

South County Sector Plan

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Section 1: Background Report

Comprehensive Planning Process Overview

The South County Sector Plan is a significant component of the Metropolitan Planning Commission's comprehensive plan. Sector plans are interrelated to several laws, processes and plans, which are described below.

The Metropolitan Planning Commission (MPC) is directed to create a comprehensive plan to provide recommendations for:

- public ways, including roads, and other transportation systems,
- public grounds, such as parks and other public property,
- the general location and extent of public utilities, including sanitation and water,
- the general character, location and extent of community centers, town sites, and housing development,
- the location and extent of forests, agricultural areas, and open space,
- uses of land for trade, industry, habitation, recreation, agriculture, forestry, soil and water conservation, and other purposes, and
- the appropriate zoning relating to the land use plan, outlining permitted uses and the intensity of those uses, such as height, bulk, and locations of buildings on their parcels.

The General Plan (The Knoxville-Knox County General Plan 2033) is the official 30-year comprehensive plan for Knoxville and Knox County that outlines a long-range vision and policy framework for physical and economic development. The plan includes the Growth Policy Plan, twelve sector plans, corridor and small area plans, and system-wide plans.

The Growth Plan (*The Growth Plan for Knoxville, Knox* County, and Farragut, Tennessee) was mandated under the Tennessee Growth Policy Act (Public Chapter 1101), and requires that city and county governments prepare a 20-year



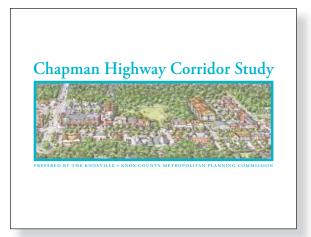
The Knoxville-Knox County Hillside and Ridgetop Protection Plan was recently adopted helping protect scenic views, water quality and forested hillsides and ridgetops.

Growth Policy Plan for each county. At a minimum, a growth plan must identify three classifications of land:

- 'Rural Areas' are to include land to be preserved for farming, recreation, and other non-urban uses.
- 'Urban Growth Boundaries'"(UGB) must be drawn for all cities and towns. The land within the UGB must be reasonably compact, but adequate to accommodate all of the city's expected growth for the next 20 years.
- 'Planned Growth Areas' (PGA) must be reasonably compact, but large enough to accommodate growth expected to occur in unincorporated areas over the next 20 years.

Sector Plans provide a detailed analysis of land use, community facilities, and transportation for twelve geographical divisions in Knox County. The focus is to take goals contained in the General Plan and draft a sector plan that is to guide land use and development over a 15-year period. Also included is a five-year plan with recommended capital improvements and other implementation programs.

Corridor Plans primarily cover land use and transportation recommendations along existing transportation corridors. These plans are more detailed than sector plans because they have a smaller geographical area. Recommendations often deal with economic development, aesthetics, and public safety.



The Chapman Highway Corridor Study included recommendations for economic development, aesthetics, and public safety.

Small Area Plans are neighborhood-based and address more detailed concerns like revitalization or special environmental considerations. These plans are developed as a result of some immediate development pressure on the area and are usually requested by the elected bodies.

System-wide Plans cover specific systems such as greenways and parks or hillside and ridgetop protection. All plans are developed through citizen participation,



The Knoxville-Knox County Parks, Recreation and Greenways Plan was adopted in 2010 and provides proposals for future park and greenway facilities connecting neighborhoods and schools across the city and county.

including workshops, surveys, and public meetings. Plans are adopted by the MPC, the Knoxville City Council and Knox County Commission and serve as a basis for zoning and land use decisions.

The South County Sector is 65 square miles and bounded by the French Broad River to the north, Little River to the west, and Sevier and Blount Counties to the east and southeast. The 12 MPC planning sectors form the geographic basis for land use planning in Knox County.



Community Population Profile

From 2000 to 2009, the sector population grew by 9.4 percent, which is less population growth than the county average of 14 percent. The greatest percent change in growth among age groups was the population between 54 and 65 years (19.6 percent). Another significant increase occurred among those aged 18 to 34 years (about 800 persons, representing a 19.4 percent increase), reversing a trend from 1990 to 2000. Another noteworthy point is the increased population growth for groups those over 54 years of age (see Table 1). These groups include the "baby boom" generation; it is anticipated that this upward trend will continue, eventually having implications for senior and health care facilities. Otherwise, losses or gains in the age group populations were modest. Also, the population of those 5 to 17 years (the student population) decreased.

Table 1. South County Population by Age and Sex							
	1990	2000	2005-09*	1990-2000 % Change	2000-2009 % Change		
Under 5 years	1,097	1,030	1,045	-6.1%	1.5%		
5-17 years	2,782	2,913	2,895	4.7%	-0.6%		
18-34 years	4,420	4,086	4,879	-7.6%	19.4%		
35-54 years	5,002	6,064	6,261	21.2%	3.2%		
54-64 years	2,078	2,160	2,584	3.9%	19.6%		
65+ years	2,355	2,987	3,377	26.8%	13.1%		
TOTAL	17,734	19,240	21,041	8.5%	9.4%		
Male	8,782	9,377	10,533	6.8%	12.3%		
Female	8,952	9,863	10,508	10.2%	6.5%		

* The data listed in this column are from the U.S. Census Bureau's American Community Survey. 2005 to 2009. That survey is based on a sample of the population and the figures are composed from an average of all the sampled data for the five-year period. It is likely that the population is slightly higher; however, the 2010 sub-county census data are not available as of March 2011.

Table 2. Knox County Population							
	1990	% Share	2000	% Share	2005-09	% Share	
South County	17,734	5.3%	19,240	5.0%	22,825	5.2%	
Knox County	335,749	100.0%	382,032	100.0%	435,725	100.0%	
Knoxville	169,761	50.6%	173,890	45.5%	185,100	42.5%	
County balance	165,988	49.4%	208,142	54.5%	250,625	57.5%	

The size of the South County population is small when compared to Knox County as a whole and other county sectors. Appendix B contains various demographic characteristics. Those tables show that the population's race/ethnicity is predominantly white. Poverty indices show that 2,275 people (about 11 percent of the sector population in comparison to almost 15 percent county-wide) live below the poverty level. About 75 percent of occupied housing units are owner-occupied.

Table 3. Knox County Sectors Population							
	1990	% Share*	2000	% Share*	2009**	% Share*	
East	12,357	7.2%	13,313	6.2%	16,028	6.0%	
North	32,391	19.0%	42,557	19.7%	52,261	19.6%	
Northeast	18,993	11.1%	21,816	10.1%	27,751	10.4%	
Northwest	49,422	28.9%	62,864	29.1%	77,816	29.2%	
South	17,759	10.4%	19,236	8.9%	22,825	8.6%	
Southwest	39,990	23.4%	56,419	26.1%	70,260	26.3%	
Sectors Total	170,912	100.0%	216,205	100.0%	266,941	100.0%	

^{*} Share of total Knox County Sectors

^{**} Note: These 2009 population estimates are different from those numbers in Table 1 because they are estimated from housing development and demolitions of the 2000 to 2009 period, factoring in average household size as the multiplier to make the estimate. A more accurate measure will be available with publication of the 2010 Census.

Public Facilities and Infrastructure

Schools

Total enrollment numbers for elementary, middle, and high school reveal a decline from 2005 to 2010. South Doyle Middle showed the greatest decline, while New Hopewell Elementary was the only school to register growth in student enrollment. While there is modest available capacity, the Knox County School Board staff foresees that all the schools will be operational during the longer range planning horizon, and is not planning new schools presently in this sector.

The Knox County School Board makes decisions regarding school construction and maintenance. Currently, the capital improvement program for almost all Knox County's schools revolves around maintenance and upgrading of existing facilities, such as a school's electrical, and heating and cooling systems.

Table 4. South County Sector School Enrollment							
School Name	2005	2006	2007	2008	2009	2010	
Bonny Kate Elementary	406	410	399	428	410	383	
Gap Creek Elementary	124	109	112	113	130	121	
Mooreland Heights Elementary	280	252	261	297	305	276	
Mount Olive Elementary	329	286	278	301	299	290	
New Hopewell Elementary	275	301	273	280	289	284	
South Doyle Middle	1,231	1,195	987	963	975	978	
South Doyle High	1,455	1,449	1,309	1,247	1,215	1,162	
TOTAL	4,100	4,002	3,619	3,629	3,623	3,494	



The Howard Pinkston Branch Library

Libraries

One library is located in the South County Sector, the Howard Pinkston Branch located on Martin Mill Pike, next to Bonny Kate Elementary. However, residents of South Knox County also make use of branches in other sectors, including the South Knoxville Branch on Chapman Highway, the new Burlington branch on Asheville Highway, as well as the main location Lawson McGee downtown.

Parks and Greenways

With approximately 21,000 residents, this sector is among the least populated. Its beautiful rivers, creeks, ridges, and mountains offer a setting for conservation and limited recreation. A potential concern may be an immediate need for a community park, should the lease at Bower Field be terminated. The other major shortcoming in this sector is the need for neighborhood parks, especially as more subdivisions are created in the Stock Creek valley. In the past two years, two additional natural areas were added in this sector. These are the TWRA Fort Loudoun Wildlife Management Area overlooking Fort Loudoun Lake and an extension of Seven Islands Wildlife Refuge next to the French Broad River.



Bower Field facilities fill a recreational need for South Knox County. However, this park is not county-owned land and should this lease be terminated could create a gap in recreational opportunities for residents in this area.

The National Recreation and Park Association (NRPA) recommend that communities meet a minimum standard of 6.25 acres of close-to-home parks (neighborhood and community parks) for every 1,000 people. In comparing

that standard to the South County's 2009 population (21,041), the sector is deficient by 60 acres in such parks. Neighborhood parks, which generally would have a playground and informal field space, should be within one-half mile of suburban residents. There are no true neighborhood parks in South Knox County. School playgrounds and the tiny Scottish Pike Park are the only neighborhood-serving facilities. (Please see Section 2, The Plan, South County Sector: Park and Greenway Plan with Existing Community Facilities map.)

Table 5. South County Sector Park Acreage					
Park Classification	Acreage				
Neighborhood	4.96				
Community	71.51				
District/Regional	154.45				
Sports Complex	0				
Open Space/Natural Area	1,159.4				
Special Use Park (including Middle Schools)	0				
Total Acreage	1,390.32				
Total Acreage of Close-to-Home-Parks	76.47				

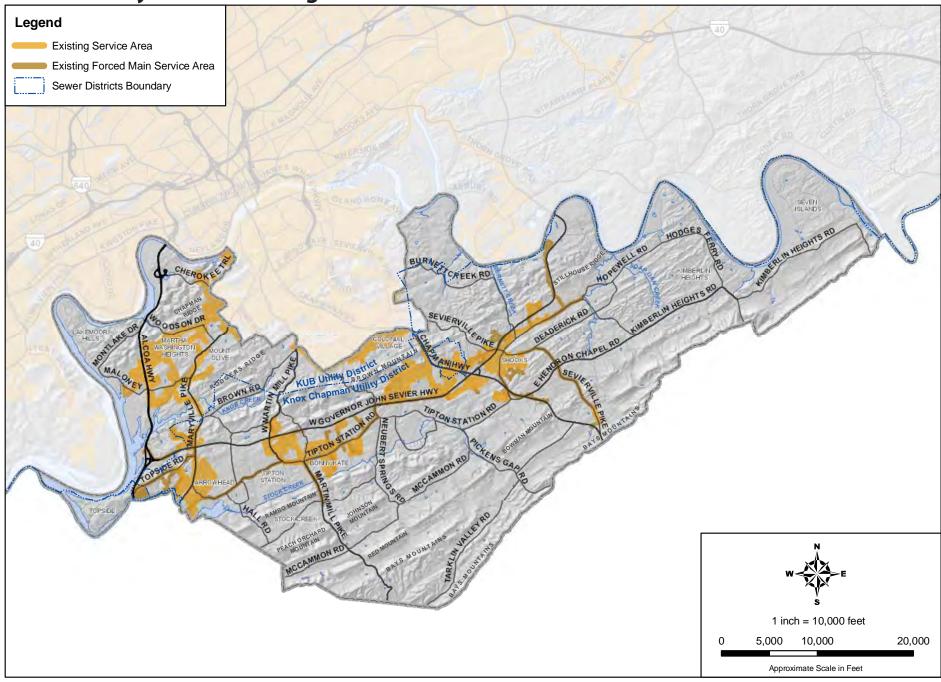
Public Safety

Police protection is primarily provided by the Knox County Sheriff's Department, except for the areas of the sector located within the City of Knoxville which are covered by the Knoxville Police. Fire protection service is largely provided by Rural Metro, with the exception of a small portion of the South County Sector, within the city limits, which is provided by Knoxville's Fire Department.

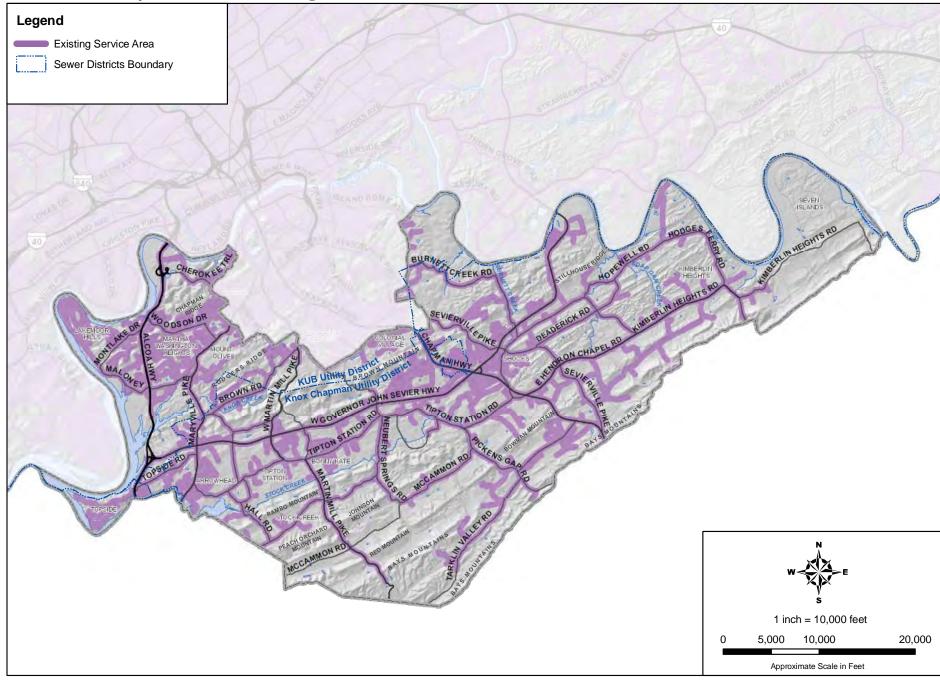
Public Utilities

Both Knox-Chapman Utility District and Knoxville Utility Board (KUB) provide water and wastewater services within the sector. Public wastewater services are also confined to limited corridors. The sewer mains (both gravity and forced mains for uphill service) are one of the most significant determinants in urban and suburban growth, are depicted in the South County Sector: Existing Wastewater Service map on the following page.

South County Sector: Existing Wastewater Service



South County Sector: Existing Water Service



Knox Chapman provides service in the areas that have experienced the most development in the past decade, including the locations near John Sevier Highway, Tipton Station Road, and Maryville Pike. Knox Chapman's wastewater is pumped across the Little River and treated in the Maryville area. KUB has been the provider near Alcoa Highway and in the recent Cherokee Bluff area developments.

Water mains (including those that flow with gravity and those that use pumps to move water uphill) are depicted in Existing Water Service map. In looking at that map, it is apparent that public water service is primarily provided in areas that are experiencing suburban growth. Many parts of the Rural Area (see the South County Sector: Growth Policy Plan map) are served by private wells.

Natural gas is provided by KUB; however, natural gas is not widely available. Corridors with gas service include Chapman Highway, Topside Road, Tipton Station Road, parts of John Sevier Highway and parts of Kimberlin Heights Road.

Transportation

The Major Road Plan for the City of Knoxville and Knox County, Tennessee was adopted by MPC, City Council and County Commission in 2004 and updated in 2011. It views each road as part of the overall transportation system and identifies its functional classification. It assigns right-of-way requirements based on the purpose and function of the road, future road improvements, future pedestrian improvements, traffic counts, anticipated development, and policies and goals contained in plans (including the sector plan, long range transportation plans, and the Knoxville-Knox County General Plan). The Planned Roadway Improvements map was developed using data from the Major Road Plan.

Traffic Counts and Congested Corridors

The Road Class, Volume and Conflicts map identifies traffic volumes on the roadway network, as well as congested corridors in the sector. There are four identified congested corridors in the South County

Sector: Alcoa Highway, Governor John Sevier Highway, Chapman Highway, and Maryville Pike. When looking at traffic volumes, a level of service (LOS) of the roadway can be assessed based on planning capacities.

The Highway Capacity Manual defines LOS as a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Roads or segments of roads are assigned an LOS with designations ranging from A to F; an LOS "A" represents the best operating conditions and LOS "F" the worst. Each level of service represents a range of operating conditions and the driver's perception to those conditions.

Alcoa Highway is a four-lane limited access expressway that runs north/south between the Knox/Blount County line and Interstate 40. The traffic volumes on Alcoa Highway range from 46,000 to 55,000 vehicles per day (v.p.d.), or a LOS ranging from D to E. The intersection of Governor John Sevier Highway creates increased congestion, as does the five-lane section through the commercial corridor.

Governor John Sevier Highway is a two and three-lane major arterial that connects Asheville Highway to Alcoa Highway. The traffic volumes on Governor John Sevier Highway range from 11,000 to 15,000 v.p.d., or a LOS D.



Governor John Sevier Highway is a State Scenic Highway.

Chapman Highway is a four-lane major arterial that runs from the Henley Street Bridge to the Knox/Sevier County line. Chapman Highway is part of the Maynardville Highway, Broadway, and Henley Street road that runs all the way to the Knox/Union county line. The traffic volumes on Chapman Highway range from 28,000 to 32,000 v.p.d., or a LOS ranging from D to F. The primary source of congestion on Chapman Highway is the high number of intersections and driveway cuts. In addition to operational congestion, the Tennessee Department of Transportation (TDOT) has evaluated Chapman Highway from the Henley Street Bridge into Sevier County, and identified many safety improvements needed along the corridor, such as changing those intersections with sight distance problems into cul-de-sacs, installation of dedicated left-turn lanes, and installing of shoulders.

Maryville Pike is a two-lane minor arterial which connects Chapman Highway to the Knox/Blount County line. The traffic volumes on Maryville Pike range from 5,000 to 6,000 vehicles per day (v.p.d.), or a LOS of B. The congestion on Maryville Pike is related to the geometric design of the road with very tight vertical and horizontal curves, narrow pavement widths and no shoulders, lack of turn lanes, and single lane railroad underpasses.

Sidewalks, Bike Lanes and Transit

There are not many sidewalks in the sector. This shortcoming is the result of much of the sector being developed during the "automobile age," the era after World War II, when there was little emphasis on sidewalk construction.

Additionally there are no general requirements to provide sidewalks with new development. The Planning Commission may require sidewalks with new development, and often does, especially within the Parental Responsibility Zone (PRZ) around schools. The PRZ is the area around schools where parents are responsible for providing transportation to and from school as these zones are not serviced by school buses. (The PRZ for elementary schools is 1 mile from the school, via the road network, and 1.5 miles for middle and high schools.) As a result, these areas should be targeted for sidewalk creation or improvement.



While the South County Sector is a popular biking destination, there are no bike lanes and only two paved greenways.

There are currently no bike lanes in the sector, and bicyclists are limited to the shoulders of roads. Signage alerting drivers of cyclists and the addition of bike lanes should be considered in future planning. A portion of the Will Skelton Greenway and a small greenway near the Howard Pinkston Library are the sector's only greenway trails.

The only bus routes are along Chapman Highway to the intersection with John Sevier Highway and along a small portion of Alcoa Highway to UT Hospital/ Cherokee Trail area. Please see in Section 2, The Plan, the South County Sector: Other Transportation Modes and Parental Responsibility Zones map.

Scenic Route Designation

Alcoa Highway and Governor John Sevier Highway are both designated as scenic routes. Governor John Sevier Highway is a designated Scenic Highway and Alcoa Highway is a designated Tennessee Scenic Parkway. See the Planned Roadway Improvements map.

Scenic Highways

Under state law, several roads in Knox County are designated Scenic Highways, like portions of Governor John Sevier Highway. The provisions of this 1971 act prohibit junkyards and billboards within 2,000 feet of the designated highway. With few exceptions, the act also limits building height to 35 feet within 1,000 feet

of a designated route. If a local government has adopted or adopts a more stringent standard, such as design standards for signs, buildings and landscaping, the local provision shall guide scenic highway protection.

Tennessee Parkway

There is also a provision for Tennessee Parkways, which has the same restriction on junkyards and trash dumping as the Scenic Highway (see above). However, billboards are not regulated in such areas that are comprehensively zoned. The Parkway designation, which does affect building height, is made by the head of TDOT. A change to the zoning ordinance creating local standards protecting or enhancing scenic qualities is an alternative that could improve scenic quality.

The Knoxville-Knox County Forest Protection and Tree Planting Plan (adopted 2007) calls for conservation of the rural and scenic attributes of many roads in this sector. The two strategies outlined in the plan are:

- Rural Residential Corridors where native trees should be conserved and planted, and
- Local Scenic Conservation Corridors where views of the agricultural land, the tree-lined fence rows and forests are worthy of protection.

Tipton Station Road, McCammon Road, Tarkin Valley Road, Martin Mill Pike, Neubert Springs Road, Pickens Gap Road, and Hodges Ferry Road are included in these conservation categories.

Implications from the **Chapman Highway Corridor Study**

In 2006, MPC completed a study of the corridor, outlining short-term and long-term transportation improvements and concepts for more pedestrian friendly development. The document was adopted as a plan. The importance of the corridor warrants the integration of the study's recommendations into this sector plan update. The study divides Chapman Highway into segments; with the following two areas being the most pertinent to this sector.

Segment 5:

W. Dick Ford Lane to Governor John Sevier Highway Although zoned commercial, development should be limited due to topography and access issues. Chapman highway passes through the gap in Brown Mountain and further development should be discouraged in order to avoid massive hillside cuts.

Seament 6:

Governor John Sevier Highway to Knox County Line

Suggested road improvements include widening shoulders, adding a center landscaped median, appropriate turn lanes, and intersection improvements for this segment of the highway. The public has expressed interest in a park and ride located at the intersection of Gov. John Sevier and Chapman Highways. Strips of commercial development are discouraged, while smaller intersections like Kimberlin Heights/Tipton Station/Hendrons Chapel area are encouraged for smaller-scale commercial. An activity center of smaller-scale commercial, civic type uses, park and ride, and possible trail head for the Smoky Mountain Rail Trail would be ideal for the developing neighborhoods at Simpson Road/Sevierville Pike.

In addition to having proposals for segments of land use along the highway, the study has recommendations for urban design, landscaping, and transportation to create a more contiguous corridor.

- Urban Design: Maintaining consistent setbacks of buildings and substituting tall commercial signs to monument signs will make the corridor more attractive to lower speeds and pedestrian scales. Shared parking facilities and driveways should be encouraged. Compatible housing types that accommodate a wide demographic range will provide customers for businesses located on the corridor and help create a harmonious streetscape.
- Landscaping and Lighting: Native plants and slopes should be conserved and integrated into the landscape, and invasive species should be eradicated. The amount of impervious surfaces should be limited, and landscaping should be increased. Each new development should have trees and landscaped yards for shade and visual relief. Surface parking lots should also be landscaped.
- **Transportation:** The incorporation of all modes of transportation is necessary, minimizing interruption of the sidewalk network. Sidewalks and greenways should be developed to increase connectivity and extensions into adjacent neighborhoods. Bus stops should be in areas that make users feel comfortable, with bus pull-off areas.



The terrain is quite varied, with good farm soils along the French Broad River giving way to the rugged slopes of Bays Mountain.

Natural Resources and Environmental Challenges

The boundaries of the South County Sector mostly follow natural features. Watercourses define the northern portions of the sector, with the French Broad River to the northeast, and the Tennessee and Little Rivers to the southeast. The ridge system of Bays Mountain splits the Knox County line with Blount and Sevier Counties to the south.

Geology, Soils and Vegetation

Like the rest of the Appalachian Ridge and Valley Province, the topography of the South County Sector was shaped by millions of years of tectonic uplift and subsidence. From the French Broad River to Bays

Mountain, this area is characterized by a high occurrence of Tennessee marble, though actually considered a limestone because of its sedimentary formation. Tennessee marble prompted the proliferation of quarrying operations in South County from the late 1800s until the 1930s. The occurrence of limestone and other highly erodible rock types has lead to the weathered mountain and ridge formations comprising the landscape of the South County sector today. The dissolution of limestone layers is common in this landscape, characterized by geologists as karst terrain. This type of geology is noted by the presence of sinkholes and caves. Sinkholes provide challenges for development and water quality.

The soils of the South County sector are a by-product of the area's geology, climate, and vegetation. The USDA's Natural Resources Conservation Service updated the soil survey for Knox County in 2006 for the first time since 1955. Included in the survey is soil slippage potential, a measure of susceptibility of soil failure when vegetation is removed and the soil is at or near saturation during precipitation events. Slip potential is an important consideration when siting roads, buildings and forestry operations. High slip potential soils, which are characterized as unstable, are dominate when the slope of the land reaches approximately 20 percent. These soil types are prevalent on many hillside and ridge features.

Knox County is known for the forested hillsides that surround the community. Forested lands are infiltration hotspots for heavy rainfall events, protecting local waterways from sedimentation and reducing the demand on stormwater infrastructure. Table 6 show the relationship between steepness of slope and the existence of forested land in the South County sector. Forested lands significantly increase to 61 percent of the land on slopes 15 to 25 percent. While countywide approximately 60 percent of the remaining forested land is found on slopes greater than 15 percent, in this sector, 71 percent of the remaining forested land is found on slopes greater than 15 percent. Though not all land in South County is steeply sloped, 50 percent of the land in South County is relatively level and only 30 percent of the level land area is forested. See South County Sector: Natural Resources and Environmental Constraints map.

Table 6. South County Sector Slope Characteristics						
Percent of Slope	Total Acreage	Percent of Total Land Area	Percent Forested			
0 - 15 %	20,717	49.7 %	31.6 %			
15 - 25 %	8,830	21.2 %	61.0 %			
25 - 40 %	7,314	17.5 %	82.3 %			
40 - 50 %	2,705	6.5 %	90.4 %			
50 % and greater	2,152	5.2 %	92.7 %			

The vegetation in South County is characterized by forested hillsides, pasture row crops in the more level land and floodplain areas, where prime farmland soils are dominant.

Agricultural Soils and the Greenbelt Program

More than half of the sector's land use is composed of agricultural, forest and vacant land. The prime and locally important farmland soils are located along the bends of the French Broad River, along streams and valleys in the south portions of the sector (see the map on the opposite page). The Greenbelt Program applies to parcels where the property owner has elected to limit the use of land to agriculture or forest production practices. By doing so, a land owner's property tax is based on the value as farm or forest land, not on a market value for residential or commercial purposes. The Greenbelt program does



The scenic qualities of the French Broad River make it a popular destination for canoeing and kayaking in Knox County.

not guarantee permanent farmland protection; owners can opt out and redevelop after paying rollback taxes (see Appendix C). In the South County sector, over 23 percent of all the land in the sector is protected under the Greenbelt Program

Water Resources

There are ten sub-watersheds intersecting the South County sector, these include Burnett, Cement Mill, Gap, Goose, Hinds, Holston and French Broad, Knob, Stock, Tennessee River, and Toll Creek. The French Board River, above the confluence with Holston River, is recognized as a High Quality Water system, where endangered species occur. These sub-watersheds are part of the larger watersheds of the Upper Tennessee and the Lower French Broad. The health of the sub-watersheds and their respective drainage areas vary across the sector. Leaking septic systems, poor development practices, and agricultural activities are the primary contributors to poor water quality found in approximately 27 miles of streams.

The largest sub-watershed in the South County sector is Stock Creek (see South County Sector: Watershed and Impaired Streams map). The Stock Creek Task Force

was established in 2001 to address watershed issues and improve the overall health the creek, because land use activities are taking a toll on the resource. Federal, state and local stream monitoring indicates water quality has declined. According to the 2010 Tennessee Department of Environment & Conservation's 303(d) list describing water quality, four drainage areas of Stock Creek were listed as impaired due to sedimentation, where the majority of new development activities have occurred since 2000.

The pathogen E. coli is often found in several settings: in rural areas with inadequate septic systems or with large concentrations of livestock and inadequate buffers on streams, or in urban areas where wastewater collection systems have failures. The Roddy, Grandview, High Bluff, and Gun Hollow branches are all contaminated with E. coli, as are Stock Creek and Goose Creek, and as such all are deemed unsafe for fishing and swimming. The water quality of these streams is influenced by agricultural runoff and rural residential uses, relying on septic systems.

Historic land uses play a role in contamination of water bodies in the South County Sector as well. Although the production of Polychlorinated Biphenyls (PCBs) were



The French Broad River

banned in 1979, PCBs are found in Goose Creek, Little River and Fort Loudoun Reservoir all are considered highly impaired by pollution. PCB occurrence is related to legacy sediments leaching into the water from historic land uses which included poorly maintained hazardous waste sites and illegal or improper dumping of PCB wastes. Health warnings have been issued to limit fish consumption from Fort Loudoun Reservoir because of PCB contamination, particularly for channel catfish and largemouth bass. Elevated levels of mercury are also present in fish in the upper portion of the Fort Loudoun Reservoir, which is also largely attributed to contaminated sediment. Raw drinking water sources for residents of South County include the Fort Loudoun Reservoir, French Broad River, and private groundwater wells.

Even though TVA controls flooding with the Douglas and Fort Loudoun dams, there are several low lying floodplains located along the French Broad River. Additionally, Stock Creek, Hines Creek, and their tributaries are Federal Emergency Management Agency (FEMA) designated flood areas.

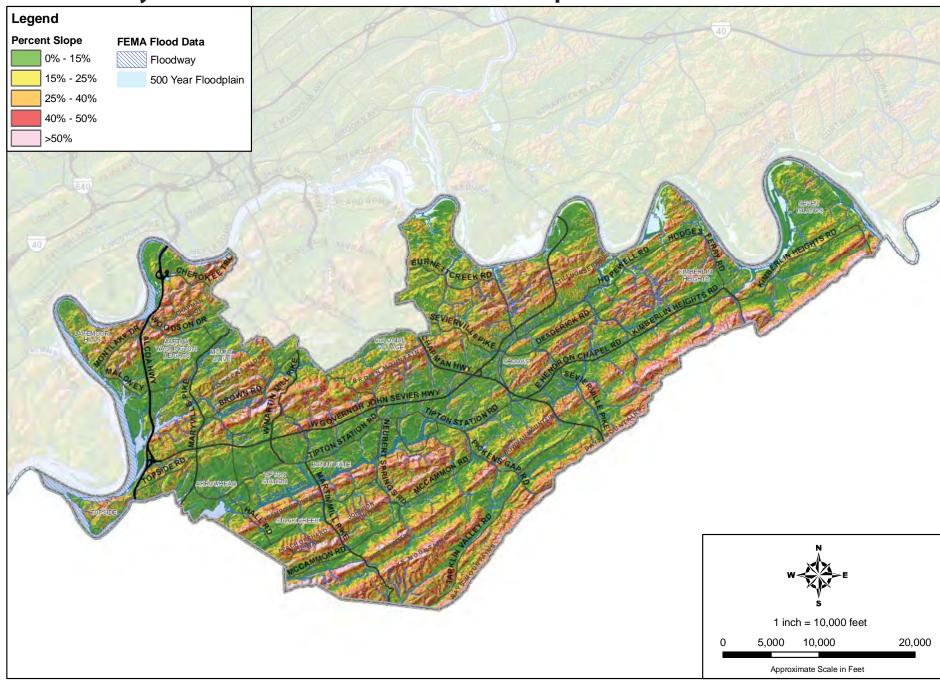
The French Broad River

The Tennessee Water Quality Control Board lists the Lower-French Broad River from the confluence with the Holston River to the Douglas Dam as an Exceptional Tennessee Water (ETW). The basis for this inclusion is the presence of federally endangered Pink Mucket, federal threatened Snail Darter, state endangered Lake Sturgeon and state threatened Blue Sucker. The French Broad River Corridor Study was completed in 2003, and provides an overview of the existing conditions of the area surrounding the French Broad River on both sides of the river in the South and East County sectors. The study describes in detail the unique characteristics of this corridor as scenic, environmental and culturally significant resource for Knox County. The most recent update of the East Knox County sector plan in 2010 contained a proposal for a French Broad River Conservation Corridor. The proposal has been discussed during the South County Sector plan public meetings well and is presented in Appendix D.

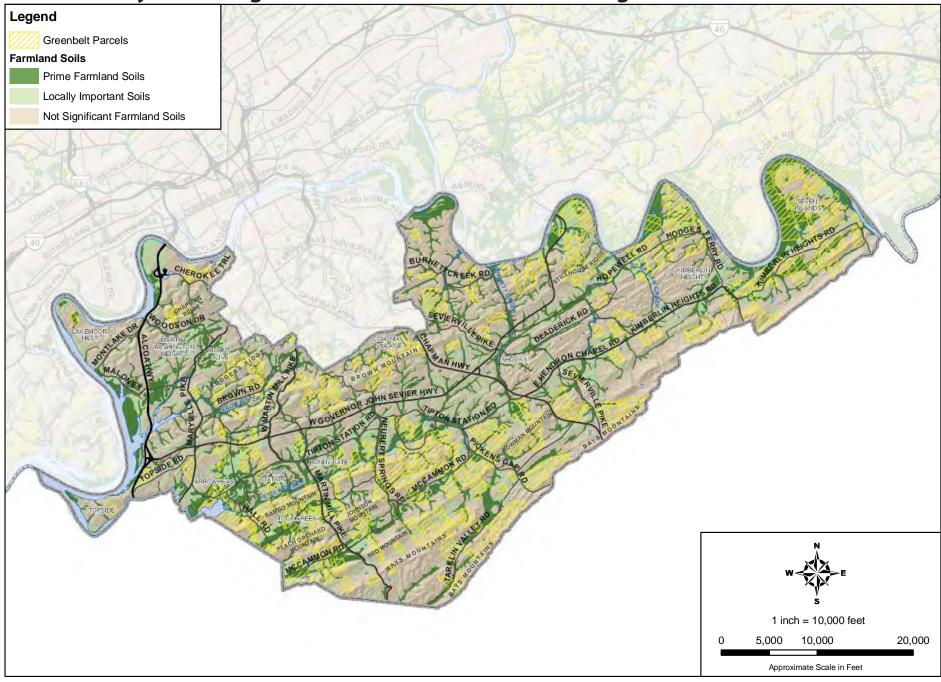
Air Quality

Though not only affecting the South County Sector, it is important to note that Knox County remains in a "non-attainment" status for the minimum air quality standards for ground level ozone and particular matter as prescribed by the Clean Air Act. The poor air quality experienced in Knox County is related to our climate and topography, as well as human-caused emissions. Coal-fired power plants and combustion engines are the primary human sources. Transportation alternatives can significantly increase air quality. According the recently released American Community Survey, it is estimated that approximately 1,900 persons in the South County sector ride the bus, carpool, bicycle, walk, or worked from home reducing their individual impact on air quality.

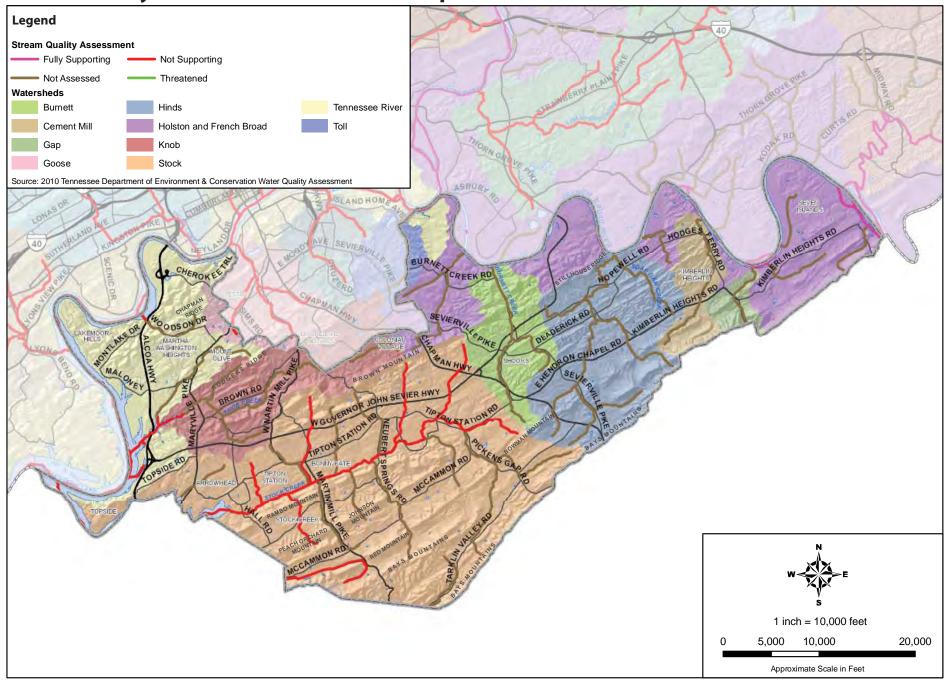
South County Sector: Natural Resources and Development Constraints



South County Sector: Agricultural Soils and Greenbelt Program Parcels



South County Sector: Watersheds and Impaired Streams





More than half of the sector's land is used for agricultural or rural residential purposes.

Existing Land Use and Development Trends

Although South County is experiencing steady suburban residential growth, over half (57 percent) of the existing land use is still primarily composed of agriculture, forest and vacant land (see the South Knox County: Existing Land Use map and Table 7. While another 16 percent is used for Rural Residential (houses on lots of two to ten acres) purposes.

Single family residential uses are the becoming more extensive, accounting for 10 percent of the sector's land use. Since 2000 there have been 113 new residential subdivisions (see also the Residential Development Trends section).

Public and quasi-public land now represents over 1,500 acres (or 3.6 percent), including such uses as parks and refuges, the university's farmland, and the UT Medical Center. Commercial land, which includes retail and wholesale uses, comprises less than one percent of the sector's land use, and is found primarily along Chapman Highway.

Table 7. South County Sector Land Use Acreage, 2008					
Land Use Categories	Acreage	% Share			
Agriculture/Forestry/Vacant Land	23,841	57.16%			
Commercial	288	0.69%			
Industrial (Manufacturing)	81	0.19%			
Multifamily Residential	316	0.76%			
Office	108	0.26%			
Private Recreation	12	0.03%			
Public Parks	960	2.30%			
Public/Quasi Public Land	1,512	3.62%			
Right of Way/Open Space	2,049	4.91%			
Rural Residential	6,621	15.87%			
Single Family Residential	4,260	10.21%			
Transportation/Communications/Utilities	34	0.08%			
Under Construction/Other Uses	44	0.10%			
Water	1,582	3.79%			
Wholesale	1	0.002%			
TOTAL	41,718.3	100.0%			

Residential Development Trends

Residential development locations (from the past decade) are depicted on the South County Sector: Residential and Non-Residential Development Activity, 2000-2010 map. These include attached and detached houses and multifamily structures. Much of the residential development is widely distributed across the sector; however, the clusters of new units indicate larger subdivision development along John Sevier Highway, Tipton Station Road, Topside Road, Maryville Pike and Highland View Road.

Residential Subdivision Activity

From 2000 to 2009, South County gained 1,103 residential lots, distributed among 113 new subdivisions and 1,257 acres. Still, the sector had only five percent of all permits for residential lots of all county sectors during this time.

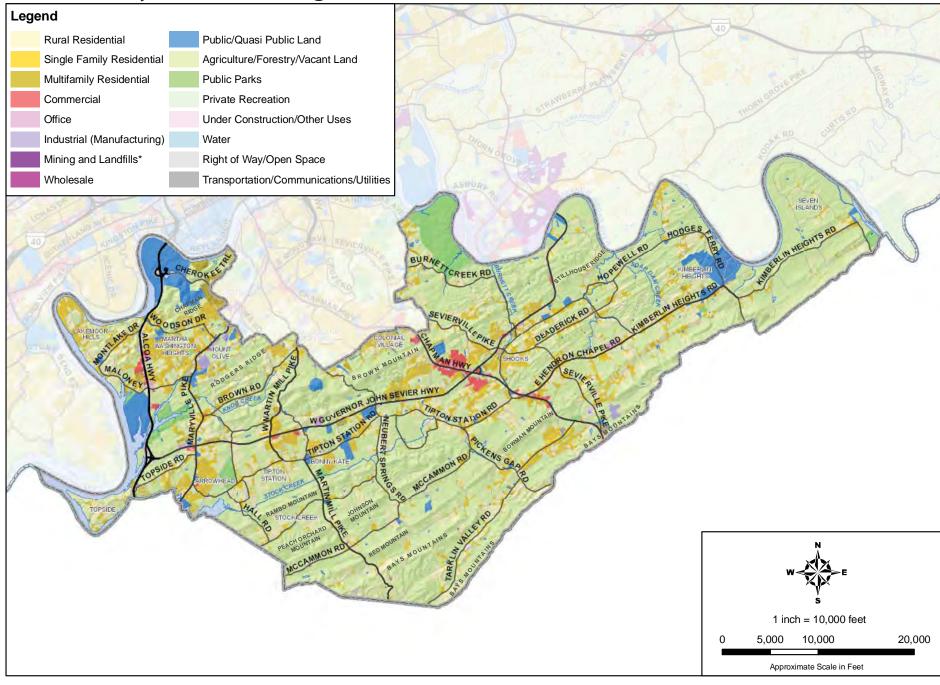
Table 8. Residential Subdivision Permits, 2000 – 2009								
Subdivisions	South County Sector	All County Sectors	% Share					
Acreage	1,257.7	16,719.3	7.5					
Number	113	1,103	10.2					
Lots Created	1,103	22,069	5.0					

Residential Building Permits

Although the overall number of housing units in South Knox County is relatively low in relation to other sectors, steady suburban growth becomes apparent when looking at Table 9. The total number of housing units in South County increased markedly, rising by almost 1,600 units in nine years. Increases in the development of all types of units were significant. Detached dwellings comprised the largest share of residential types with 75 percent of the total housing units.

The proportion of expansion of attached and multi-dwelling units (for example, "condos," townhouses, and apartments) rose to almost 15 percent of all units. Much of this development is student-oriented housing off Cherokee Trail and Edington Road.

South County Sector: Existing Land Use



South County Sector: Residential & Non-Residential Development Activity, 2000-July 2012

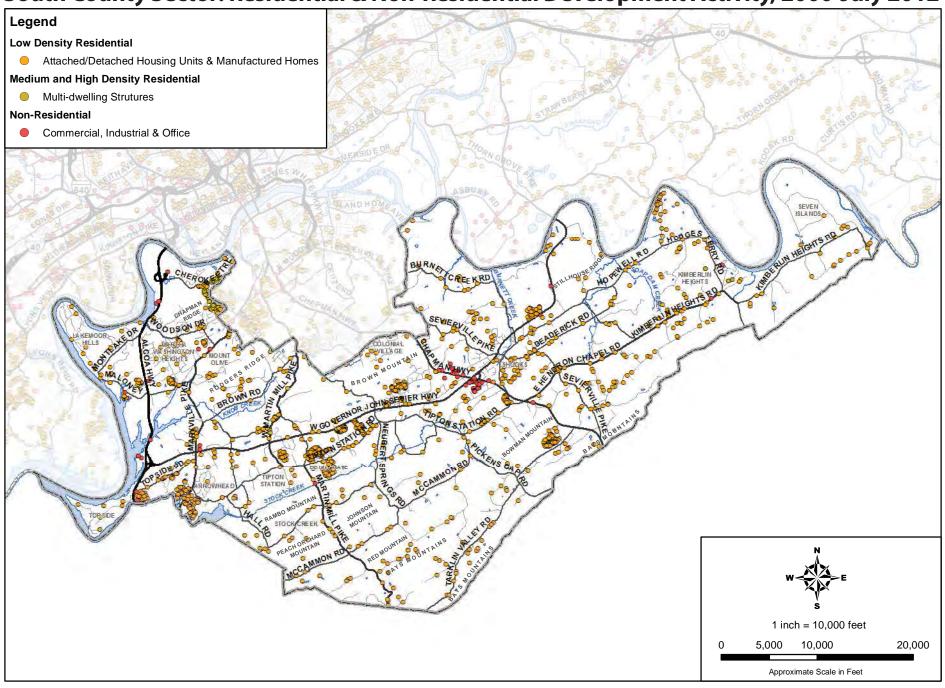


Table 9. South County Sector Housing Units								
	1990	% Share	2000	% Share	2009**	% Share		
Detached	5,720	79.5%	6,774	80.7%	7,509	75.3%		
Attached	156	2.2%	258	3.1%	570	5.7%		
Multi-dwelling	495	6.9%	504	6.0%	873	8.7%		
Mobile Home	750	10.4%	836	10.0%	1,018	10.2%		
TOTAL	7,191	*	8,397	*	9,970	*		

*The totals do not add up to 100 percent because the 1990 and 2000 censuses included people living in RVs, campers and house boats (a very small percentage of the units **The 2009 housing unit counts are based on MPC's development activity reports, 2000 through 2009; there were 66 residential demolitions in that period. The demolition records do not differentiate as to what type of unit was torn down; MPC staff assumes that nearly all were single family detached units and reflect that loss in the table accordingly.



Over three-fourths of the sector's housing are detached units and most are in very good condition.

Housing Conditions and Other Building Conditions

Building conditions are determined through the City and County Tax Assessors Offices. Maps demonstrating housing and commercial-industrial-office building conditions are on the following pages. In general most houses are in average to excellent condition. The larger areas depicted in red (denoting poor condition) are generally one house on a large parcel; in other words, the amount of houses in poor condition is not great and such houses are widely distributed across the sector. Most of the non-residential buildings are in average condition; new development, like South Grove, are in excellent condition but not reflected on the South County Sector: Commercial-Industrial-Office Building Conditions map because the data base is a few years old.



The University of Tennessee Medical Center

Retail Development Trends

Most recently, the sector has experienced growth in this type of development around Chapman Highway and its intersection with Governor John Sevier Highway in the form of retail stores. This has become a significant node for retail activities, serving residents of the South Knox County, South Knoxville, Seymour, and East Knox County:

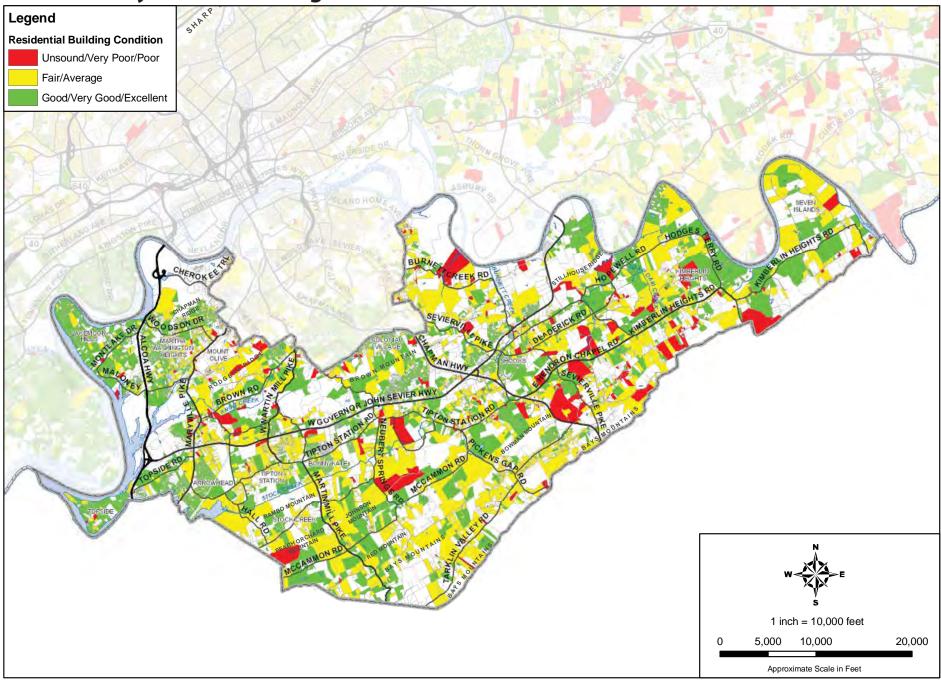
- South Grove commercial subdivision of 63.6 acres. including Lowe's Home Improvement Center, Food City, and other retail shopping and adjacent restaurants
- The Home Depot, Walmart Supercenter, and nearby restaurants

The sector as a whole has approximately 500,000 square feet in shopping center and related retail and restaurant space.

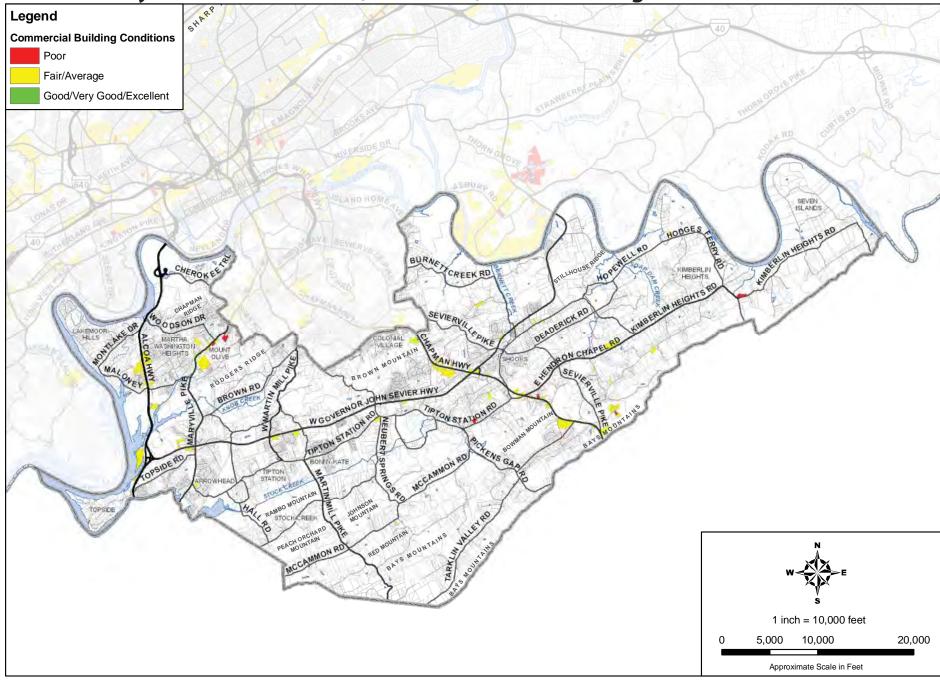
Office Development Trends

The South County sector has 622,199 square feet of office space distributed among 14 buildings with an average of 41,209 rentable square feet. The two main office uses are call centers and healthcare. The call centers are primarily located in former shopping center space. Elavon Information Systems and First Tennessee Bank Call Center are the significant call centers; both are located along Chapman Highway. The other major office spaces are operated in conjunction with the University of Tennessee Medical Center near Alcoa Highway.

South County Sector: Housing Conditions



South County Sector: Commercial, Industrial, Office Building Conditions



Industrial Development Observations

Most of the sector's industrial spaces pre-date 1960. They represent relatively small operations and are concentrated in two places. The first is along the rail lines and Maryville Pike. It is comprised of 11 industrial spaces, which combined amount to approximately 530,000 square feet. Metal recycling, machinery parts distribution, construction materials, and structural steel account for some of the industrial uses found in the sector.

The vacancy rate in the South County sector was over 25 percent in 2007, suggesting needs for renovation and redevelopment. However, a drawback to improvement is the inadequacy of vehicular access and particularly awkward access to the interstate system.

There is also a small aging industrial operation north of Chapman Highway near the Sevier County line. This includes the old Camel plant, which has access from Valgro Road and Chapman Highway.

Growth Policy Plan Implications

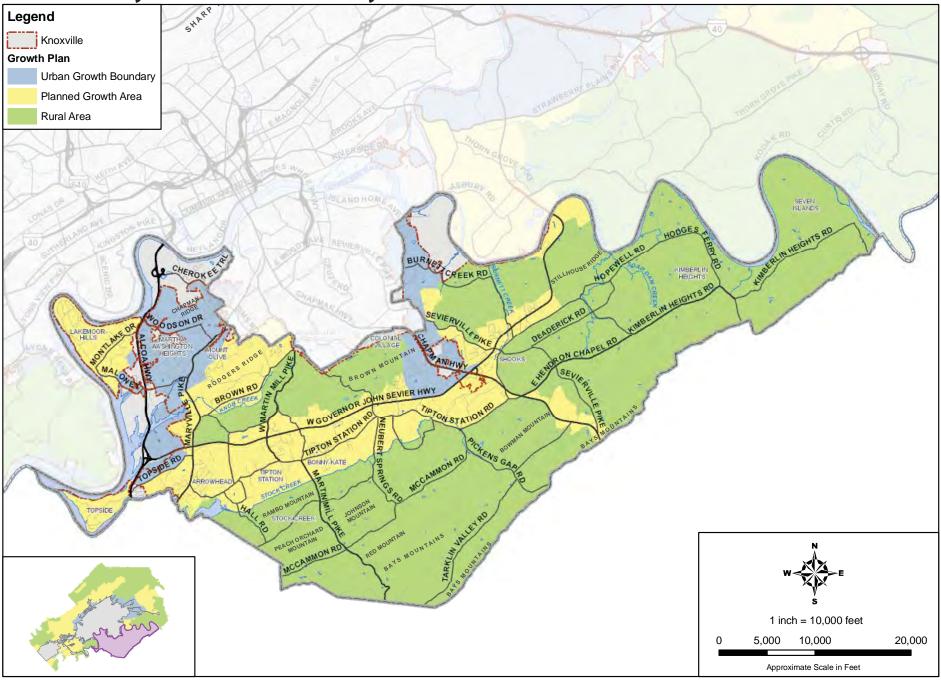
The majority of the area is in the unincorporated area of Knox County. A few areas have been incorporated as part of the City of Knoxville, including the land near Alcoa Highway, Cherokee Trail, Chapman Highway, and the State Wildlife Management Area. The city has the right to request annexations in several areas that are adjacent to the aforementioned locations (see the Urban Growth Boundary, shaded blue, on the Growth Policy Plan map).

Within Knox County's unincorporated area, the designated Rural Area is very large (shaded green); that designation is made, under provisions of state law, to conserve, agricultural, forest and other natural resources. The Planned Growth Area (shaded yellow) is designated to foster low and moderate forms of development, it primarily follows, Maryville Pike, John Sevier Highway, Tipton Station Road, and the south end of Chapman Highway. Several considerations were taken into account in defining the Planned Growth Area, including the extent and local expansion of public sewer services and the provision of adequate roads, schools, parks and related facilities,

Economic Development Studies

Various studies have been conducted to examine potential office park and business park sites in Knoxville and Knox County. These include redevelopment of older industrial land in the city as well as greenfield sites. Undeveloped land at the intersection of John Sevier Highway and Alcoa Highway was identified as potential office park sites (*Inventory of Potential Sites for Business and Office Parks, 2002*). In view of the topography, infrastructure and related industrial location factors, no future business park sites were identified in the South County Sector.

South County Sector: Growth Policy Plan



Archaeological and Historic Resources

Many of the resources in this sector are on the National Register of Historic Places (see South County Sector: Historic and Related Resources Map). Through the preservation of the sites, present and future generations can better understand early settlement life, including the importance of agriculture, river transportation, and religious history. National Register status offers potential protection from federally funded construction projects and possible income tax incentives.

Archeological Resources

Native Americans have lived in the lower French Broad River valley for at least 12,000 years. The history of their occupation is discussed in Appendix E. For the most part, the archaeological richness of the area remains largely unknown. Studies by the University of Tennessee and the State of Tennessee have confirmed that the presence of various cultural components along the lower reaches of the Knox County's French Broad River valley. Most research was on the north side of the river. Additionally, the University has worked to create a predictive model to better understand where archeological resources would likely be found. The research team found that archeological sites are most likely to be found within a reasonable walking distance to the river and its tributaries, areas that do not have steeper slopes, and have good agricultural soils. Many of these areas are similar to the floodplain and adjacent land.

History of Settlement

The first settlers of Knox County migrated over the Appalachians from the Carolinas or followed the path of the rivers from the Shenandoah Valley and the short-lived State of Franklin in upper East Tennessee. What became Knox County was still part of North Carolina when settlement began. Many early settlers were motivated by the "Land Grab Act" of 1783, a piece of North Carolina legislation that was enacted to sell the state's western lands to produce revenue. William Blount, then in the North Carolina congress, was instrumental in creating the act, resulting in the sale of millions of acres in the Tennessee Valley.



The Beulah Methodist Church, built in 1894

Mills and ferries were influential in early settlement life in the late 18th and early 19th centuries. Mills allowed the farmers to produce grain, particularly wheat, and sell flour to markets outside the region. Ferries were the points of contact between the two shores of the river, fostering commerce and communication. Agriculture was the dominant industry. From 1795 to 1830, the method of agriculture was settled field and livestock culture. The agricultural economy increased with the rest of the South in the mid-1800s; production included livestock and grains, primarily corn and wheat.

Communities spanned both sides of the French Broad River as a result of ease of movement with ferries, such as those operated by Hodges and Huffaker. The Seven Islands community is an example of community life spanning the river. The first settler in Seven Islands was William Hines, the operator of the saw and gristmill which served the settlers in the 1780s. Another early settler was Peter Keener who also operated a sawmill. His house still stands overlooking the river. Other settlers included Catherine Huffaker and her sons, George and Justus, William Widner, Henry Frazier, and the Newman and Underwood families.

Kimberlin Heights was first settled in 1786 by Greene and James Cozby. Its name is derived from the Kimberlin

family. In 1787, Jacob Kimberlin found lead in the area where Johnson Bible College now stands. Early settlers of this area were the Kellys, Huffakers, Keeners, Fraziers and Bowmans. According to the Postal Gazetteer of 1859, the post office for this community was called Gap Creek; however, the name was changed to Kimberlin Heights in 1887 after Dr. Ashley Sidney Johnson, the postmaster, moved to the house of his grandfather, Jacob Kimberlin.

The patterns of early settlement, particularly agriculture, are carried on today. That is apparent in looking at the landscape with its late-18th century and 19th century farmhouses and outbuildings. That part of the agricultural setting has not changed for generations, especially along much of the French Broad River and in the southern valleys near Bays Mountain.

The New Hopewell Community developed around the New Hopewell Baptist Church, which was established as a one room church and school house around 1836. The congregation grew, requiring new church facilities, and education has continued over the years, ultimately being taken over by Knox County. The current New Hopewell Elementary School is in the same vicinity.

A series of pioneer settlements were formed along the Little River and the French Broad River. These were like homesteads, upon which settlers often crafted log houses and farmed their land. Significant among them was Marble Springs, created by John Sevier.

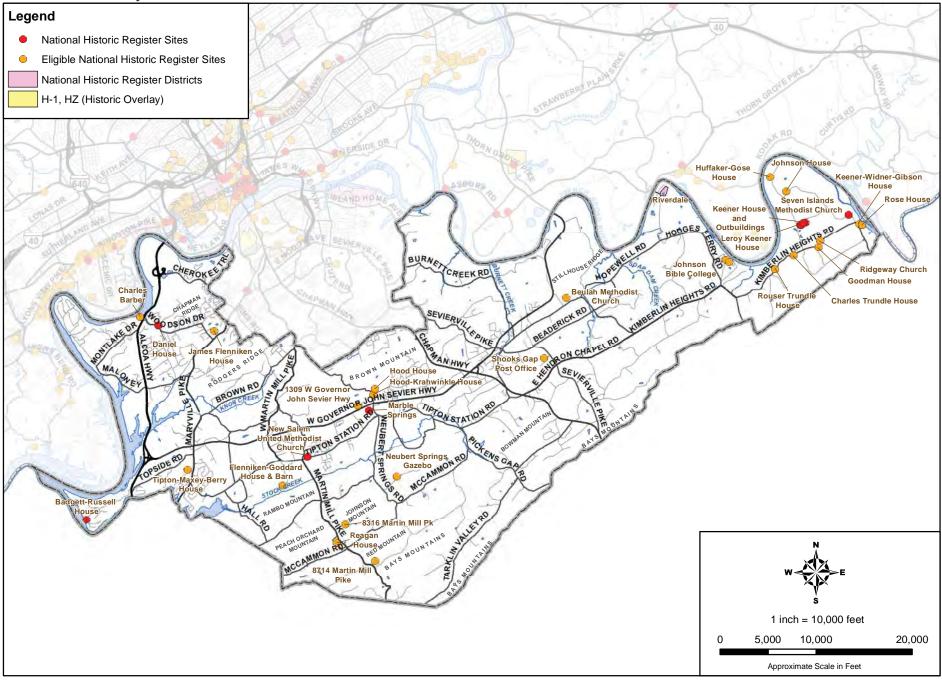
Within these communities there are several sites that are listed on the National Register of Historic Places. A list of all the sites is presented in Table 10 and the full descriptions are presented in Appendix E.

Rural Heritage

The South County Sector Plan of 2002 contained a goal related to rural heritage conservation. The East County Sector Plan, addressing the area north of the French Broad River, also contained such a goal but in its update went further to propose a French Broad River Conservation Corridor, which could have implications for both sides of the river. The excerpt of that proposal is presented in Appendix D.

Table 10: South County Sector Historic Resources Inventory					
Name	Location	Construction Date	Historic and Architectural Significance		
Charles Barber House	Alcoa Highway	c.1930	This classical Revival-style house was designed by and became the home of Charles Barber, an early 20th Century architect.		
Shooks Gap Post Office	Bedloe Way	c.1890	Located near Sevierville Pike, this post office is made of log, and was centrally located to serve the community.		
Flenniken-Goddard Place	Goddard Road	1792, 1842 & 1977	The two-story log portion of this house was constructed in 1792 by Samuel Flenniken.		
Bowman-Hodges-McBee House	Hodges Ferry Road	1836	This house, which is part of the Riverdale District, is significant for its Gothic Revival architecture, and its role in river transportation.		
Henry Huffaker-Lewis Gose House	Huffaker Ferry Road	1832	Henry Huffaker built this Georgian-style house and operated a farm and a ferry here.		
Marble Springs (John Sevier's house)	W. John Sevier Highway	c.1800	Having received a land grant, Sevier created a log house and working farm.		
Double-penned log house	W. John Sevier Highway	c. 1800	This early two-story log house is covered with a composite siding, which hides its double-penned structures.		
Old Main, Johnson Bible College	Johnson University campus	c.1900	Established by Dr. Ashley Sidney Johnson, it served as the college's administration and academic building.		
President's House, Johnson Bible College	Johnson University campus	c.1900	The president's home is a fine example of Queen Anne style architecture.		
Beulah Methodist Church	Kimberlin Heights Road	1894	The church was constructed as a community project, and maintains its Gothic Revival appearance.		
Walt Trundle-Rouser House	Kimberlin Heights Road	1915	This house is a two-story frame Neoclassical residence and was built by a local carpenter, Lee Massey.		
Charles Trundle House	Kimberlin Heights Road	1915	The Charles Trundle House was also constructed by Massey, using lumber cut on the property.		
Dr. R. T. Goodman House	Kimberlin Heights Road	1915	Dr. Goodman contracted with Massey to build this Neoclassical-style house.		
Ridgeway Baptist Church (c.1900)	Kimberlin Heights Road	c.1900	Built in the Gothic Revival Style, the one-story church is covered with clapboard.		
Queen Anne farmhouse	Martin Mill Pike	c.1970	This two-story farmhouse is a good example of the Queen Anne style. Its landscape with the rock wall and pastures is noteworthy.		
Reagan House	Martin Mill Pike	c.1800; c.1880	The Reagan house is a two-story, double pen log residence with a one-story frame ell.		
Gothic Revival house	Martin Mill Pike	c.1870	The Gothic Revival house with its center gable and sawn-wood porch rails, is a good example of the style.		
Flenniken House	Maryville Pike	c.1806	This timber frame house was built by James Flenniken as a one-story structure facing a stage road, now Maryville Pike.		
Tipton-Maxey-Berry House	Maryville Pike	c.1810 & 1872	This house was likely built by Reuben or William Tipton. The house was acquired by the Maxeys in 1872.		
Hood House	Neubert Springs Road	1882	This two-story Gothic Revival house was built by Andrew Hood and is associated with Neubert Springs, a late 19th century resort.		
Hood-Krahwinkle House	Neubert Springs Road	c.1800	The Hood family owned the property early on. The house is reflective of early transportation and settlement.		
Neubert Springs Gazebo	Neubert Springs Road	c.1890	This gazebo is the only Knox County remnant of spas and resorts of the 19th century.		
The Johnson House	Seven Islands Road	c.1870	This house is a good, local example of Italianate architecture. It features a hip roof, turned posts and sawn wood trim.		
Seven Islands Community Church	Seven Islands Road	c.1865	This clapboard-covered building was constructed in the Vernacular style. The congregation was organized in 1803.		
Keener-Widner-Gibson House	Seven Islands Road	c. 1790s	Overlooking the river, this two-story house was built by Peter Keener, an early settler and a sawmill operator.		
Rose House	Seven Islands Road	1890	This two-story frame house was designed in the Victorian Vernacular style. Rose owned a lumber company in Knoxville.		
Badgett-Russell House	Topside Road	c.1815; 1865	Also called Maple Bend, Burwell Badgett built the first section of the house in 1813.		
New Salem United Methodist Church	Twin Creek Road	c.1890	This Gothic Revival-style building is typical of the Methodist Church architecture of the era.		
Leroy Keener House	Woodlawn School Road	1842	This two-story brick, Federal-styled house with outbuildings is representative of early settlement. Peter Keener moved to south Knox County from Pennsylvania in 1809. His son, Leroy, farmed and built the home in 1842.		
Daniel House	Woodson Drive	c.1949	Recognized as a symbol of architectural innovation, this house was designed by James W. Fitzgibbon.		

South County Sector: Historic and Related Resources



Section 2:

Land Use, Community Facilities, Green Infrastructure and Transportation Plans

Land Use Plan

The 15-Year Land Use Plan is a basis for land development and conservation, including rezoning decisions. Those zoning decisions are made periodically through recommendations of the Metropolitan Planning Commission and the changes to existing zones via the decisions of City Council or County Commission.

To provide an example of a typical rezoning case, consider the following. Low density residential (LDR) land use is the most common designation in growing suburban areas (see the land use plan map at the end of this document). Many times such land was zoned agricultural back in the 1950s. A rezoning to allow detached houses in such areas is almost always approved.

The list of zoning districts that are recommended in relation to the following land use plan designations and policies are outlined in Appendix F.

Proposed Land Use Policies

Agricultural (AG): For use in the Rural Area of the Growth Policy Plan, this designation includes other farm and agricultural-related uses and very low density residential uses (not to exceed one dwelling unit per acre).

Low Density Residential (LDR): Primarily residential at densities of less than 6 dwelling units per acre (city); 5 dwelling units per acre (county).

Medium Density Residential (MDR): Primarily residential at densities from 6 to 24 dwelling units per acre (city) and 5 to 12 dwelling units per acre (county).

Medium Density Residential/Office (MDR/O): Areas designated to accommodate medium density or office uses, occasionally used as buffers to low density



Twin Creek Subdivision, across from Bonny Kate Elementary, is an example of Low Density Residential in the Planned Growth Area of South County.

residential areas. In areas near existing commercial centers or at major intersections, such Alcoa Highway and John Sevier Highway and addition of medium density residential and office may be created.

Office (O): Business and professional offices and office parks.

Rural Commercial (RC): Retail and service-oriented commercial uses intended to provide rural communities with goods and services that meet day-to-day and agricultural-related needs.

Neighborhood Commercial (NC): This classification includes retail and service-oriented commercial uses intended to provide goods and services that serve the day-to-day needs of households, within walking or short driving distance.

Community Commercial (CC): This land use includes retail and service-oriented development, including shops, restaurants, and what has come to be known as "big

box" retail stores; typical service area includes 20,000 to 30,000 residents.

General Commercial (GC): Primarily existing strip commercial corridors, providing a wide range of retail and service-oriented uses.



King's Station Market and Deli at the corner of Tipton Station Road and Pickens Gap Road is an example of rural commercial in the South County Sector.



A mixed use district allows for integration of commercial, office and medium to high density residential uses and encourages walkability between uses.

Mixed Use Special District (MU-SD): These areas primarily include older portions of the city or county where redevelopment programs are needed for revitalization purposes (e.g. older shopping centers). For areas that have not had previous development, these areas allow for a variety of uses as defined in the district designation.

Community Mixed Use Center (MU-CC): These centers are envisioned to be developed at a moderate intensity with a variety of housing types (8 to 24 dus/ac). The core of the district, with its predominant commercial and office uses, should be within ¼ mile of the higher intensity residential uses (such as townhouses and apartments). The district should be located within a ¼-mile radius of an intersection of the thoroughfare system (a collector/arterial or arterial/arterial intersection). In addition to sidewalks, the district should be served by transit. Redevelopment of vacant or largely vacant shopping centers is considered for these centers.

Light Industrial (LI), Heavy Industrial (HI) and Mining (HIM): These classifications are used to identify older industrial areas, which were intended for manufacturing, assembling, warehousing and distribution of goods. Light industrial uses include such manufacturing as assembly of electronic goods

and packaging of beverage or food products. Heavy industrial uses include such processes used in the production of steel, automobiles, chemicals, cement and animal by-products and are viewed clearly not compatible with areas designated for residential, institutional, office and retail uses. Quarry operations and asphalt plants are a particular form of heavy industrial, generally located in rural areas.

Civic/Institutional (CI): Land use for major public and quasi-public institutions, including schools, colleges, churches, correctional facilities, utilities and similar uses.

Public Parks and Refuges (PP): Existing parks, wildlife refuges or similar public or quasi-public parks, open spaces and greenways.

Other Open Space (OS): Cemeteries, private golf courses and similar uses.

Stream Protection Areas (SP): Areas subject to flooding as identified on Knox County flood maps. For streams that do not have a mapped flood zone, state and local storm water regulations, creating non-disturbance areas, apply.

Major rights-of-way (ROW): Generally, the rights-of-way of interstates and very wide parkways and arterial highways.



Forks of the River Wildlife Management Area is connected to the Will Skelton Greenway, as well as the newly developed Urban Wilderness and Historic Corridor system.



Much of South County is characterized by a series of ridge and valley topography like Rodgers Ridge and Brown Mountain shown in the photograph above.

Hillside/Ridgetop Protection Areas (HP): Used to identify hillsides, ridges and similar features that have a slope of 15 percent or more. Future development should conform to the policies of the Knoxville-Knox County Hillside and Ridgetop Protection Plan.

Table 11. Hillside and Ridgetop Protection Plan Policies*

Low Density Residential density limits within the Hillside and Ridgetop Protection Area (HRPA):

- •15 25 percent slope = two houses per acre in the low density residential areas; one house per acre in agricultural and rural residential areas
- 25 40 percent slope = one house per two acres
- 40+ percent slope = one house per four acres
- Ridgetops are generally the more level areas on the highest elevations of a ridge. Because the shapes of Knox County ridges are so varied, the ridgetop area should be determined on a case-by-case basis with each rezoning and related development proposal.

Medium Density Residential and Office development within the HRPA that extends into the 15 to 25 percent slopes should only be considered:

- If the slope is closer to 15 percent and the building footprint does not exceed 5,000 square feet per one acre
- If the slope is closer to 25 percent and the building footprint does not exceed 5,000 square feet per two acres
- All proposals should be subject to the approval of a use on review and site plan by the Metropolitan Planning Commission.

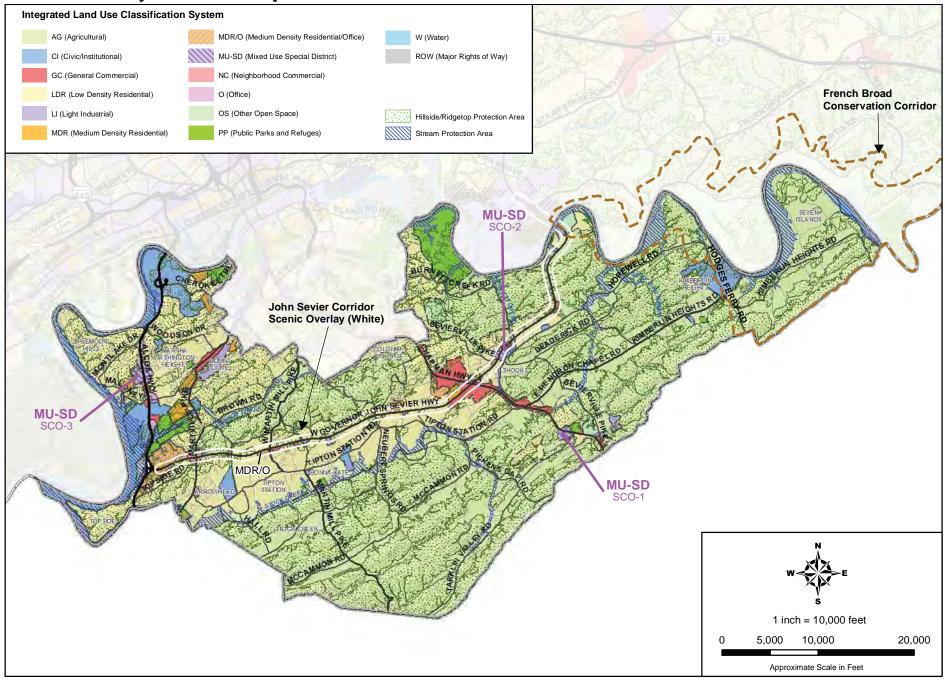
Commercial development within the HRPA that extends into the 15 to 25 percent slopes:

• Slope restoration and reforestation of cut-and-fill areas should be accomplished to minimize the long term impact to water quality and lessen forest canopy loss.

Height of new buildings within the HRPA: Limit to 35 feet.

^{*}Please note that this is not a complete list of the policies from the Knoxville-Knox County Hillside and Ridgetop Protection Plan, as adopted by County Commission Resolution RZ-12-1-101 on January 23, 2012.

South County Sector: Proposed Land Use Plan



SPECIAL LAND USE DISTRICTS

There are several areas that are capable of sustaining different mixes of land uses. In other words, a broad brush of proposing only one land use may not be prudent in view of changing conditions and the dynamics of the local economy (for example, the reuse of older commercial properties for other land development purposes). All the following proposed districts are well located in terms of good transportation systems and generally have good infrastructure. Design principles to consider during development plan review for projects in Mixed Use Districts are presented in Table 12 at the end of this section.

MU-SCo-1:

South Knox County Gateway

The Highland View Shopping Center and adjacent golf driving range area is proposed as a mixed use district. Development should be connected with pedestrianoriented walks and be well landscaped, given this area's position in entering Knox County.

Recommended Uses: Low or medium density housing, office and retail

Recommended Zoning: Commercial, office or residential zoning that requires site plan review.

Other Considerations: MPC and the county commission should consider revisions to retail parking requirements, enabling a fewer number of spaces and, in turn, more opportunity for further development. This would offer both economic and environmental benefits.

Bower Field is not a county owned park. It is privately owned and operated by the county parks department via a lease. Should a decision be made to forego lease renewal, allowing private development, the same set of mixed land uses as SCo-1 would be appropriate.

Combining access points and the consideration for an extension of transit into this section of Chapman Highway should be considered as additional commercial, retail, office and medium density residential growth continues along the corridor toward the county line.

Presently, there are significant areas of vacant land and buildings and, occasionally, underutilized buildings. The present zoning is largely for commercial uses.



Existing commercial zoning and infrastructure at the Highland View Shopping Center, across from Bower Field, make redevelopment as a mixed use district plausible.



 $\label{prop:eq:energy} \textit{Existing commercial zoning and infrastructure, adjacent to existing residential neighborhoods, create an opportunity for walkable mixed use redevelopment.}$

MU-SCo-2:

Governor John Sevier Highway/Sevierville Pike

This section of John Sevier Highway, which is largely zoned for commercial purposes, is currently characterized by a mix of office, commercial and residential uses or is still vacant land. Strong pedestrian connections from residential areas to area commercial, retail and office uses will increase livability and reduce traffic generation by future development. Several factors support the concept to allow a mix of uses, including planned residential uses (up to 12 dwelling units per acre):

- Chapman Recreation Club is the centerpiece of the area and is already bordered by an attached housing development
- Ample vacant or underutilized commercial land at Governor John Sevier/Chapman Highway (South Grove, etc.) to meet the long range retail needs
- Medium density housing is needed to serve the existing retail, medical and call center activities in the Governor John Sevier/Chapman Highway area

Recommended Uses: Rather that concentrating solely on commercial uses, a new district is proposed whereby a mix of uses can be fostered, including various types of residential structures, office and retail commercial.

Recommended Zoning: Commercial, office or residential zoning that requires site plan review.

Table 12. North County Sector Mixed Use District Design Principles

Mixed use districts allow for flexibility in the types of uses that can be developed within a defined area. With this flexibility comes the need to create a harmonious environment where different uses fit comfortably within individual developments and are compatible in design with other buildings in the district. In addition, sensitive environmental resources should be protected against adverse consequences from adjacent development. The following design principles should be considered during development plan review and approval:

Low impact development techniques, as described in the City and County stormwater manuals, should be incorporated into site plans.

Proposed greenways as noted in the *Knoxville-Knox County Park, Recreation* and *Greenways Plan* should be obtained as development is approved.

Signs for shopping centers, or other planned developments, should be developed in accordance with a master sign plan including consolidated sign boards for less visual clutter.

Exterior lighting should be directed away from adjoining properties and all lighting fixtures should be either full cut-off luminaries, or directionally shielded fixtures.

The **architectural design** of structures within a common development should be complimentary in terms of building materials, colors, roofing and window design.

Means to **reduce impervious parking surfaces** should be sought, including shared parking, pervious parking, bio-swales and limiting the number of parking spaces.

Parking lot landscaping should require 1 shade tree for every 10 parking stalls, with trees distributed in islands and planting strips throughout the parking lot.

Front and side yard landscaping should be provided, including a mix of native medium and large maturing trees.

Alcoa Highway Small Area Plan

Alcoa Highway and its adjacent development patterns will change significantly in the coming decade. Since the late 1970s, various proposals have been made for traffic capacity and safety improvements. Since 1985, average daily traffic has increased from 39,482 to 47,189 vehicles, an increase of 19.5%. The residential population surrounding the corridor has stayed relatively stable since 1970, with and average population of approximately 3,600 persons living in the area surrounding Alcoa Highway.

The dominate land uses contiguous to Alcoa Highway are commercial, office and civic institutional, with a large church campus south of the Maloney Road intersection. Commercial development began along Alcoa Highway around the 1950s/1960s. The dominate style of strip commercial development began in the 1960s with the construction of the Southgate Shopping Center. Other new commercial and civic institutional structures continued to develop until the mid-1980s/early 1990s. However, little new development or redevelopment has come to this corridor in recent years and vacancy rates of commercial structures have also risen.

The last neighborhood shopping center will likely become a church property in the coming year. One premise of the planning for this area has been consideration in creating a greater market potential. Along with the difficulties in highway access a population loss of about one thousand residents has impaired business success. According to the Urban Land Institute, a neighborhood shopping center is comprised of a "supermarket and drug store as the most common anchors." Presently, the surrounding population, primarily residing in low-density residential subdivisions, is too low to support a neighborhood shopping center along the commercial strip.² Presently, Alcoa Highway is a four lane highway with many curb cuts for the adjacent commercial areas and neighborhood roads. High rates of speed and cars accessing the highway at many locations have contributed to increased traffic fatalities and accidents.

The most recent transportation improvement plans (dating from 2000) are being reviewed through the Environmental Assessment (EA) process by the Tennessee Department of Transportation (TDOT); the review is projected to end 2013. The project will add additional lanes to Alcoa Highway creating a six-lane highway with median separation. As of the 2000 design plans, the project provides additional access management for Alcoa Highway by creating fly-overs and interchanges for some of the existing at grade intersections and frontage roads for portions of the project. However, the design is still under review and frontage roads may not be part of the final design.

This project still must go through detailed engineering design, right-of-way acquisition and construction. Given that some improvements are expected to commence in the near future, the following concepts should be considered for development adjacent to Alcoa Highway.

The highway widening and new access roads will necessitate changes in the relationship of parking to existing buildings. For decades much of the retail activity was in response to easy-off, easy-on consumer trips. Although traffic in the corridor increased the number of households has remained stable since the 1970s. This has resulted in major retail changes, including significant vacancies and changes in use (retail services to storefront church).

The proposals and policies that are outlined on the following pages are premised on the expected narrowing in the depth of lots, a continued trend in less spontaneous shopping behavior (given that access will not be allowed directly from the highway), and more destination-oriented land uses (such as a health club, churches, offices and limited retail uses that meet day-to-day needs of the nearby neighborhoods). Also, rather than relying solely on a commercial, a mix of uses is proposed for the larger parcels making office and apartment uses more viable, especially with frontage roads construction.

The ultimate decision on Alcoa Highway improvements is critical to the adjacent future land uses. Frontage road improvements and grade separation would greatly foster economic development. Without those improvements, the development of more intense uses will be impaired. Once the TDOT decision is made, this small area plan should be revisited.

Alcoa Highway Small Area Plan Objectives

MPC staff has premised the development of this plan to address the following objectives.

- 1. Increase traffic safety along Alcoa Highway.
- 2. Create a sense of place and identity for Alcoa Highway by promoting local businesses and protecting/strengthening both commercial, office and residential areas.
- 3. Enhance and further promote the redevelopment of existing commercial areas, particularly for a grocery store or small market retailer.
- 4. Enhance connectivity and walkability of the area through sidewalks, greenways, and parks.
- 5. Protect the character of neighborhoods adjacent to Alcoa Highway.

MU-SCo-3:

Alcoa Highway Small Area

Since a decision has not been made on whether frontage roads will be part of this highway improvement project, two alternatives are included in this plan. Both alternatives would allow a mix of uses based on underutilized parcels and redevelopment opportunities for large commercial tracts.

Listed below are the transportation and land development principles for both alternatives.

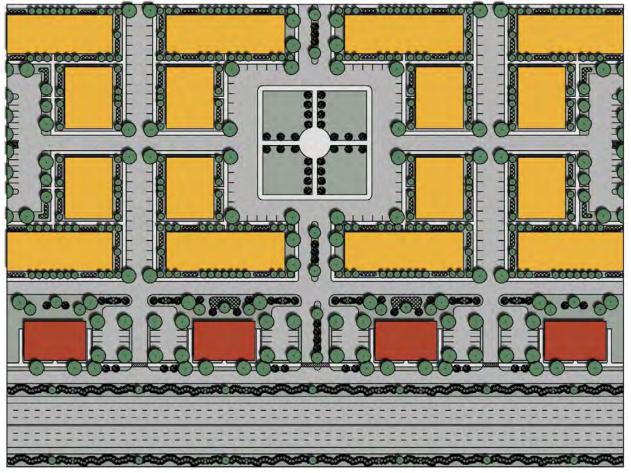
Transportation and Land Development Principles

- 1. Consolidate access points onto highway or frontage roads and/or create interparcel access between properties.
- 2. Create more intense buffers for the adjacent established neighborhoods.
- 3. Diversify development to include commercial, office and, if frontage roads are built, medium to high density residential.
- 4. Reduce parking requirements to increase outparcel development potential for smaller office and commercial buildings.
- 5. Landscape parking and frontage areas to increase aesthetic appeal and reduce stormwater runoff.
- 6. Provide safe pedestrian and cyclist circulation throughout the area with walking and biking connections for the established neighborhoods and the Knox-Blount greenway.

¹ Urban Land Institute, 1999, Shopping Center Development Handbook, p.53 ²lbid. p.46



The Village Plaza Shopping Center off Alcoa Highway is characterized by a high vacancy rate and extensive parking.



A conceptual design plan for reuse/redevelopment of a site utilizing the principles of the Alcoa Highway Small Area Plan: The red rooftops represent commercial or office buildings adjacent to the frontage roads, while the yellow roofs could be office or apartment development.

Alternative 1:

This alternative is based on Alcoa Highway improvements that would include six travel lanes, an interchange at Maloney and Montlake Roads, and two frontage roads (as proposed by TDOT in 2000).

Under this proposal, a mix of commercial, office and medium to high density residential uses would be allowed where larger tracts exist. The additional opportunity for residential density would increase support for retail, which is currently in decline. Both office and higher intensity residential uses are warranted in light of a safer highway and proximity to downtown, UT Medical Center and the airport. These uses can be located separately or as vertical mixed uses (for example, shops at ground level with office or residential above).

Medium density residential uses are also proposed west of the current Village Plaza Shopping Center, contingent upon access from an Alcoa Highway frontage road.

Recommended Uses: Commercial, office, and medium to high density residential

Recommended Zoning: Commercial, office or residential zoning that requires site plan review.

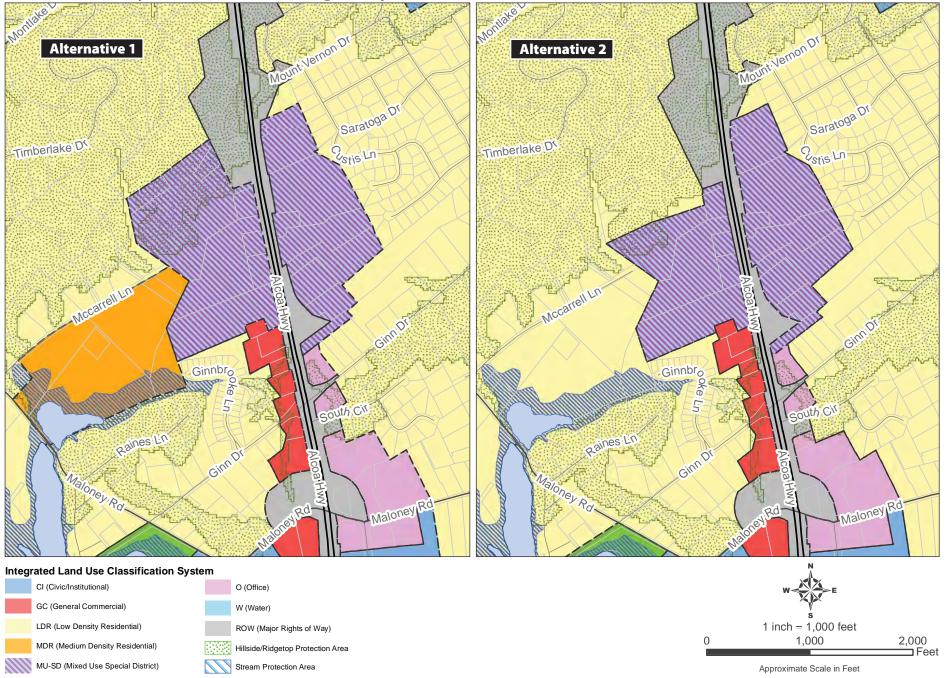
Alternative 2:

This alternative is based on the six lanes, an interchange at Maloney and Montlake Roads, but no frontage road construction. Without the frontage road, right-in access and right-out egress will be necessitated. In view of the existing commercial zoning, only office and commercial uses are recommended.

Medium to high density residential uses are not recommended in this alternative. This recommendation arises from safety concerns related to additional traffic generation from higher density residential, and the only partially controlled access. The right-out egress would in all likelihood necessitate rapid acceleration at selected points of many onto a heavily used highway. Consequently, additional residential development is not a part of this alternative.

Recommended Uses: Commercial and office **Recommended Zoning:** Commercial or office zoning that requires site plan review.

South County Sector: Alcoa Highway Small Area Plan



Governor John Sevier Highway Scenic Corridor Design Proposal

A major road improvement to widen Governor John Sevier Highway to a 4-lane divided facility is proposed by the Tennessee Department of Transportation (TDOT) for sometime between 2015 and 2024 for the segment between Alcoa Highway and Chapman Highway. This same segment of the highway holds a state level designation as a Rural Scenic Highway, however, this designation only prohibits junkyards and billboards within the corridor. The rest of Governor John Sevier Highway does not hold a state level designation.



Governor John Sevier was one of the founding fathers of Tennessee. The site of his homestead, Marble Springs, lies just off the highway.



Recently built metal structures in the corridor have spurred concerns by residents over the scenic quality of the corridor.

Community interests in more thorough protection of scenic resources have been heightened recently. This has arisen in response to recent residential and commercial development using building materials and types that disrupt the scenic quality of the corridor.

Both in response to community requests, as well as in the previous South County Sector Plan update of 2002, residents would like to see the rural scenic qualities of Governor John Sevier Highway protected as new development occurs along the corridor. The following conceptual design guidelines are proposed to help protect the scenic quality of the corridor. However, to effectively implement these guidelines, corridor overlay zoning should be adopted.

Scenic Corridor Conceptual Design Guidelines

Public Realm:

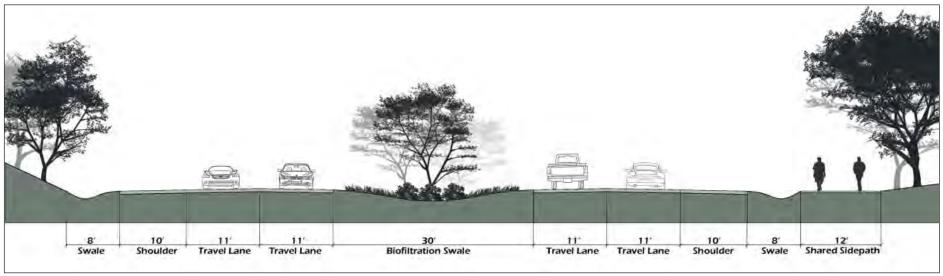
Since road widening to a FOUR-lane divided facility for Governor John Sevier Highway is expected in the near future, the following should be considered in the design of this right-of-way expansion.

Multi-modal, median divided, four-lane highway

- Four travel lanes with turning lane breaks at major intersections
- Landscaped separated, 12-feet wide bicycle/pedestrian sidepath

Green Highway Design

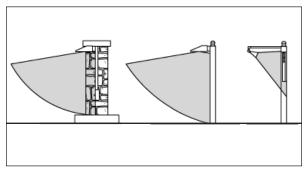
- Drainage swales
- Landscaping, including native trees and shrubbery within the rights-of-way



As TDOT widens Governor John Sevier Highway to a four-lane median-separated highway, the above illustration demonstrates how this highway can maintain a rural aesthetic. This example shows bioinfiltration swales in the median and grass swales on the side of the road to reduce and clean stormwater runoff and further protect bicyclists and pedestrians on the shared sidepath.

Liahtina

- Public lighting limited to commercial nodes
- Dark sky lighting fixtures in commercial nodes



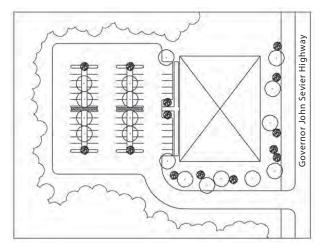
Lighting in both the public and private realm should adhere to' dark sky' lighting standards to reduce light pollution throughout the corridor.

Private Realm:

For areas adjacent to the right-of-way, the following should be considered in development of a zoning overlay and subdivision regulations to protect scenic resources in the corridor.

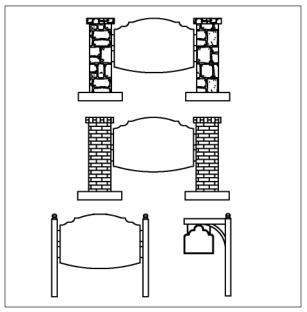
Access Management

- Shared access points to multiple tenant centers
- Limited access points for individual buildings
- Where possible, locate access points on streets instead of the highway
- Parking maximums and reduced parking minimums, with parking encouraged behind and to the side of structures



Sign Control

- Billboard prohibition along the entire South County corridor
- Uniform sign height, monument signs for individual buildings
- Master sign plan for multi-tenant centers



Sign controls should be implemented to help preserve the rural aesthetic of the corridor.

Site landscaping and woodland conservation

- Tree conservation with new construction
- Planting native tree species in parking areas and yards
- Planting trees and shrubs around buildings
- Prohibition on clearing and grading for non-residential uses on slopes over 25 percent

Recommended building materials, based on the best of current practice

- Brick, clapboard or clapboard-like material, square logs and stone
- Metal-sided with stone or brick on a majority of the façade

Window and doors (facing the highway)

- Entrance doors should be oriented to the highway
- Windows should compose at least one-quarter of the facade
- With unusual site constraints, an entrance door may be oriented to the side of the building and parking as long as windows face the highway
- Garages: doors should be oriented to the side of a building or the garage should be located behind the rear plane of a house or other structure

Uses not subject to overlay design review

- Houses under a 2,000 square foot footprint
- Agriculture with the exception of home occupations; structures used for such occupations should be constructed with (a) materials typical of South County residences, using clapboard or clapboard-like materials, square logs, stone, or brick, and (2) windows on every face of the structure.

Lighting

- Dark sky lighting fixtures
- Recessed canopies for gas pump and drive-through areas



This Weigel's has reduced light pollution impact on adjacent properties.

Setbacks

- Establishment of a general build-to line
- Allowances for setback averaging, given the varied nature of the terrain

Other Considerations

- Limited new commercial development at significant intersections, like Maryville Pike and Chapman Highway
- Office, public/institutional, and residential uses as the predominant land use pattern



The French Broad Corridor is characterized by rural, scenic landscapes and historic structures.

French Broad River Conservation Corridor

The rural landscape, which is characterized by farmland, wooded ridges, historic sites and the French Broad River is worthy of conservation. In order to realize the French Broad River Conservation Corridor new land development tools are needed. The proposed tools that could be developed include, a conservation overlay district, a new large lot agricultural zone, a new small lot rural residential zone, the establishment of a transfer of development rights program, adoption of conservation subdivision standards, the adoption of codes and plans concerning hillside and ridge top protection, and utilization of other agricultural and conservation programs. The following narrative gives more detail about possible conservation tools that could be utilized within the French Broad River Conservation Corridor.

The considerations in mapping the proposed conservation corridor were prime and locally important agricultural soils, historic buildings, archaeological resources, creek and river habitats, and forested ridges (the scenic backdrop in defining the corridor).

Implementation Plan

The proposed conservation program is as follows:

Conservation Overlay District

A conservation overlay district could be created that would guide new development while conserving historic and environmental resources. The establishment of such guidelines could cover historic preservation, new building location, architectural design, sign regulations, parking requirements, fencing, landscaping, and other elements that make development appear more rural in character. Along the river there could be measures that could specifically prohibit development that would potentially harm endangered species, conserve trees and ground cover along the river and reestablish native vegetation along this riparian edge, and discourage sewer treatment plants in the corridor.

New Agricultural Zone Districts

The current agricultural (A) zone, which allows one dwelling unit per acre, on any A-zoned property should be reconsidered because that density is a formula for sprawl at very low densities and does not protect farm land and other resources. Also, much of the hillside forested areas in Knox County are zoned Agriculture (A) and generally cannot be used for conventional farm purposes, like row crop production and pasturing. As alternatives to the current practice, the following are the new zoning districts that are recommended.

- Large Lot Agricultural Zone: The county has one agricultural zoning classification that permits both residential and farm uses. Some community's separate these two uses into two distinct zones to accommodate the unique differences between residential uses and farm uses. By increasing the minimum lot size for agricultural uses, farmland could be preserved within the corridor.
- Small Lot and Cluster Rural Residential Zone:

A new zone should be created that encourages rural residential uses, while still conserving such assets as hillsides and farms within the corridor. Housing in new subdivisions could be clustered to conserve land within the conservation corridor.

Transfer of Development Rights (TDR) Program

A TDR program would allow the community to accommodate growth while preserving open space and farmland in a manner that is fair and equitable for all landowners.

TDR allows a community to transfer the development potential in an where growth is restricted to a separate receiving area where roads, utilities and other infrastructure already exist making it appropriate for growth. Farmland and open space is preserved and growth is targeted to areas where such infrastructure as higher capacity roads and sewers are in place.

Through the program, developers purchase development rights to build in a "receiving area," which is an area that is targeted for growth, and those funds are used to permanently preserve land in the "sending area" (for example, farm land).

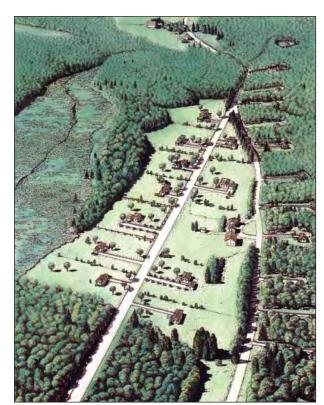
In October 2009, a Transfer of Development Rights Task Force, which was created by the County Commission, recommended that a county-wide program not be pursued at this time. During the course of their work, several members felt that the French Broad River Conservation Corridor would be a good candidate for such a program. Should conditions change in the future, such as with reconsideration of the Growth Policy Plan, this corridor may be a good candidate for a pilot TDR program.

Conservation Subdivision

Conservation subdivisions are characterized by common open space and clustered compact lots. The purpose of a conservation subdivision is to protect farmland and/ or natural resources while allowing for the maximum number of residences under current community zoning and subdivision regulations. A greater density (density bonus) may be offered in the local ordinance to encourage this approach to residential development planning.

Private, Federal and State **Agricultural and Conservation Programs**

Continue to work with land trusts and agricultural officials, to apply for programs to conserve land within the corridor. Some of these programs may include purchase of development rights and conservation easements.





Examples of a conventional subdivision (left) and a conservation subdivision (right)

Historical and Archaeological Preservation

There are approximately 40 historical buildings along both sides of the river. Most of them are set on the landscape, surrounded by farms, as they were in the nineteenth century. Archaeologists from the Tennessee Valley Authority and University of Tennessee have documented dozens of Native American sites, particularly in the vicinity of the rich soils that were deposited by the river. These resources provide an understanding of prehistory and the settlement of the valley (the background section describes these resources).

The proposed program includes: continued work with Knox Heritage and the University of Tennessee to identify and historical resources, not yet identified (for example, those on the Seven Islands Refuge), and work with the community to consider historic and archaeological resources on the National Register of Historic Places.

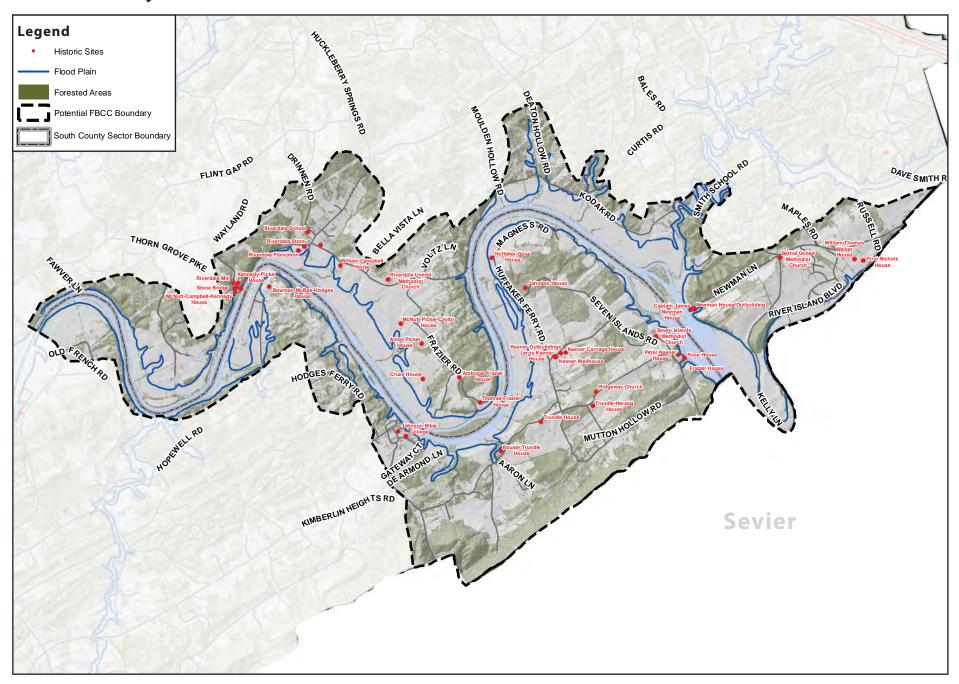
Tourism and Economic Development Strategy

The French Broad Preservation Association, identified recreation and entertainment spaces, lodging and a historical/archaeological education center as tourism development strategies. The basic provisions of the strategy include the following proposals:

- Expand recreational opportunities by creating a welcome center with a museum, trails, restaurant, and a recreation center offering kayak, canoe and bike rentals.
- Provide a small-scale performance center that takes advantage of the musical history of the region and meshes with the other uses of the Corridor.
- Develop low-density land uses compatible with the character of the Corridor such as small-scale lodging and entertainment venue, conference/retreat center, or historical/archaeological education center.

These concepts merit further consideration, particularly in the French Broad River Conservation Corridor and especially in places close to the river.

South County Sector Plan: French Broad River Conservation Corridor



The following table represents an implementation strategy and responsible parties that should pursue to assist in the preservation of the rural landscape and historic resources of this area.

Table 13. French Broad River Conservation Corridor Implementation Plan		
Policy/Program	Responsible Party	
Draft a National Register of Historic Places Rural Landscape District	MPC and Knox Heritage	
Continue conservation easement programs, including those associated with the USDA	Farm owners, USDA and such trusts as Legacy Parks and Land Trust for Tennessee	
Consider a new large lot agricultural zone along with a transfer of development rights (TDR) program in the Corridor	MPC	
Draft a scenic area zoning overlay district to address conservation and development	MPC	
Develop design guidelines and standards that can be used specifically in the French Broad River Conservation Corridor	Architectural/landscape design consultant funded by Knox County and the French Broad Preservation Association	
Develop a matching grant for façade improvements of commercial properties in areas that are identified as scenic corridors	Knox County community development department	

Community Facilities Plan

This portion of the plan is directed to future parks, school improvements and other public facilities that are needed for the community growth and provided in a prudent manner in relation to the conservation of scenic, historical environmental assets.

Parks, Greenways and Recreation Facilities

The following recommendations are taken from the Knoxville Knox County Park, Recreation and Greenways Plan (adopted in 2009, 2010). Additionally, several new greenway proposals have been added to the Park and Greenway Plan map, recognizing potential extensions of the Urban Wilderness and Historic Corridor trail system.

The following recommendations are the current ones for this sector, taken from the Knoxville Knox County Park, Recreation and Greenways Plan (adopted in 2009, 2010).

Recommendations: **Park Acquisition**

- Neighborhood Parks Acquire space for new neighborhood parks (5 to 10 acres each) in the general vicinity indicated on the plan map: East Stock Creek Park, Ford Lane Park, Twin Creek Park and Colonial Village Park.
- Bower Field Acquisition/Replacement Currently these fields are under lease to the Knox County Parks and Recreation Department. Consider purchasing this space and increasing the number of uses or acquire an alternative site more centrally located within the Planned Growth Area to provide recreation when the lease expires.
- Casteel Branch Park Acquire and add 10-20 acres to create a community serving park to provide multi-use fields, picnic and playground facilities
- Government Farm Develop a cooperative agreement to allow a loop trail at the edge of the farm and create outreach programs for environmental education.
- I.C. King Park Expansion Acquire land and an alterative access off of Maryville Pike. Create a master plan including play fields, playground and trails. Consider a partnership with Sevier Heights Baptist Church, which owns approximately 70 acres adjacent to the park on the east side, for shared parking and outdoor facility use.
- Kimberlin Heights Park Expansion Acquire an additional 10-20 acres. Consider a connection to Gap Creek Elementary School and master plan the space with area residents.
- Little River Park Work with TVA to convert this existing RV campground to a community-serving park, which includes fishing and river access, a walking trail and playground.
- New Hopewell School/Park Expansion Add 10-20 acres to create a community-serving park with multi-use fields and expand the outdoor classroom and arboretum.

- Seven Islands Wildlife Refuge Expansion Aquire the nearby islands or establish conservation easements on those islands.
- South Doyle High School and Park Expansion Acquire 20 acres, particularly in the broad floodplain, to create a community-serving park. Provide walking trail connections, multi-use fields and playground space.



A partnership of the Legacy Parks Foundation, the City of Knoxville, the Appalachian Mountain Bike Club and countless volunteers created the trail system of the Urban Wilderness Corridor; supporting the goals inherent in the Knoxville-Knox County Parks, Recreation and Greenways Plan.

Recommendations: Greenways and Greenway Connectors

- Burnett Creek Greenway Provide a greenway along this creek to connect to the proposed French Broad River Greenway and Bower Field while protecting this natural resource.
- French Broad River Greenway Provide a trail that could be used for walking or horseback riding from the county line to the Forks of the River Wildlife Management Area. Sidepaths along such roads as Hopewell Road could be part of this system.
- Hines Creek Greenway Use the floodway to provide a trail connecting the proposed French Broad River Greenway south to Bower Field.

- Knox Blount Greenway Continue collaborative efforts (involving Knoxville, Alcoa, Knox and Blount Counties, the University of Tennessee, the state and federal governments) to provide a greenway trail along the river and parallel to Alcoa Highway.
- **Knob Creek Greenway** Provide a link to the Knox Blount Greenway, near Brown Mountain.
- Seven Islands Wildlife Refuge Greenway connection
 Implement the pedestrian connection across the French Broad River.
- Smoky Mountain Railroad Greenway Use this former railroad bed to provide a trail from the South Waterfront, connecting multiple park and recreation resources, to Sevier County.
- Stock Creek Greenway Acquire land and easements to create a trail within the floodway of this creek to provide a connection from the proposed Knox Blount Greenway to the proposed Smoky Mountain Railway Greenway. Greenway connectors along such roads as Tipton Station can be part of this system.
- Urban Wilderness and Historic Corridor trail extension This trail system, used for hiking, jogging and mountain biking, should be extended beyond the South City sector.
- Greenway Connectors Chapman Highway, John Sevier Highway, Martin Mill Pike, McCammon Road and Tipton Station Road (all within the County's Planned Growth Area) are the most significant roads that should be improved to safely accommodate both pedestrians and bicyclists.

Recommendation: Recreation Facility

• South District Recreation Center – Provide a recreation center including indoor and outdoor activities to serve a population range of 20,000 to 40,000. Recommend locating this facility along major arterials for easy access.

Schools and Libraries

The school enrollment for schools located in the South County Sector has declined by 14.8 percent from 2004 to 2010 (see Table 4: School Enrollment). The Knox County School Board does not have any current plans to build new or expand existing schools within the district. Portable classrooms have been utilized to handle temporary classroom expansion as needed. The school system will be concentrating on facility maintenance programs, such as HVAC upgrades, for the foreseeable future.

No new libraries in the South County sector have opened since the last plan update in 2002, however, Bonny Kate Library was opened in the summer of 2000. The South Knoxville library branch on Chapman Highway and the Burlington Branch library on Asheville Highway both serve residents of the South County sector. Libraries are well distributed to meet the needs of the sector for the foreseeable future.

Law Enforcement and Fire Protection

The majority of this sector is outside of the city limits of Knoxville and therefore is served by the Knox County Sheriff's Office and Rural/Metro Fire Department. The areas within the City of Knoxville are also served by the Knoxville Police Department and Knoxville Fire Department.

Utilities and Utility Policy

Utility corporations, like Knoxville Utilities Board and Tennessee Valley Authority, are not under the jurisdiction of MPC or local governments. Each are chartered by the state and federal governments, which provide the corporations the means to meet their public utility obligations as long as they are in compliance with such provisions as environmental laws (like those of the U.S. Environmental Protection Agency). Cooperative agreements would be needed to develop policies for utility facility locations, such as a wastewater plant.

Water Utilities

The Knox Chapman Utility District is the water utility provider for the entire sector, with the exception of the areas within the city limits of Knoxville which are serviced by the Knoxville Utilities Board. Water is available to most properties in the sector but there are

still properties serviced by private wells. Knox Chapman Utility District recently began construction of a new water treatment plant to replace their current plant, which was built in 1959. This new plant will double the capacity of wastewater capacity 10 million gallons per day (MGD) and has the potential to expand to 14 MGD. If gaps of coverage arise, water service should be expanded to fill those gaps.

Wastewater Utilities

The Knox Chapman Utility Distict is the wastewater utility provider for the entire sector, with the exception of the areas within the city limit of Knoxville which are serviced by the Knoxville Utilities Board. The existing wastewater infrastructure has been installed primarily in the Planned Growth Area, which is primarily along parts of Alcoa Highway, John Sevier Highway, portions of Tipton Station Road, and along Maryville Pike. The wastewater infrastructure should not extend into the Rural Area as designated by the Growth Plan.

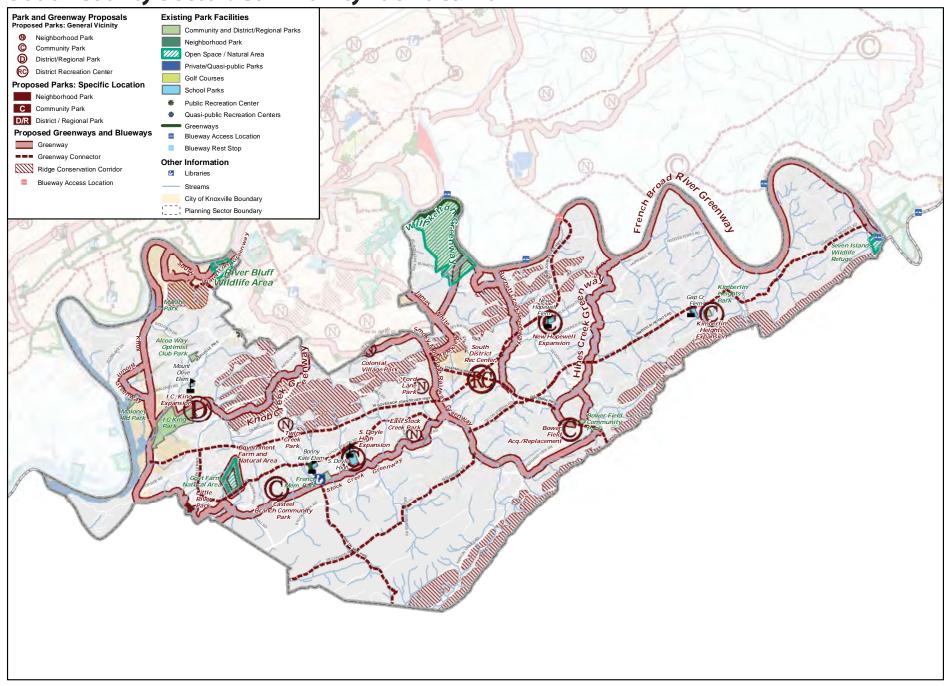
Electrical Utilities

The Knoxville Utilities Board services the sector.

Solid Waste Services

Within the South County Sector, the County's Solid Waste Department provides a convenience center at John Sevier Highway, near the intersection with Twin Creek Road, primarily servicing the western half of the South County Sector. However, another convenience center is located in the East County Sector in Forks of the River industrial park area and services the eastern half of the sector. The centers provide an adequate level of service. The City of Knoxville handles solid waste collection within the city limits.

South County Sector: Community Facilities Plan



Green Infrastructure Plan

Green infrastructure is a planned and managed network in both the natural and built environment. These elements include:

- Natural resource areas, such as streams, wetlands and forests
- Parks and greenways
- Low-impact development techniques, such as perviousparking lots, bioswales and green roofs

A well-connected green infrastructure system has both environmental and economic benefits to communities. These benefits include clean air and water, increased property values, and healthier citizens.

The Green Infrastructure Plan incorporates the components of the Knoxville-Knox County Park, Recreation and Greenways Plan; the Legacy Park Foundation's initiatives; the Knoxville-Knox County Hillside and Ridgetop Protection Plan; the Knox County and City of Knoxville Stormwater Ordinances; and the Knoxville-Knox County Tree Conservation and Planting Plan.



Stock Creek is a polluted waterway. Increasing the buffer via greenway acquisition and streambank restoration would benefit the health of this creek.

Goals:

- Connect residential areas to natural areas and community facilities such as schools and parks
- Balance development and conservation
- Foster more widespread use of development practices that reduce stormwater runoff and protect water quality

Existing Policies Related to Green Infrastructure

Water Resources

Floodways and Floodplains – Structures are not allowed in the floodway zones for the city and county (F-1 and F). For streams with a designated 100-year floodplain, fifty percent of the floodplain can be filled. Development on wetlands and sinkholes is limited by the city and county stormwater ordinances.

Stormwater Best Management Practices – Such practices include bio-retention areas, wetland enhancement and porous paving systems. The practices are illustrated and discussed in the Knox County Stormwater Management Manual, 2008 and the City of Knoxville Best Management Practices Manual.

Hillsides and Ridgetops

The Knoxville-Knox County Hillside and Ridgetop Protection Plan proposes development policies to encourage low density residential development on steeper slopes and recommends minimizing clearing and grading.

Agricultural Areas

The Knoxville-Knox County Growth Policy Plan has a rural area designation to conserve agricultural resources. Additionally, under the Tennessee Greenbelt Law, farmers may elect to request a property tax reduction. Finally, Tennessee has a right-to-farm law, which allows farmers the opportunity to farm even though development may be encroaching nearby.

Schools, Parks and Greenways

The Knoxville-Knox County Park, Recreation and Greenways Plan identifies existing and proposed greenways and parks. Proposed parks are generally located in areas that are currently underserved. The proposed greenways make connections to parks, schools, libraries and other points of interest via pedestrian and bicycle facilities. The Knoxville-Knox County Minimum Subdivision Regulations also allow MPC to consider dedication of education or park land up to 10 percent of the subdivision's acreage.

Streets and Highways

The Knoxville-Knox County Tree Conservation and Planting Plan recommends various transportation corridor strategies to designate scenic routes in rural

settings and enhance arterials such as Chapman Highway by creating public and private planting programs for roadside trees and parking lot landscaping.

Future Implementation Strategies

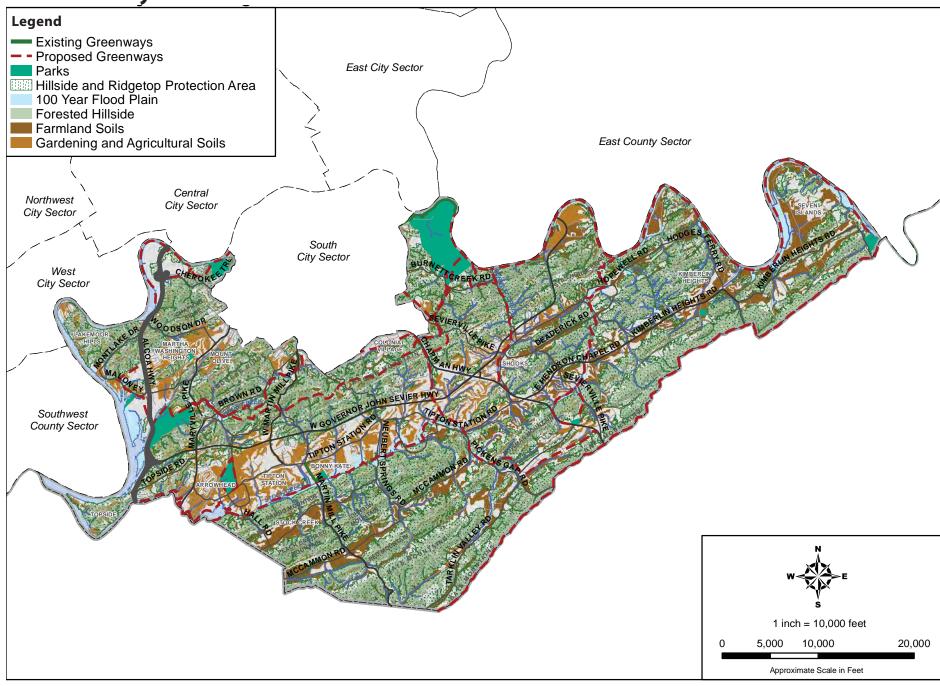
 Support initiatives to connect the green infrastructure assets along Brown's Mountain, the French Broad River and Stock Creek as high priorities. This could include public matching funds for acquisition and fostering private sponsorship to acquire easements and trail development.



One of many cattle farms in the Stock Creek Valley area

- Promote the conservation of farmland and the **continuation of farming**, particularly in the French Broad River Conservation Corridor, working with the U.S. Natural Resource Conservation Service's Farm and Ranchland Protection Program, allowing farmers to create a legacy of farming while being compensated for their development rights.
- Enable homeowners and community groups to identify the most productive soils for personal and community gardening. The Green Infrastructure map shows that there are many areas within the planned growth area that have good agricultural soils; additional information can be secured through the UT Extension Service and the U.S. Department of Agriculture (USDA).

South County Sector: Green Infrastructure Plan



- Work with the City and County Departments of Parks and Recreation and State of Tennessee to **pursue that portion of real estate transfer taxes dedicated to wetland and park purchases**.
- Enact conservation subdivision regulations to foster green infrastructure protection while allowing clustered residential development.



This bioretention swale is located at the Hallsdale-Powell Utility District headquarters.

• As part of the new EPA regulations related to water quality, new city and county ordinances should include incentives to encourage infiltration and allow for flexibility in design of stormwater management facilities along streets, and on the grounds of schools, parks and greenways. These considerations should also be provided to private homeowners wishing to reduce their impact on their watershed. Demonstration projects by both city and county stormwater divisions can be used as both test sites and teaching aids for property owners to learn about installation, benefits and costs for using green infrastructure best management practices.

Transportation Plan

The transportation recommendations are based on previously adopted plans and studies, including the *Knoxville Regional Mobility Plan 2009 - 2034*, the 2002 *South County Sector Plan*, and the *Chapman Highway Corridor Study*, 2006. The South County Sector portion of the Mobility Plan is presented in the Transportation Improvement Plan map. During the course of public meetings, changes were not suggested to the plan.

Prior to implementation of the proposed projects, there should be opportunities for additional public input to address issues of impacts related to adjacent land use, neighborhood protection, and environmental and cultural resource protection. These are principles that are important in developing a sustainable transportation system. It is vital to develop and maintain a transportation network that is accessible, provides mobility to all residents, and does not adversely impact the environment. To meet these goals this plan recommends several implementation tools such as complete streets and greenways.

Additionally there are no general requirements to provide sidewalks with new development. The only exception is in school areas, where sidewalks may be required under the Parental Responsibility Zone (PRZ) with new subdivisions. The PRZ is a one-mile radius around elementary schools and 1.5-mile radius around middle and high schools where parents are responsible for providing transportation to and from school as these zones are not serviced by school buses. As a result, these areas should be targeted for sidewalk creation or improvement (see Transportation Improvement Plan map).

Complete Streets

Complete streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and transit riders of all ages and abilities are able to safely move along and across a complete street. The complete streets principles should guide all future roadway projects.

The greenway connectors, sidewalks, sidepaths and bicycle lanes form types of complete streets. Future bicycle and pedestrian systems, as represented in the *Knoxville Knox*

County Parks, Greenway and Community Facilities Plan, could be implemented to bring a more complete street approach to the sector. As roads are improved, those bicycle and pedestrian systems should be constructed.

Knox Blount Greenway

Phase I of the Knox Blount Greenway connects to Neyland Greenway via the pedestrian bridge on the Buck Karnes Bridge (crossing the Tennessee River) and will continue along the bank of the Tennessee River through the University of Tennessee's Cherokee Farm connecting to Marine Park. From Marine Park the greenway facility will run along Alcoa Highway connecting to the Village Plaza Shopping Center area.

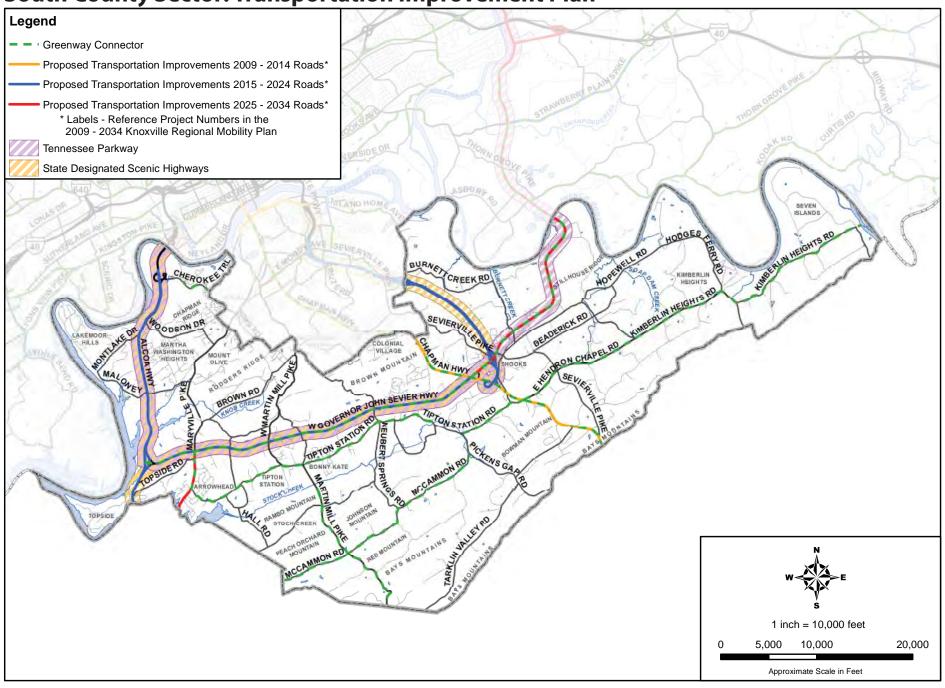
Phase II plans call for the Knox Blount Greenway to connect to the Alcoa-Maryville combined greenway system and eventually through Townsend to the Great Smoky Mountains National Park. This portion of the greenway project is still in the design phase but it will generally continue from the Village Plaza Shopping Center area and connect back to McCarrell Lane. It will then run adjacent to a portion of Maloney Road and then connect back with Alcoa Highway in the vicinity of I.C. King Park. The Knox/Blount Greenway will continue running the length of Alcoa Highway past the interchange with Governor John Sevier Highway crossing the Cates Bridge area into Blount County.

Alcoa Highway and James White Parkway

As of the fall of 2012, final decisions have not been made on these two projects. Safety improvements will be made along Alcoa Highway at Maloney Road and Montlake Road. The objectives of grade separation at those roads have not been changed. However, the concept of frontage roads is under further review.

A decision on the extension of the James White Parkway has not been made. The land use proposals of this plan near the potential parkway location are based in relation to the existing situation. If a decision is reached to build that parkway, the land use plan for that area should be reconsidered.

South County Sector: Transportation Improvement Plan



Section 3: Five- and Fifteen-Year Improvement Plan

The Improvement Plan recommends projects and programs to be implemented for the first five and the next ten years following plan adoption. The 5-Year Plan should be reviewed annually in preparing capital improvement programs.

Project or Program	5-Year	15-Year	Responsible Agency
LAND USE			
Adopt new off-street parking regulations, enabling a choice in how much parking must be provided, assisting in further development of older shopping centers	X		City/County/MPC
Develop John Sevier Scenic Highway Corridor Overlay District guidelines to maintain the rural scenic aesthetic of the highway corridor	Х		City/County/MPC
Implement the French Broad River Conservation Corridor strategies to maintain the rural, scenic and environmental quality of the French Broad River corridor area	Х		County/MPC
COMMUNITY FACILITIES			
Complete the Knox Blount Greenway (greenway trail along the river parallel to Alcoa Highway)		X	City/County/TDOT
Complete the Knob Creek Greenway (link to the proposed Knox Blount Greenway, near Brown Mountain)	Х		City/County
Complete the Smoky Mountain Railroad Greenway (trail from South Waterfront to Sevier County)	Х		City/County
Complete the Stock Creek Greenway (trail from proposed Knox Blount Greenway to the proposed Smoky Mountain Railway Greenway)		x	County
Complete the French Broad River Greenway (County line to Forks of the River Wildlife Management Area), including road sidepaths		х	City/County
Acquire or replace Bower Field (if replaced, a location more central to the Planned Growth Area in South County is recommended)		х	County
Stock Creek Parks: Acquire the Casteel Branch site and portions of the floodplain at South Doyle High School to create two community parks		х	County
New Hopewell School: Acquire 10 to 20 acres to expand into a community park		X	
Complete the South District Recreation Center including indoor and outdoor activities, locate along major arterial		Х	County
TRANSPORTATION			
Safety Improvements on Alcoa Highway	Х		City/TDOT
Safety Improvements on Chapman Highway	Х		City/County/TDOT
Widening and access changes along Alcoa Highway		Х	City/County/TDOT
Widening of John Sevier Highway		Х	City/County/TDOT
James White Parkway Extension		X	City/County/TDOT

APPENDIX A: Public Participation

MPC staff held six public meetings concerning the update of the South County Sector Plan. Public input was gathered by staff taking notes at these meetings, emails sent to staff, phone conversations, comment cards supplied at the meetings, as well as a web-based comment form on the MPC website. The meetings summaries are presented in chronological order.

First Round of Meetings

April 16 and April 19, 2011 Number of Attendees: 28

Parks, Greenways and Recreational Facilities Summarized Comments

- Need more parks, bike lanes and greenways
- Neubert Springs Road is heavily used for bicycling, a bike path is needed
- · More trails for hiking and walking
- Stock Creek Greenway liability concerns
- Expand urban wilderness/historic corridor with connections into South County, including John Sevier historic site
- Need soccer field complex
- · Greenways as outdoor/environmental education and historic resource (example Stock Creek)

Governor John Sevier Highway Corridor Summarized Comments

- Develop scenic overlay John Sevier Highway
- John Sevier Home: 2 miles of trails already to be designated national arboretum...national register
- · John Sevier Corridor, scenic corridor requirements need to be enforced, land use controls are needed, including a design review overlay
- Steep slope areas need to have additional oversight/review before development begins, new standards may be needed, Historic Highway Designation (federal)should be examined

Transportation Summarized Comments

- Improved safety of roads (i.e. speed enforcement) especially small roads
- Traffic signals on John Sevier near condos and new residential areas

- Concerns about many drivers passing in the turn lane on Governor John Sevier Highway
- What happens when subdivisions under construction are completed? Traffic safety
- · Problems exist with smaller intersections: Hopewell and French Roads – 7 or 8 traffic accidents/year now Also Kimberlin Heights and Chapman Highway
- Speeding on Sevierville Pike at Northon
- Speed limit signage needed at Sevierville Pike
- · Chapman Highway at Highland View Road may need turn lanes
- Red light cameras create a hardship on working families

Land Use Summarized Comments

- Slope protection needed
- No mining of limestone
- Continue rural area uses, desire to keep what's residential "residential," city annexation concerns into the Urban **Growth Boundary**
- Conserve scenic beauty
- Concerns about regional areas of intense housing
- Parcels 148003 and 1360781 should be shown on sector plan as commercial to be inline with zoning for parcel across the road 148AB010, which is zoned CA
- Restrict multi-story apartments
- · Encourage condo development
- We need to eliminate highway litter, enforce existing codes for county home owners. This includes non-working vehicles, junk in the yard, general poor maintenance of property
- All historic sites should be included in a historic corridor
- South Knoxville is a lovely place to live, please keep it that way
- · No industry is needed
- Do not let it be over developed

Other Summarized Comments

- · Great iob with the Howard Pinkston library
- Utility company limits growth due to high water/sewer costs; elderly residents have difficulty with high water/sewer costs

Second Round of Meetings

May 8 and May 10, 2012 Number of Attnedees: 14

Parks, Greenways and Recreational Facilities **Summarized Comments**

- Concern about water play areas for recreational water illnesses
- Need for a "Splash Pad" for young children in South Knoxville. The Howard Pinkston Park is right beside a library, has a lovely park for young children and lots of green space to put it. I think it would be a very good idea.
- · Implement greenway connectors

Green Infrastructure Summarized Comments

- The plan does not recognize the likely expansion of the Seven Islands Wildlife Refuge. It probably should be amended to show a refuge extending from the county line downstream about 1 mile between Seven Islands Road and the river to and including the 32 acre island and the associated 18 acres to the north of the cemetery.
- The proposed greenway running along the river needs to be eliminated. Greenways are acquired in fee simple and this one would convert all of the riverfront property it goes through to non-riverfront property. It is unrealistic to expect the property owners to agree to such a proposal and it should be eliminated from the plan.

John Sevier Highway Summarized Comments

Would like to see same language or language that severely limits development along John Sevier Highway, John Sevier Highway needs to be kept scenic, so many spoke out for this. There are so many highways full of commercial buildings. Let's please keep John Sevier Highway one of the few to stay scenic. Commercial areas are already provided at both ends of the highway.

Land Use Summarized Comments

- Light at Chapman Highway and Highland Bad mix of uses with Bower Field and many families and the bar (Daniels) in Highland View Shopping Center
- Check existing land use map north side of John Sevier Highway, east of Twin Creek Road
- Check requirements for foundations for manufactured homes in County

- Check existing commercial north side of Alcoa Highway (is MU-CC logical?)
- Double think MU-CC at Sevier Heights Baptist Church
- Need a policy relative to James White Parkway; should it be extended

French Broad River Conservation Corridor Summarized Comments

• In regard to the French Broad River Conservation Corridor, wonderful!

Transportation Summarized Comments

• More sidewalks needed (particularly to schools)

Third Round of Meetings Alcoa Highway Small Area Plan

September 27, 2012 Number of Attendees: 33

Transportation Summarized Comments

- · Alcoa Highway needs a traffic signal
- Alcoa Highway is an entrance for Knox County and the City of Knoxville from the airport and should be treated as such, as a welcoming area to the city
- Speed limit was once lower, it should be again
- Access via frontage road to commercial will be convoluted
- Should only consider a plan with frontage roads
- T-Bone accidents are the most common
- More police enforcement is needed
- Traffic should be slowed down
- Need public transit down Alcoa Highway
- Greenway/pedestrian ability to walk North/South to downtown, along western edge of expressway
- If Alcoa Highway is classified as an "Expressway" in Tennessee it is in conflict with the FHA definition of "expressway

Land Use Summarized Comments

- City's redevelopment office sees small area plan a step in their process
- Alternative 1 is unacceptable with medium/high density housing right next to us. Already have a failed Maxey development across the street (Maloney Road) and to suggest more destruction is just unthinkable.
- More housing isn't the solution, it's about quality of life.
- Businesses suffer because of the dangerous traffic situation on Alcoa Highway

South County Sector Plan Update - Final Draft

October 1, 2012

Number of Attendees: 18

- Pedestrian bridge across the French Broad River is in the plan, and the language about protecting the landscape is welcome as well
- Would like to see swift movement toward drafting real implementable land use controls for Governor John Sevier Highway to protect the scenic quality of the corridor
- An individual requested that parcel 147 039, along Governor John Sevier Highway, be shown on the land use plan to allow an office with outdoor equipment parking

APPENDIX B: South County Sector Demographics

SOUTH COUNTY SECTOR: RACE/ETHNICITY						
Daga /Fébraición	1990 2000 2005-20		2000		0009*	
Race/Ethnicity	South County	Knox County	South County	Knox County	South County	Knox County
White	17,374	301,788	18,683	336,204	19,792	369,431
Black or African American	110	29,299	295	33,069	702	37,586
American Indian and Alaska Native	216	996	40	1,183	62	889
Asian	16	3,070	53	4,548	133	7,043
Native Hawaiian and Other Pacific Islander	0	66	0	35	14	22
Some other race	18	530	169	6,993	338	8,684
Hispanic or Latino	70	1,935	218	4,431	154	9,899
TOTAL	17,804	337,684	19,458	386,463	21,195	433,554

SOUTH COUNTY SECTOR: POVERTY STATUS							
Dougles Chaters		1990		2000		2005-09*	
Poverty Status	South County	Knox County	South County	Knox County	South County	Knox County	
Total population for whom poverty status is determined	17,420	323,827	18,858	369,911	20,014	410,374	
Persons below poverty level	1,875	45,608	2099	46,572	2,275	60,187	

SOUTH COUNTY SECTOR: HOUSING OCCURPANCY AND TENURE						
Housing Ossungney and Tonura	1990		2000		2005-2009*	
Housing Occupancy and Tenure	South County	Knox County	South County	Knox County	South County	Knox County
Total units	7,204	143,582	8,397	171,439	8,999	192,729
Occupied	6,705	133,639	7,788	157,872	8,340	177,175
Owner occupied	• 5,397	• 85,283	• 6,308	• 105,594	• 6,740	• 119,078
Renter occupied	• 1,308	• 48,356	• 1,480	• 52,278	• 1,600	• 58,097
Vacant	499	9,943	609	13,567	659	15,554

^{*} The data listed in this column are from the U.S. Census Bureau's American Community Survey, 2005 to 2009. That survey is based on a sample of the population and the figures are composed from an average of all the sampled data for the five-year period.

APPENDIX C: Land Use Classifications

AGRICULTURAL and RURAL RESIDENTIAL LAND USE CLASSIFICATIONS

Agricultural (AG) and Agricultural Conservation (AGC)

This includes farmland in the county's Rural Area as designated in the Growth Policy Plan. Undeveloped tracts with the best soils for agriculture are considered as the primary areas for agricultural conservation (AGC). Agricultural land uses are not generally recommended in the City of Knoxville, nor in the County's Planned Growth Area.

Location Criteria:

- Farmland in the Rural Area as designated in the Growth Policy Plan
- Land where soils are designated as prime or locally important by the U.S. Department of Agriculture are considered for agricultural conservation (AGC)

Recommended Zoning and Programs:

County's Rural Area: A new zone AC (Agricultural Conservation) is proposed for Agricultural Conservation (AGC) areas, allowing agriculture and one dwelling unit per 30 acres, minimum. (Note: This density will require a change to the zoning ordinance.) Additionally, conservation easement and related programs should be considered to preserve prime farmland.

Other Zoning to Consider:

A or PR @ densities of one dwelling unit per acre where dwellings are clustered in one portion of a subdivision.

Rural Residential (RR)

Very low density residential and conservation/cluster housing subdivisions are typical land uses.

Location Criteria:

- Rural areas characterized as forested (tree covered), especially on moderate and steep slopes
- Sites adjacent to agricultural areas (AG or AGC) where conservation/cluster housing subdivisions may be appropriate

Recommended Zoning and Programs:

County's Rural Area: OS, E, RR (Rural Residential, a new zone with densities of one dwelling unit per acre or less), or PR @ densities of one dwelling unit per acre where dwellings may be clustered in one portion of a subdivision

Other Zoning to Consider:

A in the Growth Plan's Rural Area

RESIDENTIAL LAND USE CLASSIFICATIONS

Traditional Neighborhood Residential (TDR)

This land use is primarily residential and is characterized by neighborhoods where a mix of detached and attached houses, sidewalks, smaller lots and alleys have typically been or are to be created. Densities in the range of 4 to 8 dwelling units per acre are typical.

Location Criteria:

- Neighborhoods like those in the 'Heart of Knoxville' where lots are typically less than 50 feet wide, and usually have sidewalks and alleys. This area is essentially the 19th and early 20th century grid street neighborhoods, mostly located within the I-640 beltway.
- City's Urban Growth Area or county's Planned Growth Areas where neighborhood or community mixed use development is identified (see Mixed Use and Special Districts section)

Recommended Zoning and Programs:

City:

R-1A or RP-1 [with an Infill Housing (IH-1), Neighborhood Conservation (NC-1) or Historic (H-1) Overlay];

TND-1; and new residential zone(s), based on lot sizes less than 7,500 square feet

County's Planned Growth Area: PR and new TND zoning.

Other Zoning to Consider:

City:

R-1, R-1A and RP-1 (without overlays), R-2

County's Planned Growth Area:

 $\ensuremath{\mathsf{RA}}, \ensuremath{\mathsf{RB}}$ and $\ensuremath{\mathsf{PR}}$ (with conditions for sidewalks, common open spaces and alleys)

RESIDENTIAL LAND USE CLASSIFICATIONS . . . continued

Low Density Residential (LDR)

This type of land use is primarily residential in character at densities of less than 6 dwelling units per acre (dus/ac). Conventional post-1950 residential development (i.e. large-lot, low-density subdivisions) and attached condominiums are typical.

Location Criteria:

- · Land served by water and sewer utilities and collector roads
- · Slopes less than 25 percent

Recommended Zoning and Programs:

City: R-1, R-1E and RP-1 at less than 6 dus/ac and new residential zones based on lot sizes greater than 7,500 square feet and 75 feet or greater frontage. County's Planned Growth Area: RA, RAE and PR at less than 6 dus/ac.

Other Zoning to Consider:

City: R-1A and A-1 County: A and RB

Medium Density Residential (MDR)

Such land uses are primarily residential at densities from 6 to 24 dwelling units per acre (city) and 6 to 12 (county). Attached houses, including townhouses and apartments are typical. Mobile home parks are another form of this land use.

Location Criteria:

- · As transitional areas between commercial development and low density residential neighborhoods
- On land with less than 15 percent slopes
- Along corridors that are served by or proposed to be served by transit, with densities proposed to be above 12 dwelling units per acre and to be served by sidewalks

Recommended Zoning and Programs:

City: R-2, R-3 and R-4 (within the 'Heart of Knoxville' area such zoning should be accompanied by an IH-1, NC-1 or H-1 overlay); otherwise, R-1A, RP-1, RP-2 or RP-3. Densities above 12 dus/ac should be within ¼ mile of transit service with sidewalk connections to transit service.

County's Planned Growth Area: PR. densities above 12 dus/ac should be within 1/4 mile of transit service with sidewalk connections to transit service: RB at 6 or more dus/ac may be considered with use on review. (Note: This proposed 6 dus/ac threshold for use on review will require a zoning ordinance change.)

Other Zoning to Consider:

City's Urban Growth Boundary: R-2, R-3 and R-4

High Density Residential (HDR)

This land use is primarily characterized by apartment development at densities greater than 24 dwelling units per acre.

Location Criteria:

- · On major collector and arterial streets, adjacent to regional shopping and major office districts (office sites allowing four or more stories); these sites must be identified in sector or small area plans
- · Within the CBD or its adjacent areas, such as portions of the Morningside community
- On relatively flat sites (slopes less than 10 percent)
- Along corridors with transit and sidewalks

Recommended Zoning and Programs:

C-2, RP-2 and RP-3, and new form-based codes (e.g. South Waterfront). R-3 and R-4 (with an IH-1, NC-1 or H-1 overlay in the 'Heart of Knoxville' area)

Other Zoning to Consider:

TC-1 and TC (where higher density residential is part or a mixeduse project)

RESIDENTIAL LAND USE CLASSIFICATIONS... continued

Medium Density Residential/Office (MDR/O)

Office and medium residential uses typically have similar development characteristics: scale of buildings, areas devoted to parking, yard spaces and location requirements (on thoroughfares). In areas designated MU-MDR/O, either use can be created. These uses provide a buffer to low density residential areas, particularly when located adjacent to a thoroughfare or as a transition between commercial uses and a neighborhood.

Location Criteria:	Recommended Zoning and Programs:	Other Zoning to Consider:
Soo Madium Dancity Decidential (MDD) criteria	City: RP-1, RP-2, RP-3	City: O-1, O-2
See Medium Density Residential (MDR) criteria	County: PR	County: OB

OFFICE and BUSINESS/TECHNOLOGY LAND USE CLASSIFICATIONS

Office (O)

Location Criteria:

This land use includes business and professional offices and office parks.

_	ocation criteria.
•	Low intensity business and professional offices (less than
	three stories) may be transitional uses from commercial or
	industrial uses to neighborhoods

- Generally level sites (slopes less than 15 percent)
- Access to major collector or arterial streets, particularly within one-quarter mile of such thoroughfares
- Highest intensity office uses (development that is four or more stories), should be located in close proximity to arterial/freeway interchanges or be served by transit

Recommended Zoning and Programs: City: O-1, O-2, O-3, or a new office zone that requires site plan review

County's Planned Growth Area: OA, OC, PC (with covenants) or a new office park zone that requires site plan review

Other Zoning to Consider:

In areas that are identified in sector plans exclusively as office land uses, OB.

Technology Park (TP)

Location Criteria

This land use primarily includes offices and research and development facilities. The target area for such development has been the Pellissippi Technology Corridor. Additional districts could be created in other areas of the city or county. The development standards that are adopted by the Tennessee Technology Corridor Development Authority should be used for such districts.

Location officia.
Within the Technology Corridor or subsequent areas
designated for Technology Park development
Sites near freeway interchanges or along major arterials
Water, sewer and natural gas utilities available

Recommended Zoning and Programs: City: BP-1

Other Zoning to Consider:

| EC

County's Planned Growth Area: BP and PC

(with covenants limiting uses to research/development)

(with limitations to require office and research/development uses)

RETAIL and RELATED SERVICES LAND USE CLASSIFICATIONS

Rural Commercial (RC)

This classification includes retail and service-oriented commercial uses intended to provide rural communities with goods and services that meet day-to-day and agricultural-related needs.

Location Criteria:	Recommended Zoning and Programs:	Other Zoning to Consider:
At the intersection of two thoroughfares	County's Rural Area: CR	CN
(arterial or collector roads)	PC as provided in Growth Policy Plan	
Rural commercial nodes should generally not exceed more		
than 300 feet in depth and lots and not extend more than		
300 feet away from the intersection		

RETAIL and RELATED SERVICES LAND USE CLASSIFICATIONS . . . continued

Neighborhood Commercial (NC)

This classification includes retail and service-oriented commercial uses intended to provide goods and services that serve the day-to-day needs of households, within a walking or short driving distance. Neighborhood commercial uses may also be accommodated within neighborhood centers (see Mixed Use and Special Districts).

Location Criteria:

- · Generally located at intersections of collectors or arterial streets at the edge of or central to a neighborhood
- New NC should not be zoned for or developed within ½ mile of existing commercial that features sales of day-today goods and services
- Automobile-oriented uses (e.g. gas stations or convenience stores) should be located on arterial street at the edge of neighborhood
- Should not exceed the depth of the nearby residential lots and not extend more than a block (typically no more than 300 feet) away from the intersection

Recommended Zoning and Programs:

City: C-1

County's Planned Growth Area: CN

Other Zoning to Consider:

SC-1

Community Commercial (CC)

This land use includes retail and service-oriented development, including shops, restaurants, and what has come to be known as "big box" retail stores; typical service area includes 20,000 to 30,000 residents. Community commercial uses may also be considered within community centers (see Mixed Use and Special Districts).

Location Criteria:

- Locate at intersection of arterial streets
- Sites should be relatively flat (under 10 percent slope) and with enough depth to support shopping center and ancillary development.
- · Vehicular and pedestrian connections should be accommodated between different components of the district (e.g. between stores, parking areas and out-parcel development)
- Infrastructure should include adequate water and sewer services, and major arterial highway access
- · Community commercial centers should be distributed across the city and county in accordance with recommended standards of the Urban Land Institute

Recommended Zoning and Programs:

Because of traffic and lighting impacts (potential glare) and buffering needs of surrounding interests, 'planned zones' should be used.

City: SC-2, PC-1 and PC-2.

County's Planned Growth Boundary: PC or SC

Other Zoning to Consider:

As infill development within areas already zoned C-3, C-4, C-5 and C-6 (City), and CA, CB and T (County)

RETAIL and RELATED SERVICES LAND USE CLASSIFICATIONS . . . continued

Regional Commercial (RS)

This land use includes retail and service-oriented development that meets the needs of residents across Knox County and surrounding areas. Development typically exceeds 400,000 square feet; malls have been a typical form and 'life-style centers' (e.g. Turkey Creek) are examples of regional-oriented commercial uses. Regional commercial uses may also be considered in Regional Centers (see Mixed Use and Special Districts).

Location Criteria:

- Flat sites (under 10 percent slope)
- Locate near interstate interchanges with major arterial highway access
- Water, sewer, gas and stormwater systems should be capable of handling the development
- Vehicular and pedestrian connections should be accommodated between components of the development

Recommended Zoning and Programs:

Because of the magnitude of the traffic and environmental impacts, planned zones should be used.

City: SC-3, PC-1 and PC-2

County's Planned Growth Boundary: PC

Other Zoning to Consider:

As infill development within areas already zoned C-3, C-4, C-5 in the City

CA, CB and SC in the County

General Commercial (GC)

This category includes previously developed strip commercial corridors providing a wide range of retail and service-oriented uses. Such land use classification and related zoning should not be extended because of the adverse effects on traffic-carrying capacity, safety and environmental impacts. Redevelopment of commercial corridors, including mixed use development, should be accommodated under planned or design-oriented zones.

Location Criteria:

• Existing commercial areas

Recommended Zoning and Programs:

City: C-6 and PC-1

County's Planned Growth Area: PC

New corridor design overlays when designated as special districts (see Mixed Use and Special Districts)

C-3, C-4, C-5, SC-1, SC, CA and CB for infill commercial development in areas previously zoned for commercial uses

MIXED USE and SPECIAL DISTRICTS

There are several types of mixed-use areas: neighborhood, community and regionally-scaled districts and urban corridors. Mixed Use areas can be developed with higher intensity uses because of infrastructure and ability to sustain alternative modes of transportation. Development plan review is crucial. These areas should typically be created with sidewalks. Shared parking may be considered. Automobile and truck-dependent uses, such as heavy industrial, distribution and highway-oriented commercial uses should not be located in neighborhood, community and regional mixed-use centers. There are likely to be several distinctions between types of mixed use designations. Each Sector Plan and the One Year Plan will have a separate section which outlines the intent of each mixed use district and the development criteria for the district.

1. Neighborhood Mixed Use Center (MU-NC)

These are the least intense of the proposed mixed use districts. Residential densities of 5 to 12 dus/ac are appropriate within the area. Locations at the intersection of a local street and thoroughfare are generally most appropriate. The surrounding land uses should primarily be planned for low or medium density residential. The buildings of these centers should be designed with a residential character and scale to serve as a complement to the surrounding neighborhoods.

Location Criteria:

- Flat terrain (slopes generally less than 10 percent)
- Currently served by or planned to be served by sidewalks
- The location does not include auto and truck-oriented uses such as industrial, strip commercial and warehouse/ distribution uses unless the proposal calls for a redevelopment of such areas
- At the intersection of a local street and throughfare
- · Next to low or medium density residential

Recommended Zoning and Programs:

TND-1

Other Zoning to Consider:

Other form- or design-based codes

MIXED USE and SPECIAL DISTRICTS . . . continued

2. Community Mixed Use Center (MU-CC)

These centers are envisioned to be developed at a moderate intensity with a variety of housing types (8 to 24 dus/ac). The core of the district, with its predominant commercial and office uses, should be within ¼ mile of the higher intensity residential uses (such as townhouses and apartments). The district should be located within a ¼-mile radius of an intersection of the thoroughfare system (a collector/arterial or arterial/arterial intersection). In addition to sidewalks, the district should be served by transit. Redevelopment of vacant or largely vacant shopping centers are considerations for these centers.

Location Criteria:	Recommended Zoning and Programs:	Other Zoning to Consider:
Flat terrain (slopes generally less than 10 percent)	TC-1, TC	Other form- or design-based codes
Areas currently served by or planned to be served by		
sidewalks		
The location does not include auto and truck-oriented		
uses such as industrial, strip commercial and warehouse/		
distribution uses unless the proposal calls for a		
redevelopment of such areas		
• Within a ¼-mile radius of an intersection of the thoroughfare		
system (a collector/arterial or arterial/arterial intersection)		
Commercial/office core should be within ¼ mile of the		
higher intensity residential uses (e.g. townhouses and		
apartments)		
Areas currently served by or planned to be served by		

3. Regional Mixed Use Center (MU-RC)

sidewalks and transit services

These are envisioned to be highest intensity mixed use centers. These districts should be served by sidewalk and transit systems and be located on a major arterial, adjacent to an Interstate highway or adjacent to downtown. Housing densities in the core of such districts can be 24 or more dus/ac. Downtown Knoxville's Central Business District is a regional mixed use center.

Recommended Zoning and Programs: Other Zoning to Consider: **Location Criteria:** • Flat terrain (slopes generally less than 10 percent) C-2 in the Central Business District (Downtown): an Other form- or design-based codes Currently served by or planned to be served by sidewalks adaptation of C-2 for the 'Downtown North' area (Central City The location does not include auto and truck-oriented Sector); TC-1, TC or new form-based codes (and regulating uses such as industrial, strip commercial and warehouse/ plans) for other community and regional centers distribution uses unless the proposal calls for a redevelopment of such areas · On a major arterial, adjacent to an interstate highway or adiacent to downtown

4. Urban Corridor Mixed Use (MU-UC)

Several street corridors within the city have potential for redevelopment with a mix of retail, restaurants, office and residential uses. Commercial cores should be created at points (nodes) along these corridors, allowing a vertical mix of uses (for example, shops at ground level and apartments above); such nodes should not be more than four blocks long.

Location Criteria:	Recommended Zoning and Programs:
 Corridors should have sidewalks, transit services, street 	City: form-based or design-based codes
trees and related beautification	(e.g. South Waterfront)
Capable of sustaining on-street parking along corridor or	
along side streets	

MIXED USE and SPECIAL DISTRICTS . . . continued

5. Special Mixed Use District (MU with reference number)

These can include designations to address urban design, pedestrian and transit-oriented development and vertical mixed use in designated areas. The areas may include older portions of the city or county where redevelopment and/or preservation programs are needed for revitalization purposes.

Location Criteria:

Recommended Zoning and Programs: · Case-by-case analysis is recommended

TND-1, TC-1, TC, especially in greenfield areas, or form-based or designed-based codes as noted in the Sector Plan and One Year Plan for each of these districts.

6. Special Corridors (CD with reference number)

These can include designations to address urban design and environmental concerns along commercial or industrial corridors (where overlays for aesthetic reasons or sidewalks may be recommended, like the Chapman Highway corridor). Other potential corridor designation could include rural/farmland conservation areas.

Location Criteria:

Recommended Zoning and Programs:

· Case-by-case analysis is recommended

Should be noted in the Sector Plan and One Year Plan for each of these districts.

INDUSTRIAL AND WAREHOUSE/DISTRIBUTION LAND USE CLASSIFICATIONS

Light and Heavy Industrial (LI and HI) and Mining (HIM)

These classifications are typically used to identify older industrial areas, which were intended for manufacturing, assembling, warehousing and distribution of goods. Light industrial uses include such manufacturing as assembly of electronic goods and packaging of beverage or food products. Heavy industrial uses include such processes used in the production of steel, automobiles, chemicals, cement, and animal by-products and are viewed as clearly not compatible with areas designated for residential, institutional, office and retail uses. Quarry operations and asphalt plants are a particular form of heavy industrial, generally located in rural areas.

Location Criteria:

- Existing industrial areas
- · Within one mile of an interstate interchange with access via standard major collector or arterial streets

Recommended Zoning and Programs:

City: I-1, I-2, I-3 and I-4 (infill development, using those zones, may be appropriate); C-6, PC-2 and a new planned, industrial zone, that requires site plan review, may be warranted to address environmental and transportation issues and surrounding community concerns.

County's Planned Growth Boundary: LI; EC zone should be used in future development

Other Zoning to Consider:

County: I (Industrial) zoning should be used in cases involving rezonings to accommodate mining activities and should be accompanied by buffering and other conditions to protect adjacent property owner.

PC, LI, I and CB may be considered for infill industrial development.

Business Park (BP) Type 1

Primary uses are light manufacturing, office and regionally-oriented warehouse/distribution services in which tractor-trailer transportation is to be a substantial portion of the operations. A zoning category which requires site plan review is expected in the development or redevelopment of such areas. Site plans shall address landscaping, lighting, signs, drainage, and other concerns that are raised in the rezoning process. Substantial landscaped buffers are expected between uses of lesser intensity, particularly residential, office and agricultural uses.

Location Criteria:

- Relatively flat sites (predominant slopes less than 6 percent) out of floodplains
- Relatively large sites (generally over 100 acres)
- Away from low and medium density areas or where truck traffic would have to go through such areas
- Areas with freeway and arterial highway access (generally within two miles of an interchange)
- Rail access is a consideration
- Can be served with sanitary sewer, water and natural gas

Recommended Zoning and Programs:

City: I-1, C-6, PC-2 or a new Planned Industrial Park zone

County's Planned Growth and Rural Areas: EC

Other Zoning to Consider:

PC

INDUSTRIAL AND WAREHOUSE/DISTRIBUTION LAND USE CLASSIFICATIONS . . . continued

Business Park (BP) Type 2:

Primary uses are light manufacturing, offices, and locally-oriented warehouse/distribution services. Retail and restaurant services, which are developed primarily to serve tenants and visitors to the business park can be considered. A zoning category which requires site plan review is expected in the development or redevelopment of such areas. Site plans must include provisions for landscaping, lighting and signs. Substantial landscaped buffers are necessary between uses of lesser intensity, particularly residential, office and agricultural uses.

Location Criteria:

- Relatively flat sites (predominant slopes less than 6 percent) out of floodplains
- Relatively large sites (generally over 100 acres)
- Away from low and medium density areas or where truck traffic would have to go through such areas
- Freeway and arterial highway access (generally within two miles of an interchange)
- · Rail access is a consideration
- · Sites that can be served with sanitary sewer, water and natural gas

Recommended Zoning and Programs:

City: I-1, C-6, PC-2 or a new Planned Industrial Park zone

County's Planned Growth and Rural Areas: EC

Other Zoning to Consider:

PARK, PUBLIC INSTITUTIONAL, OTHER OPEN SPACE & ENVIRONMENTAL PROTECTION LAND USE CLASSIFICATIONS

Public Parks and Refuges (PP)

This land use classification contains existing parks, wildlife refuges or similar public or quasi-public parks, open spaces and greenways. It also contains quasi-public spaces, which are owned by civic or related organizations. Location criteria is not needed relative to large components of the park system, like community, district and regional parks and refuges; these areas are generally established through capital expenditures or land transfers from state or federal governments.

Location Criteria:

- Neighborhood parks, squares and commons should be within 1/4 mile of residents in the traditional residential areas (particularly the 'Heart of Knoxville') and within ½ mile of residents within the balance of the city and county's Planned Growth area.
- Greenways should be located along or within the flood plains of streams and rivers/reservoirs. Other potential locations include ridges and utility corridors.

Recommended Zoning and Programs:

City: OS-1

County's Planned Growth and Rural Area: OS, E and OC

A new zone should be created to designate parks, schools and similar institutional lands for both city and county jurisdictions.

Other Zoning to Consider:

Other zones that allow parks and open space as permitted

Civic/Institutional (CI)

Land used for major public and quasi-public institutions, including schools, colleges, the university, churches, correctional facilities, hospitals, utilities and similar uses.

Location Criteria:

- Existing public uses, other than parks and greenways
- Quasi-public uses of two acres or more

Recommended Zoning and Programs:

City and County: New zoning categories for such uses or continue to use conventional zones (e.g. O-1, O-2 and OC)

Other Zoning to Consider:

Other zones that allow civic/institutional as permitted uses.

Other Open Space (OS)

Land uses include cemeteries, private golf courses, and similar uses.

Location Criteria:

• Existing cemeteries, private golf courses and private open spaces

Recommended Zoning and Programs:

City: OS-1 and a new zone created to designate parks. schools and similar institutional lands County's Planned Growth and Rural Area: OS, E and OC

Other Zoning to Consider:

A-1, and A

PARK, PUBLIC INSTITUTIONAL, OTHER OPEN SPACE & ENVIRONMENTAL PROTECTION LAND USE CLASSIFICATIONS . . . continued

Hillside/Ridge Top Protection Areas (HP)

This classification is used to identify hillsides, ridges and similar features that have a slope of 15 percent or more. Open space, recreation land or very low density housing (one dwelling unit per two acres) is recommended for slopes exceeding 25 percent. For slopes of 15 to 25 percent, housing densities should not exceed 2 dus/ac). Office uses may also be considered. Building height should not exceed 35 feet.

Location Criteria:	Recommended Zoning and Programs:	Other Zoning to Consider:
Hillsides greater than 15 percent slope	City: RP-1, OS-1 and a new hillside protection zoning overlay,	Other zones that require use-on-review
	that has standards for various residential and office land	
	uses and the amount of land disturbance that can take place	
	relative to the degree of slope.	
	County's Planned Growth and Rural Areas:	
	OS, E, A (on slopes less than 15 percent) and PR; a new	
	hillside protection zoning overlay, that has standards for	
	various residential and office land uses and the amount of land	
	disturbance that can take place relative to the degree of slope.	

Stream Protection Areas (SP)

Typically these are areas which are subject to flooding. Such areas include both the floodway, which carries the significant portion of stormwater, and the 500-year flood fringe, which the city and county govern with various stormwater regulations.

Location Criteria: Recommended		mended Zoning and Programs:				
	Floodways and flood fringes	City: F-1 and 'planned zones' (such as RP-1 and PC-1), which entail site plan review.				
		County's Planned Growth Area: F and 'planned zones' (such as PR and PC), that require site plan review to address				
		flooding and stream protection issues				
	Water (W)					

Typically includes the French Broad River, Holston River, Fort Loudoun Lake/Tennessee River, and Melton Hill Lake/Clinch River.

Location Criteria:	Recommended Zoning and Programs:
Rivers, TVA reservoirs	City: F-1
	County: F

Major Rights of Way (ROW)

Generally, the rights-of-way of interstates and very wide parkways and arterial highways are depicted on the future land use map.

APPENDIX D: Existing Agricultural, Forest, and Open Space Land Protection Programs

U.S. Department of Agriculture Farm and Ranch Land Protection Program

First established in 2002, this program was extended in 2008 with slight modifications. The modifications include forest land conservation. The program can be used by a farmer to conserve a farm and be compensated for the sale of development rights of a farm. A conservation easement is placed on the farm to conserve its agricultural use in perpetuity. To accomplish this, the program provides federal funds to cover 50 percent of the cost of the farm's development rights (determined via an appraisal which is based on the difference between current value as farmland and the market value for the land's conversion to residential or other more intense use, allowed by existing plans and regulations. To qualify for the 50 percent match, a non-profit or similar entity has to provide 25 percent of the easement acquisition. The land owner must contribute the remaining 25 percent (which may be accomplished via a donation, which in essence would be proceeds of the sale of the development rights to the farmer by 25 percent).

A local example of the use of this program is the conservation of the Cruze farm (pictured below) on the north side of the French Broad River.

State of Tennessee Greenbelt Protection Program

Tennesseans can pay less property tax if it is dedicated to farm, forestry, or open space uses. Usually, the amount of property tax is based on what it is worth on the market. The Agricultural, Forest and Open Space Act of 1976, known as the Greenbelt Law, allows certain land to be taxed at a reduced rate based on present use instead.

Provisions for each type of greenbelt parcel are:

Agricultural Land includes resources used for the production or growing of crops, plants, animals, nursery, or floral products. It may also include a home site for the owner or farm operator, although tax breaks are not given for the residential part of the farm. To qualify for greenbelt status, farm property must be a minimum of 15 acres and produce an average annual gross income (including farm sales, farm rent, or farm federal support payments) of at least \$1,500.

Forestry Land is property of 15 acres or more used in the growing of trees under a program of sustained yield management (letting trees grow to be capable of producing lumber). Forest land does not have to produce a specific income in order to be considered for greenbelt status.

Open Space Land is property of three acres or more maintained in open or natural condition. It benefits the public because it conserves natural resources, provides a natural setting for people who might not otherwise have access to such a place, and otherwise provides relief from the monotony of urban sprawl. Although the public may use the property for recreation, properties which have been significantly developed for this purpose, such as golf courses, do not qualify. The property must be included within a plan for preservation approved by the state or local planning agencies, or the owner must execute a perpetual open space easement – which requires the owner of the land to maintain the property's open and natural character - in favor of the state Commissioner of the Environment and Conservation on terms approved by the commissioner.

To qualify for greenbelt, an application must be approved by the county tax assessor. Once approved, an owner does not have to reapply each year.

Property approved for greenbelt status is valued by the assessor at both its market value and use value. However, the assessment is based only on the use value.



APPENDIX E: South County Sector Archaeological and Historic Resources

Many of the resources in this sector are on the National Register of Historic Places. Through the preservation of the sites, present and future generations can better understand early settlement life, including the importance of agriculture, river transportation and religious history. National Register status offers potential protection from federally funded construction projects and possible income tax incentives.

Pre-History

Native Americans have lived in the lower French Broad River valley for at least 12,000 years. The history of their occupation can be divided into five major cultural periods.

Paleo-Indian Period (12,000 B.C. – 8,000 B.C.)

The Paleo-Indians were the first native people to arrive in the French Broad River valley before the end of the last Ice Age, 12,000 or more years ago. They seasonally moved through the area, hunting Mastodon and other big game. Their distinctive lanceolate spear points have been found scattered throughout the valley.

Archaic Period (8,000 B.C. - 1,000 B.C.)

At the end of the Ice Age, changes began in the lifeways of native people. While hunting continued, smaller animals such as deer and turkey, were sought. Fish, shellfish, and plant foods such as hickory nuts, acorns, walnuts and chestnuts became mainstays of sustenance. While still moving seasonally, a growing population now lived longer in campsites, usually established on the floodplain terraces.

Woodland Period (1,000 B.C. – A.D. 1000)

During this period, native people along the French Broad River were beginning to plant gardens, growing such plants as gourd-like squash and sunflower. Technological development, such as pottery and later, the bow and arrow, were highlights of the period. Agriculture supported small, permanent villages. The dead were often laid to rest in burial mounds.

Mississippian Period (A.D. 1000 – A.D. 1600)

Mississippian people established small villages and large

towns, which were centers of political and religious life. A planned layout of substantially built houses around a plaza and large flat-topped mounds were the centerpiece for religious structures and the residence of the chief. Larger populations were supported by intensive farming of corn, beans, and squash.

Historic Period (A.D. 1600 - A.D. 1835)

Villages of the Mississippian Period were still in place after 1600. However, due to European-introduced disease and warfare, the population of these ancestors of the Cherokee declined dramatically. Eventually they moved into smaller villages in the Great Smoky Mountains where they remained until they were removed by the U.S. Government in the 19th century. A few intrepid survivors remained there and their descendants still live today.

Archeological Sites

For the most part, the archaeological richness of the area remains largely unknown. Studies by the University of Tennessee and the State of Tennessee have confirmed that the presence of various cultural components from the five periods are represented along the lower reaches of the Knox County's French Broad River valley. The focus of substantial portions of these investigations has been on the north side of the river, where a significant Late Mississippian town was discovered. In the past decade, systematic testing of archaeological sites has indicated that many sites are deeply buried and undisturbed and were intensively occupied for thousands of years. Additionally, the university has worked to create a model to better understand where archeological resources would likely be found.

History of Settlement

The first settlers of Knox County migrated over the Appalachians from the Carolinas or followed the path of the rivers from the Shenandoah Valley and the short-lived State of Franklin in upper East Tennessee. What became Knox County was still part of North Carolina when

settlement began. Many early settlers were motivated by the "Land Grab Act" of 1783, a piece of North Carolina legislation that was enacted to sell the state's western lands to produce revenue. William Blount, then in the North Carolina congress, was instrumental in creating the act, resulting in the sale of millions of acres in the Tennessee Valley. Speculators "grabbed" the opportunity to purchase land because the price per acre was extremely low.

Mills and ferries were influential in early settlement life in the late 18th and early 19th centuries. Mills allowed the farmers to produce grain, particularly wheat, and sell flour to markets outside the region. Ferries were the points of contact between the two shores of the river, fostering commerce and communication. Weirs were constructed at shallow points along the river to facilitate shipping. In such places as the shoals of Seven Islands, teams of mules were used to move boats when the water flow was particularly low. Agriculture was the dominant industry. From 1795 to 1830, the method of agriculture was settled field and livestock culture. The agricultural economy increased with the rest of the South in the mid-1800s; production included livestock and grains, primarily corn and wheat.

Communities spanned both sides of the French Broad River as a result of ease of movement with ferries, such as those operated by Hodges and Huffaker. The Seven Islands community is an example of community life spanning the river. It was tied to the Frazier Bend and Kelly Bend communities by the Huffaker Ferry. The first settler in Seven Islands was William Hines, the operator of the saw and gristmill which served the Boyd's Creek settlers in the 1780s. Another early settler was Peter Keener who also operated a sawmill and whose house still stands overlooking the river. Other settlers included Catherine Huffaker and her sons, George and Justus, William Widner, Henry Frazier and the Newman and Underwood families.

Kimberlin Heights was first settled in 1786 by Greene and James Cozby, friends of James White. In 1787, Jacob Kimberlin found lead in the area where Johnson

University (formerly Johnson Bible College) now stands. Early settlers of this area were the Kellys, Huffakers, Keeners, Fraziers and Bowmans. According to the Postal Gazetteer of 1859, the post office for this community was called Gap Creek; however, the name was changed to Kimberlin Heights in 1887. The post office was located in the home of Dr. Ashley Sidney Johnson who had been appointed postmaster. Dr. Johnson probably changed the name since he had moved to the house of his grandfather, Jacob Kimberlin, which served as the local post office facilitating correspondence with his bible college students. Frazier Bend on the opposite side of the French Broad River, is closely linked with the Kimberlin Heights community. It was originally settled in the 1790s, and its early residents included Henry Frazier and Robert and Jeremiah Johnson.

The patterns of early settlement, particularly agriculture, are carried on today. That is apparent in looking at the landscape with its late-18th century and 19th century farmhouses and outbuildings. That part of the agricultural setting has not changed for generations, especially along much of the French Broad River and in the southern valleys near Bays Mountain.

The New Hopewell community developed around the New Hopewell Baptist Church, which was established as a one room church and school house around 1836. The congregation grew, requiring new church facilities. The current New Hopewell Elementary School is in the same vicinity.

A series of pioneer settlements were formed along the Little River and the French Broad River. These were like homesteads, upon which settlers often crafted log houses and farmed their land. Significant among them was Marble Springs, created by John Sevier.

Within these communities there are several sites that are listed on the National Register of Historic Places: Marble Springs, Seven Islands Community and New Salem United Methodist Churches, and the Keener, Daniel, Bowman-Hodges-McBee and Badgett-Russell Houses. "Thumbnail" descriptions of the resources follow.



Charles Barber House (c.1930) Alcoa Highway

This house was designed by and became the home of Charles Barber, a renown early 20th Century architect. The house is a fine blend of the Classical Revival and Colonial Revival architectural styles. Barber's interest in architecture undoubtedly grew under the eye of his father George Barber, who designed hundreds of buildings and created a mail order business to sell designs nationwide. Charles became one of the founders of Barber & McMurry Architects, long recognized as the designers of Knox County's school buildings of the 1920 to 1940 era.

Shooks Gap Post Office (c. 1850) **Bedloe Way**

Located along Sevierville Pike, this post office was centrally located to serve the community prior to the construction of Chapman Highway. The log structure served as a home and a post office in the 19th century and early 20th century.

Flenniken/Goddard Place (1792, 1842 & 1977) **Goddard Road**

The two-story log portion of this house was constructed in 1792 by Samuel Flenniken, a Revolutionary War veteran who moved to Knox County with his family from North Carolina. In 1842, the house was bought by the Goddards, who added the two story frame section. The present owners added the rear addition in 1977. There are a number of log outbuildings on the property which are not original to the site.



Bowman-Hodges-McBee House (1836) Hodges Ferry Road

The Bowman-Hodges-McBee House, located across the French Broad River from the Riverdale community, is significant for its Gothic Revival architecture and its role in river transportation history. Samuel Bowman received the land surrounding this house in a land grant from the State of Tennessee in 1812. Bowman built the house and established a ferry which ran until the 1950s. The house features several windows that are highlighted with ruby glass transoms and sidelights. Timber framing with noggin infill form the structure. The ferry landing is still visible on the river bank. Later owners and ferrymen were Samuel's son, James W. Bowman, who sold the house and ferry to Robert L. McBee in 1886. C. B. Hodges succeeded McBee as the ferryman. The ferry was used by the Federal forces in floating supplies down the French Broad River to Knoxville when the city was under siege by Confederate General Longstreet.



Henry Huffaker-Lewis Gose House (1832) Huffaker Ferry Road Henry Huffaker was born in Sevens Islands in 1806. He was the son of George Huffaker, who came to the area in 1785

or 1786, and is believed to have first seen the Seven Islands area while serving in the Revolutionary War. Henry and his descendants operated the Huffaker Ferry, connecting Seven Islands with the Frazier Bend community on the north side of the river. The Huffaker-Gose House is a two-story, heavy timber frame, originally built in the Georgian style with later Victorian Vernacular style elements. A slave cabin and blacksmith shop are located to the side of the house, along with several barns and other outbuildings. Lewis Gose's parents purchased the house in 1935. Mr. Gose began operating the ferry in 1937. Huffaker Ferry operated until 1964, when it was sunk during the filming of the movie *All the Way Home*.



Marble Springs (c. 1800) W. Govenor John Sevier Highway

John Sevier created a home site out of the land grant he received for service in the Revolutionary War. Sevier created not only a home, but a working farm, quarry, and guest houses to accommodate his large family. The property remained in the Sevier name until 1818; afterwards, the land and buildings passed through different owners until the State of Tennessee purchased the site in 1941. Currently only the main cabin is original to the site, the other historic structures were transported from other places in Tennessee dating from the same time period. The site serves as a living history exhibit that is open to visitors.

Double-penned Log House

W. Governor John Sevier Highway

This early (likely in the late 18th or early 19th century) two-story log house, which is covered with a composite siding, is composed of two double penned structures. Its proximity to Marble Springs begs the question of possible association with John Sevier.



Johnson Bible College

Johnson University campus

Established by Dr. Ashley Sidney Johnson, its original purpose was a correspondence school for those desiring to enter ministries. In 1893, he opened Johnson Bible College on the site of the farm of his great -grandfather, Jacob Kimberlin. The grounds contain several historic buildings. "Old Main" (dating from around 1900) served as the administration and major academic building for much of the 20th Century. The president's home was built about 1890 and is a fine example of Queen Anne style architecture. The house is still used by the college, and has been restored with added space for receptions and meetings.



The Beulah Methodist Church (1894)

Kimberland Heights Road

This church was constructed between 1892 and 1894 as a community project. The lumber for the building's

structure was sawn from logs salvaged from a French Broad River flood. (It was a practice to float timber down the river to markets.). They were hauled to a sawmill by community members and cut by a local carpenter. The church still maintains its Gothic Revival appearance. The bell in the steeple that calls people to worship was donated by P. F. and J. W. Nichols. The name "Beulah," meaning promise, was selected at the request of Mrs. A.G. French which she hoped would reflect the inspiration of the congregation in constructing the church.

The Trundle and Goodman Houses

Lee Massey, a local carpenter, built these similarly-designed houses in the early 20th century. All are in the Kimberland Heights community.

Walt Trundle-Rouser House (1915)

Kimberlin Heights Road

This house, built in 1915, is a two-story frame Neoclassical residence with Italianate influence. The Rousers purchased the house in 1940.



Charles Trundle House (1915)

Kimberland Heights Road

This house was also constructed in 1915, using lumber cut on the property.

Dr. R. T. Goodman House (1915)

Kimberlin Heights Road

Goodman had this house constructed in 1915. It features Neoclassical architecture with Craftsman influences.



Ridgeway Baptist Church (c.1900)

Kimberlin Heights Road

Built in the Gothic Revival Style, a very popular means of designing the era's churches, this structure is a good example of turn-of-the-last century architecture. The one-story frame structure is covered with clapboard and has such decorative features as fish scale shingles and eight pane transoms.

Oueen Anne Farmhouse (c. 1890)

Martin Mill Pike

This two-story farmhouse is a good example of Queen Anne style architecture. The main body of the clapboardcovered house features a hip roof while a front ell frames one side of the porch. Its surrounding landscape with the rock wall and rolling pastures is noteworthy.

Regan House (c. 1800; c. 1880)

Martin Mill Pike

The Reagan house is a two-story, double pen log residence with a one-story frame ell. The logs have half-dovetail notching. James Reagan, who probably built the house, received his grant and moved to Knox County in 1800. Local tradition states that the house was once a stage stop. It is located along the old stage road from Knoxville to Chattanooga. The house is representative of early settlement patterns.

Gothic Revival House (C. 1870)

Martin Mill Pike

The Gothic Revival architecture began to appear on rural landscapes in mid-19th century. This two-story, clapboardcovered house, with center gable and sawn-wood porch rails, is a modest example of the style.



Flenniken House (c.1806)

Maryville Pike

This timber frame house was built as a one-story structure facing a stage road which later became Maryville Pike. The house was built by James Wallace Flenniken. Additions to the house were made around 1832, when a second story was added, and in 1890 by William Peery Flenniken, who added a rear ell. Eastlake detailing was also added around 1890. The house shows early settlement and construction, and the importance of Maryville Pike as a transportation corridor.



Tipton-Maxey-Berry House (c. 1810 & 1872) Maryville Pike

The central portion of this house is a two-story log structure which was located on land owned by Reuben Tipton and acquired from 1790 to 1819. The log house may have been built by Reuben or his son William ("Fightin' Billy") Tipton. The house was standing in 1872, when it was acquired by Christopher C. and Edward N. Maxey. The frame additions were made by the Maxeys. Willie Jones Berry inherited the property from Maxey around 1900. The house is significant for its historic associations with early settlement (the Tiptons), the Civil War (Maxey) and Knox County government (Berry), as well as its architecture.

Hood House (1882)

Neubert Springs Road

This two-story frame, Gothic Revival house was built by Andrew Hood and has been owned by the Neubert family, for whom Neubert Springs is named, and Dr. J. H. Gammon. The house is significant for its representation of the history of Neubert Springs, a late 19th century resort in Knox County, and for its architecture.

Hood-Krahwinkle House (c. 1800)

Neubert Springs Road

The history of this two-story, log house is still being researched, and an exact construction date is not known now. The Hood family owned the property early on, and may have purchased it directly from John Sevier. The house sits well back from the present Neubert Springs Road; it faces an abandoned dirt road, once known as the Old Stage Road. The road began in Sevier County on the French Broad River, traveled across Brown's Mountain, led to Maryville and Tellico Blockhouse to the southwest, and eventually connecting with the seaports of Charleston and Savannah. The house is reflective of early transportation and settlement.

Neubert Sulphur Springs Gazebo (c.1890)

8104 Neubert Springs Road

The gazebo at Neubert Sulphur Springs is the only visible reminder of the importance of the many spas and resorts which thrived in Knox County at the turn of the twentieth century.

The Johnson House (c. 1870)

Seven Islands Road

This house is a good, local example of Italianate architecture, which was one the revival styles popularized in the United States in mid-1800s. The Johnson House features a hip roof with lower cross gables. Another distinctive feature is the the shed roof porch with its turned wood posts and sawn wood trim.



Seven Islands Community Church (c.1880) Seven Islands Road

This Vernacular building, which rests on a cut stone foundation, was constructed in 1865. The weatherboard clad structure is covered by a metal roof. It has long been an anchor for this rural community. The congregation was organized in 1803 with the help of Bishop Asbury, who visited the community a year earlier and ordained Justus Huffaker and James Sullivan as deacons. It is among the earliest congregations in Knox County.

Keener-Widner-Gibson House

Seven Islands Road (c. 1790s)

Overlooking the river, this two-story log house initially belonged to Peter Keener. This early settler operated a sawmill in the community.

Rose House (c. 1880)

Seven Islands Road

This two-story frame house was designed in the Victorian Vernacular style. Rose owned a lumber company in Knoxville.



Badgett-Russell House (c. 1815; 1865) Topside Road

The Badgett-Russell House, also known as Maple Bend, is named for Burwell F. Badgett. He built the first section of the house in 1813, using timber frame construction and noggin infill. The house was inherited by Badgett's grandaughter, Catherine Russell (married to Dr. John L. Russell), who made the first major changes to the house. The house was located at a ford on the Tennessee River and next to Louisville Road (now Topside Road).

New Salem United Methodist Church (c.1890) Twin Creek Road

In what was the Stock Creek community, Peter French settled on what is now Martin Mill Pike and Tipton Station Road, building a home named Salem. Because of this name the roadway adjacent to the home was named Salem Valley Road (now Tipton Station Road). The French and Goddard families began holding Bible study meetings in 1813. As the community grew the need for a larger structure for church services became apparent, resulting in the construction of New Salem United Methodist Church.



Leroy Keener House (1842)

Woodlawn School Road

This two-story brick, Federal-styled house with servant's quarters, smokehouse and other outbuildings is representative of early settlement and architecture. Peter Keener and his wife moved to south Knox County from Pennsylvania in 1809. They had two sons, Abraham and Leroy, and operated a grist and saw mill. Abraham followed in his father's footsteps, working the mill and Leroy farmed in the area. After marrying Mary Jane McCallie, Leroy built the home on present day Woodlawn School Road in 1842. Their descendents maintained ownership until 1913 when it was sold to the Kelly family; the present owners purchased the home in 1972.

Daniel House (c.1949)

Woodson Drive

Recognized as a symbol of architectural innovation, this house was designed James W. Fitzgibbon. A recognized master of mid-20th century Modern style architecture, Fitzgibbon was the campus planner at the University of Oklahoma where he befriended Robert Daniel, an English professor. When Daniel and his family relocated to Knoxville in 1948, the professor secured the design services of Fitzgibbon to create the house. The home is a unique design incorporating local marble found around the site and accommodating the existing physical geography of the site. The home was renovated in 1961 and then again in 1982.

METROPOLITAN PLANNING COMMISSION TENNESSEE

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