing infrastructure and services it is recognized that some level of outward growth is necessary. To accommodate this outward growth in a manner that does not diminish the quality of life of current residents of these areas, the timing of new developments must be carefully orchestrated to coincide with the construction of public facilities and services to meet the needs of current and future citizens.

The growth management goal is clearly intended to discourage development in the rural areas of Roanoke County and recognizes that incompatible development in these areas of the County is costly both in terms of service delivery and the irreversible damage to critical resources.

In order to implement the growth management goals it should be recognized that the provision of adequate public infrastructure and services to those areas designated to receive growth is a critical component. The growth management goals of Roanoke

County can only be achieved if needed capital facilities improvements are timed and coordinated to accommodate future growth. Conversely, it must be recognized that the inefficiencies of providing these same public services to dispersed rural populations is not in the overall public interest. The provision of public facilities and services requires significant public funding for construction, operation and long-term maintenance. The County should ensure that the highest benefit is provided to County citizens in exchange for this cost.

In order to achieve the stated growth management goals, future emphasis should be placed on providing public service delivery to those designated growth areas where future development should be directed. To accomplish this, public facilities and services should be provided at a much higher level in these growth areas than in the non-growth or rural areas.

LAND USE RECOMMENDATIONS FOR GROWTH AREAS

Primary growth areas - those areas currently served by public water and sewer and where the majority of new growth should be encouraged - include the following land use designations: Principal Industrial, Core, Transition, Development and Neighborhood Conservation.

Future growth areas – those areas adjacent to primary growth areas where outward growth over the next 5 years should be accommodated – include the following land use designations: Development and to a limited extent Village Center.

These growth areas must be attractive places to live and work. Development in these areas should be more efficient and at higher densities than in the past in order to help prevent sprawl development and keep suburban development patterns from encroaching into rural areas. The continuation of low-density suburban areas should not be encouraged in designated growth areas. Design strategies should be developed to ensure that these growth areas are harmonious with surrounding areas but may include different uses and different densities than those surrounding areas. Careful design of these growth areas should result in development that is beneficial to the community.

1. The majority of new residential growth in the County should be in designated primary and future growth areas.
2. Development within the growth areas should have public water and sewer.
3. Rezoning of property within these designated primary and future growth areas should consider and address the impacts on public facilities and services that would result from the rezoning.
4. The residential growth areas should be developed at densities that allow efficient use of the land. Gross densities should be increased.

5. Design of residential growth areas should reflect the following principles:
 - a. Transportation – Neighborhood streets (both public and private) should be of a scale that complements the area, should incorporate landscaping and should encourage walking and biking. Private streets, and public streets in accordance with VDOT guidelines, should be designed to calm traffic. Sidewalks and paths should be provided for pedestrians.
 - b. Parks and Open Space – To compensate for increased residential densities parks and open space should be incorporated into the design. Environmental resources such as floodplains, slopes and forested areas should be protected.

6. Steep slopes – New development, infill development and redevelopment on slopes between 10% and 33% should be sensitive to existing grades and where possible should promote architectural design elements that work with, rather than against, these grades. Develop design guidelines and regulations for development on steep slopes. These should include provisions for “slope maintenance bonds”, and should determine a slope above which development should not be allowed. The precise slope percentage should be determined after more research and analysis is conducted but should be specified in the future zoning ordinance amendment.

7. Infill development – new development on vacant lots within urbanized/suburbanized areas - should be encouraged. Design guidelines should be developed to:
 - a. allow flexibility in housing location, type and density;
 - b. provide flexibility in lot size, configuration, and vehicle access to facilitate infill development;
 - c. provide clear development standards that promote compatibility between new and existing development;
 - d. encourage development of needed housing in close proximity to employment and services;
 - e. promote neighborhood preservation and enhancement through redevelopment of underutilized properties;
 - f. encourage mixed use development to complete neighborhoods and provide housing close to jobs and commerce;

A policy that considers encouraging infill development should address accessory dwellings, flag lots, shared driveway policies, frontage requirements, setbacks and parking requirements.

8. Public improvements, needed to support and encourage infill development, should be scheduled in a timely fashion in order to be incorporated into new developments.
9. Neighborhood Commercial Centers – Properties suitable for low to

moderate intensity retail sales and services – along collector and arterial roads – should be inventoried and rezoned to Neighborhood Commercial. Small, neighborhood commercial areas should be developed to enhance the residential development and should connect to the residential area. Mixed uses – shops, offices, civic and cultural spaces – should be encouraged. Densities should be increased by encouraging the mix of residential uses, office uses and retail uses.

The current Neighborhood Commercial District standards should be modified as follows:

- a) Total District Size: increase from current maximum of 3 acres
- b) Permitted Uses: expand commercial uses allowed (retail) and consider including limited residential
- c) Strengthen use and design standards including site development, lighting, landscaping, signage and maximum square footage requirements
- d) Revise minimum parking requirements and establish maximum parking requirements in the District; revise shared parking limitations
- e) Encourage public uses within this District such as public branch libraries, police sub-stations, etc.

In addition, the Community Plan should address the issue of allowing higher-density residential in the immediate neighborhoods surrounding these identified Neighborhood Commercial Districts.

10. Commercial development should encourage vehicular and pedestrian connections to nearby neighborhoods and should avoid strip, linear designs.

11. Revise the Cluster Development ordinance. Address the following sections:

- a. Street and Access Requirements including: 1) length of private streets; 2) number of dwelling units allowed on any single private street; and 3) private street design requirements.
- b. Conservation Areas, Primary and Secondary: review and clarify definitions including section relating to slope.
- c. Open Space Requirements and the relationship to lots and property lines.

12. In compliance with the ozone Early Action Plan, Roanoke County should adopt a 40% tree canopy coverage (calculated at ultimate growth of trees) as a target for all new development. Encourage developers to site structures and parking lots around stands of mature trees and where needed, require the replacement of trees. Recognize the important role trees lay in air quality, aesthetics and cooling.

13. Develop corridor studies for future commercial areas including Route 220 South, Route 221 and Route 460 west.

LAND USE RECOMMENDATIONS FOR RURAL AREAS

Rural growth areas – those areas where growth should be discouraged – include the following land use designations: Rural Village, Rural Preserve, Conservation and to some extent Village Center. Roanoke County should make a commitment to preserve its rural areas. Without this, we will see the continued fragmentation of large parcels of land and the conversion to residential development. This pattern results in a declining agricultural economy, the loss of plant and wildlife habitats, and the loss of natural resources and the rural character of much of Roanoke County. The subdivision of rural lands for single-family residences has serious implications for resource conservation and the preservation of the rural character.

The outlying more rural areas of Roanoke County are currently zoned to allow minimum lot sizes of 1-3 acres. These lot sizes are not conducive or sufficient for viable agricultural, forestry or conservation land uses. The only thing these small lot sizes do is encourage the steady spread of a basically suburban land pattern and character in historically rural areas. The consequence is the irreversible loss of rural lands and the loss of natural, scenic and historic landscapes. In addition, rural residential land development requires increased delivery of public services.

To be consistent with the growth management goals of Roanoke County, the policies that allow the continued development and fragmentation of rural lands should be changed. It should be recognized that the most effective tools for protecting rural lands are those that discourage development from occurring in the first place and provide permanent protection of the land. Any land use regulations that allow residential development in the rural areas, even at much less density, will reduce fragmentation and density impacts but not eliminate them. Having said that, the goal is not to eliminate all residential development in the rural areas of Roanoke County but to recognize the impacts this development pattern has and to address the location, character and extent of this development in order to minimize the harmful impacts. The following policies are recommended:

1. Encourage land protection and conservation in rural areas. Recognize that tools such as conservation easements are the most cost-effective solution to protecting rural lands.
2. Decrease residential density in rural areas. Revise the AR, AG-1 and AG-3 zoning district site development regulations to address the issue of lot averaging and the concerns of land fragmentation and density related impacts.
3. Permit and or require clustering of rural residential development for subdivisions of 5 lots or greater. This should encourage a more efficient land development pattern and retain all the development potential that would be available under a conventional development standard. The benefits of this program to the

landowner are reduced development costs, more marketable lots, and the preservation of substantial portions of land. Citizens would gain the benefits of permanent preservation of large tracts of land that could be used for agricultural or forestry uses, recreational uses and the preservation of water, natural or scenic resources. Many issues need to be considered in developing standards for a rural cluster program. The protection of the natural environment should be ensured. A minimum size of the preservation parcel should be determined. The standards should ensure that a minimum amount of land is used for residential development. With that though, and in keeping with the growth management goals of Roanoke County, the use of rural cluster developments should not be a justification to extend public water and sewer to these rural areas. In order for this program to work, alternatives for wastewater treatment and water supply should be considered that would allow reduced lot sizes for the residential parcels and, thereby, allowing significant portions of land to be available as preservation parcels.

4. Proactively manage the extension of water and sewer services. Recognize that the availability of public water and sewer, among other things, greatly influences the development and density of land. Sewer pump stations have made the extension of public sewer feasible to areas of the County where it would not otherwise be. Staff has mapped recommended “future growth” areas, contiguous to the current utility services boundary, that should accommodate growth over the next 5 year period of time. Within this future growth area Section 15.2-2232 public review will not be required for the extension of water and sewer services. Outside and beyond these future growth areas, staff is recommending that no new utility lines be extended, no new pump stations be built and no new community well systems be allowed without the benefit of a Section 15.2-2232 public review.
5. Consider adopting a set of design guidelines and recommendations for future improvements to rural roads. Also, consider adopting the Virginia Department of Transportation Rural Rustic Roads Program. This program for unpaved roads is designed to pave rural roads in a more environmentally friendly and less costly manner. This program uses existing road widths for road improvements, rather than increasing road widths and is designed for areas with limited growth.
6. Consider minimum private road development standards for very large lot rural residential development. Shared driveways, flag lots or lots with no frontage should also be considered to minimize the amount of road frontage required and the visual impact of residential development from the rural roads. These standards should apply to five or fewer lots.
7. Protect steep slopes and ridgelines. Develop design guidelines and regulations for development on steep slopes. These should include provisions for “slope maintenance bonds”, and should determine a slope above which development should not be allowed. The precise slope percentage should be determined after

more research and analysis is conducted but should be specified in the future zoning ordinance amendment.

8. Develop and implement a Mountain Zoning District. This proposed district should prohibit multi-family residential, commercial and industrial development within the district and provide limitations on clearing, grading, building height and distance from ridgeline for all other development. Specifics of this ordinance should be researched and analyzed after the adoption of the Community Plan.
9. Develop design standards for Rural Village Centers. Review the areas currently designated as Village Centers and, with community input, determine which should stay on the list, which should be removed and if new areas should be added. There may be areas that are currently designated Rural Village Centers that, given growth patterns, may be better suited as Development and rezoned to Neighborhood Commercial. In these cases, consideration should be given to the extension of public water and sewer to these areas. Rural Village Centers are rural locations where you would find small country stores, small family restaurants, schools, post offices and churches – those establishments that bring a sense of community to the surrounding countryside. These areas are not intended to be major employment centers for urban/suburban residents but rather to provide essential goods and services to the nearby rural residential community. These areas are often the rural crossroads. Design standards should consider the following: prohibit the creation of strip development along rural roads; appropriate scale of buildings; the re-use and renovation of existing buildings should be encouraged. Overall, rural design standards should be implemented not suburban design standards. It should be recognized that these rural village areas do not require the same signage, access, parking and lighting standards that more suburban and urban areas do.
10. Develop an ordinance to prohibit the clear-cutting of trees in certain zoning districts, under certain circumstances. Attention should be given to the provisions of State Code dealing with silviculture activities.

CHAPTER 4

COMMUNITY FACILITIES

1. PARKS AND RECREATION

Introduction

The Roanoke County Parks and Recreation Department offers a vast variety of programs and services. The department oversees large-scale special events, an after school program, development of a residential camp, a ropes course, new park developments and a teen center. The department is motivated to offer the best possible programs and services to the citizens of Roanoke County and the surrounding areas.

The future direction of park facility development includes some exciting projects for Roanoke County. In addition to developing and updating master plans for parks, the Parks and Recreation Department is actively seeking sites and funding to acquire new park land. During school renovation and new school construction, the Parks and Recreation Department and the School Board work to develop joint-use facilities and community centers. The department actively supports the efforts of the Roanoke Valley Greenway Commission. A recent successful fundraising campaign has provided money for significant investment at Camp Roanoke and a master plan for park development around Spring Hollow Reservoir has been completed.

Goal

To protect, conserve and manage designated Roanoke County public parks, assigned public lands and associated environmental, cultural and historic resources consistent with the needs, attitudes and interests of County residents and within available resources.

Issues and Opportunities

- There is growing interest in a Valley-wide greenway system. With the creation of the Roanoke Valley Greenway Commission, opportunities exist to create and expand trail systems throughout the County and across jurisdictional lines. Greenways can serve as a link between destinations such as schools, parks, libraries, and commercial and employment centers. Greenways also can preserve important natural areas, protect water quality, and promote healthy lifestyles and physical fitness. There needs to be continued support for the planning and development of greenways on a County and Valley-wide basis.

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- Roanoke County Parks and Recreation and the Roanoke County School Board have a long history and tradition of the joint use and development of park and athletic facilities. Joint use is a cost-effective way to optimize the use of publicly owned land. As the School system proceeds with the implementation of the Blue Ribbon Committee's School Facilities Plan, efforts should be made to incorporate design strategies that promote and accommodate non-school community programs. Where practical, gyms should be full sized, with convenient and safe access. Outdoor recreation areas should be developed that support both the schools and secondarily, the community recreation mission.
- The requirements associated with the passing of Americans With Disabilities Act has increased both the demand and the expectations for recreation services for our physically and mentally challenged citizens.
- Opportunities exist to partner with private businesses, non-profit community service organizations, and other local governments to develop facilities, programs, and events which will improve the quality of life of all Valley residents. Through increased tourism, these partnerships could also have a positive impact on the business community.
- The development community can provide additional park and recreation facilities. These facilities may include dedication of park land or payment in lieu of dedication, construction of park facilities, dedication and construction of greenways and other forms of public-private partnerships.

Objectives

- A. Continue to develop the County's district parks as a major source of recreational facilities and activities.
- B. Develop a greenway system, and funding mechanism, that provides access to Roanoke County's cultural, historic, and recreational resources for the benefit of all Roanoke Valley citizens.
- C. Encourage the provision of open space and park facilities with new development.
- D. Acquire additional land for new parks, or expansion of existing parks, where facility deficits exist.
- E. Seek alternative funding methods for existing and future recreation facilities and programs.
- F. Provide additional park and recreation facilities during the renovation and/or construction of schools.
- G. Expand the number, size, and type of park facilities in Roanoke County.

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- H. Provide alternative modes of transportation to access recreation facilities.
- I. Provide adequate waterfront access to the Roanoke River.
- J. Develop strategies to preserve the Roanoke River as a recreational resource.
- K. Continue to encourage public input and opinion in planning for parks and recreation.
- L. Attract major athletic events and festivals to park facilities.

Implementation Strategies

1. Continue to use the master planning process to obtain citizen input for park facility's development. (Obj. A, G, K)
2. Use the Capital Improvements Program (CIP) to acquire land and provide improvements to the County's park and recreation facilities. (Obj. D, F, G)
3. Obtain State and Federal funds for park and recreational facility development whenever possible. (Obj. B, E)
4. Revise subdivision and zoning ordinances to require specific amounts of park land to be dedicated or payment in lieu of dedication by developers to the County based upon the population to be served as well as the size of the development. (Obj. C)
5. Coordinate with the Roanoke County School Board on the location, phasing, and design of school and park sites to enhance the potential for development of community recreation facilities. (Obj. F, G)
6. Develop an integrated park and greenway system linking major resource areas, parks and schools. (Obj. B, F, H)
7. Capitalize on the region's tourism through publication of recreational site locations and activities, public waterfront access locations and community programs and events. (Obj. I, J, L)
8. Develop intergovernmental agreements for the provision of recreational programs and facilities. (Obj. B, J, L)
8. Continue to develop park facilities at Camp Roanoke and Spring Hollow Reservoir. (Obj. E, G)
9. Expand Valley Metro and Cortran service to ensure access to County recreation centers and district parks. (Obj. H)
11. Evaluate the development of a County-owned and operated water park. (Obj. D, G)

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12. Implement the Southwest District Park Master Plan. (Obj. A, G, K)
13. Develop a soccer complex in north Roanoke County. (Obj. A, G, K)
14. Encourage neighboring jurisdictions to adopt the Roanoke River Corridor Conservation Overlay District. (Obj. I, J)

2. LIBRARIES

Introduction

In 1996, the Roanoke County Library Board of Trustees revised and approved the *Roanoke County Public Library Five-Year Plan*. The plan provides goals, objectives and strategies for the following components of the library system: resources; operation, organization, and procedures; staff development; collection development; program service and development; technology, capital items and facilities; and interdepartmental and interlibrary cooperation.

The *Roanoke County Public Library Five-Year Plan* has a simple and effective structure of goals, objectives, and implementation strategies. The plan is divided into seven components. Each component of the plan has one general goal, with several underlying objectives. Each objective has strategies to meet the objectives. Each strategy is given a target year for completion. The goals of each component are listed below as objectives. A sample of the objectives of each component goal are listed below as implementation strategies. For complete text of the plan, the reader should refer to the *Roanoke County Public Library Five-Year Plan, April 24, 1996*.

Goal

The Roanoke County Public Library System is a community information and life-long learning center which provides citizens with the resources to help them develop their intellectual, economic, cultural and educational potential.

Issues and Opportunities

- As a world-wide, information-based economy continues to develop, accompanied by vast structural changes in the work force, continual job-related learning, training, and development will become increasingly important to citizens. Career and vocational information, specific skills instruction and access to distant education programs will be vital.
- Demand will grow for electronic, online, audio and video formats and for multimedia information delivery. Libraries will need to have all of these items in their collections and must have the facilities and equipment for their housing and use.
- Extended hours and special reference and research services will be needed as customers want maximum convenience to fit their hectic, demanding lives.
- The way information is gathered, stored, accessed, and disseminated will be subject to continuing technological change as well as changes driven by human behavioral factors and needs. Validation, arrangement and packaging of information may change radically.

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- Automation of routine tasks will help maintain services. Customer self-charging systems, debit cards, security systems, after-hours voice mail and e-mail drops and automated calling systems are all possibilities.
- Contracted cataloging and preliminary processing of up to 70% of all selected titles may eventually be possible, freeing technical services personnel for public services work. Document delivery may be another possible outsourcing option.
- As research strategies and the available search tools become more sophisticated and varied, staff will need to receive constant training to provide effective service. Library work will demand increased knowledge and skills, and, on the average, reference transactions will become more complicated and time-consuming.
- The average age of Roanoke County citizens is increasing. Older library consumers tend to need and demand a higher level of service, including more or improved services in areas such as health and medical information, investment research and non-book formats.
- While children will decrease as a percentage of the County's population their absolute number will remain relatively stable. Continued service improvements will be required for children and students. In an information-economy, the library's role as a doorway to learning and reading for pre-schoolers will be more crucial than ever.
- Assisting students to be competitive with students from around the world will be important. The library can help the information "have nots" of all ages - but especially children - to gain access to technology and information.
- In trying to serve the needs of the oldest and youngest age groups the library will need to improve outreach activities. Beyond these two age groups, the community will also benefit from increased outreach to businesses and educational agencies.
- The library needs to develop more extensive working partnerships with other agencies and private sector organizations.
- The library needs place for active, noisy toddlers as well as quiet space for dedicated researchers. Additional space is needed for community meetings and programs, space supporting the arts and local cultural efforts and instructional space for distant learners.
- The development of the Internet will continue to increase demand on library services.

Objectives

- A. Increase quality of managerial control of resources and seek to improve resource level.
- A. Improve the efficiency and effectiveness of operations and procedures.
- C. Provide opportunities for staff skill development and improvement.

- D. Develop strong, responsive collections, which address well defined, prioritized needs through the systematic use of collection management and developmental techniques and tools.
- E. Expand the customer base for current programs; identify emergent programming needs and develop appropriate support and action plans.

Implementation Strategies

1. Maintain and improve current reporting methodologies. (Obj. A)
2. Adjust and refine formal resource allocation procedures. (Obj. A)
3. Develop a staffing plan to project staffing need based on workload indicators and service plan, and define needed new positions. (Obj. A)
4. Establish and support budget goals for collections. (Obj. A)
5. Diversify team activities through greater use of working teams to address specific, emergent issues. (Obj. B)
6. Complete restructuring process. (Obj. B)
7. Adopt a vision statement to complement the mission statement. (Obj. B)
8. Revise five-year plan. (Obj. B)
9. Promote team concept and support county training. (Obj. C)
10. Improve and expand in-house training. (Obj. C)
11. Support attendance for professional programs, conferences, and workshops. (Obj. C)
12. Retain annual special collection development goal plan. (Obj. D)
13. Begin to build systemized collection development plan. (Obj. D)
14. Maintain expanded staff participation in collection development. (Obj. D)
15. Conduct needs' assessments and fill rate studies. (Obj. D)

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16. Provide strong support for juvenile services programs. (Obj. E)
17. Develop plan for adult programming. (Obj. E)
18. Identify and protect core fundamental services from fee encroachment, but consider fee-based enrichment programs. (Obj. E)
19. Strengthen local history collection and services. (Obj. E)
20. Expand electronic services. (Obj. E)

3. SCHOOLS

Introduction

In April 1996, the Roanoke County School Board began a comprehensive study of their 28 educational facilities. The School Board hired a local consulting firm to coordinate the project. The consulting firm set up local school committees for each of the 28 facilities. The committees consisted of individuals, such as school faculty and staff, PTA members, and parents, who were the most familiar with the physical needs of the schools. The local school committees made lists of major capital investment needs, as well as operation and maintenance needs.

The Roanoke County Board of Supervisors and School Board jointly developed a citizen committee to evaluate and prioritize the results of the facility study. The 22-member group was named the Blue Ribbon Committee. The Blue Ribbon Committee visited each of the school facilities to review the list of needs developed by the local school committees. Following their review and evaluation, the Blue Ribbon Committee identified \$100 million in school capital improvement needs. Three phases of construction were recommended over a 10-year period. The total cost of the recommended improvements, adjusted for inflation, is approximately \$121 million.

On March 17, 1997, the Blue Ribbon Committee presented the school facility's plan to a joint meeting of the Roanoke County Board of Supervisors and the Roanoke County School Board. On March 27, 1997, the School Board accepted and endorsed in concept the report of the Blue Ribbon Committee. On April 22, 1997, the Board of Supervisors passed a resolution endorsing in concept the recommendations presented by the Blue Ribbon Committee.

Goal

Support and implement the School Facilities Plan submitted by the Blue Ribbon Committee and adopted by the School Board.

Issues and Opportunities

The following issues and opportunities were provided by the School Board in 1997. Some of the issues were carried over from the 1985 Comprehensive Plan, Community Facilities Plan.

- The Roanoke County School Board's six-year plan presents goals and strategies intended to enhance the teaching/learning process and to give direction to improvement efforts. The Roanoke County School Board has developed and continues to support a wide range of academic and extracurricular programs. The curriculum and design of each of these Programs are reviewed on a regular schedule to ensure that classroom instruction and other school activities reflect the best practices and recent research.

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- Enrollment is predicted to increase by approximately 3.5% by 2000. The largest increase is anticipated in the West County District (6.1%), followed by Vinton (5.5%), South County (2.9%), and North County (1.3%).
- Roanoke County schools serve as multiple-use facilities. Adult education and continuing education programs use various school facilities. In addition, the School Administration building is used for seminars and workshops. The school system cooperates with the Roanoke County Department of Parks and Recreation in making available gymnasiums and athletic fields for recreation use after school hours. Citizens in many sections of the County sponsor community education programs and/or community meetings in respective elementary schools. County schools are used frequently for community activities and for polling stations. School libraries can also serve as public resources.
- Acquiring school sites over the next 10 years will provide a significant challenge to the County School system, due to an ever tightening real estate market and lack of sites suitable for school facilities.
- The County and the school system cooperate in the areas of central purchasing of paper products, office supplies, food items, office machine maintenance, insurance, data processing services and gasoline facilities.

Objectives

The following objectives for school facilities are excerpts from Section 3A, 3B, and 3C, Statement of Equality Issues in *The 1997 Comprehensive Facilities Study of the Roanoke County School System*. In the Statement of Equality Issues, the Blue Ribbon Committee established guidelines for school population size, school space requirements, safety requirements, and regulatory requirements. The guidelines were developed for elementary, middle/junior high, and high schools.

Statement of Equality Issues, Elementary Schools

Size

Newly constructed elementary schools' student population should be no larger than 600 to 660. However, most of the existing elementary structures were not originally designed for those numbers and their size should not be increased to handle more than a maximum population of 500.

Requirements

Dedicated areas should be established at each school for the resource subjects of art, physical education, music, reading specialist, learning disability specialist, computer lab and other special areas such as guidance and library.

Safety

- All doors unlocked during the school hours should be monitored either through a visual

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means or opening from an office which is constantly manned or by means of electronic equipment.

- All doors should be designed to be operable by all students.
- There should be a 2-way communication intercom in every instructional area for use by the teacher.
- Each school should have a monitored sick child room or clinic.
- Each school should have adequate lighting, indoors and out, to support school functions.
- Dusk-to-dawn lighting should be used at the exterior of each school.
- Each building's electrical system, interior signage, fire alarms, fire doors, emergency exits, etc, should be maintained at current code, not "grandfathered" into acceptance at the expense of safety.
- Procedures for safe arrival and departure of students, whether by bus, auto or on foot, should be implemented and reviewed periodically.
- Adequate space for bus loading and unloading should be provided on school property.
- Adequate parking space should be provided.
- Restroom facilities with adequate ventilation and capacity should be provided.

Regulatory

- "Push and go" doors for handicapped accessibility.
- Access to handicapped bathroom facilities.
- Compliance with ADA through ramps, elevators, etc.
- Compliance with all current local, state and federal codes is required.

Statement of Equality Issues, Middle / Junior High Schools

Size

The optimum size for a middle school is approximately 800 to 850 students, with a core facilities capacity of approximately 1,000.

Requirements

- Requirements under the Americans with Disabilities Act (ADA) must be met.
- Classroom space properly designed and appropriately equipped to meet special education needs must be provided.
- Properly equipped science labs with adequate dedicated space for storage and separate preparation rooms are essential.
- Music and art are not frills. These disciplines are an important part of our culture. Adequate dedicated space must be provided for instruction and storage for these subjects.
- Core areas such as the gymnasium, cafeteria, auditorium, media center/library, and computer labs must be large enough to accommodate the students and faculty in reasonable comfort.
- Sufficient space must be dedicated to essential administrative functions such as administrative offices, guidance offices and conference rooms and storage areas.
- A properly equipped faculty lounge, of a size adequate to accommodate the faculty, is essential. Faculty work areas must be provided so that teachers have a space dedicated to the planning and preparation that are an essential part of proper instruction.
- Storage space is, at best, inadequate and often nonexistent. Storage areas for instructional equipment and materials must be provided.
- Adequate student lockers must be provided. Students should not be required to share lockers. A resolution of the overcrowding problem may alleviate this situation.
- Persistent problems with air conditioning, humidity and heating must be solved.

Safety

- A sick student room with a sink must be provided.
- The administrative offices must be located and configured to provide visual control of all unlocked entrances so as to allow for the observation of strangers entering the building.
- An intercom system must be established to provide two-way communication between the administrative offices and each classroom. Under current conditions, the only way many

teachers have to summon help in an emergency is to send a student to the office.

- Bus and automobile loading and unloading areas must be located and configured to provide safe pick-up and delivery of students.
- Exterior and parking lot lighting must be adequate to provide security.
- Adequate paved parking must be provided.

Statement of Equality Issues, High Schools

Size

The optimum size for a high school is approximately 1,000 to 1,100 students with a core facility for 1,400 students. No high school should exceed 1,400 students. To manage enrollment, the committee recommends an annual review of attendance lines and a willingness to redraw them when necessary. At overcrowded schools, special attention should be given to reducing the number of non-resident students.

Requirements

- Requirements under the Americans with Disabilities Act (ADA) must be met.
- Provide classroom space properly designed and appropriately equipped for all students and programs, including those with special education needs.
- Science labs must be properly equipped with adequate dedicated space for storage and separate preparation rooms.
- Adequate dedicated spaces for music and art are essential including the necessary storage.
- Core areas should include gymnasium, auxiliary gymnasium, cafeteria, auditorium, media center/library and computer labs. These areas must be large enough to accommodate students and faculty in reasonable comfort.
- Until cafeteria space problems can be resolved, short term solutions should be attempted. These include consideration of a 4th lunch period and establishing a lunch program at Arnold R. Burton.
- Outside play fields should be adequate to support the physical education and team sport functions.

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- Dedicated space essential for administrative functions (administrative offices, guidance offices, conference rooms and storage areas) must be provided.
- Faculty should be provided with a lounge of adequate size and work areas with a dedicated space for planning and preparation.
- Students need adequate lockers which do not require sharing.

Safety

- Administrative offices must be located and configured to provide visual control of all unlocked entrances allowing for observation of unauthorized visitors.
- An intercom system should be provided for two-way communication between administrative offices and each classroom.
- Bus and automobile loading and unloading areas must be located and configured to provide safe pick-up and delivery of students/.
- Adequate paved parking must be provided including exterior security lighting.

Implementation Strategies

Strategies to accomplish the objectives take the form of specific proposed facility improvements in the construction phasing schedule. The phasing schedule which is listed below is found in Section 5, Prioritization of Selected Options in *The 1997 Comprehensive Facilities Study of the Roanoke County School System*. For specific project details, the reader should refer to Section 4, Recommendations in *The 1997 Comprehensive Facilities Study of the Roanoke County School System*.

Phase I 1997-2002

New Pyramid V High School and Sports Complex
Glenvar Middle School Separation/High School
 Auxiliary Gymnasium and Band Room
Proposed Bonsack Elementary School
Burlington Elementary School
Clearbrook Elementary School

Phase II 2001-2006

Cave Spring Middle School
Roanoke County Career Center
Arnold R. Burton Technology Center
Oak Grove Elementary School
Mount Pleasant Elementary School
Mountain View Elementary School
Northside High School
Glenvar High School
Cave Spring High School

Phase III 2004-2009

Land Acquisition for New South County
Elementary School
Glenvar Elementary School
Mason's Cove Elementary School
Bent Mountain Elementary School
Penn Forest Elementary School
Glen Cove Elementary School
Herman L. Horn Elementary School
W.E. Cundiff Elementary School
Green Valley Elementary School
Northside Middle School
William Byrd Middle School
Fort Lewis Elementary School
Cave Spring Elementary School
William Byrd High School
Hidden Valley Middle School
Back Creek Elementary School

4. PUBLIC SAFETY

Introduction

Public safety includes the services provided by the County Sheriff's Office and the Fire and Rescue and Police Departments. This element of the Community Plan recognizes that the level of service provided by these departments is a significant factor in the quality of life enjoyed by the County's residents. The strong growth that Roanoke County is experiencing is paralleled by demand for additional services from these departments. Roanoke County must strike a balance between land use decisions and the sustainability of providing appropriate levels of public service.

The primary mechanism for ensuring a well-balanced and adequate public safety system is through the Capital Improvement Program (CIP). The County's Capital Improvement Program guides the development of facilities over a five year period. It shows the arrangement of projects in a sequential order based upon a schedule of priorities and assigns an estimated cost as well as an anticipated method of funding of each project. The Capital Improvement Program provides the financial foundation necessary to implement plans.

The following Goal, Issues and Opportunities and Objectives apply to all three areas of public safety: Sheriff's Office, Fire and Rescue Department and the Police Department. Following the Objectives are specific Implementation Strategies for each of the three public safety areas.

Goal

To provide the highest level of public safety services in the most cost-effective manner.

Issues and Opportunities

- The County strives to provide the efficient delivery of public safety services with minimal response times.
- There are opportunities for increased community involvement and educational programs in the public safety areas.
- There are opportunities for enhanced intergovernmental cooperation in the provision of public safety services.

Objectives

- A. To provide for the safety of all of Roanoke County's citizens, businesses and visitors.
- B. To protect the rights and property of all citizens within the boundaries of Roanoke County.
- C. To cooperate and coordinate with neighboring jurisdictions to provide the most effective and cost-efficient services to County residents.
- D. To inform and educate County citizens about all aspects of public safety.

Police Department

Introduction

Roanoke County Police Department (RCPD) is committed to ensuring that citizens continue to trust the department to provide reliable and effective law enforcement service. The services provided by the RCPD meet or exceed the Commonwealth of Virginia Department of Criminal Justice Services Commission Standards and the stringent standards required for national accreditation. Existing department programs which were enhanced through the accreditation process include: criminal investigations, traffic enforcement, domestic violence, crime prevention, criminal apprehension and community-involved policing. Citizen safety and well-being are of paramount importance to the department.

Implementation Strategies

- 1. Provide the necessary resources to the Roanoke County Police Department to meet the existing and projected needs of County residents. (Obj. A, B, C, D)
- 2. Reduce patrol response times by reevaluating existing patrol districts and maximizing staffing resources. Any modifications to patrol districts should utilize existing community centers and the topographic features of the County. (Obj. A, B, C)
- 2. Continue to expand drug awareness programs by working with the Roanoke County School Board to assist in funding increases in D.A.R.E., the D.A.R.E. Camp and middle school D.A.R.E. programs. Utilize the School Resource Officer program to impact drug use in the schools. (Obj. D)

4. Increase community participation in crime control by actively involving the citizens and businesses of Roanoke County in a variety of crime prevention programs. Such programs include: Neighborhood Watch, Business Watch, Citizens Police Academy and other similar programs. (Obj. D)
5. Maintain National Accreditation (CALEA) Status. National Accreditation serves as a management tool to standardize and professionalize the Roanoke County Police Department. (Obj. A, B)

Fire and Rescue Department

Introduction

The Roanoke County Fire and Rescue Department (RCFRD) is committed to providing the most effective and efficient level of fire prevention, suppression and emergency medical services to the residents, business and visitors of Roanoke County. The department is committed to maintaining and enhancing its services while it maximizes the use of taxes and other resources.

Implementation Strategies

1. Examine the existing facilities, equipment and personnel to determine where the demand for services has increased faster than the provision of services. Develop a comprehensive plan to address the deficits in existing services, to minimize response times and project where future improvements will be needed. (Obj. A, B, C)
2. Encourage and provide opportunities for public participation and training in fire prevention and safety as well as first aid and CPR. (Obj. D)
3. Recognize the challenges associated with using a volunteer system. Staff resources are extremely limited during the day when many volunteers are at their day jobs. During the neighborhood planning process the need for new volunteers was identified as a challenge confronting many of the rural fire and rescue stations. Response times for fire and rescue services are constantly monitored and evaluated. (Obj. A, B, D)
4. Take advantage of new technologies to update and improve the County's dispatch and communication systems and establish a regional emergency communications center. (Obj. A, B, C)

Sheriff's Office

Introduction

The primary duties of the Roanoke County Sheriff's Office are to provide a secure and safe environment in the courtrooms for all members of the judiciary and the public. Additionally, the Sheriff's Office is responsible for providing a safe and secure environment for all inmates housed in the Roanoke County-Salem Jail and to serve all civil process orders in a timely manner.

Implementation Strategies

1. Construct a regional juvenile detention center. This facility will eliminate overtime and be a more cost effective and efficient method for the detention of juveniles. (Obj. A, B, C)
2. Continue to learn about and pursue technological innovations in justice administration. The devices and monitoring systems can free up jail space for more serious offenders as well as eliminate the costs of constructing additional space. (Obj. A, B)
3. Explore opportunities for the use of private contracts to provide full detention services and the more basic tasks associated with the administration of courts and detention centers. Exploring these opportunities should be part of an annual review so as to offer the most cost effective system as possible. (Obj. A, B)

5. PUBLIC UTILITIES

Introduction

Public utilities available in Roanoke County include water supply and production, water distribution, sanitary sewer collection, solid waste management, electrical service, telephone service, natural gas distribution and cable television. Public water production and distribution, and sanitary sewer services that are provided by the Western Virginia Water Authority (WVWA). Transfer of solid waste to the regional landfill and the management of that landfill is the responsibility of the Roanoke Valley Resource Authority.

This section of the Community Plan discusses two public utility services - water and sewer, which individually and collectively, greatly influence growth in Roanoke County. The provision of these services to a previously unserved area will encourage growth and development in that community. As we learned over the last 10 years, the lack of water and sewer services to an area does not necessarily mean that community will not experience growth. Past history has shown that growth may still occur, but it will likely be at lower densities. As development pressures increase, the communities may experience the failure of wells and on-site septic tank/drainfield systems.

As a community Roanoke County must recognize the influence that public water and sewer services and internal policies concerning fees, fee rebates and cost sharing have on growth management. The policies of the WVWA must be consistent with County policies concerning issues of land use, economic development, schools and the provision of public services such as police, fire and rescue.

The WVWA is charged with providing public water and sewer service to the citizens of Roanoke County and Roanoke City. This Authority operates as an enterprise fund and receives no direct general fund tax dollars. As a result, the Authority is funded solely from the collection of water and sewer fees from the citizens of Roanoke County and Roanoke City.

The WVWA is responsible for providing and maintaining a safe drinking water supply. The predominant source of this water for Roanoke County is the Spring Hollow Reservoir, which when full, holds 3.2 billion gallons of water. The reservoir can meet Roanoke County's water needs past the year 2040.

Distribution of water from the Spring Hollow Reservoir is provided via two transmission lines. The 30-inch diameter South Transmission Line begins at the Spring Hollow water treatment facility, terminates along U. S. Route 220 in the Clearbrook Community and serves major areas of southwestern Roanoke County between these two points. In addition, portions of southwest Roanoke City are served by the South Transmission Line. The north loop begins at Route 11/460 near Cherokee Hills and proceeds to Route 311, along Loch Haven Road to the Plantation Road area and includes a parallel line from Dixie Caverns to the Fort Lewis area. Major areas served by the North Transmission Line include the I-81 corridor between Dixie Caverns and Plantation Road. Also served are portions of northeast Roanoke City.

The WVWA continues to have limited dependence on ground water wells. Currently, approximately 22 wells located in Roanoke County supply drinking water. More than forty wells have been taken off-line since the construction of the Spring Hollow Reservoir. In

addition, the WVWA has the capability of purchasing approximately 0.2 million gallons per day from the City of Salem.

The WVWA is responsible for maintaining the wastewater collection system, including sewage pump stations for the wastewater conveyance system located in Roanoke County. Roanoke County participates in the regional wastewater treatment plant that is owned and operated by the WVWA.

Roanoke County, Botetourt County, the Town of Vinton and the Cities of Salem and Roanoke are participating in an upgrade of the regional wastewater treatment plant.

The WVWA has completed a Capital Improvement Plan through the year 2006. This Plan includes the most critical needs in the areas of water and sewer service that can reasonably be funded and constructed within the 2001-2006 timeframe. The WVWA develops a new Capital Improvement Plan every five years.

6. STORMWATER MANAGEMENT

Introduction

Stormwater management is the planned control of surface water runoff that results from rainfall. The goal of stormwater management is to prevent flooding and pollution.

All development creates an impact to the overland flow of rain water. Studies have shown that there is a direct correlation between development and water quality degradation/flood volume. This element of the Community Plan provides direction for ensuring that development impacts are mitigated by stormwater management facilities and water quality best management practices.

A number of regulatory and safety factors influence stormwater management in Roanoke County. These include local, state, and federal regulations such as the Roanoke County Stormwater Ordinance, the Virginia Stormwater Management Handbook, and the County's Virginia Pollutant Discharge Elimination System MS-4 Permit # VAR-040022. Following are the stormwater goals of Roanoke County. (1) Prioritizing drainage basins which need improvement through stream inventories and watershed impact assessment. (2) Addressing pollutant load and flood reduction techniques. (3) Inventorying stormwater management facilities and their condition through the storm sewer system mapping program. (4) Recommending capital improvement projects to improve stormwater quality.

The primary issues of concern for the stormwater management section of the Roanoke County Community Plan are to (1) Minimize the impact of drainage on private property, (2) Alleviate existing stormwater problems, (3) Manage stormwater discharge control, (4) protect water and stream quality, and (5) Research potential stormwater management financing methods. The objectives and implementation strategies of this section direct Roanoke County to monitor maintenance of existing stormwater facilities and will also work towards meeting or exceeding the compliance requirements of the Federal Government's National Pollutant Discharge Elimination System.

Objectives and implementation strategies are presented to address the five primary issues of the Roanoke County Community Plan. Performance standards for stormwater discharge will be applied to new development to prevent downstream degradation. These standards will be imposed through regulations, but alternative methods such as low impact development methods or developer contributions to public facilities may be provided, where feasible. Detailed drainage system studies are proposed to identify feasible off-site discharge control opportunities and to identify other drainage conditions which warrant County action. More general policies for preserving water quality include the protection of natural drainage corridors and the incorporation of water quality consideration into various aspects of stormwater management. Implementing riparian buffer regulations to filter run-off, reducing stream temperatures, providing open space and wildlife habitat and preventing development of parking lots and structures within close proximity of a stream corridors are all means of water protection.

Many drainage issues involve conditions that raise questions concerning the division of public and private responsibility. Policies concerning existing conditions emphasize a thorough study to

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identify conditions which may warrant County action either to correct problems on County property or to assume a new level of responsibility for those that are now considered private property. The creation of a framework for informed decisions concerning the expansion of the County role is proposed.

The County has also determined that regional stormwater management facilities can provide a viable alternative to individual on-site controls and will work to include regional facilities as an important component of the countywide stormwater management program.

Stormwater management regulations should be revised where applicable, so that land development activities can be reviewed and developed from a watershed-wide perspective. Until such time, regional or community facilities should be approved on a case-by-case basis taking into consideration all state and federal stormwater management compliance regulations. .

In summary, the Stormwater Management Policy presented in this section emphasizes prevention of future problems and the development of information and procedures necessary for a proper evaluation of stormwater management practices. Consistent with the nature of the Community Plan, the policy is general and is intended to be a guide for more specific implementation actions.

Issue #1

Drainage on Private Property

Objectives

- Reduce future property damage, nuisance flooding and requests for public assistance.
- Protect water quality and reduce the potential for flooding and erosion damage by preventing encroachment into natural watercourse areas.
- Continue storm sewer drainage system studies to identify existing and future flooding and erosion damage.
- Re-evaluate current County policy for stormwater basin inspections and maintenance acceptance.

Implementation Strategies

- Evaluate the existing floodplain regulations to determine if amendments are needed to reduce the exposure of new structures to flooding.
- Preserve the natural character of drainage ways.
- Apply appropriate standards for the alteration of private drainage facilities.
- Work to upgrade the County's floodplain mapping to provide more accurate data on future flooding evaluations.

Issue #2

Existing Stormwater Problems

Objectives

The current understanding of existing stormwater problems indicates a level of severity which demands substantial immediate action by the County. The current system of responsibility provides remedies either by the affected party or through legal measures to obtain relief from a party causing the problem. Nevertheless additional requests for County assistance can be expected, and will require an expanded County effort. Any actions to expand County responsibilities for the correction of existing stormwater problems should be supported by a thorough analysis of needs, proper solutions, and appropriate levels of public and private responsibility. These conclusions support the following objectives for policies related to existing stormwater problems:

- To provide a high level of performance for drainage facilities on County property and for facilities necessary to manage the off-site effects of drainage from County property.
- To establish the financial capacity, information base and decision criteria necessary for the County to assume responsibility of private drainage problems when conditions warrant such intervention.
- To recognize the validity of private responsibility for a large portion of the drainage system and to maintain a consistent, understandable, and supportive posture regarding private responsibilities.
- To increase coordination with V-DOT in urban Bio-infrastructure installation and maintenance.
- To develop a system for the identification, correction and financing of a comprehensive storm sewer illicit discharge connections program.

Implementation Strategies

The implementation strategies recommended below are intended to retain aspects of current practices which are working well, to adjust certain policies to minimize conflict over responsibilities, and to initiate expansion of County responsibilities for existing drainage systems when such expansion serves the public interest.

- Continue studies necessary to identify deficient drainage structures and conditions on County property, evaluate the effect of these conditions both on and off County property using watershed impact analysis, identify appropriate corrective measures, and establish priorities for implementation. The purpose of this policy may be accomplished as a part of the drainage basin studies recommended in other elements of the overall Stormwater Management Program as outlined in the current stormwater maintenance program and the County's Virginia Pollutant Discharge Elimination System MS-4 Permit # VAR-040022.
- Initiate studies necessary to identify feasible drainage projects on private property, establish the justification for County assumption of responsibility for these projects, and establish priorities for implementation. This policy may also be accomplished as part of a comprehensive drainage basin study.

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- Maintain annual capital budgeting for drainage improvements. Identify feasible projects which require scheduled maintenance and an annual budget. As the results of storm sewer system drainage studies identify additional projects, the budget level may be increased accordingly. Development of a drainage utility approach to funding shall be considered. Any program of sufficient magnitude to justify the creation of a drainage utility may require bond funding to support major capital costs in the early stages.
- Use guidelines which recognize need, equity, and public purpose in determining the appropriateness of the County assuming responsibility for privately owned drainage facilities.
- Develop an information/education program to increase citizen awareness of private drainage responsibilities and potential stormwater effects.
- Develop an ordinance prohibiting illegal discharges into the storm drain system.

Issue #3

Stormwater Discharge Control

Objectives

- Manage the stormwater effects of new development.
- Manage the stormwater effects of re-development.
- Manage stormwater quantity.
- Manage stormwater and stream quality.
- Correct and fund existing drainage deficiencies.
- To prevent significant increases in the potential for property damage, nuisances, or other negative impacts of stormwater.
- To equitably allocate the costs of controlling increases in stormwater discharge to properties which are the sources of the increase.

Implementation Strategies

- Controlling, through regulation or ordinance, stormwater discharge from new development in pre and post construction.
- To apply discharge control methods (stormwater best management practices) which are economically, aesthetically, and environmentally acceptable, as well as effective in stormwater management.
- Develop a system for stormwater discharge control which emphasizes regional/community facilities. In addition, appropriate levels of on-site control for new development should be applied to a particular site where immediate downstream degradation or flooding issues exist.
- Incorporate in site plan review, considerations for potential pre and post construction stormwater impact.
- Develop ordinance and regulation to prohibit illegal and illicit stormwater connections.

This general policy related to discharge is intended to combine the strengths of on-site and off-site approaches, while minimizing the weakness of either approach. Accomplishment may require studies to create a fee in lieu of on-site facilities when plans have been approved for better off-site improvements. These improvements may include strategically located improvements. Design criteria for the discharge control system will be subject to further detailed consideration, but the following are appropriate:

1. Control the peak flow for the two and twenty-five year storm events
2. No increase in peak discharge after development
3. Stormwater Best Management Practices that enhance water quality
4. Provisions for future maintenance
5. Authority and standards for the County to either require on-site performance, to accept alternative methods, or require fees in lieu of performance
6. A fee system based on the average cost of site control

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- Continue storm sewer drainage system studies to identify feasible regional facilities and other facility improvements that may be constructed as alternatives to on-site discharge control. The ongoing program of the storm sewer drainage system study will be necessary to establish the location and feasibility of regional facilities as part of the discharge control system.
- The storm sewer drainage system studies should also identify actions which can be taken to expand the capacity of existing drainage systems to accommodate increased flow. Structural modifications and channel improvements may be the preferred management approach in some situations.
- Continue to prioritize and evaluate watershed and urban bio-infrastructure health through the stream inventory and storm sewer system mapping programs.

Issue #4

Water Quality

Objectives

- To sustain a stormwater and stream water quality program which meets federal stormwater discharge permit requirements, state water quality standards and local needs.
- To preserve the natural character, ecological processing functions and biological integrity of drainage ways.
- To incorporate water quality considerations into County actions related to public facilities and development regulations.

Implementation Strategies

- Evaluate the County's stormwater and stream quality policies to meet federal stormwater discharge permit requirement, state water quality standards and to address local needs. Components of the County's plans should include discharge controls on new development, drainage basin and regional basin studies, illegal discharge identification and control, retrofit projects, water quality monitoring, and public education and participation programs.
- Preserve the natural character of drainage ways by greenway acquisition, flood prone area regulation, drainage corridor protection, public design and construction, and the application of other public resources that may be identified in the future. The intent of this policy is to apply the various powers and resources of the County to the preservation of natural features which prevent pollutants from entering streams and reduce potential economic cost due to flooding, stream erosion and urban Bio-infrastructure degradation.
- Incorporate water quality management practices into discharge control regulations and County design, construction and maintenance practices. Water quality and receiving water impacts will be considered during the design, construction, and maintenance of drainage facilities on County properties. Water quality will be fully considered as one of the factors which may justify assumption by the County of responsibility for the maintenance of drainage systems, including existing facilities on property which is currently privately owned.
- Encourage where applicable, Low Impact Development Standards (LID's) to help alleviate stormwater quality or quantity issues within the county.

Issue #5

Stormwater Management Financing

Objective

- To develop an equitable system of stormwater financing based on relative contributions to the stormwater problem based on impervious surface assessment, water quality impact and watershed impact mitigation.

Implementation Strategies

- Develop a system for financing the public costs of controlling stormwater discharge from new development. A development fee system and/or stormwater utility district confined to basins with regional controls may provide financing for public facilities to be used instead of on-site controls.
- Use general County revenues to finance the correction of drainage deficiencies affecting existing development until annual costs reach a level that justifies a drainage utility approach to financing. The storm sewer drainage system studies may identify additional needs and could lead to a substantially expanded County role in drainage facility construction and maintenance. If such an expansion should occur, the creation of a drainage utility approach to annual financing may be feasible. A drainage utility may be justified if widespread needs and long-term annual funding requirements are identified. Drainage utility fees may be charged to each property in the County based on the amount of uncontrolled runoff from the property as calculated by impervious area.
- Identify target areas for future stormwater management facilities.
- Investigate the feasibility of a regional stormwater management authority.

7. Transportation

Introduction

Roanoke County has become a vital employment, retail, residential, and entertainment center for Southwest Virginia. Along with this growth and expansion, the County is experiencing the consequent transportation dilemmas that much of the nation is undergoing. In order to remedy the problems, one must closely examine travel characteristics, statistics, and trends to gain insight into the quandary. The population of the United States increased 33% from 1970 to 1998, while the workforce increased 66% over that same period. That means that about 55 million more people are commuting daily to work and the majority of those, some 88%, travel in an automobile. That means over 48 million more commuters by automobile on the road every day. The incredible magnitude of the problem becomes clear when one examines the data and realizes that the amount of vehicle miles traveled is almost doubling (increased 72% from 1980 to 1998) while the amount of road mileage/capacity is holding steady as new roads are not being funded and built (total U.S. roadway lane-miles increased by only 3.6% during the same time period) (All statistics from Bureau of Transportation Statistics).

Comprehensive and forward-looking solutions are necessary to address these problems and to meet the transportation needs of Roanoke County residents, visitors, and businesses. The Transportation element of the Community Plan provides a policy and program framework for these solutions. Transportation projects and plans developed and implemented within Roanoke County are guided by this framework. By achieving the goals set forth in this Plan, Roanoke County will provide accessible, attractive, economically viable and environmentally sound transportation options that meet the needs of residents, employers, employees, and visitors for safe, convenient, and efficient travel.

The Virginia Department of Transportation (VDOT) and the Commonwealth of Virginia owns, constructs, and maintains all of the public roads in the County. However, the County does have considerable input and say into what transportation projects are supported and funded within the County; and a close working relationship is and will be maintained with VDOT on County transportation issues. Roanoke County will also continue to participate in the Roanoke Valley Area Metropolitan Planning Organization to continue comprehensive transportation planning and to promote and provide additional opportunities for effective citizen input in concert with neighboring jurisdictions. Utilizing this Transportation element of the Community Plan and working in coordination with adjoining localities and the aforementioned entities will enable the County of Roanoke to achieve the goals laid out herein.

It should be noted that this element of the Community Plan is a policy document rather than a transportation proposal; no specific projects or changes in traffic planning are mandated.

I. Transportation Components of Community Plan

A. Goal: To consider present and future transportation implications when making land use decisions.

i. Objective: To encourage growth where adequate roads and other transportation systems exist; to plan, design, and construct transportation infrastructure in areas where development is desired.

a. Strategy: ***Growth Management Measures*** -- Transportation is one of the keys that unlock the door to irresponsible growth. Without the emergence of transportation, sprawl and suburban development would not exist. Additional transportation infrastructure, if not planned and placed in a reasonable context, leads to a furtherance of ad-hoc sprawl. The question arises, if transportation is a key factor in the creation and growth of sprawl, how is it a growth management tool?

Every metropolitan area in the nation is shaped by the way its public infrastructure is financed and by the timing and geographical sequencing by which that public infrastructure is built. Generally, infrastructure can be financed by developers or by taxpayers; it can be targeted geographically according to a specific desired sequence; or it can be allowed to be constructed anywhere within the area. By design or by accident, these policies help to determine the geographical pattern of growth within a region.

Therefore, a growth management policy is simply an attempt to deliberately use public land acquisitions, land use regulations, and infrastructure investments to contain, influence, or direct growth to specific geographical locations to meet the needs of the locality. While Roanoke County may not be experiencing the population explosion that other areas are, it is imperative that the County encourage development in designated growth areas in order to support efficient expansion of infrastructure and services, including transportation facilities. Similarly, the County should attempt to negate taxing the existing transportation infrastructure with over-development by ensuring that if the existing roadway cannot handle the expected trips generated by a proposed development, then accommodations would be made by the developer or the taxpayers to safely and efficiently carry the expected traffic levels.

As the Roanoke Valley continues to grow, the demands of an increasing population create potential threats to the County's quality of life: threats such as eroding livability, declining mobility, and rising transportation costs. Without careful planning designed to manage this new growth, these threats could become

reality.

b. Strategy: ***Balance Land Use Objectives with Street Functional Capabilities*** -- Transportation road networks provide two divergent objectives (see Figure T-1). One objective is to provide efficient mobility from one location to another, usually accomplished at the sacrifice of limiting access to adjacent land (e.g., limited access highway/freeway). The other objective is to provide access to each parcel of land, usually at the sacrifice of rapid, efficient movement from location to location (e.g., local or subdivision road). In between these two extremes of the transportation network spectrum, you will find many of the roadways that are located in Roanoke County.

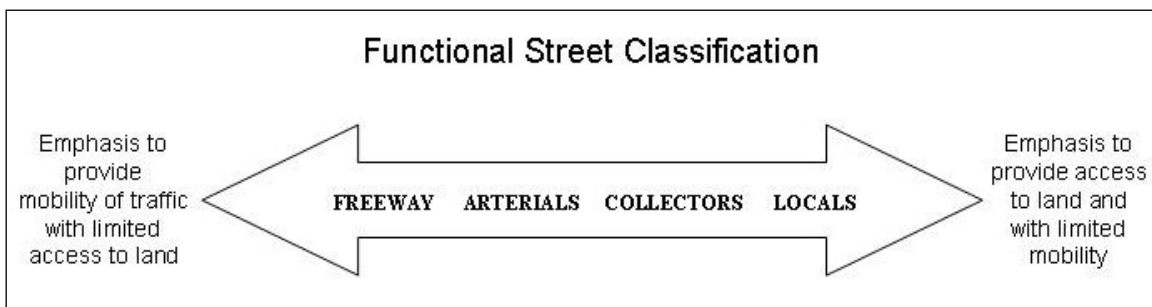


Figure T-1: Objectives/Emphasis of Functional Street Classifications

It is important to first establish and then assign a functional street classification to each roadway within the County; and then to institute a policy framework for balancing our land use objectives with the functional street classifications. The idea behind this practice is to ensure that inadequate roads, or roads that were never intended to handle large traffic volumes, are not overtaxed. It is also the intent of County staff to ensure that the access requirements of each land use designation are properly addressed by the roads in the respective classifications.

Rather than “reinventing the wheel”, the County will utilize the Virginia Department of Transportation (VDOT) functional street classifications. This is done for uniformity and clarity since the County is already using VDOT street classification in its Pavement Management System (mentioned in this element of the Community Plan). VDOT’s functional classifications are based on mobility and accessibility. The streets and highways are grouped into

classes according to the character of service they are intended to provide. The VDOT system parallels the federal classification system except that Federal Major Collectors are designated as Minor Arterials in the State system.

The two major categories of roadways are Rural and Urban Functional Classification Systems. The distinction between Rural and Urban is based on population figures reported by the Bureau of Census. An Urbanized area is defined as one having a population exceeding 50,000 people. A Small Urban area is designated by the Bureau of Census having a population between 5,000 and 50,000. Rural areas are all areas not designated Urbanized or Small Urban (i.e., less than 5,000 people).

Under the heading of Rural Functional Classification System, the classifications and their subsequent criteria and characteristics are as follows:

- **Rural Principal Arterial** (e.g., US 220, between Franklin County line and Blue Ridge Parkway)
 - Serves corridor movements of substantial statewide or interstate travel;
 - serves all urban areas of 50,000 and over population and a majority of those over 25,000 people;
 - provide an integrated network without stub connections;
 - Primary function is the movement of traffic, access for individual properties is a secondary consideration
- **Rural Minor Arterial** (e.g., VA 221, between Floyd County line and Rte. 688 Cotton Hill Rd)
 - Link cities and large towns;
 - Provide service to corridors with trip lengths and travel density greater than those served by rural collectors or local systems;
 - Design should be expected to provide for relatively high overall speeds with minimum interference to through movement;
 - Direct access to individual property owners is discouraged.
- **Rural Major Collector** (e.g., VA 311 Catawba Valley Drive, from ¼ mile North of Rte 419 to Craig County line)
 - Provide service to larger towns not directly served by higher systems;
 - Link the larger towns to nearby larger towns or routes of higher classification;

- Serve the more important intra-county travel corridors;
- Entrance controls (such as turn lanes, signals, signs, combined access points, etc.) should be utilized.
- **Rural Minor Collector** (e.g., VA 711 Tinsley Road, near Bent Mountain Elementary School)
 - Spaced at intervals consistent with population density;
 - To collect traffic from local roads and bring all developed areas within a reasonable distance of a collector road
 - Provide service to the remaining smaller communities.
- **Rural Local** (e.g., VA 617 Pitzer Road, from Blue Ridge Parkway to Franklin County line)
 - Serves primarily to provide direct access to adjacent land;
 - Provide service to travel over relatively short distances as compared to collectors or other higher systems;
 - Includes all facilities not on one of the higher systems.

The Urban Functional Classification System includes the following classes and criteria:

- **Urban Principal Arterial** (e.g., Rte. 11 Williamson Road, between Roanoke City and Botetourt County lines.)
 - Serves the major center of activity of a metropolitan area;
 - Highest traffic volume corridors;
 - Roads serving the longest trip desires;
 - Carry a high proportion of the total urban area travel on a minimum of mileage
 - Limited access highway, direct access to individual properties is controlled.
- **Urban Minor Arterial** (e.g., VA 720 Colonial Avenue, from Roanoke City line to Rte 221 Brambleton Ave.)
 - Should interconnect with and augment the urban principal arterial system and provide service to trip of moderate length at a lower level of travel mobility than principal arterials;
 - Includes all arterials not classified as a principal and contains facilities that place more emphasis on land access and offer a lower level of traffic mobility.
- **Urban Collector** (e.g., VA 630 Kessler Mill Road, from the City of Salem line to Rte 311)

- Provides land access and traffic circulation within residential neighborhoods, commercial, and industrial areas;
 - Distributes trips from the arterials through these areas to their ultimate destination;
 - Collects traffic from local streets and channels it to the arterial system.
- **Urban Local** (e.g., VA 1658 Cresthill Drive, from Rte 682 Garst Mill Rd to Rte 1647 McVitty Rd)
- Serves primarily as direct access to abutting land;
 - Serves as access to the higher order systems;
 - Through traffic movement is deliberately discouraged
 - All facilities not on one of the higher urban systems.

Once the functional street classification system is applied to the County's roads, the next step is to establish the framework for balancing land use objectives with those classifications. The following table, Table T-1, serves to accomplish that goal. In the first column are the County's/VDOT's functional street classifications. The second column contains the County's various land use designations that staff recommends as applicable and pertinent to the street classification. The land use designations are used to identify areas around the County where similar land use activities occur, and are used in conjunction with the Future Land Use Guide and this Community Plan (please refer to *Roanoke County Community Plan Land Use Guide* for further explanation of the designations).

Functional Street Classification	Applicable Land Use Designations
Rural Principal Arterial	Rural Preserve Rural Village Village Center
Rural Minor Arterial	Rural Preserve Rural Village Village Center
Rural Major Collector	Rural Preserve Rural Village
Rural Minor Collector	Rural Preserve Rural Village Conservation
Rural Local	Rural Preserve Rural Village Conservation
Urban Principal Arterial	Transition Core Principal Industrial
Urban Minor Arterial	Transition Core Development
Urban Collector	Neighborhood Conservation Transition Development
Urban Local	Neighborhood Conservation Development

Table T-1: Functional Street Classifications vs. Land Use Designations

For example, consider the land use designation “Core”. As defined by the *Land Use Guide*, Core is a future land use area where high intensity urban development is encouraged. Land uses within core areas may parallel the central business districts of Roanoke, Salem, and Vinton. Core areas may also be appropriate for larger-scale highway-oriented retail uses and regionally-based shopping facilities. Some common Core land use types are: general retail shops and personal services, office and institutional uses, and limited industrial uses. One of Core’s land use determinants is access. Locations that are or can be served by an arterial street system are grouped into the Core category. Therefore, based on these determinants and the criteria outlined in the *Land Use Guide* for the Core designation, it is sensible to recommend Urban Minor Arterial and Urban Principal Arterial as the functional street classifications that could accommodate development that could occur in the Core areas. Urban Local and Urban collector roads would not address the requirements of most Core area

developments, hence they are not recommended.

It is important to point out that the recommendations presented in Table T-1 are not requirements or to be viewed as deterrents to a developer. Rather, they should be seen as a guide for developers and County planners in making land use decisions. A prospective developer or planner could determine what land use designation the prospective site is located in and the functional classification of the road serving the development, refer to Table T-1 in this document, and determine whether the adjacent roadway is capable of meeting the needs of the development. Once again, this policy framework is not intended to be a disincentive or restriction to development, but rather a planning tool to aid in balancing the established land use objectives with the capabilities of the road network that serves them.

Utilizing the information in Table T-1 is but one idea to balance land use objectives with street functional capabilities. County staff is coordinating with VDOT to develop strategies to determine the existing level of service of all roads in the County and then to use that data to better enable planning decisions. Level of service, or LOS, is a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Letters designate each level, from “A” to “F”, with LOS A representing the best operating conditions and LOS F the worst. Level of Service is defined in the *Highway Capacity Manual*, published by the Transportation Research Board. General definitions of levels of service, as provided in the *Highway Capacity Manual* are as follows:

LOS A describes completely free flow conditions at average travel speeds. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.

Operations are constrained only by the geometric features of the highway and by driver preferences.

LOS B represents reasonably unimpeded operations at average travel speeds. The ability to maneuver within the traffic stream is only slightly restricted and stopped delays are not bothersome. The general level of physical and psychological comfort provided to the drivers is still high.

LOS C represents stable operations. Freedom to maneuver within the traffic stream is noticeably restricted and lane changes require more care and vigilance on the part of the

driver. Minor disruptions can cause serious local deterioration in service, and queues will form behind any significant traffic disruption.

LOS D is the level at which speeds begin to decline slightly with increasing flows and density begins to increase somewhat more quickly. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels.

LOS E describes operation at capacity, an unstable level. At capacity, the traffic stream has no ability to dissipate even the most minor disruption, and any incident can be expected to produce a serious breakdown with extensive queuing. Operations at this level are volatile, because there are virtually no usable gaps in the traffic stream. Maneuverability within the traffic stream is extremely limited, and the level of physical and psychological comfort afforded the driver is poor.

LOS F represents breakdowns in vehicular flow. This level characterizes arterial flow at extremely low speeds below one-third to one-quarter of the free flow speed. Intersection congestion is likely at critical signalized locations, with high approach delays resulting.

The *Highway Capacity Manual* contains no recommendations for the applicability of the levels of service in highway design. That is to say there is no “official” standard as to the minimum acceptable level of service. The choice of an appropriate level of service for design is properly left to the highway designer and the local agencies. Representatives from VDOT state that they do not have formal guidelines for this matter, rather they refer to the Green Book, otherwise known as *A Policy on Geometric Design of Highways and Streets*, published by the American Association of State Highway and Transportation Officials (AASHTO). The guidelines set forth in that document are as presented in Table T-2.

Appropriate LOS for specified combinations of area and terrain type				
Functional Class	Rural level	Rural rolling	Rural mountainous	Urban and Suburban
Freeway	B	B	C	C
Arterial	B	B	C	C
Collector	C	C	D	D
Local	D	D	D	D

Table T-2: Guidelines for acceptable minimum LOS standards

Roanoke County will strive to provide the highest level of service practical. County staff will coordinate with VDOT in reviews of traffic impact studies to ensure that these guidelines are met. If the minimum acceptable standards are not met, staff will consult with VDOT as to what mitigation matters, if any, are necessary to meet the standards. County staff should research ordinances that other states/local agencies have implemented that affect development when it is shown that the development project significantly degrades the level of service.

Along the same lines of thought, the County staff, specifically the Traffic Engineering department, desires to reserve the right to request a traffic impact study in situations where staff feels it is necessary. The conditions that could trigger a request for a traffic impact study include: rezoning or special use permit request that is inconsistent with Community Plan; potential impacts upon local and/or regional road networks; the site generates or attracts 100 total trips or more per hour during the adjacent street peak hour; among others. Currently, only the Virginia Department of Transportation or the Director of the Department of Community Development can request a traffic impact study.

c. Strategy: ***Long Range Transportation Plan issues*** -- Federal regulations, implemented as a result of the Transportation Equity Act for the 21st Century (TEA-21), require urbanized area MPO's (Metropolitan Planning Organization) to develop and approve a financially constrained long range multimodal transportation plan. The Long Range Transportation Plan (LRTP) is intended to guide the region in creating a more efficient, responsive, and environmentally-sensitive transportation system over the next twenty to twenty-five years. The plan examines transportation issues/trends and offers a list of specific projects for addressing the region's mobility needs. The LRTP provides the context from which the region's Transportation Improvement Program (TIP), a capital improvement program for implementing highway, transit, and bikeway projects, is drawn.

VDOT prepares travel demand forecasts using computer simulation models that relate travel demand to socioeconomic factors. Using the computer model, trips forecasted for the horizon year are assigned to the existing plus committed transportation network. The resulting traffic distribution is then analyzed to determine at what Level of Service (LOS) the traffic would operate. Recommendations are then made to eliminate existing and projected deficiencies in the network.

The Roanoke Valley MPO is required to conduct a review of the LRTP on a periodic basis, ideally updating the LRTP every five years. The review takes into account changes in socioeconomic and land use factors and trends. It also includes an evaluation of how well the travel demand forecasting process simulates actual travel. County staff works with the Roanoke Valley MPO and the RVARC to consider VDOT's recommendations and compare those recommendations and projects to the County's future land use, zoning, impacts to the corridor, smart growth factors, etc. The final product, following the County's review and submittal to VDOT, is an updated LRTP. The plan may also be amended as a result of changes in projected Federal, State and local funding, major improvement studies, congestion management system plans, interstate interchange justification studies, and environmental impact studies.

Please refer to Table T-3: *Roanoke Study Area 2025 Recommendations & Priorities* for the routes on the current LRTP and the recommended improvements (as submitted by Roanoke County staff. For the approved 2025 LRTP, see the Roanoke Valley-Alleghany Regional Commission website -- <http://www.rvarc.org/work/lrpfinal.pdf>). This represents a prioritized list of the County staff's recommendations and comments for each road section that VDOT has recommended based on their models. Note that the "U" and "R" designations in the "VDOT/Roanoke Co. Recommends" column represent Urban and Rural, respectively. The number that follows the "U" or "R" is the number of lanes proposed.

It should be pointed out that the County has recommended allocation of funds (relatively more than has been allocated in the past) to be set aside for miscellaneous items such as traffic signals, signal optimization, spot improvements, intersection re-design, transit, bike and pedestrian improvements, and technological solutions to transportation deficiencies.

Long Range Plan

Roanoke Study Area 2025 Recommendations & Priorities
Jurisdiction -- Roanoke County (Primary Routes)

Priority	Primary Route	Facility	From	To	Length (mi)	Exist. Lanes	VDOT Recommends	Roanoke Co. Recommends	Roanoke Co. Comments
1	11/460	Lee Hwy	Rte 612	WCL Salem	1.91	3L	R4L	R4L	Already being done; could be removed from list
2	221	Bent Mtn.	1.05 mi W 694	.35 mi S Rte 897	3.34	2L	R4L	R4L	4L prior to this section; properties have already been bought through S-turns, some plans have been done
3	11	Williamson	Roanoke CL	Rte 117	1.49	2L	U4L	U4L	Agree, don't want a bottleneck; high priority for County
4	115	Plantation	Roanoke CL	Rte 11	2.19	2L	U4L	U4L	R-O-W has been bought, wide R-O-W; a lot of development in area; widen this takes traffic off Peters Cr.
5	220	Franklin	S Rte 715	Roanoke CL	3.72	4L	R6L	U6L/R6L	Why not continue to Franklin Co. Line? U6L from Roan. City line to Yellow Mtn Rd, R6L from Yellow Mtn Rd to Franklin CL
6	116	Jae Valley	Rte 664	Roanoke CL	1.24	2L	R4L	R2 24'	Downgrade to R2 24'; goes under BR Parkway; keep on the list, very important for Smith Mtn Lake
7	460	Challenger	Roanoke CL	Botetourt CL	1.98	4L	R6L	U6L	Change to U6L; proposed commercial development in this area
8	419	Electric Rd.	Rte 220	Starkey	0.83	4L	U8L	U8L or U6L	For planning purposes keep it 8-lane? 8 lanes probably won't work, would hurt real estate, 8L not the answer; need to focus on 220 interchange; possibly 6L or 4L with frontage roads
9	419	Electric Rd.	Starkey	SCL Salem	4.58	4L	U6L	U6L	Agree, especially if upgrade section prior to this one
10	116	Jae Valley	Franklin CL	Rte 664	1.94	2L	R2 24'	R2 24'	Smith Mtn Lake big attraction; lots of curves and bad terrain; would be major \$ to increase lanes
11	221	Brambleton	Rte 689	Rte 419	0.99	4L	U6L	U4L	4L should accommodate traffic volumes; major impacts if widen; may be removed from list

Table T-3: Roanoke Study Area 2025 Recommendations & Priorities – Primary Routes

Long Range Plan
Roanoke Study Area 2025 Recommendations & Priorities
Jurisdiction -- Roanoke County (Secondary Routes)

Priority	Secondary Route	Facility	From	To	Length (mi)	Exist. Lanes	VDOT Recommends	Roanoke Co. Recommends	Roanoke Co. Comments
1	601	Hollins	Rte 115	083 mi S Rte 627	1.36	2L	R2 24'	R2 24'	On 6-yr plan; R-O-W already acquired
2	720	Colonial	Penn Forest	Electric Rd	0.53	2L	R2 22'	R2 24'	On 6-yr plan; being designed as R2 24'
3	679	Buck Mtn	Starkey	Rte 220	2.25	2L	R2 24'	U2L	Proposed development in area; BR Parkway in area; change to Urban designation on whole section
4	613	Merriman	Starkey	Rte 1640	1.16	2L	R2 24'	U2L	On 6-yr plan; Scoping meeting held; upgrade to U2L
5	634	Hardy	Vinton CL	Bedford CL	0.99	2L	U4L	U4L	Industrial park in the area; some R-O-W being acquired; BR Parkway passes over section; keep U4L
6	904	Starkey	Rte 613	Eden Ave	1.39	2L	U4L	U4L	Lots of industry and residential development in area; U4L
7	625	Hershberger	Roanoke CL	Rte 115	0.60	2L	U4L	U3L (incl. TWTL)	Attempt to match Roanoke City recommendation
8	682	Garst Mill	Brambleton	Grandin	1.44	2L	U4L	U3L (incl. TWTL)	Residential, rough terrain; 4L too much, wouldn't fit in corridor; decrease to 1-through lane in each direction w/ Center Turn Lane
9	687	Penn Forest	Colonial	Starkey	1.25	2L	R2 24'	U2L	Change to U2L
10	720	Colonial	Brambleton	Penn Forest	0.34	2L	U4L	U2L	Change to U2L to match what's being built on Colonial & McVitty

Table T-3 continued: Roanoke Study Area 2025 Recommendations & Priorities – Secondary Routes

B. Goal: To make efficient use of Roanoke County's taxpayers' money allocated for transportation projects.

i. Objective: **To utilize staff expertise, knowledge, and abilities in making road improvement, design, and maintenance funding decisions.**

a. Strategy: ***Pavement Management System for Six-Year Secondary System Construction Plan and Revenue Sharing decisions*** -- The Six-Year Secondary System Construction Plan is VDOT's plan for the allocation of road construction funds for a six year period. The Six-Year Plan provides improvements to all roads with route numbers of 600 and above. It consists of a priority list of projects and a financial implementation plan. The Plan is based on local projects and priorities adopted by the County Board of Supervisors. Roanoke County and VDOT are continuously reviewing and updating the Six-Year Plan. Staff receives requests throughout the year concerning secondary roads in Roanoke County. In deciding which projects should be included in the Six-Year Plan and/or Revenue Sharing program, staff considers traffic counts, existing and future development, pavement conditions, drainage, safety, and the economic benefit to the County. Staff will make an attempt to incorporate the CIP (Capital Improvement Program) and growth management strategies into their decision making process for the Six-Year Plan; but it must be pointed out again that the Six-Year Plan is only applicable to secondary roads and the budget for this program is currently very limited.

In the latter part of each year (usually November-December), VDOT and the Board of Supervisors hold a joint public hearing about these road improvement projects. After receiving public input, the Board of Supervisors adopts a resolution establishing the top priorities in road improvement projects for the next six years. As is usually the case, the Board of Supervisors approves a priority list of road improvement projects that would cost, in total, in excess of available funds over the six-year planning period. With such a list developed, subsequent VDOT Six-Year Plans can be prepared and revised in response to available annual funds.

The Revenue Sharing program is slightly different. Whereas State money exclusively is used to fund major road improvement/reconstruction projects in the Six-Year Plan, the County must contribute financial resources for Revenue Sharing projects such as routine/preventive maintenance and smaller scale improvement projects. VDOT annually provides counties the

opportunity to receive State matching funds for the construction, maintenance, and improvement to roads in the State's highway system. Roanoke County, a participant in the program, must match dollar for dollar Secondary road improvements within the County. The Commonwealth of Virginia allocates \$15 million for the matching program and limits localities to \$500,000 each (dependent on the number of counties that participate in the program, the value may be increased or decreased proportionately). VDOT and County staff review and evaluate streets and drainage requests throughout the year. There is also contact made with the County's Economic Development Department, Utility Department, and VDOT's area superintendents.

As a result of ever limited State and Federal funding, road construction funds must be carefully expended and road needs carefully identified and programmed. In the past, the County staff has used engineering judgment and opinion to select and prioritize road improvement projects in the County. However, the County is attempting to implement a pavement management system to identify maintenance options, help prioritize competing road sections for immediate attention, and anticipate future deterioration. Under the new system, the County will create and archive an inventory of all the roads in the County (utilizing staff GIS capabilities), assess the current condition of the road, select the appropriate treatment, prioritize the projects, and model its future budget requests. The pavement management system offers a rational, systematic approach, enhances professional judgment, and provides statistical backing for fund-allocations. The desired consequence of utilizing a pavement management system is selecting the *right* treatment, for the *right* road, at the *right* time, ensuring the tax-paying public gets the best value for their dollars. County staff has met with VDOT representatives to discuss their pavement management policy. VDOT uses a pavement management plan for the primary/interstate roads in the Salem District but do not presently have a plan in effect for the secondary/subdivision roads. VDOT has recommended that the County implement a plan for its secondary roads, predominantly for selecting and prioritizing projects in the Revenue Sharing program. VDOT staff has reviewed the software and methodologies that the County plans on using for its pavement management system and had no objections. Both entities have agreed to work in one accord on this undertaking to ensure the best results. At the writing of this element of the Community Plan, the inventory of the County roads is nearly complete and plans are being made to begin the condition assessment and subsequent work. Staff is confident that the implementation of this system is a

step towards providing smooth, safe, and economical road surfaces and achieving the best possible value for the available public funds.

(Note: Interested citizens should consult the most recent “*County of Roanoke Six Year Secondary System Construction Plan and Revenue Sharing*” document for a current, prioritized list of road improvement projects in the County. The document is available for review at the County office and/or on the County website.)

C. Goal: To guide the use of Roanoke County transportation infrastructure system to control air pollution, traffic, and livability problems.

i. Objective: To reduce Roanoke County’s dependence on single-occupant vehicle use as a primary mode of travel.

a. Strategy: *Bicycle Facilities & Greenways* --

Bicycle facilities

There are numerous benefits associated with bicycling. Bicycling offers health and fitness benefits through increased exercise; environmental benefits through reduced vehicular emissions; and transportation benefits by providing an alternative transportation option to the automobile. Bicycles may also serve as an excellent, all-around short-distance transportation alternative to the single-occupant vehicle for trips to work, schools, shopping, recreational facilities, and other intra-neighborhood destinations. The many benefits of bicycle facilities and reasons to invest in such infrastructure have been adequately explained in detail in both the *1997 Bikeway Plan for the Roanoke Valley* and the *Regional Bicycle Suitability Study - Phase I and II* (both documents can be accessed via the Roanoke Valley Allegheny Regional Commission (RVARC) website: <http://www.rvarc.org/bike/home.htm>, or by contacting either the RVARC, at telephone number (540) 343-4417, or the County Traffic Engineer, at telephone number (540) 772-2080, to obtain a hard copy of the documents). For that reason, this element of the Community Plan will not attempt to duplicate the valuable information contained in those documents; rather, explain how the County attempts to implement its bikeway plan.

The following disclaimer is presented in the *2003 Regional Bicycle Suitability Study*:

Note: For bicycle accommodations to be considered as part of roadway improvements using Federal and State funding,

the roadway must be included in an approved bikeway plan. The *1997 Bikeway Plan for the Roanoke Valley Area* (RVAMPO, 1997) is the approved bikeway document for the MPO, thereby fulfilling this requirement. As such, the *1997 Bikeway Plan* should be referenced when specific roadways are cited for bicycle accommodations. *Phase I* of the *Regional Bicycle Suitability Study* is not intended to supercede or replace the *1997 Plan* in this capacity. Instead it should complement the efforts and goals of the *1997 Plan* and facilitate the provision of bicycle accommodation in the MPO.

Due to the Virginia Department of Transportation's requirements and importance of having an adequate and complete list, the County is striving to provide input; not only on amendments to the *1997 Plan*, but in the creation of a region-wide, connected network of bicycle facilities that will hopefully be an end product of the *Regional Bicycle Suitability Study*.

The *Regional Bicycle Suitability Study* will consist of *Phase I* and *Phase II*. Whereas *Phase I* of the *Study* introduces the applicable computer models, provides detailed analysis and summary of survey responses, gives an overview of local, regional, state, and national bicycle facility planning efforts, and lays the groundwork for the project, *Phase II* of the *Study* will consist primarily of the application of work products developed in *Phase I*. A prioritized list of routes, corridors, destinations, and activity centers to be connected via a significant regional bicycling network; maps of existing and proposed bicycle facilities, and other spatial data relevant to the study; and potentially a new, approved, and updated bike plan are end products of *Phase II*.

The primary goal of the *Study* is to provide planners, transportation engineers, citizens, and bicycle coordinators and enthusiasts the tools and data for use in developing facilities and other accommodations to enhance safe bicycle travel within the MPO area. Data and tools developed as part of the *Study* are useful in identifying current and future problems facing the bicycling public, facilitating the planning and design of a bicycle-friendly transportation system, and determining possible options regarding operational and design requirements for new facilities. End products will assist stakeholders in establishing consistency and connectivity along travel corridors, developing crucial linkages with the greenway system and public transit, and developing other components of a regional bicycling network.

Development of a regional bicycling network will require coordination and cooperation among all stakeholders in the study area. As a geographic region composed of several jurisdictions, Roanoke Valley governments should coordinate bicycle facility improvements to ensure that travel corridors are consistent in and between jurisdictions in the study area.

As part of the *Regional Bicycle Suitability Study*, a planning committee, composed of interested stakeholders, was established to assist in various aspects of the study. Representation from a varied cross-section of stakeholders was sought in selecting members. The planning committee was composed of Regional Commission staff, local planning and traffic engineering staff (including Roanoke County staff), Greenway representatives, VDOT representatives, bicycling advocates, and citizens. The committee is assisting in the development of a regionally significant bicycling network by guiding the application of work products in *Phase II* of the *Regional Bicycle Suitability Study*, facilitating continued regional cooperation in bicycle facility planning, and data collection.

The new *Study* will make it easier for the MPO and the localities to develop a new bikeway plan to replace the *1997 Bikeway Plan*, but will not, in itself, be a replacement for the 1997 plan. Until a new plan is developed and adopted by the MPO, the 1997 plan will be the official plan that the County adheres to and thus, it is important to keep the 1997 plan up-to-date. Tools from the *Regional Bicycle Suitability Study* could be used to develop a new bicycle plan for the region in the next few years.

Rather than waiting for the completion of a replacement or update to the *1997 Plan*, the County will strive to utilize the computer models introduced and implemented in the *Regional Bicycle Suitability Study* to get a jump on the planning efforts. Before the design phase of scheduled road projects begins, County staff will attempt to measure the existing bicycle compatibility level and generate proposed options regarding an applicable bicycle facility; all the while consulting the *1997 Bikeway Plan*.

Study findings and work products will be available to localities in the region, and can be easily incorporated in the development of regional and local plans. Once the *Regional Bicycle Suitability Study* is complete and the localities have agreed upon a bicycle-friendly transportation infrastructure that has been developed on a regional basis (not only to meet existing demands, but also to encourage and facilitate bicycling as a viable means of

transportation in the Roanoke Valley), County staff recommends that the County Board of Supervisors adopt the new plan and that it is utilized as the County's approved plan.

In addition, the Virginia Department of Transportation released a memorandum in early 2003 stating their bicycle and pedestrian policies and procedures. In the memo, the Secretary of Transportation stated, among other things: that non-motorized transportation should receive the same consideration as motorized transportation in the planning, design, construction, and operation of Virginia's transportation network; and bicycle and pedestrian accommodations should be included in the design of all new highway facilities and all major highway reconstruction efforts, unless special circumstances exist that prevent their inclusion or a local governing body has formally requested that bicycle or pedestrian accommodations not be included. The Secretary declared that the new policies should be in place by end of the 2003 calendar year. That policy became effective on March 18, 2004 and applies to projects that have not yet reached the scoping phase. The "*Policy for Integrating Bicycle and Pedestrian Accommodations*" can be reviewed on VDOT's website. The County will keep abreast of the developments pertinent to VDOT's bicycle and pedestrian policies and procedures.

Ultimately, the County's objectives pertaining to bicycle facilities can be summed up in the following points:

- To complete a network of bikeways that serves bicyclists' needs, especially for travel to employment centers, commercial districts, transit stations, institutions, and recreational destinations;
- To provide bikeway facilities that are appropriate to the street classifications, traffic volumes, and speed of traffic;
- To develop and implement education and encouragement plans aimed at youth, adult cyclists, and motorists; and to increase public awareness of the benefits of bicycling and of available resources and facilities;
- To encourage bicycle parking and related facilities as part of all new construction or major renovation, including office, retail, industrial, and housing developments;
- To encourage the construction of showers and changing facilities in all new or renovated commercial development;
- To encourage bicycle parking facilities at all park and ride lots, commercial developments, and selected parking lots (such as bicycle parking facilities at public spaces such as County buildings, museums, libraries and civic centers).

A regionally significant bikeway network in the MPO will include the Roanoke Valley Greenway system. The greenway system is an integral component of the recreational and transportation infrastructure in the area, providing open and recreational space for Roanoke Valley residents. Some bicyclists, such as novice users, will not be comfortable with on-road facilities. The Greenway Plan presents an added opportunity to meet this need by providing facilities with little conflict from automobiles and by providing linkages and connectivity. The Roanoke Valley's greenway system is explained in the following section of this element of the Community Plan.

Greenways

A greenway is a corridor of protected open space managed for conservation, recreation and nonmotorized transportation. Greenways often follow natural geographic features such as ridge lines, stream valleys, and rivers, but may also be built along canals, utility corridors, or abandoned rail lines. Most greenways include a trail or bike path, but others may be designed strictly for environmental or scenic protection.

Greenways, as vegetated linear parks, provide tree cover, wildlife habitat, and riparian buffers to protect streams. The environmental benefits include reduced storm water runoff, flood reduction, water quality protection, and preservation of biological diversity. The trails within the greenways provide access between neighborhoods and destination points, opportunity to travel without an automobile, outdoor education classrooms, and close-to-home paths for walking, jogging, bicycling, and roller blading. Tree cover and use of bicycles instead of cars provide for better air quality, fewer hard-surfaced parking lots, and reduced energy costs. Although greenways are a collateral component of a county-wide park system, they do not replace the need for additional park land.

In the spring of 1995, the four local governments (Roanoke County, Roanoke City, City of Salem, and Town of Vinton) appointed representatives to a Greenways Steering Committee, supported by the Fifth Planning District Commission. A consulting firm was hired to develop a *Conceptual Greenway Plan for the Roanoke Valley* with input from elected officials, civic leaders, and the general public. This Plan was adopted by each of the four jurisdictions in 1997.

The Roanoke Valley Greenway Commission, appointed by the four Valley governments, replaced the Steering Committee in

1997. It is an advisory body with the responsibility to facilitate cooperation and coordination among jurisdictions in greenway planning and development; recommend funding sources for greenway construction; develop uniform standards for design and construction; and, pursue public/private partnerships for greenway development.

In August 1997, the first one-half mile of greenway in Roanoke was completed through Garst Mill Park along Mud Lick Creek. This was the first section of greenway in Roanoke County and is being very heavily used. Extensions of this greenway are planned to connect to the Hidden Valley High School and to Murray Run Greenway in the City of Roanoke.

The Hanging Rock Battlefield Trail which travels through portions of Salem and Roanoke County opened in 1999. This Trail is included on the brochure *Shenandoah Valley Civil War Trails* and attracts tourists as well as local residents. The extension of this greenway will follow Masons Creek to the Roanoke River.

In 2001 the Wolf Creek Greenway opened in Roanoke County, extending a section built in the Town of Vinton in 1999. This trail connects the new bicycle lanes built on Hardy Road to Goode and Stonebridge Parks in Roanoke County. The extension of this greenway will connect with the Blue Ridge Parkway to the northeast and with the Roanoke River to the south. A master plan for Tinker Creek Greenway was completed in 2000 in cooperation with Roanoke City, and plans for Glade Creek Greenway are being developed with the Town of Vinton.

The backbone of the Roanoke Valley greenway system will be the Roanoke River Greenway which will run for over 20 miles through Roanoke County, Salem, Roanoke City, and Vinton. Master plans for the Roanoke River Greenway have been completed, and two sections of the greenway have been built - one in Salem and one in Roanoke City. The first section to be built in Roanoke County will be in Green Hill Park.

In 1998, Roanoke County completed a prioritization of greenways within its jurisdiction. The priorities for off-road routes were: Wolf Creek, Roanoke River, Tinker/Carvins Creek, Glade Creek, and Mud Lick Creek Greenways. The priorities developed by staff in 2001 for on-road facilities needing major improvements were: Mountain View Road, Plantation Road, Hardy Road, Loch Haven Drive, and Colonial Avenue. While a significant amount of progress has been made on greenways over the last 7-8 years, there are substantial steps still to be taken.

b. Strategy: ***Traffic Management Strategies*** -- For the most part, the effectiveness of existing roads should be maximized rather than using new road construction as a crutch. It has been proven in the past that we cannot build our way out of congestion; we must begin to be creative about the utilization of the existing infrastructure. Some potential strategies Roanoke County staff can implement include:

- Encouraging motorists to carpool or rideshare;
- Promote employer-supported vanpool programs;
- Persuade the use of park-and-ride facilities;
- Endorse shuttle transit service from fringe parking areas to urban centers or major destinations;
- Encourage enhanced motorists information services and systems (such as presenting the congestion crises on television, radio, or the internet; motorists would be advised to car pool or alter their driving patterns);
- Advocate public transit, working with Valley Metro (Greater Roanoke Transit Company) and RADAR (Roanoke Area Dial-A-Ride);
- Support non-motorized travel, such as bicycle/pedestrian facilities (addressed in other sections of this Plan);
- Teaming up with Roanoke Valley-Allegheny Regional Commission (RVARC) and their regional ridesharing program called “Ride Solutions”. This program is a grant-funded program that provides free carpool and vanpool matching services for citizens of the Roanoke Valley and surrounding areas within southwestern VA. The program also provides directions to area park-and-ride lots, and information about alternative modes of transportation, such as public transit service, walking, and bicycling. Information on Ride Solutions can be obtained from the website www.ridesolutions.org or by calling them at (540) 342-9393.

c. Strategy: ***Education on Transportation Systems & Livability Issues*** -- Americans perceive their car as a provider of the freedom that we have come to cherish so greatly. An aspect of that freedom is enjoying the privacy, convenience, and safety of automobiles. Our love of cars has grown out of necessity. That is to say, as residential developments are built without proximity to employment centers or shopping facilities, residents have no choice but to use personal automobiles. Transportation infrastructure has been designed and built for the personal transport vehicle, rather than designed on a human scale.

The public must be informed of the alternatives to the single-occupant vehicle. One method to consider is informing the younger residents of Roanoke County. Educating the young is highly important if you want to make a new transportation system work or even make an old one work better. Today's children are the potential mass transit users, bikers, and pedestrians of tomorrow, but the potential must be tapped through education. By educating children, not only is the next generation reached, but so are the parents. The children will hopefully influence the parents to consider alternatives to the single-occupant vehicle.

Roanoke County staff will consider working in conjunction with the Roanoke Valley-Alleghany Regional Commission in their educating/advertising endeavors. Staff should also examine informing and promoting the use of mass transit with the aid of Valley Metro (Greater Roanoke Transit Company) and RADAR (Roanoke Area Dial-A-Ride). The County should also enlist the help of the Roanoke Valley Greenway Commission and local bicycling clubs to publicize and market the facilities available to pedestrians and bicyclists. Roanoke County staff could also utilize the County website and the public access cable channel (Roanoke Valley Television, RVTV Channel 3) in its educating efforts.

ii. Objective: **To reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users.**

a. Strategy: ***Traffic Calming*** -- Traffic calming measures are mainly used to address speeding and high cut-through traffic volumes on neighborhood streets. These issues can create an atmosphere in which non-motorists are intimidated, or even endangered, by motorized traffic. Along with the additional amount of traffic generated within the neighborhood, cut-through motorists are often perceived as driving faster than local motorists. By addressing high speeds and cut-through volumes, traffic calming can increase both the real and perceived safety of pedestrians and bicyclists. Although the social results of traffic calming are slightly more difficult to measure, studies show that traffic calming measures can increase property values, decrease crime and noise levels, promote a sense of community, and improve the quality of life within the neighborhood.

In an effort to induce motorists to slow down and drive responsibly, traffic calming purposely introduces additional self-

enforcing physical features in the design of the roadway, effectively changing the design speed. Traffic calming measures are generally implemented in a retrofit situation and traditional design standards require interpretation and modification. Some of the commonly implemented traffic calming measures includes:

Horizontal Deflection

- curb extension / bulb out;
- chicane;
- choker;
- on-street parking;
- raised median island / pedestrian refuge;
- and traffic circle, etc.

Vertical Deflection

- textured crosswalk;
- speed hump;
- raised intersection;
- and raised crosswalk, etc.

Physical Obstruction

- semi-diverter;
- diagonal diverter;
- raised median through intersection;
- and street closure, etc.

Signs and Pavement Markings

- roadway narrowing with edge lines;
- speed limit signing;
- turn prohibitions;
- one-way streets;
- and commercial vehicle prohibitions, etc.

Any of the above mentioned measures could be individually installed but may be most effective if used in concert with other measures. Tools **not** recommended for traffic calming include: STOP signs, “Children at Play” signs, speed dips, and speed bumps.

Functional classification and land use should be primary criteria in determining whether traffic calming measures are appropriate for a particular roadway. When conditions warrant, traffic calming measures may be appropriate on the following roadway types:

- Local residential streets;
- Collector streets with predominantly residential land uses;
- Arterial roads located within downtown districts or commercial areas (with posted speed limits of 40 mph or less). Traffic calming is not appropriate for use on arterial streets which are intended to accommodate higher speeds and larger traffic volumes. It is important to determine the

intended function of the roadway and remember that efficiently moving large numbers of vehicles is necessary on some roads.

When implementing traffic calming measures, it is best to do so under the direction of an overall traffic calming plan for the area in question. Installing traffic calming devices in the absence of an area-wide plan could simply divert one neighborhood's speed and traffic volume problems to other streets.

One more critical facet of traffic calming is gaining community support. A comprehensive community outreach program is important to ensure that the communities' needs will be met by a proposed project. A task force should be formed at the early stages of planning and concept development. This task force should have representation from the following groups: residents, business and property owners, emergency services, school representatives, transit authorities, local officials, utility departments, RVARC, VDOT, and other interested parties. The idea behind this is to try to get up-front public involvement in order to ensure that the final solution has broad support in the community. It is the citizen's of Roanoke County that must live with the solution and the traffic calming measures will be largely unsuccessful without community support. By making the residents co-authors of the solution it will foster a sense of ownership and pride in the community. The role of Roanoke County staff is one of facilitator rather than director of the solution.

County staff will also work to investigate citizen's traffic calming requests as they are submitted and will examine possibilities to include traffic calming to be included in repair/reconstruction projects on all applicable roads. Staff will determine (based on functional classification, land use, and other factors) whether traffic calming implementation should be pursued and if so, work with VDOT on the project.

iii. Objective: **To provide access to land development, while preserving the safety and capacity of the transportation system.**

a. Strategy: ***Access Management*** -- Access management is a fairly new response to the congestion, the loss of arterial capacity, and the serious access related accidents that are plaguing our roadways. It is defined as the careful control of the location, design, and operation of all driveways and public street connections to a roadway. Access management is intended for use on collectors and arterial roads that have many commercial and

residential driveways/intersections to increase the mobility of the traffic. There are different methods for attaining the goals and those methods are typically designed around the needs and problems of each particular area.

The basic principles of access management include:

Limiting the Number of Conflict Points

A conflict point exists at any place that vehicle paths will cross, merge into, or diverge from one another along roadways, specifically at intersections or driveways. The potential for vehicular crashes increases as the number of conflict points along a roadway go higher. One method for limiting the number of conflict points is to decrease the number of driveways a business or neighborhood can have onto an arterial or collector roadway. Limitation of conflict points can also be accomplished with the use of reverse frontage and access roads. Decreasing the number of conflict points significantly reduce the potential for crashes.

Separating Basic Conflict Areas

Intersections of public streets as well as intersections of driveways and public streets represent basic conflict areas. High levels of activity can occur at these locations and, consequently, the through traffic needs time to react to the decelerations, accelerations, and travel paths of other vehicles at or near the intersections. Adequate spacing between intersections allows drivers to react to one intersection at a time and provides greater opportunities to avoid potential conflicts at each successive downstream intersection. Similarly, setting driveways and connections back from intersections reduces the number of conflicts and provides more time and space for vehicles to turn or merge safely across lanes. One way of accomplishing this goal is to close off or relocate existing entrances or establish a larger minimum lot size for corner lots.

Reducing Interference with Through Traffic

Traffic often needs to slow down for vehicles exiting, entering, or turning across the roadway. Providing turning lanes and restricting turning movements allows turning traffic to get out of the way of the following through traffic. Other measures include increasing the turning radius of a driveway, using a driveway flare, or increased driveway width and length.

Providing Adequate On-Site Circulation and Storage

The design of good internal vehicle circulation in parking areas and on local streets reduces the number of driveways that businesses need for access to the major roadway. Internal

connections between neighboring properties allow vehicles to circulate between businesses without having to re-enter the major roadway. Subdivisions should be designed so that lots fronting the major roadway have internal access from a residential street (reverse frontage).

Implementation of an access management measure is much easier when constructing a new corridor with wide right-of-ways and no existing development. Developers can follow certain guidelines or regulations that have been established. However, as is the case in most of Roanoke County, most of the corridors have already been developed and the right-of-ways are set. The designers and developers must try to “retrofit” access management measures into an already tight right-of-way. More often than not, access management projects will coincide with major road improvements.

Some of the benefits of implementing Access Management are:

- Saves lives and reduces the frequency of fatal, injury, and property damage accidents;
- Maintains the transportation system travel efficiency necessary for economic prosperity;
- Prolongs the functional life of existing highways by maintaining or increasing capacity, thereby reducing the need for new capital construction to meet increasing system demands;
- Is an element of Air Quality Conformance;
- Reduces congestion and delay and provides property owners with safe access to highways;
- Promotes desirable land use patterns, establishes uniform standards, and promotes fair and equal application to the development of the community.

Virginia Department of Transportation has Access Management guidelines that are available for adoption by the County. Roanoke County staff will consider adoption of said standards, coordinating with RVARC and VDOT throughout the process. Until the time that the Board has approved and adopted the standards, staff will consider each major corridor project that is performed in the County as a candidate Access Management project.

iv. Objective: **To reduce noise levels where transportation activities are the predominant noise generating sources.**

a. Strategy: *Noise Abatement Measures* -- To the normal Roanoke County motorist, highway traffic noise is not a

considerable concern. However, to the many County residents and business owners that are adjacent to a busy travel way, it is an unnecessary nuisance.

The level of highway traffic noise depends on three factors: (1) the volume of traffic, (2) the speed of traffic, and (3) the number of trucks in the flow of traffic. With the number of registered vehicles and vehicle miles traveled increasing every year to nearly uncontrollable values, planners/designers must look to strategies other than traffic and/or speed mitigation.

The highway noise dilemma can be solved with a three-part solution: motor vehicle control, land use control, and highway planning and design. *Motor vehicle control:* The Environmental Protection Agency has issued noise limit regulations for new trucks and many local and State governments have passed ordinances requiring existing vehicles to be properly maintained and operated. *Land use control:* Highway traffic noise complaints often come from occupants of new homes built adjacent to an existing highway. The majority of these highways were originally constructed through undeveloped lands. Prudent land use control can help to prevent many future traffic noise problems in these areas. It is important to point out that such controls need not prohibit development, but rather require reasonable distances between buildings and roads as well as “soundproofing” or other noise abatement measures. Another strategy is to promote the development of less noise-sensitive commercial buildings next to a major highway, with residences farther away. *Highway planning and design:* Early in the planning stages of most highway improvement projects, the highway agency will do a noise study. The existing noise levels of a highway are measured or computed by models. Then, the agency predicts what the future noise levels will be once the project is constructed. If the predicted noise levels exceed Federal noise criteria, the agency must consider measures that can be taken to lessen the adverse noise impacts.

Some noise reduction measures that can be implemented on existing roads include creating buffer zones, construction barriers (e.g., earth berms, noise walls, etc.), planting vegetation, installing noise insulation in buildings, and managing traffic.

On a more local level, VDOT established its *Noise Abatement Policy* in 1989 to lessen the impact of highway traffic noise on people in neighborhoods and in other noise-sensitive areas. That policy maintains that VDOT will conduct a highway traffic noise study on proposed federally funded highway improvement projects. These projects must meet one of the following

conditions: a highway is being built on a new location; an existing highway is being redesigned with a significant change in its alignment; or the number of through traffic lanes on an existing highway is being increased. The cost of the noise reduction measures are included with the other costs of the highway improvement and are eligible for Federal funding in the same proportion as other aspects of the project. State highway agencies may also use Federal highway grants for noise reduction project on existing roads on the Federal-aid system. The monies spent on the noise reduction measures are deducted from funds which would otherwise be available for highway construction. On non-federally funded highway improvement projects, the locality can obtain partial funding from VDOT to implement noise abatement measures if the locality meets eligibility requirements outlined in the aforementioned state noise policy. The County will strive to adhere to VDOT's *Noise Abatement Policy* when making decisions pertinent to Roanoke County roads.

If alternative measures will not reduce the noise or are not desirable in a certain location, VDOT engineers will then consider installing noise walls. The noise walls must meet the following conditions: they will not present a safety or engineering problem; they will reduce noise levels by at least five decibels at all impacted locations; and they cost \$30,000 or less per noise-impacted property. If the structure costs more than \$30,000 per affected property, they can still be built if a third party – someone other than VDOT or FHWA, such as a locality or developer – funds the difference. The neighborhood or any other interested party can also participate as the third party and third party payments must be received prior to the start of highway construction.

Noise problems are harder to mitigate after an area is developed. Consequently, local governments are encouraged to evaluate potential noise problems as part of planning and zoning decisions. Development standards can regulate the placement of noise generating activities adjacent to sensitive areas such as residential neighborhoods, schools, hospitals, parks, natural areas, and open spaces. Some of the action measures that the County can consider implementing include:

- Coordinate with area RVARC, MPO, and adjacent state and local agencies to minimize noise impacts of existing and future transportation facilities and other noise-producing land uses;
- Ensure development complies with state noise regulations;

- Adopt development standards which require review of the potential noise impacts of new development, including roads, and the need for appropriate mitigating measures such as:
 - Building setbacks;
 - Berms, noise walls, and extensive landscaping;
 - Site design measures such as using parking, storage areas and buildings which generate little or no noise to separate noise sources from surrounding land uses;
 - Sound insulation and state of the art mechanical and processing equipment which generate little or no noise;
 - Measures recommended by DEQ or a qualified noise consultant and financial agreements to ensure required noise reduction measures are installed;
 - Increased rights-of-way for major arterials and berming, noise walls, sunken roadways, and planting of large shrubs and trees; and
 - Traffic management measures to discourage through traffic from using local residential streets.

v. Objective: **To help reduce and control air pollutants in the Roanoke Valley and surrounding area .**

a. Strategy: *Air Quality/Attainment Status* -- The primary objective of the Federal Clean Air Act, amended by the U.S. Congress in 1990, is to establish standards for various pollutants from both stationary and mobile sources and to provide for the regulation of polluting emissions via state implementation plans. The Clean Air Act authorizes the Environmental Protection Agency (EPA) to establish minimum national standards for air quality, and assigns primary responsibility to the states to assure compliance. Areas not meeting the National Ambient Air Quality Standards (NAAQS), referred to as "non-attainment" areas, are required to implement specified air pollution control measures.

Roanoke County, by its inclusion in the Roanoke Metropolitan Statistical Area (MSA), may possibly be designated as a non-attainment area. The Roanoke MSA has one ozone monitor located in the town of Vinton. Roanoke County and all other communities within the MSA are judged solely on that one monitoring station. To meet the 1-hour ozone standard, the Roanoke MSA must have a monitored hourly peak ozone

concentration below 125 parts per billion (ppb). Since 1990, the Roanoke MSA has exceeded the 1-hour standard on two occasions in 1998. However, due to the guidelines, the MSA remains in compliance for the 1-hour standard.

Similarly, the 8-hour ozone standard, found by averaging three years of the fourth highest 8-hour ozone levels in the area, must be lower than 85 ppb to meet the standard. Currently (as of 2003), the Roanoke MSA design value is 87 ppb. Therefore, it is probable, based on recent monitoring data, that the Roanoke MSA will be designated a non-attainment area when formal designations occur, by the year 2004.

The region is volunteering to put itself into the Ozone Early Action Program (OEAP) process to expedite air cleanup and to avoid being labeled a non-attainment area. The two principal components of the OEAP are the Early Action Compact (EAC) and the Early Action Plan (EAP). The EAC is a memorandum of agreement to prepare and implement the EAP. Specifically, the EAC sets measurable milestones for developing and implementing the EAP. The EAC is between the local governments representing the Cities of Roanoke and Salem, the Counties of Roanoke and Botetourt, the Town of Vinton, the EPA, and VDEQ (Virginia Department of Environmental Quality). It is for the express purpose of developing and implementing a plan that will reduce ground-level ozone concentrations in the Roanoke MSA to comply with the 8-hour ozone standard by December 31, 2007 and maintain that standard until at least 2012. Failure to meet that obligation results in immediate reversion to the traditional non-attainment process and the subsequent negative impacts. A major advantage of the region's participation in the OEAP is the flexibility afforded to the signatories of the Compact in selecting emission reduction measures and programs that are best suited to local needs and circumstances.

The Roanoke MSA's OEAP is designed to enable a local, proactive approach to ensuring attainment of the 8-hour ozone standard and, as a by-product of these actions, protect human health. Using the OEAP approach, the region could begin implementing by 2005 emission-reduction measures directed at attaining the 8-hour standard. This allows for a significantly earlier start than waiting for formal EPA non-attainment designation and it gives more flexibility in choosing which emission reduction strategies to implement.

The Roanoke Valley Alleghany Regional Commission (RVARC), in consultation with the aforementioned local governments, will develop the EAP in coordination with VDEQ, EPA, stakeholders,

and the public. The EAP will serve as Roanoke MSA's official air quality improvement plan, to be adopted and implemented by the local governments.

By signing the EAC, the Roanoke County Board of Supervisors is committed to holding responsibility for the development and implementation of the EAP. Roanoke County Community Development staff has aided the RVARC in the early stages of the EAC and EAP and helped in selecting the consultant that will work on this project. The staff will continue its efforts with the RVARC, adjacent communities, and interested stakeholders throughout this endeavor; ensuring that the emission reduction measures that are selected are best suited to County needs and circumstances. (For more information, please refer to the latest copy of the *Roanoke Valley Area Ozone Early Action Plan* on the internet at <http://www.rvarc.org/work/eap.pdf>)

D. Goal: To play an influential role in shaping and implementing regional transportation decisions.

i. Objective: To continue comprehensive transportation planning and to work in concert with neighboring jurisdictions and public entities.

a. Strategy: ***Active role in Regional Transportation Issues and Funding*** -- In 1973, federal law began requiring the formation of a Metropolitan Planning Organization (MPO) for urbanized areas with populations exceeding 50,000 to ensure that federal expenditures on transportation projects include cooperation at all government levels and provide for citizen input. The regional MPO consists of representatives from area localities, the Virginia Department of Transportation, the Greater Roanoke Transit Company, Roanoke Regional Airport, and the Roanoke Valley-Alleghany Regional Commission (RVARC). The service area of the Roanoke Valley Area MPO includes Roanoke and Salem cities, Vinton, the urbanized portions of Botetourt and Roanoke counties and the extreme western portion of Bedford County.

The MPO functions through regional forums where a series of participants address transportation issues. The Policy Board reviews and approves plans and programs and exercises administrative and fiscal control over MPO duties. It is made up of two representatives (at least one elected official) from each member locality and one member each from other participating agencies. The Transportation Technical Committee (TTC) works

closely with MPO staff in developing plans and programs and advises the Policy Board on technical and administrative issues related to regional transportation planning. It is comprised of planning and engineering staff from participating members of the MPO. An often underutilized component of the decision-making process is citizen participation. The public is invited to help develop, review and comment on proposed regional transportation plans. All MPO meetings are open to the public and serve as a regular forum for community transportation concerns.

The Metropolitan Planning Organization is charged with developing plans and programs to be approved by the Federal Highway Administration (FHWA) in order for federal-aid dollars to reach their regions. Federal regulations (see discussion of TEA-21 in this element of the Community Plan) mandate that each MPO develop a Long Range Transportation Plan and a Transportation Improvement Plan.

The *Long Range Transportation Plan (LRTP)* is an urbanized area's guide to creating a more efficient, responsive and environmentally-sensitive transportation system over a twenty-year horizon. This plan examines transportation issues and trends and offers a list of specific projects for dealing with a region's mobility needs. The LRTP is updated every five years and public input is requested.

The *Transportation Improvement Program (TIP)* is a three-year schedule of all federally funded and regionally significant transportation projects to be constructed in the urbanized area. To receive federal funding, these projects must first be approved by the MPO Policy Board for inclusion in the TIP. The TIP is updated annually and may include proposals originating from the LRTP. The *State Transportation Improvement Program (STIP)* is Virginia's version of the TIP, (earmarking state funds) established after annual TIP approvals.

The *Unified Transportation Work Program (UTWP)* is a one-year schedule of all urban transportation planning activities that will be carried out with federal expenditures. Project suggestions can originate from the public or from any MPO member. The Policy Board and TTC determine the projects to be part of the UTWP which is updated each year.

Roanoke County staff will continue in its efforts to work in concert with the RVARC, collaborating on particular facility, sub-area, corridor, and system-level transportation studies, and representing the County on the associated boards and committees mentioned above.

b. Strategy: *Active role with Virginia Department of Transportation (VDOT)* -- Roanoke County staff seeks to work in a cooperative manner with Virginia Department of Transportation on all projects that occur in the County. This coordination of efforts is done to ensure the project progresses in a timely manner; all the while, looking out for the best interests of the County residents. Our efforts may involve forwarding citizens' comments, questions, and/or recommendations, ensuring compliance with County standards, and sharing data, information, expertise, etc. to assure timely and efficient completion of projects.

Whereas County residents and staff have input on all roads in Roanoke County, the opportunity for citizen input is greater regarding the secondary roads, working within the framework of the annually updated Six-Year Secondary System Construction Plan. The public may advise county staff on needed safety or other improvements to the secondary street system. Staff considers these requests, investigates the matter, and takes the concerns to VDOT, hopefully to gain a spot in the Six-Year improvement program. Staff also gathers insight and input from the Board of Supervisors, VDOT, and the MPO prior to the inclusion of a specific road into the Six-Year improvement program (see Figure T-2 for an explanation of VDOT's Project Development Process). In addition to the Six-Year improvement program, the County also works in conjunction with VDOT on Revenue Sharing (both the Six-Year Secondary System Construction and Revenue Sharing programs are covered in this element of the Community Plan) and the Rural Addition Program.

County staff will attempt to continue to grow and strengthen the working relationship with VDOT, specifically the Salem District of VDOT.

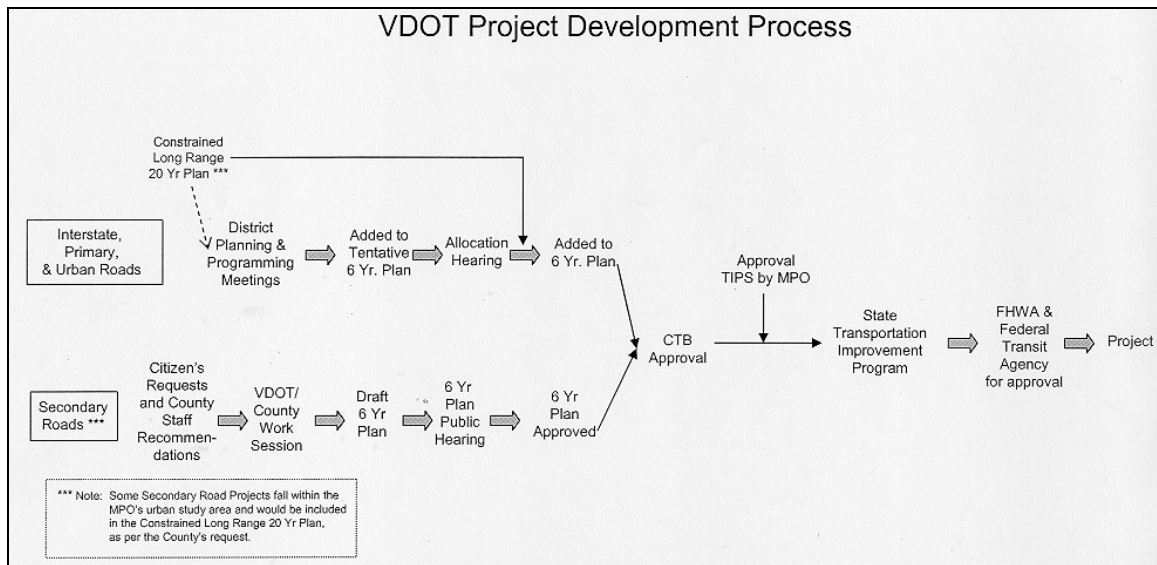


Figure T-2: VDOT Project Development Process

c. Strategy: **Support regional aviation efforts** -- The Virginia Air Transportation Systems Plan classifies the Roanoke Regional Airport as a Commercial Service Airport. The Roanoke Regional Airport accommodates the aviation needs of the scheduled airlines, air freight carriers, general aviation, corporate, air taxi and charter operators, as well as the military, for a region including, but not limited to, the Roanoke Valley. The Roanoke Regional Airport's passenger service area covers an area which includes the Cities of Roanoke and Salem, the Counties of Roanoke, Montgomery, Pulaski, Giles, Craig, Botetourt, Alleghany, Rockbridge, Bedford, Franklin, Floyd, and portions of West Virginia. Public ground transportation service to and from the airport is limited to taxicab and limousine service. There are a few heliports located in and around the area. Although these heliports are important from a service and air traffic standpoint, their impact on overall transportation planning in the Roanoke area is minor.

The need for improvements to the Roanoke Regional Airport spawned an Airport Master Plan Update in 1997 to estimate and accommodate future aviation demand, maintain flexibility for development opportunities and market changes, and to recognize physical constraints. Major long-range anticipated improvements (horizon year 2015) include pavement upgrades to airfield runways, relocation and widening of taxiways, installation of new runway navigational/landing aids, construction of a new air traffic control tower and changes to the passenger terminal and parking lots.

The implementation strategies put forth in the County's 1998 *Community Plan* hold true for this update/revision. The strategies include:

- Supporting improvement to the airport and airport access as a central factor in economic development;
- Locating and operating aviation and related facilities in such a way as to minimize detrimental environmental and community impacts;
- Evaluating land uses around existing aviation facilities during the development review process, to ensure compatibility in terms of height, noise, and the functional classification of the aviation facility;
- Supporting the provision of transit service to the Roanoke Regional Airport, not only for passengers, but in support of the airport's role as a major employment center;
- Encouraging the use and development of the Roanoke Regional Airport and seek international status;
- Encouraging the Airport Commission to procure aviation and related facility easements where appropriate.

d. Strategy: *Collaborate with Virginia Department of Rail and Public Transportation (VDRPT)* -- Rail transport, once a thriving business and transportation choice in the Roanoke Valley, is not presently a popular mode of transportation for County citizens. There is currently no direct inter-city rail service available from the Roanoke valley. There is, however, rail service from Clifton Forge and Lynchburg, surrounding communities within a short driving distance of Roanoke. Roanoke County staff should cooperate with the VDRPT, RVARC, and Roanoke City staff in revitalizing passenger rail service for the Roanoke Valley.

ii. Objective: **To stay abreast of recent legislation that pertains to transportation and investigate its availability for County infrastructure systems.**

a. Strategy: *TEA-3 (An Update / Reauthorization of TEA-21)* -- TEA-3, or Transportation Equity Act- 2003 (third authorization) refers to the nation's surface transportation program previously scheduled for renewal in 2003. The original vision, Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 introduced a series of reforms to national transportation policy, steering away from the automobile and towards pedestrian, bicycling, passenger rail and transit mobility. In 1998, the Transportation Equity Act for the Twenty- First Century (TEA-21) continued those programs through the expenditure of \$300 billion during the decade.

The renewal of TEA-21 could occur anytime from mid-2004 through late 2005 involving Senate Commerce, Science & Transportation, Finance, Banking, Environment & Public Works,

and Housing & Urban Affairs committees and House of Representatives Transportation & Infrastructure, Science, and Ways & Means committees with the U.S. Department of Transportation as the lead agency. The challenge is to build on ISTEA's provisions for improving transportation through flexibility, local decision-making, long range planning, fiscally constrained budgeting, and environmental stewardship. Sound transportation investments can help communities thrive by providing a safe, healthy, and secure environment, enhancing neighborhood livability, and promoting energy efficiency and conservation.

The most popular and visible use of federal funds has been conducted under the Transportation Enhancements Program (TE). TE was created under ISTEA and fosters local economic development and helps reconnect communities divided or negatively impacted by highway construction. Using only two cents of every federal transportation dollar, TE projects – bicycle and pedestrian facilities, main street revitalization programs, renovation of train stations and other historic sites, scenic easements, and billboard removal along highway corridors – are achieved. For example, the regional greenways program has been awarded nearly \$3.88 million in Transportation Enhancement and other federal funding since 1996.

County staff will continue to monitor the progress of the TEA-3 authorization and investigate ways that County residents can benefit.

iii. Objective: **To remain informed and up-to-date on major road/transportation projects within the County.**

- a. Strategy: ***Interstate 81*** -- Interstate 81 extends for 325 miles throughout Virginia, with a substantial portion of it located in Roanoke County. Cut through rolling and mountainous terrain, I-81 has been recognized as one of the most scenic interstates in the U.S. The highway is essential not only to the economic vitality of Virginia; it also serves as one of the East Coast's most important transportation facilities. The route carries out-of-state tourists, through travelers, a growing number of intra-valley commuters, and more than a third of all college and university students in Virginia. The interstate closely parallels U.S. Route 11 and railroad lines. The nearly 40 year old route is experiencing capacity and safety issues. Traffic through this crucial corridor has tripled in the last 20 years, from around

20,000 vehicles per day to nearly 70,000 vehicles per day in the Roanoke Valley. Though mostly a rural corridor, I-81 is one of the top eight truck routes in the U.S. On some sections of I-81, the number of trucks nearly equals the number of passenger cars. The highway was designed for 15% truck traffic, but trucks now account for 20-40% of the traffic on I-81.

VDOT accepted proposals under the Public-Private Transportation Act of 1995 (PPTA) to design, build, improve, maintain, and/or operate all or parts of I-81 through the Commonwealth. These proposals involved separating passenger vehicles and heavy trucks using physical barriers, adding additional lanes, adding truck climbing lanes, longer on- and off- ramps, tolls on all motor vehicles or tolls only on heavy trucks, utilizing Intelligent Transportation Systems (ITS), and other features. In early-2004, after much review and discussion, the Commonwealth Transportation Commissioner directed VDOT to enter into negotiations with STAR Solutions as the potential operator for improvements to I-81. The STAR proposal would widen I-81 to at least four lanes in each direction, with the separation of truck and car lanes. The project would be partly financed with tolls applied to both cars and trucks.

Plans or proposals to improve I-81 cannot be implemented without the approval and concurrence of the Federal Highway Administration (FHWA). Because the interstate system is federally funded, any proposed changes to the highway must comply with all federal laws, including the National Environmental Policy Act (NEPA). In accordance with NEPA, in the fall of 2003 FHWA and VDOT launched an I-81 Corridor Improvement Study. The study will objectively identify deficiencies along the interstate as well as opportunities for improvements throughout the corridor in Virginia. This study will lead to the completion of an Environmental Impact Statement (EIS) and ultimately a Record of Decision from FHWA.

Roanoke County will be working with neighboring jurisdictions, planning organizations, and VDOT during the completion of the corridor study and environmental review. County staff will continue to work in concert with all interested parties on this endeavor to best address the safety concerns and truck traffic capacity issues. Similarly, we recognize the crucial link between land use and the transportation system.

Staff must consider the impacts to existing right-of-way, be mindful of the project's effect on rezonings, special-use permits, and planning projects, and determine if the corridor will play a role in the growth management measures under consideration.

In addition, it must be stated that the Roanoke County Board of Supervisors has been very supportive of the I-81 improvement project. They have adopted numerous resolutions, some dating back to 1997, corroborating VDOT's attempts to improve the corridor. Subsequently, they have resolved to "express its support for the development and promotion of rail freight and passenger service parallel to I-81, to complement limited highway-widening and to move a large volume of the long-distance freight traffic from trucks on I-81 to freight trains on dual track, high-speed rails parallel to I-81" (Resolution 062403-6.d).

(Note: To review the most current information pertaining to I-81, click on the link on the County's website to access VDOT's I-81 website)

- b. Strategy: ***Proposed Interstate 73*** -- The U.S. Congress designated Interstate 73 (I-73) a National Priority Corridor as part of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. Congress made I-73 official in 1995 by including it in the National Highway System (NHS). The purpose of the NHS "priority corridor" is to link the nation's regions and support economic growth. Needs were identified to improve goods movements between the port of Charleston, South Carolina and Sault Ste. Marie, Michigan. This would require an effective and efficient roadway that facilitates interstate travel between Michigan, Ohio, West Virginia, Virginia, and North and South Carolina.

I-73 is an identified state and regional priority in Virginia to foster planned economic development between southwestern Virginia and the Piedmont Triad regions in North Carolina. Local manufacturers have business connections with the cities of Greensboro, Winston-Salem, and High Point, NC. Improved access through the Roanoke Valley to I-581 and I-81 will link businesses in the study area with locations in the eastern U.S.

Another regional priority in southwest Virginia is to address safety concerns along U.S. Route 220 resulting from high

percentages of truck traffic, poor sight distances, steep grades, and a large number of accidents. VDOT's consultant maintains that solutions to these concerns could be achieved by developing a safe and direct transportation link for business trucking between NC's Piedmont Triangle and the Roanoke Valley's I-581 and I-81 corridors.

The Virginia Commonwealth Transportation Board (CTB) approved a corridor location for I-73 in May 2001. Starting at the northern end of the corridor, the approved location for I-73 begins at the existing interchange of I-81 and I-581 and continues along I-581 through Roanoke City to the Elm Avenue interchange. At this point in the route, there is a change to be made to the previously approved alignment. In 2004 it was deemed that the Southeast Roanoke neighborhood that would have been impacted by I-73 was eligible for designation as a historic district. Therefore, an approximately 12-mile section of the corridor in southeast Roanoke City, Roanoke County, and northern Franklin County had to be re-routed. The re-routed corridor that is currently being studied at the time of this writing includes the existing alignment of Route 220 from Elm Avenue continuing south into the Clearbrook area of the County and then veering southeast of Buck Mountain Road along Route 657 (Crowell Gap Road) into Franklin County where it would rejoin the original approved corridor in the vicinity of Coopers Cove.

Roanoke County's Board of Supervisors has supported this project and passed several resolutions pertaining to the issue in recent years. VDOT will be finalizing the Environmental Impact Statement (EIS) with specific information about the selected corridor. The Final EIS will then be forwarded to the Federal Highway Administration (FHWA) for consideration and/or approval. Completion of the Final EIS and approval by FHWA may take up to a year. Once the FHWA issues its approval - called a Record of Decision - final design, right of way acquisition and construction can begin. Roanoke County staff will continue to monitor the development of this project and work in concert with all involved. Along those same lines, staff recognizes the crucial link between land use and the transportation system. Staff must consider the impacts to existing right-of-way, be mindful of the project's effect on rezonings, special-use permits, and planning projects, and determine if the corridor will play a role in the growth management measures under consideration.

E. Goal: To provide progressive and forward looking solutions and technology to users of Roanoke County's transportation network.

i. Objective: To improve the management of the County's resources and data and to utilize computer technology as a decision making tool.

a. Strategy: *Geographical Information Systems (GIS)* --

Roanoke County has attempted to stay on the leading edge of computer technology. This trend maintains as it relates to transportation issues the County encounters. Specifically, GIS will be used to develop and maintain an inventory of the transportation infrastructure. The inventory will include road lengths and widths, traffic counts, and functional classification, to name a few archived items. GIS will also be used in conjunction with a pavement management system to track and display road construction/maintenance. The inventory and pavement management system will be maintained in the ESRI (Environmental Systems Research Institute) environment utilizing up to date versions of ArcGIS. We will incorporate a relational database to enter, store, and analyze the necessary data.

The GIS software will be pivotal in preparing maps and presenting infrastructure inventory and maintenance recommendations to VDOT, the Board of Supervisors, and the public.

ii. Objective: To improve the livability of Roanoke County residents by ensuring that transportation systems are properly designed and applicable to the community it serves.

a. Strategy: *Context Sensitive/Flexible Design* -- An important, yet often forgotten, concept in highway design is that every project is unique. The setting and character of the area, the values of the community, the needs of the highway users, and the challenges and opportunities are unique factors that designers must consider with each highway project. For each potential project, designers are faced with the task of balancing the need for the highway improvement with the need to safely integrate the design into the surrounding natural and human environments.

Often, over- engineered road design standards limit transportation choices, isolate neighborhoods, create hazardous settings, and otherwise harm the quality of life within a community. Unnecessarily wide neighborhood streets discourage pedestrian and bicycle use and increase car speeds. Flexible road standards

would give designers more opportunities to use varying widths, medians, sidewalks, bike lanes, and landscaping to develop better streetscapes with more opportunities for transportation and recreation, while still providing roads that efficiently carry vehicles. Use of the aforementioned flexible standards is commonly referred to as Context Sensitive Design (CSD). CSD incorporates the streetscape, aesthetics, livability, and the application of devices aimed at changing motorists' behavior. However, in order to succeed, CSD requires neighborhood involvement *before* road design changes are initiated. CSD attempts to balance the level of service of a road with surrounding community values. CSD provides a higher level of safety for pedestrians, cyclists, and motorists than conventional street design which focuses on vehicular movement at high speeds. Typical elements of CSD are somewhat similar to traffic calming measures. Some examples of CSD are:

- Real or perceived lane width reductions or limitations
- Intentional curvature
- Textured pavement and/or markings
- Extensive landscaping
- Right of entry for all travel modes

Context Sensitive Design calls for public involvement when defining the need for a road project. This requires public participation throughout the project, the early and continuous use of a multidisciplinary design team, the use of visualization techniques to aid the public, and the application of flexible design criteria. The reference most often used for project design criteria is the Green Book. Its official title is *A Policy on the Geometric Design of Highways and Streets*. Although often viewed as dictating a set of national standards, this document is actually a *series of guidelines* on geometric design within which the designer has a range of flexibility. As stated in the forward to the Green Book:

The intent of this policy is to provide guidance to the designer by referencing a recommended range of values for critical dimensions. Sufficient flexibility is permitted to encourage independent designs tailored to particular situations.

Context Sensitive Design can provide significant improvements to collector and arterial roads scheduled for widening or reconstruction in Roanoke County. An example of a Virginia Department of Transportation (VDOT) project that has

incorporated CSD is the Colonial Avenue project (a one-half mile portion of Colonial between Penn Forest Boulevard and Route 419). Citizens along Colonial Avenue requested that the County and VDOT implement CSD along that corridor. At the time of this update to the Community Plan, that project is progressing with the input of the citizens along the Colonial Avenue corridor and will hopefully meet the needs of the residents and motorists.

Roanoke County staff will attempt to monitor all VDOT road projects within the County and ensure that the proposed design is applicable to the needs and environment of the community while maintaining the desired function of the roadway.

ii. Objective: **To help take an active role in implementing and incorporating new technologies into the transportation system to increase the safety and efficiency of the system.**

a. Strategy: *Intelligent Transportation Systems (ITS)* -- Intelligent Transportation Systems (ITS) incorporate new technologies in information processing, communications, control, and electronics into the transportation system. When integrated into the transportation infrastructure, and in vehicles themselves, these technologies help monitor and manage traffic flow, reduce congestion, provide alternate routes to travelers, enhance productivity, and save lives, time, and money.

Intelligent transportation systems provide the tools for transportation professionals to collect, analyze, and archive data about the performance of the system. Having this data enhances a traffic operator's ability to respond to incidents, adverse weather, or other capacity constricting events.

Some systems, products, and services are already in place and at work throughout the country (a local example of ITS technology can be found between Blacksburg and I-81 on the Smart Road). Various examples of Intelligent Transportation Systems include:

- On-board navigation systems;
- Crash notification systems;
- Electronic payment systems;
- Roadbed sensors;
- Traffic video/control technologies;
- Weather information services;
- Variable message signs;
- Fleet tracking and weigh-in-motion technologies.

Roanoke County and other member governments of the Roanoke Valley Area Metropolitan Planning Organization (RVAMPO) are seeking to take an active role in the Commonwealth's efforts to develop and implement ITS technologies. County staff will work with the Roanoke Valley-Alleghany Regional Commission (RVARC) in this effort and cooperate with VDOT's Salem District when possible.

F. Goal: To expand and emphasize citizen participation and comments during the early stages of transportation planning.

i. Objective: To ensure that Roanoke County citizens have their voices heard on projects/issues that will affect them.

a. Strategy: ***Comment form on County's website*** -- More and more people are utilizing the internet to gather and transmit information than ever before. The County should provide a platform for those individuals that want to communicate their inquiries, comments, and concerns to County staff, via this format.

An addition will be made to the County's website that allows the citizens to voice their opinions, desires, and questions. The citizen will access the Transportation/Engineering portion of the County's website at:

<http://www.roanokecountyva.gov/Departments/Engineering/Transportation/>. Once here, the citizen will find contact information that will enable them to speak their mind on transportation issues in the County.

b. Strategy: ***Citizen Input on Long Range Transportation Plan*** -- As noted earlier in this element of the Community Plan, the County's input into the Long Range Transportation Plan (LRTP) is vitally important. For that reason, staff is seeking the comments of County residents on the matter. Ultimately, the residents are the one that pay for and use the infrastructure; consequently, their voice should be heard.

Comments received after the release of this updated Community Plan will be taken into consideration for the next update to the LRTP, as the list has already been submitted (submitted in September '03) to VDOT for consideration. However, as stated earlier, the plan may be revised by the Roanoke Valley MPO through amendments. Therefore, County staff is requesting that the residents review the list (Table T-3) and subsequent map

Chapter 4: Community Facilities

Transportation Element – Implementation Schedule		
STRATEGY	TIME FRAME	COMMENTS
Growth Management Measures	ongoing	Dependent on APFO legislation; work with VDOT on LOS for County roads
Balance Land Use Objectives w/ Street Functional Capabilities	by 2005	Functional Classifications designated by 2004; implementation of guidelines by planning staff will take a little more time.
Long Range Plan Issues	ongoing	Officially updated every 5 yrs.; County will receive comments at any time
Pavement Mgmt. Sys. for Secondary 6-Year Plan & Rev. Sharing	by 2005	6-yr Plan and Revenue Sharing updated annually; hope to implement PMS for Revenue Sharing for 2005 program.
Bicycle Facilities & Greenways	ongoing	Continue working with VDOT & the Roanoke Valley Greenway Commission
Traffic Management Strategies	by 2005	Work with RVARC
Education on Transportation Systems & Livability Issues	by 2005	Work with RVARC, Valley Metro, County website, RVTV, etc.
Traffic Calming	by 2005	Dependent on scheduling of potential projects
Access Management	by 2005	Dependent on scheduling of potential projects
Noise Abatement Measures	by 2005	Project specific; may be an issue that coincides with improvements to I-81
Air Quality/Attainment Status	by 2005	Must be in compliance by 12/31/07; being implementing measures by 2005
Active role in Regional Transportation Issues & Funding	ongoing	Work with RVARC, MPO, and other localities
Active role with VDOT	ongoing	
Support Regional Aviation Efforts	ongoing	Work with Roanoke Regional Airport and Roanoke Co.'s Economic Development department
Collaborate with VDRPT	ongoing	Work with VDRPT, RVARC, and Roanoke City
TEA-3	ongoing	
Interstate 81	ongoing	Roanoke Co. will provide comments; work in conjunction with VDOT & MPO
Proposed Interstate 73	ongoing	Staff monitoring project progress
Geographical Info. Sys (GIS)	ongoing	Used extensively for road inventory and PMS
Context Sensitive/Flexible Design	ongoing	Project specific, time frame dependent on project scheduling
Intelligent Trans. Systems (ITS)	ongoing	Coordinate efforts with RVARC & VDOT
Comment Form on County's Website	by 2005	Citizen can currently access contact info and communicate to the County Traffic Engineer; will attempt to get more structured comment form in 2005
Citizen Input on Long Range Plan	ongoing	Will receive comments at any time for potential amendments and/or the scheduled updates

CHAPTER 5

RESOURCE PRESERVATION

INTRODUCTION

The citizens of Roanoke County have a strong desire to preserve the quality of the county's natural, scenic and historic resources. The county's natural features - including mountains, forests, productive soil, streams, fresh air and wildlife - serve to distinguish the greater Roanoke Valley as a uniquely attractive urban center.

Roanoke County citizens recognize that the beauty of the existing natural environment attracts not only businesses and residents to our community but also tourists and sports enthusiasts. County citizens believe that it is essential to maintain the high quality of Roanoke County's environment while accommodating the pressures for future growth and development.

OPEN SPACE

During the past twenty-five years, Roanoke County has experienced steady growth. From a population of 53,800 in 1970 that reflects the results of several annexations, the population grew 54 percent to 83,100 in 1995. Future population projections indicate that by the year 2010 the County population will be approximately 87,400.

This growth in population and the accompanying shift in demographics - such as an aging population - are changing the traditional rural landscape of the County. New residents require more housing, schools, shopping centers, office buildings, roads, water and sewer facilities and parks and recreational services. The rural landscape is gradually becoming urbanized as a result of this growth. What was once an orchard is now a residential subdivision or a shopping center. What was once a hardwood forest is now an office building or condominium.

Between 1982 and 1992 the number of farms in Roanoke County decreased 11 percent from 306 to 272. Acreage of farmland decreased 25.5 percent from 33,475 to 24,924 during that same time frame. The loss of orchard land was even more dramatic, decreasing over 44 percent from 459 acres in 1982 to 256 acres in 1992.

With this loss of rural and agricultural lands there is a loss of undeveloped land commonly referred to as open space. Although Roanoke County has a high-quality public park system, there are severe shortages of park land particularly in certain areas. In addition, the majority of park land in the County is devoted to active recreational uses such as ballfields.

Open space provides many functions necessary for a healthy and prosperous community. It protects our drinking water by providing ample undeveloped land for the recharge of underground aquifers. It offers safe habitat for rare and endangered species of plants and wildlife. Forested lands improve air quality by removing carbon dioxide and other pollutants

from the air and by releasing oxygen into the air. They also help prevent soil erosion by stabilizing the soil with the roots from trees and other vegetation. Buffers of trees beside streams can improve water quality by slowing stormwater runoff, allowing pollutants to filter out before being deposited into the water courses.

Open space, especially with the mountainous terrain in Roanoke County, provides residents a sense of relief or spatial definition. When you see the mountains off in the distance you have a perspective on where the urban/suburban space ends and the rural space begins. Open space can also link residential communities via greenways and provide buffers between adjacent land uses. It provides recreational, educational, and cultural opportunities for residents, of all ages.

An ad-hoc advisory committee with representatives from the planning departments of the Roanoke Valley's four local governments and the Fifth Planning District Commission has been working on a regional open space plan. To date, the study includes an inventory of open space resources. The next step is to obtain citizen input on priority resources and to examine the alternatives for preserving, protecting and managing open space resources.

In preparing the inventory of resources for the open space plan, different types of land or resources have been identified and mapped. Five categories of open space have been analyzed: public open space, semi-public open space, private open space, agricultural/forestral parcels and lands under a conservation easement. Lands with unique natural resource characteristics have also been mapped. These include greenway corridors, lands in the 100-year floodplain, mountain elevations at a specified elevation, threatened and endangered species areas and scenic views from the Blue Ridge Parkway. Scenic views from the Appalachian Trail - a National Scenic Trail - may be included as this information becomes available.

GREENWAYS

A greenway is a corridor of protected open space managed for conservation, recreation and nonmotorized transportation. Greenways often follow natural geographic features such as ridge lines, stream valleys and rivers, but may also be built along canals, utility corridors or abandoned rail lines. Most greenways include a trail or bike path, but others may be designed strictly for environmental or scenic protection.

Greenways, as vegetated linear parks, provide tree cover, wildlife habitat, and riparian buffers to protect streams. The environmental benefits include reduced storm water runoff, flood reduction, water quality protection, and preservation of biological diversity. The trails within the greenways provide access between neighborhoods and destination points, opportunity to travel without an automobile, outdoor education classrooms, and close-to-home paths for walking, jogging, bicycling and roller blading. Tree cover and use of bicycles instead of cars provide for better air quality, fewer hard-surfaced parking lots and reduced energy costs. Although greenways are a collateral component of a county-wide park system they do not replace the need for additional park land.

In the spring of 1995, the four local governments appointed representatives to a Greenways Steering Committee, which was provided staff support by the Fifth Planning District Commission. A consulting firm was hired to develop a Conceptual Greenway Plan for the Roanoke Valley involving elected officials, civic leaders and the general public.

The Greenway Commission, appointed by the four Valley governments, is an advisory body. Its responsibilities include: facilitate cooperation and coordination among jurisdictions in greenway planning and development; recommend funding sources for greenway construction; develop uniform standards for design and construction; and, pursue public/private partnerships for greenway development.

The backbone of the Roanoke Valley greenway system is the Roanoke River which runs for over 20 miles through Roanoke County, Salem, Roanoke City and Vinton. In 1998 the Roanoke River Greenway Implementation Plan will be completed, focusing on that portion of the river in Salem and west Roanoke County.

In August 1997, the first one-half mile of greenway, through Garst Mill Park, was completed and opened. This was the first completed section of greenway in Roanoke County and is being very heavily used.

Construction will begin in 1998 on the Hanging Rock Battlefield Trail which travels through portions of Salem and Roanoke County. Also in 1998, construction is scheduled to begin on the Wolf Creek Greenway in the Town of Vinton. This trail will connect to the new bicycle lanes to be built on Hardy Road and the existing trail system in Goode and Stonebridge Parks in Roanoke County.

While a significant amount of progress has been made on greenways over the last 2 or 3 years there are substantial steps still to be taken.

ROANOKE RIVER

History and Location

The Roanoke River springs from the Jefferson National Forest in Virginia's western mountain highlands, and flows east through Montgomery, Roanoke, Bedford and Franklin Counties, the Cities of Salem and Roanoke and the Town of Vinton, to Smith Mountain Lake and beyond to the Atlantic Ocean. The heart of the Roanoke River corridor is an ageless, fertile valley, a scenic mountain bowl carved between the parallel ridges of the Allegheny and Blue Ridge Mountains. The river cuts perpendicular across two major, north-south routes in the region: I-81 and the Blue Ridge Parkway.

The mainstem of the Roanoke River is formed by the confluence of the North and South Forks. The North Fork drains a portion of the Ridge and Valley physiographic province, while the South Fork drains the western face of the Blue Ridge. The two forks converge at Lafayette, a short distance west of the Roanoke County line. The mainstem continues on through a narrow, steep-

walled valley near Glenvar. It then traverses the main valley, picking up many short and steep tributaries as it passes through the cities of Salem and Roanoke. The river follows the western

slope of the Blue Ridge to Mill Mountain, where it turns east and enters the Roanoke Gap, a gorge that it cut as the ridge was rising. Once through the Blue Ridge, the river enters the rolling Piedmont province, where it has been impounded to form Smith Mountain Lake.

The mountainous nature of the river headwaters tends to increase the severity of storms and the speed of runoff, making the river subject to flash floods. The sill formed by the Blue Ridge creates a natural settling basin above the gorge, in downtown Roanoke. The natural constriction of the river is exacerbated by manmade structures such as bridges and rail embankments, as well as by floodplain development along the river's course through the main Roanoke Valley. One result is frequent and extensive flood damage.

On the other hand, the mountainous terrain contributes to the river's scenic and recreational value, and also has positive effects on the river as an aquatic habitat. The cool, well-oxygenated water harbors an unusually wide variety of aquatic life, including trout and the Roanoke logperch, which is listed by the U.S. Fish and Wildlife Service as an endangered species. Riparian vegetation and woodlands help to keep water temperatures down and provide a habitat corridor that allows wildlife to move through the urbanized Roanoke Valley.

The river has also provided a corridor for human movement, which has been an important factor in both the prehistory and history of the Roanoke Valley. Native peoples moved up and down the Great Valley, but also settled at the rich meadows above the mouth of the Roanoke Gorge. Pioneer settlers used this water gap as a route from the Virginia tidewater to the Great Valley and beyond. The railroads followed in the 19th Century, giving Roanoke its main industry for many years. As a result, the river corridor is as rich in prehistoric and historic resources as it is in environmental resources.

Roanoke River Corridor Study

The Roanoke metropolitan area, the largest in Virginia west of the "urban crescent" from Washington through Richmond to Tidewater, is also the only major concentration of people and industry in the State to lie so close to the headwaters of a major river. It is the only population center of consequence to be found in the mountainous region west of the Blue Ridge. This location results in a set of environmental, aesthetic, and land use factors unique to the area.

The importance of the river and the urgent need for information on it led to the Roanoke River Corridor Study in 1990. This study included the length of the Roanoke River from its headwater tributaries in Montgomery and Roanoke Counties to the Hardy Ford Bridge, at the upper reaches of Smith Mountain Lake. Participants included the jurisdictions of Bedford, Franklin, Montgomery and Roanoke Counties, the Town of Vinton, and the Cities of Roanoke and Salem. Also included were the Central Virginia, Fifth, New River Valley and West Piedmont planning district commissions.

The study's goals were to produce a report documenting existing conditions in the Roanoke River corridor and to recommend ways in which identified problems, opportunities, and protection needs could be addressed. The final report contains detailed recommendations for policy implementation by the local governments.

One important element of the final report is a model Roanoke River Conservation Overlay Zone ordinance. This model ordinance provides a "shell" for each participating jurisdiction to use in developing an ordinance that is specific to the needs, challenges, opportunities and constraints of their jurisdiction. To date, only Roanoke County has adopted this ordinance and incorporated appropriate language into the comprehensive plan.

SOILS

In 1989 a soil survey was conducted in Roanoke County that contains information that can be used in land-planning programs in the County. The soil survey contains predictions of soil behavior for selected land uses such as agriculture, woodland management, recreation and development. The survey also highlights limitations and hazards inherent in the soil, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are shallow to bedrock. Some are too unstable to be used as a foundation for buildings or roads. Wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

In doing this survey, soil scientists observed the steepness, length, and shape of slopes; the general pattern of drainage; the kinds of crops and native plants growing on the soils; and the kinds of bedrock. The soils in the survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate and natural vegetation of the area. Each kind of soil is associated with a particular kind of landscape or with a segment of the landscape. By observing the soils in the survey area and relating their position to specific segments of the landscape, a soil scientist develops a model of how the soils were formed. During mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil at a specific location on the landscape.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit.

More specific information on the soils of Roanoke County can be obtained from the Soil Survey of Roanoke County and the Cities of Roanoke and Salem, Virginia published by the National Cooperative Soil Survey and issued in July 1997.

HISTORIC RESOURCES

Overview

Settlement began in Roanoke County in the mid-18th century, with the first immigration into the Great Valley of Virginia. The earliest settlers were Scots-Irish who came south along the Great Wagon Road, through the Shenandoah Valley and into the Roanoke River Valley. The earliest settlements naturally occurred in the northern areas, including Catawba and the Botetourt Springs/Hollins area. Germans began to settle in Roanoke County in increasing numbers, particularly in the last two decades of the 18th century.

By 1838, Roanoke County was established, with the growing town of Salem as its county seat. Roanoke County had its roots as an agrarian economy, dominated by wheat and later tobacco cultivation and their related industries, milling and tobacco processing. In 1852, the Virginia and Tennessee Railroad completed tracks through Salem and, two years later, to Bristol improving access to eastern markets. By the 1880's, Roanoke had become a major transportation hub for several railroads, particularly when Norfolk and Western Railroad established Roanoke as the major office of its Virginia operations. Between 1880 and 1900, the County and the Cities of Roanoke and Salem experienced rapid growth and urbanization. In the twentieth century, the agricultural base has declined with the increased urban growth of Roanoke and Salem, particularly since 1950. Today, the Roanoke area is the regional center for industry and commerce in southwest Virginia.

Historical Architecture Reconnaissance Survey

Roanoke County residents have long been interested in the history of their community. In the 1980's, two new histories were written about the County and its architecture. In 1982, W.L. Whitwell, Professor of Art at Hollins College and Lee W. Winborne, a resident of Roanoke, prepared one of the first architectural studies of Roanoke County. Titled The Architectural Heritage of the Roanoke Valley, this book surveys the architecture of the County and the Cities of Roanoke and Salem, ranging from agricultural buildings to city storefronts. With the County's 150 year celebration of its founding, the Roanoke County Sesquicentennial Committee commissioned Deedie Kagey to write a history of Roanoke County, from its first settlement to the future. This volume, entitled When Past is Prologue: A History of Roanoke County, published in 1988, provided a valuable and complete history of the County.

Roanoke County's historic preservation efforts were boosted by the establishment of two important organizations in Roanoke: the Roanoke Regional Preservation Office and the Roanoke Valley Preservation Foundation. In 1990, in conjunction with these two organizations, Roanoke County undertook an architectural survey of its historic properties. The information gathered in this survey allows the objective evaluation of the significance of the County properties and provides preservation priorities to update the comprehensive plan.

The Roanoke County survey recorded a total of 410 structures. Of these, 379 historic sites were surveyed at the reconnaissance level and 31 at the intensive level. The most common building

type documented in the survey area is the single-family dwelling. Roanoke County's domestic architecture is predominantly rural and vernacular, reflecting its traditional agrarian culture character. The County survey did not identify any resources dating to the 18th century. Even in the earlier settled area of the Catawba Valley, no 18th century structures have yet been found.

Eleven homes were identified as potential recommendations to the National Register. In addition, the areas of Janee Drive, Hollins College, Bonsack and Wabun were identified as potential historic districts.

One of the important objectives of this survey was to promote civic pride in our community and to promote heritage education. One of the first steps in educating the public about the historic resources in Roanoke County is to let them know that they exist. It is important to inform the owners of such properties that their buildings are historic and therefore a valuable part of the County's history. It is also important to inform the general public of the existence of these historic structures and areas. These objectives could be achieved through the distribution of the survey forms to the property owners and the development of a historic tour brochure. The creation of a permanent Roanoke County Historic Resources Commission to deal with preservation issues would further help to protect the historic resources in the County.

MOUNTAINS AND RIDGETOPS

Introduction

The mountainsides and ridgetops that surround Roanoke County have always served as a source of great beauty, community pride and cultural heritage to those who call this area home. The mountains that form the bowl around the Valley below make this area unique - very few places can claim the scenic beauty of this region.

The mountains are not only beautiful to look at. They provide a valuable tool in the economic development tool box whether it be courting a new industrial prospect, being selected as the site of a major sports event or drawing in outdoor enthusiasts and tourists from around the world. The Roanoke Valley is able to offer something unique and different from anywhere else in the United States and that can be attributed to the scenic beauty of the region - the mountains, the forests, the Blue Ridge Parkway and the Appalachian Trail. How many communities can boast that they have both a National Park and a National Scenic Trail within their boundaries?

As our county prospers and grows and developable land is consumed it becomes increasingly important to implement strategies to preserve and protect these mountains and ridgetops. Careful and prudent planning must be conducted.

Mountain and Ridgetop Development Policies

For the most part, our suburban-oriented subdivision and zoning regulations assume that projects are built on relatively flat terrain. When these regulations are applied to projects built on

mountainsides and ridgetops they result in denuded hillsides, erosion, siltation of streams, flooding and the loss of scenic quality. Mountains and ridgetop development policies can help alleviate these unpleasant results and serve the following purposes: 1) Minimize soil instability, erosion and downstream siltation; 2) Minimize flooding; 3) Promote safety of the design and construction of development; 4) Protect rare and critical environments, such as aquifers and

recharge areas, wildlife, fragile soils and geologic structures; 5) Provide for safe vehicular access; and, 6) Preserve the scenic character of mountainsides.

There are various options for mountains and ridgetop development policies ranging from identifying and preserving steep slopes that should not be developed to adapting the density of development to the terrain so that as slope increases, allowed density decreases. In addition, various design guidelines should be evaluated to minimize land disturbance, encourage retention of existing vegetation and appropriate architecture that blends with the natural surroundings. Another option is to provide legal and financial mechanisms for the acquisition of open space and conservation easements in these areas.

AGRICULTURAL RESOURCES

The characteristics of the rural areas of Roanoke County have changed significantly over the last three decades, a trend that can be seen across the State. Farming has decreased from about 47,000 acres to less than 20,000 acres since 1969. The number of farms existing in the County in 1997 had dropped to half of what it was in 1969. Another noteworthy trend is that increasingly smaller part-time farms dominate agriculture in Roanoke County. Only two dairy farms and a few orchards remain. The bulk of farming is truck (vegetable) farming, cattle and hay. In almost all cases these operations are supplemented by at least one and often two outside incomes. The major farm and land owners are aging and retiring, placing them on fixed incomes in a climate of rising real estate taxes. Frequently there is no expectation that the next generation will continue farming.

The climate for forestry is similar. Forest resources are diminishing and land ownership is becoming more fragmented. This has discouraged some logging and forestry related industries and services from operating in the County.

The process by which agricultural land becomes suburban land tends to be incremental and characterized by subtle changes. The actual breaking of ground is only the conclusion of this conversion process. The principal factors that drive this farmland conversion process include: 1) the local economic viability of agriculture; 2) the loss of the critical mass of agricultural land within an area necessary to support agricultural services and markets; 3) public investment decisions for road improvements and sewer and water system construction; 4) the strength of local growth pressures and the resulting difference in land values for agricultural use and for development; and, 5) the circumstances, lifestyle preferences, and life cycles of farm families.

Suburban residents in Roanoke County are increasingly drawn to the attractions of pastoral landscapes and rural lifestyles. At first, they built “farmettes” on parcels of 5 to 20 acres serviced by private wells and septic systems. Eventually, denser development followed and the community now closely replicates the suburbs from which the newcomers fled. Continuing subdivision development will tend to drive land prices higher, making it more difficult and expensive to maintain enough land to support viable agricultural operations. Conflict is and will continue to be created between the farmers and the new residents over the smells, noise, use of fertilizers and other attributes of agriculture.

Given the nature and realities of these trends, should the County take proactive steps to preserve and protect the remaining agricultural and forestry resources? Despite these trends, there is a strong desire on the part of rural residents to maintain the rural environment, the rural life style and the rural quality of life that they have enjoyed and to preserve these things so that future generations can also enjoy them. In a broader sense, the existence of rural areas, working farms, pastoral views and open space enhance the quality of life of all residents of the Roanoke Valley. Farming is an important and critical link to our agrarian heritage and culture and provides educational opportunities for adults and children alike.

If agricultural resources have value to the community, then planning strategies and preservation techniques must be pursued that will allow farming to survive and remain financially feasible under changing economic and market trends. The challenge entering the next century will lie in community and citizen-based efforts to develop balanced, equitable and widely supported approaches to preserve the rural and agricultural areas of the County.

THE BLUE RIDGE PARKWAY

Introduction

Although the concept of parkways had been around since the mid-19th century, the Blue Ridge Parkway was one of the first rural parkways to be conceived. Its original purpose was simply to link two national parks - the Shenandoah in Virginia to the north and the Great Smokey Mountains in Tennessee and North Carolina to the south - a distance of over 469 miles. The new roadway was seen by many as an economic stimulus to the struggling southern Appalachia region and economy. The Parkway was initiated as a means of alleviating unemployment and promoting tourism. The construction of the Parkway also served as a reclamation project since much of the land along the Parkway's route was in poor condition from excess timbering operations and poor farming practices.

Construction of the Blue Ridge Parkway began in 1935 and the final section of the Parkway, at Grandfather Mountain, was not completed until 1987. For most of its length it follows the Blue Ridge of the southern Appalachian Mountains in Virginia and North Carolina. Elevation along the Parkway ranges from 649 feet above sea level to 6,053 feet above sea level.

Design of the Parkway

Although the general layout of the Parkway route had been established - a fairly direct linkage along the Blue Ridge Mountains connecting the Shenandoah National Park to the Great Smokey Mountain National Park - the design and construction route still had to be decided. In 1934 the designers of the Blue Ridge Parkway assembled in Roanoke, Virginia and established several principles to help define the themes and provide the context for the Parkway's design.

Throughout the 52 year life of the design and construction of the Parkway, these original unifying design themes have been closely followed: 1) The Parkway would pass through a wide right-of-way averaging about 100 acres per mile. This would allow for the restoration and preservation of the roadside landscape; 2) All structures, such as bridges, tunnels, park buildings, signs and site details would be characterized by a rustic simplicity so that the Parkway would harmonize with the natural and cultural environments; 3) All design elements would relate to each other in a way that provides the "complete road"; and, 4) At intervals, the linear parkway right-of-way would bulge, creating recreational parks and scenic protection.

The Blue Ridge Parkway in Roanoke County

The Blue Ridge Parkway travels for 469 miles through two states, 29 counties, three national forests and an Indian reservation. The Parkway descends from the Peaks of Otter and for nearly 27 miles travels through Roanoke County. Roanoke has the distinction of being the most urban, metropolitan stop along this motor route.

As a long, linear national park the Blue Ridge Parkway shares its boundaries with a large number of adjoining properties. The Parkway has been described as a narrow ribbon laid upon the land. As such, many of the beautiful views, pastoral scenes and vernacular landscapes observed while driving the Parkway are private lands and not protected by national park status or scenic easement. As Roanoke County continues to grow and develop, the challenge is to protect the scenic qualities of the Blue Ridge Parkway while respecting private landowners' rights to use their land. This balance can be achieved through the use of careful design guidelines and incentives to encourage sensitive site planning.

Blue Ridge Parkway Overlay District

A proposed Blue Ridge Parkway Overlay District may be one means to protect the important viewshed aspects of this resource. The National Park Service in conjunction with County staff has mapped and prioritized the significant viewsheds from the Parkway. These viewsheds are identified on the future land use maps in Chapter 7. This information could form the basis of a Blue Ridge Parkway Overlay District. Such a district would maintain the development regulations of the underlying zoning district while providing additional design guidelines and development flexibility to protect these viewsheds. This overlay district could include density bonuses to encourage cluster development outside of the viewshed areas, more stringent limitations on height of structures and more flexibility in landscaping requirements.

THE APPALACHIAN NATIONAL SCENIC TRAIL

Introduction

The Appalachian Trail (A.T.) is a 2,160 mile long public footpath traversing the spine of the Appalachian Mountains from central Maine to northern Georgia. First conceived in the early 1920s by Benton MacKaye, the A.T. was completed in 1937 largely due to the efforts of local volunteer organizations. The trail links 75 public parks and forests including 26 federally designated wilderness areas.

The A.T. is the most ecologically diverse unit of the National Park system. With inventories complete on 85% of the corridor, there have been 1472 recorded occurrences of sensitive, rare, threatened or endangered species at 402 separate sites.

Utilized by three to four million hikers annually, the trail offers everything from an afternoon's stroll to a six month through hike. The A.T. is within a days drive of two thirds of the population of the United States.

Perhaps as remarkable as the physical public resource is the system that built and maintains the trail for future generations. Locally based volunteer organizations perform the lions share of the work needed to build and maintain the footpath, overnight shelters, parking areas, bridges, and the environmental and cultural resources that are integral to the Appalachian Trail experience. Their partnership with state and federal agencies and local governments is perhaps the longest lasting, strongest and most complex public/private partnership in the nation. It has served as a model for similar arrangements across the country.

The Appalachian Trail in Roanoke County

Some of the most spectacular sections of the entire Appalachian Trail and two of its most well used destination points are found along the 17.8 miles of the trail found in Roanoke County. The trail enters the county just north and west of the famed McAfee's Knob. This dramatic outcrop of Silurian sandstone provides a 270 degree view from the pastoral Catawba Valley to the City of Roanoke. It is arguably the most photographed point on the Appalachian Trail. The trail follows Catawba Mountain, crosses the Catawba Valley rural historic district, crosses Sandstone Ridge, and ascends Cove Mountain to the popular Dragon's Tooth outcrops. Following the crest of Cove Mountain above Millers Cove, the trail leaves the county but continues to view areas within the county. The trail re-enters the county at the crest of Brush Mountain and follows along the county line, passing the Audie Murphy monument, then dropping into the Sinking Creek Valley. The trail sections from Rt. 311 to McAfee's Knob and the day-use trail to Dragon's Tooth are among the most heavily used and best loved sections of the A.T. in the entire region.

The entire trail section through the county is well known for remote rugged ridgetops that overlook some of the most beautiful and unspoiled pastoral landscapes on the A.T. The Andy Layne/North Mountain trail system runs from Scorched Earth Gap on Catawba Mountain to Lost Spectacles Gap on Cove Mountain to complete a popular 28.7 mile loop trail with the A.T., almost entirely within the county.

Two trail shelters are located within the county on Catawba Mountain. Trailhead parking lots are located on Rt.311 at the crest of Catawba Mountain, at the foot of North Mountain and on the

crest of Brush Mountain west of the Audie Murphy Monument.

The Appalachian Trail Overlay District

All of the actual footpath of the A.T. and most of the foreground viewshed within the county is in federal ownership. The trail and associated lands are primarily managed by the Roanoke Appalachian Trail Club, a non-profit volunteer organization founded in 1932, and the Appalachian Trail Conference, a trail-wide private umbrella organization with local offices in Newport, Virginia. Trail lands east of the Virginia Route 624 crossing are under the jurisdiction of the National Park Service's Appalachian Trail Park Office and lands west of that crossing are a part of the Jefferson National Forest.

A proposed Appalachian Trail Overlay District is one means of protecting the important viewsheds associated with the trail experience in the county. The County staff, in conjunction with the Appalachian Trail Conference and Roanoke Appalachian Trail Club, and with the assistance of the U.S. Forest Service and National Park Service, are in the process of mapping the significant viewsheds from the trail. This information could form the basis of an Appalachian Trail Overlay District. Such a district would maintain the development regulations of the underlying zoning district while providing additional design guidelines and development flexibility to protect these viewsheds. This overlay district could include density bonuses to encourage cluster development outside of the viewshed areas, more stringent limitations on height of structures and more flexibility in landscaping requirements.

Goal

To preserve and manage the natural, historic and scenic resources of Roanoke County in a way that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.

Issues and Opportunities

- Roanoke County citizens place a high value on the surrounding mountain landscape, agricultural and forested lands, streams, rivers, open spaces and parks.
- Although rapidly urbanizing, the County still has large rural areas where little development has occurred and limited environmental degradation has taken place.
- The County is a member of the regional Greenway Commission. While actively involved in planning and constructing an integrated greenway system, the County has not prepared a detailed feasibility study for all of the primary off-road greenways proposed in the County.

Chapter 5: Resource Preservation

- The County participates in the regional land trust through membership on the Board of Trustees and financial support. The land trust is a regional publicly-supported charitable organization providing voluntary means to promote the preservation of natural and cultural resources.
- The County participates in the regional open space planning project initiated by the Fifth Planning District.
- The County has adopted the Roanoke River Overlay District as part of the zoning ordinance. This provides a moderate level of environmental protection to this significant water resource.
- The County zoning ordinance is not an effective mechanism for protection of the natural landscape and environment. It does not prevent or even discourage development on mountainsides and ridgetops and has no tools in place for the protection of streams, wetlands and other natural features.
- Given the large land base of the County and the amount of construction activity occurring, the County requires additional monitoring and enforcement resources directed towards the control and prevention of soil erosion.
- Over the last decade, Roanoke County has seen moderate to strong residential development pressures. As more and more of the relatively flat and close-in land has been developed the economic feasibility of building on the mountainsides and ridgetops had grown.
- The County allows filling and construction in floodplain areas. Although this conforms to Federal Government minimum standards, it constrains stormwater drainage and may create a flooding hazard downstream.
- The zoning ordinance does not require nor effectively encourage open space or greenways in new subdivisions.
- VDOT road standards provide for the efficient and safe movement of traffic but do not allow or encourage innovation or creativity in subdivision design.
- The County subdivision ordinance needs to be updated and modified to reflect the policies and guidelines of this Community Plan.
- The County has developed a regional stormwater management plan but this plan does not emphasize the use of open space or greenways as a cost effective, non-engineering tool.
- The County does not restrict or monitor development in wetlands. The County depends on the Army Corps of Engineers for this but there is no “alert” mechanism in place. The system relies on the diligence of citizens to protect wetlands.
- Natural stream channels are allowed to be diverted or covered by development. Although unavoidable in a few specific instances, it does permanently alter the natural environment

and aesthetic amenity of that water course.

- The County does not have a mechanism in place to control or manage the removal and destruction of trees on private properties.
- The County participates in the land use valuation program. This program allows land owners to reduce real estate taxes on land that is set aside in agricultural, forestry or horticultural uses.
- The County has not implemented the “Recommendations for Planning” produced as a result of the historic architectural survey of 1991-92.
- The scenic viewsheds of the Blue Ridge Parkway and Appalachian Trail are under a continuous threat from development, including broadcast towers.
- Active farm and orchard land in Roanoke County are diminishing rapidly.

Objectives

- A. Require land use management policies that preserve the natural, scenic and historic environment while accommodating future growth and development.
- B. Protect the Blue Ridge Parkway, Appalachian Trail and other scenic corridors through Roanoke County.
- C. Protect critical mountainsides and ridgetops.
- D. Protect soils, aquatic life and water quality by reducing runoff and soil erosion.
- E. Reduce flooding and flood damage by protecting floodplains and wetlands.
- F. Encourage land use patterns that conserve and protect open space thereby providing wildlife habitat and recreational opportunities.
- G. Promote the use of a liveable traffic design model that values neighborhood appearance and pedestrian friendly aspects of a neighborhood street as much as the ease of traffic movements.
- H. Encourage innovation and creativity in site design and, where appropriate, greenways, parks and open space in new subdivisions.
- I. Provide incentives for the protection of forested areas on private lands.
- J. Increase participation in the land use valuation program.
- K. Increase awareness of our historic, cultural and heritage resources.

- L. Encourage design that respects the natural environment and reflects the local environment.
- M. Encourage the implementation of the Conceptual Greenway Plan.

Implementation Strategies

1. Conduct extensive public education, with assistance from the Urban Forestry Council, Valley Beautiful and local, regional and statewide land trusts, on tree preservation and protection. Coordinate this effort with VDOT, AEP, Roanoke Gas, other utilities and the Roanoke Regional Home Builders Association. (Obj. C, D, I)
2. Adopt a tree ordinance to protect, preserve and/or replace trees on private property during land development. (Obj. C, D, I)
3. Develop a county-wide “conservation and development” resource map utilizing the GIS system. Include such features as wetlands, floodplains, steep slopes, historic sites, viewsheds, habitats of endangered or threatened species and significant woodlands. (Obj. B, C, D, E)
4. Adopt a Natural Resources Overlay District to include resources such as mountainsides and ridgelines, properties within the critical viewsheds of the Blue Ridge Parkway and the Appalachian Trail, and lands that include wetlands and floodplains. Within this overlay district “conservation site design” will be mandatory allowing full density with clustering and open space requirements. (Obj. A, B, C, E, F, H, L)
5. Incorporate “conservation site design” as a by right option in all agricultural and residential zoning districts. This design technique provides a straightforward way to ensure that new subdivisions are designed around the central organizing principle of conservation. It requires the developer to identify conservation and development areas on the site and locate houses, streets and lots in a way that protects these resource features while allowing clustering and full-density. (Obj. A, C, E, F, H, L)
6. Identify mountainsides and ridgetops that should be protected and develop preservation strategies for these resources. (Obj. C)
7. Adopt policies for the siting of broadcast towers. (Obj. A, B, C, L)
8. Incorporate the design and development of the greenway system into the regional stormwater management plan. (Obj. E, H, M)
9. Allocate a percentage of any future stormwater management utility fees to the development of greenways. (Obj. E, H, M)

Chapter 5: Resource Preservation

10. Revise parking lot standards to reflect actual usage, not anticipated “worse case” usage. Encourage shared parking where feasible. (Obj. D)
11. Develop educational brochures that outline voluntary means to preserve and protect open space, forest and agricultural lands, mountainsides and ridgetops and historic resources. (Obj. B, C, D, E, J, K)
12. Adopt stormwater management techniques, such as grassy swales, that are both effective on-site control measures and aesthetically pleasing. (Obj. D, L)
13. Ensure the long-term protection of the Spring Hollow Reservoir and adjacent public lands. Study the effectiveness of various conservation strategies such as conservation easements, zoning ordinance overlay districts or other mechanisms. (Obj. A, C, D, F)
14. Revise the subdivision ordinance to reflect the policies and guidelines of this Community Plan. Encourage the donation of greenway easements when property that is included on the Roanoke County Conceptual Greenway Plan is subdivided. (Obj. F, H, M)
15. Distribute the historic resources survey forms to property owners and assist in the creation of a permanent Roanoke County Historic Resources Commission. (Obj. K)
16. Develop subdivision street standards that value salable communities, retail and pedestrian-friendly streets, and a distinctive product equally with ease of traffic movement. Consider private road systems and standards. (Obj. G, L)
17. Identify important gateways and develop gateway overlay districts to preserve scenic entrances to and views of our community. (Obj. A, B, K)
18. Work with representatives of the billboard industry to optimize the location of billboards in Roanoke County. (Obj. A, K, L)
19. Utilize the Virginia Department of Game and Inland Fisheries fish and wildlife resources and habitat’s information system. (Obj. D, F)
20. Prioritize the open space resources in Roanoke County and develop a long-term strategy to preserve, protect and manage these critical resources. (Obj. A, B, C, D, E, F, I K, M)

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21. Prepare a detailed feasibility study, as described in the Conceptual Plan, for the primary off-road greenways proposed in the County. (Obj. M)
22. Study, identify and recommend dedicated sources of funding for the County greenway system. (Obj. M)
23. Encourage the use of best management practices in the watersheds of Spring Hollow and Carvin's Cove Reservoirs. (Obj. D, E)
24. Enhance existing regulations and enforcement procedures to reduce soil runoff and erosion and provide for the protection of soils, aquatic life and water quality. (Obj. D, E)

CHAPTER 6

FUTURE LAND USE GUIDE

INTRODUCTION

The Future Land Use Guide is an important component of this Community Plan. The Guide is a policy framework for future land use decisions within the County. Used in conjunction with the future land use maps found in Chapter 7 of the Plan, the Guide serves as a reference for all citizens on the most desirable location for future land use activities throughout the county. The Future Land Use Guide also implements, to the extent possible, the design guidelines discussed in Chapter 3.

The Guide should be used by Roanoke County citizens and property owners who are evaluating alternative uses for their land and will be used by Roanoke County staff, Planning Commission and Board of Supervisors in the evaluation of requested land use amendments.

LAND USE DESIGNATIONS

The following designations are used to identify areas around the county where similar land use activities occur. The type of land uses which are desirable within each designation are also described.

In addition, this section includes land use determinants. These determinants or factors are used to evaluate requested changes to the future land use maps. The careful examination of these factors will determine which land use designation a piece of land should be in.

Conservation: A future land use area of particular environmental sensitivity due to topography, existence of unique land characteristics, conservation/open space/greenway easements, soil types or location with respect to other State or Federally preserved lands. Typical resources would include wetlands, ridgelines, mountainsides, scenic views from the Blue Ridge Parkway and Appalachian Trail, identified greenway corridors, productive agricultural lands, historical and cultural resources and threatened or endangered species habitats.

Land Use Types: Agricultural Production - The production of crops, plants, vines, trees, livestock, poultry and eggs and associated services such as soil and crop preparation, landscape and horticultural care.

Forest and Wood Products - Tree farms, forest nurseries and reforestation services.

Parks - Large regional park facilities that are designed and developed to preserve the environmentally sensitive nature of the land.

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Public Lands - Includes land that is owned by a public entity but is not an official park. Examples would be Haven's Wildlife Management Area, Spring Hollow Reservoir, Carvin's Cove watershed, Appalachian Trail, Blue Ridge Parkway, Forest Service lands and publicly owned land on Green Ridge Mountain.

Conservation Easements - Includes private lands that are protected by a conservation easement (includes scenic, agricultural, greenway and open space easements) held either by a private land trust or a State agency.

Rural Residential - Very limited, low density single-family homes generally averaging a gross density of one unit per 10 acres. Cluster developments are encouraged.

Land Use Determinants: **EXISTING LAND USE PATTERN** - Locations where unique and important natural, agricultural, historical and cultural resources exist that deserve to have the highest level of protection.

RESOURCE PROTECTION - Locations where valuable and irreplaceable resources such as open space, public water supply impoundments, rivers, streams, lakes, productive agricultural land, woodlands, critical slopes, ridgelines, historical and archeological sites and unique natural areas exist.

ACCESS - Locations that are accessible by existing improved or unimproved rural roads.

RURAL SECTOR - Locations not served by urban services.

Rural Preserve: A future land use area of mostly undeveloped, outlying lands. These rural regions are generally stable and require a high degree of protection to preserve agricultural, forestal, recreational, and remote rural residential areas.

Land Use Types: Agricultural Production - The production of crops, plants, vines, trees, livestock, poultry and eggs.

Agricultural Services - Services that support agricultural production such as soil and crop preparation, veterinary services and landscape and horticultural care.

Forest and Wood Products - Tree farms, forest nurseries and reforestation services.

Parks and Outdoor Recreation Facilities - Large regional parks and other recreation facilities that are designed to preserve environmentally sensitive lands and protect them from more intense land uses.

Rural Residential - Single-family residential generally averaging a gross density of one unit per three acres. Cluster developments are encouraged.

Rural Institutional - Limited intensity uses such as religious assembly facilities and clubs serving the local rural population base.

Mining and Extraction Operations - Those uses that locate according to the availability of natural resources. There are strict limitations on these industries in the Rural Preserve designation due to potentially harmful effects on housing, farming and resource protection and conservation areas.

Land Use Determinants: EXISTING LAND USE PATTERN - Locations where agricultural, recreational, and forestal uses are predominant and are encouraged to expand.

EXISTING ZONING - Locations where agricultural zoning is in effect.

RURAL RESIDENTIAL AND INSTITUTIONAL AREAS - Locations where limited, very low density residential and institutional uses are allowed.

RESOURCE PROTECTION - Locations where valuable and irreplaceable resources such as open space, public water supply impoundments, rivers, streams, lakes, productive agricultural land, woodlands, critical slopes, ridgelines, historical and archeological sites and unique natural areas exist.

ACCESS - Locations that are accessible by existing improved or unimproved rural roads and, to a lesser extent, rural arterial highways.

RURAL SECTOR - Locations outside the urban service area.

Rural Village: A future land use area where limited development activity has historically occurred and where suburban or urban development patterns are discouraged. These rural community and farming areas are generally in between the intense suburban development patterns already established in the County and the designated Conservation and Rural Preserve areas.

Land Use Types: Rural Housing - Low-density single-family residential generally averaging one unit per acre. Cluster developments are encouraged.

Rural Community Centers - Nonresidential uses which serve rural residents such as outdoor recreation and park facilities, religious assembly facilities, schools, fire and rescue stations and clubs.

Agricultural Production and Services - Livestock, orchards and crop productions, landscape and horticultural services, veterinary services, farm labor and farm management services. Generally including all activities that support land based uses.

Forest and Wood Products - Includes the operation of timber tracts, tree farms, forest nurseries and the gathering of forest products. Excludes sawmills and large-scale timber cutting operations.

Small Scale Commercial - Limited commercial operations that serve the local, rural community. Included would be personal services and retail convenience stores.

Rural Parks and Outdoor Recreation - Parks and recreational facilities that are designed to preserve the environmentally sensitive character of the rural landscape.

Land Use Determinants: EXISTING LAND USE PATTERN - Locations where very low density residential, institutional and limited agricultural uses have developed.

EXISTING ZONING - Locations where rural residential and agricultural zoning have been established.

RURAL RESIDENTIAL EXPANSION AREAS - Locations where small scale, very low density rural residential housing is desirable.

AGRICULTURAL - Locations where existing agricultural uses and activities are present.

ACCESS - Locations served by an existing improved rural road and, to a lesser extent, rural arterial highways.

RURAL SECTOR - Locations outside the urban service area.

Village Center: A future land use area which serves as the commercial and institutional focal point of surrounding rural residential and farming establishments. Here, the highest level of rural

land use activities may occur. By nature, the majority of commercial and institutional activities in Village Center areas are designed, scaled and marketed to best serve the product and service needs of the residents from the surrounding rural areas.

Land Use Types: Agricultural Production and Services - Services which support the surrounding agricultural community.

Parks and Outdoor Recreation - Small-scale facilities that serve the rural neighborhoods or are used for community purposes. These recreation facilities should be linked to the residential areas by greenways, bike trails and pedestrian paths.

Eco-tourism - Facilities that serve a niche market and are often outdoor, sports oriented. Designed in an environmentally sensitive way to protect the valuable natural resources of the rural areas.

Residential - Development at relatively high rural densities, generally not exceeding 6 units per acre and including single-family and two-family housing.

Rural Community Centers - Includes institutional uses such as schools, religious assembly facilities, clubs and meeting rooms that serve the needs of the surrounding rural village residents.

Convenience Retail - Establishments that provide retail goods and services to the surrounding rural village residents.

Rural Highway Retail - Small-scale, rural establishments that provide retail goods and services to the passing motorists. These uses should be clustered in a village design that complements the rural surroundings.

Land Use Determinants: EXISTING LAND USE PATTERN - Locations where commercial, institutional and low- to middle-density residential uses have developed and that are generally surrounded by rural residential settlements.

EXISTING ZONING - Locations where commercial zoning has been established.

ACCESS - Locations that are usually situated at a crossroad and are served by a rural arterial.

RURAL SECTOR - Locations outside the urban service area.

Neighborhood Conservation: A future land use area where established single-family neighborhoods are delineated and the conservation of the existing development pattern is encouraged.

Land Use Types: Single-Family Residential - Attached and detached housing at a reasonable density that is not significantly higher than the existing neighborhood. Infill lots or community re-development should be designed to be sensitive to the surrounding neighborhood but can be at reasonably higher density. New single-family residential developments should incorporate greenways and bike and pedestrian trails. Cluster developments are encouraged.

Neighborhood Institutional Centers - Uses that serve the neighborhood residents including parks, schools, religious assembly facilities, recreational and park facilities, community meeting areas and clubs. These facilities should be linked to the residential areas by greenways, bike trails and pedestrian paths.

Neighborhood Commercial - Low impact services to serve the local neighborhood that are consistent with the Community Plan design guidelines.

Land Use Determinants: EXISTING LAND USE PATTERN - Locations where limited density residential subdivisions have been platted and developed.

EXISTING ZONING - Locations where limited density residential zoning has been established.

EXPANSION AREAS - Locations where the expansion of the existing development pattern is logical.

INFILL DEVELOPMENT - Locations where infill areas complement the surrounding development pattern.

ACCESS - Locations served by a local street system.

URBAN SECTOR - Locations served by urban services.

Development: A future land use area where most new neighborhood development will occur, including large-scale planned developments which mix residential with retail and office uses. Innovation in housing design and environmental sensitivity in site development is a key objective. Clustered developments are encouraged as is the use of greenways and bike and pedestrian trails.

Land Use Types: Conventional Residential - Single-family developments in conventional lots. Includes attached, detached and zero-lot line housing options. Greenways and bike and pedestrian trails are encouraged.

Cluster Residential - Single family developments with similar gross density of conventional subdivisions but individual lot sizes may be reduced to accommodate the clustering of housing while allocating common open space. Includes attached, detached and zero-lot line housing options. Greenways and bike and pedestrian trails are encouraged.

Multi-family - Developments of 6-12 units per acre. Clustering is encouraged as are greenways and bike and pedestrian trails.

Planned Residential Development - Mixed housing types at a gross density range of 4-8 units per acre. Includes conventional housing, cluster housing, zero lot-line housing, townhouses and garden apartments. Greenways and bike and pedestrian trails are encouraged.

Planned Community Development - Planned residential development mixed with office parks, neighborhood shopping centers and supporting retail development. The majority of the development is residential with a maximum limit set on the retail land. Greenways and bike and pedestrian trails are encouraged.

Community Activity Centers - Facilities which serve the neighboring residents including parks, schools, religious assembly facilities, parks and recreational facilities and community clubs and meeting areas. These activity centers should be linked to residential areas by greenways, bike and pedestrian trails.

Land Use Determinants: PUBLIC FACILITIES CAPACITY - Locations where public facilities are adequate to handle the increased population concentration. This includes schools, parks and recreation facilities and fire and rescue facilities.

UTILITY AVAILABILITY - Locations where water and sewer services exist or are scheduled to serve the area.

ENVIRONMENTAL CAPACITY - Locations where natural land features, including topography, provide optimum opportunity for urban residential development.

ACCESS - Locations which have or can provide direct access to a major street.

URBAN SECTOR - Locations served by urban services.

Transition: A future land use area that encourages the orderly development of highway frontage parcels. Transition areas generally serve as developed buffers between highways and nearby or adjacent lower intensity development. Intense retail and highway oriented commercial uses are discouraged in transition areas, which are more suitable for office, institutional and small-scale, coordinated retail uses.

Land Use Types: Office and Institutional - Planned office parks and independent facilities in park-like surroundings are encouraged. A high degree of architectural design and environmentally sensitive site design is encouraged.

Retail - Small-scale planned and clustered retail uses.

Multifamily Residential - Garden apartments at a density of 12 to 24 units per acre.

Single-Family Attached Residential - Planned townhouse communities of 6 or more units per acre.

Parks - Public and private recreational facilities. These facilities should be linked to residential areas by greenways, bike and pedestrian trails.

Land Use Determinants: EXISTING LAND USE PATTERN - Locations where limited commercial uses exist.

 EXISTING ZONING - Locations where commercial zoning exists.

 ACCESS - Locations where properties have direct frontage and access to an arterial or major collector street.

 SURROUNDING LAND USE - Locations which serve as a logical buffer strip between conflicting land use patterns.

 ORIENTATION - Locations which are physically oriented toward the major street.

 URBAN SECTOR - Locations served by urban services.

Core: A future land use area where high intensity urban development is encouraged. Land uses within core areas may parallel the central business districts of Roanoke, Salem and Vinton. Core areas may also be appropriate for larger-scale highway-oriented retail uses and regionally-based shopping facilities. Due to limited availability, areas designated as Core are not appropriate for tax-exempt facilities

Land Use Types: General Retail Shops and Personal Services - Planned shopping centers and clustered retail uses are encouraged. These centers should incorporate greenways, bike and pedestrian trails into their designs and link them to surrounding neighborhoods.

Office and Institutional Uses - Planned developments are encouraged.

Limited Industrial Uses - Planned uses in areas designated as economic opportunity areas.

Land Use Determinants: EXISTING LAND USE PATTERN - Locations where commercial uses have been developed or will likely be developed.

EXISTING ZONING - Locations where commercial zoning exists.

ACCESS - Locations served by an arterial street system.

POPULATION CENTER - Locations within close proximity to the projected population concentrations.

URBAN SECTOR - Locations served by urban services.

Principal Industrial: A future land use area where a variety of industry types are encouraged to locate. Principal Industrial areas are existing and planned regional employment centers and are distributed throughout the county, convenient to major residential areas and suitable highway access. Due to limited availability, areas designated as Principal Industrial are not appropriate for tax-exempt facilities.

Land Use Types: Agricultural - Industries which involve the manufacturing, storage, marketing and wholesaling of agricultural products. These industries may also be located outside of the Principal Industrial areas, within the rural designations, where agricultural skills may be found.

Small Industries and Custom Manufacturing - These industries typically serve a local market and may involve the on-site production of goods by hand manufacturing.

Mining and Extraction - These facilities locate according to the availability of natural resources.

Industrial - Conventional freestanding industrial uses, warehouses, wholesalers, storage yards.

Industrial Parks - Large tracts of land that are subdivided, developed and designed according to a unified plan. These parks are employment centers and may include mixed land uses including supporting retail services. These types of industries are encouraged to develop in Principal Industrial areas. Planned industrial parks should incorporate greenways, bike and pedestrian paths into their designs and link these features to surrounding neighborhoods where appropriate.

Land Use Determinants: EXISTING LAND USE PATTERN - Locations where industry has historically developed.

EXISTING ZONING - Locations zoned industrial.

ECONOMIC OPPORTUNITY AREAS - Locations identified by Roanoke County as an economic opportunity area.

EMPLOYMENT CENTERS - Locations where labor-intensive industries exist.

TOPOGRAPHY - Locations that can be developed in an environmentally sensitive manner and that are outside of the designated floodplain.

RESOURCE PROTECTION - Locations that can be developed in such a way as not to threaten valuable natural resources.

WATER AND SEWER SERVICE AND SUPPLY - Locations where water and sewer service exist or can be provided in the near future.

ACCESS - Locations served by an adequate public street system that does not direct traffic through existing residential neighborhoods.

TRANSPORTATION CENTERS - Locations within close proximity to rail, airport and major street systems.

URBAN SECTOR - Locations served by, or in close proximity to urban services.

LAND USE POLICIES

The following land use policies apply to all land use designations.

GENERAL

1. Act proactively to manage growth. Encourage and direct growth toward those areas of the County that can support it with the appropriate and necessary infrastructure, facilities and services and discourage development where the infrastructure and transportation system cannot support it.
2. Encourage sustainable economic growth that enhances the quality of life and fosters economic health.
3. Encourage land use development patterns that reflect community values and desires. Discourage land consumptive development patterns.
4. Allow flexibility in site design to encourage the preservation of unique natural resources and open space.
5. Recognize the uniqueness of our community. Work actively to protect those features and characteristics that distinguish Roanoke County from every other community.
6. Use high quality architectural features and character in addition to creative landscape design to develop sites that are sensitive to the environment and respect the unique land features of the site.

RESOURCE PRESERVATION

1. Prevent or discourage land development that will destroy the County's valuable natural resources including ridgelines, mountains, floodplains, wetlands, scenic vistas and water quality. Develop incentives that will make this policy more palatable.
2. Encourage the preservation of agricultural lands. These farms have economic, educational, open-space and cultural value.
3. Encourage the preservation of historic and cultural resources in the County. Recognize the importance these features and sites have in the quality of life and collective history of County citizens.
4. Use creative and flexible site design techniques to protect natural resources while allowing reasonable densities.

DESIGN

1. Implement, through the rezoning process, design guidelines for all new developments to encourage architectural and site design features that enhance the surrounding community and work in cooperation with the topography and land features. Provide incentives where appropriate to facilitate this process.
2. Encourage planned residential, commercial and industrial centers that utilize coordinated access points, parking and signage and common design themes.

NEIGHBORHOODS

1. Recognize that because of the suburban nature of Roanoke County, most citizens identify more closely with their own neighborhoods than with the County as a whole.
2. Assist neighborhoods in promoting their own identities and forming neighborhood civic leagues.
3. Preserve the stability of residential neighborhoods by discouraging the intrusion of incompatible uses.
4. Recognize that in order to discourage sprawl and protect rural lands and natural resources, some reasonable increase in housing density may be necessary as infill development and re-development occurs.
5. Encourage the maintenance and enhancement of older neighborhoods, recognizing that these homes provide a viable source of affordable housing to the community.
6. Design traffic circulation patterns so that traffic is routed around rather than through residential neighborhoods whenever feasible. This policy is not meant to encourage cul-de-sacs but rather to examine the use of more narrow neighborhood streets, grid patterns, etc. to protect County neighborhoods from cut-through traffic.

COMMUNITY FACILITIES

1. Continue to support the concept of neighborhood schools and recognize their importance as a focal point of existing, stable neighborhoods.
2. Encourage the use of school facilities for multiple purposes including community meeting places, recreational facilities and open space.

3. Recognize the impact that large residential developments have on community facilities, including schools, parks and police and fire services. Consider the use of impact fees and proffers to offset some of these costs.
4. Promote regional cooperation in the provision of all community services including public safety, libraries, schools, parks and utilities.

TRANSPORTATION

1. Ensure that County citizens and staff have the opportunity to participate in transportation planning at the initial stages of plan development.
2. Require that transportation plans consider the viability and economic feasibility of alternative modes of transportation including greenways, bike paths, sidewalks and walking trails.

OPEN SPACE

1. Prioritize the open space resources of the County and develop implementation strategies for preserving and protecting these valuable resources.
2. Encourage the preservation of agricultural lands. These farms have economic, educational, open space and cultural value.
3. Encourage private property owners of large tracts of open space lands to preserve these properties using tax incentives.
4. Participate and support the Western Virginia Land Trust in its endeavors to preserve the natural resources of Roanoke County.

GREENWAYS

1. Greenways and greenway easements should be incorporated into new residential subdivisions and office and industrial parks.
2. New road construction and widening of existing roads should include serious consideration of greenways and bikeways and their associated benefits and costs.
3. Provide for the construction and maintenance of greenways by incorporating them into the Department of Parks and Recreation's park system with adequate

funding.

ECONOMIC DEVELOPMENT

1. Create an effective business environment which fosters the growth and prosperity of existing business and industry.
2. Seek new business development and investment in Roanoke County in areas planned and designated as economic opportunity areas.
3. Develop and implement plans and programs to attract tourists to Roanoke County.
4. Recognize that the scenic beauty of the Roanoke County area is an essential ingredient in the tourist experience. Support efforts to preserve and protect these valuable natural resource features.
5. Create an effective mechanism so that the County can work together with citizens and civic associations to develop or preserve their community in its economic and social dimensions.
6. Encourage the diversification of the County economy.
7. Provide adequate land for commercial and industrial growth while minimizing the impacts on residential neighborhoods and natural resources.
8. Recognize that developable land is in low supply and encourage the re-use, re-development and occupancy of existing, vacant commercial space rather than developing additional land.
9. Recognize that County citizens desire and support economic growth, even in close proximity to their neighborhoods, when the developments are carefully designed, the buildings have aesthetically pleasing and site appropriate architecture, and creative site design elements that are sensitive to surrounding neighborhoods, are utilized.
10. Encourage the development of greenways, bike trails and pedestrian paths in all new commercial and industrial park developments.

CHAPTER 7

PLANNING AREA ANALYSIS

INTRODUCTION

This section of the Community Plan presents the future land use maps for each community planning area in Roanoke County. In addition, this section summarizes the results of the neighborhood council meetings including the consistent themes that occurred in each of the neighborhood council meetings and the community values that were expressed at each of the meetings. These themes and values are reflected throughout this document and were used, to the extent possible, to develop the future land use maps for each neighborhood planning area. The detailed description and results of this process are available in the *Citizen Participation* volume of the *Roanoke County Community Plan*.

Upon adoption of the *Roanoke County Community Plan*, it is anticipated that the County will initiate the development of neighborhood specific community plans. The results of the visioning and community planning processes will be used by County staff and citizens to provide guidance in the development of these plans.

COUNTY-WIDE NEIGHBORHOOD THEMES AND CONCERNS

This section provides a summary of those issues which were **consistently identified** by the neighborhood councils across the entire County. Many ideas and suggestions were brought up by the neighborhood council members. Only those issues that were consistently identified by the councils are described below. Individuals interested in greater detail should refer to the summaries for each community found in the *Citizen Participation Volume* of the *Roanoke County Community Plan*.

These issues, as they are written here, are taken virtually “word for word” from the neighborhood council meetings.

LAND USE

Design Themes

- New development should incorporate a high standard of design including the following design elements: appropriate architecture, landscaping and tasteful signs.
- The use of planned communities needs to be encouraged for all new developments in the County. Such planned developments should have design standards in relation to tree preservation, trails, parks, and traffic circulation.

- Incompatible land uses should be appropriately buffered from adjoining land uses. Buffering should include the use of existing vegetation, topography, and landscaped areas designed to appear as part of the natural landscape.
- The preservation of trees is an important aspect in the approval of new developments.
- There should be community participation in the designs for large, new developments within the community.

Enforcement Themes

- Zoning laws pertaining to junk cars, garbage and refuse are enforced on a complaint basis. As a result, there is a perception that zoning laws are not strictly enforced or that these laws are not strong enough. To conduct systematic inspections of property for zoning compliance will require additional staff resources.
- The County should explore the use of civil processes to provide stiffer penalties for littering and illegal dumping.
- It will require diligent work to clean up properties that are perceived to be eyesores. Such efforts will require an increase in fiscal resources for these types of problem areas.

Public Involvement/Communication Themes

- The development community has too much influence and there is the perception that many of the land use decisions have been made prior to public hearings.
- Input from citizens should be solicited in all rezoning decisions. Such involvement would include community meetings and public participation in site design and/or layout.

Plan Policy Themes

- Plan and implement infrastructure improvements to be completed in conjunction with or prior to new developments being placed in the community.
- Provide incentives for the redevelopment of existing commercial and industrial structures. Such incentives need to be linked to good paying, high-tech jobs.
- Allow for flexibility in the zoning ordinance so that small scale commercial services and restaurants can be located in community/village centers.

- Develop a balance across the County between industrial and commercial development and residential development so that each community has a fair share.
- Develop corridor plans for the major roads leading into the County, work with adjoining localities so as to have consistent, compatible land uses.
- Ensure a balance in providing incentives to small, as well as large, businesses.
- Water and sewer service is a major tool to manage growth.
- Develop flexibility in zoning laws so that existing facilities may expand.
- The preservation of historic structures and/or the designation of historic districts should be encouraged where applicable.

PUBLIC FACILITIES

Regional Cooperation Themes

- Maintain and improve the intergovernmental cooperation among the localities within the Valley. Such cooperation includes fire/rescue services, police services and library services. Expansion of these cooperative efforts should include water/sewer services, stormwater management, transit, parks/recreation and development procedures.

Transportation Themes

- Examine and cooperate for the provision of limited mass transit service to those areas of the County that can support it. In recent studies these areas are the more urban regions of the County lying close to Roanoke City's corporate limits.
- Include the planning of bike lanes in the development of transportation improvement plans and other planning documents of Roanoke County.
- Plan for and provide pedestrian access in the more developed portions of the County.
- Work with VDOT to expand the resources available to improve the width and maintenance of roads in Roanoke County. Such efforts should include better maintenance of road culverts, shoulders, curbs and gutters.
- The installation of turning lanes and traffic control devices at critical intersections will also improve traffic flow as well as safety for roads in the County.
- Center lines and edge lines are needed on many secondary roads.
- Expand major County roads to improve the capacity as well as the safety for existing and

anticipated traffic volume.

Educational Themes

- The physical space and instruction in the County's schools needs to be expanded and improved.
- The impact of every new development upon the school system needs to be evaluated. The developers need to be financially responsible for the improvements required as a result of their development.
- The technical training program needs to be expanded for those students not wishing to enter college. A highly qualified, technically skilled, work force will be an asset in attracting new industry to the County.
- Library services need to be expanded in the rural areas of the County. Such expansion should include new branch facilities as well as upgrading the existing branches in the Mount Pleasant and Bent Mountain areas.

Utility Service Themes

- Meet the needs of current residents by providing water and sewer service prior to servicing new development.
- Implementation of the stormwater management practices will aid in the reduction of stream flooding.

Recreational Themes

- Expand and provide better maintenance of park facilities.
- Include the addition of gymnasiums and other lighted, recreational facilities when school improvements are planned.

Public Safety Themes

- Develop and implement a schedule for the improvement of fire and rescue buildings/facilities.
- The use of dry hydrants in rural areas provides a valuable asset in fire suppression.

- The presence and visibility of police patrols in neighborhoods provide the residents with an additional level of security. Increasing police patrols will improve the residents' sense of security.
- Additional resources need to be used to expand emergency services and to reduce response times.

RESOURCES

Greenway Themes

- All localities in the Valley should coordinate to provide for the protection of environmental resources, such as Virginia's Explore Park, Roanoke River, Blue Ridge Parkway, Appalachian Trail and greenways.
- Greenways are important for recreation, tourism and economic development efforts.
- Greenways also help in the management of stormwater and flood waters.
- Adoption and implementation of the Valley Greenway Plan for the County will lead to increased recreation opportunities as well as improved stormwater management.

Ridgeline Protection Themes

- Utility and communications structures should not be placed on the ridgelines.
- The scenic beauty of this area contributes to its quality of life and preserves property values. Limits on the extent of mountainside and ridgeline development will help preserve the scenic beauty of the County.
- Mature trees need to be preserved through the County's development regulations.
- The use of best management practices (BMPs) in all logging operations need to be required in the County's ordinances. Such provisions include a pre-harvest and post harvest plan, a re-forestation plan, road specifications, and protection of environmentally sensitive areas.

Water Quality Themes

- The use of BMPs needs to be increased to preserve and enhance the water quality of the County's streams and creeks.

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- Strengthening and enforcement of the erosion and sediment control measures will protect and enhance water resources in the County.

Quality of Life Themes

- Provide incentives and/or requirements for the preservation of the historic structures in the County. Preserve the architectural character of historic areas and structures.
- Commercial, industrial, and residential development need to be balanced with the preservation of agricultural practices and rural lifestyles in Roanoke County.

FUTURE LAND USE MAPS AND COMMUNITY VALUES, KEY RESOURCES AND GENERAL POLICIES

Following is information gathered at each neighborhood council meeting on general community values, key community resources and general policies regarding natural resource, land use and public facility issues. As in the previous section, these comments are taken virtually word for word from the council meetings.

The Future Land Use maps for each community planning area are also presented in this section.

BACK CREEK - FUTURE LAND USE MAP

UNDER CONSTRUCTION

BACKCREEK COMMUNITY PLANNING AREA

Community Values

- The rural, pastoral views of the Back Creek area, with the Poage Farm being the focus of these views.
- The rural character associated with this area is an important quality to protect and preserve.
- All new developments need to respect these values and enhance them through the use of landscaping, building design and signage.

Key Resources

- The views of Mount Chestnut, Masons Knob, Bent Mountain and the other ridgelines as seen from U.S. Route 221.
- The red bud trees lining the roadways and creeks in the Back Creek community.
- The historic buildings and sites in the Back Creek community, such as Harris House, Poage Farm, Jakes Garage, etc.
- The views from the “Horseshoe Curve” along U.S. Route 221 and the Blue Ridge Parkway.
- The land to the rear of the Back Creek Elementary School is an important resource and should be reserved for educational purposes.

General Policies

Natural Resources

- Prevent development on sensitive environmental and natural hazard areas which would endanger the environment or the development.
- Recognize, respect, and work with private property owners in order to preserve the rural lifestyle and protect the rights of property owners.
- Continue and expand the land use assessment program to promote the preservation of agricultural and forestal uses of land.

- Creation of greenways in the community will provide a method to preserve open space as well as offering safe walking and biking facilities.

Land Use

- Require both residential and commercial developers to use design principles that mitigate the impacts of the new development on adjacent uses. These design principles should enhance and protect the rural lifestyle of the community.
- Permit the development of small-scale commercial uses constructed in a planned commercial center for the community.
- Prevent the use of strip linear commercial development along the U.S. 221 corridor in the Back Creek community. This type of development has large un-screened parking areas, many access points to the main road, numerous detached buildings of varying architecture, and high light poles adding light pollution to the evening sky.
- Work cooperatively with VDOT to limit the requirements for small scale cottage businesses to operate in relation to transportation improvements required for access to the public road.
- Encourage and continue to permit the use of accessory apartments in conjunction with agricultural operations as supplemental income sources for agricultural operations.
- Maintain the low density of single-family homes in the Back Creek community.

Public Facilities

- Support and encourage the upgrading of U.S. Route 221 to create a safe roadway for the community.
- Extensions of utility service should be conducted at the same time as the improvements to U.S. Route 221. However, such extensions should be made only after a careful evaluation of all the impacts which would be caused by the extensions. Additionally, community participation is a vital key to this evaluation process.
- Provide for street lights at key intersections in the community, such as in front of the elementary school.
- Promote increased support for the rescue squad and fire department in relation to providing full-time staff resources during the day.
- Continue the use and support of citizen watch groups working in cooperation with the County's Police Department.

BENT MOUNTAIN- FUTURE LAND USE MAP

UNDER CONSTRUCTION

BENT MOUNTAIN COMMUNITY PLANNING AREA

Community Values

- The residents of the Bent Mountain community expressed a strong desire to manage growth instead of preventing it. Managing growth means decisions will be made in relationship to the carrying capacity of the land as reflected in the Community Plan.
- The community is proud of its many historic homes, farms, open spaces, and churches. Preserving this way of life is of vital importance to people of this community.
- The sense of community is an asset for the residents of Bent Mountain. In order to preserve and enhance this feeling, the residents desire to be actively involved in development decisions affecting their community.
- The community wants all new development proposals to have the proper design guidelines so as to protect the lifestyle and natural setting on the mountain while also promoting and enhancing a sustainable village center for the residents of Bent Mountain.

Key Resources

- The plateau area and meadow on the top of the mountain serve as the gateway to the community.
- Numerous historic buildings and sites are located on the mountain.
- The views and overlooks from the Blue Ridge Parkway and other scenic vistas along roads in the community.
- The entrance to the Blue Ridge Parkway at the Floyd County line provides a second gateway into the community.

General Policies

Natural Resources

- Promote the prevention of groundwater pollution and the remediation of any existing groundwater pollution in the community.
- Develop guidelines and base future decisions in such a way as to create a sustainable

community for our children and grandchildren while preserving our resources and rural lifestyles.

- Ensure that land will be reserved and/or acquired for future parks and trails for the community.

Land Use

- Ensure that the residents of Bent Mountain are empowered to shape their own community. In so doing they need a commitment from the County to promote an open and clear line of communication in relation to development decisions which affect their community.
- Guide future development into an efficient and serviceable form which is protective of the community's predominantly rural character.
- Provide the means for the residents of Bent Mountain to clean up sites in the community which are perceived as eyesores.
- Ensure that the design and scale of all future development shall be in harmony with the rural character of Bent Mountain. Buildings of different architectural design should be made compatible through the use of screens, landscaping, buffers, site breaks, and materials.

Public Facilities

- Retention and expansion of the Bent Mountain Elementary School are encouraged to provide an anchor to the community. This will also serve to maintain the sense of community that exists on the mountain.
- To further enhance the sense of community, expansion of the community center and library is recommended by the residents of Bent Mountain.
- To preserve and acquire land for future parks and trails are a major desire of the community.

BONSACK - FUTURE LAND USE MAP

UNDER CONSTRUCTION

BONSACK COMMUNITY PLANNING AREA

Community Values

- Preservation of the views of the mountains and ridgelines from this community is a value deeply held by the residents.
- The numerous historic buildings and sites provide a tie to the historic and cultural roots of the community. The preservation and enhancement of these aspects are vital to the residents of this community.
- The U.S. Route 460 corridor needs to have a unified development plan in conjunction with Roanoke City, Roanoke County and Botetourt County.
- Prevent the typical strip commercial/industrial development along U.S. Route 460. Instead require that commercial/industrial developments be developed in a planned or campus-like setting providing nodes of development along the corridor.

Key Resources

- The protection of viewsheds from the Blue Ridge Parkway, Summit Ridge, Stewart's Knob, Lowe's Farm, Seibel's Farm, Bonsack Park, and Samuel's Gate are assets for the community.
- The preservation of the Cox Trout Farm and Glade Creek is vital for the community.
- The enhancement and preservation of the historic character of the "Village of Bonsack" are a critical resource for the community.

General Policies

Natural Resources

- Require that all new developments are sensitive to the preservation, protection and enhancement of the viewsheds from the Bonsack community. In so doing, require higher standards of design which will minimize the visual impact of development and promote innovative methods of site planning.
- Acquire land for the establishment of a greenway providing critical linkages to shopping, schools, parks, libraries and homes for the residents of the community.
- Work cooperatively with adjoining jurisdictions, private landowners, and State and

Federal agencies to preserve and protect significant natural, historic, and cultural features in the Bonsack community.

Land Use

- Promote the use of planned commercial developments and/or nodes of commercial development along the U.S. Route 460 corridor. These developments would offer extensive landscaping, appropriate and tastefully designed signs and provide buildings which have a unified architectural design.
- The appropriate balance between residential, commercial, industrial, and agricultural land uses is a key to Bonsack becoming a sustainable community.
- Explore the opportunities to create a Historic District in the “Village of Bonsack,” which would promote preservation as well as economic development through heritage tourism.

Public Facilities

- Construction of the Bonsack Elementary School is strongly encouraged as an anchor to the community.
- Assure that emergency ingress and egress is provided for in all new developments. Support the provision of additional resources for these services as required with additional development in the community.
- Maintain and enhance the facilities available at the Bonsack Park while monitoring locations for additional park sites within the community.
- Explore the potential of developing alternative transportation routes to relieve the traffic congestion and improve the safety of U.S. Route 460, such as an eastern circumferential highway.

CATAWBA - FUTURE LAND USE MAP

UNDER CONSTRUCTION

CATAWBA VALLEY COMMUNITY PLANNING AREA

Community Values

- The view from the top of the mountain along Virginia Route 311 is most important. The preservation of that view is a critical value to the community.
- All existing and future businesses in the community should strive for appropriate landscaping, building design and signage to maintain the rural character of the valley.
- Any new development that may come to the valley should strive to protect and enhance the rural character of the community.

Key Resources

- The Appalachian Trail is a key resource for the community.
- Dragon's Tooth, McAfee's Knob and the ridges along Fort Lewis mountain are key resources to the Catawba valley.
- The historic properties and sites in the community, along with the headwaters of the Roanoke River and Catawba Creek, are important resources to the community. These resources need to be preserved and enhanced.
- The country inns and bed and breakfasts located in the valley are key resources for the community.

General Policies

Natural Resources

- Preserve sensitive wildlife habitats (flora and fauna) and natural hazard areas which would endanger the environment or the development itself.
- Maintain and improve the groundwater quality of the valley.
- Protect agricultural land and other rural areas of the valley for their economic and open space value.
- Work cooperatively with private landowners, Western Virginia Land Trust and other

interested parties to preserve the natural features of the valley such as ridge lines, scenic vistas, and open space.

- Continue the use and expand the land use assessment program to promote the preservation of agricultural and forestal uses of land.

Land Use

- Preservation of the rural character of the valley is the major objective for the residents in the community.
- Work cooperatively with Virginia Tech, the State and other agencies to preserve and protect the open space associated with the Virginia Tech Farm.
- Use of a community design process for any future uses of the VA Tech Farm is imperative to the residents of the community.
- Improve and expand communication between the county government and the citizens of the valley.
- Maintain the low density of single-family housing in the valley.
- Continue to permit accessory apartments in conjunction with agricultural operations as income streams for farming operations.
- Encourage and support the creation and growth of small, custom-manufacturing operations/cottage industries in the valley.

Public Facilities

- Improve fire protection services to the residents of the valley through various methods, such as installing more dry hydrants in the community.
- Support the maintenance and improve the safety of the existing road network.
- Increase the parking capacity of the commuter parking lot to reduce the traffic flow on VA Route 311.
- Protect the valley from major transportation improvements, such as new interstates or freeways.

CAVE SPRING - FUTURE LAND USE MAP

UNDER CONSTRUCTION

CAVE SPRING COMMUNITY PLANNING

Community Values

- Preservation of the Blue Ridge Parkway and the associated scenic vistas from the Parkway is important for the community.
- Development and maintenance of park facilities are of vital concern to the Cave Spring community.
- Commercial and industrial developments that are developed in campus-like settings with compatible architecture, open space, retention of natural vegetation and extensive landscaping of parking lots are of vital importance to this community.
- Achieve a balance in preserving natural, cultural, and historic resources and allow for quality residential, commercial, and industrial development.
- We have a right to the quality of life that this community offers, but we also have a responsibility to contribute to that quality of life.
- The attraction of corporations that provide white collar employment opportunities is fundamental to the residents of Cave Spring.

Key Resources

- To maintain and enhance the commercial core in and around the Tanglewood Mall area. Preservation of this core area is vital to the community becoming a sustainable area and preserving the overall property values of the community.
- The ridgelines that encircle the community and are located along the Blue Ridge Parkway provide a sense of place for the residents of the community.

General Policies

Natural Resources

- Promote the development of uses which are compatible with the environmental constraints present on the site. Use the natural environmental constraints as an element of design when building facilities for commercial and industrial purposes.
- Work cooperatively with private property owners and State and Federal agencies to

protect, preserve, and enhance the vistas and ridgelines of the community.

- Preserve and protect the mountain ridges surrounding the Cave Spring community. The scenic beauty of the area has attracted many of the businesses to the community. If these vistas are not protected then these businesses may move to other places.

Land Use

- Require that all future developments be planned unit developments (PUD). Increased density and/or intensity of development may be justified based upon site design considerations.
- Implement a tree preservation/planting program for the VA Route 419 corridor as well as for new developments.
- Develop and implement design guidelines in the County's development ordinances that require extensive landscaping, compatible architectural designs, small tasteful signage, and buffers between incompatible land uses.
- Generate and set in motion a program that will provide assistance to people in regards to the maintenance of older housing the community.

Public Facilities

- Acquire new as well as develop/maintain existing park facilities in the Cave Spring community.
- Ensure that adequate public facilities are in place or planned to be constructed in conjunction with future development proposals, such as schools, parks and transportation facilities.
- Improve school facilities and curriculum to provide for high quality facilities and educational programs for our children.

CLEARBROOK - FUTURE LAND USE MAP

UNDER CONSTRUCTION

CLEARBROOK COMMUNITY PLANNING AREA

Community Values

- This is a close-knit community which is centered around the elementary school that many generations of the community have attended.
- There is a definite rural character associated with living in the Clearbrook community while it is only minutes away from the services and activities of the urbanized areas of the County and Roanoke City.
- The rural landscape and views of the ridges and valleys are important to the residents of the community.

Key Resources

- The scenic quality of Back Creek is a major asset to the community.
- Historic structures and sites located throughout the area provide a link to the historic and cultural traditions of the community.
- The Blue Ridge Parkway and the views associated with it are irreplaceable resources for the community.
- Clearbrook Elementary School is a vital resource and link to the community's past traditions.

General Policies

Natural Resources

- Preservation of the rural character and agricultural practices needs to be maintained into the future.
- Development should be centered around the "Village of Clearbrook" area within the community.
- Prevent development from disturbing the sensitive environmental and natural features of the community, such as ridgelines and Back Creek.

Land Use

- Discourage traditional strip commercial/industrial development patterns, which have multiple access points, large parking areas, and numerous architecturally unrelated buildings.
- Development of businesses in and around the “Village of Clearbrook” should be promoted where landscaping, building design, signs, and parking lots can be designed to be aesthetically appealing and compatible with rural character.
- Assisted-living facilities, which have proper site design with ample open and/or green space around the facility, would be a good industry for this community.
- Ensure the quality of future development by providing reasonable guidelines which allow for a variety of housing types and limited, small-scale, commercial businesses to serve the needs of the citizens of the community.

Public Facilities

- Improve the safety of U.S. Route 220 by straightening curves and installing crossing/turning lanes and traffic signals at major intersections.
- Upgrade the substandard secondary roads in the community to provide sufficient road widths.
- Expand utility service for the existing residents due to the large number of contaminated wells in the community. However, expansion of utility services creates development pressures on rural undeveloped land.
- Create compatible economic development opportunities for the “Village of Clearbrook” by expansion of utility services.
- Mitigate the flooding associated with Back Creek and other streams, helping to preserve or improve the water quality of these surface waters through the use of stormwater management techniques.
- Work cooperatively with private land owners to dedicate park land in advance in locations where neighborhood parks are needed, offer incentives related to future development potential for their remaining lands.
- Expand and further develop Clearbrook Elementary School Park located in the “Village of Clearbrook.”

GLENVAR - FUTURE LAND USE MAP

UNDER CONSTRUCTION

GLENVAR COMMUNITY PLANNING AREA

Community Values

- The community respects its numerous historic sites and links to its culture as represented by these sites.
- The views of Poor Mountain and Fort Lewis Mountain from U.S. Route 460/11 are cherished by the community.
- The preservation of neighborhoods and respect for the rights of private property owners are important to this community.
- The community values an open and clear line of communication with the county officials in relation to future plans developed by the County.
- The Glenvar community desires to have more investment by the County to provide for needed infrastructure and redevelopment of the U.S. Route 460/11 corridor.

Key Resources

- Green Hill Park and Equestrian Center/Trail are critical resources for the community.
- The Roanoke River, its tributaries, and wayside are important resources for this community.
- Other public facilities such as the schools, library, Spring Hollow Reservoir, and emergency services were viewed as resources for the community.
- The views of the ridges along Poor Mountain are valued by the residents in Glenvar.
- The commercial corridor of U.S. Route 460/11 is a resource to the community.

General Policies

Natural Resources

- Prevent development from destroying the views of the mountains in the Glenvar community and discourage development from occurring on environmentally sensitive and natural hazard areas within the community.
- Develop plans and policies to address the mitigation/control of flooding along the base of

Fort Lewis Mountain and the Roanoke River.

- Develop and implement policies that prevent the construction and/or mitigate the impact of communication and transmission towers along the ridges in the Glenvar community.

Land Use

- Develop an open and clear method of communication with the residents of the community in relation to future land use decisions which involve and respect the desires of the citizens.
- Generate plans and policies which balance design requirements and community standards with the rights of private property owners.
- Develop a community plan which balances the needs of future industrial and commercial development with residential development and open space preservation.
- Increase requirements for developments to have planned settings with landscaping and design standards that will improve the looks of the community.

Public Facilities

- Increase the capacity of U.S. Route 460/11 throughout the Glenvar community as a first priority before any additional development initiatives are proposed.
- Develop programs that allow elderly citizens to have access to County utility services at a lower cost than other users of these services.
- Continue to improve and expand the cooperation with the City of Salem in the provision of public services to the residents of Glenvar.

HOLLINS - FUTURE LAND USE MAP

UNDER CONSTRUCTION

HOLLINS COMMUNITY PLANNING AREA

Community Values

- The well balanced mix of business and residential development in the Hollins community plays an important role in the residents' high quality of life.
- There are many historic sites in the community that play a key role of providing the links to the past agricultural traditions of the community.
- Views of Tinker and Read Mountains are important to the residents of the community.
- Redevelopment of the Williamson Road area is improving the image of this section of the community. This project needs to be continued and appropriately expanded.

Key Resources

- The numerous historic homes with ties to the past farming traditions of the community.
- The views of Read and Tinker Mountains.
- The educational resources located in the community, including the public schools, the library, and Hollins University.
- The well-developed parks and recreation areas are important resources to the Hollins community, such as Waldron Park, Brookside Park, and Carvins Cove.

General Policies

Natural Resources

- Respect the viewsheds of Read and Tinker Mountains from the Hollins community by requiring future communication and transmission towers to be unobtrusive and aesthetically pleasing.
- Manage timber harvesting on ridgelines through the use of the guidelines published in the *Virginia Loggers Guide*. Selective harvesting should be used to preserve the viewshed and conserve soil resources on mountain sides.
- Prevent high density development on sensitive viewsheds and environmental areas which would endanger the viewshed or environment.
- Use the natural topographic features in the design of developments and promote the use

of earth-tones buildings built on the sides of mountains.

Land Use

- Develop and implement economic development strategies which attract businesses and industries that provide a variety of employment opportunities and offer competitive compensation to their employees.
- Require higher development standards for all types of development in relation to landscaping, signage, building design, and parking lots. All new development should use the natural topography as a design element of their site.
- Preservation of existing vegetation and trees should be incorporated into the County's development regulations.
- Expand the redevelopment initiatives associated with the Hollins Village Project into other areas in this community and the County.
- Preserve, promote, and enhance the mixture of residential and business development in the community. Encourage the development of commercial nodes which provide landscaping, buffers, and screens between incompatible land uses.
- Develop policies to promote and encourage small business which will result in developing a more sustainable community.

Public Facilities

- Provide a transportation network that will prevent congestion and promote the conservation of resources via alternative modes of transportation for the residents of the community. Such alternatives would include the implementation and construction of greenways that link homes, schools, libraries, and shopping areas.
- Enhance and maintain the existing park facilities within the community and install more park facilities on existing school sites.
- Preserve the integrity of existing residential neighborhoods by acquiring additional land to provide space for future public facilities such as schools and parks, which will provide the foundations for the community.

- Develop policies and plans to address the management of stormwater and prevent flooding.
- Increase the visibility of police patrols through the use of community policing procedures and devote more resources on the concentration of crime prevention and/or personal protection services.

MASON'S COVE - FUTURE LAND USE MAP

UNDER CONSTRUCTION

MASONS COVE COMMUNITY PLANNING AREA

Community Values

- The residents of the community view Havens Wildlife area as a very important asset.
- The views of the ridgelines along Catawba Mountain, Fort Lewis Mountain, Brushy Mountain and McAfee's Knob are important to the community.
- The scale of public buildings in relation the community provides a sense of place.
- The gap between Brushy Mountain and Catawba Mountain forms a gateway into the community, enhancing the sense of place felt by many residents.

Key Resources

- The rural character of this area is an important quality to preserve and enhance.
- The many natural resources located within this community, such as Masons Creek, Havens Wildlife area, Appalachian Trail, Whispering Pines Park, etc.
- The views of the ridgelines as one drives along the old country roads in the community.
- The school and fire house are valuable resources to this community.

General Policies

Natural Resources

- Prevent development along scenic ridgelines that would destroy significant vistas and endanger the environment of the community.
- Expand the land use assessment program to be used in the protection of scenic vistas and mountainsides.
- Prohibit the use of ridgelines as locations for communication and transmission towers.
- Improve water quality by developing and implementing strategies to manage stormwater and prevent flooding.

Land Use

- Develop a program to provide assistance to improve the store facades, signs, parking, and landscaping of the businesses in the Hanging Rock area.
- Implement ordinance changes which would specify the preservation of existing vegetation and trees, along with higher development standards for all types of development, such as signage, landscaping, building architecture, and buffers. These standards should enhance and protect the rural lifestyle of the community.
- Permit the development of small-scale commercial uses constructed in a planned commercial center for the community.
- Promote the use of accessory apartments to provide income to landowners so as to protect the rural character of the community.
- Maintain the low density of single-family homes in the Masons Cove community.
- Continue to support and fund the delinquent property program used to clean up sites where debris has been dumped.

Public Facilities

- Work with VDOT to improve the transportation network of the community and to provide alternative routes for commuter traffic and emergency vehicles.
- Cooperate with VDOT and Federal agencies to increase the capacity of commuter and Appalachian Trail parking lots located in the community.
- Support and fund improvements for school and park facilities such as soccer fields, gyms and adequate instructional space.
- Work with the community, VDOT, and other interested parties to provide for alternative modes of transportation in the community such as bike lanes and walking trails.
- Support needed improvements to existing emergency services in the community.
- Continue the use and support of citizen watch groups working in cooperation with the County's Police Department.
- Utility extensions into the neighborhood should be made only after a careful evaluation of all the impacts which could be caused by the extension. Part of this evaluation should include some type of public involvement from the residents of the community.

MT. PLEASANT - FUTURE LAND USE MAP

UNDER CONSTRUCTION

MOUNT PLEASANT COMMUNITY PLANNING AREA

Community Values

- The numerous historic sites and buildings in the community. These areas provide critical links to the traditions of the locale and are important resources to the residents of the community.
- The setting of the Village of Mount Pleasant provides a focal point for the entire community.
- The views of Windy Gap Mountain, Roanoke Mountain and Muarry's Knob are important scenic vistas for the community.
- The rural lifestyle that exists in the Mount Pleasant area. This is reinforced by the number of active farms in the community.
- Appreciation for quality development which respects the existing land uses and protects the natural environment through mitigation measures such as buffering, screening, preserving natural vegetation, and building design.

Key Resources

- The course of Back Creek as it winds along the County boundary is an important feature for the community and needs to be protected.
- The mouth of Back Creek where it enters the Roanoke River has a pristine appearance. It is referred to by the residents as "The Point."
- The old Brook Hill School building is an important asset for the community.
- The Blue Ridge Parkway provides a linear park across the community.
- The public buildings and facilities in the Village of Mount Pleasant such as the school, library, fire/rescue building and the park.
- Small-scale commercial services offered in the Village are valuable to the residents of the community.
- Explore Park provides a large natural preserve for the northern section of the community.

General Policies

Natural Resources

- Develop plans and strategies to coordinate the Roanoke River Parkway, Explore Park, Blue Ridge Parkway, and the County's Greenway Plan, such that important vistas and sites are preserved as well as linking these sites to neighborhoods, schools, libraries, and shopping areas.
- Prevent development from occurring in environmentally sensitive areas and provide protection of these areas as part of the design of proposed developments.
- Recognize, respect, and work with private property owners in order to preserve the rural lifestyle, open spaces and agricultural uses of land.

Land Use

- Ensure that as development occurs in the community there are adequate public facilities existing or planned prior to approving the development request.
- Evaluate all the impacts of future utility extensions into the community. Public involvement by the residents of the community should be part of this evaluation.
- Require that all developments use design principles that support and respect the rural lifestyle that exists in the community.
- Prevent the traditional strip development patterns which have multiple access points, large parking lots, bright lighting, and many architecturally unrelated buildings on the site.
- Promote the development of additional commercial businesses and services within the Village and develop an overlay design district for the Village area to enhance the sense of community or place.
- Preserve the integrity of existing residential areas and prevent the insertion of incompatible uses into these neighborhoods.

Public Facilities

- Locate all new public buildings and facilities within the Village to promote the sense of place and to provide a focal point for the entire community.

- Provide for additional space in the school while maintaining the architectural integrity of the existing building.
- Support and fund the renovation/construction of a new emergency services building in the Village of Mount Pleasant.
- Explore the possibility of expanding the existing park to include the parcel of land across the street from the existing facility and the creation of a new park at “The Point.”
- Fully develop and maintain the community park.
- Work closely with VDOT to program road improvements for commuters and local traffic on the existing road network in the community.
- Develop a specific greenways/trails plan for this community as an alternative mode of transportation for local residents.
- Provide a fully functioning library for the community.
- Support the installation of dry hydrants throughout the community for increased fire protection.

VINTON - FUTURE LAND USE MAP

UNDER CONSTRUCTION

VINTON COMMUNITY PLANNING AREA

Community Values

- The sense of community or small town atmosphere is vital to the quality of life expressed by the residents of Vinton.
- Respect for the small business person is important to the community. Regulations on development standards must strike a balance between small businesses' ability to pay for these requirements as opposed to the costs for these requirements. Moderate landscaping and other site improvements are not prohibitive.
- The type of development that is placed on the McDonald Farm will have a major effect on how the community develops in the future.
- To achieve a balance between private property rights and development requirements. Land use is the key to making this a sustainable community in the future.

Key Resources

- The small-town atmosphere is a resource for this community.
- The War Memorial provides a focal point for the community. It is used for many private parties and other types of social events.
- The McDonald Farm is a resource for the community.

General Policies

Natural Resources

- Prevent development on environmentally sensitive and natural hazard areas in the community.
- Implement the greenways program to provide open space/green space through the community as well as wildlife corridors.

Land Use

- Develop a program that will provide assistance to small businesses to help them renovate their store fronts and provide some landscaping on the site.
- Require that new developments contribute to the small town feeling in relation to the use of design principles that preserve the sense of place and contribute to the community's cohesiveness.
- Encourage the use of campus-like designs for new commercial and industrial developments which contribute to the natural environment by providing heavy landscaped areas and trails to adjoining uses such as neighborhoods and shopping areas.
- Development of the McDonald Farm should be oriented as a point of destination and provide tax revenue, employment, and an example for all new development in the community in relation to design standards.

Public Facilities

- Work with VDOT and the Parkway to address the need to improve major transportation corridors that cross the Blue Ridge Parkway. Develop a procedure to achieve the goals of all organizations and the residents of the community in relation to these transportation improvements.
- Examine methods to require developers to contribute to the costs of transportation improvements required due to their activities in the community.
- Provide and support resources for the upgrading of educational facilities in the community.
- Cooperation of County, Town, and Federal officials is needed to develop stormwater management techniques that prevent flooding and improve water quality.
- Continue the maintenance and development of park facilities in the community.

WINDSOR HILLS - FUTURE LAND USE MAP

UNDER CONSTRUCTION

WINDSOR HILLS COMMUNITY PLANNING AREA

Community Values

- The views of the ridgelines along the Blue Ridge Parkway are a quality valued by this community.
- The views of Mount Chestnut, 12 O’Clock Knob and Poor Mountain are appreciated by the residents of Windsor Hills.
- The rural setting and landscape in the areas of Back Creek, Poage Farm, and Jamison’s Orchard.
- The landscaping and site design associated with Winterberry Point and the Colonnade Office Park on VA Route 419.

Key Resources

- The following natural features are considered to be resources for the community: Sugar Loaf Mountain, Mount Chestnut, Poor Mountain, 12 O’Clock Knob and the natural setting along Back Creek.
- The park and recreation facilities located within the community.
- The small farms and orchards that continue to operate in the community.
- The village like setting along McVitty Road.
- The various large tracts of land that remain undeveloped, such as the Via property, Roberson property, Poage farm, and Jamison’s Orchard.

General Policies

Natural Resources

- Prevent continued development on mountain ridges and provide protection and preservation of these scenic resources for the community.
- Use environmental preservation as an economic development strategy to develop eco-tourism attractions and activities.

- Preservation of sensitive environmental areas and prevention of degradation of these areas by surrounding development.
- Implementation of the planned Greenway system throughout the community.
- Preservation of the existing natural vegetation, farms, and orchards for their economic and open space value.
- Work cooperatively with private landowners, Western Virginia Land Trust, and other interested parties to preserve the natural features of the valley such as ridge lines, scenic vistas, and open space.
- Prevent the use of clear-cutting as a technique of harvesting forest resources. Promote the use of selective cutting and reforestation of areas after harvesting.

Land Use

- Prevent the use of strip linear commercial development. This type of development has large un-screened parking areas, many access points to the main road, numerous detached buildings of varying architecture, and high light poles adding light pollution to the evening sky.
- Promote the use of planned commercial developments and/or nodes of commercial development in the community. These developments would offer extensive landscaping, appropriate and tastefully designed signs, and provide buildings which have a unified architectural design.
- To develop the appropriate balance between residential, commercial, industrial, and agricultural land uses is a key to Windsor Hills becoming a sustainable community.
- Explore the opportunities to create a Historic District in the village-like area along McVitty Road, which would promote preservation as well as economic development through heritage tourism.
- Develop and implement design guidelines in the County's development ordinances that require extensive landscaping, compatible architectural designs, small tasteful signs and buffers between incompatible land uses.
- Prior to approving new residential development, ensure that the needed public facilities are available or planned to be in place to coincide with the new development.
- Require all future developments to be planned unit developments (PUD).

- Develop and implement a plan for the renovation and beautification of the Brambleton Avenue area similar to the program underway in Hollins.
- Implement a tree preservation/planting program for the VA Route 419 corridor as well as for new developments.
- Clear and efficient methods of communication need to be developed between the County leadership and the local community.

Public Facilities

- Continue to support and fund the school facilities improvement plan adopted by the School Board in 1997.
- Provide equitable distribution of school resources across the county.
- Maintain the Library Headquarters in its current location and provide additional space and resources as needed in response to continued growth of the community.
- Acquire, fully develop and maintain the park facilities within the community.
- Support and fund after-school and elderly recreation programs for the community.
- Work cooperatively with VDOT to provide the needed transportation improvements for the community, such as reduced speed limits for schools, wider shoulders along roads, and reduced speed limits for residential areas.
- Develop and implement methods that manage stormwater runoff, prevent stream flooding, and improve water quality.

CHAPTER 8

COMMUNITY PLAN IMPLEMENTATION

WORK ITEM PRIORITIES

DCD=Department of Community Development
DPR=Department of Parks & Recreation
DCR=Department of Community Relations
DED=Department of Economic Development
VDOT=Virginia Department of Transportation
5th PDC=Fifth Planning District Commission
RRHBA=Roanoke Regional Home Builders
UTIL=Utility Department

PC=Planning Commission
BOS=Board of Supervisors
GC=Greenway Commission
PATH=Pathfinders
VOF=Virginia Outdoors Foundation
NC=Neighborhood Councils
CAO=County Attorney

PROGRAMS:

January 1999 to December 2001

Principal Staff

Secondary Resources

1. INCREASE CITIZEN PARTICIPATION IN THE PLANNING PROCESS:

- | | | |
|--|---------------|-----------|
| A. Expand role of Neighborhood Councils.
(Chap. 3) | DCD, PC | NC, RRHBA |
| a. Conduct Planning Commission
work session with Neighborhood Councils. | | |
| b. Notify Neighborhood Councils
of rezoning petitions. | | |
| c. Work with Neighborhood Councils
to develop Neighborhood Plans. | | |
| B. Develop quarterly newsletter.
(Chap. 3) | DCD | |
| C. Develop County Page in Roanoke Times.
(Chap. 3) | DCD, DCR, BOS | |

2. ENHANCE PARK AND GREENWAY OPPORTUNITIES:

- | | | |
|---|-----------------------|-----------------|
| A. Prioritize greenway projects and develop funding strategies. (Chap. 3, Chap. 5) | DCD, DPR, GC, PC, BOS | NC, PATH, RRHBA |
| B. Increase recreational use of the Roanoke River by implementing construction of the Roanoke River greenway. (Chap. 4) | DCD, DPR, GC, PC, BOS | PATH, NC |
| C. Review and update Roanoke County Park's Master Plan. (Chap. 4) | DCD, DPR, PC, BOS | NC |

3. VISUAL IMPRESSIONS OF THE COMMUNITY:

- | | | |
|---|-------------------|----------|
| A. Enhance median and gateway beautification projects. (Chap. 5) | DCD, DPR, PC, BOS | NC, VDOT |
| a. Have in place a working maintenance program including watering and plant material replacement. | | |

4. INCREASE ECONOMIC DEVELOPMENT AND TOURISM OPPORTUNITIES:

- | | | |
|--|-------------------|-----------------------|
| A. Implement Phase I development of Roanoke County Center for Research and Technology. (Chap. 3) | DED, BOS | |
| B. Construct Blue Ridge Parkway Orientation/ Interpretation Center. (Chap. 3) | DED, BOS | National Park Service |
| C. Develop strategies to accommodate large-scale retail development. (Chap. 3) | DCD, DED, PC, BOS | NC |

5. IMPLEMENT RESOURCE PRESERVATION STRATEGIES:

- | | | |
|---|-------------------------|-----------------|
| A. Encourage other localities to adopt the Roanoke River Conservation Overlay District. (Chap. 4) | DCD | 5th PDC |
| B. Study conservation strategies to ensure the long-term protection of the Spring Hollow Reservoir and adjacent public lands. (Chap. 5) | PC, BOS, DPR, UTIL, DCD | Land Trust, VOF |

Chapter 8: Community Plan Implementation

C. Distribute to property owners, the historic resources surveys from the Historical Architecture Reconnaissance Survey. (Chap. 5)	DCD	Dept. of Historic Resources
D. Develop a County-wide conservation and development map. (Chap. 5)	DCD, PC, BOS	NC, RRHBA
E. Prioritize open space resources and develop strategies for protection and preservation. (Chap. 5)	DCD, PC, BOS	5th PDC

PROGRAMS:

January 2002 to December 2008

1. INCREASE ECONOMIC DEVELOPMENT OPPORTUNITIES:

A. Implement Phase II of Roanoke County Center for Research and Technology. (Chap. 3)	DED, BOS
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2. VISUAL IMPRESSIONS OF THE COMMUNITY:

A. Increase the number of median and gateway beautification projects. (Chap. 3)	DCD, DPR, PC, BOS	NC, VDOT
B. Work with the billboard industry to optimize the location of billboards. (Chap. 5)	DCD, CAO	

POLICIES:

January 1999 to December 2001

1. REVISE ZONING ORDINANCE:

	DCD, PC, BOS	NC, RRHBA
A. Adopt Cluster Development Ordinance. (Chap. 5, Chap. 3)		
B. Adopt Natural Resources Overlay District. (Chap. 5)		

- C. Adopt Interstate Interchange Overlay District.
(Chap. 4)

2. REVISE SUBDIVISION ORDINANCE:

- | | | |
|--|--------------|-----------|
| A. Ensure compliance with adopted
Community Plan. (Chap. 5) | DCD, PC, BOS | NC, RRHBA |
|--|--------------|-----------|

- | | | |
|---|--------------|-----------|
| 3. DEVELOP A TREE PROTECTION
AND REPLACEMENT ORDINANCE.
(Chap. 5) | DCD, PC, BOS | NC, RRHBA |
|---|--------------|-----------|

**4. REVISE SUBDIVISION STREET
STANDARDS.**

- | | | |
|--|--------------|------------------------|
| A. Consideration of private road standards.

(Chap. 5) | DCD, PC, BOS | NC, RRHBA,

VDOT |
|--|--------------|------------------------|

POLICIES:

January 2002 to December 2008

1. REVISE ZONING ORDINANCE:

DCD, PC, BOS, CAONC, RRHBA

- A. Allow density bonuses for in-fill
development including
consideration of transfer of
development rights. (Chap. 3)
- B. Adopt a Gateway Overlay District.
(Chap. 5)

**Planning Commission Work Program 2005
COMMUNITY PLAN
IMPLEMENTATION PROJECTS**

**Tasks Reviewed and Approved by the Planning Commission on 3/1/05
Dates added by staff on 5/3/05: All dates represent date
to go to Planning Commission**

1. Develop Stormwater Management Ordinance- 4th quarter 2005
2. Resource Protection Ordinances:
 - a. Develop steep slope protection ordinance – 4th quarter 2005
 - b. Analyze feasibility & effectiveness of ridgetop protection ordinance – 2nd quarter 2006
 - c. Develop landscape (tree canopy coverage) ordinance – 4th quarter 2005
 - d. Develop clear-cutting ordinance – 4th quarter 2005
3. Develop Village Center and Neighborhood Commercial Ordinances. Include mapping, analysis of need for water and sewer and incorporation into Capital Improvement Plan – 4th quarter 2005
4. Revise Cluster Ordinance – 3rd quarter 2006
5. Revise to the Land Development Standards – 4th quarter 2005