



# GLENVAR COMMUNITY PLAN

A COMPONENT OF THE ROANOKE COUNTY COMPREHENSIVE PLAN  
ADOPTED JANUARY 24, 2012



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Special thanks are given to all of the citizens, business representatives and organizations who assisted in the development of the Glenvar Community Plan. Additional thanks to Glenvar Middle School, Glenvar Branch Library, Spring Hollow Water Treatment Plant and Fort Lewis Baptist Church for the use of their facilities during the Glenvar Community Planning process.

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## Chapter 1: Introduction

The Glenvar Community is characterized by natural resources such as the Roanoke River, Poor Mountain and Fort Lewis Mountain, but also by infrastructure resources including Interstate 81, Route 11/460 (West Main Street) and the Norfolk Southern railroad. The Glenvar Community is also home to 10,000 residents, several internationally-recognized businesses and important community resources such as the Glenvar Library, Glenvar Schools, Fort Lewis Fire Station, Green Hill Park, Camp Roanoke, Spring Hollow Reservoir and the Western Virginia Regional Jail. Most development is clustered in the valley on the flattest land; however, much of this land is also in the Roanoke River floodplain.



Graphic 1.01 Roanoke River

### 1.1 Purpose

The Glenvar Community Plan was initiated to study development and redevelopment issues along the West Main Street corridor and in the Dixie Caverns area, in anticipation of the West Main Street widening project and the proposed intermodal facility in Montgomery County.

Route 11/460, also known as West Main Street in the planning area, has been a main route of travel for hundreds of years. Originally known as the “Great Indian Path” and the “Great Road,” Route 11 was one of the primary thoroughfares traveled by emigrants to Tennessee and Kentucky. Since its formal expansion in 1947, development along the West Main Street corridor focused on serving automobiles and their passengers.

The opening of Interstate 81 through the Glenvar Community in 1964 shifted both traffic and development to the interchanges and consequently, reduced customers for businesses along West Main Street. Commercial businesses like the Blue Jay Motel and Fort Lewis Tourist Courts fell by the wayside and were replaced by industrial development.



Graphic 1.02 Blue Jay Motel Vintage Postcard (ca. 1950s)

In the 1990s, the Virginia Department of Transportation (VDOT) began planning the widening of the three-lane section of West Main Street from the City of Salem line to Technology Drive into a four-lane-wide section with raised medians to blend with the rest of West Main Street and eliminate bottlenecks and access management issues. As a result, little development has occurred along this stretch of West Main Street over the past 20 years; however, new development is expected after the widening project is completed. The Glenvar Community Plan focuses on the West Main Street corridor from the City of Salem to Montgomery County to ensure that future development is consistent with the community’s vision.

Additionally, the proposed Norfolk Southern intermodal facility, planned for just over the County line on Route 11/460 in Montgomery County, may impact transportation, the environment and future development in the Glenvar Community. The potential impacts of the Roanoke Regional Intermodal Facility are also being considered as part of the Glenvar Community Plan.

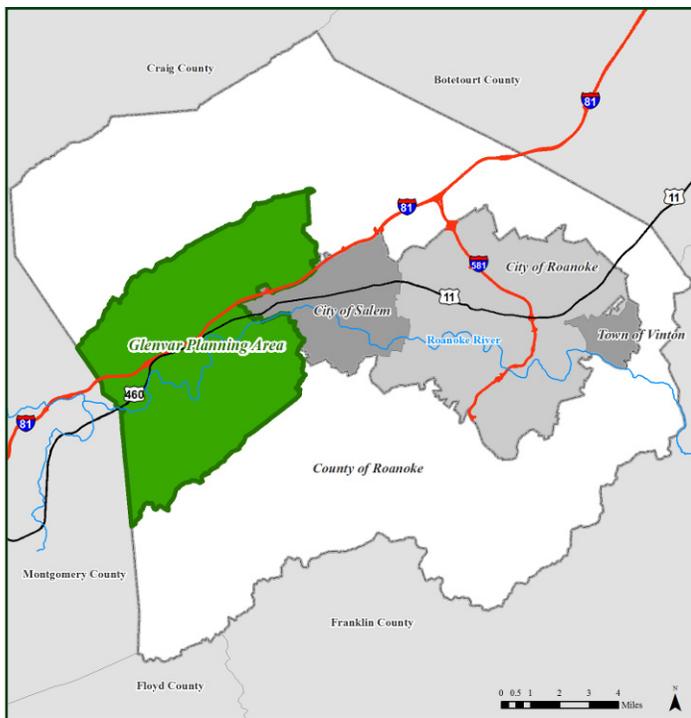
### 1.2 Relationship to the Comprehensive Plan

The Commonwealth of Virginia requires that every locality adopt a Comprehensive Plan for “guiding and accomplishing a coordinated, adjusted and harmonious development of the territory...which will best promote the health, safety, morals, order, convenience, prosperity and general welfare of the inhabitants” (Code of Virginia 15.2-2223).

The Glenvar Community Plan, adopted into the *Roanoke County Comprehensive Plan*, will aid decision-making for future development in the Glenvar area. This document is the sixth in a series of area, corridor and community planning studies that aim to provide detailed, area-specific analysis and recommendations for the areas in which they are conducted.

### 1.3 Study Area Boundaries

The study area for the Glenvar Community Plan is the Glenvar Planning Area. Roanoke County’s largest planning area, the Glenvar Planning Area stretches east to west from the City of Salem to Montgomery County and north to south from the ridge of Fort Lewis Mountain to the ridge of Poor Mountain. Part of the Catawba Magisterial District, the Glenvar

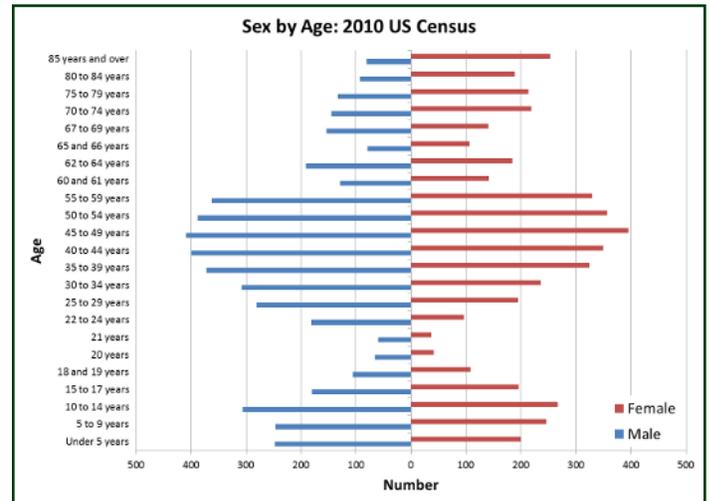


Graphic 1.03 Glenvar Planning Area

Planning Area is bisected horizontally by Interstate 81, Route 11/460 (West Main Street) and the Roanoke River. The planning area measures 31,744 acres or 49.6 square miles in size, one-fifth the land area of Roanoke County, and contains all or portions of 5,081 parcels. A larger map of the study area is located in Appendix A.

### 1.4 Study Area Demographics

The Glenvar Community is one of the fastest growing areas of Roanoke County. The community’s population grew from approximately 7,800 in 2000 to nearly 10,000 in 2010, a 20% increase in population. There is an approximately 50/50 split between male and female with the majority of the population between 30 and 60 years of age, as shown in Graphic 1.04 below.



Graphic 1.04 Glenvar Sex by Age (2010)

The majority of residents, 93%, of the Glenvar community also identify as “white alone” on the U.S. Census. Four percent identify as “black or African-American alone” and less than one percent identified as American Indian, Asian, some other race or two or more races.

In 2010, there were 3,496 households in the Glenvar Community; the majority of which (73%) are family households. The U.S. Census defines a household as “all of the people who occupy a housing unit as their usual place of residence” and a family as a “group of two or more people who reside together and who are related by birth, marriage, or adoption.” Of the family households, 83% are defined as a “husband-

wife family,” 12% as a “female householder, no husband present” and 0.04% are “male householder, no wife present.” Of the 925 non-family households in the Glenvar Community, 90% are householders living alone.

### 1.5 Planning Process

Work on the Glenvar Community Plan initially began in the last quarter of 2008. However, due to a controversial asphalt plant land use application that was under consideration at the time, the planning process did not gain momentum until a revised application was approved in November 2009.

The Glenvar Community planning process began with an inventory and analysis of existing conditions which included its history, demographic information, environmental resources, existing land use, community facilities and transportation infrastructure. The results of this inventory and analysis are included in Chapters Two through Six, respectively.

Community issues, opportunities and assets were identified through a survey, stakeholder interviews, community meetings and visioning exercises. The Glenvar Community Survey was launched in November 2009 and was available online for five months. To reach key members of the Glenvar Community, stakeholder interviews were conducted in the first half of 2010 and interest group meetings with groups of citizens and business owners were held in 2009 and 2010.



Graphic 1.05 Interest Group Meeting at Richfield Retirement Community - February 2010

Three well-attended community meetings were organized in 2010 and 2011 for County staff to present information to the Glenvar Community and to gather citizens’ input about how Glenvar should develop in the future. To aid in this process, a visioning exercise

and visual preference survey were completed by attendees of the second community meetings.

Digital communication and outreach also played a significant role in planning efforts with the use of the Glenvar Community Plan webpage, Roanoke County Planning Services Facebook Page, Twitter, *Community Developments* e-newsletter and a Glenvar email list that included citizens involved in the asphalt plant application and community meeting attendees. Traditional mailings and flyers were also utilized, as were local print and online newspaper articles and radio interviews.

The Glenvar Focus Group was created to involve community representatives in developing core components of the Glenvar Community Plan such as the vision statement, plan goals and future land use refinements and recommendations. The Focus Group met five times from January to September 2011, including a joint work session with the Planning Commission.

Several staff-led work sessions were held with the Planning Commission throughout the planning process to provide updates and to receive feedback. Two work sessions were also held with the Board of Supervisors; one at the beginning of the process in 2008 to provide an overview of existing conditions in the area and a second in January 2012 to discuss the planning process and plan recommendations.

### 1.6 Plan Adoption

The Roanoke County Planning Commission held a public hearing on the draft Glenvar Community Plan at the Glenvar Middle School Forum on November 14, 2011. Following a presentation by staff and citizen comments, the Planning Commission recommended adoption of the Glenvar Community Plan into the *Roanoke County Comprehensive Plan*.

After receiving the Planning Commission’s recommendation, the Board of Supervisors held a public hearing on January 24, 2012, to receive comments on the Glenvar Community Plan. The Board voted

unanimously (5-0) to adopt the Glenvar Community Plan as an amendment to the County's Comprehensive Plan. A copy of the Board of Supervisors' Resolution (012412-4) is in Appendix B.

### 1.7 Plan Structure

The Glenvar Community Plan is composed of eight chapters and two appendices that include related maps and documents. Chapter One includes the Plan's purpose, how it relates to the *Roanoke County Comprehensive Plan*, the extent of the Glenvar Planning Area, the planning process, the adoption of the plan and the structure of the document. The second chapter further describes the planning area and recounts the history of the Glenvar Community.

Environmental resources are detailed in the third chapter including the Roanoke River and its tributaries, watersheds and floodplain, area topography and geology as well as viewsheds. Chapter Four focuses on land use and development with sections on existing land use, economic development, zoning, future land use and County guidelines and programs. Community facilities are outlined in Chapter Five which provides an overview of community schools, library, public safety, parks, recreation and tourism and utilities. Chapter Six, Transportation, discusses roadway characteristics, alternative modes of transportation and proposed improvements and plans.

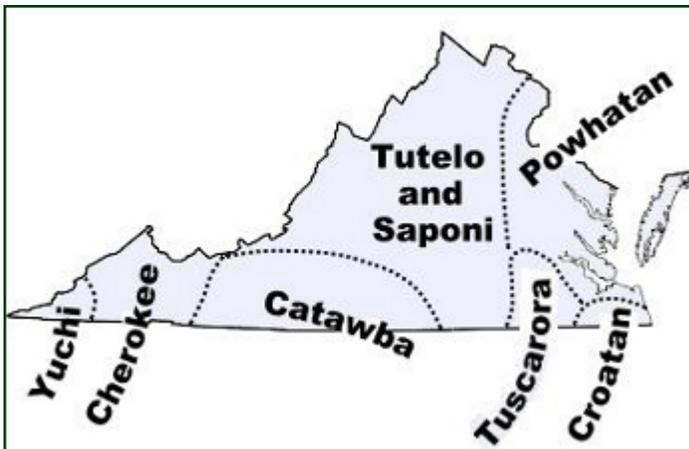
The seventh chapter documents all of the community involvement throughout the planning process including the Glenvar Community Survey, digital and traditional communication and outreach, stakeholder interviews, interest group meetings, community meetings, the Glenvar Focus Group and Planning Commission and Board of Supervisors involvement. The proposed future land use scenarios and plan recommendations are included in Chapter Eight. Appendix A contains maps referenced within the text and Appendix B includes documents cited in the Glenvar Community Plan.

## Chapter 2: History

The “Glenvar” name originated in 1891 from the middle name of Mary Glenvar Harmon, the daughter of a prominent land owner in the community. Prior to that, the entire area west of Salem was known as Fort Lewis. In the following section, the entire area will be referred to as Fort Lewis until 1890. From 1891 to 1964, the communities will be referred to separately as Fort Lewis and Glenvar, respectively. From 1964, following the construction of the high school, the entire area will be referred to as Glenvar.

### 2.1 Early History

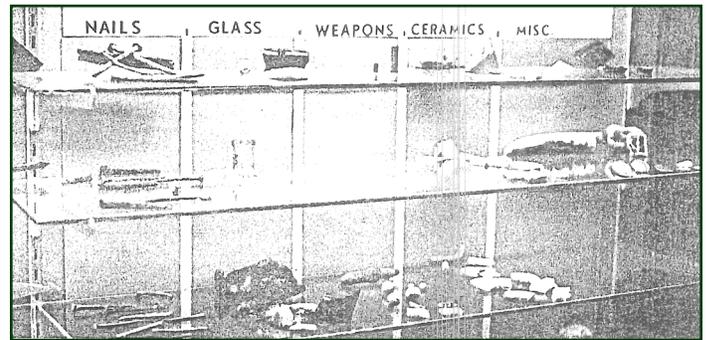
Prior to the first white settlers arriving in the Fort Lewis Community, the area was part of a larger, common hunting ground for several American Indian tribes. Referred to as the “Debatable Land,” the area was “so fair and valuable that the Indians were continually fighting among themselves for its possession.” The majority of these tribes belonged to the Siouan linguistic stock such as the Monacan, Tutelo, Saponi and Nahyssan. Other major tribes that may have hunted in the area include the Cherokee, Shawnee and those that lived on the shores of the Great Lakes.



Graphic 2.01 Native American Tribes in Virginia

There are two American Indian archeological sites in the Fort Lewis area, the Fort Lewis Swamp site and the Thomas-Sawyer site. The Fort Lewis Swamp complex of sites, also known as the Thomas Brothers site, is located three to four miles west of Salem, south of Route 11/460 and 290 yards from the Roanoke

River. Fort Lewis Swamp was created by a large spring that emanated near the former site of the Fort Lewis Mansion; animals and hunters alike were drawn to this area. Artifacts found at the Fort Lewis Swamp site include spearheads, projectile points of the clovis and other prehistoric points. Flakes and scrapers dating from the Paleo Period (9,000-10,000 B.C.) up through and including the Woodland Period (800-1600 A.D.) have also been found. Four of the eight extremely rare clovis points found in Roanoke County were within 0.38 of a mile of this swamp. There are also indications of a large woodland village site across Route 11/460 from Fort Lewis Elementary School; however, it is yet to be pinpointed.



Graphic 2.02 Artifacts from Fort Lewis Excavation

The Thomas-Sawyer site is located in west Salem, south of the Roanoke River and just east of Mill Lane. Along with a prehistoric path, the most significant artifact found at the Thomas-Sawyer site is a pottery kiln carbon-dated to 1585; the first such kiln found in western Virginia.

The “Great [Indian] Path” ran through the valley between Fort Lewis Mountain and Poor Mountain. This path was the thoroughfare between the Northern and Southern Indian tribes; as McCauley (1909) describes, “this was the path of migration, the chase, the treaty and savage invasion. Besides its central position, and direct course, the great Appalachian chain could nowhere else be so easily ascended and crossed.” The path, later known as the “Great [Wagon] Road” and currently as Route 11/460 (West Main Street), was a primary route for Scotch-Irish and German emigrants to the Roanoke Valley and pioneers traveling to Kentucky and Tennessee in the eighteenth and nineteenth

centuries. It is estimated that over 100,000 pioneers of the western states traveled the “Great Road” before it became wide enough to accommodate wagons.

## 2.2 Eighteenth Century

The earliest acquisition of land in the Fort Lewis Community was that of James Campbell in 1742. On his land, Fort Lewis was constructed in 1755 as a part of a chain of 14 frontier forts extending from Winchester, Virginia to the Tennessee River. The fort was located on a hill midway between the railroad and Route 11/460, approximately 150 feet west of the Fort Lewis Mansion site. It was approximately 60 square feet with bastions and constructed of logs on a foundation of flat field stone. A map of the forts on the Virginia frontier is available in Appendix B.

During the French and Indian War, Fort Lewis served as a “place of rendezvous” for Colonel William Byrd’s Cherokee Expedition (Sandy Creek Expedition). The fort was located in a less dangerous and more convenient place than Fort Vause, 12 miles away in Montgomery County. There was an “abundant supply of water, ample level ground for drilling, abundant forage for the horses and a tolerable supply of provisions for the men.” Troops were likely stationed at Fort Lewis from 1755 through February 1762 at which time the Virginia Regiment was disbanded and paid off. The Cherokee Expedition began and ended at Fort Lewis.

During this time, Alexander Boyd, Lieutenant and Paymaster of the Virginia Regiment, purchased 98 acres from the estate of James Campbell, which was then Army headquarters, and established a general mercantile for the entire Roanoke community in 1760/1. A general mercantile store was operated on the site through the turn of the nineteenth century under the ownership of prominent merchants Alexander Baine (1771-1785) and David Ross (1785-1806). The name, “Fort Lewis,” became attached to the residence and store of the “Boyd-Ross” Plantation and to the community.

Immediately around Fort Lewis were grants

to Ephraim Vause (216 acres, 1748), John Charlton (46 acres, 1768), John Keith (350 acres, 1787), James Mason and William Lewis (700 acres, 1790) and James Smith (350 acres, 1796). Other early acquisitions of land in the community were Thomas Arthur (1774), Peter Deyerle (1767/79) and Thomas Taylor near Dixie Caverns (1796). A map of the earliest land acquisitions in the Fort Lewis area is located in Appendix B.

## 2.3 Antebellum Nineteenth Century

There were three large farms in the community until the “Boom Days” in the 1890s; the Joseph Deyerle farm (Pleasant Grove), the White farm (Fort Lewis residence) and the Zirkle farm. The Deyerle farm, approximately 1,500 acres, was the first in the community, originally laying in both Montgomery and Roanoke Counties.

The Pleasant Grove residence and outbuildings, built by Joseph Deyerle in 1853, is one of the “finest and most intact examples of historic domestic architecture in the region.” A map showing the location of historic features in the Glenvar Community is available on page 2-4.



Graphic 2.03 Pleasant Grove

The White farm, encompassing 4,500 acres, was located south of Route 11/460 and west of Fort Lewis Elementary School, where Fort Lewis once stood. Samuel White, father of Alexander White, began construction of the Fort Lewis Mansion in 1818 and completed the structure in 1822. The Zirkle farm, 1,200 acres, lay east of the White farm. These three farms were of the plantation style and especially large compared to others in Roanoke County at the time. As such, prior to the Civil War, they were operated by slave labor. The chief crops produced were tobacco,

corn, wheat and hay. Before prohibition, liquor was also produced and sold from licensed stills on the plantations. Farming continued to dominate the economic and social life of the Fort Lewis Community until about 1890, the beginning of the “Boom Days.”

With very few living beyond the Deyerle, White and Zirkle farms for the majority of the 19th century, the area of contact for residents barely extended beyond the community itself. Social ties and contacts were formed through visiting and social recreation in the home and through attending school and/or church. The two social institutions of the early community were the one-room school house and Fort Lewis Baptist Church.



Graphic 2.04 Old School House

The “Old Glenvar Schoolhouse” was built about 1840 on the property of Peter Deyerle and used until the Civil War. Ms. Mollie L. Deyerle was the first to teach in the one-room log building. This white-only school was the first free school in Roanoke County.

Fort Lewis Baptist Church was completed and dedicated on August 28, 1855. Prior to its construction (1845-1855), members attended Salem Baptist Church in the “bend” section of the Roanoke River, six miles west of Salem. In 1853, Alexander White, owner of the Fort Lewis estate, deeded one acre to Reverend William L. Hatcher and Lewis Zirkle, trustees of the church. Construction of the original one-room, brick building began in 1854 and was completed in 1855.

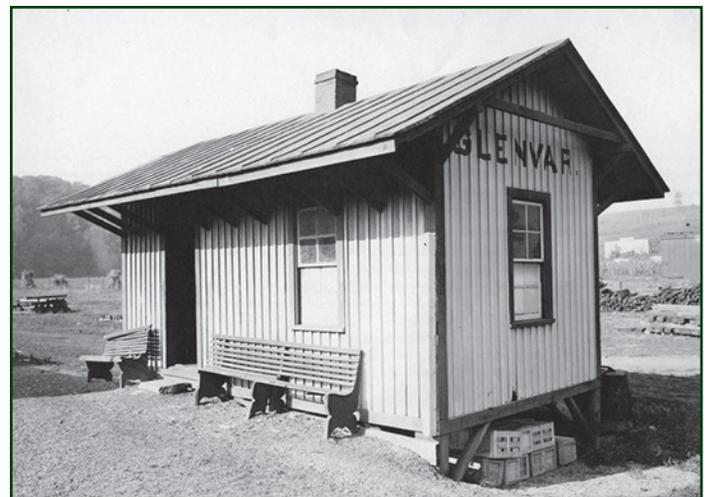


Graphic 2.05 Fort Lewis Baptist Church (ca. 1935)

## 2.4 Construction of the Railroad

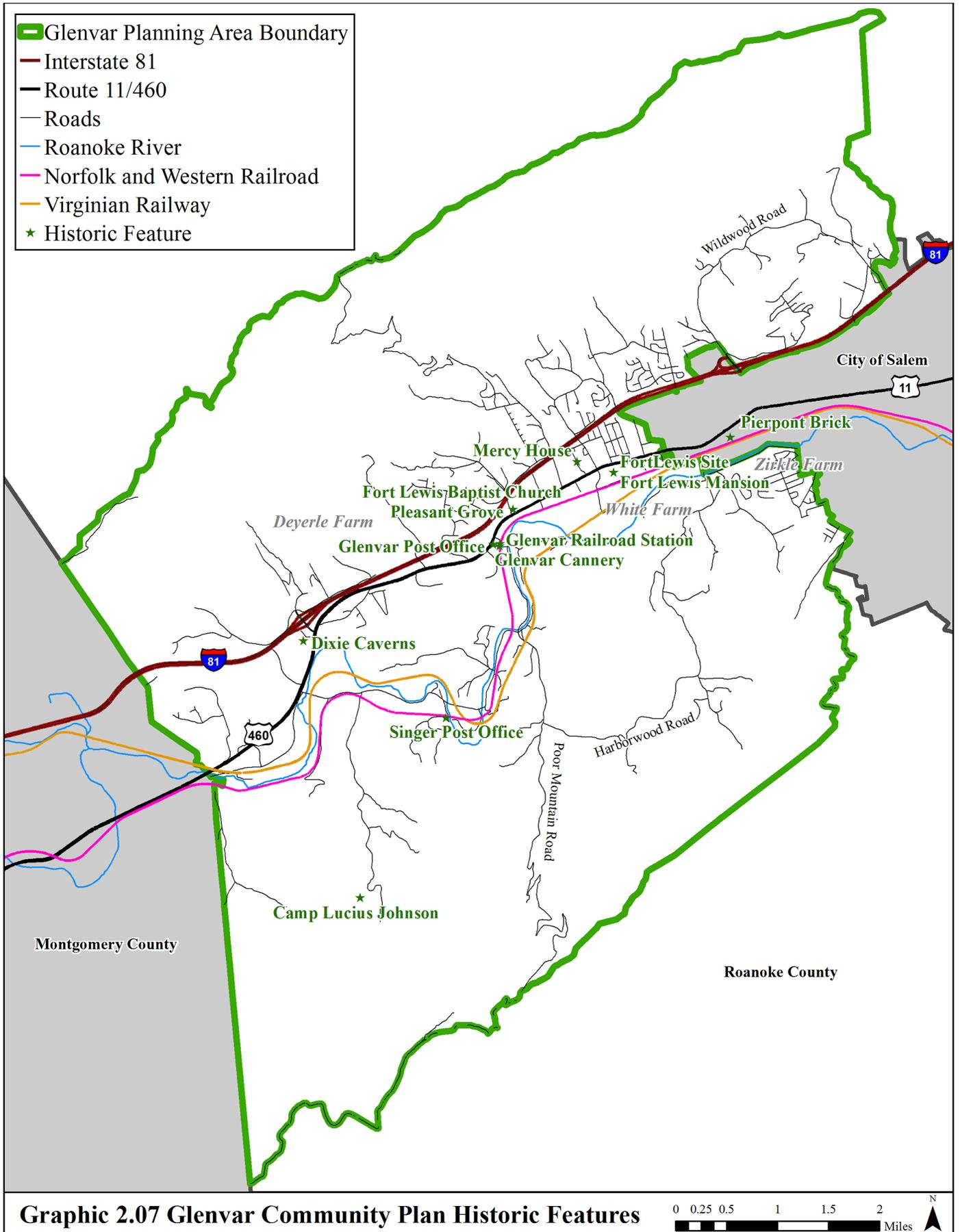
The Fort Lewis Community began to change and expand in the mid-nineteenth century as a result of the construction of the Virginia and Tennessee Railroad through Roanoke County. The Virginia and Tennessee Railroad was chartered in 1848 and broke ground for the Lynchburg to Salem section on January 16, 1850. By mid-December 1852, the railroad reached the outskirts of Salem and by 1854-1855, construction was completed through Roanoke and Montgomery counties. A telegraph line was completed along the entire line in 1857 and sleeping cars were added by 1860. The original stops were at Salem, Charles Thomas’ tavern and wagon stand near the boundary with Montgomery County and Big Spring near Elliston.

The Virginia and Tennessee Railway merged with two other antebellum railroads in 1870 to form the Atlantic, Mississippi and Ohio Railroad. In 1881, the Atlantic, Mississippi and Ohio Railroad was organized into the Norfolk and Western Railroad. By 1882, there were railroad stops at Salem, Deyerle’s Switch and Big Spring. Double-tracking of the Norfolk and Western line began in April 1890 from Roanoke to Big Spring (twenty miles through the Fort Lewis area) and was completed to Bluestone Junction by April 1891.



Graphic 2.06 Glenvar Train Station

Around this same time, the name “Glenvar” became synonymous with the community. According to local history, Mary Glenvar Harmon, daughter of a prominent landowner in the area, was often seen



near the railroad stop known at the time as “Deyerle’s Switch.” Over time, this train station became known as Glenvar (Graphic 2.06).

When the Norfolk and Western railroad station was established on present day Elmwood Lane, the Harmons opened a store and cannery near the site in 1892. The store later became Red Barn Antiques and is now home to Agape Performing Arts Studio. The Glenvar Cannery was located on the property now owned by Valley Distributing. Harmon also established a post office at his store called “Glenvar,” but it was discontinued when he moved to Washington D.C. in the early 20th century. The Glenvar post office was re-established in 1915, when W.O. Goodwin and Company took over the store.



Graphic 2.08 Goodwin’s General Store (ca. 1920)

In the late 19th and early 20th centuries, the Glenvar Community was also served by the “Singer” post office, which was located near the intersection of West River Road and Getty Drive. By the 1930s, both the Glenvar and Singer post office has been discontinued and mail was handled by rural delivery.



Graphic 2.09 Map of Post Offices and Routes (1896)

## 2.5 Boom Days

In the spring of 1890, the Glenvar Community’s first industry, Pierpont Brick Works, was established by George R. Pierpont. Now known as Old Virginia Brick, the Pierpont Yard and Plant was located on a 74-acre tract of land between the Norfolk and Western and the Virginian Railways. It was said that the output of the plant was so well known among architects and contractors for high quality bricks that many of them specified the use of Pierpont bricks in their construction plans. These bricks were used to construct the Roanoke County Jail, Jefferson Apartments and buildings at Roanoke College and Hollins [College] University.



Graphic 2.10 Pierpont Brick Works (From Route 11)



Graphic 2.11 The Virginian Railway and Norfolk and Western Tracks (Glenvar Station in Background, 1929)

The Virginian Railway (VGN), formerly known as the Tidewater, was built through Roanoke County in 1907-1908 and parallels the Norfolk and Western for twenty miles deflecting from the latter just east of the Roanoke/Montgomery County boundary. The Virginian Railway was constructed for the purpose of hauling heavy freight, so mountains were tunneled and valleys were filled or bridged with high trestles to minimize grade. Known for being well-engineered and operating some of the largest and best steam, electric

and diesel engines, the Virginian was nicknamed the “richest little railroad in the world.” Concluding a profitable 50 year history, the Virginian merged with Norfolk and Western in 1959. A large portion of the VGN, including the length through the Glenvar Community, remains in service as part of the Class I Norfolk Southern Railway.

In August 1910, Frank Burwell (F.B.) Gordon purchased the “old Fort Lewis” home and completely remodeled it in the Colonial Revival style “presenting an elegance surpassed by few, if any, of the historic homes of the Old Dominion... and a landmark for travelers either by rail or highway.” The mansion was destroyed by fire in 1949.



Graphic 2.12 Fort Lewis Mansion (from Route 11/460)

Between 1917 and 1927, the community experienced a 67% increase in population, which was almost double the growth for Roanoke County and more than five times greater than the state of Virginia as a whole. This population boom was largely a result of emigration from the counties of Floyd and Franklin and other adjacent areas. By 1930, Glenvar had over 250 homes, many of which are of the “urban type,” a post office, a new brick school building (Fort Lewis Elementary built in 1928), five churches, four stores and three industries (two canneries and a brick plant).

Farming was also done on a smaller scale. The increase in population between 1890 and 1930 led to the division of the three large farms, Deyerle, White and Zirkle, into smaller farms. In 1930, the average farm size was 35 acres. The type of farming done in the Glenvar Community also changed; the

farms switched from cultivating tobacco to wheat, corn and hay and then to dairy, orchards and poultry to accommodate increased demand in Roanoke and Salem. In 1930, only 28% of the working population of the Glenvar Community was engaged in farming. The remaining 72% were engaged in skilled and unskilled labor, domestic or personal service or business and professional occupations.



Graphic 2.13 Apple Orchard near Glenvar

During the first half of the twentieth century, the Glenvar Community became a hotspot for outdoor recreation. In 1923, Dixie Caverns was opened to the public and Camp Lucius Johnson, now Camp Roanoke, was opened by the YMCA in 1925. The camp’s namesake, Lucius Johnson, was president of the Norfolk and Western Railway from 1904 to 1921. In 1930, the initial 6,000 acres of Havens Wildlife Management Area was purchased.

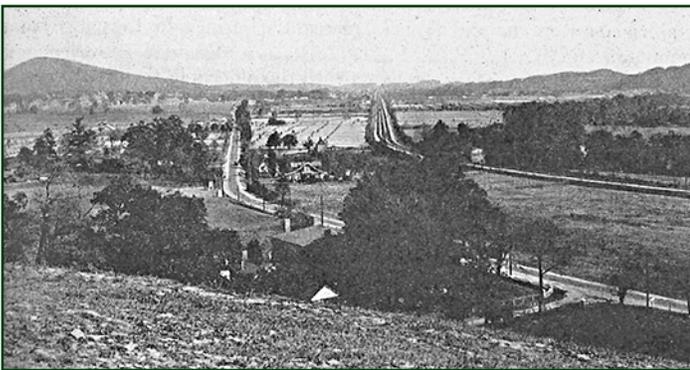


Graphic 2.14 Recreation Cabin on Getty Lane

At the same time, numerous recreational cabins were also built in Glenvar Community, especially near the Roanoke River on Getty Lane, River Bend Lane

and Poor Mountain Road. The cabins, primarily built between 1920 and 1940, were mostly rectangular, log bungalows. The logs were often painted in contrasting colors and ran either horizontally or vertically.

Mercy House, the forerunner of Richfield Retirement Community, was opened in November 1934 in an old house on what was then Roanoke County's Poor Farm. The original facility accommodated 55 patients in two buildings, one of which was designated for those suffering from tuberculosis. A new children's building, built in 1937, provided an additional 16 beds. In April 1939, a separate children's tuberculosis cottage was dedicated. By this time, Mercy House had been turned over to the Roanoke Public Health Association to be run as a nursing home. Mercy House was no longer a temporary quarter for destitute citizens, but a sanatorium with additional hospital services and a major factor in the low rate of tuberculosis in Roanoke County. Food was supplied by a 280-acre farm on the property.



Graphic 2.15 Route 11 (1938)

In the 1970s, the name of the facility was changed to Richfield Retirement Community in recognition of that the property was once part of General Andrew Lewis' estate that was named Richfield. Over the next three decades, a nursing care center, home for adults, senior rental housing units, a medical clinic and a pharmacy were opened on the property. Today, Richfield Retirement Community is one of the largest employers in Roanoke County.

## 2.6 Postwar Development

The Glenvar Community's history for the second half of the twentieth century was characterized

by industrial and residential development. Koppers Roanoke Plant was built in 1955 to replace the Norfolk and Western treating plant in Radford, Virginia. Located on a former tomato and strawberry farm, the plant now supplies one million railroad ties to Norfolk Southern and other customers. In 1964, Interstate 81 was opened through the Glenvar Community, running parallel to Route 11/460. One of the top eight truck routes in the United States, I-81 carries tourists, travelers, commuters and more than a third of all college students in the state.

Medeco [High Security Locks] moved to the Glenvar Community in 1975. Known for the development of a unique system of angled key cuts and elevating and rotating pin tumblers, Medeco locks allowed for millions of key combinations and a level of security that was unmatched in its time. Over the last 35 years, Medeco has become one of the leading producers of high security locks in the world and employs more than 400 people. Blue Ridge Beverage Company, one of the largest wholesale beverage distributors in Virginia, also opened its headquarters in the Glenvar Community in 1975.



Graphic 2.16 Medeco Building (Late 1970s)

The area around Fort Lewis Elementary School was the first to be suburbanized in the 1940s and 1950s with the development of Andrew Lewis Place, Green Hill Terrace and Richland Hills. A map of subdivisions in the Glenvar Community is available in Appendix A.

The majority of community facilities in the Glenvar area were also constructed in the past sixty years. Glenvar Elementary School was constructed in 1959, Glenvar High School was opened in 1964 and the Glenvar Library was opened in 1978.



Graphic 2.17 Glenvar Elementary Construction (1959)

In 1991, Poor Mountain Natural Area Preserve was established by the Virginia Department of Conservation and Recreation. Valley TechPark, located on Technology Drive, opened in 1994. The anchor business is R.R. Donnelley & Sons Company, a 277,000 square foot state-of-the-art printing facility. Spring Hollow Reservoir and Dam commenced operation in 1995. County-sponsored growth continued with the opening of the Center for Research and Technology in 2000, the reopening of Camp Roanoke to the public in 2001 and the opening of the Western Virginia Regional Jail in 2009. For additional information on the community facilities in the Glenvar Planning Area, please see Chapter 5, Community Facilities.

A map of the historic structures and cemeteries in the Glenvar Planning Area is available in Appendix A. Additional information about these resources is available in Appendix B.

## Chapter 3: Environmental Resources

### 3.1 Roanoke River and Tributary Streams

#### 3.1.1 Roanoke River

The Roanoke River bisects the Glenvar Planning Area, flowing northeast for 10.5 miles between Fort Lewis and Poor Mountains. With its headwaters originating just west of the planning area in Elliston, the Roanoke River provides scenic views, recreational opportunities and drinking water for both residents and visitors of Roanoke County.



Graphic 3.01 Fly Fisherman in the Roanoke River

#### 3.1.2 Tributary Streams

Within the Glenvar Planning Area, there are eight tributary streams draining directly into the Roanoke River. Six of the streams, Callahan Branch, Stypes Branch, Little Bear Rock Branch, Big Bear Rock Branch, Paint Bank Branch and Horners Branch, originate near the ridgeline of Fort Lewis Mountain and flow south through hollows - small valleys surrounded by mountains - into the Roanoke River. The two remaining streams, Dry Branch and Mill Creek, originate near the top of Poor Mountain and flow north into the Roanoke River. See Graphic 3.03, Glenvar Community Plan Water Features, on page 3-2 for a map of tributary streams in the planning area.

#### 3.1.3 Water Quality

According to a 2010 report from the U.S. Environmental Protection Agency (EPA), portions or all of the Roanoke River through the Glenvar Community is impaired due to PCBs (Polychlorinated

Biphenyls), e.coli (escherichia coli) and/or temperature, respectively. In July 2005, the Virginia Department of Health issued a Fish Consumption Advisory for PCBs for the entire Roanoke River. The source of this impairment is unknown.

The report also lists the 12.64-mile section of the Roanoke River from the City of Salem Water Treatment Plant (WTP) to the confluence of the North and South Forks of the Roanoke River as impaired for aquatic life use due to water temperature. The source of the impairment is identified as natural conditions.

The waters from the City of Salem WTP to the Spring Hollow Reservoir water intake are impaired for recreation by e. coli. Sources of this impairment include discharges from municipal separate storm sewer systems (MS4), livestock grazing or feeding operations, septic systems, sanitary sewer overflows or collection system failures, non-point source discharges and wildlife (other than waterfowl).



Graphic 3.02 Location of E.Coli Impairment

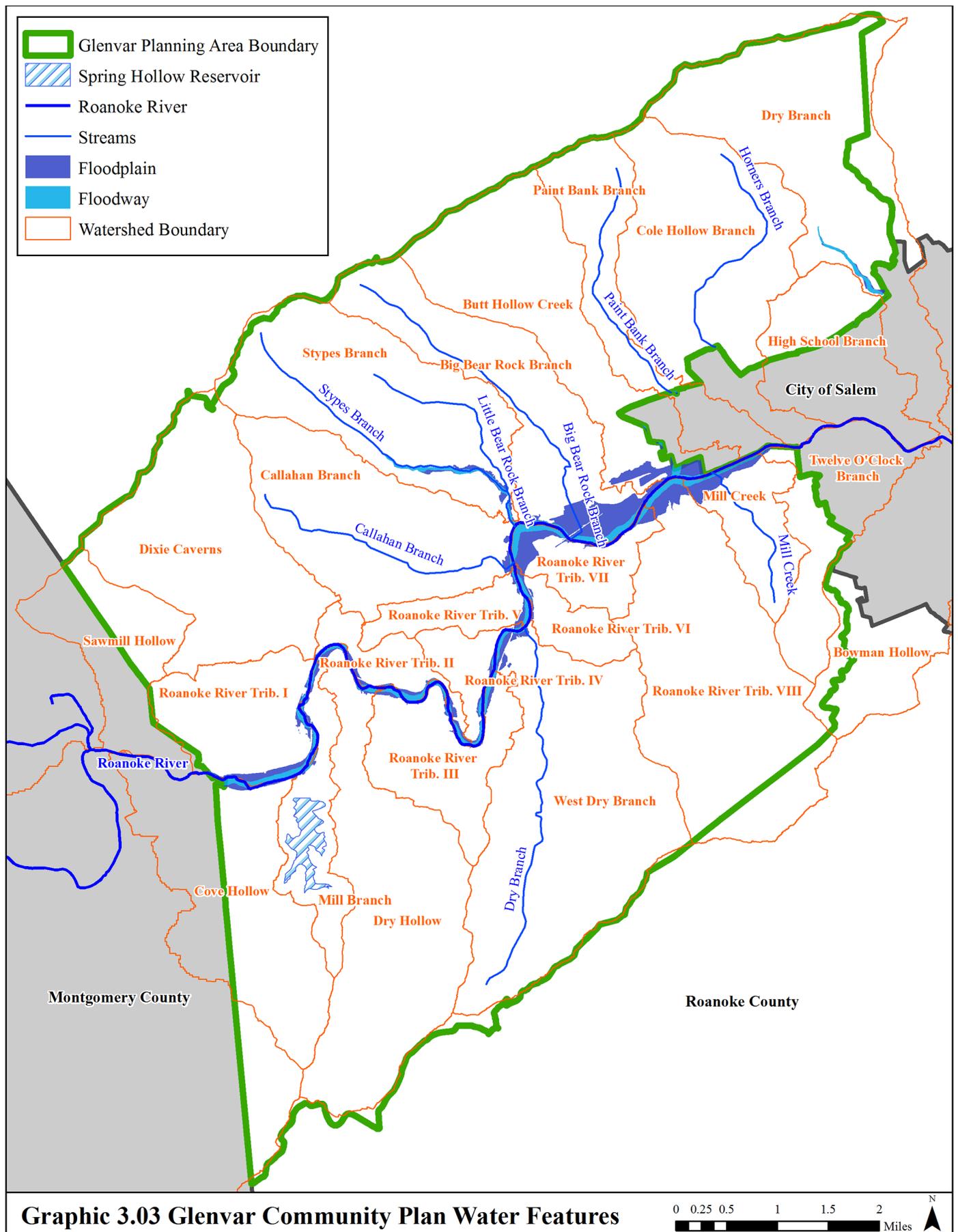
### 3.2 Watersheds and Floodplain

#### 3.2.1 Watersheds

A watershed is the area of land where all of the water drains to a common waterway, such as a stream, river or lake. There are 27 watersheds completely or partially in the Glenvar Planning Area, all of which drain into the Roanoke River. Twenty-six of these watersheds are entirely in Roanoke County, covering 38,049 acres of drainage area.

#### 3.2.2 Floodplain

A floodplain is an area near a river or a stream



that is susceptible to being inundated by water. The floodplain consists of the floodway and the floodway fringe. The floodway is the channel of a river or other watercourse and adjacent land that must be reserved in order to pass the 100-year flood without increasing the elevation more than a designated height. The floodway fringe includes areas with a 1% annual chance of flooding.

The floodplain covers 981.45 acres of the Glenvar Planning Area. Of that area, 837.96 acres (85.38 %) is parcelized; the remaining 14.62%, is right-of-way or surface water. As show in Table 3.01 below, almost all of the land in the floodplain is zoned for low density residential (R-1) or high intensity industrial (I-2) uses. The remaining 10% of the floodplain is zoned for agricultural or commercial use.

Table 3.01 Zoning in the Floodplain

Zoning District	Area (acres)	Percent of Floodplain
AG-1 Agricultural/Rural Low Density	16.00	1.91
AG-3 Agricultural/Rural Preserve	34.02	4.06
AR Agricultural/Residential	27.58	3.29
R-1 Low Density Residential	381.31	45.50
C-1 Office	1.37	0.16
C-2 General Commercial	3.76	0.45
I-1 Low Intensity Industrial	0.44	0.05
I-2 High Intensity Industrial	373.47	44.57
Total	837.96	100.00

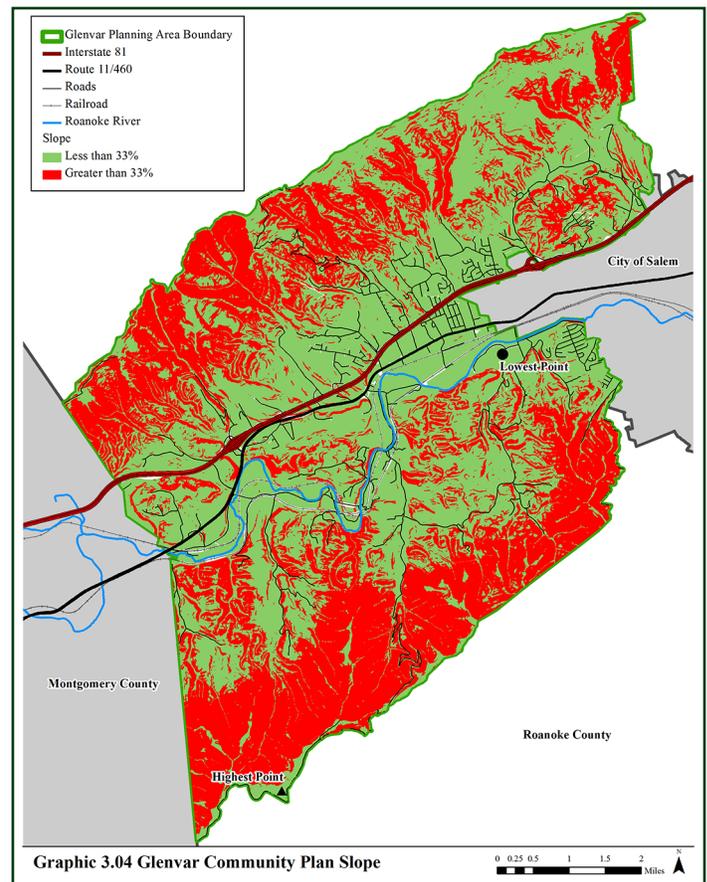
Within the Glenvar Planning Area, 453 parcels are wholly or partially in the floodplain and subject to the Floodplain Overlay (FO) District regulations as defined by the *Roanoke County Zoning Ordinance*. Within this district, a structure is prohibited from being located, relocated, constructed, enlarged or structurally altered unless it fully complies with the standards set forth in the FO District. Such regulations include a prohibition on any use, activity and/or development that adversely affects the capacity of the channels or floodways or any watercourse, drainage ditch or other drainage facility or system and a requirement that the lowest floor elevation of any new residential structure be at least two feet above base flood elevation.

### 3.3 Topography and Geologic Features

The elevations within the Glenvar Planning Area range from 1,029 feet to 3,831 feet above sea level. The lowest point is located in Green Hill Park’s field area. The highest point in the Glenvar Planning Area is found on top of Poor Mountain, located off of Honeysuckle Road near the Montgomery County border.

#### 3.3.1 Slope

Designated as steep slopes, 45% of the land area in the Glenvar Planning Area has a slope of greater than or equal to 33 percent. These areas are subject to additional building regulations and present greater challenges for developers to overcome regarding land stabilization, fill additions and deletions, retaining walls and access. The majority of the steep slope land area (85%) is zoned AG-3, Agricultural/Rural Preserve District. The areas with steep slopes are designated by red in the graphic below.



Graphic 3.04 Glenvar Community Plan Slope

The remainder, 55%, of the Glenvar Planning Area is sloped less than 33 percent. This area is mostly zoned AG-3, Agricultural/Rural Preserve and R-1, Low Density Residential District; less than 10% of this area is zoned for commercial or industrial use.

### 3.3.2 Fort Lewis Mountain

Fort Lewis Mountain extends west from Salem for 11 miles and ranges in elevation from 1,400 feet to a peak of 3,280 feet. Originally known as Butler's Mountain in the west near Lafayette and Deyerle's Mountain in the east near Salem, Fort Lewis' modern name references both the pre-revolutionary fort and General Andrew Lewis.

### 3.3.3 Dixie Caverns

Dixie Caverns, located in the southwestern portion of Fort Lewis Mountain, was discovered by Bill McDaniel in 1920. Opened to the public in 1923, Dixie Caverns is Roanoke's only and the southernmost commercial cavern in Virginia. The Virginia Department of Conservation and Recreation (DCR) has designated Dixie Caverns as a conservation site encompassing "land containing one or more biologically significant karst resources." Dixie Caverns is a unique geologic formation; unlike most caves that lead immediately down into the earth, Dixie Caverns leads up into the Cathedral Room, a massive 160-foot high space. Since the Caverns' discovery in the early twentieth century, a number of stairs and tunnels have been dug out to provide enough space for visitors to

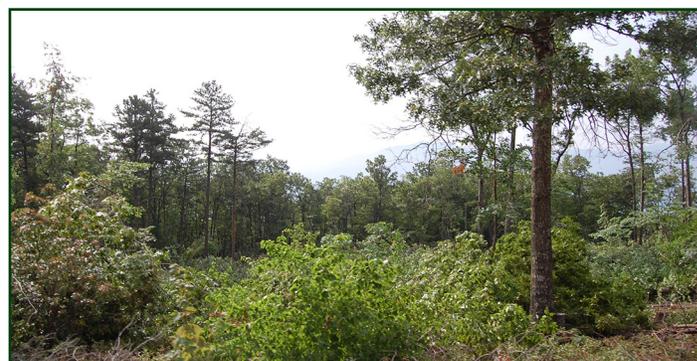


Graphic 3.05 Dixie Caverns Entrance

view the formations including the Turkey Wing, Magic Mirror, Leaning Tower, Frozen Waterfall and a 57-ton, bell-shaped formation with fringed edges called the Wedding Bell. Dixie Caverns is open for tours 363 days-a-year and also features a year-round campsite, rock and mineral shop and an indoor antique mall. See Graphic 3.07 for the location of geologic features discussed in this section.

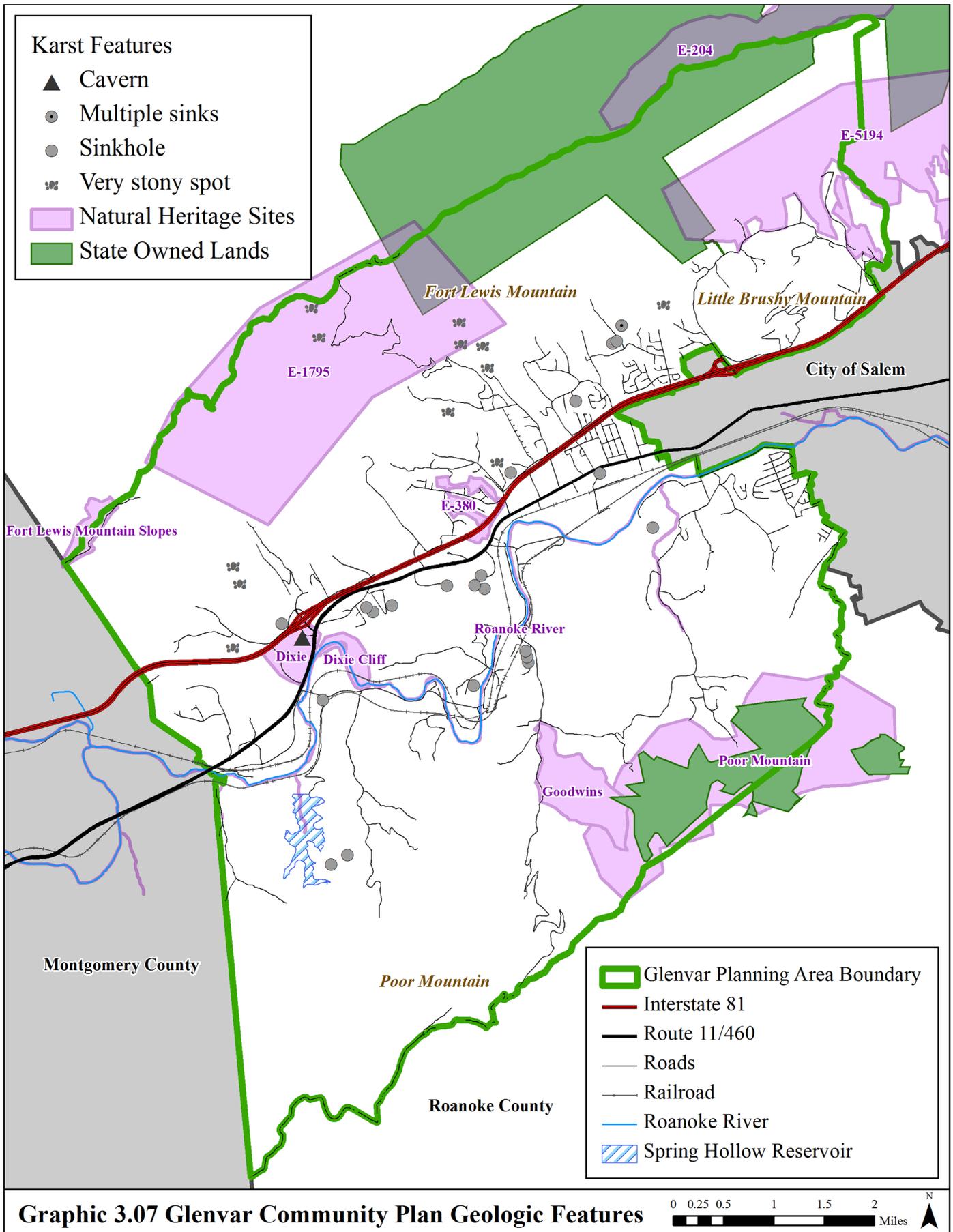
### 3.3.4 Havens Wildlife Management Area

The earliest owned management area by the Virginia Department of Game and Inland Fisheries (DGIF), the initial 6,000 acres of Havens Wildlife Management Area (WMA) was purchased in 1930 for \$2.61 an acre. Havens WMA presently encompasses 7,190 acres of heavily forested and steep, generally inaccessible terrain. Prior to the DGIF purchase, the area's primary use was timber production and the area is slow to recover due to nutrient-poor soils and little water. Ninety-nine percent forested, Havens WMA grows a mix of oak, hickory, pine and beech with a few stands of enormous eastern hemlocks.



Graphic 3.06 Forested Area within Havens WMA

The character of the forest within Havens WMA was notably affected by the chestnut blight of the twentieth century during which chestnut was replaced as the dominant tree species by various oak associations. In the areas where oaks dominate, typical tree species include northern red oak, dwarf chestnut oak, white oak, red maple, striped maple, sweet birch, cucumber magnolia, downy serviceberry, mountain holly, witch-hazel and species of rhododendron and fruit shrubs. Where oak is not dominant, communities of eastern white pine, Virginia pine and tulip tree can be found.



In a 1997 floral richness inventory of Havens WMA, 248 different plant species were identified including 45 trees, 21 shrubs and 183 types of herbaceous plants. The Virginia Department of Conservation and Recreation (DCR) identified the western portion of Havens WMA and Fort Lewis Mountain (site E-1795) as a general location of smooth coneflower (*echinacea laevigata*), one of only nine species of echinacea native to North America. The smooth coneflower occurs in only 10 counties in Virginia, North Carolina, South Carolina and Georgia and is listed by Virginia as a threatened species. The smooth coneflower is federally listed as endangered and globally listed as imperiled.



Graphic 3.08  
Smooth Coneflower

Havens Wildlife Management Area is also home to populations of white-tailed deer, black bears, red foxes, bobcats, wild turkeys, squirrels and ruffed grouse. Approximately five acres of wildlife clearings are maintained by the DGIF to provide brood range for game and nongame birds as well as forage for deer. Hunting is permitted in Havens WMA. The WMA is also part of the Virginia Birding and Wildlife Trail of the Roanoke Valley. Black-and-white, hooded, and Kentucky warblers, American redstart, ovenbird and wood thrush are common at lower elevations and black-throated green warbler, scarlet tanager, dark-eyed junco, veery and rose-breasted grosbeak are found deeper in the undisturbed forestland.



Graphic 3.09  
Frosted Elfin

DCR identified the southeastern portion of Havens WMA and Fort Lewis Mountain (site E-5194) as a general location of the frosted elfin (*callophrys irus*) butterfly. Populations of this butterfly are often small and local; consequently, the frosted elfin is designated as “very rare or local throughout its range or found locally in a restricted range.”

Another rare butterfly species, persius duskywing (*erynnis persius*), is located along the ridgeline of Fort Lewis Mountain and Havens WMA (site E-204). The persius duskywing is “apparently secure globally, though it might be quite rare in parts of its range, especially at the periphery.” In addition to hunting and birding opportunities, there are also several hiking trails throughout Havens WMA; however, they are not well marked and very steep due to the geologic formations found on Fort Lewis Mountain.

The three geologic formations found within Havens WMA are the Brallier formation, the Chemung formation and the Price formation. The Brallier formation underlies the base of Fort Lewis Mountain from 1,400 to 1,700 feet and “erodes to a series of small, linear hills that are well expressed on aerial photographs. The formation weathers to a soil that is littered with orange to grayish-brown, silty shale chips.”

The second geologic formation found within Havens WMA is the Price formation, which is exposed along part of the southeastern side of Fort Lewis and Brushy Mountains. The “quartzose sandstones and conglomerates in the formation make it one of the best ridge formers in the area. It is well exposed along many of the dirt roads and fire trails on the crest of Fort Lewis and Brushy Mountains.”



Graphic 3.10 Exposed Price Formation

The Chemung geologic formation crops out in a wide belt along the upper slopes of Fort Lewis Mountain. This formation is estimated to be 1,000 to 1,500 feet thick consisting of “highly fossilized sandstones with interbedded shales and conglomerate outcrops. The formation is typified by steep and very

steep slopes.” The Price and Chemung formations are the source of most of the sediment (colluvium) that covers the lower slopes of Fort Lewis Mountain.

### 3.3.5 Poor Mountain

Poor Mountain, at 3,928 feet, is the tallest mountain in Roanoke County. As its name suggests, Poor Mountain has predominantly infertile and acidic soils derived from metamorphosed sandstone bedrock. The Virginia Department of Conservation and Recreation (DCR) identified 345 acres of “land containing one or more biologically significant karst resources” on Poor Mountain Road near its intersection with Harborwood Road (Goodwins site).

Additionally, DCR identified the Poor Mountain site as over 2,000 acres of “convex spur ridges, narrow ravines, and rugged, steep topography [that] support the largest known population of a globally rare plant species, as well as at least two rare ecological communities. [This site is] biologically significant.”

The slopes and ridges of Poor Mountain are vegetated with open-canopied, pine-oak woodlands. At the higher elevations most of the trees are low and gnarly and include species such as the chestnut oak, scarlet oak, bear oak, table mountain pine and pitch pine. The understory is comprised largely of shrubs that thrive in acidic soil such as the black huckleberry, mountain laurel and fetterbush.

The woodlands on the northeastern slope of Poor Mountain support the world’s largest known population of a globally rare shrub known as piratebush. Restricted to only a handful of sites in the mountains of Virginia, Tennessee, and North Carolina, piratebush is listed as endangered by the state of Virginia.

Piratebush grows in clumps and can reach a height of fifteen feet; however, most specimens in the Planning Area rarely exceed waist height. The leaves are two to four inches long, narrow and pale green, which is one indication of its parasitic nature. By tapping into the root systems of neighboring plants, piratebush requires less chlorophyll than most plants, therefore the lighter foliage color. Small green flowers

appear in mid-spring at the ends of new shoots and oval-shaped, yellow-green fruits, about an inch long, mature in late summer. In autumn, the leaves of the piratebush turn bright yellow.



Graphic 3.11 Piratebush

#### 3.3.5.1 Poor Mountain Natural Area Preserve

The rare piratebush is protected by the Poor Mountain Natural Area Preserve, a 925-acre preserve maintained by the Virginia Department of Conservation and Recreation. Poor Mountain Natural Area Preserve was acquired by DCR in 1991 and recently, several hiking trails were installed in the preserve. Bird watching is also a popular activity with butterflies, ruffed grouse, wild turkeys and pileated woodpeckers all found in Poor Mountain Natural Area Preserve.



Graphic 3.12 Wayfinding Signage and Bench in Poor Mountain Natural Area Preserve

#### 3.3.6 Geologic Formations

Fort Lewis Mountain and the northern slope of Poor Mountain are part of the Ridge and Valley ecoregion which is characterized by a series of parallel ridges that run northeast to southwest and are separated by narrow valleys. The ridge and southern slope of Poor Mountain fall in the Blue Ridge ecoregion. The terrain of the Blue Ridge ecoregion varies from narrow ridges and hilly plateaus to massive mountainous areas; it is generally rugged on metamorphic bedrock.

#### 3.3.7 Karst Topography

Karst features such as sinkholes and caves are commonly found in both the Ridge and Valley and Blue Ridge ecoregions. Karst describes landforms and

landscapes formed primarily by the slow dissolving, rather than mechanical eroding, of bedrock. Karst areas necessitate additional consideration to prevent contamination of groundwater supplies and to avoid building in these geologically hazardous areas. Twenty-one sinkholes have been identified in the Glenvar Planning Area, the majority of which are on south of Route 11/460. See Graphic 3.07 for a map of the karst features in the Planning Area.

### 3.3.8 Natural Heritage Data

In addition to the sites on Fort Lewis and Poor Mountain, the Virginia Department of Conservation and Recreation (DCR) also identified three other Natural Heritage sites in the Glenvar Planning Area. For a map of these sites, please see Graphic 3.07 on page 3-5.

The first site, Dixie Cliff, is located across Route 11/460 from Dixie Caverns. DCR describes the significance of this 86-acre site: “a large dolomite slope here supports globally rare ecological communities as well as rare plants. An unexplored cave with tremendous potential for additional rare plant and animal species contributes to the biological significance of this site.”

The second site is located in the vicinity of the Cherokee Hills neighborhood. This site, E-380, identifies the general location of Addison’s Leatherflower (*clematis addisonii*). This extremely rare flower is only found in four counties in Virginia.

Leatherflowers, like most members of the buttercup family, have no petals. Instead the sepals of the leatherflower are modified to look like petals. The sepals are fused towards the base, and curl back at the tips, forming a very elegant urn-shaped flower. Addison’s Leatherflower differs from the common species of leatherflower in that it has many leaves, almost all of them simple. According to the Digital Atlas of the Virginia Flora,



Graphic 3.13 Addison’s Leatherflower

Addison’s leatherflower tends to be found in open or slightly shaded woods on rocky dry hillsides, banks, ravines and ledges. It prefers well-drained porous soils.

The last site identified by DCR is the Roanoke River. The North and South Forks are described as “riparian reaches that provide habitat for one or more rare aquatic plants or animals.”

### 3.3.9 Soils

Soil surveys provide insight into some of the development constraints likely to be present in an area. Based upon the type of soil, slope and depth to bedrock, limitations presented by soil profiles can help determine what types of development are appropriate in a particular area. The soil survey for Roanoke County, carried out by the United States Department of Agriculture (USDA) in 1990, identifies and provides definitions and limitations for the various types of soils within the Glenvar Planning Area.

It should be noted that soil surveys provide data based on general location and site-specific information should be collected to determine the limitations presented by soils at those specific locations. The implementation of certain technical and/or design strategies can often reduce the limitations.

The predominant soil in the Glenvar Planning Area is Dekalb and Dekalb-Rock outcrop, covering approximately 27% of the area. This soil type, typically found on mountains on uplands, is not suited for any type of development.

The Chiswell-Litz soil type covers almost 16% of the Glenvar Planning Area, making it the second most predominant soil type. The Chiswell-Litz soil type is only found south of the Roanoke River on the slopes of Poor Mountain. Like the Dekalb soil type, Chiswell-Litz is also very limited for any type of development.

The land area in the valley between Fort Lewis and Poor Mountains consists mostly of loam soils. Loam soils are a mix of sand, silt and clay in relatively equal amounts. Loam is considered ideal for gardening

and agricultural uses because it retains nutrients and water while still allowing the water to flow freely. A map of soils in the Glenvar Planning Area is available in Appendix A.

### 3.4 Viewsheds

Fort Lewis Mountain, Poor Mountain and the Roanoke River provide scenic views for residents and visitors to the Glenvar Planning Area. These scenic views support a number of important community elements including the natural environment, quality of life, community character and the local economy.

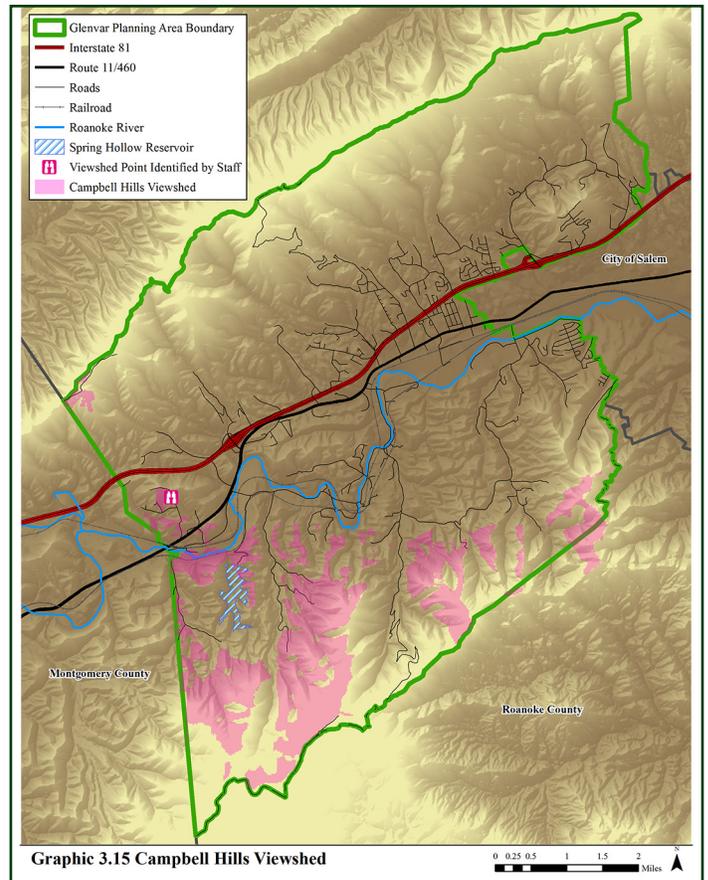
Because of their importance to the community, nine points in the Glenvar Planning Area were identified for viewshed mapping and analysis. The locations include:

- Campbell Drive (Campbell Hills)
- Center for Research and Technology
- Cherokee Hills Drive (Cherokee Hills)
- Glenvar Schools
- Green Hill Park
- Millwheel Drive (Woodbridge)
- Pleasant Run Drive
- Richfield Retirement Community
- Valley TechPark

Graphic 3.14 shows the view of Poor Mountain from Campbell Hills. Graphic 3.15 is a computerized representation of the areas visible from Campbell Hills, not taking into consideration structures or vegetation. It is important to identify critical viewsheds within the planning area because these areas contribute to the short-term and long-term quality of life for the community. A combined viewshed map is available in Appendix A.



Graphic 3.14 View of Poor Mountain from Campbell Hills



Graphic 3.15 Campbell Hills Viewshed



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**Chapter 4:  
Land Use and Development**

**4.1 Existing Land Use**

Existing land use refers to the current, functional use of a parcel of land regardless of structure type, zoning or future land use designation. For the purposes of this analysis, 5,128 parcels were classified into seven general use categories as defined by the *Roanoke County Zoning Ordinance* (Table 4.01). Vacant parcels are either completely undeveloped or are developed with unoccupied or accessory structures. Vacant land covers nearly 50% of the planning area. A large amount of this land is found on the slopes of Fort Lewis and Poor Mountains and is not easily developed due to topography.

The predominant land use on developed parcels within the Glenvar Planning Area is residential, with 3,533 parcels on over 10,000 acres of land. Residential use types include single-family dwellings, manufactured homes, mobile homes and patio homes. Civic uses, which include churches, day care centers, schools, parks and other community facilities, are found on 55 parcels, covering 13.45% of land in the planning area. Industrial uses such as light and heavy manufacturing, warehousing and distribution and scrap and salvage services account for just over 2.03% of land area yet ties for second in the number of parcels in the land use. This leads to the conclusion that industrial parcels are on average smaller than those used for civic purposes.

Commercial uses cover less than 1% of the land area in the Glenvar Planning Area. These uses include automobile dealerships and repair services, equipment sales and rental, golf courses and campgrounds. Hanging Rock Golf Course and Dixie Caverns at 116.56 and 45.58 acres, respectively, are the largest commercial uses in the planning area. Miscellaneous, office and agricultural uses account for 0.24% of the parcels and 1.29% of land in the Glenvar Planning Area. A map showing the existing land use by parcel is available in Appendix A.

Table 4.01 Existing Land Use

Land Use	Number of Parcels	Percent of Parcels	Acreage	Percent of Planning Area
Agriculture and Forestry	1	0.02	16.91	0.05
Civic	55	1.07	4,156.31	13.45
Commercial	27	0.53	233.78	0.76
Industrial	51	0.99	626.97	2.03
Miscellaneous	6	0.12	377.74	1.22
Office	5	0.10	6.19	0.02
Residential	3,533	68.90	10,071.78	32.60
Vacant	1,450	28.27	15,406.12	49.87
<b>Total</b>	<b>5,128</b>	<b>100.00</b>	<b>30,895.80</b>	<b>100.00</b>

**4.2 Economic Development**

*4.2.1 Center for Research and Technology*

Roanoke County’s 483-acre Center for Research and Technology (CRT) is located on Glenmary Drive near the Dixie Caverns exit off of Interstate 81. Opened in 2000, this publicly owned business park is designed for corporate headquarters, high-tech manufacturing operations and emerging research and development companies. Sites range in size from 26 to 57 acres and are served by natural gas, public water and sewer and several telecommunications companies. CRT has direct access to the Roanoke Regional Airport and Interstate 81, is in close proximity to Virginia Tech and 19 other higher education institutions and has access to a large regional labor market of over 300,000 skilled workers.

The Center for Research and Technology also has in place protective covenants and PTD, Planned Technology District, zoning to ensure long-term, high quality growth in the park. The park is designated as a Technology Zone, which provides regulatory flexibility while seeking to accommodate the requirements of emerging companies. Incentives available to qualifying companies include infrastructure improvement or site preparation grants, tax exemptions and discounts on building and permit fees.

Currently, CRT has two tenants: Novozymes Biologicals, Inc., a world leader in enzyme solutions,

and Tecton Products, which designs and manufactures custom fiberglass pultrusions.



Graphic 4.01 Novozymes Biologicals

The Roanoke County Economic Development Department recently completed a \$3.5 million construction project in the Center for Research and Technology. Improvements included the construction of a new roadway with all necessary utilities and amenities to Phase II of the park and the grading of three additional sites that are serviced by the new road. Additional landscaping enhancements along the entrances and roadways including the reforestation of the hillside and drainage area adjacent to the newly created sites were also completed. Future construction and improvement plans for the Center for Research and Technology include the continuation of the grading of sites within Phases I and II of the park, ongoing roadway and ground maintenance, utility extensions and improvements to Dow Hollow Road.

#### 4.2.2 Valley TechPark

Valley TechPark is a 177-acre business park located off of West Main Street on Technology Drive. Opened in 1994, Valley TechPark is home to R.R. Donnelley, a global provider of integrated communications, and Synchrony, a technology leader in active magnet bearings and high speed motors and generators.

Valley TechPark is zoned I-2C, heavy industrial with conditions that regulate the use and appearance of the buildings in the business park. The park is served by natural gas, public water and sewer

and three telecommunications companies. Currently, one 8.45-acre site is available for [re]development in Valley TechPark.



Graphic 4.02 R.R. Donnelley

#### 4.2.3 Available Industrial and Commercial Sites

The Roanoke County Economic Development Department has targeted eight available industrial properties and one available commercial property for sale and development within the Glenvar Planning Area. The sites are listed below in Tables 4.02 and 4.03.

Table 4.02 Available Industrial Sites

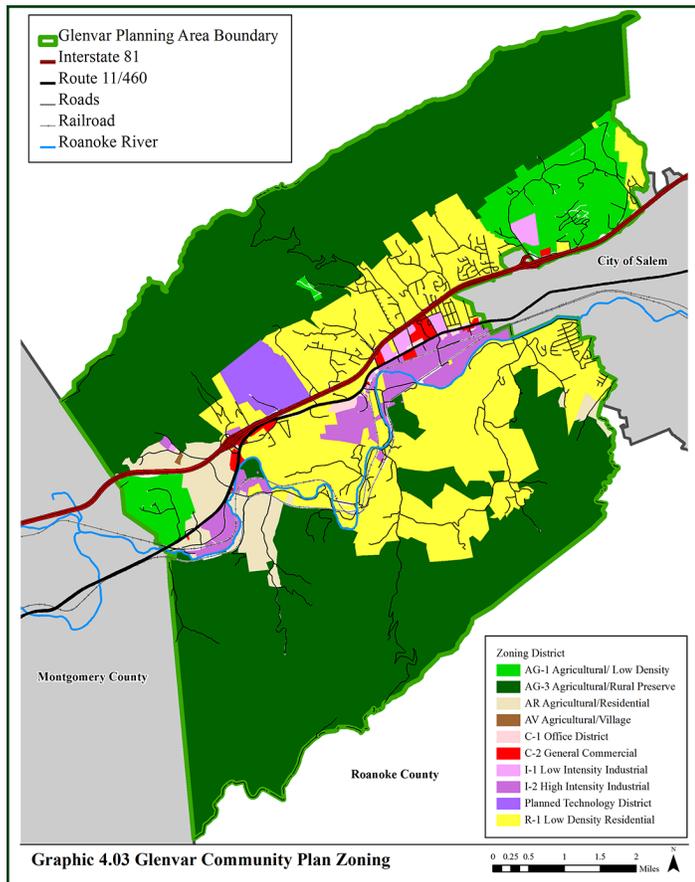
Site Name	Location	Acreage	Zoning
Ashworth	West River Road	30.51	AR
Blue Ridge Beverage	Barley Road	9.00	I-2
Center for Research and Technology	Glenmary Road	483.00	PTD
College of Health Sciences	Harwick Drive	37.35	AR
Country East	West Main St. at Garman Road	15.50	I-2, C-1
Horn	West River Road	47.63	I-2, R-1C
Salem Vent at Valley TechPark	Technology Drive	8.45	I-2C
Twine Hollow Road	Twine Hollow Road	16.62	I-2C, I-1

Table 4.03 Available Commercial Sites

Site Name	Location	Acreage	Zoning
Dixie Caverns	5753 West Main Street	14.00	C-2, AR, R-1

### 4.3 Zoning

Every property in Roanoke County has a zoning classification that regulates what land uses are permitted as well as where the building can be located, how tall it can be and how much lot coverage is allowed. Graphic 4.03, Glenvar Community Plan Zoning, shows the location and extent of each zoning district within the planning area.



As shown in Table 4.04, the majority (70.79%) of land in the Glenvar Planning Area is zoned agriculturally, AG-1, AG-3, AR or AV. These zoning districts account for 21,609.11 acres of the planning area and are located primarily on the slopes of Fort Lewis and Poor Mountains. The R-1, Low Density Residential, District is the second largest at 7,146.22 acres or 23.41% of the planning area. The remaining 1,770.61 acres or 5.80% of the Glenvar Planning Area is zoned for industrial or commercial use with I-1 and I-2 accounting for 1,563.87 acres, 5.12%, of that land area. Only 206.74 acres are zoned C-1, Office, or C-2, General Commercial.

Table 4.04 Zoning (As of June 2011)

Zoning District	Acreege	Percent of Planning Area
<b>Agricultural</b>		
AG-1 Agricultural/Rural Low Density	1,896.51	6.21
AG-3 Agricultural/Rural Preserve	18,705.50	61.28
AR Agricultural/Residential	1,000.38	3.28
AV Agricultural/Village Center	6.72	0.02
<i>Subtotal</i>	<i>21,609.11</i>	<i>70.79</i>
<b>Commercial</b>		
C-1 Office	59.68	0.20
C-2 General Commercial	147.06	0.48
<i>Subtotal</i>	<i>206.74</i>	<i>0.68</i>
<b>Industrial</b>		
I-1 Low Intensity Industrial	183.76	0.60
I-2 High Intensity Industrial	896.61	2.94
PTD Planned Technology District	483.50	1.58
<i>Subtotal</i>	<i>1,563.87</i>	<i>5.12</i>
<b>Residential</b>		
R-1 Low Density Residential	7,134.69	23.37
R-1MH Manufactured Housing Overlay	11.53	0.04
<i>Subtotal</i>	<i>7,146.22</i>	<i>23.41</i>
<b>Total</b>	<b>30,525.94</b>	<b>100.00</b>

In the last five years, 15 land use applications (rezoning or special use permit) located in the Glenvar Planning Area have been approved by the Board of Supervisors (see Table 4.05 on page 4-4).

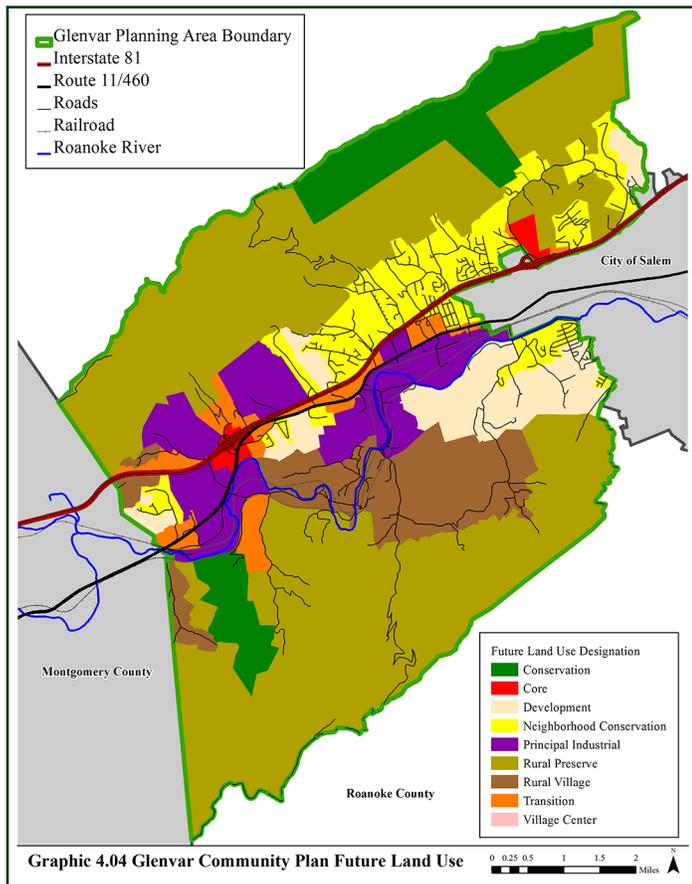
The most common request was for a multiple dog permit which is required legally keep, breed or train four or more dogs in a residential area. The corrections facility and the asphalt plant were the most contentious land use applications, with several hundred community members in attendance.

Table 4.05 Land Use Applications (2006-2011)

Date	Land Use Action	Old Zoning District	New Zoning District	Purpose	Location	Affected Acreage	Ordinance Date
February 2006	Rezoning and SUP	I-2 (High Intensity Industrial)	AG-3C (Agricultural/Rural Preserve with Conditions)	Corrections Facility	West River Road	43.00	2/28/06
July 2006	SUP	AR (Agricultural/Residential)	ARS (Agricultural/Residential with a SUP)	Religious Assembly	Meacham Road	26.32	7/25/06
May 2007	SUP	R-1 (Low Density Residential)	R-1S (Low Density Residential with a SUP)	Accessory Apartment	River Oaks Drive	0.89	5/22/07
May 2007	Rezoning	R-1 (Low Density Residential) and PTD (Planned Technology District)	PTD (Planned Technology District)	Amend Covenants, Conditions and Master Plan for CRT	Glenmary Drive (CRT)	25.30 and 545.25	5/22/07
June 2007	Rezoning	I-2 (High Intensity Industrial)	AG-3 (Agricultural/Rural Preserve)	Single-Family Dwelling	Beason Lane	35.21	6/26/07
August 2007	SUP	R-1 (Low Density Residential)	R-1S (Low Density Residential with a SUP)	Religious Assembly	West Main Street	1.00	8/28/07
May 2008	Rezoning	I-2 (High Intensity Industrial)	C-2C (General Commercial with Conditions)	Unmanned Gasoline Station	Shawnee Drive	1.00	5/27/08
May 2009	SUP	R-1 (Low Density Residential)	R-1S (Low Density Residential with a SUP)	Multiple Dog Permit	West Riverside Drive	4.33	5/26/09
November 2009	SUP	I-2 (High Intensity Industrial)	I-2S (High Intensity Industrial with a SUP)	Asphalt Plant	Peaceful Drive	16.70	11/17/09
September 2010	Rezoning and SUP	AR (Agricultural/Residential)	AVS (Agricultural/Village Center with a Special Use Permit)	Construction Yard	Twine Hollow and Meacham Drive	6.54	9/28/10
October 2010	SUP	R-1 (Low Density Residential)	R-1S (Low Density Residential with a SUP)	Multiple Dog Permit	Fort Lewis Church Road	1.005	10/26/10
April 2011	SUP	R-1 (Low Density Residential)	R-1S (Low Density Residential with a SUP)	Private Stable	Harborwood Road	44.50	4/26/11
June 2011	SUP	R-1 (Low Density Residential)	R-1S (Low Density Residential with a SUP)	Multiple Dog Permit	Elderwood Road	2.24	6/28/11
September 2011	Rezoning	R-1 (Low Density Residential)	AR (Agricultural/Residential)	Livestock and Chickens	Harborwood Road	5.02	9/27/11

#### 4.4 Future Land Use

The future land use designation for an area can be found on the Future Land Use Map, a component of the *Roanoke County Comprehensive Plan*. Future land use is a tool used by governing bodies, planning commissioners and planning staff to identify the most appropriate and desirable locations in their jurisdiction for specific land uses. The existing land use and zoning of a property are not always consistent with the future land use designation for an area; over time, as properties develop and redevelop, these classifications should become complementary with each other. Future land use designations are particularly important when parcels are proposed for rezoning from one zoning district to another.



Half of the Glenvar Planning Area (over 16,000 acres) is designated as 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. This designation is currently located on the slopes of

both Fort Lewis and Poor Mountains. Neighborhood Conservation is the second largest future land use area covering 3,367.87 acres or 10.61% of the Glenvar Planning Area. Neighborhood Conservation is intended to preserve and encourage traditional single-family neighborhoods; typical uses include single-family residential, parks, schools and churches. The majority of the Neighborhood Conservation designation is found north of Route 11/460 and includes developments such as Cherokee Hills, Glenvar Heights and Fort Lewis Estates.

Table 4.06 Future Land Use

Future Land Use	Acreege	Percent of Planning Area
Conservation	2,765.69	8.71
Core	292.57	0.92
Development	2,140.88	6.74
Neighborhood Conservation	3,367.87	10.61
Principal Industrial	2,878.77	9.07
Rural Preserve	16,248.85	51.19
Rural Village	2,930.90	9.23
Transition	1,118.33	3.52
<b>Total</b>	<b>31,743.86</b>	<b>100.00</b>

The Rural Village designation, covering 2,930.90 acres (9.23%) is generally located in between suburban development patterns already established in the Glenvar Planning Area and designated Conservation and Rural Preserve areas. The areas around Harborwood Road and West River Road are designated Rural Village.

Slightly under 2,900 acres (9.07%) of the planning area is designated as Principal Industrial. This area is intended for industrial uses and regional employment centers and includes the Center for Research and Technology, Valley TechPark and existing industrial areas south of Route 11/460.

The Conservation future land use area is of particular environmental sensitivity due to topography, existence of unique land characteristics, conservation easements, soil types or location with respect to other state or federally preserved lands. This future land use

area accounts for 2,765.69 acres (8.71%) of the Glenvar Planning Area and is located on Havens Wildlife Management Area and Spring Hollow Reservoir.

Almost 7% of the planning area is designated as Development. This future land use area, covering 2,140.88 acres, is where most new neighborhood development should occur, including large-scale planned developments that mix residential with retail and office uses. The Development designation is currently placed on Campbell Hills, Green Hill Park, parts of the Woodbridge subdivision and near Pleasant Valley Road.

The Transition future land use area 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. The Transition designation is spread out on both sides of Route 11/460 and covers 1,118.33 acres of the planning area.

The smallest future land use area in the Glenvar Planning Area is Core, where high intensity urban development is encouraged. This designation currently accounts for only 292.57 acres of the planning area and is located around Interstate 81 exits 132 and 137.

## 4.5 County Guidelines and Programs

### 4.5.1 Route 11/460 West Corridor Design Guidelines

A set of Design Guidelines was developed for the corridor as part of the Route 11/460 West Corridor Master Plan. The Design Guidelines address preferred building orientation and location, site access and layout, parking and pedestrian circulation, building style and architectural treatment, landscaping, site lighting and signage.

While the Design Guidelines are voluntary, County staff encourages applicants submitting land use applications for a special use permit or rezoning

to utilize the recommendations. Compliance with the Design Guidelines is required of applicants wishing to apply for County funding for assistance with site improvements through the Commercial Corridor Matching Grant Program.

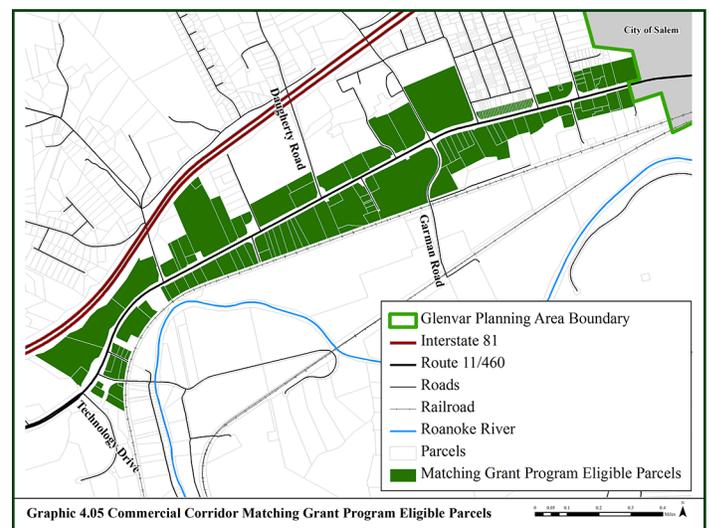
### 4.5.2 Commercial Corridor Matching Grant Program

The Roanoke County Commercial Corridor Matching Grant Program was created in the early 1990s as a means to assist businesses located on corridors slated for major road improvements. The Matching Grant Program offers up to a 50% County match (up to \$20,000 dollars) to business owners for site improvements in compliance with the area's Design Guidelines that also exceed zoning ordinance requirements. Examples of improvements include façade renovation, landscaping, site lighting, parking improvements, monument-style signs and site accessories such as wooden fences.

To be eligible the property must be:

- Located within the defined Route 11/460 corridor;
- Used commercially or industrially (non-residential);
- Taxed by Roanoke County; and
- Certified as having no active zoning violations.

The program has been utilized once along the Route 11/460 West corridor for a sign at Fort Lewis Fire Station.



## Chapter 5: Community Facilities

### 5.1 Schools

The four Roanoke County Schools serving the Glenvar Planning Area are Fort Lewis Elementary School, Glenvar Elementary School, Glenvar Middle School and Glenvar High School. Fort Lewis Elementary is located on West Main Street at the eastern end of the planning area and Glenvar Elementary, Glenvar Middle and Glenvar High Schools are located in a campus off of Malus Drive in the central portion of the planning area. See Graphic 5.03, Glenvar Community Plan Community Facilities, on page 5-2.

Fort Lewis Elementary School serves residents in the eastern sections of the planning area bordering the City of Salem and in the area around Wildwood Road. The Glenvar Elementary school district covers the remaining portion of the planning area. Both Glenvar Middle and High Schools serve the entire Glenvar Planning Area.



Graphic 5.01 Fort Lewis Elementary School (1936)

The original, one-room Fort Lewis Elementary was built in 1889 and later expanded to four rooms in the early 1900s. In 1928, the present structure opened with seven classrooms and an auditorium. Expansions in 1941 and 1996 have resulted in the fifteen-classroom

structure present today. In December 2010, a section of the roof that was constructed in 1996 collapsed under the weight of heavy winter snow. No one was injured in the incident and the structure was fully repaired by February 2011. Fort Lewis Elementary is currently undergoing a renovation and expansion of its parking area as a result of the widening of West Main Street.

Glenvar Elementary, Middle and High School are located in a single campus north of Interstate 81 on Malus Drive. The campus was completed in 1964, with both the elementary and high schools opening at that time. Glenvar High School has served residents of the community as a high school from 1964-1976 and continuously since 1983. From 1977-1982, the school served as Glenvar Junior High following the consolidation of Andrew Lewis and Glenvar High Schools into Salem High School. Glenvar was re-established as a high school in 1983 following the formation of the Salem City Schools system. Glenvar Middle School opened in 1996 following the completion of a 41,000 square foot expansion connected to the existing high school.

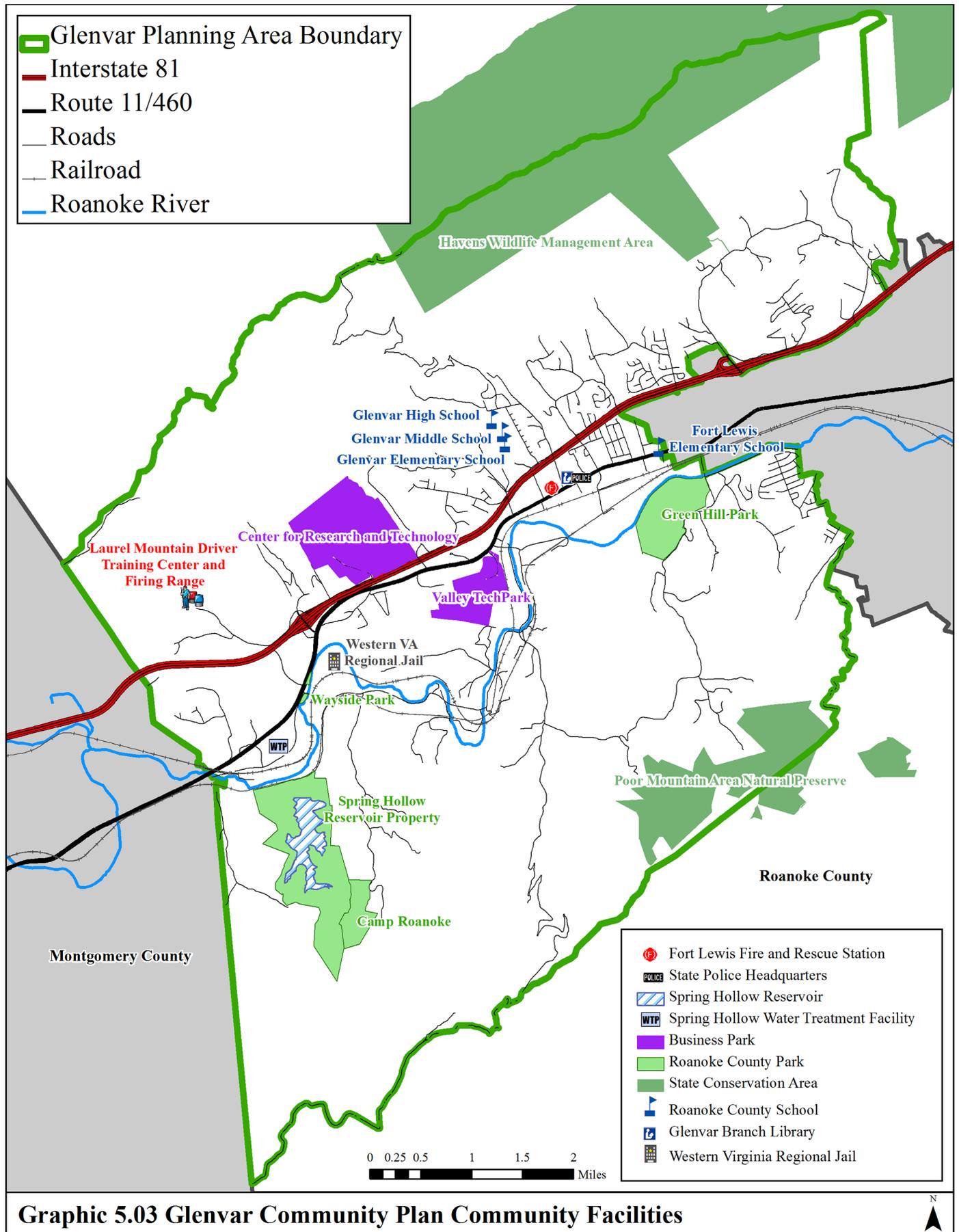


Graphic 5.02 Glenvar Middle School

Enrollment figures for the four schools in the Glenvar Planning Area are listed below in Table 5.01.

Table 5.01 School Enrollment Figures

School	Grade Levels	Capacity	Enrollment				
			2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Fort Lewis Elementary	Kindergarten - 5	220	206	216	234	233	220
Glenvar Elementary	Kindergarten - 5	525	372	361	354	355	369
Glenvar Middle	Grades 6-8	525	469	443	414	430	410
Glenvar High	Grades 9-12	715	635	647	661	615	591



## 5.2 Library

The Glenvar Branch Library is located at the intersection of Daugherty Road and West Main Street. The existing 5,100 square foot structure was constructed in 1978. Outside of media collections, general services and programs provided at the Glenvar Branch include story times, computers, wireless internet, office machines, book clubs, family movie night, video services and one meeting room.



Graphic 5.04 Glenvar Library Exterior



Graphic 5.05 Glenvar Library Interior

The existing library had become inadequate to service the needs of the Glenvar Community. On September 29, 2011, ground was broken for a new Glenvar Library. The new library will be 15,000 square feet and incorporate features such as a computer training lab, teen and juvenile room and an after-hours meeting room with a small food preparation space.



Graphic 5.06 New Glenvar Library Rendering

Overall circulation for the Glenvar Branch Library has increased steadily over the past three years. The number of library programs for adults, young adults and children also increased from 2008 to 2011. Additional circulation and service statistics for the Glenvar Branch Library are listed below in Table 5.02, Glenvar Branch Library Service Report.

Table 5.02 Glenvar Branch Library Service Report

	2008-2009	2009-2010	2010-2011
<b>Circulation</b>			
Adult Fiction	21,471	23,805	24,286
Adult Nonfiction	10,381	9,629	10,058
<b>Total Adult</b>	<b>31,852</b>	<b>33,434</b>	<b>34,344</b>
Juvenile	13,008	14,301	15,382
Young Adult	5,575	5,780	6,511
Audio	3,321	3,494	3,859
Software	2	0	0
Videos	3,498	2,237	1,611
DVDs	29,119	29,279	27,326
NetLibrary	0	0	99
<b>Grand Total</b>	<b>86,375</b>	<b>88,525</b>	<b>89,132</b>
<b>Services</b>			
<b>Library Programs</b>			
Adult: # of Events	11	4	12
Attendance	52	96	235
Young Adult: # of Events	18	28	37
Attendance	165	146	212
Children: # of Events	125	131	131
Attendance	2,113	2,197	2,195
<b>Non-Library Programs</b>			
# of Events	54	37	45
Attendance	933	569	676
<b>Outreach</b>			
# of Visits	35	38	47
# of People	2,225	2,825	2,870
<b>User Count</b>	<b>65,334</b>	<b>62,095</b>	<b>62,274</b>
<b>Volunteer Hours</b>	<b>365</b>	<b>121</b>	<b>106</b>
<b>New Registrations</b>	<b>323</b>	<b>275</b>	<b>244</b>

### 5.3 Public Safety

#### 5.3.1 Fire and Rescue

The Glenvar Planning Area is served by Roanoke County Public Safety Building #9, Fort Lewis, located at the intersection of Daugherty Road and West Main Street, across from the Glenvar Branch Library. Station 9 is first due for all of western Roanoke County from Montgomery County to the City of Salem and between Fort Lewis and Poor Mountains. The station is also responsible for Interstate 81 from the Montgomery County line to Exit 140 and the entire Richfield complex.

Station 9 is manned by both career and volunteer staff. A minimum of eight career staff are in place Monday through Friday from 6:00AM to 6:00PM to staff one fire truck and one additional unit (fire or rescue). The eight career staff includes two that are assigned to an ambulance on a 24/7 basis. Twenty-six fire department volunteers also respond from this station.



Graphic 5.07 Fort Lewis Public Safety Building

Equipment assigned to Station 9 includes one engine, one pumper/tanker combination, one 100' aerial tower ladder, one mobile air unit, one heavy squad, one brush truck, one utility vehicle and two ambulances. The mobile air unit is deployed as needed to refill air bottles; the heavy squad is also utilized as needed, particularly on the entire I-81 corridor in Roanoke County.

A total of 12,690 emergency responses were handled by Roanoke County Fire and Rescue in 2010 with 1,603 of these being in Fort Lewis Response Area. Of these 1,603 calls in Fort Lewis, 1,351 were

rescue responses and 252 were fire responses. The 1,351 rescue responses resulted in 978 transports to a hospital; of these 978, 57% required advanced life support (ALS) care.

Station 9, Fort Lewis, continues to be one of the busier stations in Roanoke County, typically third behind the Cave Spring and Hollins stations. Due to high traffic and call volume, Fort Lewis Station is identified in the 2011-2015 Capital Improvement Program (CIP) as in need of HVAC and sewer repairs.

#### 5.3.2 Roanoke County Police

The Roanoke County Public Safety Building, located at 5925 Cove Road, is the headquarters facility for County police operations. The Public Safety Building, which also houses Fire and Rescue administration and Communications and Information Technology for the County, is located approximately seven miles from the center of the Glenvar Planning Area.

The populated area of the Glenvar Community is served by the Number 7 Police District. Within this police district, there are 15 reporting districts, 701-715.

The Roanoke County Police also operate the Laurel Mountain Driver Training Center, located on Twine Hollow Road near the Dixie Caverns



Graphic 5.08 Laurel Mountain Driver Training Center and Firing Range

interchange. The driver training center is a Virginia Department of Criminal Justice Services approved facility for training law enforcement officers in the proper and safe methods of handling vehicles in a variety of road conditions.

The 30-acre training center includes a closed one-mile course, skid pad, classroom and garage for minor maintenance and repairs. Originally built for use by Roanoke County and still managed by the Roanoke County Police Department, the Center is the only training facility of its kind west of Richmond. The Roanoke County Firing Range is also located off of Twine Hollow Road near the training complex. The range was recently updated to include a “bullet trap system” designed to neutralize firing range bullets so that they are able to be disposed of easily, saving money on maintenance.

### 5.3.3 Virginia State Police

The headquarters for Division 6 of the Virginia State Police is located at 3775 West Main Street on the northern side of the road. Division 6 includes the counties of Alleghany, Bath and Highland (Area 38), Botetourt and Rockbridge (Area 39), Craig, Montgomery, Roanoke and Floyd (Area 40), Bedford and Franklin (Area 41), Henry and Patrick (Area 42) and Pittsylvania (Area 43). The 11,152 square foot building was built in 1950.

### 5.3.4 Western Virginia Regional Jail

The Western Virginia Regional Jail (WVRJ), which began taking in prisoners on April 9, 2009, is located on a 427-acre tract off of West River Road on a bend in the Roanoke River. The 264,000 square foot state-of-the-art building is rated for a capacity of 605 inmates with another 200 beds double-bunked for a total of 805 inmates. The facility can be expanded to accommodate an additional 649 inmates in the future. The WVRJ currently houses an average daily inmate (male and female) population of 725. Staff at the regional jail averages around 200 including subcontractors (medical, food service, commissary and inmate phones) with jail employees accounting for about 90% of the staff.

The WVRJ was built to relieve the overcrowded and potentially unsafe conditions in the local jails serving the four localities that formed the Western Virginia Regional Jail Authority—the counties of Franklin, Montgomery, and Roanoke and the City of Salem. After obtaining an exemption from the state moratorium on new jail construction, ground was broken for the Western Virginia Regional Jail in February 2007. After two years of construction, the jail was formally dedicated on March 6, 2009, in a ceremony attended by state and local dignitaries and members of the public.



Graphic 5.09 Western Virginia Regional Jail

The Western Virginia Regional Jail received LEED (Leadership in Energy and Environmental Design) certification in April 2010, making it the first correctional facility in Virginia and one of the first in the nation to receive LEED certification.

Some of the specific green features included in the regional jail’s design are:

- a siphonic roof drainage system that works with the Jail’s stormwater recycling system that collects and stores 120,000 gallons of rainwater which is filtered and reused in the laundry operations;
- a pulping system in the kitchen that removes water and leaves the waste solid but significantly reduced in volume;
- a vacuum assisted waste system that reduces water use by approximately one-third compared to a conventional gravity waste plumbing system; and
- a white roof membrane that reduces the heat load on the building and reduces air conditioning costs by reflecting heat away from the building.

### 5.4 Parks, Recreation and Tourism

There are three facilities maintained by the Roanoke County Department of Parks, Recreation & Tourism in the Glenvar Planning Area: Green Hill Park, Wayside Park and Camp Roanoke. A map showing the location of these facilities is located on page 5-2.

#### 5.4.1 Green Hill Park

Green Hill Park, located in the eastern section of the planning area at the intersection of Duiguirds Road and Harborwood Road, is one of Roanoke County's largest and most utilized parks. Named for the Green Hill estate of Robert Craig that is located near the site, the park provides residents with numerous recreational opportunities including access to the Roanoke River and the Roanoke River Greenway, four hiking trails, several athletic fields, two rentable picnic shelters and public restrooms. The grass fields at Green Hill Park host many of the region's large special events and athletic tournaments such as the kite festival and medieval faire.



Graphic 5.10 Green Hill Park

Green Hill Park Equestrian Center is the only publicly operated facility of its type within the Roanoke Valley. Facilities in the Center are open 365 days of the year and include three arenas, a 30+ acre cross-country course, a round pen, day-use stabling and water provisions. Riding at the center is most popular during hunting season when equestrians are seeking a safe place to ride. Use of the facility requires either a one-time \$15 use fee or an annual membership of \$40 for an individual or \$80 for a family. The center

is available to rent for horse shows and related events such as dressage, hunters and jumpers, western, racking and fun shows.



Graphic 5.11 Green Hill Equestrian Center

#### 5.4.2 Camp Roanoke

Camp Roanoke, the only camp operated by Roanoke County, is located off Dry Hollow Road near Spring Hollow Reservoir. First opened by the YMCA in 1925 as Camp Lucius Johnson, the facility remained in operation until 1985. In 1986, the camp was purchased by Roanoke County as part of the watershed needed to construct the nearby reservoir. Following a prolonged grassroots effort to restore the facility, Camp Roanoke was reopened to the public in June 2001.



Graphic 5.12 Camp Roanoke Activity Field and Activity Shelter

The 110-acre camp facilities include eight, ten-person, air conditioned cabins served by a central bathhouse, a large picnic shelter and a rentable 84 person dining hall. Other features include an activity shelter housed in a 1920s recreational cabin, an archery range, a disc golf course and basketball court.

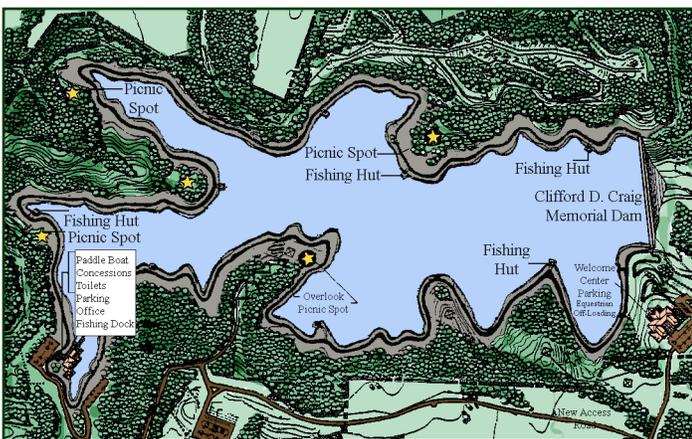
The camp also hosts wide variety of summer camps for children, challenge course programs, adventure and environmental outdoor programs for all ages.

#### 5.4.3 Wayside Park

Wayside Park is a small facility located directly off of West Main Street near its intersection with West River Road. The 1.6-acre roadside park features a boat launch on the Roanoke River and picnic tables.

#### 5.4.4 Master Plans

Since the construction of Spring Hollow Reservoir in the early 1990s, the County has envisioned the property to serve a dual function as both water supply and recreation. In 1996, the County commissioned the *Recreation Master Plan for Spring Hollow Reservoir*. This plan calls for a variety of amenities to be installed for recreational use in and around the reservoir. Some of the proposed enhancements include an upgrade of the perimeter road, construction of a visitor's center, picnic facilities, boat access, fishing amenities, restrooms and administrative office space.



Graphic 5.13 Spring Hollow Master Plan Phase II

The Roanoke County 2007 *Parks, Recreation & Tourism's Master Plan* researched, inventoried and made recommendations for the County's parks and recreation system. Sampled households were asked to identify which facilities they visited over the previous 12 months. Of the 28 County facilities listed, Green Hill Park was the most utilized with 38% of users. Camp Roanoke received a four percent user rate, ranking 22nd overall of respondents visiting that facility during the one-year period. Wayside Park was not identified

by respondents as part of the study.

The Master Plan lists the development of an updated sports complex at Green Hill Park as a “key capital project.” The plan recommends that the sports park be designed to host both adult and youth softball and baseball tournaments with the goal of attracting national, state and regional tournaments and supporting economic development in the area.

The Master Plan also lists the “develop[ment of] a special event area at Green Hill Park to bring in festivals and multiday events” and the improvement and enhancement of “outdoor recreation opportunities at Camp Roanoke including the development of an outdoor adventure park supported by corporate sponsors and partnerships” as vision objective strategies.

#### 5.4.5 Capital Improvements Program

The 2011-2015 Roanoke County Capital Improvements Program (CIP) calls for numerous additions and renovations in Green Hill Park. The first project, the Green Hill Park Loop Trail Connector to the Roanoke River Greenway, is listed as a priority Greenway and Trails Project. This project would construct a one-mile loop around Green Hill Park that connects to the section of the Roanoke River Greenway that was completed in April 2008, providing a two-mile trail around the periphery of Green Hill Park. The capital cost for the project is estimated at \$264,000 and is currently deferred.

Green Hill Park: Phase I is also included in the Parks and Recreation section of the 2011-2015 CIP. The proposed project will continue the development of Green Hill Park by providing an amphitheater, restroom building, large picnic shelter, installation of electric and water to the existing two shelters, improved security lighting, expansion of existing parking and paving of all areas, expansion of the barrier system, installation of an accessible playground and the addition of fencing and improvements to the landscaping. Additional items include expanding the existing ballfields into a five-field tournament quality

“sports complex,” the addition of three blueways, replacement of the fishing pier and the construction a maintenance yard and outbuildings. The capital cost estimate for Phase I of the Green Hill Park expansion is \$500,000 with total project costs estimated to be \$3,950,000. The project is currently deferred.

The 2011-2015 CIP for Camp Roanoke calls for completing the renovation of Camp Roanoke into a residential camp and retreat center. Proposed renovations include upgrading the dining hall and restrooms, the construction of a lodge, ropes course, three bathroom/shower facilities and trail upgrades. Other proposed improvements include the construction of a new camp pool, dock to access the Spring Hollow Reservoir for canoe and kayak programs, parking lot paving and landscape enhancements. Capital costs for these items are estimated at \$267,500 and improvements are currently deferred.

The 2011-2015 CIP for the Spring Hollow Reservoir calls for the implementation of the 1996 *Spring Hollow Master Plan*. The Spring Hollow Reservoir Park project consists of developing the 700-acre site around the reservoir as a public park for fishing, hiking, picnicking and other appropriate outdoor recreational activities. Development of the reservoir depends upon Health Department and Water Authority requirements. Capital costs for Phase I of the project are estimated at \$962,500 with total project costs estimated to be \$3,234,000. The project is currently deferred.

### 5.5 Utilities

#### 5.5.1 Water

The Western Virginia Water Authority (WVWA) is responsible for providing water, sewer and related services to residents in Roanoke County and the City of Roanoke as well as to customers in Franklin County, the Town of Vinton, the City of Salem and Botetourt County. The WVWA treats and delivers 23 million gallons of drinking water per day to more than 155,000 residents via 1,000 miles of water main and 50 pump stations. The Water Authority also

maintains 48 drinking water storage tanks and 4,000 fire hydrants within its service area.

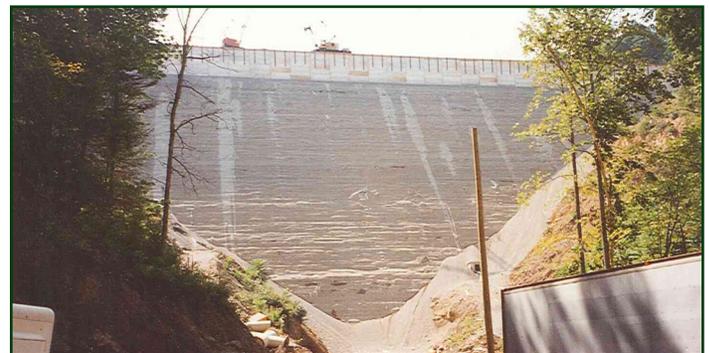
Within the Glenvar Planning Area, the WVWA operates and maintains 63.24 miles of water mains, five pump stations, two booster stations, 284 hydrants and the Spring Hollow Reservoir and Treatment Facility. Additionally, there are 6.11 miles of non-WVWA water mains, one-mile of private water lines and two active raw water wells within the planning area. A map of the water facilities in the planning area is available in Appendix A.

The WVWA’s Funded FY2010 Water System Capital Improvement Program calls for over \$900,000 of improvements to Spring Hollow Reservoir. The project is funded over a five year horizon.

#### 5.5.1.1 Spring Hollow Reservoir and Treatment Facility

Spring Hollow Reservoir is the main source of drinking water for Roanoke County. A pumping station, capable of pumping up to 80 million gallons per day into the reservoir, pumps water from the Roanoke River when the river’s flow is at or above the state-permitted withdrawal level to supply the reservoir.

The reservoir was formed by the Clifford D. Craig Memorial Dam, a 243-foot high, roller-compacted concrete dam with a crest length of 990 feet that was dedicated in 1994.



Graphic 5.14 Clifford D. Craig Memorial Dam Construction

Spring Hollow Reservoir (Graphic 5.15) has a working volume of 3.2 billion gallons, a surface area of 158 acres and a drainage area of 540 acres.



Graphic 5.15 Spring Hollow Reservoir

After water is withdrawn from the reservoir, it is oxygenated and treated with chlorine dioxide to oxidize dissolved organic matter, iron and manganese. Treatment at the Spring Hollow Treatment Facility includes clarification, filtration, chlorine disinfection and fluoridation. Once treated, water is stored in a two million gallon storage tank and then pumped through the north and south transmission lines to the distribution system.

Spring Hollow Water Treatment Facility treats about seven million gallons daily but has the capacity to treat 36 million gallons of water a day. Current usages average 5.19 million gallons a day. During an emergency, standby wells may be used to supplement the source water.

#### 5.5.1.2 Salem Source

The Western Virginia Water Authority contracts with the City of Salem to purchase water to supply Andrew Lewis Place, Robin Hood Park and along West Main Street in Roanoke County.

#### 5.5.2 Sewer

The Western Virginia Water Authority's Wastewater Operations division is responsible for operating the Roanoke Regional Water Pollution Control Plant, which treats 40 million gallons of wastewater a day from throughout the Roanoke Valley. The WVWA also operates and maintains over 900 miles of sewer and gravity mains, 22,000 manholes and 21 lift stations and 10 miles of force mains within its service area.

Within the Glenvar Planning Area, the WVWA operates and maintains 27.94 miles of gravity sewer, 4.06 miles of force main, six lift stations and 708 manholes. Additionally, there are 0.2 mile of sewer mains, three manholes and 0.04 mile of private sewer lines not maintained by the WVWA in the planning area. A map of the sewer facilities in the Glenvar Planning Area is available in Appendix A.

The FY2010 CIP for the waste water system does not contain any line items in the Glenvar Planning Area.

#### 5.5.3 Stormwater Management

The *Roanoke County Comprehensive Plan* defines stormwater management as the planned control of surface water runoff that results from rainfall. The goal of stormwater management is to prevent flooding and pollution and to ensure that development impacts are mitigated by stormwater management facilities and water quality best management practices. The primary concerns of stormwater management are to:

1. minimize the impact of drainage on private property;
2. alleviate existing stormwater problems;
3. manage stormwater discharge control; and
4. protect water and stream quality.

Numerous local, state and federal regulations influence stormwater management in Roanoke County, such as the *Roanoke County Stormwater Ordinance*, the Virginia Stormwater Management Handbook, and the Virginia Pollutant Discharge Elimination System MS-4 Permit (#VAR-040022).

According to the Roanoke County stormwater management database, there are 47 stormwater management facilities in the Glenvar Planning Area not including those being installed as part of the Route 11/460 widening project. The majority (83%) of the facilities are detention basins.

### *5.5.4 Electric*

Electrical service within the Glenvar Planning Area is provided by Appalachian Power, a subsidiary of American Electric Power Company of Columbus, Ohio.

### *5.5.5 Gas*

The Roanoke Gas Company, a subsidiary of RGC Resources, provides natural gas and propane to residents and businesses within the Glenvar Planning Area. Originally organized in 1883, Roanoke Gas now serves over 70,000 customers in the counties of Roanoke, Montgomery, Franklin, Bedford and Botetourt, the Town of Vinton and the cities of Roanoke and Salem.

### *5.5.6 Telecommunications*

Telecommunications - cable, telephone and internet - in the Glenvar Planning Area are largely provided by Cox Communications, Verizon and Comcast. Other telecommunication companies in the Glenvar Planning Area include B2X Online, Dish Network and DirecTV.

## Chapter 6: Transportation

Transportation infrastructure in the Glenvar Planning Area includes roads, railroads, bicycle accommodations, greenways and other pedestrian facilities.

### 6.1 Roadway Characteristics

There are approximately 145 miles of roads located within the Glenvar Planning Area. As with most roads in Roanoke County, the majority (110 miles) are owned and maintained by the Virginia Department of Transportation (VDOT). The remaining roads (35 miles) are privately owned and maintained.

#### 6.1.1 Road Classifications

VDOT’s publicly-maintained roads are described as either urban or rural and then divided into many sub-classifications, several of which are represented in the Glenvar area. Collector roads, like West Main Street, allow moderate levels of traffic movement and property accessibility and local streets, like Technology Drive, supply broad accessibility to property and limit traffic mobility.

Table 6.01 Sample Road Classifications

	Urban	Rural
Interstate	Interstate 81 north of Exit 132	Interstate 81 south of Exit 132
Principal Arterial	Wildwood Road: Four-lane section in Salem	None
Minor Arterial	None	None
Collector	West Main Street: east of West River Road Diuguids Lane Barley Drive	<i>Major</i> – Twelve O’Clock Knob Road West Main Street: west of West River Road <i>Minor</i> - None
Local	Andrew Avenue Givens-Tyler Road Technology Drive	Cherokee Hills Drive Dow Hollow Road Peaceful Drive

#### 6.1.2 Average Annual Daily Traffic

Average Annual Daily Traffic (AADT) is an estimate of daily traffic on major road segments for

a one-year period. Traffic counts taken in 2010 for West Main Street and Interstate 81 showed that more vehicles travel on these roadways closer to the City of Salem line and fewer vehicles travel on the western portions of these roadways towards Montgomery County. Tables 6.02 and 6.03 show the AADT for the different segments of West Main Street and Interstate 81, respectively.

Table 6.02 VDOT 2010 Annual Average Daily Traffic Volume Estimates, West Main Street

Starting Point	Ending Point	AADT
Montgomery County Line	West River Road	7,900
West River Road	Dow Hollow Road	7,900
Dow Hollow Road	Daugherty Road	11,000
Daugherty Road	Alleghany Drive	14,000
Alleghany Drive	City of Salem Line	18,000

Table 6.03 VDOT 2010 Annual Average Daily Traffic Volume Estimates, Interstate 81

Starting Point	Ending Point	AADT Northbound and Southbound
Montgomery County Line	Dow Hollow Road (Exit 132)	47,000
Dow Hollow Road (Exit 132)	City of Salem Line	50,000
City of Salem Line	Wildwood Road (Exit 137)	50,000
Wildwood Road (Exit 137)	City of Salem Line	58,000

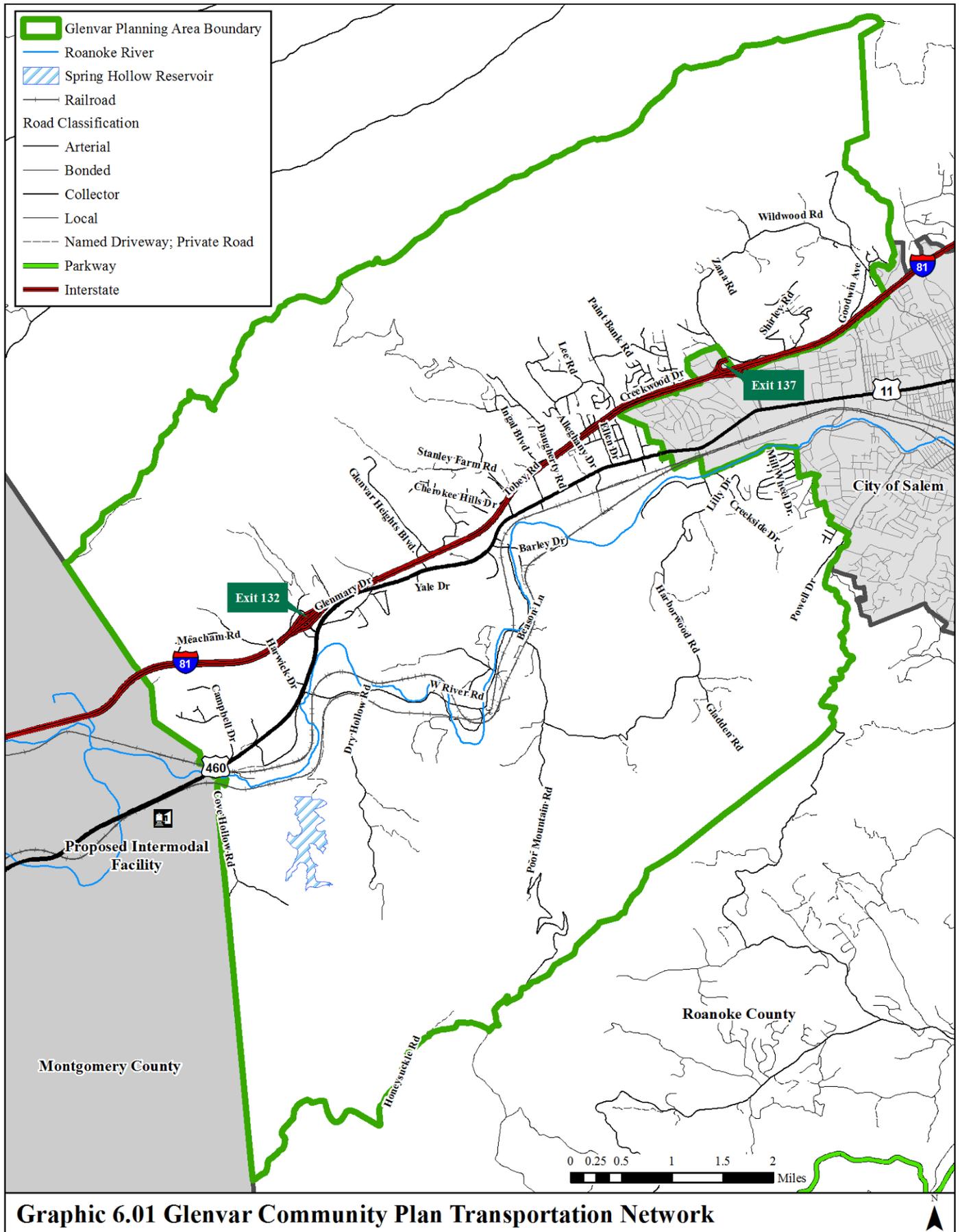
#### 6.1.3 Level of Service

Level of Service (LOS) indicates the ability to travel based on speed, congestion and overall mobility on a road. LOS is measured on the following scale:

*LOS A:* Free flow traffic with individual users mostly unaffected by other drivers

*LOS B:* Stable flow with a high degree of freedom to select speed and operating conditions with some influence from other drivers

*LOS C:* Stable restricted flow with significant interactions with other drivers; comfort level and convenience declines noticeably



*LOS D:* High-density flow with speed and maneuverability severely restricted

*LOS E:* Unstable flow at or near capacity levels with poor convenience and comfort levels

*LOS F:* Forced traffic flow with volume approaching a point exceeding capacity

The *Interstate 81 Corridor Improvement Study* graded and projected levels of service for the entire stretch of I-81 in Virginia for the years 2004 and 2035. Both urban and rural segments of the interstate located in western Roanoke County performed at LOS C for the year 2004. The 2035 portion of the study assumed a “no-build” scenario and was projected at LOS E/F. It is expected that some degree of improvement will be made to I-81 in Glenvar before 2035 which should lessen the effects of any potential no-build scenario.



Graphic 6.02 Interstate 81

#### 6.1.4 Accident Data

Roanoke County Police Department statistics indicated that 261 crashes were reported within the Glenvar Planning Area from November 16, 2005 – December 23, 2008, the majority of which (43%) occurred along West Main Street (Route 11/460). Of these 113 crashes, one fatality occurred at the intersection of Dow Hollow Road and West Main Street. Two other fatalities occurred away from West Main Street during the three year period; one at the intersection of Gum Springs Road and Wildwood Road and one at Bohon Hollow Road and Hillcrest Road.

Table 6.04 lists the number of accidents at intersections with West Main Street from 2005-2008.

These intersections typically have poor levels of service, undesirable operational characteristics and/or access management issues.

Table 6.04 Number of Accidents at Intersections with West Main Street (2005-2008)

Intersecting Road	Number of Accidents
Dow Hollow Road	17
Daugherty Road	12
Alleghany Drive	11
West River Road	9
Fort Lewis Church Road	8

VDOT accident data for 2009 and 2010 documented an additional 25 accidents along West Main Street. In 2009, 22 accidents occurred with one fatality and 11 injuries. In 2010, only three accidents were recorded along West Main Street with one fatality and no injuries. Both accidents resulting in fatalities involved a fixed object located off of the roadway. Eight of the 25 accidents were rear-end collisions, another eight involved fixed objects off of the roadway and six were documented as a collision with a deer or another animal.



Graphic 6.03 Daugherty Road Intersection

#### 6.2 Railroads

Roanoke County is part of the Virginia Rail Heritage Region which was established by the Virginia General Assembly in 2010 to highlight and promote the railroad heritage of the state of Virginia. The Glenvar Community demonstrates this rich heritage as it was transformed in the mid-nineteenth century with the construction of the Virginia and Tennessee Railroad through the area.

The Norfolk and Southern Railway, originally

known as the Virginia and Tennessee Railway, was constructed through the Glenvar Community in 1853 and 1854. By 1857, a telegraph line was completed along the entire line and sleeping cars were added by 1860. The original stops were at Salem, Charles Thomas' tavern and wagon stand near the boundary with Montgomery County and Big Spring near Elliston. By 1882, after merging into the Norfolk and Western Railway, there were railroad stops at Salem, Deyerle's Switch and Big Spring. Double-tracking of the Norfolk and Western line began in April 1890 from Roanoke to Big Spring, including twenty miles through the Glenvar area. These tracks are now part of Norfolk Southern's Heartland Corridor, a multi-state project aimed at significantly improving the freight shipping time between the Port of Hampton Roads in Virginia and markets in the Midwest (see Graphic 6.05).

The Virginian Railway, formerly known as the Tidewater, was built through Roanoke County in 1907-1908. The Virginian parallels the Norfolk and Southern for twenty miles deflecting from the latter just east of the Roanoke/Montgomery County line.



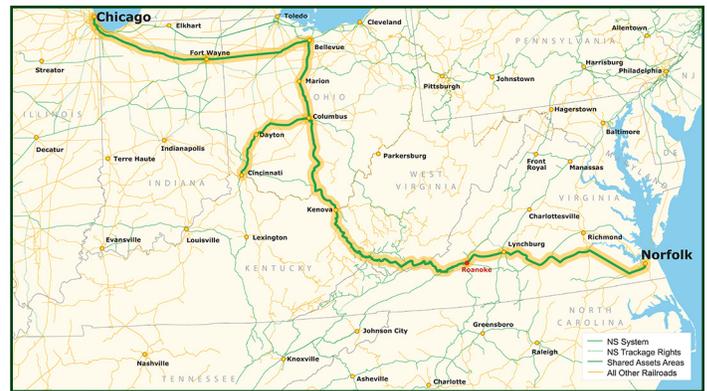
Graphic 6.04 Men Work on Tracks (ca. 1930s)

There are 26.82 miles of railroad tracks and 19 railroad crossings in the Glenvar Planning Area. Six of the crossings are underpasses, five are signalized crossings, one has a sign but no signal and seven have no sign or signal. A map of the railroad crossings by signalization is available in Appendix A.

## 6.3 Proposed Intermodal Facility

### 6.3.1 Heartland Corridor Rail Improvement Initiative

As part of the Heartland Corridor multi-state freight rail improvement initiative between Virginia, West Virginia and Ohio to reduce shipping time to Chicago by a day and a half, Virginia has committed to several infrastructure improvements along the Heartland Corridor. These improvements include increased tunnel clearances to allow double stack freight traffic on the rail corridor in Virginia and the construction of a new intermodal facility in the Roanoke Region to provide both east-west (Heartland Corridor) and north-south (I-81 Rail Corridor) capacity for freight rail traffic.



Graphic 6.05 Heartland Corridor

### 6.3.2 Roanoke Regional Intermodal Facility

The Roanoke Regional Intermodal Facility is planned for a 65-acre site in Montgomery County, about a half of a mile from the Roanoke County border (Graphic 6.06, Elliston Site). The Elliston site is relatively flat and near the mainline rail elevation. The site is on the double-track of the Heartland Corridor and is directly accessible to the Shenandoah and Altavista rail lines. It also has truck access to I-81 to the east at Dixie Caverns (Exit 132) and to the west at Ironto (Exit 128).

The site would require relocation of the existing Cove Hollow Road and construction of a new highway bridge over the Roanoke River. The construction cost of an intermodal facility at the Elliston site is approximately \$35.5 million - full build-out plus a new highway bridge and relocation of Cove Hollow Road.



Graphic 6.06 Elliston Site

### 6.3.3 Potential Impacts of the Intermodal Facility

The Virginia Department of Rail and Public Transportation’s (DRPT) *Economic Assessment Report on the Roanoke Regional Intermodal Facility* concluded that the intermodal facility could provide significant economic benefits for the Roanoke region. Potential economic benefits include an increase in annual employment of up to 2,900 jobs and tax revenues of up to \$71 million annually. The facility, as part of the Heartland Corridor project, could reduce the number of long haul trucks on area highways such as I-81 and Route 460 by 150,000 trucks per year.

## 6.4 Alternative Modes of Transportation

### 6.4.1 Greenways

Greenways are open space corridors that can be managed for conservation, recreation or alternative transportation. The only completed greenway in the Glenvar Planning Area is a one-mile segment of the Roanoke River Greenway located in Green Hill Park. Dedicated in April 2008, this segment is planned to connect with the Roanoke River Greenway after a greenway between Green Hill Park and Mill Lane is constructed.

A *Comprehensive Master Plan for Parks and Facilities* was completed by the Roanoke County Parks, Recreation and Tourism Department and adopted by the Board of Supervisors in 2007. The Master Plan supports continued greenway and trail development with a two-pronged development approach, “(1) develop park greenways and hiking and walking trails

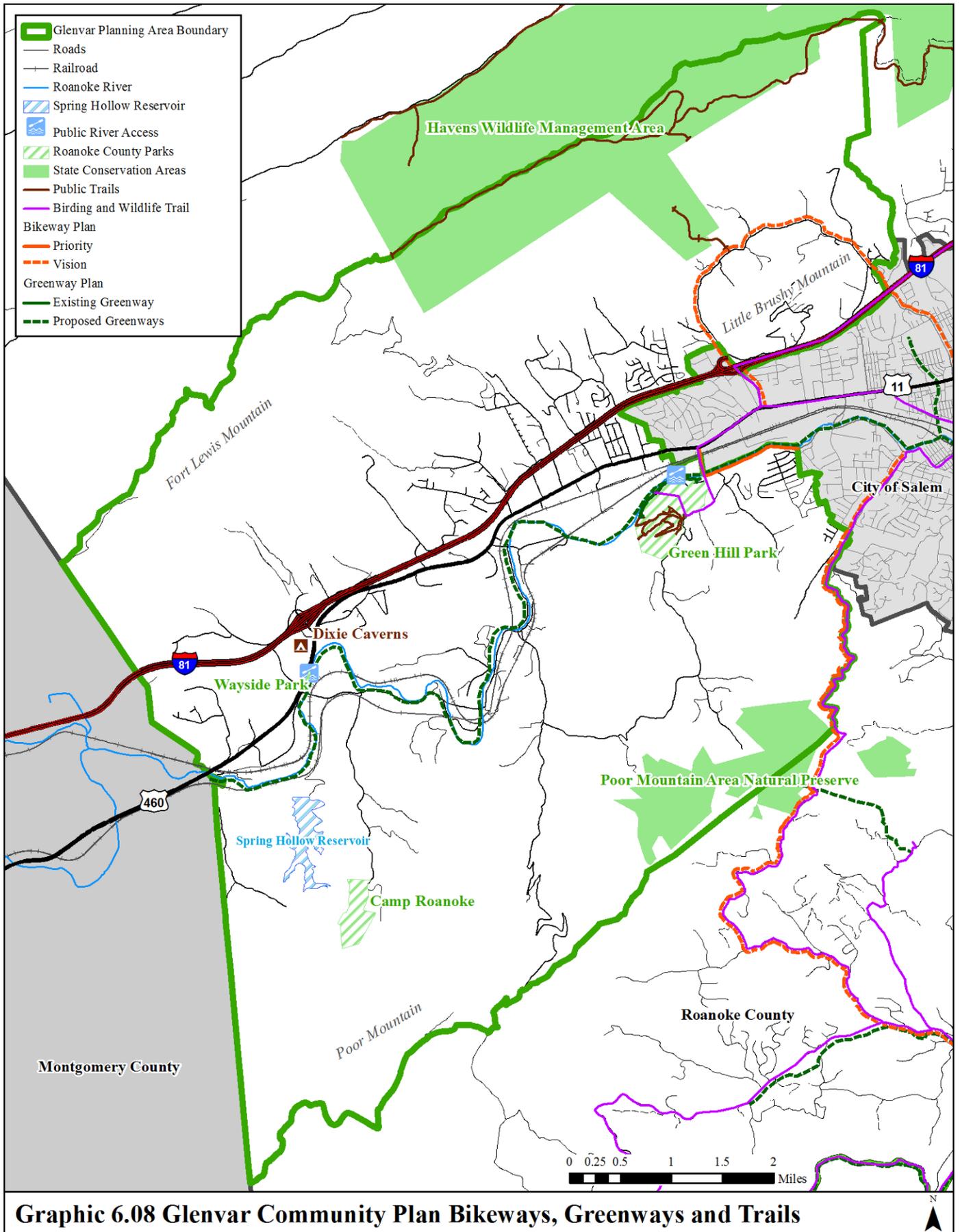
within County parks that offer opportunities for close-to-home opportunities for walking, jogging, hiking, bicycling and (2) develop greenways outside existing County parks that will link or connect parks with resources such as schools, neighborhoods, playgrounds and other parks, forests, rivers and other natural areas, historic sites and businesses.”



Graphic 6.07 Greenway in Green Hill Park

The *2007 Update to the Roanoke Valley Conceptual Greenway Plan*, prepared by the Roanoke Valley Greenway Commission and the Roanoke Valley Alleghany Regional Commission (RVARC) and adopted by the Board of Supervisors in 2007, has several components, including identifying and prioritizing greenways and trails to be constructed throughout the Roanoke Valley. The following segments are located or proposed within the Glenvar Planning Area.

- *Roanoke River Greenway (Greenway Plan #31):* Establishment of the Roanoke River Greenway from Montgomery County to Franklin County through Roanoke County, the City of Salem, City of Roanoke and Town of Vinton is the Plan’s first priority. In the Glenvar Study Area, a one-mile-long stretch along the river in Green Hill Park was completed in 2008. A phase of the Roanoke River Greenway West, from Spring Hollow Reservoir to Green Hill Park, was identified (and unfunded) in the 2011-2015 Roanoke County Capital Improvements Program (CIP). This phase includes preliminary engineering and the initial



phase of right-of-way acquisition with a cost estimated at \$450,000 dollars. The segment of greenway between Green Hill Park and Mill Lane in both the County of Roanoke and the City of Salem is currently being designed and engineered. Construction of the greenway is anticipated in 2014.

- *Green Hill Park Trails (Greenway Plan #16)*: A network of natural surfaced trails has been built since 2007 connecting the Roanoke River Greenway and lower fields to the meadow at the top of the hill. Additionally, the Green Hill Park Loop Trail Connector is identified in the FY 2011-2015 Roanoke County CIP. The proposed one-mile-long loop trail around part of Green Hill Park would connect to the existing Green Hill Park segment of the Roanoke River Greenway. The estimated project cost is \$264,000 dollars but is currently unfunded.
- *Havens Wildlife Management Area Trails (Greenway Plan #18)*: The Virginia Department of Game and Inland Fisheries maintains this area primarily for hunting and wildlife management purposes. In addition to hunting opportunities, there are also several hiking trails throughout Havens WMA; however, they are steep and not well-marked. As of January 1, 2012, an Access Permit will be required for visitors who are age 17 and older, unless they possess a valid Virginia hunting, freshwater fishing, trapping license or a current Virginia boat registration.
- *Perimeter Trail (Greenway Plan #28)*: A proposed multi-use, long-distance trail connecting and incorporating Roanoke Valley trails and features including Carvins Cove, Havens Wildlife Management Area, Green Hill Park, Spring Hollow, the Blue Ridge Parkway, Explore Park and the Jefferson National Forest.
- *Poor Mountain Preserve (Greenway Plan #29)*: A state preserve managed by the Natural Heritage Division for protection of the endangered piratebush. A network of natural surface trails has

been built since 2007.

- *Spring Hollow Trails (Greenway Plan #33)*: A network of trails is proposed in the County’s master plan for this area.

A map of the greenways planned for the Glenvar Community is shown on page 6-6.

#### 6.4.2 Virginia Birding and Wildlife Trails

Several Birding and Wildlife Trails in Roanoke County are identified as part of the Mountain Trail by the Virginia Department of Game and Inland Fisheries (DGIF). The Roanoke Valley Loop is described by DGIF as follows:

“In addition to montane forests, these venues offer riverside views, riparian corridors, and open fields. Birding is at its peak during migration when songbird density can be especially attractive to visitors.”

As shown in Graphic 6.08, three Birding and Wildlife Trails are located within the Glenvar Study Area:

- Havens Wildlife Management Area;
- Green Hill Park; and
- Poor Mountain Natural Area Preserve.

#### 6.4.3 Bikeways

The 2005 *Bikeway Plan for the Roanoke Valley Area Metropolitan Planning Organization* was established to “facilitate development of a regional transportation network that accommodates and encourages bicycling as an alternative mode of travel and as a popular form of recreation in the MPO study area.” The Priority List alignments reflect regional priorities for bicycle improvements that connect greenway and transit systems, activity centers and other important locations. Shown in Graphic 6.08, the Priority List in the Glenvar Community includes West Riverside Drive from the City of Salem to Diuguids Lane for bicycle accommodations. The Vision List alignments support the Priority List and include gaps in

accommodations. This list designates Twelve O’Clock Knob Road from Route 221/Bent Mountain Road to West Riverside Drive and Wildwood Road from the City of Salem to Interstate 81/City of Salem for bicycle accommodations.

The *Rural Bikeway Plan* prepared by the Roanoke Valley Alleghany Regional Commission (RVARC) in 2006 was intended as a planning resource for bicycle accommodations in the rural areas of the RVARC service area. As shown in Graphic 6.08, bicycle accommodations are recommended for West Main Street from the Metropolitan Planning Organization boundary at Dow Hollow Road to the Montgomery County line.

### 6.4.4 Park and Ride Facilities

The 2009 Ride Solutions *Park-and-Ride Study* inventoried existing official and unofficial park-and-ride lots in the Roanoke and New River Valleys. While there are no official park-and-rides in the Glenvar Planning Area, locations of nearby facilities are as follows:

Table 6.05 Park-and-Ride Facilities

Location	VDOT Category	Type	Smart Way Stop
Route 311 near Routes 419, 311, 630 at Orange Market and Hanging Rock	Unofficial	Park & Pool	No
I-81 Exit 140 at Edge Brook Road	Official	Park & Ride	Yes
Exit I-81 Exit 128 at Pedlar Road	Official	Park & Pool	No

Official lots are those owned or leased by VDOT. Unofficial lots are parking lots that VDOT recognizes as being used for commuter parking but are not official lots. Park-and-ride lots provide connections to transit service such as the Smart Way commuter bus that runs between the Campbell Court transfer station in downtown Roanoke City to Squires Student Center at Virginia Tech with several stops along the route, including one at the Roanoke Regional Airport. Park-and-pool lots, such as those at the Orange Market and

Hanging Rock Park, serve carpoolers.

The *Park-and-Ride Study* identified a parking deficit at the I-81 Exit 140 lot with 58 spaces provided and 74 cars utilizing the lot, a deficit of 16 spaces. Since the *Park-and-Ride Study* was completed in 2009, this lot has been expanded by paving the grassed area adjacent to the parking lot that was being used for parking (Graphic 6.09). The Orange Market/Hanging Rock lot is typically half-full (49%) and the Interstate 81 Exit 128 lot is minimally used (13%).



Graphic 6.09 I-81 Exit 140 Lot Expansion Area

## 6.5 Improvements

### 6.5.1 VDOT Six-Year Improvement Program

The Six-Year Improvement Program (SYIP) is the Commonwealth Transportation Board’s program for allocating funding to interstate and primary highway, rail, public transportation, commuter assistance, bicycle and pedestrian projects. To identify new capacity or expansion projects, local governments work with residents and Virginia’s transportation agencies to develop a transportation plan that anticipates land use changes and travel patterns more than two decades into the future. The following two Six-Year Improvement Program projects are planned or under construction in the Glenvar area.

#### 6.5.1.1 Interstate 81

Partial preliminary engineering has been funded for major widening of I-81 from four to eight lanes. However, preliminary engineering funds are only a small percentage of the necessary total engineering

fund estimates. Construction funds have not been allocated for the project.

The bridges over Wildwood Road and Alleghany Drive are also listed in the SYIP and scheduled to receive funding in FY2016 and FY2017. In addition to the bridge replacement projects, bridge deck repairs are currently underway on the Dow Hollow Road and Fort Lewis Church Road bridges.

### 6.5.1.2 Route 11/460 Widening Project

VDOT is in the process of reconstructing a 2.1-mile segment of West Main Street (Route 11/460) from the City of Salem limits to one-tenth of a mile west of Technology Drive. This project has been on the Six Year Primary Improvement construction list for several years and is one of two primary highway reconstruction projects currently underway in Roanoke County. Begun in spring 2010, this section of West Main Street will be rebuilt as a four-lane divided highway with a continuous 12-foot paved shoulder, a raised median and turn lanes. Included in the construction is a 44-foot long bridge over Little Bear Rock Branch and sidewalks around Fort Lewis Elementary School, connecting with existing sidewalks to the east. The traffic signals at Alleghany Drive and Daugherty Road will also be replaced. The FY2012 Six-Year Improvement Program lists engineering, right-of-way and construction costs estimates at \$45 million. Work is expected to be completed by fall 2013. A map of the widening project is available in Appendix A.



Graphic 6.10 VDOT Rendering of the Completed West Main Street Widening Project (Looking West)

### 6.5.2 VDOT Revenue Sharing Program

VDOT’s Revenue Sharing Program provides Roanoke County the opportunity to annually receive state matching funds for the construction and improvement of primary and secondary roads in the state’s highway system. In FY2011-2012, the Commonwealth of Virginia provided \$103 million for this matching program with maximum state participation at \$10 million per locality.

County and VDOT staff continuously review and evaluate street and drainage improvement projects throughout the year for possible inclusion in the Revenue Sharing Program. In deciding which projects to include in the program, County and VDOT staff consider the following: traffic counts, vehicular and pedestrian safety, existing and future development in the adjacent area, existing pavement width, overall pavement condition, drainage, roadway geometrics and the economic benefits of the project.

Three current revenue sharing projects in the Glenvar area are listed below, followed by a brief description of the project.

- *Daugherty Road*: Replace existing box culvert near 4144 Daugherty Road. Added to project list in FY2006-07;
- *Wildwood Road*: Widen for guardrail, sight distance and typical section improvements from Zana Road to near Gum Springs Road. Added to project list in FY2008-09. Additional funds added in FY2011-12 and FY2012-13; and
- *Fort Lewis Church Road*: Drainage improvements from I-81 to Cherokee Hills Drive. Added to project list in FY2011-12.

### 6.5.3 Rural Addition Projects

The Rural Addition program is a cooperative effort between Roanoke County and the Virginia Department of Transportation (VDOT). Through this program, private roads are reconstructed, paved, and taken into the State System of Secondary Roads,

to be maintained by VDOT. Streets added under the Rural Addition Program may exist as a result of past development, but were not initially proposed for maintenance by VDOT.

Previously funded as incidental construction services in the VDOT Secondary Six Year Improvement Program, Roanoke County has not received any new funding for rural additions since FY2005-2006. The existing program balance of approximately \$430,000 will be used for projects currently under design or construction. Other projects on the revenue sharing list, including the three projects listed below, will remain identified for future construction until such time that funds are available, or the projects are removed from the list.

- *Williams Drive*: Approximately 300 feet in length; right of way and easements needed; 6 families served;
- *Dow Hollow Road*: Approximately 3,000 feet in length; widening and possible drainage improvements; 3 families served; and
- *Grey Fox Lane/Uphill Drive*: Approximately 2,000 feet in length, possible drainage and grade problems; 11 families served.



Graphic 6.11 Dow Hollow Road (Existing Condition)

## Chapter 7: Community Involvement

When the Glenvar Community Plan was initiated in 2008, the national and regional economies were sliding into a recession. As budgets tightened, Roanoke County staff was challenged to find creative and cost-effective ways to involve Glenvar residents and businesses in the planning process. The resulting strategies included a heavy emphasis on digital communication tools such as Facebook, email newsletters and invitations, local news blogs and an interactive Glenvar Community Plan webpage. Personal interaction was also a critical component of community involvement with several community meetings, stakeholder interviews and the Glenvar Focus Group.

### 7.1 Glenvar Community Survey

The Glenvar Community Survey was available to complete online for five months, from November 24, 2009, to April 16, 2010. The initial invitation to complete the survey was emailed to 380 recipients of the December 2009 *Community Developments* e-newsletter, which included interested citizens, professionals, County staff and elected and appointed officials. Links to the survey were also included in five subsequent *Community Developments* e-newsletters and the survey was advertised at the January 2010 community meeting, the Glenvar Library and Richfield Retirement Community.

The survey included questions about community likes and issues, housing supply, future development types, satisfaction with public services and environmental features, needed transportation improvements and respondent demographics.

A total of 195 surveys were submitted with 168 surveys (86%) completed online and 27 surveys (14%) filled out in hard copy form. Paper surveys were available at the Roanoke County Administration Center, Glenvar Library and Richfield Retirement Community. A copy of the survey and a summary of the results are available in Appendix B.



Graphic 7.01  
Community Survey  
Graphic

#### 7.1.1 Community Likes

The first survey question asked respondents, “What do you like most about your community?” The most common answers included the rural character of the area; the quiet and peaceful setting while not being too far away from amenities in Salem or in Christiansburg; views of the mountains; the Roanoke River; the feel of the community, that it is close-knit and safe; the Glenvar Schools and the Glenvar Library.

#### 7.1.2 Important Issues Today

When asked to identify the three most important issues facing their community today, respondents answered with the following:

##### Issue 1

- Maintaining the community feel of the area
- Traffic/congestion and appearance of Route 11/460
- Unwanted industrial businesses and heavy industry

##### Issue 2

- Traffic
- Loss of jobs and unemployment
- Condition and funding of the schools and library
- Governmental representation
- Lack of youth recreation, family activities and a community center

##### Issue 3

- Environmental issues (air and water quality, protecting open space)
- Property values and taxes
- Lack of commercial development
- Safe options for alternative modes of transportation

#### 7.1.3 Important Issues in the Next Five to Ten Years

Answers to the question asking respondents to identify the three most important issues facing their community in the next five to ten years included:

##### Issue 1

- Impact of industry on the community

- Improving the Glenvar Library and Schools
- Impact of the proposed intermodal facility
- Jobs creation and retention
- Road maintenance and traffic issues
- Public service staffing
- Housing issues (quality and affordability)
- Environmental concerns (air, water quality and floodplain)

## Issue 2

- Lack of amenities (restaurants and businesses)
- Overcrowding in schools and funding of schools
- Water quality concerns
- Current zoning
- Residential growth
- Increasing traffic on West Main Street
- Appearance of West Main Street
- Industrial development

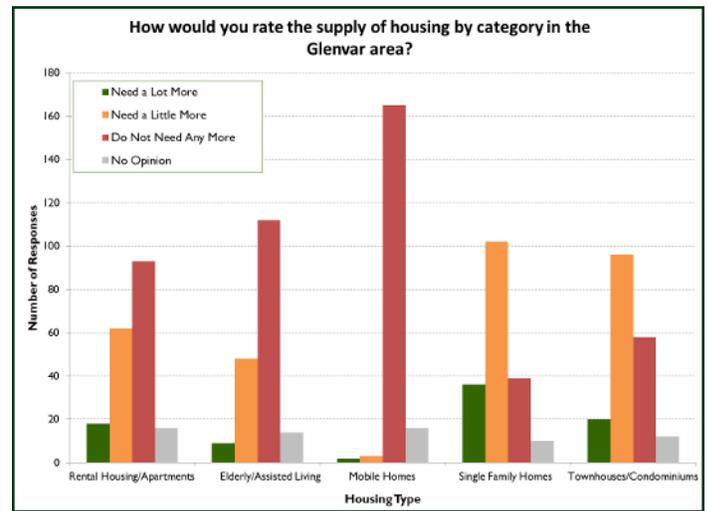
## Issue 3

- Protection of rural character
- Governmental transparency
- Property values and taxes
- Lack of commercial businesses
- Traffic congestion
- Lack of safe options for alternative modes of transportation
- Lack of community recreational activities
- Increasing crime

### 7.1.4 Housing Supply

Respondents were asked to rate the supply of housing by category with the responses “need a lot more,” “need a little more,” “do not need any more” or “no opinion” for rental housing/apartments, elderly/assisted living, mobile homes, single family homes and townhouses/condominiums. Respondents indicated that no additional rental housing/apartments, elderly/

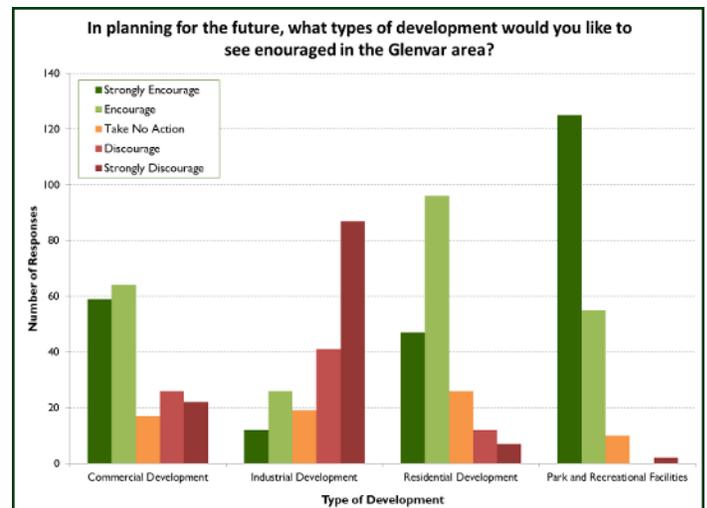
assisted living or mobile homes are needed in the Glenvar area. Survey respondents also indicated that some additional single-family homes and townhouses/condominiums are needed in the community.



Graphic 7.02 Housing Supply Chart

### 7.1.5 Future Development

When asked what types of future development should be encouraged in Glenvar, respondents desired to strongly encourage new park and recreational facilities, encourage new residential and commercial development and strongly discourage new industrial development.

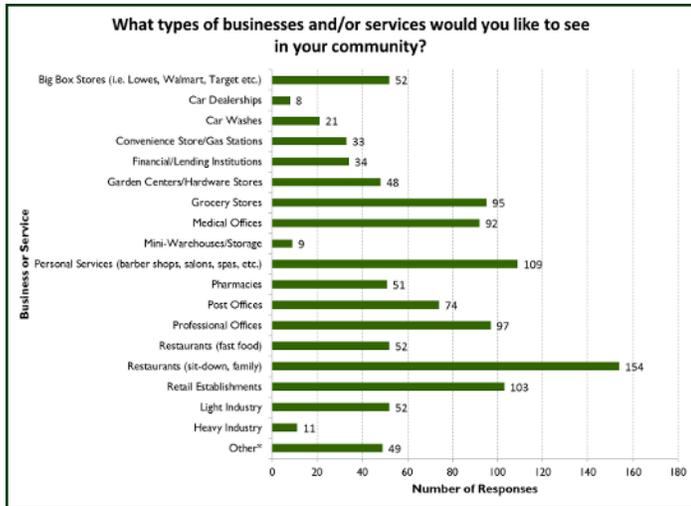


Graphic 7.03 Future Development Types Chart

### 7.1.6 Businesses and Services

The top five answers to the question, “what types of businesses and/or services would you like to see in your community?” are as follows:

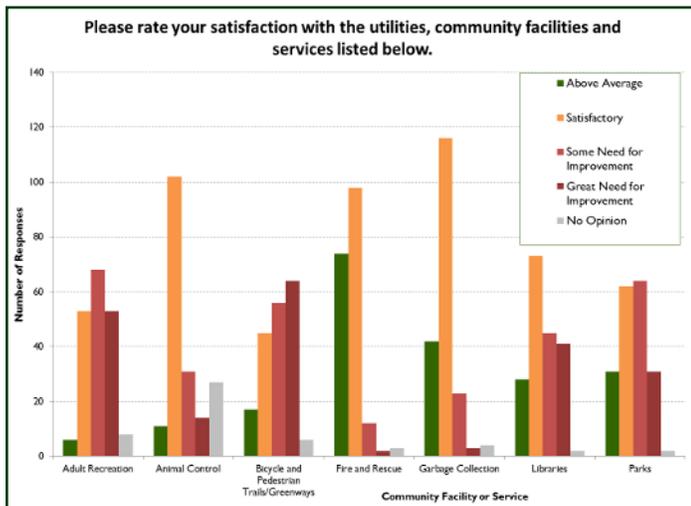
1. Restaurants (sit-down, family)
2. Personal services (barber shops, salons, spas, etc.)
3. Retail establishments
4. Professional offices
5. Grocery stores



Graphic 7.04 Business and Services Chart

7.1.7 Community Facilities and Services

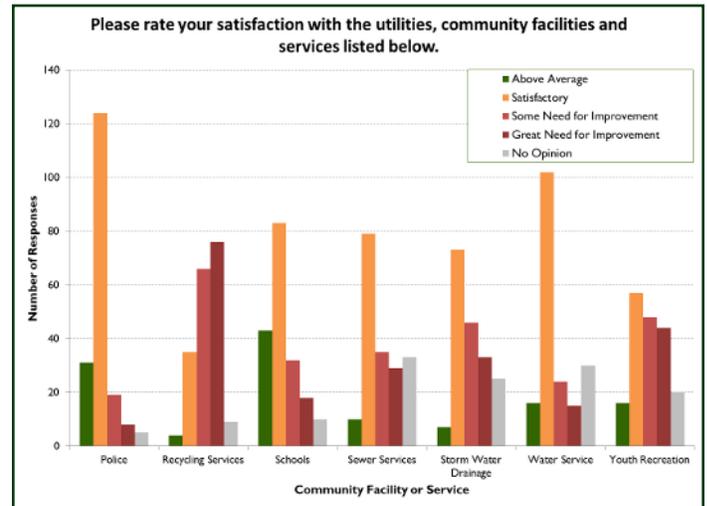
A question was also asked regarding level of satisfaction with 14 public services.



Graphic 7.05 Community Facilities and Services Chart

“Satisfactory” was the most common response with regard to animal control, fire and rescue, garbage collection, libraries, police, schools, sewer services, storm water drainage, water service and youth recreation. “Some need for improvement” was chosen most frequently for adult recreation and parks. “Great need for improvement” was indicated most often for

bicycle and pedestrian trails/greenways and recycling services.

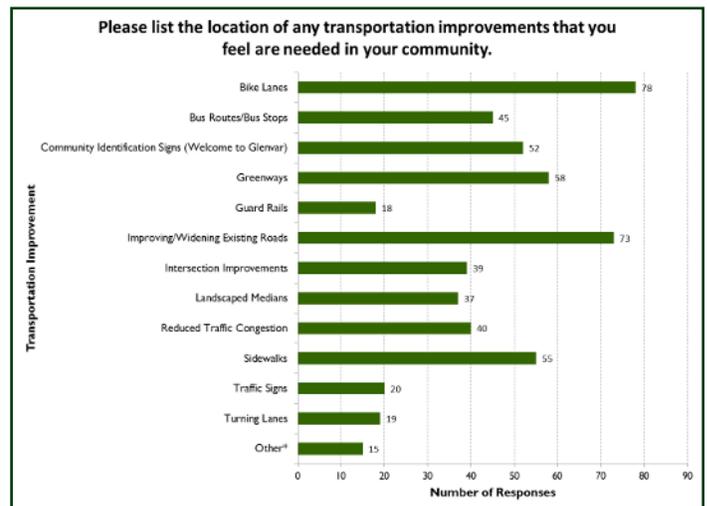


Graphic 7.06 Community Facilities and Services Chart (2)

7.1.8 Transportation Improvements

Survey respondents selected several transportation improvements that they feel are needed in the Glenvar area. The top five answers were:

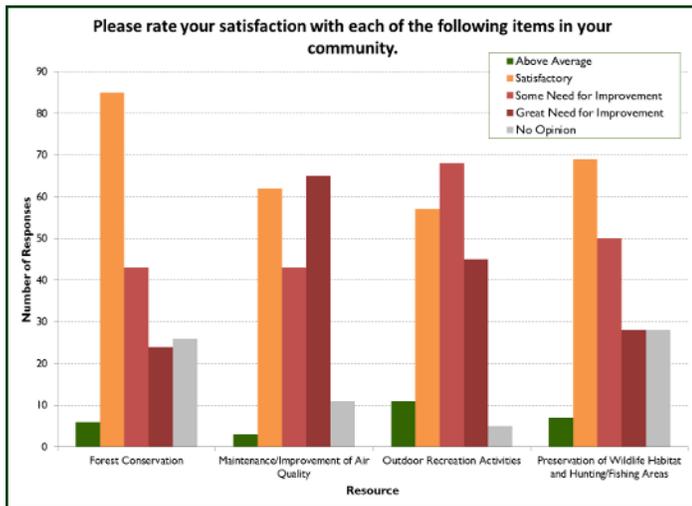
1. Bike lanes
2. Improving/widening existing roads
3. Greenways
4. Sidewalks
5. Community identification signs (Welcome to Glenvar)



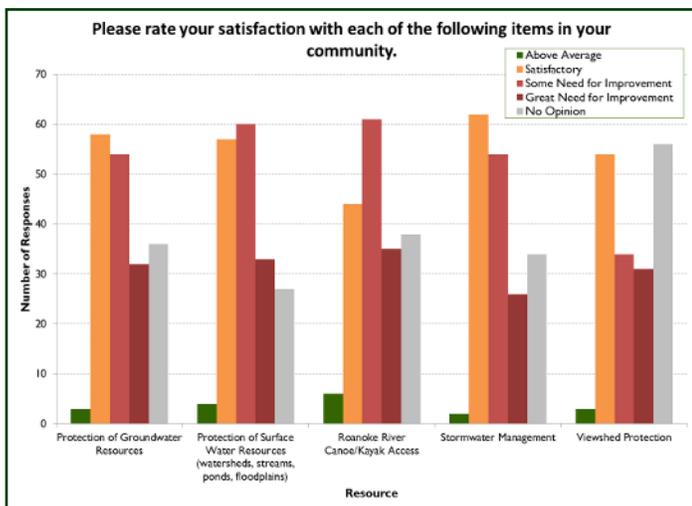
Graphic 7.07 Transportation Improvements Chart

7.1.9 Resource Preservation

When asked about satisfaction with nine environmental resources in the community, “satisfactory” was the most common response for forest conservation, preservation of wildlife habitat and hunting/fishing areas, protection of groundwater resources and stormwater management. “Some need for improvement” was entered most often for outdoor recreation activities, protection of surface water resources (watersheds, streams, ponds, floodplains) and for Roanoke River canoe/kayak access. “Great need for improvement” was chosen most frequently for maintenance/improvement of air quality and respondents offered “no opinion” most often for viewshed protection.



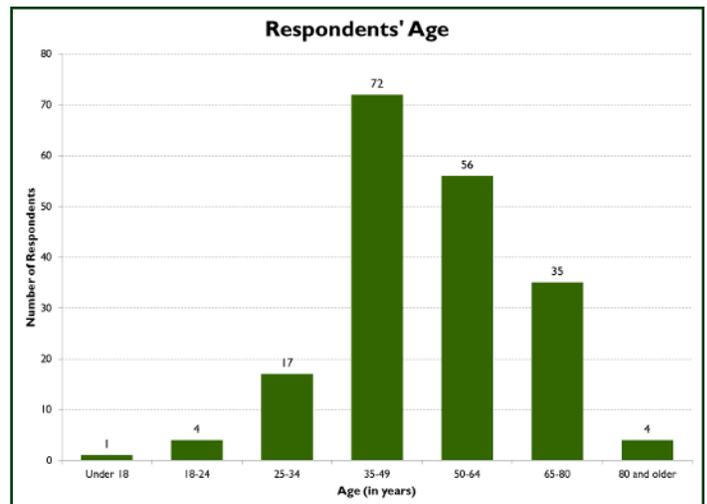
Graphic 7.08 Resource Preservation Chart



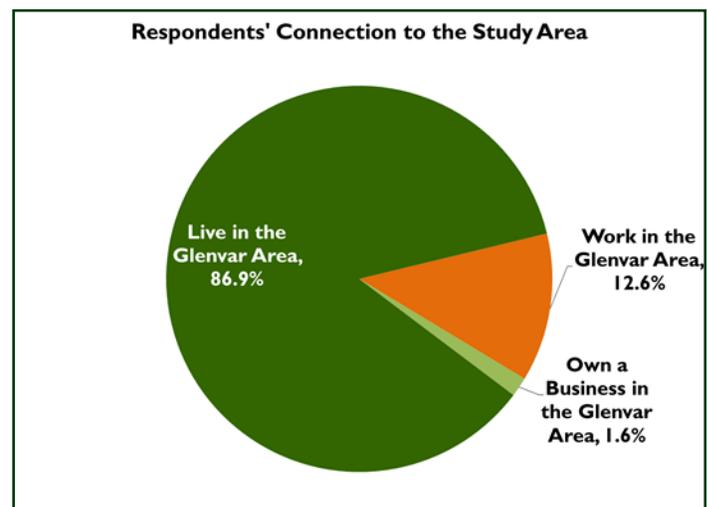
Graphic 7.09 Resource Preservation Chart (2)

7.1.10 Demographics

Survey respondents were more frequently female (60.1%) than male (39.9%). The most common age range of respondents was 35 to 49 years old (72 respondents), followed by the 50 to 64-year-old age range (56 respondents) and the 65 to 80-year-old age range (35 respondents.) Most people who completed the survey live in the Glenvar area (86.9%), while 12.6% of people work in the community and 1.6% own a business.



Graphic 7.10 Respondents' Age Chart



Graphic 7.11 Respondents' Connection to Study Area Chart

7.2 Digital Communication and Outreach

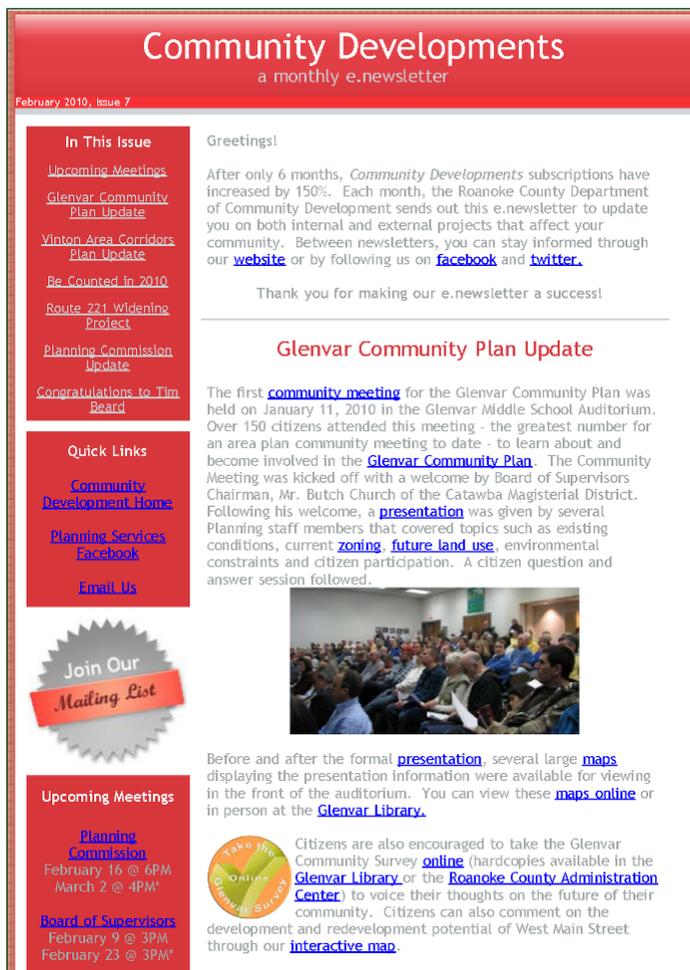
7.2.1 Glenvar Community Plan Webpage

The Glenvar Community Plan webpage, [www.roanokecountyva.gov/GCP](http://www.roanokecountyva.gov/GCP), was created to provide and receive information throughout the planning

process. Information about the Glenvar area including maps and meeting materials was posted online, as well as a link to the survey and final survey results. The webpage also included an interactive map highlighting potential development and redevelopment opportunities along the West Main Street corridor with the capability for citizens to submit comments and photos of redevelopment possibilities.

### 7.2.2 Social Media

The Glenvar Community Plan was the first area plan to utilize social media as a primary method of outreach. The Roanoke County Planning Services Facebook Page was utilized to post community meeting notices and requests for comments on proposed future land use scenarios for the Glenvar area. Upcoming meeting dates and reminders were also tweeted on Roanoke County’s Twitter account to reach additional followers.



Graphic 7.12 Community Developments E-newsletter

Glenvar Community Plan meeting notices were included in the Community Development Department’s e-newsletter, *Community Developments*, as were links to the survey, survey results, future land use scenarios and to other materials. Additionally, prior to each community meeting, a customized e-vite was sent out to the ‘Glenvar Community Plan’ email list, which was generated from those involved in the asphalt plant rezoning and special use permit process and well as those who signed up to receive electronic communications at a community meeting.

### 7.3 Traditional Communication and Outreach

In addition to digital communication and outreach, meeting notices were mailed out to interested citizens without email access, meeting flyers were left at the Glenvar Library and Richfield Retirement Community and meeting information was posted on the Glenvar Schools’ message board. Several articles were written about the Glenvar Community Plan in *The Roanoke Times* So-Salem section and on OurValley.org. These articles are available in Appendix B. Staff members were also interviewed by WFIR in preparation for the first community meeting that was held in January 2010.



Graphic 7.13 Glenvar Schools Message Board Advertising the Third Community Meeting

### 7.4 Stakeholder Interviews

Seventeen stakeholder interviews were conducted by County staff in 2010 to receive comments and feedback from key members of the Glenvar Community. A list of the stakeholders interviewed is available in Table 7.01.

The most common topic during the interviews was future industrial and commercial development in the community. The need for more commercial uses came up in almost every stakeholder interview conducted, noting that the nearest restaurants and grocery stores are in Salem or Christiansburg. Property and business owners were also concerned about the impact of industrial development and the proposed intermodal facility on the environmental and scenic resources in the community.

Table 7.01 Stakeholder Interviews

Name	Organization/Affiliation
Don Bandy	Property Owner, West Main Street
Dr. Gene Bane	Ft. Lewis Property Owner
Pleasant Grove Residents (Beason)	Historic Property Owners
Bob Benninger, Gary Robertson	Western Virginia Water Authority
Chief Richard Burch, Division Chiefs	Roanoke County Fire and Rescue
Gary Ellis	Owner, Salem Auto Sales
Joe Hafey, Sonya Klein, Jamie Soltis	Principals, Glenvar High School
Martha Hooker	Planning Commissioner, Catawba Magisterial District
Bruce Ingram	Outdoor Writer, Enthusiast
Greg Martin	Manager, Camp Roanoke
Roger and Debbie Rardin	Tyler Rose Owners, Residents
Robert Rector	Chief Operating Officer, Richfield Retirement Community
David Shelor	Property Owner, Ft. Lewis Mtn.
Susan Short, Joyce Waugh	Roanoke Regional Chamber of Commerce
Leonard Southern	Pastor, Ft. Lewis Baptist Church
John Vest	Head Librarian, Glenvar Library
Ralph Williams	Realtor, Thalheimer Real Estate

## 7.5 Interest Group Meetings

Five meetings on the Glenvar Community Plan were held with groups of citizens and business owners

with specific interests in late 2009 and 2010. County planning staff delivered presentations to 14 members of Citizens for Positive Growth, 25 attendees at Richfield Retirement Community, 15 representatives from the Glenvar business community, 15 members of the Glenvar Rotary Club and to 20 employees of Novozymes and Tecton. Comments and observations from these groups included the need for ancillary commercial uses such as restaurants for employees and questions about impact of the West Main Street widening project.



Graphic 7.14 Glenvar Business Meeting - April 2010

## 7.6 Community Meetings

The Glenvar Community was invited to three community meetings over the course of 18 months. Hundreds of citizens attended the meetings during which County staff presented information, listened carefully and recorded ideas about the future of the Glenvar Community.

### 7.6.1 First Community Meeting

Approximately 150 citizens attended the first Glenvar Community Meeting on January 11, 2010, in the Glenvar Middle School Auditorium. The presentation began by describing the study area, demographic information, development trends, motivating factors for the study such as the West Main Street widening project and the proposed intermodal facility. The presentation also discussed community facilities, zoning analysis, future land use analysis, environmental constraints including steep slopes and floodplain and the community involvement process and survey. The meeting agenda and presentation are

located in Appendix B. Questions from this meeting included how much input the community would have in the planning process, what can be done about existing blighted properties along West Main Street and the timeline of the road widening project.



Graphic 7.15 First Community Meeting - January 2010

### 7.6.2 Second Community Meetings

Two separate community meetings, identical in format, were held at Fort Lewis Baptist Church in June and July of 2010 to focus on two distinct areas of the Glenvar Community. The first meeting, in June 2010, focused on the developed end of the West Main Street corridor from the City of Salem to Technology Drive. The Dixie Caverns area, focused around the Dow Hollow Road interchange at Interstate 81, was discussed at the second meeting in July 2010. The press release and newspaper articles regarding these meetings are located in Appendix B.



Graphic 7.16 Second Community Meeting Presentation July 2010

Approximately 80 citizens attended the West Main Street corridor meeting on June 29, 2010 and approximately 60 came to the Dixie Caverns area meeting on July 15, 2010. Both meetings began with a presentation on the results of the Glenvar Community Survey.

Following the presentation, attendees were separated into small groups to complete a visioning exercise. The visioning exercise asked participants to imagine the West Main Street or Dixie Caverns area of Glenvar in 20 years and describe how that vision is different from today and what steps could be taken to achieve that vision. Participants shared their thoughts with the small groups and group facilitators recorded all ideas on flipcharts. The most common themes are listed below.

#### *West Main Street Corridor*

- Emphasis on landscaping; integrated into site
- Pedestrian-scale development; sidewalks
- Interconnectivity through greenways, trails and bikeways
- Clustered commercial uses; less industry
- Community center; neighborhood scale parks
- Underground utilities; junkyards eliminated

#### *Dixie Caverns Area*

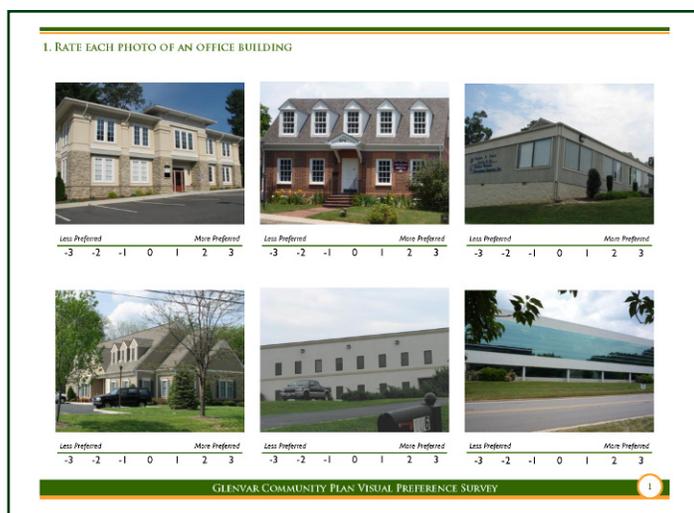
- Buildings designed to fit in with surroundings; preserve historic/rural character
- Gateway corridor
- Built-out technology parks; hotels and restaurants at interchange
- Improvements to Dow Hollow Road and intersection
- Greenway connectivity
- Emphasis on outdoor recreation; parks; tourism

The visioning exercise handout and the resulting comments for both areas are located in Appendix B.



Graphic 7.17 Second Community Meeting Break-Out Group June 2010

Community meeting attendees were also asked to complete a visual preference survey. This type of survey is used to identify and rate visual and aesthetic preferences for designated features such as buildings, landscaping, architectural styles and signs. The visual preference survey assembled for the Glenvar Plan included images from the region of currently permitted commercial land uses along the West Main Street corridor like grocery stores, banks, offices and restaurants. Industrial, multi-family residential, sign and streetscape images were also included in the 108-image survey. A total of 101 surveys were completed at the two community meetings and online.



Graphic 7.18 Glenvar Visual Preference Survey Page

The Glenvar visual preference survey indicated that citizens prefer:

- Variation in façades using brick or stone and architectural details including eaves, rooflines, windows and entryways;
- Visible landscaping around the building and integrated into the site;
- Pedestrian-friendly features such as lighting;
- Parking farther back or at the rear of the site;
- Limited signage: monument-style signs with landscaping around the base;
- Grassed or landscaped medians;
- Bicycle lanes; and
- No overhead power lines.

The complete results of the visual preference

survey are located in Appendix B.

### 7.6.3 Third Community Meeting

The final community meeting was held on May 2, 2011, at the Glenvar Middle School Forum. Approximately 45 people attended the meeting which began with a presentation about the Glenvar Focus Group, the results of the visioning exercise and visual preference survey from the second community meeting, the Glenvar Community Plan vision statement and three proposed future land use scenarios.

After the presentation, attendees spent time looking at the West Main Street and Dixie Caverns future land use scenario maps and speaking with Focus Group and County staff about the proposed alternatives. Future land use scenario handouts and comment sheets for both West Main Street and Dixie Caverns were given to meeting participants to record feedback on the proposed changes. Both sets of handouts and comment sheets are located in Appendix B.

The comments for the West Main Street corridor indicated that citizens preferred the Glenvar Village Scenario. No clear preference was indicated for the Dixie Caverns area. Additional information about the Glenvar Focus Group is available in the next section, 7.7, Glenvar Focus Group, and details regarding the future land use scenarios are located in both Chapter 8 and in Appendix A.



Graphic 7.19 Third Community Meeting, Future Land Use Scenario Discussion with Glenvar Focus Group Members  
May 2011

## 7.7 Glenvar Focus Group

The Glenvar Focus Group was created as a means to involve key community members in crafting core components of the Glenvar Community Plan such as the vision statement and the future land use scenarios. Through five meetings over nine months, the group worked together to successfully complete both tasks. The 17-member Glenvar Focus Group was composed of residents, business representatives, community leaders and civic organization members. A list of Focus Group members and their affiliation is available in Appendix B.

### 7.7.1 First Focus Group Meeting

The first Glenvar Focus Group meeting was held on January 24, 2011, at the Glenvar Library. A presentation reviewed the comprehensive planning process and the differences between the Comprehensive Plan and the Zoning Ordinance, discussed the tasks to be completed and showed existing zoning and environmental constraints in the area. County staff from the Economic Development Department also talked about the industrial parks in the Glenvar area, industrial lands in the County and the current business climate. Results of the Glenvar Community Survey, the visual preference survey and the visioning exercise were also reviewed. With the survey results in mind, Focus Group members offered their thoughts about what Glenvar should be like in the future for use in crafting a vision statement.



Graphic 7.20 First Glenvar Focus Group Meeting  
January 2011

### 7.7.2 Second Focus Group Meeting

Glenvar Focus Group members met for a second time on February 17, 2011, at Fort Lewis Baptist

Church. The draft vision statement was finalized at this meeting:

*The Glenvar area strives to be a visually appealing, healthy and sustainable community that encourages a mix of land uses in a manner that is consistent with the Community's rural character.*

The Focus Group also reviewed Roanoke County's future land use designations, proposed "housekeeping" changes to Glenvar's future land use map and then worked in three small groups with large maps to determine what potential future land use changes may be appropriate for the West Main Street and Dixie Caverns areas. Three scenarios for both West Main Street corridor and for Dixie Caverns area were generated and discussed with the larger group. The proposed future land use changes are discussed in Chapter 8 and shown in detail on maps located in Appendix A.



Graphic 7.21 Second Focus Group Meeting  
February 2011

### 7.7.3 Third Focus Group Meeting

The third Focus Group meeting was held on March 31, 2011, at the Spring Hollow Water Treatment Plant. Focus Group members were asked to approve digital versions of the future land use maps marked up at the second meeting. They also considered the new "Mixed Use" and "Glenvar Village" designations as well as the proposed Glenvar-specific refinements to the existing Principal Industrial, Development and Core future land use designations. The format of the third Glenvar community meeting was discussed,

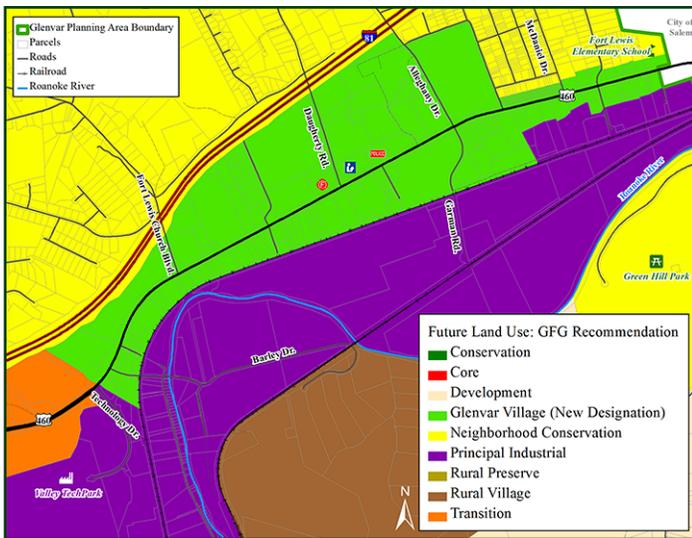
including how the future land use scenarios would be presented and the role of the Focus Group at that meeting.



Graphic 7.22 Third Focus Group Meeting  
March 2011

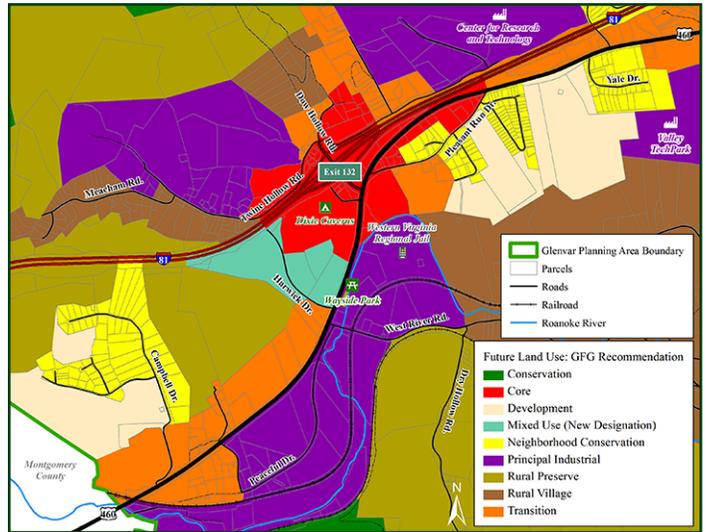
7.7.4 Fourth Focus Group Meeting

The Focus Group members analyzed all of the West Main Street and Dixie Caverns future land use scenario changes and community input at the fourth Glenvar Focus Group meeting on June 16, 2011. By deciding which individual land use changes were most appropriate, the group agreed upon the Glenvar Focus Group Recommended Future Land Use Scenarios for the West Main Street corridor and the Dixie Caverns area as shown in Graphics 7.23 and 7.24.



Graphic 7.23 Glenvar Focus Group Recommendation  
West Main Street Corridor

The recommended future land use scenarios are discussed in Chapter 8 and shown in detail on maps located in Appendix A.



Graphic 7.24 Glenvar Focus Group Recommendation  
Dixie Caverns Area

7.7.5 Joint Glenvar Focus Group/Planning Commission Work Session

The Glenvar Focus Group members joined the Planning Commission at its September 20, 2011, work session to present and explain the vision statement and recommended future land use scenarios.

7.8 Planning Commission

Beginning in December 2008, the Planning Commission discussed the Glenvar Community Plan at several work sessions and community and stakeholder meetings. After meeting with the Glenvar Focus Group and holding a special public hearing on the document in Glenvar, the Planning Commission forwarded the draft Glenvar Community Plan to the Board of Supervisors with a favorable recommendation.

7.8.1 Work Sessions

County staff held eight work sessions with the Roanoke County Planning Commission to receive feedback and to provide updates throughout the planning process. The concept of the Glenvar Community Plan was first presented to the Planning Commission at a work session on December 15, 2008. The next work session, held on August 18, 2009, provided an overview of the document outline and the area’s features, zoning, existing land uses, future land use designations and environmental constraints. A

work session was held on December 1, 2009, to review the Glenvar Community Survey to date, the Glenvar Community Plan webpage and other digital means of communication for the Glenvar Community Plan.

Preliminary Glenvar Community Survey results were shared at the March 16, 2010, work session. County staff also updated the Planning Commission on the stakeholder interviews conducted to date, presentations given at Richfield Retirement Community and the Glenvar Area Business Meeting as well as progress on the Glenvar Enforcement Task Force. The work session held on June 1, 2010, reviewed the complete results of the Glenvar Community Survey, the stakeholder interviews and outlined the content of the second community meeting.

Another update was provided to the Planning Commission on August 17, 2010, discussing the results of the second set of community meetings including transportation issues, expansion of greenways and preservation of resources. The January 18, 2011, work session covered the planning process including the creation of the Glenvar Focus Group. The visual preference survey and visioning exercise results were also presented. The third community meeting was summarized at the May 17, 2011, work session. The finalized vision statement, Glenvar Focus Group Recommended Future Land Use Scenarios and future land use designation refinements were also reviewed at this work session.

### *7.8.2 Joint Glenvar Focus Group/Planning Commission Meeting*

A joint Planning Commission and Glenvar Focus Group meeting was held on September 20, 2011. The purpose of the joint meeting was for the Focus Group members to present the vision statement and Glenvar Focus Group Recommended Future Land Use Scenarios for the West Main Street and the Dixie Caverns areas.

### *7.8.3 Public Hearing*

The Roanoke County Planning Commission

held a public hearing on the draft Glenvar Community Plan at the Glenvar Middle School Forum on November 14, 2011. Following a presentation by staff and a few citizen comments, the Planning Commission recommended adoption of the Glenvar Community Plan into the County's Comprehensive Plan.

## **7.9 Board of Supervisors**

### *7.9.1 Work Sessions*

A work session was held with the Board of Supervisors on October 28, 2008, to review existing conditions, potential plans for the Roanoke Regional Intermodal Facility, new Western Virginia Regional Jail, impending widening of West Main Street and proposed improvements to Interstate 81 in the vicinity of the Glenvar area. On January 10, 2012, a work session was also conducted with the Board of Supervisors to review the draft Glenvar Community Plan.

### *7.9.2 Public Hearing*

After receiving the Planning Commission's recommendation, the Board of Supervisors held a public hearing on January 24, 2012, to receive comments on the Glenvar Community Plan. The Board voted unanimously (5-0) to adopt the Glenvar Community Plan as an amendment to the County's Comprehensive Plan. A copy of the Board of Supervisors' Resolution (012412-4) is in Appendix B.

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## Chapter 8: Plan Recommendations

The Glenvar Community Plan will be implemented using a hierarchy of vision statements, goals and objectives. The overall community vision is at the top of the hierarchy. The vision statement expresses the desired future of the community. A set of goals with supporting objectives and strategies form the implementation framework and provide direction for the future growth and development of the community.

### 8.1 Vision Statement

The Glenvar Community's vision for the future emerged during the community meetings held in 2010 and was refined by the Glenvar Focus Group. The following vision statement is a broad but concise description of what the community desires to be in the future and was used as a guide when developing goals and future land use scenarios and determining plan recommendations.

***The Glenvar area strives to be a visually appealing, healthy and sustainable community that encourages a mix of land uses in a manner that is consistent with the community's rural character.***

### 8.2 Plan Goals

In addition to an overarching vision, it is important to have more specific goal statements that can be achieved through implementing the plan recommendations. The goals of the Glenvar Community Plan are:

1. Ensure that public services and facilities will adequately serve the needs of residents and businesses within the Glenvar Community and that such services and facilities are adaptable to future growth.
2. Develop a safe, efficient transportation system that provides a range of transportation choices and reinforces the livability of neighborhoods.
3. Provide a mix of environmentally-sensitive commercial and industrial uses at appropriate locations in the Glenvar Community that meet the needs of current and future residents.

4. Provide a diverse, affordable and sustainable housing mix for a varied population, while preserving the natural resources and rural character of the community.
5. Conserve and appropriately use the Glenvar Community's natural resources in a manner that ensures their long-term viability and recreational, natural, scenic and economic value.
6. Preserve, enhance and promote the unique, historic and cultural richness of the Glenvar Community.
7. Maintain a healthy, safe and sustainable community that ensures opportunities for a multi-generational community to live, work, recreate and raise a family.
8. Develop a comprehensive system of public and private parks, trails and open spaces that meet the needs of all age groups within the Glenvar Community [and Roanoke County].

### 8.3 Future Land Use Recommendations

#### 8.3.1 Future Land Use Designation Refinements

Roanoke County utilizes different future land use (FLU) designations to identify areas around the county where certain activities occur, are anticipated or are encouraged. The designations are broad, allowing them to be applied throughout the county; consequently, the location and types of uses desired within the Glenvar Planning Area need to be refined for three designations: Principal Industrial, Development and Core.

##### 8.3.1.1 Principal Industrial FLU Designation

Technology-based businesses and low intensity industrial uses are most appropriate for the Principal Industrial designation in the Glenvar Planning Area. Uses which have the potential to be dangerous or extremely obnoxious are not appropriate. Industrial development should be located in existing technology parks such as the Center for Research and Technology (CRT) and Valley TechPark. If businesses are not able to locate in an existing technology park, high intensity

industrial uses should be located south of Route 11/460. Low intensity or technology-based industrial uses are appropriate for either side of Route 11/460. Industrial development should also be sensitive to the natural environment and include a high degree of architectural and creative site design that is compatible with the rural and historic character of the community. The Principal Industrial designation does not preclude commercial uses from being developed.

*Route 11/460:* Industrial uses should not be prominent along the corridor and should be buffered from the right-of-way. High intensity uses should be located south of Route 11/460. Low intensity or technology-based industrial uses are appropriate for either side of Route 11/460.

*Roanoke River/Floodplain:* Development or expansion of industrial uses along the Roanoke River and in the floodplain should be limited. Appropriate uses include:

- Manufacturing, storage, marketing and wholesaling of agricultural products;
- Low intensity industrial uses and custom manufacturing; and
- Warehousing and distribution.

*Poor Mountain Road:* Uses should be limited to environmentally-sensitive, small manufacturing and low intensity industrial along the Roanoke River and railroad tracks.

*Center for Research and Technology/Valley TechPark:* These areas are the most appropriate for high-tech manufacturing operations, research and development companies and corporate headquarters. Uses, site design and aesthetics are regulated by each park's respective covenants, master plan and/or conditions.

*Twine Hollow Road:* Development or expansion of industrial uses along Twine Hollow Road should be limited to:

- Manufacturing, storage, marketing and wholesaling of agricultural products;

- Low intensity industrial uses and custom manufacturing;
- Warehousing and distribution; and
- Mining and resource extraction.

### 8.3.1.2 Development FLU Designation

Development is a future land use designation where most new neighborhood development should occur. In the Glenvar Planning Area, Development should be consistent with the existing land use pattern. Appropriate uses include:

- Conventional Residential – single-family attached and detached dwellings on conventional lots;
- Cluster or Planned Residential – single-family developments with gross density similar to conventional subdivisions but houses are clustered to preserve open space or a critical environmental feature; and
- Community Activity Centers – uses that serve neighboring residents including parks, schools, community clubs and meeting areas connected to residential areas by sidewalks, bikeways and/or greenways.

### 8.3.1.3 Core FLU Designation

In the Glenvar Planning Area, the Core future land use designation is utilized around Interstate 81 off-ramps at exits 132 (Dow Hollow Road) and 137 (Wildwood Road). These areas serve as a gateway to both the Glenvar Community and Roanoke County. Development that enhances the rural and historic character of the area is encouraged.

The Core designation is appropriate for higher intensity commercial development that includes hotels, restaurants, mixed use and highway-oriented retail uses; truck stops should be avoided. Restaurants and other businesses serving travelers should be distinctive in appearance and include a high degree of architectural and creative site design. Industrial uses should be redirected to land designated as Principal Industrial.

### 8.3.2 Future Land Use Map Changes

One of the most important components of a community plan’s recommendations is the amendments to the future land use map. The future land use map should be updated to account for recent development or redevelopment as well as for the anticipated [re] development of key areas. Section 8.3.2.1 discusses the housekeeping changes identified by staff and supported by the Glenvar Focus Group. Sections 8.3.2.2 and 8.3.2.3 present the three future land use scenarios developed by Focus Group members at their second meeting. The last section, 8.3.2.4, presents the Glenvar Focus Group’s recommended future land use scenario. This scenario was developed based on input received at the third community meeting and the Focus Group’s decision regarding which individual future land use changes were most preferable.

#### 8.3.2.1 Housekeeping Changes

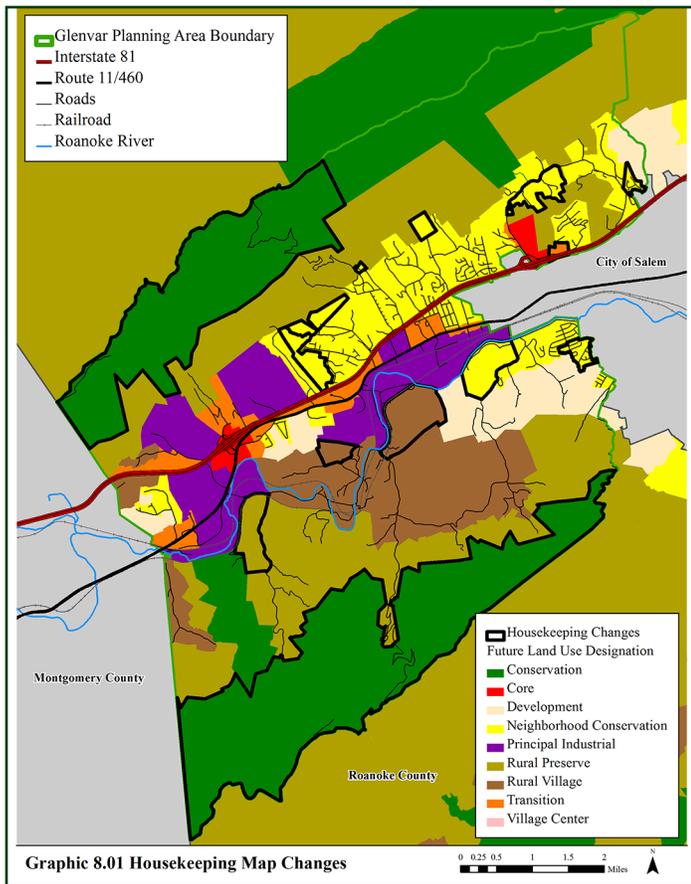
The housekeeping changes incorporated into the future land use map were based on existing land use, current zoning and topography. The ten housekeeping changes and the reasons for their incorporation are listed in Table 8.01, Housekeeping Changes.

Table 8.01 Housekeeping Changes

Location	FLU Change	Reasoning
Slopes and ridgeline of Fort Lewis Mountain and Poor Mountain	Rural Preserve to Conservation	Mountains are an important resource and need to be protected; consistency with other community plans; topography
Wildwood Road (Zana Road and Lawyer Drive), Kings Crest Drive, Fieldgate Road, and Coronado Drive	Rural Preserve and Development to Neighborhood Conservation	Consistency with existing land use and current zoning
Skyview Road	Neighborhood Conservation to Transition	Economic development identified parcel

Location	FLU Change	Reasoning
Termini of Joe Carrol Road, Daugherty Road, Stanley Farm Road and Fort Lewis Church Boulevard	Rural Preserve to Neighborhood Conservation	Consistency with existing land use and current zoning
Between Glenvar Heights Boulevard and Cherokee Hills Subdivision	Development to Neighborhood Conservation	Consistency with existing land use, current zoning and topography
Dry Hollow Road	Transition to Rural Preserve	Preserve entrance road to Camp Roanoke; AEP owned and used parcels – low development potential
South of Valley TechPark near Bohon Hollow Road	Principal Industrial to Rural Village	Consistency with existing land use, surrounding future land use and topography
Adjacent to railroad tracks and Beason Lane	Development and Principal Industrial to Rural Village	Consistency with existing land use, surrounding future land use and topography
Green Hill Park	Development to Neighborhood Conservation	Consistency with other County parks; most appropriate future land use designation for such a facility
Woodbridge Subdivision (Stone Mill Drive to Woods Meadow Lane)	Development to Neighborhood Conservation	Consistency with existing land use and current zoning

Table 8.01, Housekeeping Map Changes, reflects the changes described above and the future land use breakdown incorporating only the housekeeping changes is listed in Table 8.02. The largest housekeeping changes were in the Conservation and Rural Preserve future land use designations. This is due to the slopes and ridgelines of Fort Lewis and Poor Mountains being changed from Rural Preserve to Conservation.



8.3.2.2 West Main Street Corridor Proposed Changes

West Main Street Scenario 1

West Main Street (WMS) Scenario 1 calls for the land from Technology Drive to Hawley Drive between the railroad and Interstate 81 to be changed from Principal Industrial and Transition to the proposed Mixed Use future land use designation. A map of WMS Scenario 1 is show below in Graphic 8.02.

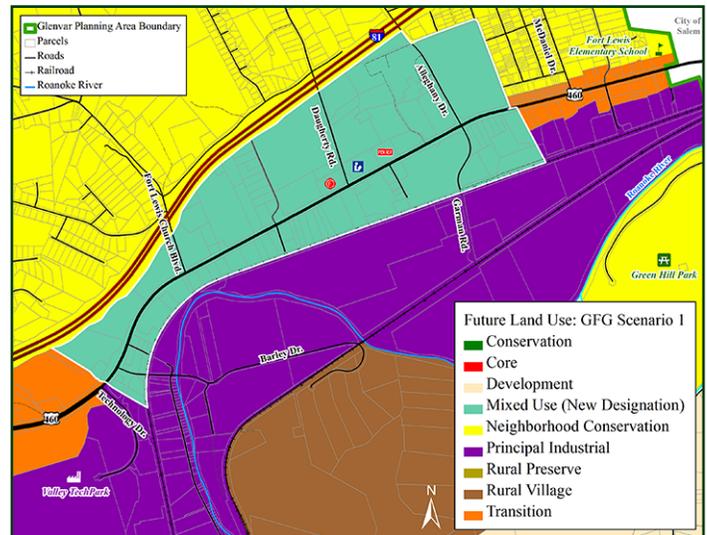


Table 8.02 Housekeeping Future Land Use Breakdown by Acres and Percent of the Planning Area

FLU Designation	2005 Map	Housekeeping Map
Conservation	2,765.69 (8.71%)	10,508.63 (33.10%)
Core	292.57 (0.92%)	292.65 (0.92%)
Development	2,140.88 (6.74%)	1,458.67 (4.59%)
Neighborhood Conservation	3,367.87 (10.61%)	4,201.66 (13.23%)
Principal Industrial	2,878.77 (9.07%)	2,626.09 (8.27%)
Rural Preserve	16,248.85 (51.19%)	8,370.50 (26.37%)
Rural Village	2,930.90 (9.23%)	3,391.37 (10.68%)
Transition	1,118.33 (3.52%)	897.72 (2.83%)

Graphic 8.02 West Main Street Scenario 1

The proposed Mixed Use designation, identified by teal on the map, recognizes the existing mixture of uses and zoning districts and provides for a mix of uses to be preserved and developed. This future land use designation allows for more choice and opportunity in how the land can be [re]developed. A high degree of architectural and creative site design is encouraged to enhance the rural and historic character of the area as well as pedestrian and vehicular connectivity between properties.

Land use types proposed for the Mixed Use designation include:

- *Community Activity Centers* - Public and private facilities serving surrounding residents including parks, schools, community clubs and meeting areas connected to residential areas by sidewalks, bikeways and/or greenways;
- *Commercial* - Planned small-scale or clustered commercial including specialty businesses, personal services and sit-down or family-style

restaurants. Also included are small, highway-oriented retail establishments providing goods and services to passing motorists. Such facilities should be designed to complement the character of the community;

- *General Retail Shops and Personal Services* - Planned shopping centers and clustered retail uses are encouraged. These centers should incorporate greenways, bike and pedestrian accommodations into their designs to link to surrounding development;
- *Limited Industrial* - Low intensity industrial uses are encouraged. Such development should be clustered and should not have an adverse impact on air or water quality, the natural environment or scenic viewsheds;
- *Mixed Use* – Developments that combine retail, service or other commercial uses with office and/or residential use in the same building or on the same site;
- *Office and Institutional* - Planned office parks and independent facilities in park-like surroundings are encouraged. Such developments should be designed to enhance the rural and historic character of the area;
- *Parks and Outdoor Recreation/Ecotourism* – Public and private recreation from small-scale community based facilities to regional attractions with greenway linkages and bike and pedestrian accommodations. Also encouraged are eco- and sustainable tourism businesses; and
- *Residential* - Townhouse, low density multi-family, single-family attached and two-family dwellings are appropriate. Clustering and connectivity are encouraged.

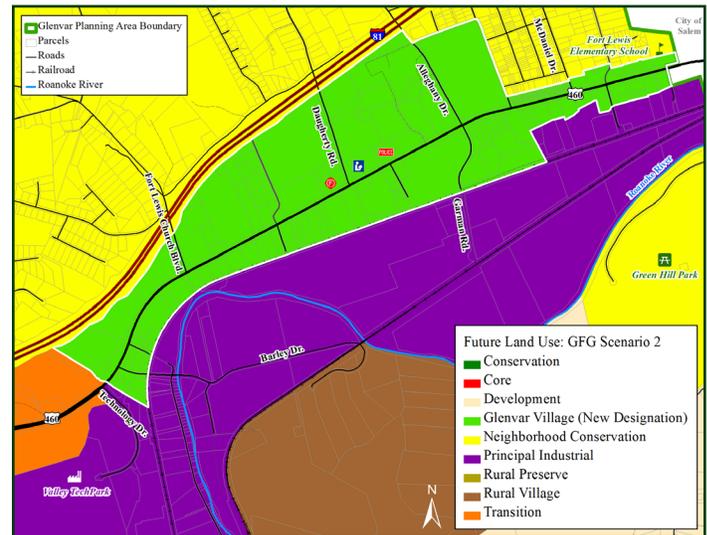
Land use determinants for this designation are:

- *Existing Land Use Pattern* - Locations where commercial or industrial uses have been developed or will likely be developed;
- *Existing Zoning* - Locations where commercial or industrial zoning exists;

- *Access* - Locations served by collector street system; and
- *Utility Availability* - Locations where water and sewer service exist or can be provided.

*West Main Street Scenario 2*

West Main Street Corridor Scenario 2 calls for area between Technology Drive and the City of Salem line to be changed from Principal Industrial and Transition to the proposed Glenvar Village future land use designation as shown in Graphic 8.03 below.



Graphic 8.03 West Main Street Scenario 2

The proposed Glenvar Village designation, identified by bright green on the map, is intended to serve as focal point for the Glenvar Community. This stretch of West Main Street is home to community identifiers such as the new Glenvar Library, Richfield Retirement Community, Fort Lewis Fire and Rescue Station, Fort Lewis Elementary, entrance to Glenvar Schools Complex, Pleasant Grove and Fort Lewis Baptist Church. Because of the area’s importance to the community, a high degree of architectural and creative site design is encouraged to enhance the rural and historic character of the area as well as pedestrian and vehicular connectivity between properties.

A mix of uses on a parcel and/or along the West Main Street corridor is encouraged in the Glenvar Village designation.

Land use types proposed for the Glenvar Village designation include:

- *Community Activity Centers* - Public and private facilities serving surrounding residents including parks, schools, community clubs and meeting areas connected to residential areas by sidewalks, bikeways and/or greenways;
- *Commercial* – Planned small-scale or clustered commercial such as local target area shopping centers with specialty businesses, personal services and sit-down or family-style restaurants. Such facilities should be designed to complement the character of the community;
- *General Retail Shops and Personal Services* – Planned shopping centers and clustered retail uses are encouraged. These centers should incorporate greenways, bike and pedestrian accommodations into their designs to link to surrounding development;
- *Office and Institutional* - Planned office parks and independent facilities in park-like surroundings are encouraged. Such developments should be designed to enhance the rural and historic character of the area;
- *Limited Industrial* - Low intensity industrial uses are encouraged to locate south of Route 11/460; such development should be clustered and should not have an adverse impact on air or water quality, the natural environment or scenic viewsheds;
- *Mixed Use* – Developments that combine retail, service and other commercial uses with office and/or residential use in the same building or on the same site;
- *Parks and Outdoor Recreation/Ecotourism* – Public and private recreation from small-scale community based facilities to regional attractions with greenway linkages and bike and pedestrian accommodations. Also encouraged are eco- and sustainable tourism businesses;
- *Residential* - Townhouse, low density multi-family,

single-family attached and two-family dwellings. Clustering and connectivity are encouraged.

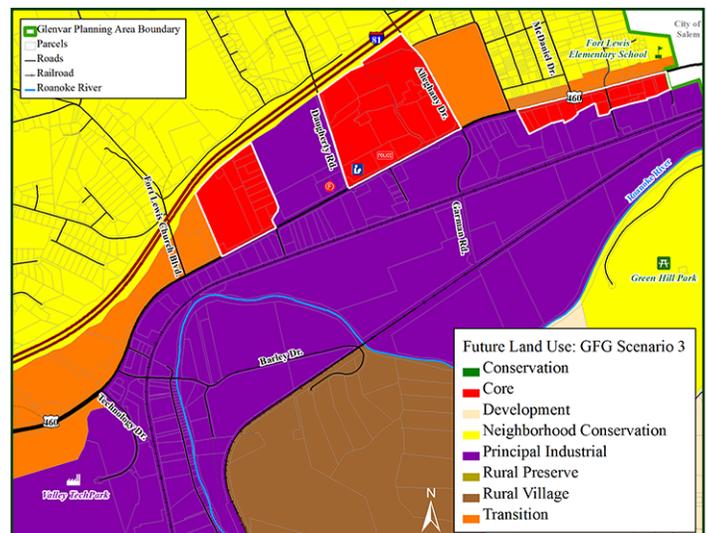
Land use determinants for the Glenvar Village include:

- *Existing Land Use Pattern* - Locations where commercial or industrial uses have been developed or will likely be developed;
- *Existing Zoning* - Locations where commercial or industrial zoning exists;
- *Access* - Locations served by collector street system; and
- *Utility Availability* - Locations where water and sewer service exist.

### West Main Street Scenario 3

The proposed future land use change along the West Main Street corridor in Scenario 3 are shown below in Graphic 8.04 and include:

- Changing the future land use designation of parcels from the former City of Salem water treatment plant to Crossmill Lane from Principal Industrial to Core;
- Changing the future land use designation of parcels north of West Main Street from Daugherty Road to Alleghany Drive from Transition to Core; and
- Changing the future land use designation of parcels south of West Main Street from Hawley Drive to the City of Salem line from Transition to Core.



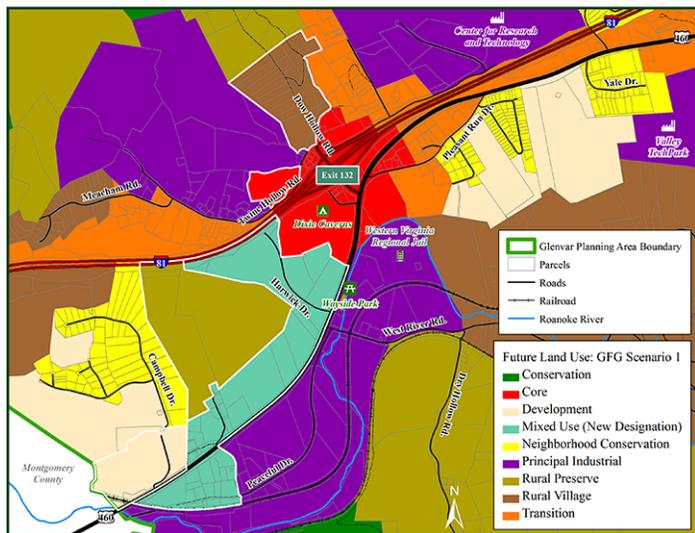
Graphic 8.04 West Main Street Scenario 3

8.3.2.3 Dixie Caverns Area Proposed Changes

Dixie Caverns Scenario 1

As shown in Graphic 8.05 below, five changes were proposed to the future land use map in the Dixie Caverns area. The proposed modifications are highlighted in white and include:

- Changing the future land use designation of parcels off of Dry Hollow Road and Grey Fox Lane from Transition to Rural Village;
- Changing a 16.3-acre property off of Twine Hollow Road from Principal Industrial to Core;
- Changing the future land use designations of parcels along Harwick Drive and on both sides of West Main Street from Dixie Caverns to Campbell Hills from Principal Industrial and Transition to Mixed Use;
- Changing the knoll between Campbell Hills and Harwick Drive from Principal Industrial to Rural Preserve; and
- Changing the area at the entrance of Campbell Hills from Transition to Development.



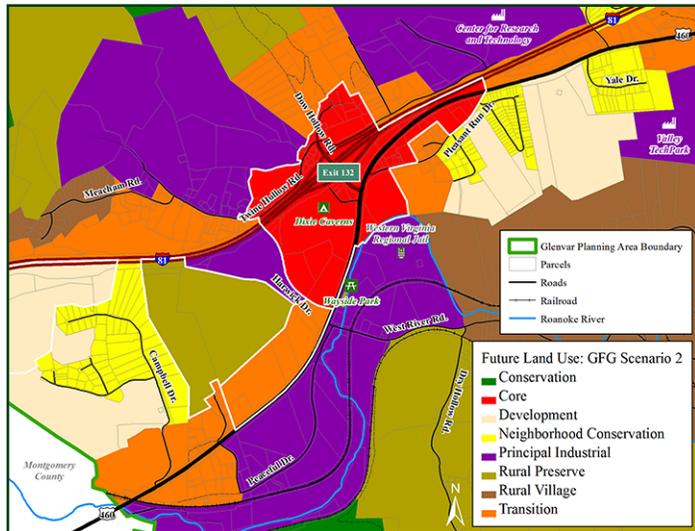
Graphic 8.05 Dixie Caverns Scenario 1

Dixie Caverns Scenario 2

As shown in Graphic 8.06, the four proposed future land use map modifications in Dixie Caverns Area Scenario 2 include:

- Expanding the Core designation around the Dixie Caverns interchange;

- Changing the knoll between Campbell Hills and Harwick Drive from Principal Industrial to Rural Preserve;
- Changing the parcels on the northern side of West Main Street from Peaceful Drive to Harwick Drive from Principal Industrial to Transition; and
- Changing the parcels adjoining Campbell Hills along Interstate 81 from Rural Village to Development.



Graphic 8.06 Dixie Caverns Scenario 2

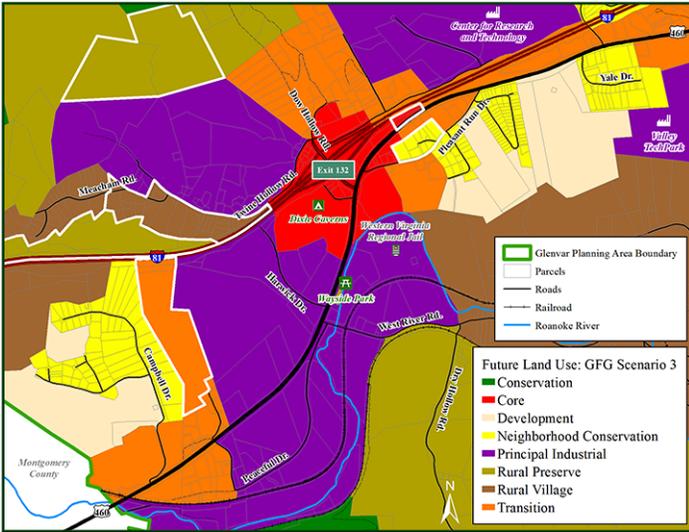
Dixie Caverns Scenario 3

There are six proposed modifications to the future land use map in Scenario 3. They include:

- Expanding the Core designation further east along West Main Street;
- Changing the parcels on Pleasant Run Drive from Scenery Drive to View Point Avenue from Transition to Neighborhood Conservation;
- Changing the northern half of two parcels at the end of Twine Hollow Road from Principal Industrial to Rural Preserve;
- Changing the parcels on the southern half of Twine Hollow Road and parts of Meacham Road from Transition to Rural Village;
- Changing the future land use designation of seven parcels along Interstate 81 from Transition to Rural Preserve; and

- Changing two parcels at the end of Peaceful Drive from Principal Industrial to Transition.

The proposed changes are highlighted below.



Graphic 8.07 Dixie Caverns Scenario 3

8.3.2.4 Complete Future Land Use Scenario Breakdown

The future land use breakdowns for the three scenarios (West Main Street and Dixie Caverns combined) are as follows:

Table 8.03 Future Land Use Scenario 1 Breakdown

	Acreage	Percent of Planning Area
Conservation	10,508.63	33.10
Core	309.02	0.97
Development	1,518.17	4.78
Mixed Use	571.07	1.80
Neighborhood Conservation	4,201.52	13.23
Principal Industrial	2,094.31	6.60
Rural Preserve	8,531.16	26.87
Rural Village	3,465.04	10.91
Transition	548.38	1.73

Table 8.04 Future Land Use Scenario 2 Breakdown

	Acreage	Percent of Planning Area
Conservation	10,508.63	33.10
Core	401.44	1.26
Development	1,458.67	4.59
Glenvar Village	376.63	1.19
Neighborhood Conservation	4,201.52	13.23

	Acreage	Percent of Planning Area
Principal Industrial	2,146.10	6.76
Rural Preserve	8,531.16	26.87
Rural Village	3,269.88	10.68
Transition	731.75	2.30

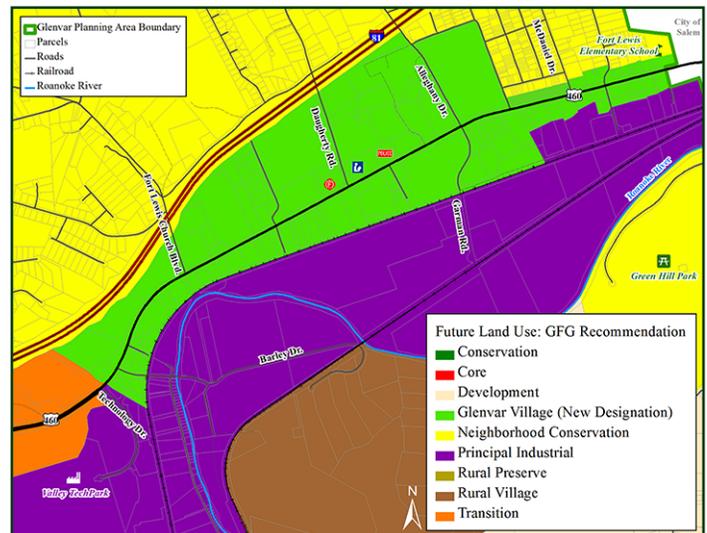
Table 8.05 Future Land Use Scenario 3 Breakdown

	Acreage	Percent of Planning Area
Conservation	10,508.63	33.10
Core	418.26	1.32
Development	1,458.67	4.59
Neighborhood Conservation	4,215.64	13.28
Principal Industrial	2,413.10	7.60
Rural Preserve	8,571.79	27.00
Rural Village	3,448.54	10.86
Transition	712.71	2.24

8.3.2.5 Glenvar Focus Group Future Land Use Recommendation

Of the future land use changes proposed in the three scenarios described above, the following have been supported and recommended by the Glenvar Focus Group:

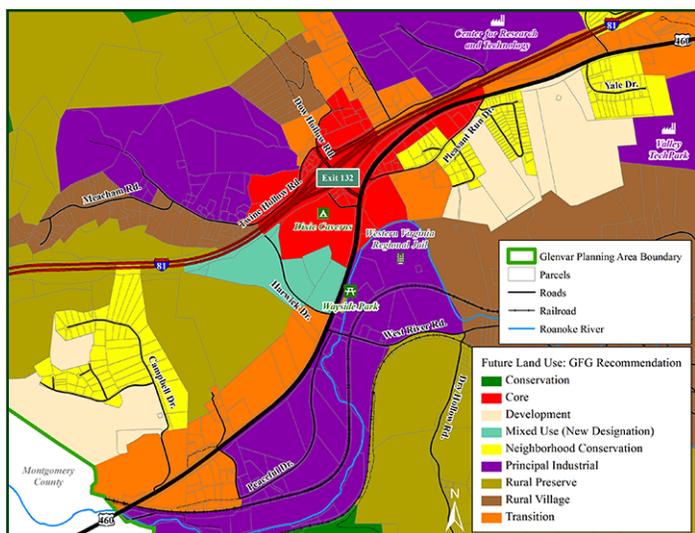
- Changing the future land use designation of the area between Technology Drive and the City of Salem from Principal Industrial and Transition to the Glenvar Village designation (Graphic 8.08).



Graphic 8.08 Glenvar Focus Group FLU Recommendation

Graphic 8.09 reflects the rest of the FLU recommendations:

- Expanding the Core designation further east along West Main Street;
- Changing the future land use designation of five parcels off of Dow Hollow Road from Transition to Core and on two parcels off of Twine Hollow Road from Principal Industrial to Core;
- Changing the future land use designation of parcels off of Dry Hollow Road and Grey Fox Lane from Transition to Rural Village;
- Changing the parcels on Pleasant Run Drive from Scenery Drive to View Point Avenue from Transition to Neighborhood Conservation;
- Changing the northern half of two parcels at the end of Twine Hollow Road from Principal Industrial to Rural Preserve;
- Changing the parcels on the southern half of Twine Hollow Road and parts of Meacham Road from Transition to Rural Village;
- Changing the future land use designation of seven parcels along Interstate 81 from Transition to Rural Preserve;
- Changing the future land use designations of parcels along Harwick Drive from Principal Industrial to Mixed Use;
- Changing the knoll between Campbell Hills and Harwick Drive from Principal Industrial to Rural Preserve;
- Changing the parcels adjoining Campbell Hills along Interstate 81 from Rural Village to Rural Preserve; and
- Changing the parcels on the northern side of West Main Street from Peaceful Drive to Harwick Drive from Principal Industrial to Transition.



Graphic 8.09 Glenvar Focus Group FLU Recommendation

The future land use breakdown for the Glenvar Focus Group recommended scenario is shown below in Table 8.06. Large versions of all the future land use scenario maps are available in Appendix A.

Table 8.06 Glenvar Focus Group Recommended Scenario Future Land Use Breakdown

	Acreage	Percent of Planning Area
Conservation	10,508.63	33.10
Core	354.86	1.12
Development	1,458.67	4.59
Glenvar Village	376.18	1.19
Mixed Use	82.96	0.26
Neighborhood Conservation	4,215.51	13.28
Principal Industrial	1,973.59	6.22
Rural Preserve	8,854.31	27.89
Rural Village	3,383.78	10.66
Transition	538.83	1.70

## 8.4 Plan Recommendations

### 8.4.1 Zoning and Design Recommendations

The two proposed zoning overlay districts, the Glenvar Village Overlay District and the Gateway Corridor Overlay District, will encourage higher quality development that is consistent with the rural character of the Glenvar Community. Overlay zoning is a regulatory tool that creates a special zoning district, placed over an existing base zone(s), which identifies special provisions in addition to those in

the underlying base zone. Where the provisions are in conflict, the overlay district governs. These zoning overlays would be targeted towards new construction and substantial additions or expansions. To adopt the proposed overlays into the zoning ordinance, a separate action must be taken by the Board of Supervisors.

### *8.4.1.1 Glenvar Village Overlay District*

The proposed Glenvar Village Overlay District (GVOD) would include the properties along West Main Street that are in the Glenvar Village future land use designation. The GVOD is intended to serve as focal point for the community. This stretch of West Main Street is home to community features such as the new Glenvar Library, Richfield Retirement Community, Fort Lewis Fire and Rescue Station, Fort Lewis Elementary, the entrance to Glenvar Schools complex and the historic structures of Pleasant Grove and Fort Lewis Baptist Church. Because of the significance of the features to the community, a high degree of architectural and creative site design is encouraged to enhance the rural and historic character of the area.

Architectural and site development standards for properties located within the GVOD could be amended to require:

- New development to be connected, via sidewalks and shared use trails, to existing civic, commercial and residential areas;
- Increased landscaping that is integrated into sites to create a park-like and rural feel;
- Parking to the side or rear of buildings; and
- Low profile, monument style signage.

The GVOD would provide for a mix of uses that are consistent with the Glenvar Community's vision. It recognizes that some established parts of the proposed village area consist of a variety of compatible uses and the GVOD aims to maintain and enhance the vitality of these areas while encouraging appropriate [re]development on the West Main Street corridor. The Glenvar Community envisions less

industry and more commercial and office development in a clustered pattern. Other features envisioned for the GVOD include a community center, higher density residential such as townhouses and condos and public art installations.

### *8.4.1.2 Gateway Corridor Overlay District*

The Gateway Corridor Overlay District (GCOD) would provide a higher standard of development for areas that serve as the main entrances to the Glenvar Community. The proposed GCOD would include properties along Route 11/460 from the Montgomery County line to its intersection with Dow Hollow Road and areas around Exits 132 and 137 off of Interstate 81.

The GCOD could prohibit certain uses such as a truck stop or scrap and salvage services that are not consistent with the community's vision. Development standards for properties located within the GCOD could also be amended to require that parking be located to the side or rear of buildings, freestanding signs be monument style and landscaping and screening to be increased.

### *8.4.1.3 Route 11/460 Design Guidelines*

The existing Route 11/460 Design Guidelines are currently used to determine the merit of Commercial Corridor Matching Grant applications within the Route 11/460 West corridor and for land use applications (special use permits and rezonings) located within the same boundary. The existing Design Guidelines should be amended to incorporate community preferences derived from the visual preference survey such as a varied façade of brick or stone material, architectural details like eaves and porticos and landscaping around buildings.

### *8.4.2 Economic Development Recommendations*

The following incentives and recommendations have been identified to retain viable business and attract compatible, new growth to the Glenvar Community.

#### 8.4.2.1 Commercial Corridor Matching Grant Program

The Commercial Corridor Matching Grant Program encourages improvements above and beyond current building and zoning requirements to business properties for beautification and economic redevelopment of highway entrance corridors in Roanoke County. To improve participation in this program, the boundaries of this program should be expanded to include all properties abutting Route 11/460 West and made applicable to new construction projects. Any changes to the Commercial Corridor Matching Grant Program are subject to approval by the Board of Supervisors.

Other potential program changes that should be considered include:

1. Providing templates for monument sign and landscaping design that are consistent with the rural and historic character of the community;
2. Retaining an architectural firm to assist business owners in designing options for the potential improvements;
3. Creating incentives through the Departments of Economic Development and Community Development for the use of green building and low impact development techniques;
4. Evaluating tax incentives, coordinated through the Department of Economic Development and the Commissioner of the Revenue, to increase program participation;
5. Establishing tiered levels of funding for different project types, for example:
  - Façade renovations would qualify for \$50,000
  - Monument signs would qualify for \$20,000
  - Landscaping would qualify for \$15,000.

#### 8.4.2.2 Virginia Enterprise Zones

The purpose of the Enterprise Zone Program is to encourage new business activity by providing state and local tax relief and grants, local regulatory

flexibility and local infrastructure development. An enterprise zone is a distinct geographical area of a county, city or town that is designated by the Governor for a period of 20 years.

The Enterprise Zone Program offers two state incentives to qualified businesses and zone investors located in a designated enterprise zone:

- *Enterprise Zone Job Creation Grants* - For companies creating at least four net new qualifying jobs with health benefits and paying at least twice the federal minimum wage rate, a job grant amount of up to \$4,000 is available for each job over the four threshold jobs. Companies paying 1.75 times the federal minimum wage rate are eligible for up to \$2,500 per qualifying job over the threshold amount. Businesses must qualify for the grants annually. The company makes an application for the grant in the following calendar year and funds are dispersed by mid-year. Qualifying companies may claim the grants on up to a maximum of 350 jobs per year.
- *Real Property Investment Grants* - Qualified zone investors (entities and individuals) investing in qualifying industrial, commercial or mixed use real property may receive a cash grant. For an investment of \$100,000 or greater for rehabilitation projects, grants are issued for up to 20% of anything spent in excess of the \$100,000 threshold. For an investment of \$500,000 or greater for new construction projects, grants are issued for anything spent in excess of the \$500,000 threshold.

The Virginia Enterprise Zone designation should be considered for the West Main Street corridor to include the Glenvar Village Overlay District and both the Center for Research and Technology and Valley TechPark.

#### 8.4.2.3 Virginia Economic Development Incentive Grant

The Virginia Jobs Investment Program (VJIP) is one of Virginia's most actively used economic

development incentives. The program encourages the expansion of existing Virginia businesses and start-up of new business operations in Virginia by offering customized recruiting and training assistance to companies that are creating new jobs or experiencing technological change. In addition to offering direct funding, VJIP also provides assistance with workforce-related challenges and organizational development workshops.

### 8.4.2.4 Virginia Technology Zone

A Technology Zone can be a valuable tool for the encouragement of new and expanding technology businesses in a locality. The establishment of a Technology Zone allows localities to create special incentives for qualified businesses locating or expanding operations in a zone. These incentives may include a reduction of user and permit fees, local tax incentives, special zoning treatment, exemption from local ordinances or other incentives adopted by ordinance.

Currently, Roanoke County has one Technology Zone located within Roanoke County's Center for Research and Technology. The County should consider expanding the Technology Zone designation to Valley TechPark to attract the types of industrial businesses desired by community residents.

### 8.4.3 Streetscape Recommendations

In addition to the Gateway Corridor and Glenvar Village Overlay District recommendations, streetscape improvements should be considered for the entire West Main Street corridor. The community survey indicated that bicycle lanes, sidewalks, community identification signs and landscaped medians were the streetscape improvements most desired by citizens.

Other design aspects that should be considered for streetscape plans include:

- Crosswalks with pedestrian signals;
- Improved road and pedestrian lighting;
- Underground utilities;

- Street trees;
- Street furniture (benches, trash receptacles, etc.); and
- Light post banners.

As opportunities arise for the installation of streetscapes improvements, the following general recommendations should be considered for the Glenvar Community.

#### 8.4.3.1 Sidewalks

The only sidewalk section designed as part of the Route 11/460 Widening project is in front of Fort Lewis Elementary School, connecting with the City of Salem. However, sidewalks are especially needed on the northern side of West Main Street to connect the Glenvar Library, Richfield Retirement Community, existing residential neighborhoods and future commercial development.

It is recommended that consideration be given to requiring the installation of sidewalks during the rezoning, special use or site plan review process for new development or redevelopment along the Route 11/460 corridor. Additionally, Roanoke County should explore other opportunities to install sidewalks along the corridor such as Transportation Enhancement Grants or inclusion into the County's Capital Improvements Program.

#### 8.4.3.2 Pedestrian Lighting

Pedestrian lighting can create and encourage a pedestrian friendly environment, which is especially beneficial to neighborhood business districts. Pedestrian-scale lights improve walkway illumination for pedestrian traffic and enhance community safety and business exposure. Light poles also provide a space to display community identification banners or hang planter baskets. Typically, this type of lighting is positioned over the sidewalk, rather than the street, at 12 to 15 feet above the sidewalk.

Along with sidewalks, pedestrian-scale lighting should be considered for the extent of the Glenvar

Village Overlay District and as part of any new development in the Glenvar Community. Pedestrian lighting should be designed to reflect the rural and historic character of the Glenvar Community.

#### 8.4.3.3 Landscaping

Roadways with landscaped medians and street trees provide significant aesthetic and environmental benefits for a community. Landscaped medians provide areas or community identification or gateway entrance signs. Street trees provide shade for pedestrians by being planted either between the curb and edge of sidewalk or behind the sidewalk.

Every group during the West Main Street visioning exercise desired a future corridor with increased landscaping and trees. Landscaped medians also ranked highly in the Transportation Improvements section of the Glenvar Community Survey.

With the current fiscal situation, alternative methods of funding and maintenance should be utilized such as citizen-managed landscaping or adopt-a-spot/highways programs or partnerships with local businesses, as discussed in Section 8.4.7, Community Involvement Recommendations. It is recommended that consideration be given to requiring increased landscaping consistent with revised Design Guidelines during the rezoning, special use permit process for new development or redevelopment along entire the Route 11/460 Corridor.

#### 8.4.3.4 Underground Utilities

Three out of four groups envisioned underground or buried utilities during the West Main Street visioning exercise. Overhead utilities are typically located within the right-of-way, conflicting with proposed sidewalks and landscaping. Unfortunately, utilities were moved instead of buried as part of the Route 11/460 Widening Project.

It is recommended that utilities be buried underground along with the installation of sidewalks and pedestrian lighting over time and as funding allows.

### 8.4.4 Transportation Recommendations

#### 8.4.4.1 Bicycle Amenities

The community survey ranked bicycle lanes as the most desired transportation improvement in the Glenvar Community. To achieve the goal of “providing a range of transportation choices,” the County should consider the recommendations of the *Bikeway Plan for the Roanoke Valley Areas Metropolitan Planning Organization* and *Rural Bikeway Plan*. Bicycle amenities should be incorporated, whenever possible, into streetscape modification plans in the Glenvar Planning Area.

Roanoke County should also utilize cost-effective techniques to better accommodate cyclists. Some of these techniques include:

- Install signage, such as “Share the Roadway” signs;
- Striping on the right edge of lanes to provide a paved shoulder for bicyclists; and
- Installation of bicycle racks at community facilities such as schools and the library.



Graphic 8.10 Bicyclist on Shoulder of Route 11/460

#### 8.4.4.2 Access Management

Roanoke County should conduct an access management study on Route 11/460 from Technology Drive to the Montgomery County border to identify problematic or insufficient intersections.

#### 8.4.4.3 Transit Extension

Currently, the closest Valley Metro stop is at Spartan Square in the City of Salem. Roanoke County

should consider expanding public transit service into the Glenvar Community. Extending bus routes along West Main Street (Route 11/460) to Daugherty Road would provide access to job opportunities and an alternative mode of transportation for the residents of Richfield Retirement Community.

Additionally, Roanoke County should consider a Smart Way Bus Stop near the Center for Research and Technology and Exit 132. This would provide Glenvar residents with regular bus access to the New River Valley and residents of the New River Valley with access to jobs in and around the Center for Research and Technology.

### 8.4.5 Residential Development Recommendations

Currently, there is no multi-family development in the Glenvar Community outside of a few duplexes. To attract residents and employers to the community, higher density residential uses should be encouraged near interchanges and business parks. Additionally, the Glenvar Village Overlay District should provide for mixed use – commercial/office and residential development. In order to ensure that this development is consistent with the rural character of the community, standards for townhouse and small-scale multi-family development should be incorporated into the revised Design Guidelines.

### 8.4.6 Outdoor Recreation and Park Recommendations

In order to develop a comprehensive system of public and private parks, trails and open spaces that meet the needs of all age groups within the Glenvar Community, the following recommendations should be considered:

- Implement the recommendations of the *Roanoke County Parks, Recreation and Tourism's Master Plan*;
- Work with the Western Virginia Water Authority and Roanoke County Parks, Recreation and Tourism to explore potential recreation opportunities at Spring Hollow Reservoir and consider updating the *Spring Hollow Master Plan* accordingly;

- Construct the Roanoke River Greenway and extensions from Green Hill Park to the Montgomery County line with connections to residential neighborhoods and community facilities;
- Explore other opportunities for greenway connections to the Glenvar Village Overlay District and Glenvar Schools complex;
- Improve existing river access at Green Hill Park and Wayside Park by constructing access ramps and related facilities for canoes and kayaks;
- Explore opportunities for other river access points on property owned by Roanoke County; and
- Promote the recreation opportunities in the Glenvar Community such as hiking and bird watching in Poor Mountain Natural Area Preserve and Havens Wildlife Management Area, caving at Dixie Caverns and mountain biking on Poor Mountain.



Graphic 8.11 County Owned Property Adjacent to Roanoke River

### 8.4.7 Viewshed Conservation Recommendations

In the Glenvar Community Survey, the majority of residents listed “views of the mountains and Roanoke River” as what they liked most about their community. To protect views of the mountains, critical viewsheds from and within the Glenvar Community should be identified and protected with appropriate land use tools. Such land use tools could include height restrictions in an overlay district or conservation easements on mountain slopes. The Roanoke River Conservation Overlay District should be also reviewed and amended to ensure adequate protection of the resource.

#### 8.4.8 Community Involvement Recommendations

Community involvement has been an essential component of the planning process to date, but it is also important to the Glenvar Community Plan implementation. The Glenvar Focus Group should continue to function as a core group of community representatives and spokespersons and stay involved in plan implementation and land use decisions. An example would be involvement in the review and changes to the Design Guidelines to ensure that the community's vision is represented. Focus Group members should also act as a liaison, updating their respective constituents on implementation progress and any land use actions or development in the Glenvar Community.

##### 8.4.8.1 Public/Private Partnerships

With fiscal restrictions, Roanoke County should explore public/private partnerships to implement some of the Glenvar Community Plan's strategies such as the installation of community identification signage, Adopt-a-Highway/Spot Programs and the Comprehensive Roadside Management program.

##### 8.4.8.2 Adopt-a-Highway/Spot Programs

The Adopt-a-Highway Program provides volunteer groups and individuals an opportunity to improve the aesthetics in their community. Volunteers agree to a two-year commitment of "adopting" a two-mile or more stretch of roadway and picking up trash at least four times a year. Similarly, the Adopt-a-Spot Program encourages citizen participation in beautifying specific areas within community such as medians, parks, vacant lots that are not covered by the Adopt-a-Highway Program.

##### 8.4.8.2 Comprehensive Roadside Management Program

The Comprehensive Roadside Management Program, administered by VDOT, enables private businesses, civic and community organizations, individuals and local governments an opportunity to

improve the appearance and safety of state-maintained right-of-way.

#### 8.5 Implementation Strategies Table

A table of the implementation strategies for the Glenvar Community Plan is provided in Appendix B.

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