

AUGUSTA – RICHMOND COUNTY

COMPREHENSIVE PLAN

As Adopted by the Augusta-Richmond County Planning Commission
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December 1, 2003

As Adopted by the Augusta Commission
Bob Young, Mayor
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February 17, 2004

THE AUGUSTA-RICHMOND COUNTY COMPREHENSIVE PLAN

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Chapter 1 – Introduction

1. Preface

The Augusta-Richmond County Comprehensive Plan is a long-range plan for managing and guiding Augusta's development over the next 20 years. The Plan examines the existing conditions affecting development, enumerates the needs and goals for the future development of the city, and spells out the strategy for addressing the needs and achieving the goals. The Plan serves as a basis for local decision making regarding development and as a general resource for information about the present and future condition of the city.

The Augusta-Richmond County Comprehensive Plan has been prepared in accordance with the Minimum Standards and Procedures for Local Comprehensive Planning effective on February 1, 2002 and administered by the Georgia Department of Community Affairs. The city must prepare and adopt a comprehensive plan that meets these standards in order to retain designation as a Qualified Local Government. Designation as a Qualified Local Government makes the city eligible to apply for certain loan and grant programs administered by state agencies.

The Augusta-Richmond County Comprehensive Plan is the first plan update prepared by the City. The original comprehensive plan developed under state guidelines was adopted in 1992. At the time, the City and County were separate political subdivisions, but agreed to jointly develop a comprehensive plan. In 1994, the City and County amended the Plan to incorporate a strategy to protect the Savannah River Corridor. This amendment was made in response to changes in the state guidelines. A new five-year Short Term Work Program was developed and adopted in 1997. Other recent planning efforts include publication of an updated land use and public facilities plan for the area covering the former county in 1995, and updated neighborhood plans for the former city in 1995 and 1996.

A plan update is not required until the year 2008. However, the City decided that an update is necessary because conditions, trends and needs in the city have changed drastically in recent years. The changes occurred primarily as result of the 1996 consolidation of Augusta and Richmond County. The resulting municipality's issues and concerns are not reflected in the plan. Also, the release of the 2000 Census provides an opportunity to review trends with relatively new data. Under an agreement with the Georgia Department of Community Affairs (see April 17, 2001 memo to Mayor Bob Young), the City agreed to update the Plan by October 2003, with the understanding that the Plan will be updated again in 2008 in compliance with the state's schedule.

1.1 Public Participation

The Comprehensive Plan update started with a series of five meetings with major stakeholders. The meetings were held on various dates between August 2000 and January 2001. Identified stakeholders included representatives from neighborhood

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associations, development organizations, realtors, builders, utilities, environmental organizations, the county school board, and interested private citizens. A committee of Planning Commission members met with the stakeholders to begin the process of identifying issues to address in the Plan.

Between October 25 and December 3, 2001 the Planning Commission held a series of ten public hearings throughout the city to kick-off the plan update process. A second series of eleven hearings was held during September 2002 to review issues and opportunities, obtain feedback on draft goals, objectives and strategies, and review the accomplishments on the 1998-2002 Short Term Work Program. In July 2003 a final round of three public hearing was held to receive feedback on the draft comprehensive plan. Subsequently, the draft was transmitted to the Central Savannah River Area Regional Development Center and the Georgia Department of Community Affairs for review and comment.

1.2 The Planning Process

The Minimum Planning Standards and Procedures require that the Comprehensive Plan be prepared in accordance with a three-step planning process. As outlined in the Georgia Department of Community Affairs regulations, the three steps in the planning process are Inventory and Assessment, Statement of Needs and Goals, and Implementation Strategy.

1.2.1 Step 1 - Inventory and Assessment

This step is designed to answer the question "What do we have as a community?" A profile of existing conditions is necessary in order to plan for the city's future. Information is required on existing conditions in the areas of population, housing, economic development, transportation, community facilities and services, natural and historic resources, and land use in order to complete the community profile.

1.2.2 Step 2 - Statement of Needs and Goals

This step is designed to answer the question "What do we need or want for the future of the community?" Based upon the inventory and assessment, existing community needs are identified and goals and objectives for future growth and development are prepared. The goals provide a vision for the city and a framework for developing more specific strategies and policies to address the needs.

1.2.3 Step 3 - Implementation Strategy

This step is designed to answer the question "How are we going to get to our desired future as a community?" It combines all of the plan's recommendations and describes how they will be implemented. The Short Term Work Program is an integral part of the

Chapter 1 – Introduction

Implementation Strategy. The Short Term Work Program includes the specific programs and projects that the city and other stakeholders will implement over the next five years to carry out the plan. The Implementation Strategy and Short Term Work Program ensure that the plan is a useful decision making tool and not a document that sits on a shelf.

1.3 Plan Elements

The planning process is applied to each of the six planning elements required by the Minimum Planning Standards and Procedures. In addition, a transportation element is added due to the importance of this issue to the future of the city and the fact that transportation planning has been an integral part of the community for over 35 years. Note also that the Natural Resources / Greenspace and Historic Resources elements are separate from one another. While these issues are interrelated, separate chapters are needed to give adequate attention to them. The plan elements are as follows:

1.3.1 Population

This element documents historic population trends, current population characteristics, and projected population in Augusta-Richmond County. Specific items addressed include total population, number and type of households, age distribution, racial composition, level of education, and income. The inventory and assessment of the population serves as a foundation for the other five plan elements and helps in determining community facility needs employment opportunities, housing needs, and potential impacts on natural and historic resources.

1.3.2 Housing

This element includes an inventory and assessment of the city's housing stock. It begins with an overview of residential development patterns and housing unit trends in Augusta. Census data is used to profile housing unit characteristics including the number of units, tenure, age, cost and general condition. The housing needs of the homeless are also highlighted. Finally, housing production and programs are reviewed that involve the private sector, the city, non-profit organizations, and the local public housing authority.

1.3.3 Economic Development

This element includes an inventory and assessment of the city's economic base, labor force, and economic development opportunities and resources. Economic characteristics reviewed include current employment, wage levels, income, labor force participation, occupations and commuting patterns. Employment projections are used as one indicator of expected economic growth, and the city's role in the regional economy is highlighted.

Chapter 1 – Introduction

The chapter concludes with a summary of the resources (agencies, technical assistance, and funding) that are available to address economic development needs.

1.3.4 Transportation

This element includes an inventory and assessment of transportation facilities and services. Transportation facilities reviewed include the street and highway network, railroads, airports, bicycle and pedestrian facilities, and public transit. Census data provides information on the travel characteristics of workers. Information from the regional travel demand model and other reports offers insight into the problems on streets and roads. The final section summarizes the plan for future improvements to each of the major transportation facilities and services.

1.3.5 Community Facilities and Services

This element includes an inventory and assessment of public facilities and services provided by the city and other public and private organizations. Existing conditions and needs are identified for such facilities as the water and sewerage systems, public safety, solid waste, schools, and libraries and other cultural facilities. An inventory of hospitals and other public health facilities is also included.

1.3.6 Historic Resources

This element includes a brief overview of the city's history, followed by an inventory and assessment of historic resources. Resources covered include National Register and local historic districts and properties and archaeological resources. A summary of ongoing activities indicates that many individuals and organizations are actively surveying, documenting, preserving and adaptively reusing historic resources. The element concludes with a general outline of historic preservation needs.

1.3.7 Natural Resources / Greenspace Program

This element includes an inventory and assessment of natural and environmentally sensitive resources in the city. Topics addressed include topography, soils, agricultural land and forestland, air quality and water resources. It also identifies the issues, problems and opportunities associated with these resources. The city's Greenspace Program is also integrated into this element of the plan. The element concludes with a general assessment of natural resource and greenspace program needs.

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1.3.8 Land Use

This element includes an inventory and assessment of existing land use in the city. It begins with an inventory of land use, highlighting the factors and trends affecting local land use. Land use patterns have contributed to blight and lack of investment in some parts of the city, increased demand on public facilities, and impacted the natural environment and quality of life. The element also offers some suggestions regarding opportunities for infill development. The estimated acreage of each of the land use categories is calculated and projections are made of the amount of land required to meet future demands. The element concludes with a list of the general policies that apply to local land use decision making. The policies are meant to implement the broad goals included in the implementation strategy.

1.3.9 Implementation Strategy

The Plan's Implementation Strategy combines the answers to the three basic questions that are integral to the planning process. Goals, needs and strategies are enumerated for each of the plan elements. This is followed by a description of methods used to assure coordination of plan implementation. The Implementation Strategy concludes with the five-year Short Term Work Program. The Short Term Work Program identifies the specific projects, including estimated cost and responsible entities, to be undertaken during the next five years to address plan needs and goals.

Augusta will continue to change as time goes by. Changes will be monitored and the Plan will be amended as the need arises. At a minimum, the Plan will be updated in the year 2008 in accordance with the schedule for plan updates maintained by the Georgia Department of Community Affairs.

Augusta-Richmond County, GA

Study Area



Geographic Information Systems

Date: <Place Date Here>
Prepared By: <Your Name Here>

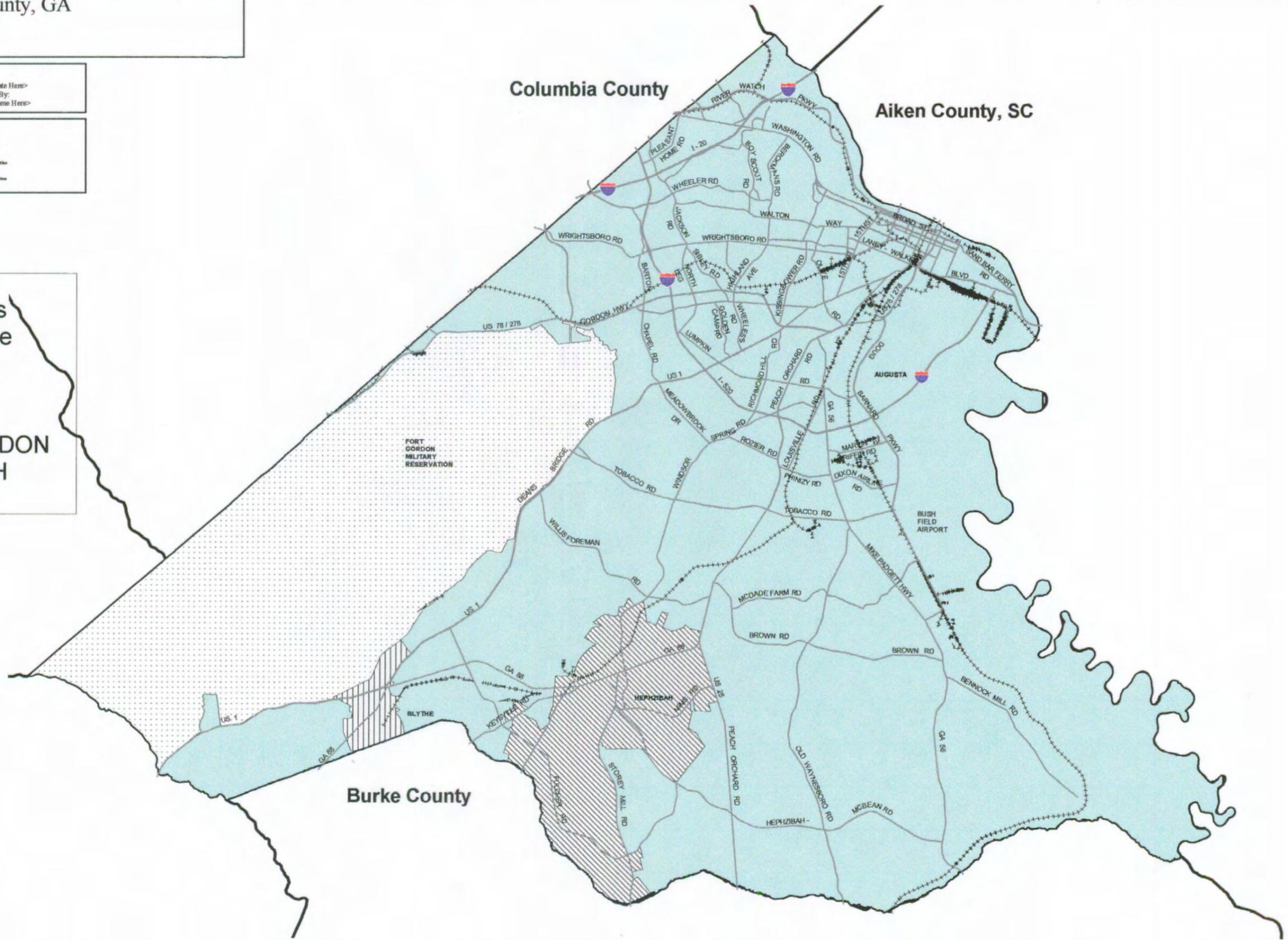
Augusta, GA Disclaimer

The data represented on this map has been compiled by the best methods available. Accuracy is contingent upon the accuracy of information as compiled by various agencies and organizations both local and external to the governmental government of Augusta, GA. Augusta, GA and the mapmakers disclaim any liability for the information or accuracy contained on this map. It is strictly for reference and is not to be used for any purpose other than the written request of the Augusta-Richmond County Commission.

Major Roads
 Railroad Line

City

- AUGUSTA
- BLYTHE
- FORT GORDON
- HEPHZIBAH



Chapter 2 – Population

2. Introduction

This chapter includes basic information about Augusta's residents and households, including past trends, current characteristics, and forecasts of the future. The data in this chapter provides a basis for the remaining elements of the plan. Population household and employment forecasts help determine the demand for housing, jobs, infrastructure improvements, and land development consistent with the goals and policies in the plan.

The 2000 Census is the most recent data source used in this chapter. Due to the merger of the city of Augusta and unincorporated Richmond County in 1996, some characteristics, such as total population, show a dramatic increase between 1990 and 2000. To compensate, Richmond County trends are highlighted in some tables, and the past characteristics of the “old” city and unincorporated area distinguished in others.

2.1 The Planning Area

Augusta, the county seat for Richmond County, is located in east central Georgia adjacent to the state's border with South Carolina. There are two other incorporated places in Richmond County, the city of Hephzibah and the city of Blythe. Augusta is a central city in the Augusta-Richmond County, GA-SC Metropolitan Statistical Area (MSA). Other counties in the MSA are Columbia and McDuffie in Georgia and Aiken and Edgefield in South Carolina.

Augusta's Comprehensive Plan covers all of Richmond County, except for Hephzibah, Blythe and Fort Gordon. Hephzibah and Blythe have their own comprehensive plans, and separate planning programs. Fort Gordon is a federal military installation. Data comparisons include the other cities and counties in the metropolitan area, as appropriate. In addition, some trends in Augusta are compared to those in other so-called "second tier" cities in Georgia. This is done to highlight the similarities in trends among these communities. Figures for Hephzibah, Blythe and the former unincorporated part of Richmond County are also included in some tables.

2.1.1 Population and Household Trends

Augusta's population and household characteristics reflect those of an older city that has merged with newer suburbs. Table P-1 shows the change in population and households in Richmond County between 1980 and 2000. Overall, the local changes reflect the trend toward suburbanization evident throughout the United States in recent decades. As the total population and households in the "old" city declined, comparable figures for the then unincorporated part of Richmond County rose. The 2000 Census figures reflect the consolidation of the city and the county, so the suburbanization trend is not as evident.

Chapter 2 – Population

Table P-1 Population and Household Trends Richmond County, 1980-2000			
	1980	1990	2000
Total Population			
Richmond County	181,620	189,719	199,775
Augusta*	47,532	44,639	195,182
Hephzibah**	1,452	2,466	3,880
Blythe**	365	300	713
Unincorporated	132,280	142,314	0
Total Households			
Richmond County	59,501	68,675	73,921
Augusta	19,108	18,819	72,307
Hephzibah	435	822	1,374
Blythe	121	101	240
Unincorporated	39,837	48,933	0
Average Household Size			
Richmond County	2.81	2.61	2.55
Augusta	2.40	2.26	2.55

Richmond County's population growth is relatively low in comparison to the other counties in the Augusta MSA and the state of Georgia. Table P-2 shows that Richmond County's population growth rate has declined over the last thirty years and is now lower than the other counties, the MSA, and the state of Georgia.

Chapter 2 – Population

**Table P-2
Comparison of Population Trends
Augusta MSA Counties and the State of Georgia**

	Change in Population				Change in Population (%)		
	<u>1970</u>	<u>1980</u>	<u>1990</u>	<u>2000</u>	<u>1970s</u>	<u>1980s</u>	<u>1990s</u>
Columbia Co.	22,474	40,474	66,910	89,288	80.1%	65.3%	33.4%
McDuffie Co.	15,276	18,546	20,119	21,231	21.4%	8.5%	5.5%
Richmond Co.	162,437	181,629	189,719	199,775	11.8%	4.5%	5.3%
Aiken Co., SC	91,025	105,625	120,940	142,552	16.0%	14.5%	17.9%
Edgefield Co., SC	15,692	17,528	18,375	24,595	11.7%	4.8%	33.9%
Augusta-Aiken MSA	305,953	363,340	417,823	477,441	19.1%	14.7%	14.3%
State of Georgia	4,589,575	5,463,105	6,478,216	8,186,453	19.0%	18.6%	26.4%

SOURCE: U. S. Bureau of the Census

Low population growth is common among the second tier cities in the state. Table P-3 compares recent population trends in four counties with those of the corresponding metropolitan areas in which they are located. The table reveals that between 1990 and 2000 the counties that are home to Macon, Savannah, Columbus and Augusta experienced lower population growth than the corresponding metropolitan area. The following chart compares the percent change in population in the subject counties with the state level change between 1990 and 2000.

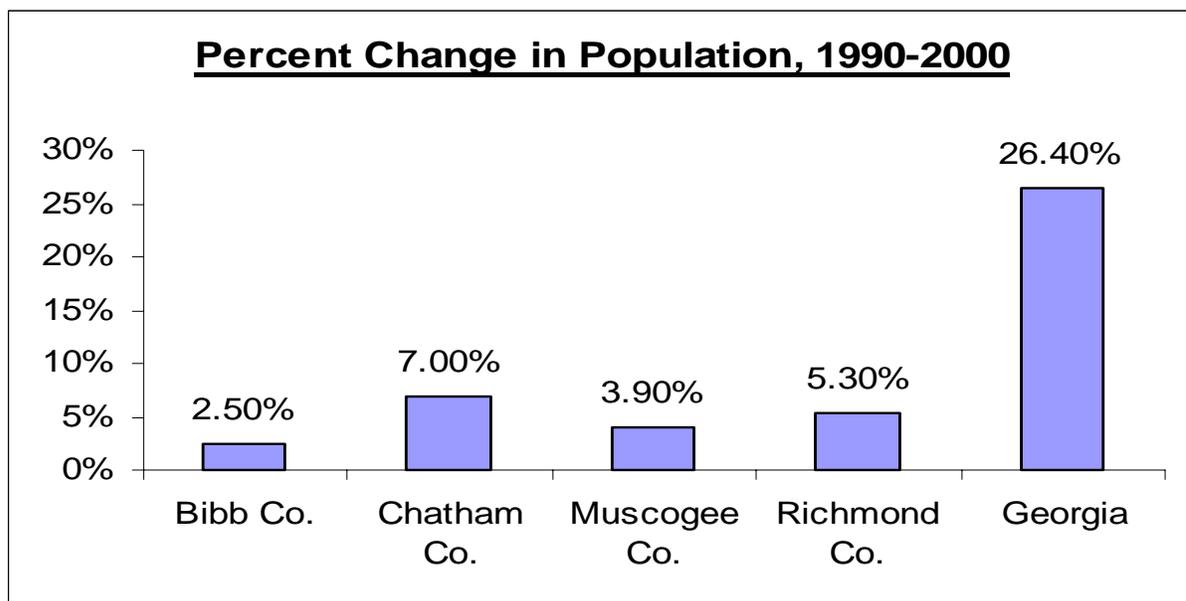


Table P-3 Comparisons of Population Trends Selected Counties and MSAs in Georgia				
	1990	2000	Change in Population	
County			Number	Percent
Bibb	150,137	153,887	3,750	2.5%
Chatham	216,774	232,048	15,274	7.0%
Muscogee	179,280	186,291	7,011	3.9%
Richmond	189,719	199,775	10,056	5.3%
Metropolitan Statistical Area				
Macon-Warner Robins, GA	281,103	322,549	41,446	14.7%
Savannah, GA	242,622	293,000	50,378	20.8%
Columbus, GA-AL	243,072	274,624	31,552	13.0%
Augusta-Aiken, GA-SC	417,823	477,441	59,618	14.3%
Macon is in Bibb County; Savannah is in Chatham County; and Columbus is in Muscogee County.				
SOURCE: U. S. Bureau of the Census				

2.1.2 Population by Census Tract

Census tracts are small, relatively permanent statistical subdivisions of a county delineated for the purpose of presenting census data. Census tracts are delineated by local officials and are designed to be relatively homogeneous units with regard to population characteristics, economic status, and to contain between 2,500 and 8,000 residents. For the 2000 Census, Richmond County was divided into forty (40) census tracts, the same number as in the 1990 census.

The map at the end of this chapter shows the population trends by census tract for Richmond County. Overall the information offers more evidence of the trend toward suburbanization. During the 1990s the population declined in several census tracts in and near the old city limits. Conversely, census tracts experiencing the largest net population increase are concentrated in south and west Augusta. This continues a trend observed over the last three decades.

Chapter 2 – Population

2.1.3 Race and Sex Characteristics

Table P-4 shows the recent trends for racial composition in Richmond County. The figures reflect a trend of increasing minority population and decreasing white population. The table indicates that with the 2000 Census Blacks became the largest group of one race in Richmond County (49.8%). Whites comprise 45.6% of the county's population, reflecting a 16% decline over the last two decades. The number of persons of other races has more than doubled in the past 20 years. The chart on the next page shows that the trend of increasing minority population is projected to continue in the future.

Table P-4 Population Trends by Race Richmond County, 1980 – 2000					
	1980	1990	2000	Change, 1980-2000	
				Number	Percent
Richmond County					
White	109,110	104,612	91,006	-18,104	-16.59%
Black	67,980	79,639	99,395	31,415	46.21%
Other	4,539	5,468	9,374	4,835	106.52%
Total	181,629	189,719	199,775	18,146	9.99%
SOURCE: U. S. Bureau of the Census					

Table P-5 shows the 2000 population by race and Hispanic Origin for Richmond County and the incorporated places therein. Augusta's population is 44% White, 50.4% Black or African-American, and 4.7% other races. Persons of Hispanic or Latino origin total 5,447 or 2.8% of the city's population. This represents an increase of 1,783 (48.6%) in the Hispanic population since 1990.

Table P-5 Population by Race Richmond County, Augusta, Hephzibah and Blythe, 2000				
	White	Black	Other	Hispanic Origin
Richmond County	91,006	99,395	9,379	5,546
Augusta	87,651	98,320	9,211	5,447
Hephzibah	2,769	973	138	76
Blythe	586	102	25	23
SOURCE: U. S. Bureau of the Census				

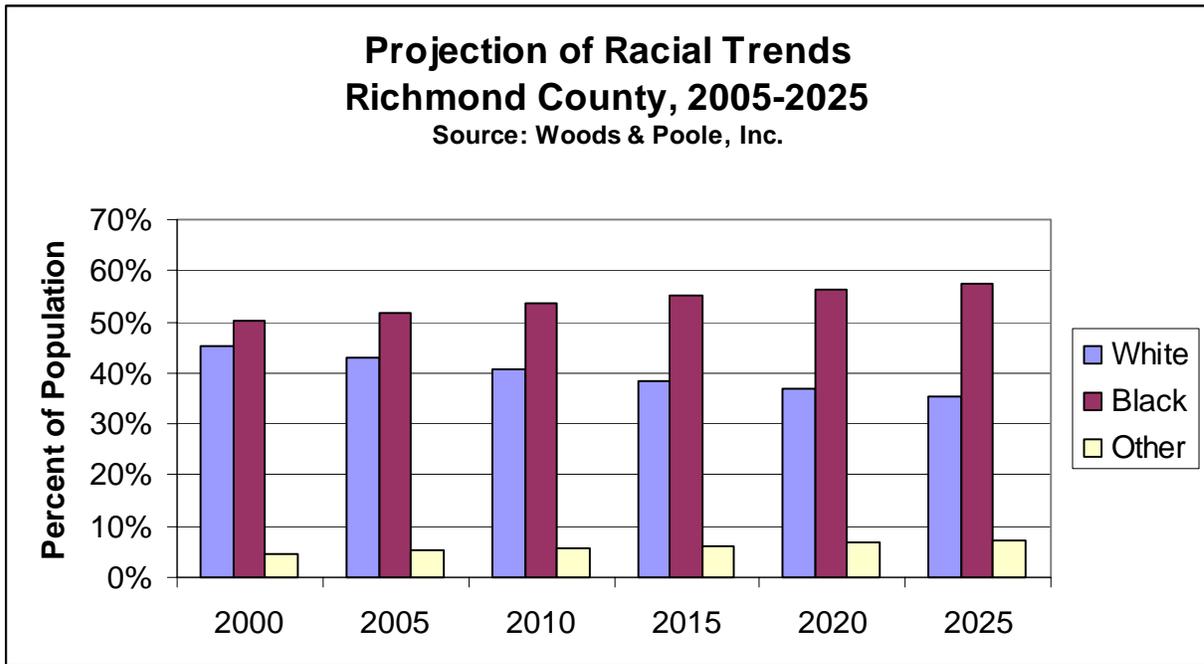


Table P-6 compares 1990 and 2000 population by sex for Richmond County and the State of Georgia. The figures indicate that the percentages of males and females in Richmond County changed only slightly between 1990 and 2000. Compared to the state, Richmond County has a higher percentage of females and lower percentage of males.

**Table P-6
Population by Sex – 1990 – 2000
Richmond County and the State**

	1990		2000	
	Richmond	Georgia	Richmond	Georgia
Male	92,098	3,141,761	96,375	4,027,113
Female	97,621	3,336,455	103,400	4,159,340
% Male	48.5%	48.5%	48.2%	49.2%
% Female	51.5%	51.5%	51.8%	50.8%

SOURCE: U. S. Bureau of the Census

Chapter 2 – Population

2.1.4 Population by Age

Augusta and Richmond County continue to reflect the age characteristics of a relatively mature community. Table P-7 includes information on age structure in the county. The school age population 5-17 years old comprises approximately 20% of the population. Those elderly (65 and over) account for another 11% of the population. The county's median age rose from 30.3 in 1990 to 32.3 in the year 2000.

Table P-7 Population by Age – 2000 Richmond County, Augusta, Hephzibah and Blythe				
Age	Richmond County	Augusta	Blythe	Hephzibah
0-5 years	14,244	13,943	50	251
5 to 17	39,364	38,331	194	842
18 to 20	10,836	10,639	21	177
21 to 24	13,045	12,841	25	179
25 to 44	59,686	58,295	212	1,175
45 to 54	25,076	24,435	98	543
55 to 59	8,818	8,587	31	200
60 to 64	7,061	6,883	25	153
65 to 74	12,072	11,806	39	227
75 to 84	7,372	7,250	16	106
85 and over	2,201	2,172	2	27
TOTAL	199,775	195,182	713	3,880
Under 18	53,608	52,274	244	1,093
65 and over	21,645	21,228	57	360
Median Age	32.3	32.3	31.2	34.7
SOURCE: U. S. Bureau of the Census				

Table P-8 shows historic trends in age distribution for Richmond County between 1980 and 2000. Overall, the figures reflect a decline in the number of pre-school children, teenagers and young adults, and an increase in the number of middle-age and older adults. The number of elementary and middle school age children did show a net increase between 1980 and 2000. The chart below Table P-8 shows age distribution projections for the County to the year 2025. The chart indicates a continuation of recent trends, namely a net increase in the number of pre-school children, the school-age population and the elderly. The change in the number of young and middle-age adults is expected to be variable.

Chapter 2 – Population

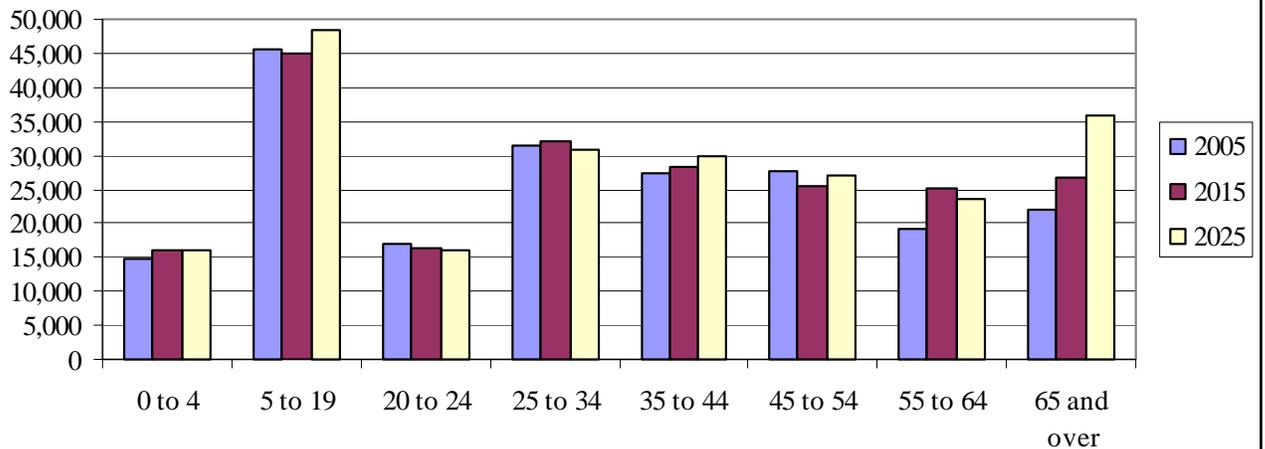
Table P-8
Trends in Population by Age
Richmond County, 1980 – 2000

<u>Age Bracket</u>	<u>1980</u>	<u>1990</u>	<u>2000</u>	Change, 1980 - 2000	
				<u>Number</u>	<u>Percent</u>
Under 5 years	16,562	15,167	14,244	-2,318	-14.00%
5-13	21,944	25,377	27,528	5,584	25.45%
14-17	13,567	11,087	11,836	-1,731	-12.76%
18-20	14,998	10,757	10,836	-4,162	-27.75%
21-24	16,991	12,641	13,045	-3,946	-23.22%
25-34	31,606	35,628	29,633	-1,973	-6.24%
35-44	18,908	26,734	30,053	11,145	58.94%
45-54	17,066	18,368	25,076	8,010	46.94%
55-64	14,732	15,031	15,879	1,147	7.79%
65 and over	15,236	18,929	21,645	6,409	42.06%
TOTAL Population	181,629	189,719	199,775	18,146	9.99%

Source: U.S. Bureau of the Census

Age Distribution Projections
Richmond County, 2005-2025

Source: Woods & Poole, Inc.



Chapter 2 – Population

Table P-9 compares the percentage of residents by age category for Richmond County and Georgia in 1990 and 2000. The figures show that in terms of age distribution changes in Richmond County mirror the trends at the state level. Among the trends are an increase in the percentage of school-age children, a decrease in the percentage of individuals in “family formation” years (18-44), and an increase in the percentage of the population age 65 and over.

Table P-9 Population Age Comparison – 1990 – 2000 Richmond County and the State				
	Richmond County		Georgia	
Age	1990	2000	1990	2000
Under 5 years	8.0%	7.1%	9.2%	7.3%
5 to 17	19.1%	19.7%	17.6%	19.2%
18 to 20	5.9%	5.4%	4.9%	4.5%
21 to 24	6.8%	6.5%	6.2%	5.7%
25 to 44	32.8%	29.9%	33.9%	32.3%
45 to 54	9.3%	12.6%	10.5%	13.2%
55 to 59	4.1%	4.4%	4.0%	4.6%
60 to 64	3.9%	3.5%	3.7%	3.5%
65 to 74	6.1%	6.0%	6.0%	5.3%
75 to 84	3.0%	3.7%	3.2%	3.2%
85 and over	0.9%	1.1%	.9%	1.1%

SOURCE: U. S. Bureau of the Census

2.1.5 Educational Attainment

Overall education levels are improving in Richmond County. Table P-10 shows that the number and percentage of adult residents with less than a high school education declined between 1990 and 2000. The percentage of the population with at least a high school education increased from 71% to 78%. The number and percentage of residents with a Bachelor’s and/advanced degree increased as well.

When compared to the State and neighboring counties, however, Richmond County lags in terms of educational attainment. Statewide, a higher proportion of adults have college degrees, and a lower percentage have less than high school education. Almost a third of the adults in Columbia County have a college degree, compared to only 18.6 % in Richmond County. The contrast among educational attainment levels in Richmond, Columbia and McDuffie Counties is partly explained by the fact that demographic characteristics vary widely in the three counties. Table P-11 shows recent trends in high school graduation test scores, high school dropout rates and the percentage of Richmond County high school graduates attending Georgia public colleges and technical schools.

Chapter 2 – Population

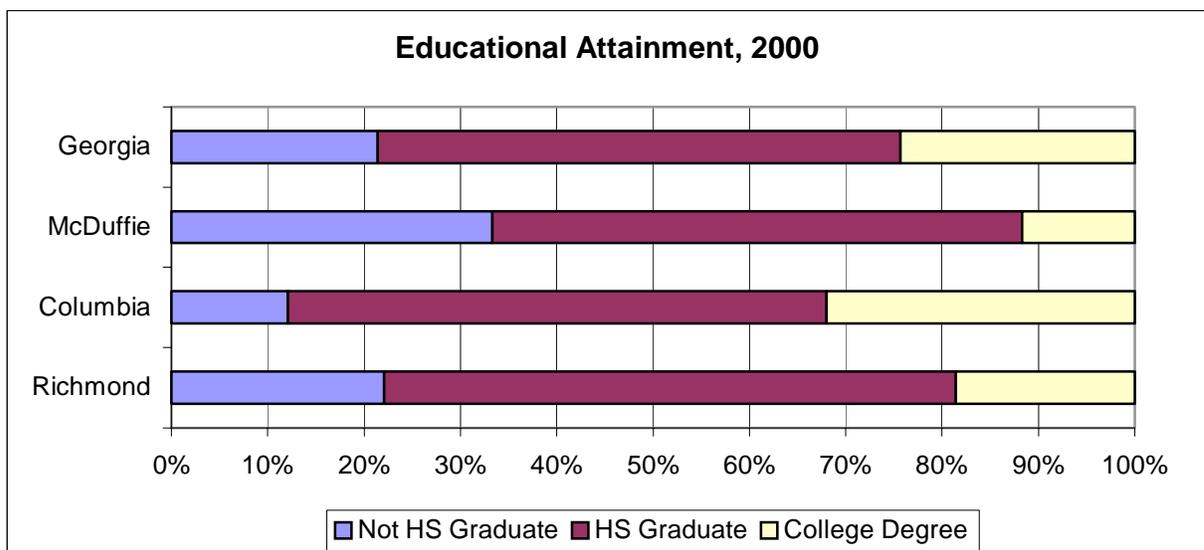
**Table P-10
Educational Attainment
Richmond County, 1990-2000**

School Years Completed	1990		2000	
	Number	Percent	Number	Percent
Less Than 9 th Grade	14,136	12.3%	9,144	7.5%
12 th Grade, No Diploma	19,191	16.7%	17,867	14.6%
High School Graduate	34,495	30.1%	36,323	29.6%
Some College, No Degree	20,628	18.0%	28,392	23.2%
Associate Degree	6,451	5.6%	7,957	6.5%
Bachelor's Degree	13,185	11.5%	14,767	12.0%
Graduate Degree	6,604	5.8%	8,142	6.6%
Total Persons 25+	114,690		122,592	
% High School Graduates	70.9%		78.0%	

SOURCE: U. S. Bureau of the Census

Educational Attainment, 2000	Richmond County	Columbia County	McDuffie County	Georgia
Not High School Graduate	22.10%	12.10%	33.30%	21.40%
High School Graduate	59.30%	55.90%	55.00%	54.30%
College Degree	18.60%	32.00%	11.70%	24.30%

SOURCE: U. S. Bureau of the Census, SF 3, 2000



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**Table P-11
Selected Education Statistics
Richmond County, 1995-2001**

Category	1995	1996	1997	1998	1999	2000	2001
High School Graduation Test Scores (All Components)	77%	70%	57%	59%	58%	60%	61%
High School Dropout Rate	12.40%	10.30%	7.90%	7.50%	5.90%	6.10%	5.40%
Graduates Attending Georgia Public Colleges	25.80%	34.90%	33.40%	32.90%	30.00%	NA	NA
Graduates Attending Georgia Public Technical Schools	12.00%	9.50%	6.80%	6.60%	8.00%	10.10%	NA

Source: Georgia Department of Education

2.1.6 Income

Historically, Richmond County has ranked in the top ten counties in the state in terms of total personal income. Total personal income is defined as the income that is received by, or on behalf of, all the residents who live in the county. The high rank order is due in large part to the fact that Richmond County is among the largest in terms of population. The figures in Table P-12 reveal, however, that the average annual growth rate of total personal income in Richmond County has been lower than the state and metropolitan area averages over the last thirty years.

**Table P-12
Total Personal Income Trends
Richmond, Columbia & McDuffie County, Augusta MSA and Georgia**

	Richmond	Columbia	McDuffie	Augusta MSA	Georgia
Total Personal Income*					
1990	\$3,375.9	\$1,196.6	\$ 289.0	\$ 7,332.2	\$115,414.2
1995	\$3,945.6	\$1,631.2	\$ 377.0	\$ 9,028.4	\$159,800.5
2000	\$4,728.6	\$2,343.6	\$ 464.2	\$11,389.0	\$228,738.2
Average Annual Growth Rate, 1969- 2000	7.6%	11.9%	7.9%	8.3%	9.3%

* In millions of dollars

SOURCE: U. S. Bureau of Economic Analysis

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Median household income and per capita income are indicators of the buying power of residents in a community. Table P-13 indicates that median household and per capita income increased in Augusta and Richmond County between 1989 and 1999. The increase in Augusta is somewhat deceiving because consolidation resulted in a large population increase in the city. Even with the increases, Augusta and Richmond County figures continue to lag behind comparable averages for the state and metropolitan area. Among the factors that probably contribute to Augusta's low averages are higher percentages of poverty households, non-family households, and households receiving public assistance.

Table P-13 Household and Per Capita Income Trends Augusta, Richmond County, Augusta MSA and Georgia							
					Augusta as a Percentage of		
	Augusta	Richmond County	Augusta MSA	Georgia	Richmond County	Augusta MSA	Georgia
Per Capita Income							
1989	\$10,376	\$11,799	\$12,721	\$13,631	87.90%	81.60%	76.10%
1999	\$17,117	\$17,088	\$18,744	\$21,154	100.01%	91.30%	81.00%
Median Household Income							
1989	\$15,315	\$25,265	\$28,490	\$29,021	60.60%	53.80%	52.80%
1999	\$32,972	\$33,088	\$38,103	\$42,433	99.70%	86.50%	77.70%
Note: 1989 figures for Augusta are for the city prior to consolidation							
SOURCE: U. S. Bureau of the Census, Sample Data, 1990 and 2000							

Table P-14 summarizes recent trends in household income distribution for Richmond County. The table shows that the number of households with income below \$35,000 declined between 1989 and 1999. During the same period the number of households with income \$35,000 and above increased. The increase was particularly significant for households with income of \$60,000 and above.

**Table P-14
Household Income Distribution Trends
Richmond County, 1989-1999**

	Number of Households		Change, 1989-99	
	<u>1989</u>	<u>1999</u>	<u>Number</u>	<u>Percent</u>
Less than \$10,000	13,890	10,308	-3,582	-25.79%
\$10,000 to \$14,999	6,504	5,905	-599	-9.21%
\$15,000 to \$19,999	6,588	6,082	-506	-7.68%
\$20,000 to \$24,999	7,031	5,558	-1,473	-20.95%
\$25,000 to \$29,999	6,192	5,677	-515	-8.32%
\$30,000 to \$34,999	5,590	5,169	-421	-7.53%
\$35,000 to \$39,999	4,400	5,023	623	14.16%
\$40,000 to \$44,999	4,125	4,366	241	5.84%
\$45,000 to \$49,999	2,973	3,957	984	33.10%
\$50,000 to \$59,999	4,343	5,917	1,574	36.24%
\$60,000 to \$74,999	3,482	6,061	2,579	74.07%
\$75,000 to \$99,999	2,055	5,174	3,119	151.78%
\$100,000 to \$124,999	816	2,026	1,210	148.28%
\$125,000 to \$149,999	169	879	710	420.12%
\$150,000 or more	626	1,837	1,211	193.45%
Total Households	68,784	73,939	5,155	7.49%

SOURCE: U. S. Bureau of the Census, Sample Data, 1990 and 2000

2.2 Augusta-Richmond County Tomorrow

The Augusta-Richmond County Comprehensive Plan forecasts population, household and employment growth to the year 2025. The forecasts are made based on the assumption that the city limits of the three municipalities - Augusta, Hephzibah and Blythe - will not change. Georgia law prohibits municipal annexation within three miles of another municipality. Augusta shares a common border with both Hephzibah and Blythe.

2.2.1 Population Projections

Several data sources were analyzed in order to project Augusta and Richmond County's population over the next twenty-three years. Data sources reviewed included the Georgia Office of Planning and Budget, Woods and Poole Economics, and the Augusta-Richmond

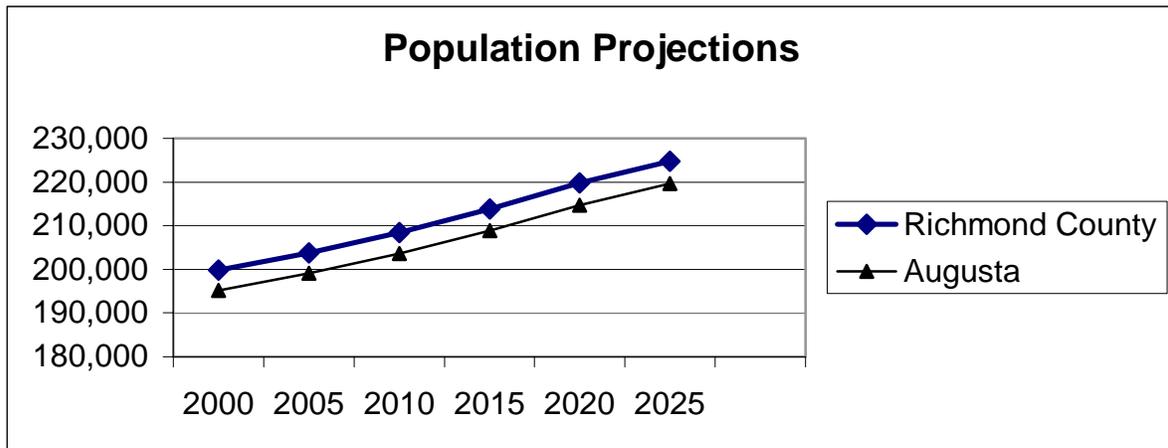
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County Planning Commission (ARCPC). The population projections made by these sources were reviewed against both local population estimates made during the 1990s based on building permit data, and against estimates made by the U. S. Bureau of the Census. Among the forecasts, the ones prepared by the Augusta-Richmond County Planning Commission and included in the 1992 Comprehensive Plan most closely reflected actual trends in population growth. The Augusta-Richmond County Planning Commission projections, updated and extended to the year 2025, were therefore adopted for the Comprehensive Plan.

Population projections were made for Augusta and Richmond County based on an examination of trends over the last four decades and, more specifically an extension of the growth rates experienced over the last twenty years. The projections assume that Hephzibah and Blythe will continue to account for a relatively small percentage of the county's total population. Three sets of projections - high, medium, and low - were made for the county. The projections reflected growth rates below, on, and above the population growth experienced during the last two decades. Population was then allocated to each of the three municipalities based on the percentage of the population each has historically captured. The medium level projection was selected for use in the Comprehensive Plan.

Table P-15 shows the Population in Richmond County from 2000 (Census Bureau), and projected to 2025 in five-year increments. The population projections for Augusta, Hephzibah and Blythe are also shown. While recent Census Bureau estimates (2001 and 2002) reflect a decline in Augusta's population since the 2000 census, the projections reflect an expected increase in population over the long term. Experience indicates that the Census Bureau population estimates are not always accurate. During the 1980s and 1990s, the Census Bureau estimated that Richmond County's population was declining. The actual Census counts in 1990 and 2000 reflected a net increase in population during both decades.

Table P-15 Population Projections, 2005-2025 Richmond County, Augusta, Hephzibah and Blythe						
	2000	2005	2010	2015	2020	2025
Richmond County	199,775	203,771	208,356	213,773	219,759	224,715
Augusta	195,182	199,084	203,564	208,856	214,705	219,642
Hephzibah	3,880	3,953	4,042	4,148	4,263	4,263
Blythe	713	734	750	769	791	810
Note: All data as of April 1 of the year shown SOURCES: 2000, U. S. Bureau of the Census; 2005-2025, Augusta-Richmond County Planning Commission, 2002						



2.2.2 Household and Housing Projections

Table P-16 includes household and housing unit projections for Augusta. The projections are based on the foregoing population forecasts. They are limited to Augusta because this is the area the City Commission has authority over regarding land use decisions.

The number of households is based on the average size for the city projected at five-year intervals to 2025. Dividing the future population in households by the average household size yields the number of households at each five-year interval. The population in group quarters (e.g. dormitories, correctional facilities, nursing homes) is assumed to remain 5.4% of the total population over the forecast period. Over the next twenty-two years the number of households in Augusta is projected to increase by over 12,000. The number of households is the same as the number of occupied housing units. Applying an occupancy factor yields the total number of housing units, including those that are vacant. The occupancy factor represents the percentage of all units expected to be occupied.

Table P-16 Household and Housing Unit Projections Augusta, 2005-2025						
	2000	2005	2010	2015	2020	2025
Number of Households	72,307	74,808	77,421	80,077	82,632	84,542
Persons Per Household	2.55	2.515	2.485	2.465	2.455	2.455
Population in Households	184,312	188,142	192,391	197,389	202,862	207,551
Group Quarters Population	10,870	10,942	11,173	11,467	11,843	12,091
Total Population	195,182	199,084	203,564	208,856	214,705	219,642
Occupancy Rate	89.8%	91.5%	92.5%	92.5%	92.5%	92.5%
Housing Units	80,481	81,575	83,698	86,570	89,332	91,397
SOURCE: 2000, U. S. Bureau of the Census; 2005-2025, Augusta-Richmond County Planning Commission						

2.2.3 Employment Projections

The Augusta-Richmond County Planning Commission prepared employment projections for the Comprehensive Plan. The projections are based on an analysis of employment trends over the last four decades. Sources of information reviewed include the U. S. Bureau of the Census and the Georgia Department of Labor. The projections use employment categories as reported to the Georgia Department of Labor. The projections are based on the following assumptions:

- ❑ Augusta will continue to serve as the economic hub of the metropolitan area even as some suburban counties increase employment at a faster rate
- ❑ The Service and Retail Trade categories will continue to account for more than two-thirds of the jobs in Richmond County.

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Employment in Richmond County is projected to grow by approximately 25% over the next two decades or so, from 108,000 now to over 135,000 in 2025. It is important to note that this is the number of people working in the county, not the number of county residents who have jobs. The projections indicate that employment in the Service, Retail Trade, and Manufacturing sectors will increase the most over the planning period. Table P-17 shows the forecasted changes in all of the major employment sectors.

Table P-17 Employment Projections Richmond County, 2005-2025						
	1999	2005	2010	2015	2020	2025
Construction	6,028	6,502	6,695	6,743	6,830	6,971
Manufacturing	13,263	14,412	15,155	15,974	16,780	17,266
Transportation &	4,518	4,818	5,025	5,234	5,432	5,620
Wholesale Trade	3,042	3,374	3,543	3,684	3,792	3,898
Retail Trade	21,481	22,431	23,513	24,577	25,641	26,545
F.I.R.E.*	3,197	3,448	3,616	3,771	3,927	4,132
Services	50,190	54,544	56,904	59,210	61,280	63,687
Public Administration	5,722	6,154	6,443	6,510	6,778	6,871
Other**	416	425	436	423	439	441
Total	107,857	116,108	121,330	126,126	130,899	135,431
*Finance, Insurance and Real Estate						
**Other includes Agriculture, Forestry, Fisheries and Mining						
SOURCES: Georgia Department of Labor, 1999; 2005-2025 Projections by Augusta-Richmond County Planning Commission						

Augusta-Richmond County, GA

Population Change, 1990 - 2000

 **Geographic Information Systems**

Date:
August 20, 2003
Prepared By:
Paul DeCamp

Augusta, GA Disclaimer
The data represented on this map has been compiled by the best available available
Agency to the extent possible. The accuracy of the data is not guaranteed. The
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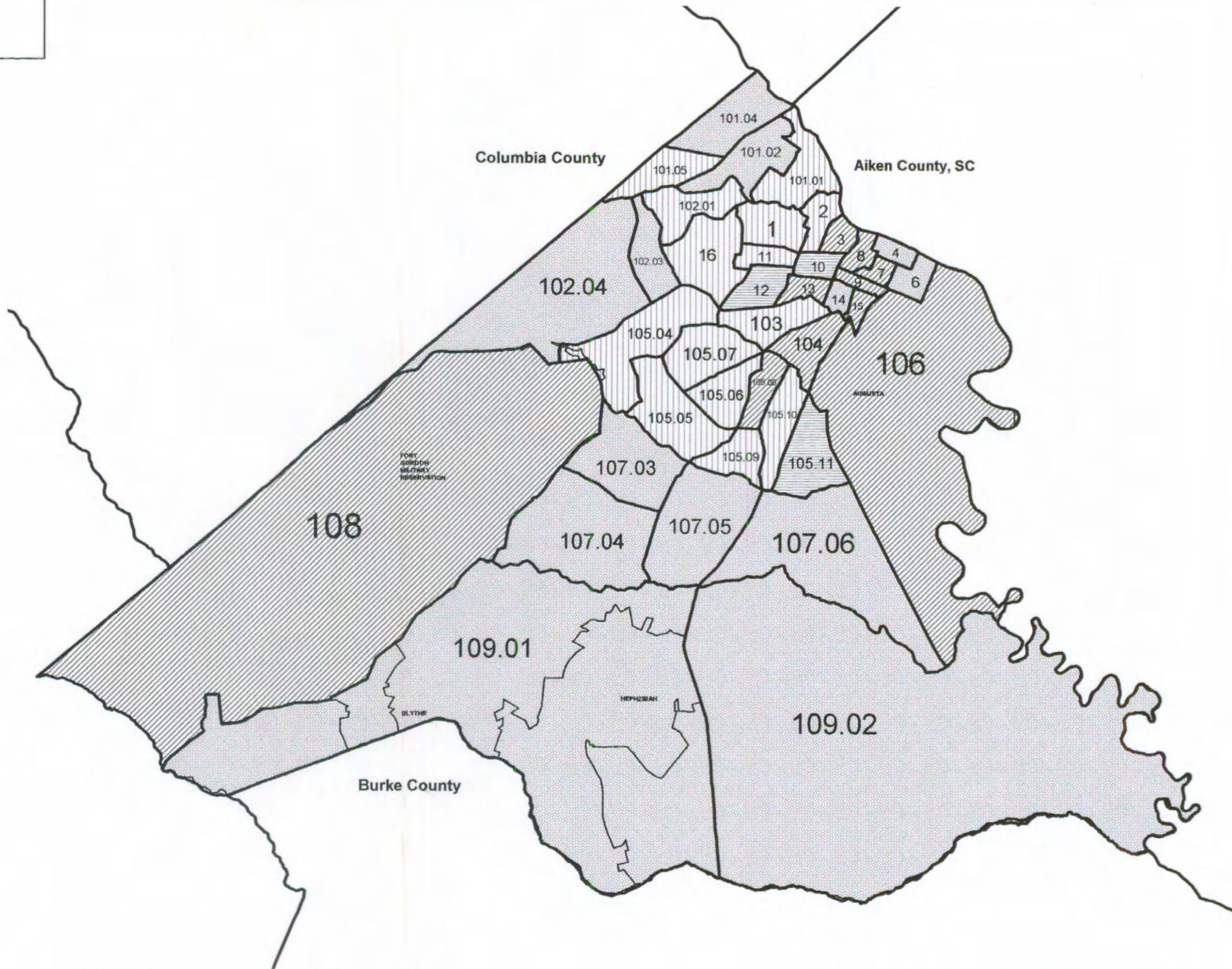
Percent Population Change, 1990-2000

Census Tracts

-  < 10% Net Population Decline
-  10% + Net Population Decline
-  <10% Net Population Increase
-  10%+ Net Population Increase



0.2 0 0.2 0.4 Miles



Chapter 3 – Housing

3. Introduction

Augusta's housing characteristics reflect the city's history and early development patterns. More recent trends indicate how and where housing development will occur in the future. Residential land uses cover approximately 28,000 acres at present. This includes a mix of single-family, site-built residences at various densities, duplexes, apartments, manufactured homes, and group quarters. Assessing the housing stock helps identify major housing problems, determine future housing needs, and develop a plan for managing housing development in the future.

3.1 Residential Development Patterns

Though both Augusta (1736) and Richmond County (1777) were founded in the eighteenth century, residential development patterns in Augusta were more urban than those in Richmond County until about 60 years ago. Initially settlement in the city occurred in close proximity to the Savannah River and nearby trading routes. As the city expanded to the south and west, neighborhoods developed in conjunction with the introduction of new modes of transportation (e.g. railroads) and manufacturing facilities (e.g. textile mills). In the twentieth century, Augusta annexed both incorporated places (Summerville) and unincorporated areas (e.g. Forest Hills, Highland Park), thereby adding a mix of older and newer housing to the existing stock.

Settlement patterns in Richmond County were more rural than Augusta until about the 1940s. From its founding the County was a largely agrarian area and residential development was centered on several small incorporated towns. These included Bath, Blythe, Mt. Enon, Hephzibah, and other towns located within the boundaries of what is now the Fort Gordon Military Reservation. Following World War II, suburban development began in earnest in Richmond County and continues to the present day. The character, age and condition of the housing stock thus reflect this trend and the expansion of commercial and industrial facilities that accompanied it.

3.2 Housing Unit Trends

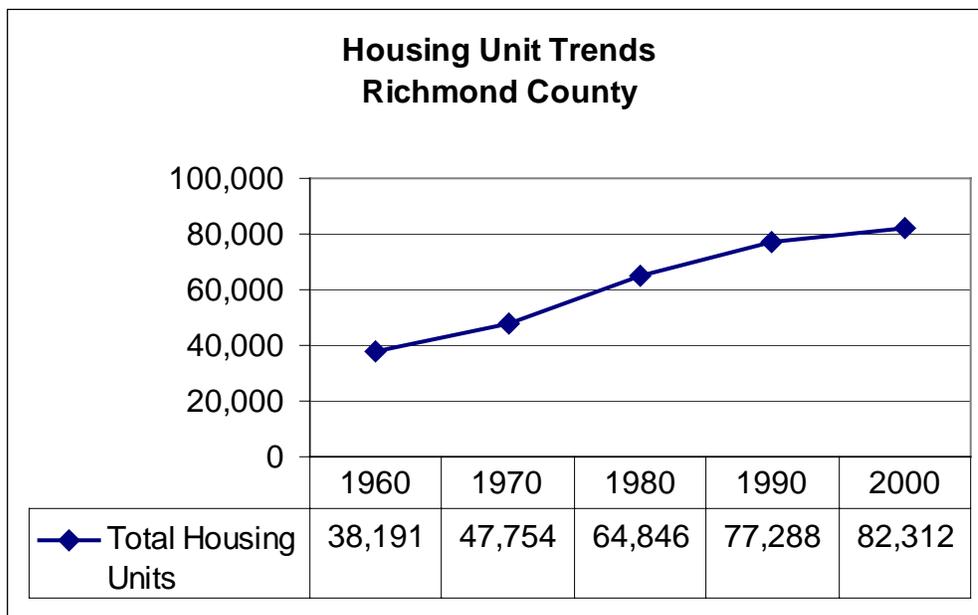
Between 1990 and 2000, total housing units in Richmond County increased 6.5% to 82,312 units. This is lower than the 19% increase in units between 1980 and 1990 (see Table H-1). The number of units in Augusta nearly tripled, but this is a statistical anomaly reflecting the consolidation of Augusta and Richmond County in 1996. Nevertheless, Augusta accounts for 98% of all the housing units in Richmond County. Hephzibah and Blythe also recorded significant increases in total housing units, but part of the gain reflects annexations the two communities completed prior to consolidation.

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Table H-1 Total Housing Units Richmond County, Augusta, Hephzibah and Blythe				
			Change, 1990 – 2000	
	<u>1990</u>	<u>2000</u>	<u>Number</u>	<u>Percent</u>
Richmond County	77,288	82,312	5,024	6.5%
Augusta	21,588	80,481	58,893	272.8%
Hephzibah	935	1,570	635	67.9%
Blythe	125	261	136	108.8%
Unincorporated Area	54,640	0	(54,640)	(100.0%)

Note: Augusta and Richmond County consolidated on January 1, 1996. Hephzibah and Blythe annexed land in unincorporated Richmond County prior to consolidation.
Sources: 1990 and 2000, U.S. Bureau of the Census

The chart below gives an impression of the county-wide trend in total housing units over the last 40 years.



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The map at the end of the chapter summarizes the net change in housing units between 1990 and 2000 within all forty census tracts. Geographically, total housing units increased the most in the southern and western parts of Richmond County during the decade. Notably, five of the six census tracts with the highest percentage increase in housing units are located in south Richmond County. Other tracts in the south and west also registered smaller housing unit gains. This continues a trend evident for several decades.

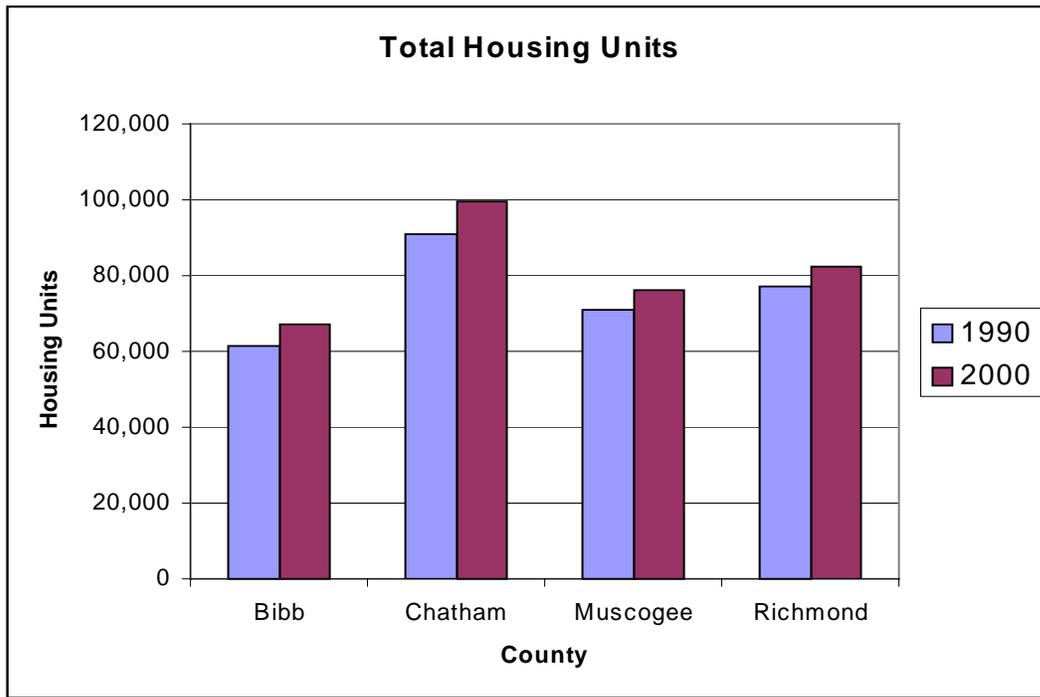
In contrast, most census tracts in or near the "old" city either recorded a decline in housing units or remained essentially unchanged from 1990. Of interest is the fact that areas encompassing some post-World War II subdivisions are beginning to experience a decline in housing units. Also of note is that downtown and adjacent areas registered an increase in housing units.

The number of housing units in Richmond County is increasing at a slower rate than in other parts of the metropolitan area. Table H-2 compares the numeric and percentage change in housing units for the Georgia counties in the MSA, the Augusta MSA and the state of Georgia during the 1990s. The table shows that the percent change in housing units was highest in suburban Columbia County. McDuffie County and the Augusta MSA were slightly lower than the statewide change in housing units. Richmond County was well below the state level change.

Table H-2 Housing Unit Trends Richmond, Columbia & McDuffie County, Augusta MSA and Georgia					
	Richmond County	Columbia County	McDuffie County	Augusta MSA	Georgia
Total Housing Units					
1990	77,288	21,841	7,270	158,342	2,638,418
2000	82,312	33,321	8,916	195,759	3,281,737
Percent Change 1990 - 2000	6.5%	52.6%	22.6%	23.6%	24.4%
Source: U. S. Bureau of the Census, SF 1, 1990 and 2000					

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When compared to other Georgia counties with similar demographics, Richmond County’s relatively low change in housing units is not unusual. The chart below compares housing unit change in Richmond County with those of the three counties that are home to Macon, Savannah and Columbus. The chart indicates that all four counties recorded relatively modest increases in housing units during the decade.



The detached single-family, site-built home continues to be the dominant type of housing unit in the market, representing 61.5% of the total units in Richmond County in 2000. This is up slightly from a 60% share in 1990, but below the 71% share recorded in 1980. In the last twenty years a number of new apartment complexes have been built in Augusta. In addition, the aging of the population and growth in “empty-nester” and one-person households has increased the demand for attached and semidetached units on small lots. As a result, the number of attached, single-family units increased from 2,387 in 1990 to 3,088 in 2000 (+29%). Apartments (structures with 3 or more units) comprise almost 26% of the housing stock. Mobile or manufactured homes account for 9.2% of the housing units, about the same percentage as in 1990. Table H-3 lists the number of units by type of structure for 1990 and 2000.

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Table H-3 Units in Structure Richmond County, 1990 and 2000			
	1990	2000	Percent of 2000 Total
Total	77,288	82,312	100.0%
1, detached	46,022	50,586	61.5%
1, attached	2,387	3,088	3.8%
2	3,578	2,762	3.4%
3 or 4	5,138	5,243	6.4%
5 to 9	7,305	7,428	9.0%
10 to 19	3,323	2,208	2.7%
20 to 49	1,113	795	1.0%
50 or more	1,193	2,622	3.2%
Mobile home	6,537	7,580	9.2%
Boat, RV, van, etc.	692	0	0
Sources: 1990 and 2000, US Bureau of the Census Summary File 3A and SF 3 - Sample Data			

3.3 Housing Tenure

Currently 58% of the occupied housing units are owner-occupied. This is up slightly from the 56.4% rate in 1990. Since Augusta includes nearly 98% of all the housing units in Richmond County, the city's owner/renter split is almost identical to the county's mix. Owner-occupied units comprise nearly 80% of occupied units in both Hephzibah and Blythe. Prior to consolidation, a majority of the occupied units in Augusta were renter-occupied units. This characteristic had been a part of Augusta's housing marker for several decades, owing in part to the age of the housing stock and the concentration of

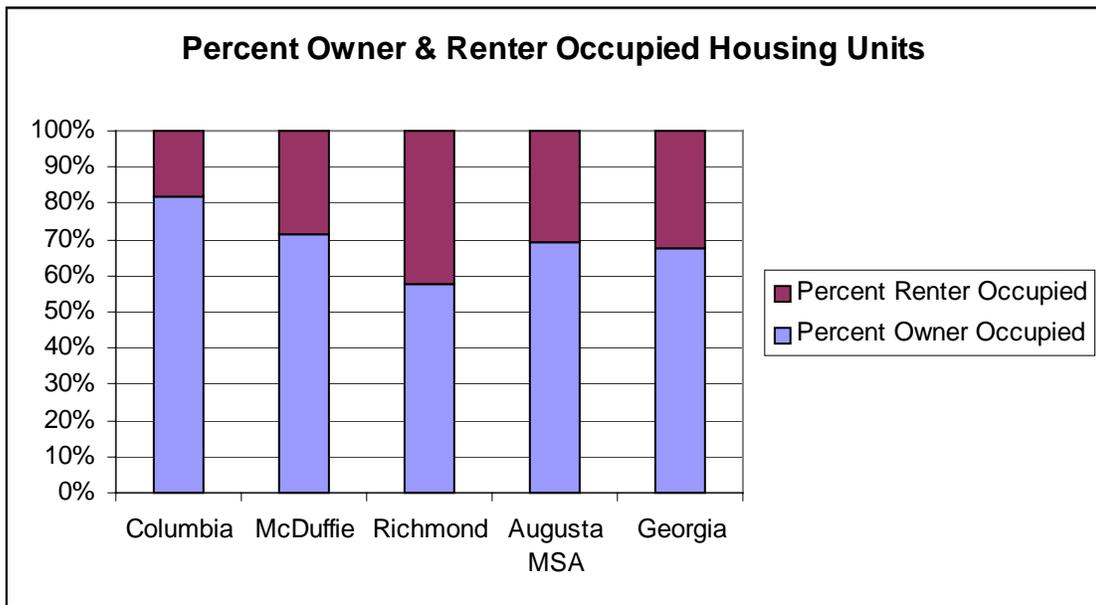
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public housing complexes in the former city. Until the 1980s, owner-occupancy had been steadily increasing in the County. The construction of several apartment complexes during the 1980s pushed the percentage of renter-occupied units up. Table H-4 summarizes current housing tenure in Richmond County and the three cities.

Table H-4 Housing Tenure, 2000 Richmond County, Augusta, Hephzibah and Blythe								
	Richmond Co.		Augusta		Hephzibah		Blythe	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Owner Occupied	42,840	58.0%	41,563	57.5%	1,088	79.2%	190	79.2%
Renter Occupied	31,080	42.0%	30,744	42.5%	286	20.8%	50	20.8%
Total Occupied	73,920	100.0%	72,307	100.0%	1,374	100.0%	240	100.0%
Source: U. S. Bureau of the Census, SF 1, 2000								

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The chart below compares the percentage of owner and renter-occupied housing units in Richmond County with those for Columbia and McDuffie Counties, the Augusta MSA, and the state of Georgia. Historically, Augusta-Richmond County has had a relatively high percentage of rental housing due in part to the presence of Fort Gordon, medical facilities, education institutions and manufacturing plants. Construction projects at major facilities in the region, such as the Savannah River Site, Plant Vogtle, Fort Gordon, and Clarks Hill (now Thurmond) Dam, also contribute to the rental housing market.



3.4 Vacant Housing Units

In 2000, 8,392 (10.2%) of Richmond County's housing units were vacant. Of the total vacant units, 8,174 (97.4%) were located in Augusta. The 10.2% vacancy rate is lower than the 11.1% vacancy rate recorded at the time of the 1990 census, but higher than the 8.2% rate in 1980. One factor that contributed to the decline in the vacancy rate is that fewer apartment units were constructed during the 1990s than in the 1980s.

Table H-5 shows the status of all vacant housing units in Augusta, Richmond and Columbia Counties, and Georgia in 2000. Not surprisingly, the Augusta and Richmond County figures are very similar. Augusta and Richmond County (both 63.5%) and Columbia County (64.7%) had higher percentages of vacant housing units either for sale or rent, or already sold or rented but not yet occupied, than the state of Georgia (53.0%).

Table H-5 Housing Vacancy Status, 2000 Augusta, Richmond and Columbia County, and Georgia								
	Augusta		Richmond County		Columbia County		Georgia	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
For Rent	3,644	44.6%	3,739	44.6%	560	25.4%	86,905	31.6%
For Sale Only	1,124	13.8%	1,160	13.8%	760	34.5%	38,440	14.0%
Rented or Sold, but Not Occupied	419	5.1%	429	5.1%	106	4.8%	20,353	7.4%
Seasonal or Recreational Use	280	3.4%	288	3.4%	338	15.4%	50,064	18.2%
For Migrant Workers	5	0.1%	5	0.1%	2	0.1	969	0.4%
Other Vacant	2,702	33.1%	2,771	33.1%	435	19.8%	78,637	28.6%
Total Vacant Units	8,174	100.0%	8,392	100.0%	2,201	100.0%	275,368	100.0%
Owner Vacancy Rate		2.6%		2.6%		2.9%		1.9%
Renter Vacancy Rate		10.7%		10.7%		9.1%		8.2%
Source: U. S. Bureau of the Census, SF 1, 2000								

Owner and renter vacancy rates were also higher locally than statewide. These are indicators that the local economy is lagging behind statewide growth levels.

3.5 Age of Housing

The age of Augusta and Richmond County's housing stock reflects the comparatively rapid growth that took place in the three decades or so after World War II, and the slower expansion of the last two decades. Table H-6 indicates that over half (51.6%) of the housing units were constructed between 1950 and 1979. Another 19% of the units were constructed between 1980 and 1989, but only about 7.5% have been constructed in the

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last ten years or so. The remaining 14% were built in 1949 or earlier. Generally speaking, the majority of the units that are fifty years or older are concentrated in neighborhoods located in the northeast part of the city (see additional discussion in the Historic Resources Element).

Table H-6 Year Structure Built, 2000 Augusta, Hephzibah, Blythe and Richmond County								
	Augusta		Hephzibah		Blythe		Richmond County	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Built 1999 to March 2000	1,182	1.5%	44	3.2%	18	6.6%	1,244	1.5%
1995 to 1998	4,739	5.9%	185	13.3%	43	15.8%	4,967	6.0%
1990 to 1994	6,188	7.7%	218	15.6%	33	12.1%	6,439	7.8%
1980 to 1989	15,213	18.9%	351	25.2%	52	19.0%	15,616	19.0%
1970 to 1979	16,813	20.8%	302	21.7%	25	9.2%	17,140	20.8%
1960 to 1969	13,602	16.9%	132	9.5%	30	11.0%	13,764	16.7%
1950 to 1959	11,488	14.2%	80	5.7%	21	7.7%	11,589	14.1%
1940 to 1949	5,275	6.5%	10	0.7%	15	5.5%	5,300	6.4%
1939 or earlier	6,146	7.6%	71	5.1%	36	13.2%	6,253	7.6%
Total	80,646	100.0%	1,393	100.0%	273	100.0%	82,312	100.0%
Source: Census 2000 Summary File 3 (SF 3) - Sample Data, Table H34								

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Table H-7 provides further evidence of the relative age of the housing stock in Augusta and Richmond County. The table lists 1972 as the median year for all housing units built in Augusta. This means that half were built before 1972 and half were built after. This makes the median age of housing in Augusta older than the housing in Hephzibah, Blythe, Columbia County, McDuffie County and the State.

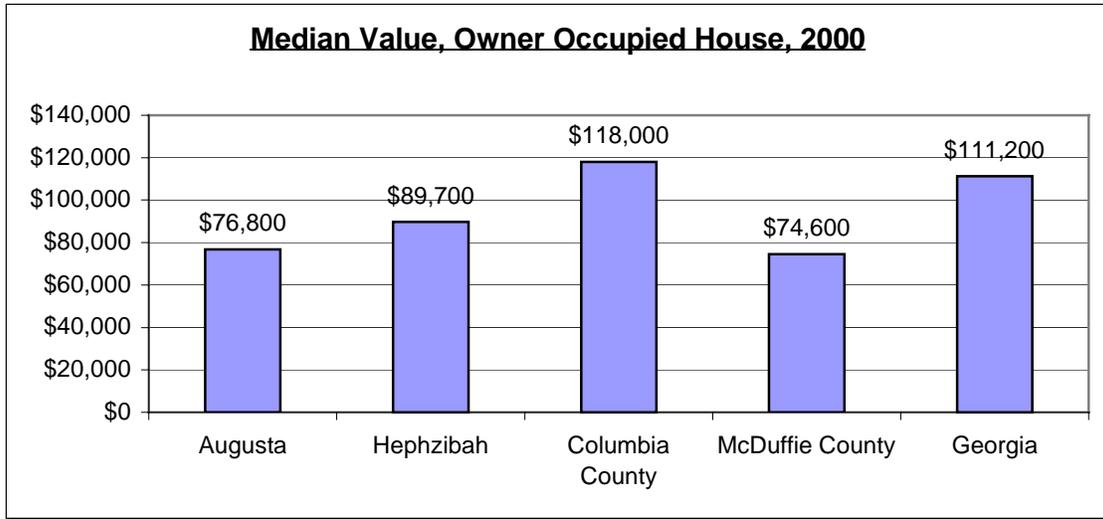
Table H-7	
Median Year Structure Built	
	<u>Year</u>
Augusta & Richmond Co.	1972
Hephzibah	1983
Blythe	1982
Columbia County	1986
McDuffie County	1977
Georgia	1980
Source: Census 2000 Summary File 3 (SF 3) - Sample Data, Table H35	

3.6 Housing Cost

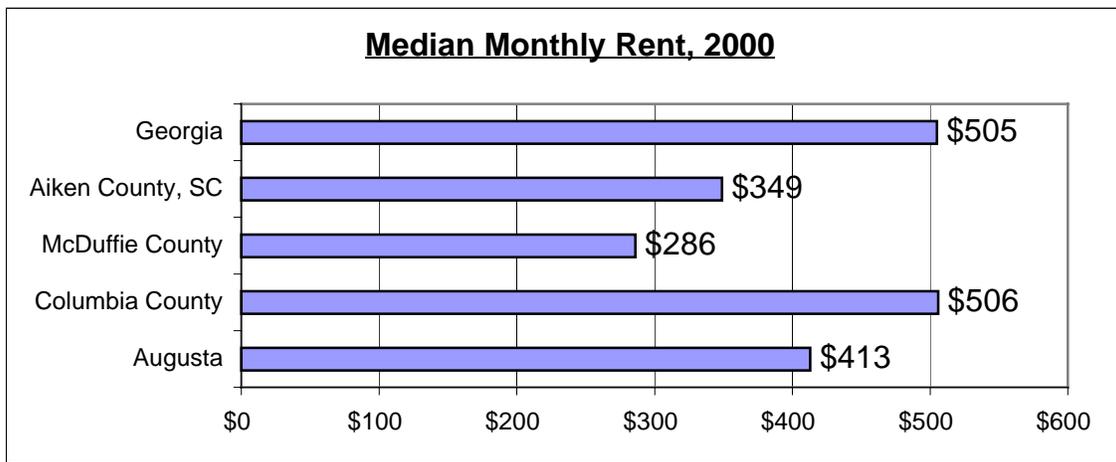
The cost of housing in Augusta, both owner and renter, has increased steadily over the decades. Even with the increase, the cost of housing remains lower than regional and state levels and contributes to the area's lower than average cost of living index.

The median value of an owner-occupied housing unit in Augusta and Richmond County was \$76,800 in the year 2000, up from \$58,500 (Richmond County) in 1990. Almost 38% of the owner units were in the \$60,000 to \$90,000 value range. The chart below shows that the median housing value is relatively low in comparison.

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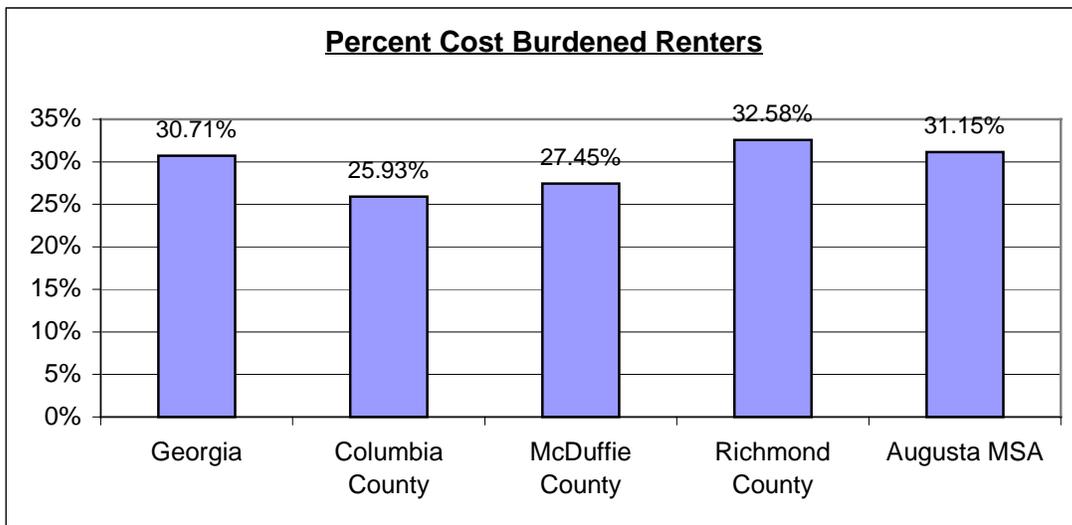
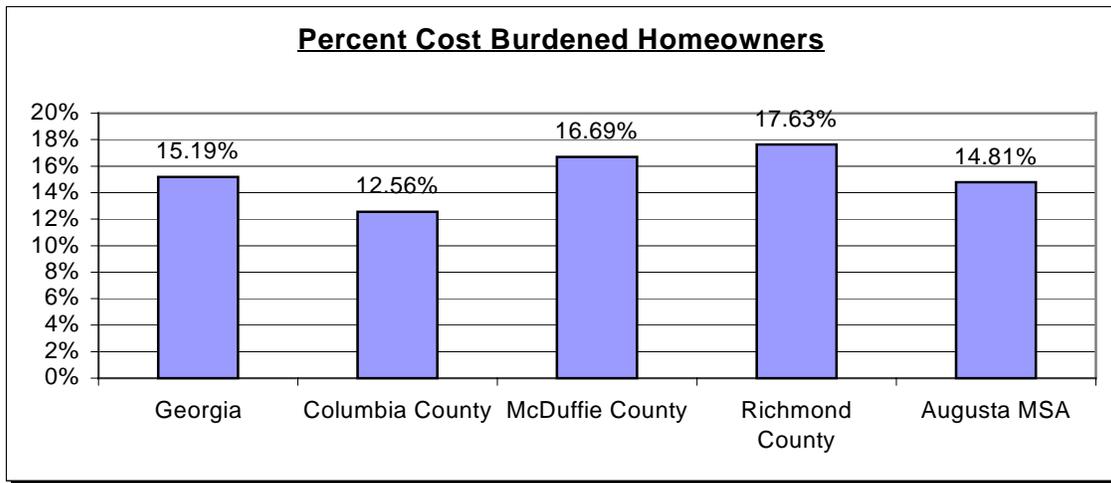
The cost of renting has increased from an average of \$305 per month in 1990 to \$413 in 2000. Nearly 45% of Augusta renters pay between \$350 and \$550 per month for rent. The chart below shows that the median monthly rent in Augusta is lower than in Columbia County and the state, but higher than in McDuffie County and Aiken County, South Carolina.



In spite of the fact that housing value and monthly rent in the Augusta area is relatively affordable, there are many households that devote a high percentage of their income to housing expenses. Cost-burdened households are defined as those households paying 35% or more of their income for housing. The data indicate that an estimated 17.6% of Richmond County homeowners, and 32.5% of renters, are cost-burdened. Approximately 91% of cost burdened renters had less than \$20,000 in household income. An estimated 5,462 of the 6,407 cost burdened homeowners (85%) have less than \$35,000 in household income. The following charts compare the percentage of cost burdened homeowners and

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renters in Richmond County with those for Columbia County, McDuffie County, Georgia, and the Augusta MSA.



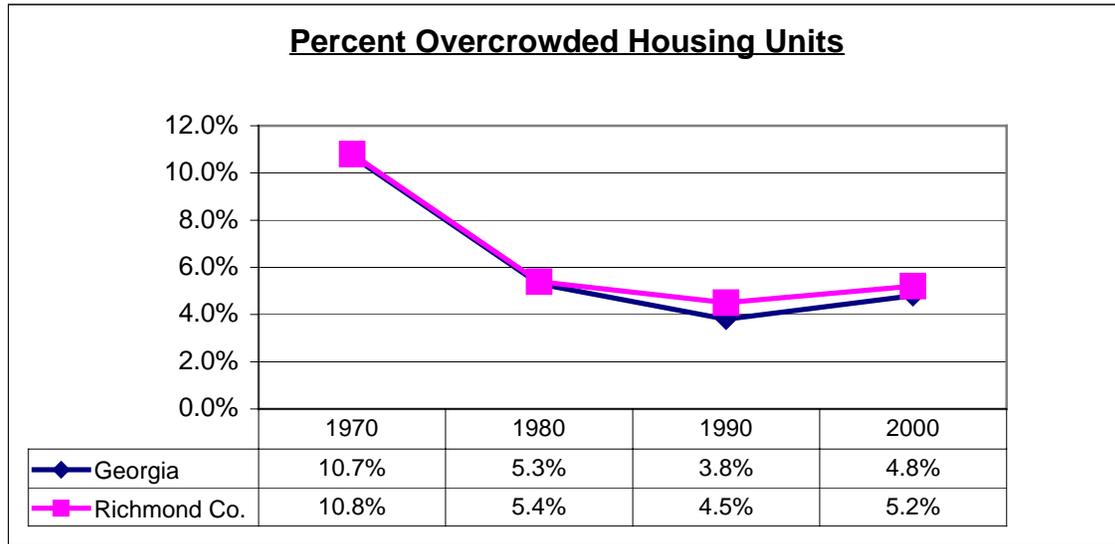
3.7 Housing Conditions

One indicator of housing conditions is the number of units that lack complete plumbing facilities. In 2000, 826 Richmond County housing units lacked complete plumbing facilities. This figure represents approximately 1.0% of the total housing units. This is down slightly from the 932 units (1.6%) lacking complete plumbing in 1990, and significantly below the 5,874 (16.8%) units in 1960.

Another indicator of housing conditions is the number of persons per room in occupied housing units. An occupied housing unit is considered overcrowded if there are more than 1.01 persons per room. At the time of the 2000 census there were 3,844

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overcrowded units in Richmond County, representing 5.2% of all occupied housing units. Renter-occupied units accounted for 72% of all the overcrowded units in Richmond County. The percentage of overcrowded units in 2000 was higher than the 4.5% recorded in 1990. The following chart shows that the percentage of overcrowded units had been declining steadily since 1960.



3.8 Housing for the Homeless

Homelessness is a fact of life for many men, women and children in the Augusta area. Many other individuals and families are in danger of becoming homeless. According to the Continuum of Care Gap Analysis there are not enough beds/units to meet the shelter needs of homeless, individuals and families with children. The Continuum of Care is a community-based planning process that identifies the critical needs of the homeless and develops a strategy to assist them. The table below shows the estimated housing needs of Augusta's homeless, the current inventory and the unmet need. It is obvious that in spite of the efforts of humanitarian organizations, the majority of the housing needs remain unmet.

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Table H-8 Housing Needs of the Homeless, 2002 Augusta, GA			
	Estimated Need	Current Inventory	Unmet Need
Individuals			
Emergency Shelter	301	148	153
Transitional Shelter	175	48	127
Emergency Shelter	875	196	680
Total	1,352	392	960
Families			
Emergency Shelter	100	61	39
Transitional Shelter	250	21	229
Emergency Shelter	400	0	400
Total	750	82	668
Source: Augusta Continuum of Care Gap Analysis, 2002			

The Augusta Task Force for the Homeless (ATFH) is the lead agency in implementing the local homeless assistance strategy. The ATFH is actually a coalition of more than 50 organizations providing housing and services to the homeless. A small, paid staff provides intake and referral services to the homeless on behalf of ATFH member agencies, distributes information, coordinates communications among service providers, and provides administrative support.

Locally, housing for the homeless is provided in the form of emergency shelters, transitional housing and some permanent housing. The Salvation Army (capacity: 80-120) and the Augusta Rescue Mission (capacity: 35) are the two largest emergency shelters. Safe Homes of Augusta, Inc. provides emergency shelter to battered women and their children. Agencies providing transitional housing units include Augusta Urban Ministries, the CSRA Economic Opportunity Authority (EOA), St. Stephen's Ministry, and the Community Mental Health Center. Groups assisted by these agencies include homeless families with children, men and women recovering from substance abuse, AIDS patients, disabled veterans and mentally ill adults. The Community Mental Health Center also provides permanent supportive housing for the homeless. The Supportive Living Program includes 40 supervised apartments, support in daily activities, counseling, and links to other community resources for the homeless.

A variety of support services are offered to the homeless. The Salvation Army provides a soup kitchen, clothing vouchers, an adult literacy program, legal advocacy and referral to Georgia Legal Services, an emergency medical clinic, prescriptions through a local pharmacy, social rehabilitation services, and substance abuse counseling sessions. The EOA supports two clinics providing free health care and operates a Rent Assistance

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Voucher program for homeless individuals and families. The EOA also operates a day shelter for the homeless.

The Golden Harvest Food Bank operates a soup kitchen and a separate food warehouse and distribution center. Catholic Social Services and Augusta Urban Ministries provide food, clothing, household goods, and other assistance to the homeless. The Richmond County Department of Family and Children Services helps the homeless obtain food stamps, welfare benefits, information, and referral services. The Augusta Housing Authority provides Section 8 housing vouchers to the homeless. The Community Mental Health Center also has programs to help clients adjust to living in the community. These programs teach community and support networking, independent living skills, job readiness, and education skills, vocational training, and recreational or leisure skills.

3.9 Housing Production and Programs

As in other communities, housing production in Augusta is largely a private sector activity. A land owner or developer has lots platted in a conventional subdivision format or in some other layout that meets a market need. A builder buys the lots and constructs housing units on each one. In the case of a multi-family development, a contractor builds the apartment complex on behalf of a group of investors. Realtors market the single-family units, while management companies oversee the rental and upkeep of apartment units. Private financial institutions provide construction and permanent financing so that the units can be built, sold and occupied. Repayment of loans to the financial institutions is one source of fresh capital for new loans.

The City of Augusta does provide some housing assistance, primarily for the benefit of low and moderate income persons. The city is an entitlement community under the U. S. Department of Housing and Urban Development's Community Development Block Grant (CDBG) Program. The city receives approximately \$2.9 million in CDBG funds each year. The grant funds are allocated to a variety of housing and related community development activities. The city receives a separate allocation of approximately \$1.4 million from HUD's HOME Investment Partnership Program. The HOME Program is designed to assist in the construction and rehabilitation of housing for low and moderate income persons. Each year the city programs the HOME funds and some CDBG funds to the following housing assistance programs:

- ❑ Housing Rehabilitation - This program provides deferred and low-interest loans to finance repairs to substandard single-family residences, emergency grants to correct dangerous or hazardous conditions in single-family residences, and free paint for use on the exterior of residences.
- ❑ Rental Rehabilitation - This program provides assistance to investors-owners to rehabilitate rental units for occupancy by low and moderate income households.

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- ❑ Downpayment Assistance - This program provides downpayment assistance to qualified low and moderate income households purchasing a home for the first time.
- ❑ Demolition - Rebuild - This program funds the construction or reconstruction of new homes for low and moderate income households occupying severely deteriorated units.
- ❑ Code Enforcement - This program finances code enforcement activities by the City's License and Inspection Department in neighborhoods with high concentration of deteriorated structures.
- ❑ Demolition and Clearance - This program finances the demolition and clearance of deteriorated structures. After clearance the vacant lots are made available to private companies and Community Housing Development Organizations (CHDOs) for the construction of affordable housing for low and moderate income households.

In recent years the City has allocated CDBG and HOME funds to non-profit organizations for the construction and rehabilitation of affordable housing in targeted neighborhoods. Several of the non-profits have been organized in response to an increased emphasis on neighborhood-based solutions to housing and community development needs. Other non-profits reflect outreach by churches located in some of the City's most distressed neighborhoods. The non-profit organizations include the following:

- ❑ Augusta Neighborhood Improvement Corporation
- ❑ 30901 Development Corporation
- ❑ Laney-Walker Development Corporation
- ❑ Antioch Ministries Community Development Corporation
- ❑ East Augusta Community Development Corporation
- ❑ Sand Hills Neighborhood Association
- ❑ Promised Land Community Development Corporation

In addition to housing programs, the city uses CDBG funds to finance public facilities, economic development and public services benefiting low and moderate income households. Public facilities constructed in recent years include Fire Station #5 in the Bethlehem neighborhood and a community center at East Augusta Park. Prior to consolidation the former County used CDBG grant awards to construct the Mental Retardation Service Center, the Savannah Place Multipurpose Center and the Belle Terrace (now Henry Brigham) Senior Center.

3.10 Public Housing

The Housing Authority of Augusta and Richmond County is the designated Local Public Housing Agency (PHA). Established in 1937, the Housing Authority is governed by a

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five-member Board of Commissioners appointed by the mayor of Augusta. An Executive Director and staff of employees oversee the day-to-day operations of the housing Authority and its properties. The Housing Authority currently operates and maintains fourteen (14) properties in Augusta-Richmond County. Together, these properties house approximately 6,800 people in 2,777 living units. Another 6,122 people are assisted through the Section 8 Housing Assistance payment Program. The annual budget for the Housing Authority exceeds \$20 million and includes expenditures to operate and maintain the public housing projects, provide housing assistance payments to Section 8 program participants, make capital improvements, provide security and other community services, and overall administration of the program.

3.11 Summary of Housing Needs

Projections indicate a need for an additional 11,000 housing units in Augusta over the next 20 years or so. The split among types of units (i.e. 1-unit detached, 1-unit attached, apartments, manufactured homes, etc.) is anticipated to remain about the same as it is now. The private sector alone will construct the majority of these new units in a variety of price ranges. However, the local government, private sector and non-profit organizations will also be involved in providing housing, especially for households sensitive to cost and affordability. Many such partnerships are already in place and providing new and rehabilitated housing units for such households. Developing mixed-income neighborhoods is the goal as additional housing is constructed.

Census data, field surveys, and input from the public and interest groups reveal a number of housing problems and needs. Lack of routine maintenance and repair work is evidence of the need for limited and moderate rehabilitation. There is a particularly high concentration of older, substandard housing units within neighborhoods in the former city of Augusta. Smaller pockets of deteriorating units are located in almost all of the neighborhoods. Still other housing units are abandoned, dilapidated, and used for criminal activities. These units need to be dealt with either through code enforcement or total reconstruction. Where dilapidated units have been removed, the resulting vacant lots have become blighting influences on neighborhoods. The vacant lots represent opportunities for construction of new housing.

Standard rental and owner units are available throughout the community, but cannot be accessed by those in need of better housing because they lack the necessary income, financing, or credit history. The high cost of housing has made it necessary for an increasing number of Augusta-Richmond County families to turn to manufactured housing and low-cost rental units as the housing of choice. Some renters are paying excessive amounts of their income for shelter, and others cannot afford the downpayment or other costs related to purchasing a home. These conditions and trends are all indicators of the need for the construction of more affordable housing, and the provision of more rental subsidies and downpayment assistance.

Based on input received at the public meetings and from homeless assistance providers, the homeless have a need for emergency shelter, transitional housing, permanent

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supportive housing, and permanent housing. Emergency shelters in the community are able to handle a high percentage of the homeless population, but there is an ongoing need to expand these facilities to meet increasing demand. Additional transitional housing is needed to take some of the burden off of the emergency shelters, and to help more of the homeless take an initial step towards moving into permanent housing. Permanent supportive housing is also needed, particularly for people with mental and physical disabilities.

Augusta-Richmond County, GA

Housing Unit Change, 1990 - 2000



Geographic Information Systems

Date: August 20, 2003
Prepared By: Paul DeCamp

Augusta, GA Disclaimer

The data represented on this map has been compiled by the best methods available. Accuracy is contingent upon the accuracy of the information supplied by various agencies and departments both internal and external to the consolidated government of Augusta, GA. Augusta, GA and the contractor involved in developing these data assume no legal responsibility for the information or accuracy contained on this map. It is strictly forbidden to either reproduce these maps or data for any reason without the written consent of the Augusta-Richmond County Council.

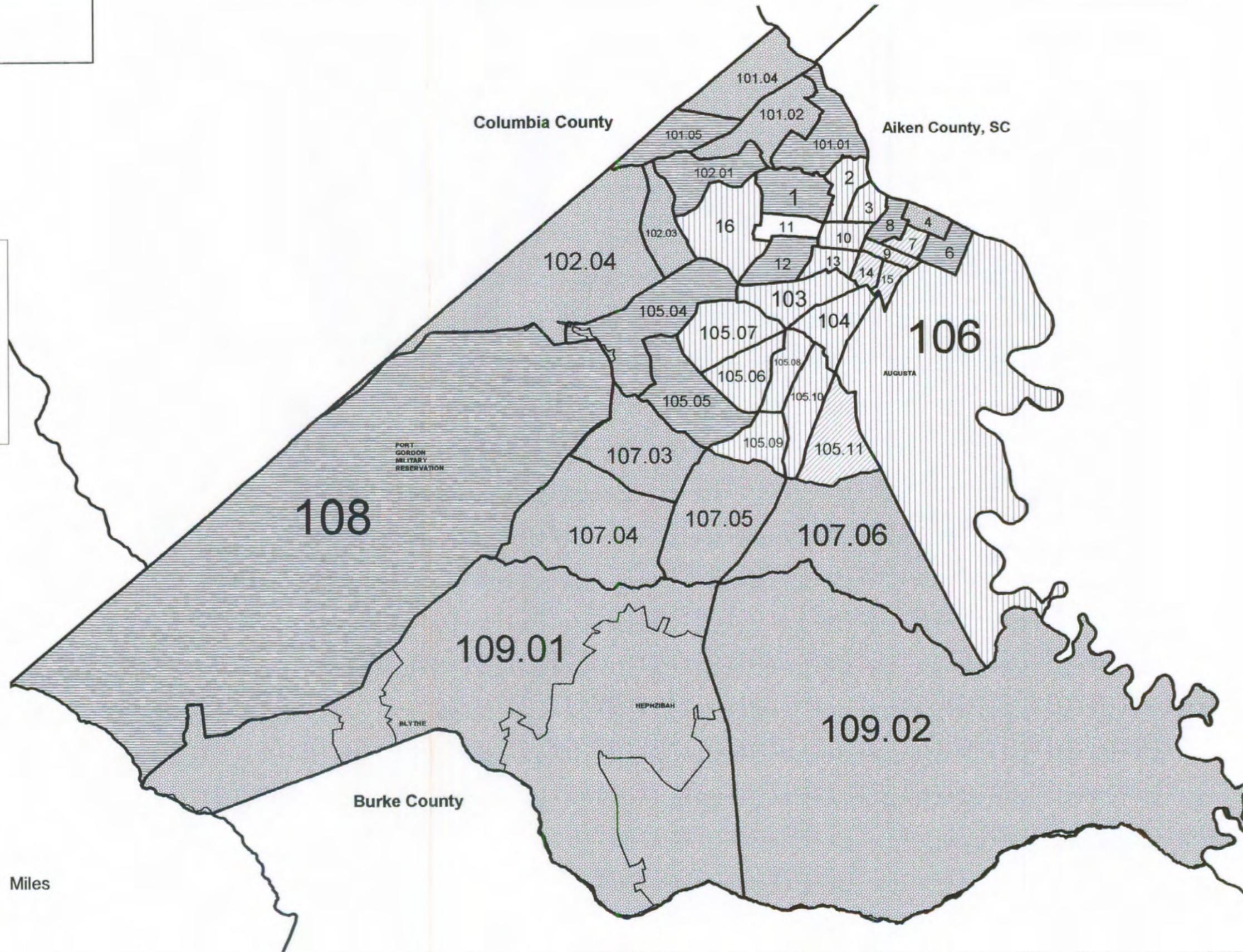
Percent Housing Unit Change, 1990-2000

Census Tracts

- No Change In Housing Units
- < 10% Net Housing Unit Decline
- 10% + Net Housing Unit Decline
- <10% Net Housing Unit Increase
- 10%+ Net Housing Unit Increase



0.2 0 0.2 0.4 Miles



Chapter 4 - Economic Development

4. Introduction

Economic development is critical to the future of Augusta. The creation of jobs and investment in facilities and equipment generates the income needed to sustain the community and attract additional development. Economic initiatives, in combination with population projections, housing, land use, community facilities and services, and natural resources, form a strategy for the economic well being of the city.

This chapter includes an inventory and assessment of Augusta's economic base, labor force characteristics, and economic development opportunities and resources. This profile is used to identify economic strengths and weaknesses, and enables the city to pinpoint specific economic development needs and goals. The economic development goals, in turn, help identify specific economic development initiatives that are part of the implementation strategy for the comprehensive plan.

4.1 Augusta Metropolitan Area

Augusta is at the heart of a metropolitan area spanning five counties and including over 477,000 residents (Census 2000). Total nonfarm employment in the Augusta MSA is approximately 200,000 (Georgia Department of Labor, 2001 Annual Average). In terms of employment in the private sector, major industries in the region include manufacturing, retail trade, professional and business services, educational and health services, and leisure and hospitality services. Government accounts for 19.5% of total employment, with state and local government employment averaging a total of 31,700.

Principal components of the manufacturing sector include textiles and apparel, paper and allied products, chemicals, transportation equipment, stone, clay and glass products, food products, and furniture, lumber and wood products. Most of the manufacturing facilities are located in modern industrial parks and / or in close proximity to needed resources (e.g. water) and the surface transportation network (primarily highways and railroads).

Retail trade establishments employ 24,000 MSA residents and tend to be concentrated in strip commercial centers, shopping malls and downtown Augusta, Aiken, North Augusta, Grovetown, Evans, Martinez and Thomson. Examples of retail trade establishments include grocery stores, drug stores, department stores, furniture stores, and general merchandise stores. Combined sales of the 1,883 retail establishments in the region exceeded \$3.8 billion in 1997 (Census of Retail Trade, 1997).

Professional and business service companies employ approximately 29,700 residents and are concentrated in the urbanized parts of the metropolitan area. Health care and social services employ approximately 18,900 residents and include area hospitals, clinics, nursing homes, social service agencies, and the offices of doctors, dentists and other health care practitioners. Health care and social service facilities are located in urban and suburban sites throughout the region, with the largest concentration in the medical complex near downtown Augusta.

Leisure and hospitality establishments include such uses as restaurants, hotels, motels, nightclubs, movie theaters, and museums. Over 17,000 area residents are employed in such establishments, which tend to be

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concentrated in historic downtowns, suburban shopping centers, and along commercial strips. The high level of employment in this category reflects the strength of tourism and convention business, and the fact that the metropolitan area is home to many special events and cultural facilities.

Government is a final major employment sector in the metropolitan area. Major government employers in the area include Fort Gordon, the Savannah River Site, state universities and technical colleges, the Medical College of Georgia, local school systems, and federal, state and local government agencies. Fort Gordon and the Savannah River Site are located on large sites earmarked for their use many years ago. Local elementary and secondary schools are scattered throughout the metropolitan area. General government offices and courts tend to be located downtown or in new town centers such as Evans.

4.1.1 Fort Gordon and the Savannah River Site

Fort Gordon, located in southwest Augusta, is the home of the U. S. Army Signal Center, the world's largest training facility in communications and electronics. A fixture in the community since the 1940s, the Fort accounts for employment of about 17,000 area residents, 10,000 of who live off base. Counting payroll and procurement of goods, services and new construction, the Fort's annual economic impact on the area exceeds \$1.0 billion. The Fort is also home to the Dwight D. Eisenhower Army Medical Center. Eisenhower Medical Center provides primary health care services to more than 90,000 active and retired military personnel and their families. In addition to the 15th Signal Brigade, Fort Gordon is home to components of the 513th Military Intelligence Brigade. The 513th MI Brigade provides intelligence and electronic warfare support to combat units.

Fort Gordon was spared from closing under the first four rounds of Base Realignment and Closure (BRAC) during the 1990s. In fact, to date none of the thirteen (13) military installations in Georgia have been affected by BRAC. This means that Georgia installations, including Fort Gordon, will be more vulnerable when the BRAC Commission makes a new list of recommended base closures in the fall of 2005. In response to this challenge, community leaders have formed the CSRA Alliance for Fort Gordon. The group is charged with developing a strategic plan to protect the Fort from closure, sponsoring a single point of contact in Washington, D.C. with information on the Fort, and establish new missions at the Fort.

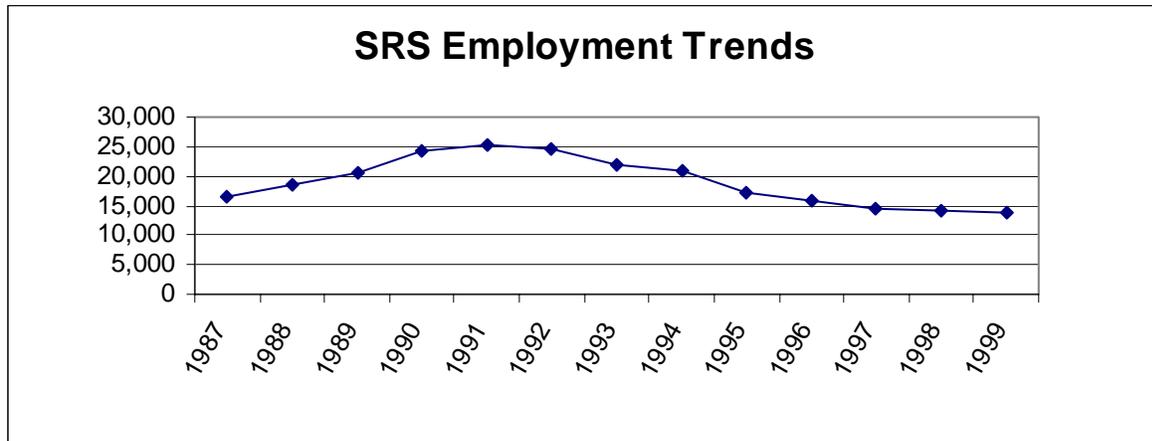
A second federal government facility important to the Augusta area is the Savannah River Site (SRS). SRS is a key Department of Energy (DOE) nuclear installation. Owned by DOE's Savannah River Operations Office, and operated under contract by the Westinghouse Savannah River Company (WSRC), the site covers some 198,344 acres (310 square miles) encompassing parts of Aiken, Barnwell and Allendale counties in South Carolina.

SRS was constructed during the early 1950s to produce the basic materials used in the fabrication of nuclear weapons, primarily tritium and plutonium-239. The site originally consisted of five reactors to produce nuclear materials by irradiating target materials with neutrons. Support facilities included two chemical separation plants, a heavy water extraction plant, a nuclear fuel and target fabrication facility and waste management facilities.

The end of the Cold War in 1990 resulted in significant changes at SRS. All five of the aging nuclear reactors were "mothballed" and the site's primary mission shifted from production of nuclear materials to

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waste management and environmental monitoring. Budget reductions resulted in downsizing at SRS that has a ripple effect on the region's economy in recent years.



According to information in a study titled "Economic Impact of the Savannah River Site", July 2001, SRS downsizing has had a substantial effect on the region's employment and income levels. Total SRS employment declined from 25,180 in 1991 to 13,854 in 1999. Aiken, Richmond, and Columbia County residents accounted for 7,067 (62%) of the jobs lost through a combination of voluntary and involuntary separation during this period. The estimated number of Richmond County (Augusta) residents working at SRS declined from 3,876 in 1991 to 1,593 in 2000.

In addition to job losses, the region lost income as a result of reduced expenditures at SRS. The economic impact study calculated that total expenses at SRS decreased by 26.4% during 1991-1999. As a result, the states of South Carolina and Georgia experienced a total direct and indirect income loss of as much as \$2.9 billion from 1992 - 1999. People in the eight counties closest to the site accounted for approximately 75% of the lost income. Additional analysis revealed that the reduction in budget and workforce at SRS had a significant impact on the growth of total personal income in many counties, especially between 1993 and 1996.

In spite of the downsizing, SRS remains a significant employer and income generator. Annual expenditures by SRS remain in the range of \$1.4 billion to \$2.0 billion (1987 - 1999). In the wake of the reductions in force, the Department of Energy appropriated \$34 million to SRS during 1993 - 1996 to assist local communities to plan and implement economic development projects. Strategies to spur job creation include the privatization of non-classified SRS operations, the transfer of technology for commercial use, technical assistance, networking with community organizations, and providing funds for building infrastructure.

4.2 Economic Base of Augusta

Augusta has a diversified economy that mirrors the MSA economy in many respects. Employment is highest in the service, retail trade and manufacturing sectors. Manufacturing facilities in the city produce textiles, paper products, chemicals, transportation equipment, and food products. Retail trade establishments are located in the downtown, in shopping centers on major roads, and on individual sites,

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and provide for the daily needs of area residents. Large facilities such as Augusta Mall and Augusta Exchange draw customers from throughout region.

Major employers in the service sector include health care and related facilities, educational institutions and business service establishments. Eight hospitals are the most visible component of the city's health care industry. (See description in Community Facilities chapter) Additional health care jobs are provided at clinics, nursing homes, laboratories, and the offices of doctors, dentists and other health care practitioners. Major educational institutions providing employment include the Medical College of Georgia, Paine College, Augusta State University, Augusta Technical College, and the Richmond County Board of Education.

4.2.1 Employment by Sector

Employment figures are a reflection of the economic base of Augusta. Table E-1 shows employment within Richmond County, between 1991 and 2000 for each major sector of the economy. The data indicate that services, retail trade and manufacturing sectors account for approximately 75% of total employment. These three sectors have dominated in the past and are expected to lead the way in the future.

**Table E-1
Employment Trends by Sector
Richmond County, 1991-2000**

Industry	1991	% of Total	1995	% of Total	2000	% of Total
Agriculture	275	0.28%	322	0.32%	364	0.34%
Mining	130	0.13%	134	0.13%	52	0.05%
Construction	4,038	4.10%	3,659	3.62%	6,028	5.60%
Manufacturing	12,908	13.10%	12,964	12.84%	13,263	12.30%
TCPU	3,345	4.40%	3,528	3.49%	4,518	4.20%
Wholesale Trade	4,157	4.22%	3,482	3.45%	3,042	2.80%
Retail Trade	20,041	20.34%	21,086	20.88%	21,481	19.92%
FIRE	3,583	3.64%	3,883	3.84%	3,197	2.96%
Services	42,576	43.21%	45,541	45.09%	50,190	46.53%
Public Administration	7,448	7.56%	6,396	6.33%	5,722	5.31%
TOTAL	98,529	100%	100,997	100%	107,857	100%

Source: Georgia Department of Labor, Data represents jobs in the county covered by unemployment insurance laws.

Chapter 4 - Economic Development

Employment in Richmond County is expected to increase by 27,574 (26%) over the next 25 years, from 107,857 to 135,431 (see Table E-2). Services, retail trade and manufacturing continue to be the three largest sectors. In 2025, services account for 63,687 jobs, or 47% of total employment. Jobs in retail trade total 26,545 (19.6%), and another 17,266 (12.7%) in manufacturing.

**Table E-2
Employment Projections
Richmond County, 2005-2025**

Industry	2000	2005	2010	2015	2020	2025
Agriculture	364	375	381	369	378	384
Mining	52	50	55	54	61	57
Construction	6,028	6,502	6,695	6,743	6,830	6,971
Manufacturing	13,263	14,412	15,155	15,974	16,780	17,266
TCPU	4,518	4,818	5,025	5,234	5,432	5,620
Wholesale Trade	3,042	3,374	3,543	3,684	3,792	3,898
Retail Trade	21,481	22,431	23,513	24,577	25,641	26,545
F.I.R.E	3,197	3,448	3,616	3,771	3,927	4,132
Services	50,190	54,544	56,904	59,210	61,280	63,687
Public Administration	5,722	6,154	6,443	6,510	6,778	6,871
TOTAL	107,857	116,108	121,330	126,126	130,899	135,431

Source: Georgia Department of Labor, 200 data; Augusta-Richmond County Planning Commission, 2005-2025 projections.

Table E-3 compares the percentage of jobs by sector in Richmond County with adjacent counties and the state of Georgia. The data show that regionally services, retail trade, government and manufacturing are the leading employment sectors. The presence of several state facilities and Fort Gordon explains why government workers account for 23% of employment in Richmond County.

4.2.2 Wage Levels

Table E-4 shows current and historic average weekly wages paid within each employment sector, and compares the most recent Richmond County averages with state level totals. The figures indicate that average weekly wages are rising in all employment sectors. Between 1992 and 2000, gains were especially significant in the Finance, Insurance and Real Estate (FIRE) sector (125.0%) and the Mining sector (39.0%). However, average weekly wages are below the state averages in all of the sectors except Manufacturing and FIRE. The average weekly wage in Richmond County was \$539. This is \$119 less than the average weekly wage statewide. One possible explanation for the lower wage rates is that lower paying sectors, such as Services and Retail Trade, account for a large share of total employment in Richmond County. Another contributing factor is that Augusta and Richmond County experienced

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relatively low growth during the 1990s, thus making it possible for employers to attract or retain employees at relatively low wages when compared to other fast-growing markets.

Table E-3
Comparison of Sector Employment, 2004
Richmond, Columbia and McDuffie Counties, the State of Georgia

Industry	Richmond	Columbia	McDuffie	Georgia
Agriculture	0.1%	0.3%	5.3%	1.2%
Mining	0.1%	0.5%	1.0%	0.3%
Construction	4.5%	11.3%	7.8%	5.2%
Manufacturing	11.4%	14.4%	22.2%	12.6%
Wholesale Trade	2.1%	2.3%	0.8%	5.3%
Retail Trade	12.5%	13.4%	13.7%	11.7%
Services (except Government)	45.8%	41.8%	29.1%	48.2%
Government	23.2%	16.0%	20.1%	15.5%
Total - Private Sector	76.8%	84.0%	79.9%	84.5%
Total - Government	23.2%	16.0%	20.1%	15.5%

Source: Georgia Department of Labor, Area Labor profiles and Georgia Nonagricultural Employment.

NOTE: The data reflect the conversion from the 1987 Standard Industrial Classification (SIC) basis to the 2002 North American Industry Classification System (NAICS) basis.

**Table E-4
Wage Levels by Industry
Richmond County, 1992 – 2000**

Industry	Average Weekly Wage				
	Richmond County				Georgia
	1992	1995	1998	2000	2000
All Sectors	\$432	\$462	\$519	\$539	\$658
Agriculture	\$235	\$259	\$353	\$347	\$403
Mining	\$590	\$779	\$949	\$820	\$879
Construction	\$404	\$434	\$513	\$568	\$655
Manufacturing	\$596	\$658	\$741	\$776	\$721
Transportation/Utilities	\$566	\$588	\$597	\$596	\$949
Wholesale Trade	\$541	\$600	\$651	\$730	\$968
Retail Trade	\$224	\$248	\$282	\$290	\$350
F.I.R.E	\$441	\$467	\$900	\$993	\$967
Services	\$462	\$490	\$521	\$535	\$657
Public Administration	\$415	\$435	\$535	\$546	\$608

Source: Georgia Department of Labor, Area Labor Profiles and Georgia Employment And Wages, 2000.

4.2.3 Income and Earnings

Income is another important component of Augusta's economic base. Tables E-5 and E-6 compare median household income and per capita income figures for Richmond County, the Augusta MSA, Georgia and the United States. Table E-5 shows that while both median household and per capita income figures increased in Richmond County between 1989 and 1999, they remain well below comparable levels for the metropolitan area, the state, and the nation. Table E-6 reveals that Richmond County's median household income is only 78% of the state's median household income and 79% of the comparable national figure. These percentages are lower than they were in 1989, indicating that local income levels are not increasing as fast as the state and national income levels. A comparable trend is evident for per capita income.

**Table E-5
Household and Per Capital Income Trend
Richmond County, Augusta MSA, Georgia and United States, 1989 – 1999**

	Median Household Income		Per Capita Income	
	1989	1999	1989	1999
Richmond County	\$25,265	\$33,086	\$11,799	\$17,088
Augusta MSA	\$28,490	\$38,103	\$12,721	\$18,744
Georgia	\$29,021	\$42,433	\$13,631	\$21,154
United States	\$30,056	\$41,994	\$14,420	\$21,587

Source: Census 1990, STF3 and 2000, SF3

**Table E-6
Income as a Percentage of Georgia and United States Figures
Richmond County and Augusta MSA, 1989 and 1999**

	Median Household Income		Per Capita Income	
	1989	1999	1989	1999
Percent of Georgia				
Richmond County	87.1%	77.9%	86.6%	80.8%
Augusta MSA	98.2%	89.8%	93.3%	88.6%
Percent of United States				
Richmond County	84.1%	78.8%	81.9%	79.2%
Augusta MSA	94.8%	90.7%	88.2%	86.8%

Source: Census 1990, STF3 and 2000, SF3

Source of personal income is another indicator of the economic health of a community. The Georgia Department of Community Affairs, with the assistance of Woods and Poole Economics, Inc., has developed estimates and projections of the sources of personal income for all Georgia counties. In developing this information, personal income is divided into the following five categories:

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1. Wage and Salary – Total income earned as compensation for working or rendering services;
2. Other Labor Income – Total employer contributions to private pension or worker’s compensation funds;
3. Proprietor’s Income – Proprietor’s income measures total profits earned from partnerships and sole proprietorships;
4. Dividends – Investment – Rent and Interest Payments, and Interest Income – Total income from investments and rental property; and
5. Transfer Payments – Total income from payments by the government under many different programs, such as Social Security, unemployment insurance, SSI, food stamps, and veterans benefits.

Table E-7 shows the source of personal income by type for Richmond County and the state of Georgia between 1990 and 2000. The data indicate that wage and salary income accounts for nearly three-fourths of personal income in Richmond County. This is well above the state average for Wage and Salary income. Locally, Proprietors’ Income and Dividends – Interest – Rent Income are below state averages, indicating that Richmond County has a lower percentage of self-employed people and people with long-term investments.

Table E-7
Sources of Personal Income by Type – 1990 – 2000
Richmond County and Georgia

	1990		1995		2000	
	Richmond County	Georgia	Richmond County	Georgia	Richmond County	Georgia
Wage and Salary	73.8%	60.4%	72.9%	59.0%	77.7%	61.2%
Other Labor	13.6%	8.7%	13.2%	8.6%	11.4%	6.8%
Proprietor’s Income	5.3%	7.1%	3.2%	7.9%	4.2%	8.6%
Dividends, Interest & Rent	15.7%	17.3%	15.5%	16.3%	17.9%	16.8%
Transfer Payments	13.8%	10.9%	17.9%	12.6%	17.6%	11.1%
Residence Adjustment	-17.5%	-0.10%	-18.2%	-0.2%	-24.3%	-0.1%

Source: Georgia Department of Community Affairs, Data for Planning, Woods and Poole Economics, Inc., 2002.

Included with the Source of Personal Income figures is a Residence Adjustment factor, which measures the net amount of personal income of residents of the county that is earned outside the county. A positive number means that the amount of income earned outside the county by residents is greater than the amount of income earned in the county by nonresidents. Richmond County’s negative Residence

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Adjustment factor indicates that the amount of income earned in the county by nonresidents exceeds the amount of income earned outside the county by residents. This is indicative of the fact that Augusta-Richmond County is home to a majority of the jobs in the metropolitan area and that a relatively small percentage of residents work outside the county. According to the projections in Table E-8, the profile of personal income sources in Richmond County is expected to remain about the same over the next 20 years.

Table E-8
Sources of Personal Income by Type - 2005 – 2025
Richmond County and Georgia

	2005		2015		2025	
	Richmond	Georgia	Richmond	Georgia	Richmond	Georgia
Wage & Salary Income	78.1%	61.1%	78.6%	60.9%	78.7%	60.9%
Other Labor Income	11.3%	6.7%	11.1%	6.5%	10.8%	6.3%
Proprietor's Income	4.1%	8.5%	4.1%	8.3%	4.0%	8.2%
Dividends, Interest & Rent	18.1%	16.8%	18.0%	16.6%	17.7%	16.3%
Transfer Payments	18.1%	11.2%	19.4%	11.7%	20.8%	12.2%
Resident Adjustment	-24.9%	0.33%	-25.9%	1.00%	-26.6%	1.35%

Source: Georgia Department of Community Affairs, Data for Planning, Woods and Poole Economics, Inc., 2002.

Earnings figures also reflect the growing importance of the service sector to the local economy. Table E-9 shows the trend in earnings by employment sector for Richmond County between 1980 and 2000. The numbers indicate that aggregate earnings in several sectors increased during the period. Notably increases were recorded in the following sectors: service, construction, state and local government, and retail trade. Aggregate earnings declined in the farming, agricultural services, mining, and federal military government sectors. Earnings in all sectors are projected to increase over the next 20 years (see Table E-10). Total earnings are projected to increase by approximately 34% to \$5.96 billion.

Table E-11 compares the percent earnings by sector for Richmond County and the state of Georgia. The figures indicate that the services, manufacturing and state and local government sectors are projected to account for the majority of earnings in Richmond County in 2025. Statewide services, manufacturing and TCPU are expected to be the top three sectors in 2025.

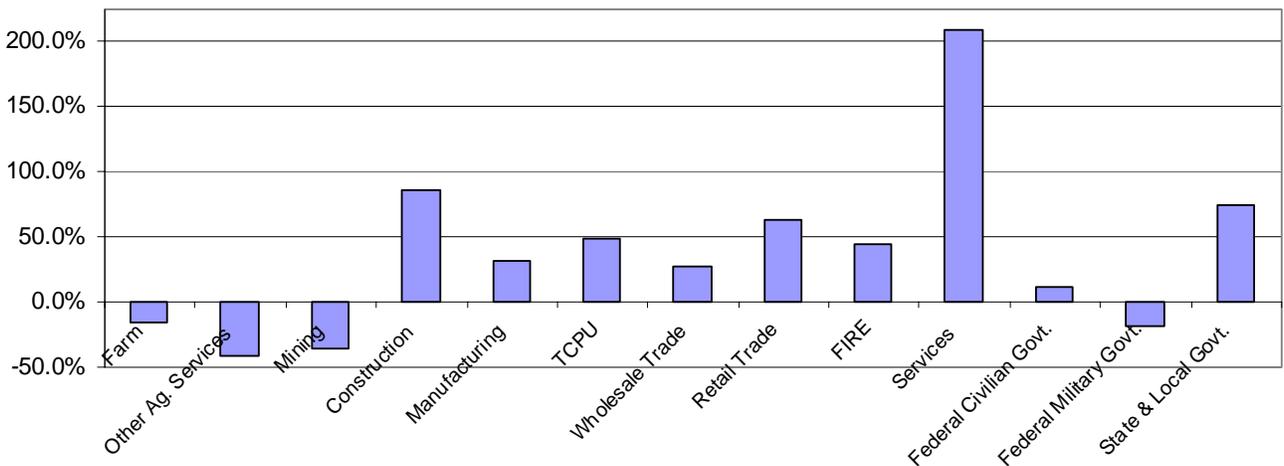
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Table E-9
Earnings by Sector, 1980-2000
Richmond County

Employment Sector	1980	1990	2000
Farm	\$1,199,000	\$774,000	\$1,014,000
Agricultural Services, Other	\$14,042,000	\$5,639,000	\$8,227,000
Mining	\$4,443,000	\$5,193,000	\$2,863,000
Construction	\$121,566,000	\$288,944,000	\$226,157,000
Manufacturing	\$453,163,000	\$611,815,000	\$597,092,000
Trans, Communications, & Public Utilities (TCPU)	\$115,754,000	\$119,012,000	\$172,536,000
Wholesale Trade	\$109,540,000	\$150,334,000	\$139,661,000
Retail Trade	\$230,800,000	\$317,850,000	\$377,584,000
Finance, Insurance, & Real Estate (FIRE)	\$96,339,000	\$111,824,000	\$138,754,000
Services	\$320,753,000	\$764,600,000	\$990,180,000
Federal Civilian Government	\$274,387,000	\$320,036,000	\$307,258,000
Federal Military Government	\$521,970,000	\$392,441,000	\$427,364,000
State & Local Government	\$432,273,000	\$563,694,000	\$756,931,000
Total	\$2,696,230,000	\$3,652,160,000	\$4,145,620,000

All figures in 1996 dollars
 Source: Woods & Poole Economics, Inc.

Earnings by Sector, Richmond County
Percent Change, 1980-2000



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Table E-10			
Projected Earnings by Sector, 2005 – 2025			
Richmond County			
Employment Sector	2005	2015	2025
Farm	\$1,086,000	\$1,252,000	\$1,473,000
Agricultural Services, Other	\$8,982,000	\$10,361,000	\$12,113,000
Mining	\$3,065,000	\$3,436,000	\$3,834,000
Construction	\$233,318,000	\$248,346,000	\$264,146,000
Manufacturing	\$626,973,000	\$696,746,000	\$769,000,000
Trans, Communications, & Public Utilities (TCPU)	\$184,903,000	\$208,911,000	\$231,046,000
Wholesale Trade	\$149,601,000	\$169,854,000	\$194,014,000
Retail Trade	\$400,351,000	\$446,910,000	\$494,271,000
Finance, Insurance, & Real Estate (FIRE)	\$151,820,000	\$177,508,000	\$208,983,000
Services	\$1,138,180,000	\$1,507,380,000	\$1,967,970,000
Federal Civilian Government	\$310,437,000	\$327,632,000	\$347,045,000
Federal Military Government	\$453,805,000	\$506,389,000	\$557,108,000
State & Local Government	\$786,122,000	\$843,195,000	\$909,382,000
Total	\$4,448,640,000	\$5,147,920,000	\$5,960,390,000
All figures in 1996 dollars			
Source: Woods & Poole Economics, Inc.			

Table E-11				
Percent Earnings by Sector, 2000 and 2025				
Richmond County and Georgia				
Employment Sector	Richmond County		Georgia	
	2000	2025	2000	2025
Farm	0.02%	0.02%	0.98%	0.79%
Agricultural Services, Other	0.20%	0.20%	0.59%	0.62%
Mining	0.07%	0.06%	0.27%	0.18%
Construction	5.46%	4.43%	6.00%	5.06%
Manufacturing	14.40%	12.90%	14.86%	12.53%
Trans, Comm., & Public Utilities (TCPU)	4.16%	3.88%	9.89%	9.63%
Wholesale Trade	3.37%	3.26%	8.44%	7.71%
Retail Trade	9.11%	8.29%	8.99%	8.71%
Finance, Insurance, & Real Estate (FIRE)	3.35%	3.51%	7.57%	7.82%
Services	23.88%	33.02%	26.77%	33.73%
Federal Civilian Government	7.41%	5.82%	3.39%	2.33%
Federal Military Government	10.31%	9.35%	2.06%	1.53%
State & Local Government	18.26%	15.26%	10.18%	9.37%
Source: Woods & Poole Economics, Inc.				

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4.3 Labor Force Characteristics

The labor force characteristics of a community provide potential investors and private companies with insights into the availability of workers, skill levels, occupations, and employment levels. This section includes an inventory and assessment of Richmond County's labor force. Information is provided on employment, unemployment, labor force participation, occupations, and commuting patterns. Local data are compared to state and national figures as appropriate.

4.3.1 Labor Force and Employment

Table E-12 indicates that Richmond County residents comprise 39% of the civilian labor force, and 38% of the employed residents, in the Augusta metropolitan area. This is not surprising because Richmond County is the most populous of the metro area counties and home to the greatest number of businesses. The unemployment rate in Richmond County is currently higher than the comparable rate for the metropolitan area and the state of Georgia. Such factors as education levels, job skill levels, poverty rates, and variations in overall economic conditions contribute to the unemployment rate.

Table E-12
Resident Labor Force, Annual Average, 2001
Augusta MSA and State of Georgia

	Civilian Labor Force	Employed	Unemployed	Percent Unemployed
Georgia	4,131,569	3,966,348	165,221	4.0%
Augusta MSA	207,079	197,361	9,718	4.7%
Richmond Co.	79,030	74,704	4,326	5.5%
Columbia Co.	44,362	43,256	1,106	2.5%
McDuffie Co.	9,687	9,021	666	6.9%
Aiken Co.	64,620	61,390	3,230	5.0%
Edgefield Co.	9,380	8,990	390	4.2%

Source: Georgia Department of Labor, Area Labor Profiles

Recent trends show that labor force and employment levels in Richmond County have been variable over the last 10-12 years. The data in Table E-13 indicates that labor force and employment levels were comparatively high in 1990, dropped by approximately 7%-8% by 1995, and recovered to some extent by the year 2000.

The downturn in the mid-1990s is partly explained by the layoffs at the Savannah River Site and the ripple effect it had on the metro area economy. During the ten-year period, Richmond County's unemployment rate remained at or significantly above the state of Georgia unemployment rate. Recent

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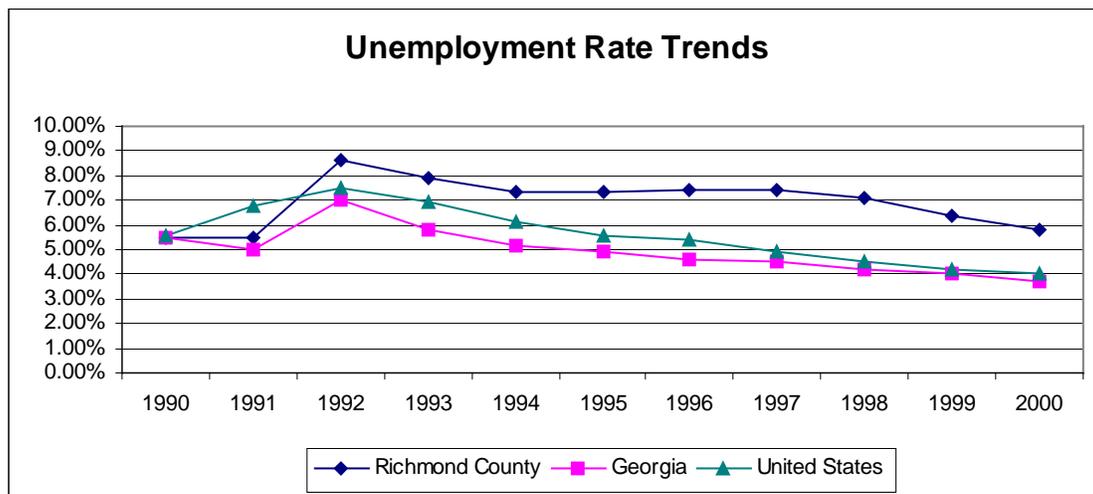
data indicate that Richmond county labor force and employment levels continue to trend upward, but have yet to reach the levels recorded in 1990.

The chart below compares unemployment rates for Richmond County, Georgia and the United States between 1990 and 2000. The data show that the local unemployment rate was consistently higher than the rates for the state and nation. This disparity is partly a reflection of the fact that Richmond County did not fully share in the nationwide economic expansion that took place during the 1990s.

Table E-13
Labor Force and Employment Trends, 1990 - 2000
Richmond County

Year	Labor Force	Employment	Unemployment	% Unemployed	
				Richmond Co.	Georgia
1990	85,649	80,910	4,739	5.5%	5.5%
1995	79,857	74,048	5,809	7.3%	4.9%
2000	80,429	75,761	4,668	5.8%	3.7%

Source: Georgia Department of Labor, Area Labor Profiles Employment by Place of Residence.



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4.3.2 Labor Force Participation

Table E-14 lists recent trends in labor force participation rates for Richmond County, Georgia and the United States. The labor force participation rate is the percentage of the resident population 16 years and over in the workforce. In 1990 the local labor force participation rate totaled 65.7% of persons 16 years and older. This was slightly higher than the United States (65.3%) and lower than the Georgia rate (67.9%). Similar trends were evident for both males and females in the labor force. Due to the presence of Fort Gordon, the military labor force participation rate was significantly higher than in the state and nation.

Table E-14
Labor Force Participation Rates, 1990 and 2000
Richmond County, Georgia, and the United States

	1990			2000		
	Richmond	Georgia	U.S.	Richmond	Georgia	U.S.
Total in Labor Force	65.7%	67.9%	65.3%	62.3%	66.1%	63.9%
Civilian Labor Force	59.2%	66.4%	64.4%	57.2%	65.0%	63.4%
Military Labor Force	6.5%	1.5%	0.9%	5.1%	1.1%	0.5%
Males in Labor Force	74.8%	76.6%	74.5%	68.2%	73.1%	70.7%
Females in Labor Force	57.3%	59.9%	56.8%	56.9%	59.4%	57.5%

Source: Census 1990, STF3, and Census 2000, SF3.

Labor force participation rates declined across the board between 1990 and 2000. Significantly, Richmond County labor force participation rates dropped more dramatically than the state and national rates. Among the factors that contributed to the decline are the aging of the population, outmigration of the work-age population, higher unemployment rates, and higher rates of growth in other parts of Georgia.

4.3.3 Occupations

Information on employment by occupation indicates the mix of skill levels in a community's workforce. This information is useful to companies interested in expanding or locating a new business in the community. Skill levels also indicate the relative need for vocational training programs.

Table E-15 shows the percentage of employment by occupation in Augusta, Richmond County, Georgia and the United States. Locally management, professional and related occupations account for the greatest percentage of jobs. This is followed by jobs in sales and office occupations and service occupations. The local occupation mix is similar to the combination in the metropolitan area, the state and the nation. The percentage of management and professional workers is slightly higher in the MSA, state and nation than in Augusta.

Table E-15
Percent Employment by Occupation, 2000
Augusta, Richmond County, Augusta MSA, Georgia and the United States

Occupation	Augusta	Richmond County	Augusta MSA	Georgia	United States
Management, professional, and related occupations	30.7%	30.5%	32.4%	32.7%	33.6%
Service occupations	18.5%	18.4%	15.5%	13.4%	14.9%
Sales and office occupations	25.4%	25.3%	24.2%	26.8%	26.7%
Farming, fishing, and forestry occupations	0.2%	0.2%	0.5%	0.6%	0.7%
Construction, extraction, and maintenance occupations	9.4%	9.7%	10.9%	10.8%	9.4%
Production, transportation, and material moving occupations	15.8%	16.0%	16.6%	15.7%	14.6%

Source: Census 2000 Summary File 3 (SF 3) - Sample Data.

4.3.4 Commuting Patterns

Data on commuting patterns reinforce the fact that a majority of employed Richmond County residents work within the county. Table E-16 shows that in 2000 eighty percent of employed residents worked within the county. This is down slightly from 83% in 1990. The data indicate that about 9% of employed residents commute to jobs in Columbia County and another 6% to workplaces in Aiken County, S.C. The number of residents commuting to Columbia County increased during the decade, while the number going to Aiken County declined. Some of the factors contributing to this trend included increasing retail and service jobs in Columbia County and the loss of jobs at the Savannah River Site.

**Table E-16
Commuting Patterns, 1990 and 2000
Employed Residents of Richmond County**

Place of Work	1990		2000	
	Number	Percent	Number	Percent
Richmond County	72,793	83%	67,645	80%
Columbia County	4,014	5%	7,637	9%
Aiken County, SC	7,118	8%	5,051	6%
Other Locations	3,359	4%	4,516	5%
Total Reporting	87,284		84,849	
Total Out Migration	14,491	16%	17,204	20%

Source: Census Bureau, Journey-to-Work Data, 1990 and 2000

4.4 Recent Economic Activities and Trends

Augusta and Richmond County have experienced steady if not spectacular economic development and growth in recent years. The local economy went through a period of readjustment during the mid-1990s as downsizing took place at the Savannah River Site and managed care affected the health care industry. Being a border community, Augusta is sometimes at a competitive disadvantage in industrial recruitment, and lost out on more than one occasion to nearby communities in South Carolina. Examples of economic development "lows" included the decision by Titleist, Inc. not to locate a manufacturing plant in the area (1997), the decision by Hankook Synthetics, Inc. to delay indefinitely the construction of a polyester fiber plant (1998), layoffs at Sibley Mill (1999), and the closing of Regency Mall (2000).

The local economy has adjusted to the changes in the market and continues to experience new investment and the creation of new jobs. The box on the following page identifies the capital investment of new and existing industry in Augusta and Richmond County in recent years. The list is only part of the story. Countless small businesses have been established or expanded, and new retail and office space continues to be added to the market. The Augusta Exchange Shopping Center is the most visible addition to Augusta's retail market. Located on 80 acres near the junction of I-20 and I-520, Augusta Exchange contains over 800,000 square feet of retail space. Major anchors include Target, Circuit City, the Sports Authority, Comp USA, and a Winn Dixie Marketplace. The center has attracted additional commercial development to other nearby sites.

In addition, Augusta's medical community continues to invest in new equipment and facilities. Both University Hospital and MCG have added new specialized facilities in recent years. Another trend is the expansion of the call and service center industry. The Augusta area is now home to 12 call and/or service centers employing a total of about 3,200 area residents. The presence of college students and military spouses is one factor making the area attractive to such companies.

Recent Business Investment Augusta-Richmond County

New Companies

- International Flavors and Fragrances (1996) \$35.0 million
- Sitel (1999) \$3 million
- Delta Airlines Reservation Center (1999) \$3 million
- Standard Textile (2001) \$4 million
- Civic Development Group (2002) \$1 million

Expansion of Existing Companies

- Humana Hospital (1997) \$14.0 million
- MCG Children's Medical Center (1998) \$53.0 million
- Murray Biscuit (2000) \$11 million (2002) \$30 million
- Boral Bricks (2000) \$10.2 million
- Garrett Aviation (2001) \$1.4 million
- Tyco Healthcare / Kendall Co. (2002) \$4 million
- PCS Nitrogen (2002) \$14 million
- Solvay Advanced Polymers (2002) \$13 million
- General Chemical (2002) \$1 million
- Monsanto Co. (2002) \$30 million
- Comcast (2001) \$4 million
- Knology (2001) \$1 million

Source: Augusta Metro Chamber of Commerce.

The public and private sectors continue to work together to plan for the future of the area economy. The JOBS NOW project is one example of this collaboration. In 2001, public and private sector representatives formed the Augusta Community Economic Development Strategy (CEDS) Committee to implement the JOBS NOW project. Between fall 2001 and summer 2002, the CEDS Committee met monthly to identify the strengths and weaknesses of the economy and outline a vision for future growth.

The committee then established goals, objectives and strategies to address the following issues: community appearance, tourism, commercial air service, education, community awareness of local development efforts, capacity-building, local programs for attracting jobs and investment, and attracting

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new missions to Fort Gordon. Staff of the CSRA Regional Development Center facilitated the committee meetings.

The JOBS NOW action plan was published in July 2002 and the project strategies are now being implemented. The action plan identifies the agencies and organizations responsible for implementing individual strategies. The CEDS Committee meets quarterly to review progress on implementation and to revise strategies based on changing conditions. The JOBS NOW plan was jointly financed by the City of Augusta, the Development Authority of Richmond County and the U. S. Department of Commerce.

At the same time, the Augusta Metro Chamber of Commerce is forming a new, independent organization to attract new business to the area. Plans are being finalized for the creation of the Augusta Regional Partnership; a 17-member board that will assume the economic development activities historically handled by the chamber. Among other things, the Partnership will be responsible for marketing Richmond, Columbia and Burke Counties to business and industry. The organization is modeled after the Aiken-Edgefield (S.C.) Economic Development Partnership and will include representatives from the public and private sectors.

4.5 Economic Development Resources

Economic development resources are vital to the expansion and retention of business in any community. Augusta is fortunate to have a wide variety of such resources to draw upon in maintaining a climate favorable to business and investment. This section summarizes the economic development agencies and financing mechanisms available in the community.

4.5.1 Economic Development Agencies

- **Development Authority of Richmond County** – The Development Authority of Richmond County is a nine-member board appointed by the Augusta Commission. The purpose of the Development Authority is to develop and promote trade, commerce, industry and employment opportunities in Richmond County. Pursuant to the Georgia Development Authorities Law (O.C.G.A. 36-62-1 - 36-62-14), the Development Authority has broad powers to finance and construct a wide variety of economic development projects throughout the county.
- **Downtown Development Authority** – The Downtown Development Authority of Augusta is a seven-member board appointed by the Augusta Commission. The purpose of the Downtown Development Authority is to help finance the cost of rehabilitation and redevelopment of the Augusta Central Business District (CBD). Pursuant to the Georgia Downtown Development Authorities Law (O.C.G.A. 36-42-1 - 36-42-16), the Downtown Development Authority has broad powers to finance and construct a wide variety of projects in the CBD. The CBD includes the area extending from the west side of Fifteenth Street through the west side of East Boundary, and from the Savannah River through the south side of Laney Walker Boulevard.
- **Augusta Metro Chamber of Commerce** - The mission of the Augusta Metro Chamber of Commerce is to enhance the economic prosperity of Richmond, Columbia and Burke counties by promoting the location, development and expansion of new and existing businesses. The Chamber is a non-profit organization funded by the voluntary dues of the members. The Chamber offers opportunities for

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involvement by small and large businesses through committees, roundtables and special activities. The Small Business Development Council, Women in Business Committee, Economic Development Council, Existing Industry Committee, and Military Affairs Committee are but a few of the programs and services offered by the Chamber. Each spring during the Masters® Golf Tournament the Chamber hosts the Red Carpet Tour, a special event to market the Augusta area as a business location for new and existing companies.

- **Augusta Housing and Neighborhood Development Department** – The Housing and Neighborhood Development Department is the city agency that administers the Community Development Block Grant (CDBG), HOME Investment Partnership and Emergency Shelter Grant programs. The department administers financing programs including the Economic Development Loan Program, Recaptured UDAG Loan Program, Façade Rehabilitation Grant Program, and Mayor’s Business Investment Grant Program.
- **Augusta Technical College** – Augusta Technical College provides education and training in all types of businesses, ranging from certificate programs to associate degrees. It also has certificates in several specialist areas including manufacturing, customer service, construction, and distribution. Augusta Tech also coordinates the Georgia Quick-Start Program, a state initiative that trains employees free of charge for new and expanding businesses.
- **The Center for Advanced Technology (CADTEC)** – This program was established by Augusta Technical College to help CSRA manufacturers compete in the world market through technology transfer. CADTEC provides high quality, accessible and affordable workforce training, technology transfer and criterion-referenced assessments to area businesses, individuals and organizations. CADTEC helps its customers identify their needs and establish the specific training to meet those needs.
- **Mayor’s Film Office** – The goal of the Mayor’s Film Office is to attract the film and video industries to Augusta by providing aid and assistance to filmmakers. Services provided by the Film Office include a photographic library, location scouting, pre-production logistical support, production assistance, and liaison with city and state governments.
- **Mayor’s Business Action Team** – A network of people, organizations and programs that provide assistance and services to large and small businesses. The City of Augusta “Services to Business” publication lists contacts for the various business service and development programs. The “Services to Business” publication is available in print and on the Mayor’s Office website at http://augusta/departments/mayors_office/conducting_business.htm
- **Augusta-Richmond County Small Business Incubator** – This facility is located at 3140 Augusta Tech Drive adjacent to the Augusta Technical College campus. The building has a total of 18,000 square feet and includes office space for nineteen clients, manufacturing space, administrative offices, conference room, work/copy room and break room. The mission of the Small Business Incubator is to foster regional economic development by supporting entrepreneurs, small/disadvantaged businesses, and businesses expanding to the CSRA area by providing managerial & technical assistance, low office rental rates, and shared access to basic office services and equipment. These services are designed to allow clients to minimize the initial high costs associated with setting up the necessary

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facilities, equipment and services for a business environment. A Small Business Advisory Board, consisting of area business leaders, monitors clients' performance, progress and continued need for incubator assistance.

- **CSRA Business League** - The CSRA Business League is a non-profit advocacy organization that is governed by a Board of Directors comprised of local leaders from the business and corporate communities. The League represents a cross section of racial, social, economic, civic and professional groups networking and exchanging information and resources to improve the economic development of the entire community. The League assists with business plans, loan packaging, management assistance, technical assistance, grant writing, and marketing. League staff also helps with advertising, procurement, reference materials, and technical support (Internet, copying, faxing).
- **CSRA Regional Development Center** - The CSRA RDC is a public sector, non-profit planning and development agency serving a 14-county and 46-city region in the eastern portion of central Georgia. Augusta-Richmond County is a member of the CSRA RDC. The RDC's Department of Economic Development assists local governments and development organizations through grant writing and administration, strategic planning, and other technical assistance. In addition, the Economic Development Department acts as Secretary and Treasurer for the CSRA Unified Development Council (UDC), a council of Chambers of Commerce, and the Unified Development Authority (UDA), a joint development authority.

The CSRA Development Companies are units of the RDC that provide loans to small businesses for a variety of purposes. The Development Companies have operating relationships with the Small Business Administration (SBA), the Economic Development Administration (EDA), and the Department of Agriculture (USDA).

- **CSRA Unified Development Council** - The Unified Development Council (UDC) is a council of the Chambers of Commerce and other economic development organizations throughout the CSRA. The primary purpose of the UDC is to offer a forum of discussion and problem-solving for economic development professionals throughout the CSRA, who jointly pursue economic marketing, professional training and enrichment, and other special projects. The UDC has been in existence since 1983, and currently has fourteen (14) dues-paying member counties: Burke, Columbia, Glascock, Hancock, Jefferson, Jenkins, Lincoln, McDuffie, Richmond, Screven, Taliaferro, Warren, Washington, and Wilkes.
- **CSRA Unified Development Authority** - The Unified Development Authority is a joint development authority encompassing 13 CSRA counties, including Augusta-Richmond County. The CSRA UDA serves to promote the economic development of the Central Savannah River Area, to encourage cooperation among economic development organizations within the member counties, and to exercise all the powers and privileges (including tax credits) granted to development authorities pursuant to Georgia law. The CSRA RDC acts as Secretary and Treasurer of the CSRA UDA.
- **Georgia Department of Industry, Trade and Tourism**- The Georgia Department of Industry, Trade, and Tourism (GDITT) recruits businesses, trade partners, and tourists to Georgia. Working in collaboration with other state and federal programs, GDITT maintains a worldwide marketing effort targeting more than 15,000 companies with the potential to expand or relocate in Georgia. GDITT

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also supports the efforts of Georgia companies to expand their international markets. These efforts include helping small businesses participate in trade shows, providing contacts and consultants in international markets, and supplying extensive training resources.

- **Georgia Power Company, Community and Economic Development Division** - Georgia Power Company operates a full-service Community and Economic Development organization serving the entire state of Georgia. The division is a comprehensive, one-stop source for business and industrial location services. The Atlanta headquarters features the Georgia Resource Center, a state-of-the-art site selection facility that allows potential investors to see Georgia without traversing the entire state. The division also helps Georgia communities build their economic development attractiveness by offering leadership, strategy, infrastructure, and marketing consultation services.
- **Georgia Tech Economic Development Institute** - Augusta is home to one of 17 regional offices of Georgia Tech's Economic Development Institute (EDI). EDI offers an array of services with a common objective: to promote the growth of business in Georgia. Whether the goal is attracting new companies to Georgia, expanding existing enterprises, providing technical expertise for industrial projects or helping communities' plan for growth, EDI helps keep the state's economy moving forward. EDI assists company managers and business owners, city and county government officials and economic development professionals.

For Georgia business and industry, EDI provides technical assistance, management training and other assistance designed to improve productivity and help companies become more competitive in world markets. EDI supports Georgia's economic development efforts by conducting specialized professional development courses, performing economic development research, helping Georgia communities prepare for growth and connecting relocating or expanding companies with resources at Georgia Tech.

- **UGA Small Business Development Center** – Augusta is home to one of 19 offices of the University of Georgia's Business Outreach Services/Small Business Development Center (SBDC). The mission of the BOS/SBDC is to enhance the economic well being of Georgia citizens by providing business and economic development assistance. Among the services provided by the organization are consulting and educational opportunities, economic research, identifying procurement opportunities and sources of capital for minority entrepreneurs, and helping existing businesses take advantage of state and local incentives for job creation.
- **Georgia Department of Community Affairs, Regional Office # 7** – Augusta is home to one of 12 Regional Service Delivery offices established by state law 1999. The regional office in Augusta is staffed by representatives from the Department of Community Affairs (DCA) and the Department of Industry, Trade, and Tourism (DITT), and is designed to bring state resources closer to the people and to foster regional collaboration in community and economic development. Personnel in the Augusta office work side-by-side with staff of Georgia Tech's EDI and the University of Georgia. Together the regional staff works to better serve the needs of local governments established businesses, and other development partners. A 21-member Regional Advisory Councils provides regular guidance to regional and state staff on issues such as leadership, infrastructure, growth management, and workforce development. The Council also works with the CSRA Regional Development Centers to formulate a regional comprehensive plan and work program.

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4.5.2 Financing Mechanisms

- **U. S. Small Business Administration (SBA) Loan Programs** – Includes the following loan programs – SBA 504, SBA 7(a) and SBA Low-Doc. SBA 504 can be used for fixed assets, such as land, buildings, machinery and fixtures. SBA 7(a) and Low-Doc can be used for most purposes, including inventory, working capital, vehicles and business acquisitions. Regionally, the CSRA Development Companies administers the SBA 504 program. A bank is the lender on the 7(a) and Low-Doc programs, with the SBA guaranteeing the loans.
- **CSRA Revolving Loan Fund** – An internal revolving loan fund of the CSRA Development Companies. Loans up to \$150,000 available for most purposes. CSRA Development Companies prefers that revolving loan fund only part of project costs.
- **Industrial Revenue Bonds** - Industrial Revenue Bonds (IRBs) are financing instruments issued through the Development Authority of Richmond County, Georgia. Both taxable and tax-exempt industrial revenue bond financing is available at competitive, below-prime interest rates. IRBs provide financing for land, building and equipment acquisition for new and expanding manufacturing plants.
- **Link Deposit Program** – The Link Deposit Program is designed to provide eligible small, minority and women-owned businesses additional sources of loan funds. Program administered by the Augusta Human Resources Department in cooperation with two banks.
- **Economic Development and Recaptured UDAG Loan Fund Programs** - The Economic Development and Recaptured UDAG Loan Fund Programs were created to finance development projects, establish new businesses and/or expansion of existing businesses, and create employment opportunities and/or retain existing jobs for low and moderate-income persons. Economic Development Loans range between \$5,000 and \$25,000, with repayment periods of up to 7 years. Recaptured UDAG Loans - Loans are between \$25,000 and \$150,000, with repayment period of up to 10 years. Examples of eligible use of funds include business acquisition and construction, land acquisition, purchase of equipment and machinery, working capital, and pollution control and abatement. The Housing and Neighborhood Development Department administers the programs.
- **Enterprise Zone Program** – Two enterprise zones have been established in the city of Augusta under provisions of the Georgia Enterprise Zone Employment Act of 1997. The Act allows the city to offer tax and other incentives to eligible businesses that create jobs areas within the city suffering from underdevelopment and economic decline. Qualifying businesses and service enterprises are exempt from state, county, and municipal ad valorem taxes, except for the portion of taxes that are collected for the school district, in accordance with the following schedule:
 1. 100% of the property taxes shall be exempt for the first five years
 2. 80% of the property taxes shall be exempt for the next two years
 3. 60% of the property taxes shall be exempt for the next year
 4. 40% of the property taxes shall be exempt for the next year
 5. 20% of the property taxes shall be exempt for the last year

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The two designated enterprise zones are the Laney-Walker Enterprise Zone near downtown, and the Rocky Creek Enterprise Zone centered on the area around Regency Mall. The Housing and Neighborhood Development Department administers the program.

- **Mayor's Business Investment Grant** – This program provides a \$2,500 reimbursable grant for start-up costs of eligible new businesses locating in the Laney Walker Enterprise Zone. Eligible businesses must be a community-serving retail or service business, provide stimulation to blighted areas, and comply with city regulations. The owner must complete a business development-training program. The Housing and Neighborhood Development Department administers the program.
- **Georgia's Business Expansion and Support Act of 1994 (B.E.S.T.)** allows statewide job tax credit and investment tax credits for businesses locating or expanding in Georgia.

1. **Job Tax Credit:** Tax liability for any one-year may be reduced by a maximum of 100%. Eligible businesses include those involved in manufacturing, warehousing, distribution, processing, tourism and research and development. This credit may be carried forward up to ten years.

Tier County	Jobs Created	Tax Credit	% Tax Liability
1 Burke	5	\$3,500	100
2 Richmond	10	\$2,500	100
3 Counties	15	\$1,250	50
4 Columbia	25	\$750	50

2. **Job Tax Credit Joint Development Authorities:** Legislation provides for an additional \$500 job tax credit for counties that are members of a Joint Development Authority, which is the case for Columbia, Richmond and Burke counties.
3. **Investment Tax Credit:** Available to manufacturers or telecommunications companies having a presence in Georgia for at least 5 years. The company must spend at least \$50,000 on an expansion project.

Tier County	% Investment Credit	% Recycling, Pollution Control & Defense Conversion Activities
1 Burke	5	8
2 Richmond	3	5
3 Counties	1	3
4 Columbia	1	3

4. **Optional Investment Credit:** Larger credits can, depending on location, offset up to 90% of a manufacturer's increased income tax liability following a major expansion. These larger investment tax credits can be carried forward for 10 years but may not be taken in conjunction with the job or investment tax credits.

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Tier County	Minimum Investment (mill)	Tax Credit %
1 Burke	\$5	10%
2 Richmond	\$10	8%
3 Counties	\$20	6%
4 Columbia	\$20	6%

5. **Retraining Tax Credit:** Firms providing retraining for employees may receive a tax credit of 25% of their costs, up to \$500 per participant, to a maximum of 50% of state income tax liability.
6. **Corporate Headquarters Tax Credit:** Companies establishing or relocating their headquarters to Georgia may be eligible for a tax credit if the headquarters is defined as the principal central administrative offices of a company. New jobs created at the new headquarters must be full-time and must pay above the average wage.

Tier County	Minimum Investment (mill) Tax Credit %
1 Burke	105%
2 Richmond	110%
3 Counties	115%
4 Columbia	115%

7. **Ports Job Tax Credit:** Companies that increase traffic shipped through Georgia ports by 10% or more in a year may be eligible for larger job tax credits. The amount of the bonus tax credit for qualifying firms is \$1,250 per job. Applicants must also be eligible for job tax credits under the B.E.S.T. legislation
8. **Research and Development Tax Credit:** A tax credit is allowed for expenses of research conducted within Georgia for any business or headquarters of any such business engaged in manufacturing, warehousing and distribution, processing, telecommunications, tourism and research and development industries.
9. **Child Care Credit:** Employers providing or sponsoring child care for employees are eligible for a tax credit of 75% of their costs, up to 50% of state income tax liability.
10. **Small Company Business Growth Tax Credit:** A tax credit is granted for any business or headquarters of any such business engaged in manufacturing, warehousing, and distribution, processing, telecommunications, tourism, and research and development industries having a state net taxable income which is 20% or more above that of the preceding year if its net taxable income in each of the two preceding years was also 20% or more.

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11. Sales Tax Exemptions:

- Manufacturing Machinery
 - Raw materials
 - Purchase for resale
 - Machinery purchased new and used directly in the manufacturing process
 - Pollution control equipment
 - Machinery components
 - Computer equipment
 - Cleanroom equipment
 - Primary material handling
 - Electricity
- **One Georgia Fund:** The One Georgia Authority will channel one third of the state's tobacco settlement to economic development projects for Tier 1 and 2 counties and, in certain instances, Tier 3 counties. Flexible assistance will be provided in the form of loans and grants to support local and regional economic development strategies. While the authority will support traditional economic development projects, it will also support innovative solutions to local and regional challenges.
 1. **Edge Fund** - Special financial assistance is provided to eligible applicants in Tier 1 and 2 counties for locating economic development projects. Limited resources are available for communities when a project is considering one site in the State of Georgia and competing against another state. Response to applications is quick due to the sensitive nature of projects and their tight timeframes. Eligible applicants are city or county governments, development authorities or other public entities.
 2. **Equity Fund** - The purpose of this fund is to provide a program of financial assistance that includes grants or loans and any other form of financial assistance to provide for infrastructure, services, facilities and improvements. Eligible applicants are cities, counties, development authorities or other public entities. Resources are limited and are awarded several times each year. Companies must have a health care plan available for employees and meet state requirements for better pay.

4.6 Summary of Economic Development Needs

Augusta is the economic hub of a market area that extends beyond the metropolitan area to include a number of the adjoining rural counties. The city is projected to remain the regional center of employment and trade in the foreseeable future. However, as the information in this chapter and other reports indicate, the community has several economic development needs to address as time goes by. These needs include:

- Additional diversification of the economic and employment base
- Offer additional incentives to attract new business and industry
- Increase wage levels in all sectors currently below the state average
- Increase household and per capita income levels in relation to state and national averages
- Decrease the unemployment rate in relation to state and national averages
- Work to retain and expand existing business and industry

Augusta-Richmond County, GA

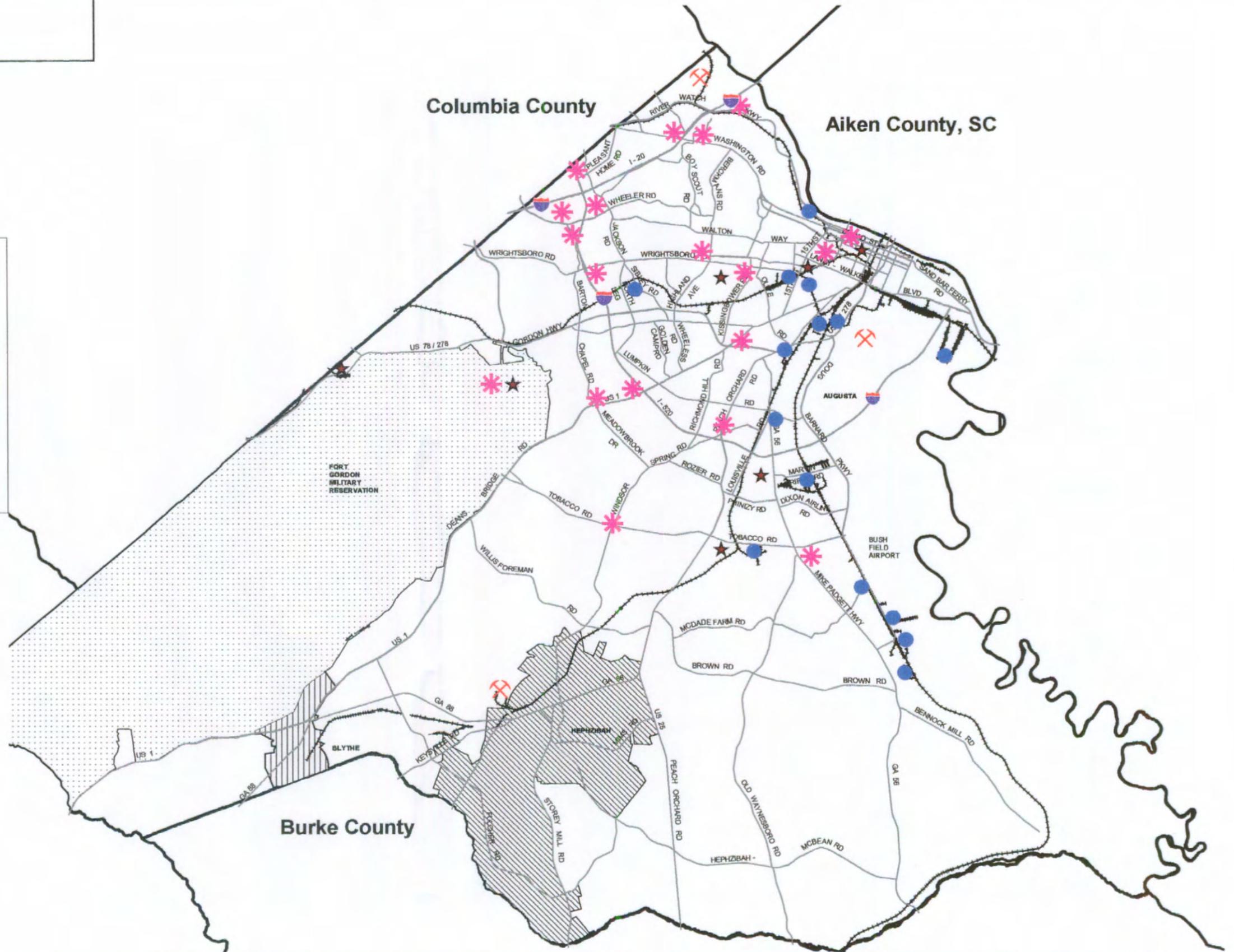
Employment Centers

	Geographic Information Systems
	Date: <Place Date Here> Prepared By: <Your Name Here>

Augusta, GA Disclaimer
The data represented on this map has been compiled by the best methods available. Accuracy is contingent upon the source information as compiled by various agencies and departments both internal and external to the municipal government of Augusta, GA. Augusta, GA and the mapmaker disclaim any liability for any errors or omissions. It is hereby declared to be a true and correct copy of the data as shown on the map.

Employment Concentrations

- ★ Government
- ✳ Service / Retail
- Manufacturing
- ⚡ Surface Mining



Columbia County

Aiken County, SC

Burke County

Chapter 5 – Transportation

5. Introduction

Transportation facilities have had a profound effect on the development of Augusta and Richmond County. From pre-colonial times to the present trails, road, railroads, waterways, and air service have all influenced the timing, location and extent of development in the community.

This chapter includes an inventory and assessment of transportation facilities and services in Augusta and Richmond County. Transportation facilities include roads, sidewalks, bikeways, airports and railroad lines. Transportation services include the public transit system.

5.1 Roadway Network

A street network that includes two interstate highways, four federal highways, ten state routes, and numerous local roads serves Augusta-Richmond County. Streets have varying functions, so the street network is generally divided into four categories: freeways, arterials, collectors and local streets. Design standards vary from one functional class to another. For example, an arterial road has more travel lanes, a higher operating speed, and fewer curb cuts than a local street. The basic characteristics of the functional classification system are outlined below.

Functional classification is not static. As roads have been widened or extended, their functional classification has been changed to reflect their new role. Examples of roads that have been widened or extended in the last 10-15 years include Wheeler Road, Deans Bridge Road, Gordon Highway, and Windsor Spring Road. New construction has resulted in the addition of the Jimmie Dyess Parkway and River Watch Parkway to the list of arterial roads. Planned road widening projects such as on Windsor Spring Road south of Tobacco Road will result in other changes to the system. In anticipation of this change, it is desirable to coordinate right-of-way acquisition, land-use planning, access and zoning activities with this change in mind.

5.1.1 Interstates, Freeways and Expressways

Freeways are limited access, multi-lane, divided roadways carrying high-speed traffic. Two freeways - Interstate 20 and Interstate 520, serve Richmond County. I-20 crosses the northwest corner of the county and connects Augusta to Columbia, South Carolina and Atlanta. Interchanges are located at River Watch parkway, Washington Road, I-520, and Wheeler Road. The River Watch Parkway interchange opened in 1993 and the Wheeler Road interchange opened in 1998. Other I-20 interchanges are located in Columbia and Aiken (S.C.) Counties and connect to other parts of the metropolitan area. Interstate 520 (a.k.a. the Bobby Jones Expressway) is a circumferential route extending from I-20 to Laney-Walker Blvd. Interchanges are located at I-20, Wheeler Road, Wrightsboro Road, Gordon Highway, Deans Bridge Road, Windsor Spring/Peach Orchard Rd., Mike Padgett Hwy. (SR56), Doug Barnard Pkwy., (SR 56 Loop), and

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Laney Walker Blvd. The section between Doug Barnard Parkway and Laney-Walker Blvd. opened to traffic in July 1998. The section of the Bobby Jones between I-20 and Gordon Highway was widened from four to six lanes in 2001. A 0.89-mile extension of Bobby Jones, from Laney Walker Blvd. to the Savannah River, is currently under construction. A companion bridge project over the river is also under construction.

River Watch Parkway (SR 104) is a four-lane, divided, controlled access facility that currently extends from 15th Street near down Augusta to Pleasant Home Road near the Columbia County line. The first phase of River Watch, between 15th St. and I-20, opened to traffic in 1991. The second phase, from I-20 to Pleasant Home Road was completed in 1993. A third phase, extending the parkway .57 miles to the Baston Road intersection, is currently under construction. River Watch Parkway was built to relieve congestion on Washington Road and carries a good deal of commuter traffic to and from west Augusta and Columbia County.

The John C. Calhoun Expressway is a four-lane, divided limited access road that links Washington Road to Greene Street in downtown Augusta. Built in the mid-1970s as an alternative route to and from downtown, the Calhoun Expressway includes a half-diamond interchange with 15th Street and a split-diamond interchange with Eve Street and Crawford Avenue. When first constructed the expressway extended from Washington Road to 15th Street. In 1984 the elevated part of the expressway, between 15th and Greene Streets, was opened to traffic.

5.1.2 Arterials

Arterial roads are designed to move large volumes of traffic through and across an urban area, and collect and distribute traffic to and from smaller streets. Several arterials, such as Washington Road, Wheeler Road, Wrightsboro Road, Deans Bridge Road and Peach Orchard Road, have interchanges with I-20 and I-520. Other arterials, such as 13th Street, Sand Bar Ferry Road, and Gordon Highway, provide connections across the Savannah River into Aiken County.

The Federal Highway Administration's Highway Functional Classification System splits arterial roads into two subgroups: major and minor arterials. Major arterials, also known as principal arterials, move larger volumes of traffic over long distances at high speeds. In Richmond County there are 18 roads or road segments classified as major or principal arterials. Examples include Washington Road, Jimmie Dyess Parkway, Gordon Highway, Peach Orchard Road, Mike Padgett Highway, Doug Barnard Parkway and Tobacco Road.

Minor arterials serve trips of moderate length at lower speeds than major arterials. Traffic volumes are lower and cross streets and driveways are spaced closer together than on major arterials. There are 38 road segments classified as minor arterials in the county. They are scattered throughout the community and include Broad St., Laney-Walker Blvd., Berckmans Rd., Richmond Hill Rd., and Old Waynesboro Road.

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5.1.3 Collectors

The primary function of collector roads is to move traffic from local streets to arterials and freeways. Collectors also provide access to some traffic generator, such as shopping centers, schools, and recreation facilities. Traffic volumes and speeds tend to be lower than on the arterials. Under FHWA's Functional Classification System there are currently 53 roads or road segments in Richmond County classified as collectors. Examples include East Boundary, James Brown Blvd., Rozier Rd., Willis Foreman Rd., Golden Camp Rd., and Alexander Drive.

5.1.4 Local Roads

The primary function of local roads is to provide access to adjoining property for both vehicles and pedestrians. Generally, local roads are 2-lane facilities on a 50-60-foot right-of-way that carry low traffic volumes and have frequent curb cuts. All roads not classified as collectors, arterials or freeways are considered local roads. In Richmond County there are over 1,000 miles of local roads.

5.2 Rail Transportation

Passenger rail service is not available in Augusta at the present time. In 1999 the Georgia Transportation Board approved a long-range plan to provide inter-city passenger rail service between Atlanta and other major cities in the State.

Freight service is provided by two railroads: Norfolk Southern and CSX Transportation, Inc. The Norfolk Southern main line track enters the City from the north, crossing the Savannah River and then continuing through downtown on the right-of-way of Sixth Street. The main line continues in a southeasterly direction through the rest of the City and on toward Savannah. Norfolk Southern has two railroad yards in the City: one (the main classification yard) is approximately a mile south of downtown and a second (Nixon Yard) is south of Augusta Regional Airport near International Paper Company.

The CSX main line crosses Augusta in a roughly east-west direction. This line provides connections to Spartanburg, S.C. and Savannah, GA. A second CSX line, formerly owned by the Georgia Railroad, connects to Atlanta. Beltline service is provided to a number of industries. The CSX main railroad yard is located off Laney-Walker Blvd. southeast of downtown. The yard covers approximately 117 acres and consists of an inbound receiving yard and an outbound classification yard. A second yard, the Harrisonville Yard, is located on 48 acres between Wrightsboro Road and Olive Road.

At-grade railroad crossings are located on many roads in the city. The crossings have been a part of community life for many years, and solutions have been sought to reduce the inevitable conflicts between railroad, motor vehicle and pedestrian traffic. At the same time, availability of rail service is a major attraction for new industry and maintaining existing industry.

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5.3 Air Transportation

There are two airports in Augusta: Augusta Regional Airport at Bush Field and Daniel Field. Augusta Regional Airport is a 1,500-acre commercial airport located at the intersection of Tobacco Road and Doug Barnard Parkway (SR 56 Spur). Major facilities include an 8,000-foot primary runway, a 6,000-foot crosswind runway, a terminal, an air traffic control tower, a facilities maintenance office, and a weather service station. Three commercial carriers serve Augusta Regional: Atlantic Southeast Airlines, US Airways Express and Continental Express. Atlantic Southeast provides service to Atlanta's Hartsfield International, while US Airways Express flies to Charlotte International. Continental Express, which began serving the Augusta market in March 2003, has flights to Houston and Newark. Augusta Regional Airport is operated under the direction of the 13-member Augusta Aviation Commission.

Daniel Field, located on a 152-acre site at the intersection of Wrightsboro Road and Highland Avenue, is a general aviation airport. Major facilities include two runways, two hangars, outdoor tie-down areas, and a control tower. Daniel Field was once the commercial airport for Augusta. Charter flights, flight training, airplane storage, and fuel and maintenance services are provided. Daniel Field is active year-round, but is especially busy in early April during the Masters ® Golf Tournament. The airport is operated under the direction of the 13-member General Aviation Commission.

5.4 Bicycle and Pedestrian Facilities

Bicycle and pedestrian facilities are important alternative modes of transportation in any community. Bicyclists use the road network on a regular basis, but currently there are no designated bike lanes, routes or bikeways in the county. Off-road facilities used by cyclists include the Augusta Canal towpath and the Savannah River levee. A fairly extensive network of sidewalks is present within the “old” city limits, but there are very few in the neighborhood and commercial centers of the former county. Sidewalks are located along some sections of the arterial and collector roads, but do not form a network that pedestrians can utilize. Sidewalks also are located adjacent to many of the public schools. Off-road facilities used by walkers and joggers include the Augusta Canal towpath, Savannah River levee, and paved trails at some county recreation centers. Where sidewalks are not present, especially on local or neighborhood streets, pedestrians simply walk in the road.

5.5 Public Transportation

Augusta Public Transit (APT) currently operates 12 fixed routes within the city with a peak fleet of 17 buses. The system is primarily radial with 10 routes terminating at the Transfer Facility at 1546 Broad Street. The remaining two routes, Barton Chapel and Lumpkin Road, terminate at a transfer point at Regency Mall, southwest of downtown. Service frequency and schedules vary, but generally APT buses run from about 6:00 a.m. until 6:00 p.m., Monday through Friday. Ten of the routes operate on Saturday. No service is provided on Sunday.

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APT also operates paratransit services for disabled persons, in compliance with the Americans with Disabilities Act of 1990. In accordance with guidelines issued by the Federal Transit Administration (FTA), APT provides paratransit service within 3/4 mile of each fixed route during the same operating hours as the local service. Paratransit service is available only to certified eligible passengers. Currently, APT has 27 motor buses and five paratransit vehicles available for maximum service.

APT operates 10 of its routes from a Transfer facility at 1546 Broad Street, just west of downtown Augusta. Opened in 1991, the Transfer Facility includes a large indoor waiting area with benches, an information desk, restrooms, water fountains, a soft-drink vending machine, and a work area for APT staff. Covered breezeways flank either side of the building, and eight sawtooth parking bays provide space for the loading and unloading of bus riders. There are also parking spaces for 20 vehicles.

APT's offices and maintenance garage are housed in a facility located at 1535 Fenwick Street, about four blocks from the Transfer Facility. There are six maintenance bays and a detached building for vehicle cleaning at the garage. APT administrative and operations staff is housed in a 5,000 square foot building erected in 1993 as part of a renovation project. The property includes parking spaces for buses, paratransit vans, and staff and visitor vehicles. During the spring of 2002, the vehicle parking area was expanded to accommodate the paratransit vehicles.

The Barton Chapel and Lumpkin Road routes terminate at a transfer center at Regency Mall located about five miles southwest of downtown. The transfer center is a dedicated area on the outskirts of the mall property and consists of a sheltered waiting area for passengers. Bus shelters are located along all of the fixed routes. In addition to benches, the shelters feature space for advertising, trash receptacles and soft drink vending machines. In the fall of 2003, the transfer center was relocated from Regency Mall to the K-Mart Shopping Center on the opposite side of Gordon Highway.

5.6 Roadway Use and Conditions

This section summarizes the travel characteristics of city residents and the existing conditions of the road system. Road and bridge improvements are important to the community's future because they influence land use, economic development, and the quality of life.

5.6.1 Travel Characteristics

Sample data tabulated as part of the 2000 Census reveals some information about the travel characteristics of Richmond County households. Of the 73,920 households, approximately 88% have at least one vehicle (car, truck) available for use. The remaining 8,969 (12%) households had no vehicle available for use. These figures are not much different from 1990, when 87% of the households had at least one vehicle available for use by members of the household.

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Data on means of transportation to work indicates a strong preference for Richmond County residents to commute by themselves (see Table T-1). More than 75% of workers drive to work alone. Another 15% carpool to work. Five percent walk to work and approximately one-percent use public transportation. The local bus system is the predominant public transportation mode in Augusta and Richmond County. Overall, the means of transportation to work remains similar to what it was in 1990. At that time, approximately 73% of workers drove alone, 16% carpooled, and 6% walked to work. The number of people working at home rose slightly from an estimated 1,156 in 1990 to 1,183 in 2000.

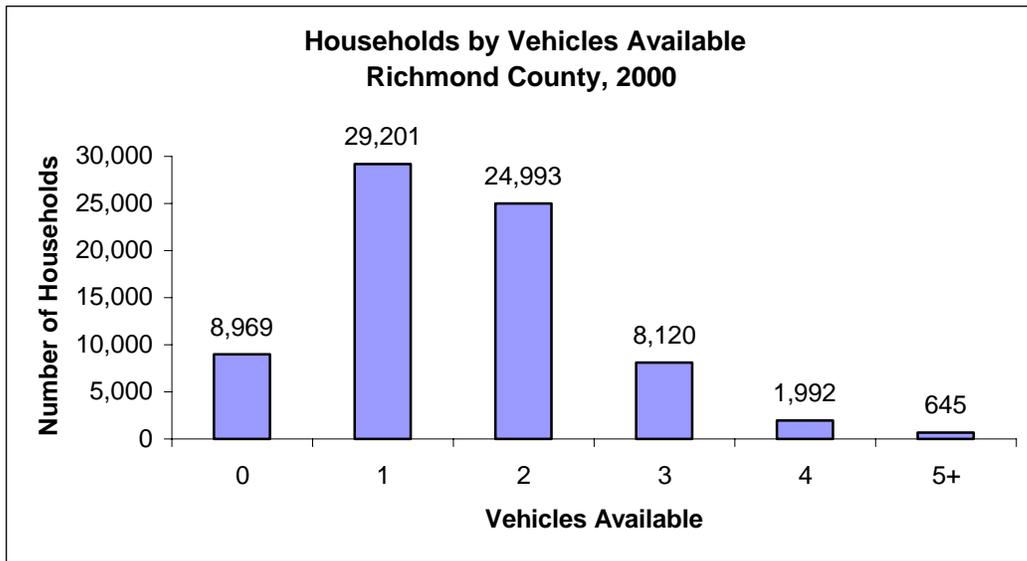
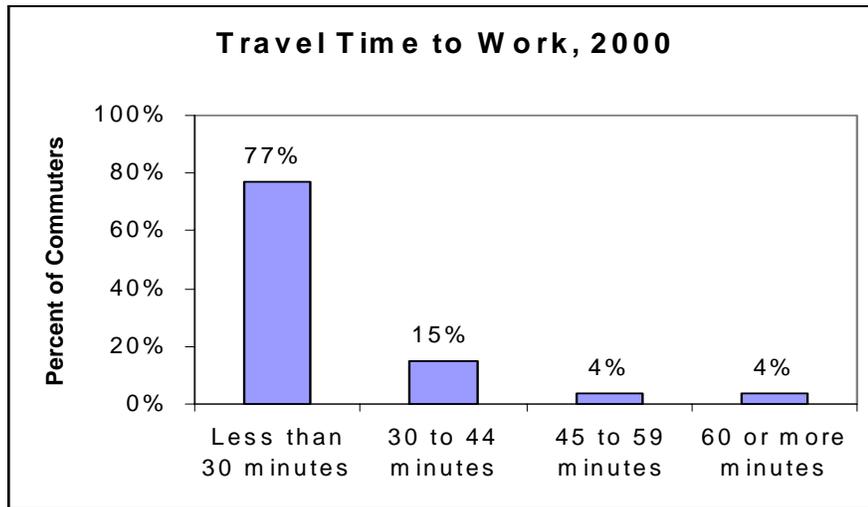


Table T-1 Means of Transportation to Work Richmond County, 2000		
Means of Transportation to Work	Number of Workers*	Percent of Workers
Drove alone	64,885	76%
Carpooled	12,415	15%
Public transportation:	1,126	1%
Bicycle	185	0%
Walked	4,204	5%
Worked at home	1,183	1%
Other means	851	1%
Total	84,849	100%
* Richmond County Residents		
Source: U.S. Bureau of the Census, 2000, Sample Data		

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Travel time data indicate that the overwhelming majority of Richmond County residents commute less than 30 minutes to work. The following chart shows that 77% of workers commute less than 30 minutes and another 15% travel from 30-44 minutes each way to work. Only 8% of residents have commutes exceeding 45 minutes.



5.6.2 Street and Highway System

Conditions on the county's street and highway system were measured using the Level-of-service (LOS) outputs from the Augusta Regional Transportation Study's (ARTS) travel demand model. The ARTS travel demand model is a traditional four-step mathematical process involving trip generation, trip distribution, mode choice, and traffic assignment. Inputs to the model include data on existing conditions and projections of population, occupied housing units, employment, school enrollment and vehicles. Outputs include LOS calculations for road segments on the transportation network.

LOS standards for a road segment are based on the ratio of the daily traffic volume to the segment's daily capacity. This volume-to-capacity ratio is an indication of the amount of delay a driver would encounter on the road segment. This level of service is based upon travel delay and is expressed as letters "A" through "F", with "A" being the highest or best travel condition and "F" being the lowest or worst condition. Table T-2 shows the LOS standards and the corresponding volume-to-capacity ratios and average speeds for urban arterial roads.

Table T-2 Level-of-Service Standards for Urban Arterials		
Level-of-Service	Volume-to-Capacity Ratio	Average Travel Speed
A	<0.50	>= 35 MPH
B	0.50 - 0.60	>= 28 MPH
C	0.60 - 0.75	>= 22 MPH
D	0.75 – 0.90	>= 17 MPH
E	0.90 – 1.00	>= 13 MPH
F	>=1.00	< 13 MPH

Source: Transportation Research Board, Highway Capacity Manual

The minimum level-of-service (LOS) designation that Augusta considers acceptable, in terms of planning for adequate capacity, is LOS "C". At LOS "C", the volume-to-capacity ratio is in the 0.60 to 0.75 range and average peak hour travel speeds on urban arterials are in the 22-28 miles-per-hour range. This LOS does not apply to rural arterial and collector streets.

Some of the notable street and highway system segments where the LOS is currently below "C" are listed in Table T-3. Not surprisingly, most are located in the urbanized part of the county. They include parts of the major arterial and collector roads that carry some of the highest volumes of traffic.

Another measure of the condition and efficiency of the street and highway system is travel time delay based on fieldwork. Since 1995 the staff of the ARTS has conducted annual travel time surveys on major arterials in the study area, including those located in the urbanized part of Richmond County. Travel runs are conducted during A.M. and P.M. peaks on each road corridor or segment. The average speed of each run is derived from the time it takes to complete the run, and is then compared to the posted speed limit for the road segment. The deviation of the average speed from the posted speed is a measure of congestion. The performance measures adopted by ARTS range from "Not Presently Congested", meaning that the average speed is equal to or above the posted speed limit, to "Seriously Congested", which are road segments on which the average speed is more than 30% below the posted speed limit. Table T-4 summarizes the CMS performance measures.

Table T-3 Sample Capacity-Deficient Road Segments Augusta-Richmond County, GA		
Functional Classification	Road Name	Segment
Interstate	Bobby Jones Expressway (I-520)	Gordon Hwy. – Deans Bridge Rd.
Principal Arterials	Washington Road (SR 28)	Pleasant Home Rd. – Calhoun Exwy.
	Wrightsboro Rd.	Barton Chapel Rd. – Jimmie Dyess Pkwy.
	Deans Bridge Rd. (US 1, SR 4)	Lumpkin Rd. – Tobacco Rd./Gate 5
	Mike Padgett Hwy. (SR 56)	I-520 – Marvin Griffin Rd.
	Fifteenth St. (SR 4)	Government St. - MLK, Jr. Blvd.
Principal Arterial / Minor Arterial	Martin Luther King Jr., Blvd. /Olive Rd.	Twiggs St. – Tubman Home Rd.
Minor Arterials	Walton Way Extension	Pleasant Home Rd. – Jackson Rd.
	Old Waynesboro Rd.	Mike Padgett Hwy. – Engle Rd.
Collector Street	Morgan Rd.	Deans Bridge Rd. – Tobacco Rd.
Source: Augusta Regional Transportation Study, Travel Demand Model, 1999 Network		

Table T-4 Performance Measures ARTS Congestion Management System	
Category	Average Speed is . . .
Not Presently Congested (NPC)	>= Posted speed limit.
At Risk of Congestion (ARC)	1% - 15% below the posted speed limit
Borderline Congested (BC)	15% - 25% below the posted speed limit
Marginally Congested (MC)	25% - 30 % below the posted speed limit
Seriously Congested (SC)	> 30% below the posted speed limit

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Since the travel time surveys started in 1995, a number of roads and road segments have been documented as having congestion problems. Many factors contribute to the congestion including high traffic volumes, frequency of traffic signals, presence of major traffic generators, and frequent turning movements. Table T-5 identifies the Richmond County corridors that have consistently experienced the highest congestion over the last seven years. These include a number of principal arterials, minor arterials and collector streets. As with the V/C ratios, these congested corridors are located in the most heavily urbanized parts of the city.

Table T-5 Selected Congested Road Corridors Augusta-Richmond County, GA		
Functional Classification	Road Name	Location
Principal Arterials	Fifteenth St. (SR 4)*	Reynolds Street to Martin Luther King Jr. Blvd. (MLK)
	Thirteenth St. (SR 4) / R. A. Dent Blvd.	Reynolds Street to Wrightsboro Rd.
	Deans Bridge Rd. (US 1, SR 4)	MLK Blvd. to Willis Foreman Rd.
	Walton Way*	Gordon Hwy. to Bransford Rd.
	Washington Rd. (SR 28)	Calhoun Expressway to Pleasant Home Rd.
	Wrightsboro Rd.**	Fifteenth St. to Barton Chapel Rd.
Minor Arterials	Davis Rd. / Pleasant Home Rd. / Jackson Rd.	Washington Rd. to Wrightsboro Rd.
	Wheeler Rd.	Walton Way Ext. to Flowing Wells Rd.
<p>Note: This list includes road segments classified at least “Borderline Congested” in AM and PM peak periods *Part of the road classified as a minor arterial ** Congestion also evident on Saturday PM in the vicinity of Augusta Mall (Jackson Rd. to Barton Chapel Rd. segment) Source: Augusta Regional Transportation Study, <i>Congestion Management System</i>, 2001</p>		

5.6.3 Intersection Problems

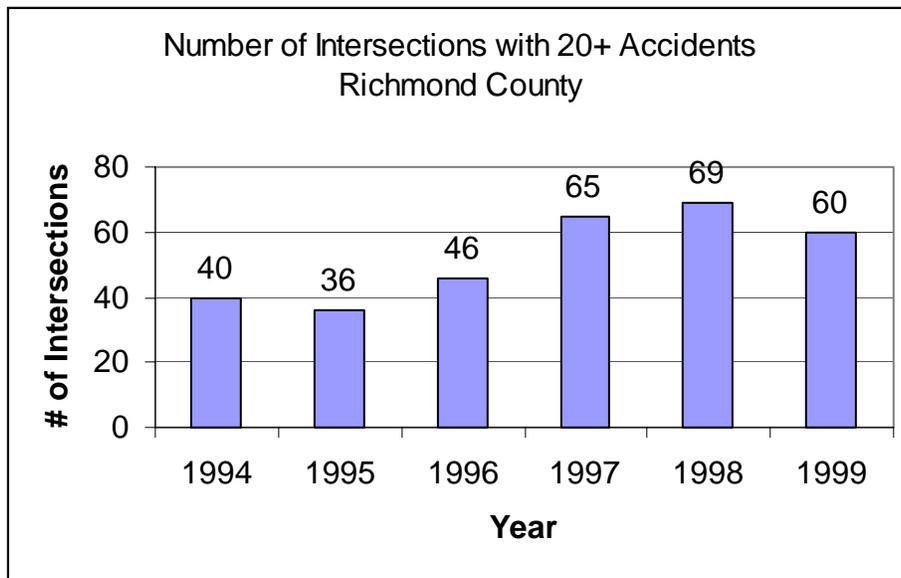
In any surface transportation network problems occur where major arterials intersect one another or where conditions (e.g. poor design, obstructions) make an intersection hazardous. As part of the ARTS transportation planning process, an analysis of

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intersection accident data is completed annually. Accident reports are collected and analyzed for all intersections in Richmond County with 20 or more reported accidents during the calendar year. The intersections are then ranked, from highest to lowest, based on both the number of accidents and the accident rate. The accident rate is a measure of the number of accidents adjusted for the number of vehicles entering each intersection during the year. The resulting report is used to inform the public about traffic safety issues in the City, and is used by the Public Works and Engineering Department to program intersection improvements. Some of the intersections with the highest accident rates between the years 1994 and 1999 include:

- Bobby Jones Expressway @ Scott Nixon Memorial Drive
- Bobby Jones Expressway Eastbound Ramp @ Mike Padgett Highway (SR 56)
- Deans Bridge Road @ Gordon Highway
- Deans Bridge Road @ Richmond Hill Road
- Washington Road @ I-20 Eastbound Ramps
- Windsor Spring Road @ Peach Orchard Road

The following chart shows recent trends in the total number of intersections with 20 or more reported accidents.



5.6.4 Maintenance Activities

Maintaining existing roads and bridges is another integral part of the transportation system. The Maintenance Division of the Public Works and Engineering Department is responsible for the repair and maintenance of roads, sidewalks, storm drains, curb and

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gutter on all county roadways. The Traffic Engineering Division is responsible for the repair and maintenance of traffic signs, pavement marking, and traffic control signals.

5.7 Transportation Plans and Projects

As mentioned in the introduction to this chapter, planning and programming improvements to the transportation system is vital to the continued growth and development of Augusta. At the same time, such improvements must be sensitive to environmental conditions, potential impacts on the human environment, and increase the mode choice for residents and visitors.

5.7.1 Road and Bridge Needs

Planning and programming road improvement projects have been an important function of government at all levels for many years. Since the mid-1960s projects involving state and federal funds have been planned and programmed through the Augusta Regional Transportation Study (ARTS). Major projects in the rural part of the county, generally including the area south of Spirit Creek, are programmed through the Georgia Department of Transportation. Table T-6 lists the major transportation projects currently programmed through ARTS and GDOT. The project list does not include lump sum funding for maintenance, safety, preliminary engineering, roadway/interchange lighting and similar types of projects on the interstate highways and major arterials. Lump sum funding is also included in both the ARTS TIP and the Georgia STIP.

The ARTS was established in response to a provision in the Federal Aid Highway Act of 1962 mandating transportation planning in urban areas throughout the country. A Policy Committee - comprised of local elected officials from the area, representatives from the Georgia and South Carolina Departments of Transportation, and representatives of the Federal Highway Administration and the Federal Transit Administration - meets quarterly to review progress on transportation projects and make decisions on ARTS planning and programming issues. A Citizens Advisory Committee and a Technical Coordinating Committee support the work of the Policy Committee. Over the years the ARTS study area has grown to include the urbanized parts of Richmond, Columbia and Aiken Counties.

The Augusta Public Works and Engineering Department is a partner in the ARTS planning process. In addition, the department, working in cooperation with the City Commission, is responsible for programming surface transportation projects involving only local funds. The Special Purpose Local Option Sales Tax (SPLOST) Program provides the City with another important tool for financing road improvements. Since 1988, SPLOST funds have paid for intersection improvements, dirt road paving projects, resurfacing, drainage, sidewalks, traffic signals, and road widening and improvement projects. SPLOST funds also paid for costs associated with larger projects involving the use of state and federal funds. Typically, the City agrees to pay for one or more of the following phases associated with a larger road widening or improvement project: engineering and design fees, utility relocation and right-of-way acquisition. Some of

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these projects have been completed more expeditiously because of the availability of SPLOST funds. Examples of completed projects using SPLOST funds include the widening of Bobby Jones Expressway from I-20 to Gordon Highway, the widening of Tobacco Road, and the construction of Jimmie Dyess Parkway.

Table T-6 Programmed Transportation Improvement Projects Augusta-Richmond County, GA	
Location	Description
Interstate 20 (SR 402)	Widen bridge shoulders at Savannah River.
Interstate 20 (SR 402)	Widen to six lanes from Belair Road to Riverwatch Parkway.
Bobby Jones Expressway (I-520, SR 415)	Reconstruction of I-20 & I-520 interchange, including modifications of the I-520/Wheeler Rd. interchange and construction of a grade separation at Bobby Jones Expressway / Scott Nixon Memorial Dr. intersection.
Bobby Jones Expressway (I-520, SR 415)	Widen from Deans Bridge Road (US 1/SR 4) to Gordon Highway.
Gordon Highway (US 278/78, SR 10)	Construct median barrier from US 25 to Walton Way.
Alexander Drive	Widen to four lanes, with turn lanes at median openings, from Washington Road to Riverwatch Parkway
Interstate 20 (SR 402)	Drainage Improvements at Crane Creek
15th Street (SR 4)	Widen to four lanes and six lanes with turn lanes as needed, from Milledgeville Rd. to Government Street.
Wrightsboro Road	Widen to four lanes with turn lanes as needed, from Jimmy Dyess Parkway to I-520 SB Ramp.
Davis Road/Walton Way Ext.	Widen to four lanes with turn lanes as needed from Skinner Mill Road to Washington Road. Includes 1/2 diamond interchange at I-20.
North Leg Road	Widen bridge over CSX Railroad.
Windsor Spring Road @ NS Railroad	Reconstruct and rehabilitate bridge over NS Railroad.

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Table T-6 Programmed Transportation Improvement Projects Augusta-Richmond County, GA	
Location	Description
Windsor Spring Road @ Spirit Creek	Widen bridge over Spirit Creek.
Windsor Spring Road	Widen to four lanes with turn lanes as needed from Willis Foreman Rd to Tobacco Rd.
Windsor Spring Road	Widen to four lanes with turn lanes as needed from SR 88 to Willis Foreman Road.
St. Sebastian Way/Greene Street Ext.	Modifications and additions to streets, railroad and related improvements in the vicinity of the grade crossing of the CSX Railroad and Fifteenth Street.
River Watch Parkway	Construct median barrier from Interstate 20 to Fifteenth Street.
Intelligent Transportation System	Install communications and surveillance equipment along I-20 from SR 388 (Lewiston Road) to South Carolina line
Mike Padgett Hwy. (SR 56) @ Goshen Road	Intersection Improvements
Peach Orchard Road @ Windsor Spring Road	Traffic Signal Upgrade
Peach Orchard Road (US 25, SR 121)	Widen to four lanes with turn lanes as needed from SR 88 to Burke County line
Source: ARTS Transportation Improvement Program, FY 04-06, June 2003, and Georgia State Transportation Improvement Program, FY 03-05, November 2002	

A review of Table T-6 indicates that road widening projects comprise a large percentage of the planned transportation improvement projects. There are also projects designed to make better use of the existing road network. Examples of such projects are the construction of a Regional Transportation Control Center (TCC), installation of surveillance and communications equipment along I-20, intersection improvements, and traffic signal upgrades.

The TCC and related surveillance equipment are part of an Intelligent Transportation System (ITS) planned for the Augusta region. A regional ITS Master Plan was completed in February 2002. The plan included recommendations for the implementation of ITS projects in phases over the next twenty years. Recommended components include a communications network, cameras, detectors, dynamic message signs, weather detectors, traveler information system and railroad grade crossing warning detection; upgrade the

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traffic control system; deployment of the Highway Emergency Response Operators (HERO on area freeways; and provide ITS for Augusta Transit.

In Intelligent Transportation Systems information technology is used to solve traffic problems. It is used to improve safety, efficiency and performance of streets and highways, vehicles, transit, and rail systems. Information comes in from the field, is analyzed, stored, and then is sent out to devices and travelers. An effective ITS saves time, money, and lives.

Another way to reduce congestion, enhance safety and make more efficient use of the road network is through access management. Access management involves changing land use planning and roadway design practices to limit the number of driveways and intersections and control vehicle turning movements. Access management also promotes a more pedestrian-friendly environment. Some of the major access management strategies include the following:

- Limit the number of driveways per lot
- Locate driveways away from intersections
- Connect parking lots and consolidate driveways
- Provide residential access through neighborhood streets
- Increase minimum lot frontage on major streets
- Promote a connected street system. Avoid networks that force traffic onto arterials
- Encourage internal access to outparcels located on large commercial lots
- Regulate the location, spacing and design of driveways

5.7.2 Rail Transportation Needs

For many years, informal agreements and local ordinances have been employed to restrict the speed and hours of operation of freight trains passing through downtown Augusta. In the 1970s the Federal Highway Administration completed a railroad demonstration plan for Augusta. The purpose of the plan was to improve the relationship between the railroad and the city and improve the operation of the transportation network.

The plan recommended the relocation of the Southern Railroad (now Norfolk Southern) and Seaboard Coast Line Railroad (now CSX Railroad) main lines and yards out of downtown, the construction of new grade separations, and upgrading the Belt Line on the Georgia Railroad (now part of CSX Railroad). In keeping with the intent of the study, the recommended improvements were identified as "usable segments", meaning that they could be implemented and provide a benefit to the transportation network even if the remainder of the recommended projects were not completed.

As it turned out, only some of the usable segments have been constructed in the twenty-plus years since the demonstration plan was completed. Four grade separations were constructed during the 1980s. Three are located on the CSX lines and include the elevated section of the Calhoun Expressway (SR 28) between 12th and 15th Streets, the Fifteenth Street overpass near the Harrisonville Yard, and the Highland Avenue overpass.

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A fourth overpass is located on Walton Way above the joint Norfolk Southern/CSX main line on Sixth Street. A fifth overpass, to span the CSX line between Broad Street and River Watch Parkway, is planned as part of the St. Sebastian Way/Greene Street Extension project.

The Norfolk Southern and CSX main lines continue to bisect downtown Augusta and the main railroad yards are still in the same locations. The Belt Line is still in need of the upgrades recommended as part of the demonstration project. There is renewed interest in relocating the Norfolk Southern main line out of downtown, and upgrading the Belt Line. In 2001, the City and the railroads worked together to purchase and install remote-controlled switches at four locations on the main line tracks in downtown. The switches reduce the delay caused by trains stopping to allow engineers to manually throw a switch.

Passenger rail service in Augusta ended a number of years ago. However, rapid population growth in Georgia in recent decades has rekindled interest in both commuter and intercity passenger rail service. In 1997, the *Intercity Passenger Rail Plan* was completed for the Georgia Department of Transportation. The *Plan* collected information on current intercity travel within the state, made forecasts of future travel by all modes and examined the costs and benefits of intercity rail passenger service in a number of possible corridors.

The *Plan* recommended the phased implementation of an intercity passenger rail network on existing freight railroad lines. First-priority corridors identified would connect Atlanta with Macon, Albany, Savannah and Jacksonville, FL. Second-priority routes would connect Atlanta with Augusta, Columbus and Greenville, SC. As stated in the *Plan* summary, the first-priority corridors were chosen “to maximize both the financial operating surplus from the lines and the net benefits of service to the State.” The study concluded that the operating surplus generated by the first-priority routes could be used to subsidize the second-priority lines, none of which were forecast to generate a profit.

The *Plan* forecast annual ridership on the Atlanta-Augusta line at 131,000 one-way trips in the year 2020. Estimated capital costs of the Atlanta-Augusta line were \$213 million at the time the study was completed. Capital costs included work on tracks and ties, signaling improvements, provision of flashing lights and safety gates at all at-grade crossings, a station and parking, maintenance facilities and trains. The Atlanta-Augusta line was forecast to operate at a loss of \$3.0 million in 2020. Issues that need to be resolved related to implementation of the entire network include identifying funding sources and support, protecting the railroad rights-of-way from encroachment, and reaching agreement with Norfolk Southern and CSX regarding use of their rail lines.

The Georgia Rail Passenger Authority, the Georgia Regional Transportation Authority and the Georgia Department of Transportation are working together to implement the *Plan*. Activities being worked on at the present time include an environmental review of the Macon corridor, acquisition of property in Atlanta for a multi-modal terminal, use agreements with the freight railroads, and improving the safety of at-grade crossings.

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5.7.3 Airport Master Plan

In 2001, the Augusta Aviation Commission hired the firm of Black and Veatch to develop a 20-year master plan for Augusta Regional Airport. Many factors prompted the study, among them the age and condition of airport facilities and declining enplanements. Major components of the study included an inventory of existing conditions, aviation demand forecasting, facility requirements, analysis of alternatives, an environmental analysis, airport plans, and a financial plan. The draft plan projected that enplanements will reach 730,000 by the year 2020 (there were 167,000 enplanements in 2001), and outlined three alternatives for improvements at the airport. The preferred alternative recommended the construction of two parallel runways (one of which is the existing 8,000 foot runway), and a midfield terminal, at an estimated cost of \$122 million (\$156 million with inflation). The preferred alternative generated a great deal of discussion among Aviation Commission members and throughout the community.

In September 2002 the Federal Aviation Administration (FAA) issued a conditional approval of the airport master plan. The FAA endorsed the new midfield terminal, airplane parking areas and taxiway recommend by the master plan. Plans to construct a runway parallel to the existing 8,000-foot runway will be put on hold until enplanements increase enough for the FAA to support the construction. The FAA questioned the projections of annual enplanements contained in the plan, and instead used its more conservative forecasts of 280,000 passengers in 2010 and 336,000 in 2020. The FAA also endorsed plans to abandon the airport's crosswind runway. The FAA's action renewed the debate about the type and extent of improvements needed at Augusta Regional Airport.

In February 2003 the Aviation Commission voted to re-evaluate the master plan due to a lack of state and federal funding for such projects. The Commission later voted to approve construction of a new terminal at the airport's current terminal location. The estimated cost of such a terminal is \$30 million. A consulting contract for development of a new terminal layout plan was pending at the end of June. The layout plan will establish a concept for the new terminal and related improvements, provide a cost estimate for the facilities, and include financing options for the project.

5.7.4 Bicycle and Pedestrian Plans

Several off-road bicycle and pedestrian projects have been implemented in recent years. Most have been financed with federal Transportation Enhancement funds and matching local funds. The City's Recreation and Parks Department constructed paved walking trails at several parks, including one at Lake Olmstead connecting to a new pedestrian bridge over the Augusta Canal. The Canal Bridge is one of several projects being implemented by the Augusta Canal Authority for the benefit of users. A project involving substantial improvements to the towpath is under construction. The project includes on-road connections from the Canal to the downtown Riverwalk and Dyess Park, as well as the towpath improvements. The towpath is adjacent to the Canal Authority's Interpretive Center, which opened in April 2003. Access to the canal is also

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possible via a pedestrian bridge near Eisenhower Park. This bridge is scheduled to be upgraded in the future.

Phase I of a "history walk" on the Augusta State University (ASU) campus was completed in the spring of this year (2003). Phase II includes the design and construction of the remainder of the history walk and a separate walking/bicycle path from the ASU campus to the ASU athletic complex on Wrightsboro Road. Both phases have been awarded TE grants and ASU is providing local matching funds.

Planning for bicycle and pedestrian facilities in Richmond County is progressing. The original ARTS Bikeway Plan (c.1994) included recommendations for a bicycle safety and awareness campaign, including bicycle facilities in highway widening projects, and making the existing transportation network more bicycle-friendly. The Bikeway Plan identified the Augusta Canal, the Savannah River levee, and several interconnected streets in the Summerville/Academy Baker area as potential sites for bikeways. In 1997, the list of potential bike corridors was expanded significantly as part of the update of the ARTS Long-Range Transportation Plan. In Richmond County, thirty-five corridors were identified as potential sites for either on-road or off-road bicycle facilities. Some could be done in conjunction with planned road widening projects. The following page includes a list of the projects.

The 1994 Bicycle Plan was updated in January 2003. The new plan provides a blueprint for development of bicycle and pedestrian facilities over the next 20 years. The plan includes an inventory of the current regional bicycle and pedestrian network, design standards for new facilities, a list of 194 recommended projects (with cost estimates), and strategies for implementing the projects. Of the total recommended projects, 47 are proposed in Augusta-Richmond County at an estimated cost of \$ 25.8 million.

The plan was developed with a public involvement program that included a bicycle and pedestrian steering committee, public meetings, a project newsletter, web page updates, and media outreach. The project steering committee included representatives from the Recreation and Parks Department, the Neighborhood Alliance, the Safe Communities Coalition, the Augusta Canal Authority, and bicycle and pedestrian organizations.

5.7.5 Public Transit Needs

The APT Transit System Analysis (November 2001), prepared by Manuel Padron and Associates, proposes several improvements to the transit system. Proposed improvements include modifications to 8 existing routes, the addition of a new cross-county connector route, and extending service to Fort Gordon and North Augusta. The changes will be phased in over a five-year period.

The proposed improvements to existing service emphasize: 1) increasing productivity where possible, 2) maintaining current levels of service for most fixed routes, and 3) enhancing service on the routes with the potential for attracting additional riders. The

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addition of a cross-county route, and extension of service to Fort Gordon and North Augusta, will connect areas with high population and employment densities.

Augusta-Richmond County, GA

Transportation Facilities



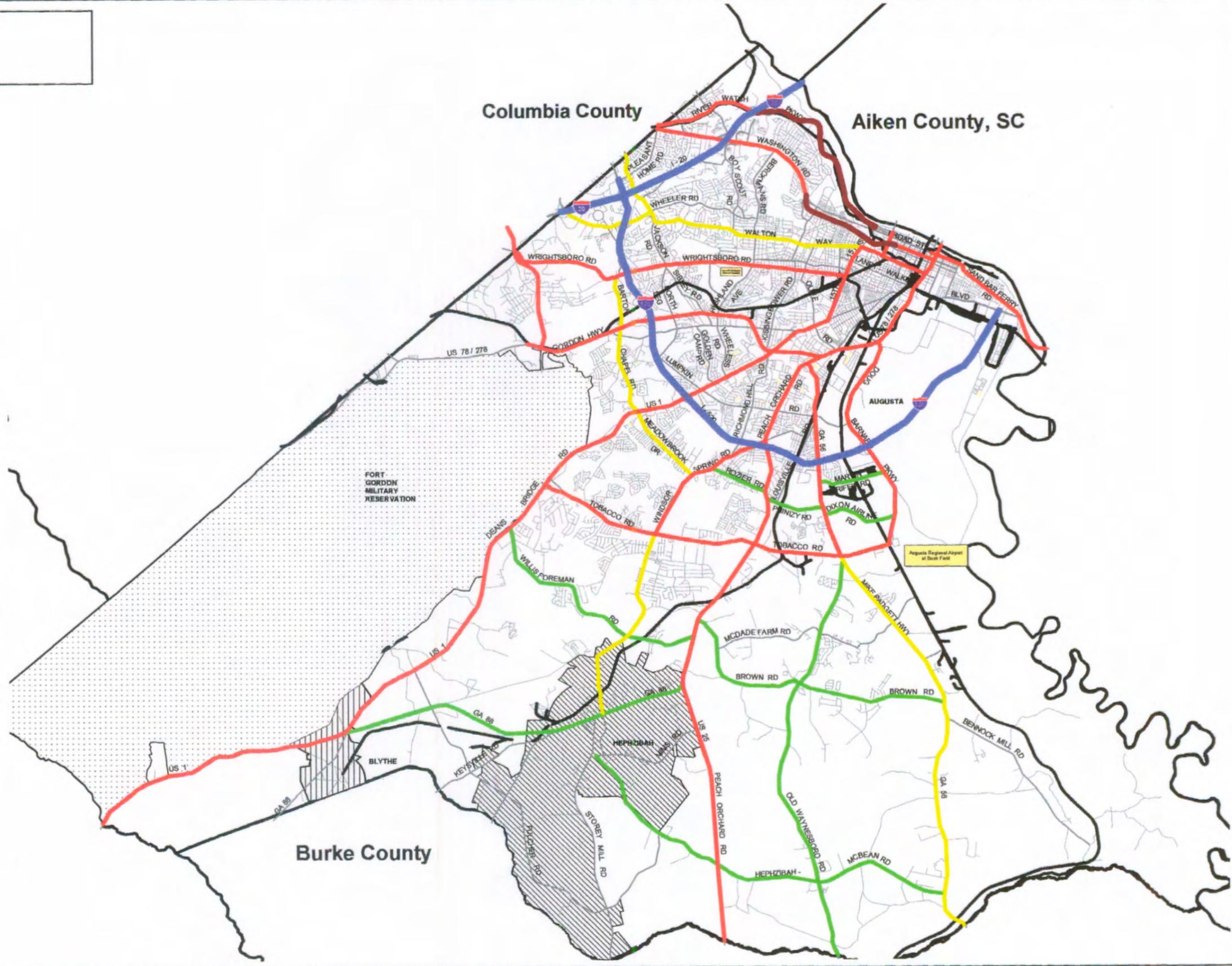
Geographic Information Systems

Date: June 20, 2003
Prepared By: Paul DeCamp

Augusta, GA Disclaimer
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- Freeways
- Expressways
- Principal Arterials
- Minor Arterials
- Collectors
- Railroad Line
- Roads

Note: Additional roads in the city are classified as arterials and collectors.



Chapter 6– Community Facilities and Services

6. Introduction

Community facilities and services are important to the future of the city. They contribute to the health, safety and welfare of residents, improve the quality of life, and foster new housing and business development. The timing and location of new community facilities and services also influence private development. It is important that community facilities and services be adequate to meet expected demands, and at the same time be used to guide growth in an orderly and logical manner.

This element includes an inventory and assessment of public facilities and services provided by the city and other public and private organizations. Existing conditions and needs are identified for such facilities as the water and sewerage systems, public safety, solid waste, recreation and parks, schools, libraries and other cultural facilities. An inventory of hospitals and other public health facilities is also included.

6.1 General Government

A ten-member board of commissioners and a mayor governs the city of Augusta. Eight of the commission members are elected from individual districts, and two are elected from a combination of four districts. The mayor is elected on a citywide basis. The term of office is four years, and no person can serve as either a commissioner or mayor for more than two consecutive terms. The mayor is the chief executive officer of the government and has the following powers and duties:

- ❑ To preside at all meetings of the commission;
- ❑ To serve as the official head of the government for the service of process and for ceremonial purposes;
- ❑ To administer oaths and take affidavits;
- ❑ To sign all written contracts on behalf of the City;
- ❑ To ensure that all laws, ordinances, and resolutions are faithfully executed.

The mayor has the right to vote to make or break a tie vote on any matter coming before the commission, but cannot veto ordinances, resolutions, or other actions of the commission.

Commission members sit on one or more of five standing committees: Finance, Administrative Services, Engineering Services, Public Services, and Public Safety/Information Technology. The appropriate committee first hears ordinances, resolutions and other matters. From the committee, an item is forwarded to the full Commission for consideration. The Commission meets twice each month, as do each of the committees. In January of each year the Commission elects a member to serve as Mayor Pro Tem. The Mayor Pro Tem chairs the Commission meeting in the absence of the Mayor, and performs other duties as assigned by the Commission. A member can serve no more than two consecutive one-year terms as Mayor Pro Tem.

Chapter 6– Community Facilities and Services

The Commission employs an Administrator to coordinate the day-to-day activities of city government. The city employs approximately 2,600 people in over fifty different departments. A number of the departments are located in the Municipal Building at 530 Greene Street, and a couple of annex buildings. Other major facilities than the city owns, and some departments operate out of include:

- ❑ Public Works & License & Inspection Departments - 1815 Marvin Griffin Road
- ❑ Recreation and Parks Department - 2027-29 Lumpkin Road
- ❑ Law Enforcement Center - 401 Walton Way
- ❑ James B. Messerly Wastewater Treatment Plant - 1820 Doug Barnard Parkway
- ❑ Richmond County Correctional Institution - 2314 Tobacco Road
- ❑ Emergency Management Agency/911 Center - 911 Fourth Street
- ❑ Fleet Management - 1568 Broad Street
- ❑ Augusta Public Transit Administration & Garage - 1535 Fenwick Street
- ❑ Augusta Public Transit Transfer Facility - 1546 Broad Street
- ❑ Augusta-Richmond County Landfill - 4330 Deans Bridge Road
- ❑ Phinizy Road Jail - 1941 Phinizy Road
- ❑ Waterworks Filter Plant - 1425 Highland Avenue

According to recent research by the Finance Department, the city leases 40,455 square feet of office space for other departments and agencies. The majority of the leased space - 30,445 square feet - is concentrated in three downtown buildings:

- ❑ The Hatcher Building, 501 Greene Street - the District Attorney, Facilities Management Department and Law Department
- ❑ New South Building, 360 Bay Street - Utilities Department, Human Relations Commission, Coroner's Office
- ❑ Augusta Riverfront Center, #1 Tenth Street - Housing and Neighborhood Development Department and Fire Department Administration

The Municipal Building and the Law Enforcement Center together also are home to several constitutional officers, judges and their staffs. These include the Clerk of Superior Court, Tax Commissioner, Marshal's Department, Sheriff's Department, the State Court Solicitor, and judges for the following court systems: Superior Court, State Court, Probate Court, and Civil and Magistrate Court.

6.1.1 Assessment of General Government Needs

Following consolidation, the city hired a consultant to evaluate space needs for the government. The space study resulted in several alternatives ranging from adding on to the existing municipal building, to relocating all functions to a new site. In February 2002, the Augusta Commission voted to renovate and expand the 100,000 square-foot municipal building for use as a judicial center and courts complex. General government offices currently housed in the Municipal Building would be moved to a yet-to-be-determined site. Plans also are in the works for new facilities to house two departments: Public Works and

Chapter 6– Community Facilities and Services

Engineering and Utilities. The new facilities will be located on a site off Richmond Hill Road in south Augusta.

Concerned that the Municipal Building site was too small for the proposed judicial center, an advisory panel recommended constructing the facility on a riverfront parcel in the 500 block of Reynolds Street in June 2003. The engineering firm hired to design the center evaluated the Reynolds Street property and another potential site at May Park. In response to a request from Augusta Commissioners, the consultant also evaluated the feasibility of sites on the 900 block of Telfair Street and Regency Mall in south Augusta. On August 19, 2003 a majority of the Augusta Commission voted in favor of the Telfair Street site, subject to a favorable environmental assessment of the property. The Commission designated the Municipal Building as the backup location.

In October several commissioners asked projects designers to look more closely at the Telfair Street site. Concerned was expressed about the impact of the project on existing businesses located on the site. On October 28th project architects presented Commissioners with an evaluation of four alternative sites on and near the 900 Block of Telfair Street. Subsequently, the Commission approved locating the 300,000 square-foot judicial center on a vacant three-acre parcel of land at the corner of James Brown Blvd. and Walker Street.

6.2 Public Safety

Public safety includes police protection, fire protection, emergency medical services, 911 dispatch services, and animal control services. The Richmond County Sheriff's office provides police protection. All other public safety functions are provided through line agencies of the Augusta government.

6.2.1 Richmond County Sheriff's Office

The Richmond County Sheriff's Office is an independent public agency headed by an elected sheriff. The office employs 716 people and is divided into four divisions: Administrative, Uniform (or Patrol), Criminal Investigation, and the Jail Division. The Sheriff's Office also staffs and operates a training center.

The Administrative Division includes the Sheriff, Chief Deputy and another 89 personnel assigned to various administrative, record keeping, and public relations functions. Twenty-one people work in the administrative division. Five officers and 27 clerks staff the records section. In the Civil Section there are 21 deputies assigned to serve court papers. Another 11 people provide supervisory or support functions in the Civil Section. The Public Relations section is staffed by 5 deputies and 1 lieutenant and implements the Drug Abuse Resistance Education (DARE) Program.

The Uniform or Patrol Division is the largest division, employing 292 people. The division is comprised of two precincts - the North and the South. A Major, assisted by a precinct Captain, commands each division. The precincts have four patrol shifts each, plus

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the various Special Operations units housed within that precinct. The uniformed patrol shifts operate on two 12-hour shifts. One lieutenant commands these shifts with the assistance of two sergeants. Patrol deputies are assigned either a permanent day or night shift. Each deputy on the shift is assigned a beat to patrol. Beat assignments are not rotated, thereby allowing a deputy to become very familiar with a specific patrol area.

Special Operations is a subdivision of the Uniform Division and is housed in both the North and South Precincts. Units within Special Operations include the Crime Suppression Team, the D.U.I Task Force, the Motorcycle/Traffic Squad, the Weed and Seed Unit, the School/Safety Patrol, and two Housing Unit Squads. The basic responsibilities of the units are as follows:

- ❑ Crime Suppression Team - A multi-function unit consisting of 8 deputies and 1 sergeant. Conducts saturation or directed patrols in high crime areas, execute search warrants and high-risk arrest warrants, and assigned to stake-outs, narcotics, and prostitution suppression efforts.
- ❑ DUI Task Force - A five-person unit whose primary function is the detection and apprehension of intoxicated drivers. The Sheriff's Office also operates a DUI van equipped with a Mobile Breathalyzer Unit.
- ❑ Motorcycle/Traffic Squad - Includes 12 motorcycle units and 1 parking violation deputy. This squad focuses on gaining compliance with all traffic laws through aggressive enforcement of the traffic code. The squad also investigates motor vehicle accidents, conducts traffic surveys, and assists with efforts to increase seatbelt usage. The parking violation deputy patrols Broad Street and adjoining streets enforcing parking regulations.
- ❑ Weed and Seed - This unit was created in January 1999 and consists of 3 deputies working under the direction of a lieutenant. Originally funded by a grant from the U. S. Department of Justice, the program is designed to "weed" out the criminal element in a neighborhood and "seed" programs and activities that create an atmosphere of security, safety and well being for residents. The Barton Village neighborhood is the target area for the unit.
- ❑ School/Safety Patrol - This unit is headed by a sergeant who is responsible for overseeing Richmond County Board of Education school crossing guards. The sergeant also is responsible for inspecting all commercial taxicabs and limousines in Richmond County on a biannual basis.
- ❑ Housing - This unit consists of 13 deputies and 2 sergeants divided between two patrols. The primary responsibility of the unit is to patrol the housing complexes owned by the Augusta Housing Authority. A grant from the U.S. Department of Housing and Urban Development is used to reimburse the Sheriff's Office for the cost of this unit.

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The Criminal Investigation Division (CID) includes 65 personnel and is responsible for following up on all crimes reported to the Sheriff's Office. CID is divided into six sections: administrative, motor vehicle theft, narcotics, property crimes, technical crimes and violent crimes. According to crime statistics, there were 31,680 crimes reported to the Sheriff's Office in 2001.

The Jail Division is responsible for operating two correctional facilities: The Augusta-Richmond County Law Enforcement Center at 401 Walton Way, and the Augusta-Richmond County Detention Center at 1941 Phinizy Road.

- Law Enforcement Center - This six-story tower opened in the latter part of 1985. Originally designed as a 240-bed facility, an additional 100 beds were added in 1987 to alleviate overcrowding. In 1997, the lower level of the facility was renovated and an annex was constructed that includes a new Intake-Release section, jail administrative offices, a transportation section, and a 27-bed infirmary. One hundred thirty-eight employees, including 103 jailers, work at the Walton Way Jail.
- Detention Center - This \$16.2 million facility opened on November 17, 1997. The Detention Center has 552 inmate beds divided among four pods. Three of the pods house male inmates and the fourth one houses females. The facility is located on part of a 52-acre site that can accommodate additional pods as the need arises. Eight-four employees, including 54 jailers, are assigned to the Detention Center.

The Richmond County Sheriff's Office Training Center is a 500-acre facility located on Deans Bridge Road near the Richmond County landfill. A staff of 8 coordinates all training activities at the program. The center conducts or hosts training courses 50 weeks a year to Sheriff's Office deputies and to personnel from other law enforcement agencies. The center is equipped with a "live fire" tire house and an Emergency Vehicle Operator Course.

6.2.2 Fire Protection

The Augusta-Richmond County Fire Department provides full-time professional fire protection to all parts of Augusta and within the city of Blythe. The service area covers approximately 214 square miles (excluding Hephzibah and Fort Gordon), and includes a mix of residential areas, high value districts, and woodlands. A high value district is an area of commercial, industrial and/or institutional land uses of unusually high property value. Examples of high value districts include downtown Augusta, the midtown medical complex, Augusta Mall and other shopping centers, and the Miracle Mile Industrial Park on Marvin Griffin Road. The service area includes a resident population of 188,141 (2000 Census).

The Fire Department has 312 employees and 34 pieces of firefighting equipment distributed among 19 fire stations. The department's headquarters is located at Station #3

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at 1099 Reynolds Street in downtown Augusta. Of the total employees, 290 are combat firefighters and the rest are administrative and support personnel. Administrative offices are located at #1 Tenth Street in downtown Augusta, but will relocate to a new building on Laney-Walker Blvd. by the end of 2003. Within the department, the Fire Prevention Bureau is responsible for arson investigation, code enforcement, and fire safety education. Schools, places of assembly, and buildings in high value districts are a top priority for life safety code enforcement. Table C-1 lists the location, number of personnel and major equipment at each fire station.

Station Number	Location	Year Built	Equipment	Personnel
1	302 Watkins St.	1964	1500GPM Pumper Water Rescue Vehicle	12
2	1435 Walton Way	1957	1500GPM Pumper	12
3	1099 Reynolds St.	1970	1500 GPM Pumper 105' Aerial Truck Command Vehicle High Angle Rescue Vehicle	27
4	1866 Ellis St.	1974	1000 GPM Pumper	12
5	M.L.K. Blvd.	1996	1500 GPM Pumper Air Supply Vehicle	12
6	2618 Richmond Hill Rd.	1954	1250 GPM Pumper 104' Aerial Truck Command Vehicle	27
7	2163 Central Ave.	1913	1500 GPM Pumper	12
8	2830 Central Ave.	1949	1500 GPM Pumper	12
9	3507 Walton Way Ext.	1974	1500 GPM Pumper 102' Aerial Truck Command Vehicle	27
10	2625 Washington Rd.	1955	1000 GPM Pumper	12
11	2108 Old Savannah Rd.	1982	1250 GPM Pumper	12
12	5098 Mike Padgett Hwy.	1978	1500 GPM Pumper 1500 GPM Tanker	12
13	2619 Lumpkin Rd.	1973	1250 GPM Pumper 1500 GPM Tanker	12
14	3507 Highway 88	1978	1250 GPM Pumper 1500 GPM Tanker	12
15	3624 Wrightsboro Rd	Temp.	1250 GPM Pumper	12
16	3446 Old Louisville Rd		1250 GPM Pumper	12
17	3705 Old Waynesboro Rd.	1975	1250 GPM Pumper Ladder Service Truck	18
18	4185 Windsor Spring Rd.		1500 GPM Pumper Haz Mat Vehicles (2) Command Vehicle	15
19	635 Sand Bar Ferry Rd.	1971	1000 GPM Pumper	12

Source: Augusta Fire Department, November 2002

**Table C-2
Fire Station Construction
Augusta-Richmond County, 2002-2004**

Station Number	Current Location	New Location	Cost	Year Opened
1	302 Watkins St.	# 1 Broad St.	\$1.4 million	2003
7	2163 Central Ave.	2917 Willis Foreman Rd	\$1.3 million	2003
19	635 Sand Bar Ferry Rd.	1600 Brown Rd.	\$1.3 million	2004
8	2830 Central Ave.	2023 Highland Ave.	\$1.3 million	2004
12	5098 Mike Padgett Hwy.	1151 Hephzibah-McBean Rd.	\$1.3 million	2004
15	Wrightsboro Rd	Flowing Wells Road	\$1.4 million	2004

Source: Augusta Fire Department, as updated December 2003

6.2.3 Emergency Medical Services

The Augusta 9-1-1 Center is located at 911 Fourth Street in downtown Augusta. The center is fully staffed on each shift with properly trained and equipped Emergency Medical Dispatchers. Depending on the nature of the call, an ambulance and/or the Fire Department First Responder is dispatched to the location. Rural/Metro Ambulance Service has a three-year contract to provide emergency medical services in Augusta-Richmond County. Rural/Metro now uses seven ambulances at all times and eight during peak periods. Gold Cross Ambulance Service provides back-up service in the city.

6.2.4 Animal Control

The Augusta-Richmond County Animal Control Department provides animal control services in Augusta. A licensed veterinarian (position currently vacant) heads the department and supervises other employees and the animal control facility on Mack Lane in south Augusta. The department operates a fleet of trucks that provide coverage throughout the city. The facility takes in an average of 10,000 animals each year. The

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animal control facility consists of a group of 30-year-old buildings and kennels in need of replacement.

The Animal Control Shelter's volunteer group, Augusta Animal Rescue Friends (AARF), offers the shelter's animals for adoption and operates a foster care program. The 12-member Richmond County Animal Control Board meets monthly to hear and decide cases involving the state's Dangerous Dog Law.

6.2.5 Assessment of Public Safety Needs

The City of Augusta provides police protection and law enforcement through the Richmond County Sheriff's Office, fire protection through the Fire Department, Emergency Medical Services under contract with Rural Metro Ambulance Service, and animal control through the Animal Control Department. The City is currently meeting the needs of its residents adequately in each of these areas, and is taking steps to meet the demands of the future.

In 1997, the Augusta-Richmond County Detention Center was built to relieve overcrowding at the Law Enforcement Center. Even with the addition of the Detention Center, correctional facilities in Augusta remain overcrowded on a regular basis. Factors contributing to the overcrowding include stiffer sentences, a backlog of court cases, and a backlog of prisoners awaiting transfer to state correctional facilities. The Sheriff's Office has brought this issue to the attention of the City Commission, as well as the fact that local detention facilities are understaffed. As previously mentioned, the Detention Facility is designed so that additional pods can be constructed on the site. During budget work sessions in the fall of 2002, the City Administrator presented the City Commission with a proposed capital improvement plan that includes the construction of two additional jail pods at the Phinizy Road facility at an estimated cost of \$7.9 million.

The city also recognizes the need for new fire stations. The advanced age of some existing fire stations, need for additional space, and shifts in population combine to make some new facilities necessary. In October 2002, the city broke ground on three new stations, each of which replaces an existing facility. Each station includes state-of-the-art design with architectural features that blend with the surrounding neighborhoods. Each station has a community meeting room for use by neighborhood residents. Three additional station relocations are planned for the year 2003. Collections from the 1-cent special purpose local option sales tax are financing the new fire stations.

A new animal control shelter is under construction. The design and specifications for the shelter were prepared in early 2002. The facility was redesigned after the initial bids came in over budget. The new shelter is expected to be ready for occupancy by November 2003.

6.3 Educational Facilities

The Richmond County Board of Education and several private schools provide elementary and secondary education facilities in Augusta and Richmond County. Post-secondary

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education facilities include Augusta Technical College, Augusta State University, Paine College, and the Medical College of Georgia.

The Richmond County Board of Education consists of ten members elected by districts that coincide with the city commission district boundaries. Eight school board members are elected by single districts and the remaining two are elected by combined districts. The Board operates under a committee system established by the Board President. The Board appoints a Superintendent to administer the operations of the public school system. The Board employs approximately 4,300 people, and the main administrative offices are located at 2083 Heckle Street. By the end of 2003, all administrative offices will be centralized at renovated buildings located on Broad Street in downtown Augusta.

There are currently 55 schools in the Richmond County public school system. Of these 34 are elementary, 10 are middle, 8 are high schools, and 3 are magnet schools. Enrollment as of the fall 2002 was approximately 35,700 students. The magnet school concept is designed to encourage system-wide attendance at inner-city schools. Richmond County opened its first magnet school in 1981. Currently Richmond County has three magnet schools: John S. Davidson Fine Arts School (grades 6-12), A. R. Johnson High School - specializing in health, science, math and engineering, and C. T. Walker Elementary School.

Private schools include Curtis Baptist School (grades K-12), Episcopal Day School (K-8), Hillcrest Baptist School (K-8), Immaculate Conception School (K-8), St. Mary on the Hill School (K-8), Southgate Christian School (K-12), and Westminster Schools (Pre-K-12).

Between 1996 and 2002, the Richmond County public school system completed a total of 47 improvement projects. Originally financed with a \$115 million bond approved by taxpayers, the improvement program included the following:

- ❑ \$53 million to build six new schools, including Cross Creek High School, replacement of Sue Reynolds and Hephzibah Elementary Schools, and the consolidation of Levi White/Jenkins Elementary Schools, Craig/Houghton Elementary Schools, and Lake Forest/Forest Hills Elementary Schools
- ❑ \$56 million in expansions and renovations to 27 schools
- ❑ \$2 million in roof repairs
- ❑ \$600,000 to retrofit 5 schools for technology

In 1996 voters approved a 1-cent sales tax increase that enabled the School Board to pay off the bonds in five years instead of thirty. The School Board, Administrative Planning Committee, Community Oversight Committee, and a program manager worked together to complete the improvement projects. Among the factors that contributed to the need for the improvement projects included the following:

- ❑ The school system was growing at a rate of more than 400 students per year
- ❑ Overcrowding that resulted in the use of many portable classrooms
- ❑ Preventive maintenance was needed to protect the investment in many schools

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- ❑ Overcrowding caused overuse of common areas, such as cafeterias and libraries
- ❑ Old schools could not accommodate the computer technology provided by lottery funds
- ❑ Good education facilities and programs promote economic growth and protect property values

6.3.1 Assessment of Education Needs

In the summer of 2001, the School Board, Administrative Planning Committee, and Community Oversight Committee completed an assessment of additional construction projects needed to bring facilities up to the expectations for the 21st century. Continued overcrowding and the use of portables, the passage of HB 1187 mandating reduced class sizes, and the age of some schools were some of the major factors contributing to the need for more projects. In November 2001, voters approved a five-year extension of the 1-cent sales tax for schools that will fund the following projects:

- ❑ Construction of two (2) new elementary schools in south Augusta
- ❑ Construction of a replacement school for Hornsby Elementary School
- ❑ Construction of a new Vocational/Technical Magnet High School
- ❑ Construction of a replacement for A. R. Johnson Science Technology High School
- ❑ Construction of new stadiums at Westside, Glenn Hills, and Laney High Schools
- ❑ Expansion (mostly new classrooms) and renovations at 17 elementary schools, 4 middle schools, and 5 high schools

6.4 Recreation and Parks

There are fifty-nine (59) public recreation facilities located in Augusta and Richmond County. Generally speaking, the facilities include community centers, neighborhood parks, playgrounds and specialized facilities. The community centers function as district parks, drawing users from a wide area, and offer both indoor and outdoor recreation programs. Six of the community centers - Henry Brigham, Johnson, McDuffie Woods, May Park, Bernie Ward, and Warren Road - have gymnasiums, and all have outdoor play equipment. Most neighborhood-level parks have an activity building, athletic field, and offer programs geared to children and pre-teens. Neighborhood parks generally draw users from within walking distance.

Playground sites vary widely in their size and facilities. Some have only playground equipment, but most have athletic fields, multipurpose courts, and/or picnic areas. A number of facilities focus on individual sports such as swimming, boxing, golf, fishing and boating, tennis, soccer, and skateboarding. One example is Eisenhower Park, which has four ball fields and a playground. Adjacent to Eisenhower Park is a bridge over the Augusta Canal. The bridge provides pedestrian and bicycle access to the 7-mile long Augusta Canal National Heritage Area.

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Julian Smith Park is a specialized facility that includes two recreation centers - Julian Smith Casino and the Barbecue Pit - an athletic field, playground and picnic areas, a disc golf course, Lake Olmstead, and a walking trail that connects to the Augusta Canal. Lake Olmstead provides opportunities for both active and passive recreation activities.

Though not a part of the City's park system, Pendleton King Park is a unique recreation facility that benefits the entire community. This 64-acre park is located on Troupe Street and is readily accessible from surrounding neighborhoods. The park is owned by the Trustees of the Pendleton King Estate, and operated and maintained by the City's Trees and Landscaping Department. Major facilities and attractions at the park include a large pavilion, playground equipment, picnic tables and shelters, tennis courts, an arboretum, and a disc golf course. Because of its size and location, Pendleton King attracts users from throughout the City, and hosts a number of special events each year.

The Augusta Recreation and Parks Department is the line agency responsible for recreation facilities and activities. The department's director supervises all programs with the aid of an assistant director and other administrative personnel. The department has six divisions: Athletic, Golf Course, Operations, Program, Support Services, and Planning/Development. In the past five years the department has entered into operating agreements with several community-based organizations. Under the agreements the organizations agree to operate selected recreation department facilities and provide volunteers to work at the facilities. Some of the organizations that have entered into agreements with the department include the Augusta Rugby Club, the Augusta Rowing Club, Sandridge Neighborhood Association, and 30901 Development Corporation. The agreements give the organizations an opportunity to participate in property maintenance and save the department thousands of dollars in personnel costs.

6.4.1 Park and Recreation Needs

The Recreation and Parks Department is continually planning facility and program improvements. The department's basic strategy is to develop new facilities to meet the needs of growth areas and underserved neighborhoods, rehabilitate existing facilities to maintain their viability, and adapt programs and services to meet changing demands. In recent years, the Special Purpose Local Options Sales Tax (SPLOST) has helped finance the construction and rehabilitation of many recreation facilities. Between 1998 and 2002, 51 facilities were rehabilitated and another 9 were constructed with the aid of SPLOST funds. New facilities include the Aquatics Center, Henry Brigham Swim Center, Blythe Community Center, the Skateboard Park, Soccer Complex, and Diamond Lakes Regional Park. Diamond Lakes is located on a 236-acre site on Windsor Spring Road in south Augusta. Phase I improvements at Diamond Lakes include a five-field youth baseball softball complex, a five-field adult softball complex, two towers featuring a first level concession and restroom facility, a second level viewing and picnic area, and third level scoring area, a one-mile walking track, three wooded picnic areas with tables and grills, and four fully-stocked public fishing ponds.

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The department is now planning the expenditure of additional SPLOST funds. A total of \$13.7 million in Phase IV SPLOST funds have been appropriated for recreation improvements. New facilities under construction include Brookfield West Park, Sand Hills Park, and McBean Park. A joint library community center is to be built at Diamond Lakes Park. A number of recreation improvement projects are planned under Phase IV of the SPLOST, including the following:

- ❑ Construct A. L. Williams Park (completed)
- ❑ Lake Olmstead Multi-Use Trail (completed)
- ❑ Old Government House - Improvements
- ❑ New Community Building at Soccer Park
- ❑ Boathouse Building Renovations
- ❑ Blythe Recreation Center Improvements
- ❑ Warren Road Community Center Improvements
- ❑ Jones Pool Renovations
- ❑ Savannah Place Park Gymnasium
- ❑ Building Addition at Doughty Park
- ❑ Building Addition at McDuffie Woods Center

6.5 Water and Wastewater Systems

6.5.1 Water System

The Augusta Utilities Department is responsible for the operation and maintenance of the water and sewerage systems in the city. In addition, the Department provides customer service functions including meter reading and customer billing, revenue collection, and inspection of new construction. The Department is headed by a director and has 215 full-time equivalent positions authorized in its FY 1999 - 2000 budget.

Augusta owns and operates a water system serving 58,246 residential and 7,424 commercial and industrial customers as of December 31, 2001. The system's surface water supply is the Savannah River, supplemented by groundwater wells located throughout the city. Water from the Savannah River is treated at the Highland Avenue Water Treatment Plant (WTP). Water from the wells is treated at one of three ground water treatment plants (GWTP). Water transmission and distribution facilities convey the water from the treatment plants throughout the 210 square mile water service area. Generally, the service area can be characterized as having complete water service coverage for potential customers who wish to connect to the system. Fort Gordon and the cities of Blythe and Hephzibah provide water service within their respective jurisdictions.

The Savannah River is the city's primary source of surface water. Water is also withdrawn from the Augusta Canal, which is fed by and located next to the river. Major facilities at the Raw Water Pumping Station, located on the Canal, include four raw water intakes on the canal (two primary and two secondary) and a diesel engine-driven standby raw water pump. The Raw Water Pumping Station has an aggregate pumping capacity of 88 million gallons daily (mgd).

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The raw water supply is pumped to the Highland Avenue Water Treatment Plant through a system of three parallel raw water lines: a 30-inch diameter cast iron, a 36-inch steel, and a 60-inch ductile iron line. A 42-inch diameter, pre-stressed concrete cylinder pipe is currently inactive. The standby raw water supply facility is at the same general location as the primary facility but pumps water directly from the Savannah River to the Highland Avenue Water Treatment Plant through the same system of raw water supply pipelines.

The city is currently permitted to draw up to 60 mgd at the Raw Water Pumping Station. An additional 15-mgd in permitted pumping capacity, currently not used, will be dedicated to a new water treatment plant and intake. The new intake is under construction at a location on the river below downtown Augusta.

The city is also permitted to withdraw supplemental raw water from the Tuscaloosa Formation aquifer through 32 wells: 26 actively producing, 5 deactivated and 1 inactive. The city is currently permitted to use up to 18.4-mgd monthly average groundwater, and 17.4 mgd maximum annual average. Well fields are generally located near one of three Ground Water Treatment Plants (GWTPs). One of the three plants, GWTP #3, located on Old Waynesboro Road, became operational in 2001. The other two plants date from 1966 and 1979. The wells that have been deactivated are in the vicinity of GWTP #1 located off Peach Orchard Road. Augusta holds permits for water sources as noted below in Table C-3

Table C-3 Water Withdrawal Permits Augusta-Richmond County	Permitted Withdrawal (mgd)	
	Monthly Average	24 hour Max. Day
Surface Water Permits		
Primary Source: Savannah River/Augusta Canal EPD Permit No. 121-0191-06	60.0	60.0
North Location: Savannah River EPD Permit No. 121-0191-09 (being relocated to the new intake site)	15.0	18.5
Groundwater Permit	Monthly Average	Annual Average
26 Active Wells - located at GWTP Nos. 1, 2, & 3 and three individual sites (Rural Chlorination Sys.) EPD permit No. 121-0007	18.4	17.4

Augusta owns four water treatment plants and a rural chlorination system, as illustrated in Table C-4. Augusta has raw water storage capacity of approximately 379 acre-feet or 124 million gallons at two raw water storage reservoirs located adjacent to the Highland Avenue WTP. They provide pre-settling of suspended matter in the raw water as well as storage during times of low river or canal flows. Water flows by gravity from these reservoirs to the WTP.

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**Table C-4
Water Treatment Plants and Chlorination System
Augusta-Richmond County**

Plant	Rated Capacity for Treatment of Raw Water	2001 Production of Treated Water (maximum day)	Date of Original Construction	Dates of Improvements
Highland Avenue WTP Permitted to 60 mgd but improvements, are needed before plant can sustain that production level. Current sustainable capacity is 45.0 mgd	60.0 mgd	40.50 mgd	1939	1949, 1954, 1987, 1994, 2000
Peach Orchard (GWTP No. 1)	5.0 mgd	6.49 mgd	1966	1969, 1996
Highway 56 Loop (GWTP No. 2)	10.0 mgd	8.95 mgd	1979	1985, 1992, 1996
Old Waynesboro Rd. (GWTP No. 3)	5.0 mgd	6.08 mgd	2001	N/A
Rural Chlorination System	3.7 mgd	1.77 mgd	1972	Each year since 1981
Total	83.7 mgd	63.97 mgd*		
*Current operating limit = 78.4 mgd				

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6.5.2 Finished Water Storage

The Highland Avenue finished water storage supplies the lower pressure zones directly by gravity while the remainder is pumped to the system's storage facilities located in various pressure zones. There are five finished water storage tanks (clear wells) at the Highland Avenue WTP with a total storage capacity of 15.45 MG. The treated water is then fed by gravity or pumped throughout the water distribution network.

6.5.3 Water Distribution System

The system's water distribution consists of approximately 1,010 miles of pipelines, ranging in size from 6 inches to 24 inches in diameter. Most of the pipelines are made of cast iron or ductile iron. Approximately 20% of these pipelines have been in service for 50 years or more, with the oldest pipelines installed approximately 140 years ago.

Finished surface water is distributed from the Highland Avenue WTP by gravity and pumping. Finished ground water is pumped from GWTP No. 1 into the Intermediate-South pressure and from GWTP No. 2 into the Pine Hill pressure gradient (417 ft. MSL). Distribution system pump stations situated at various locations are used to feed isolated high-pressure zones.

Location	Location Elevation	Pressure Systems Served	Capacity (Gallons)
Highland Ave WTP Clearwell 1	433	N/A	1,250,000
Highland Ave WTP Clearwell 2	433	N/A	3,000,000
Highland Ave WTP Clearwell 3	433	N/A	5,000,000
Highland Ave WTP Clearwell 4	433	N/A	1,600,000
Highland Ave WTP Clearwell 5	433	N/A	4,600,000
Total Clearwells			15,450,000
Berckmans Road	418	420	500,00
Highland Ave WTP Tank	564	564	500,000
Highpoint Tank	564	564	1,000,000
Walton Way Extension	501	500	750,000
Belair Road	630	630	1,000,000
Total Elevated Storage			3,750,000

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**Table C-6
Ground Water System Storage Facilities
Augusta-Richmond County**

Location	Location Elevation	Pressure Systems Served	Capacity (Gallons)
GWTP No. 1 Clearwell	162	417	500,000
GWTP No. 2 Clearwell	128	457	1,000,000
GWTP No. 3 Clearwell	240	521	2,000,000
Faircrest Avenue	436	597	5,000,000
Faircrest Avenue	417	597	500,000
Windsor Spring Road	417	417	500,000
Richmond Hill Road	417	597	500,000
Golden Camp Road	417	597	250,000
Algernon	417	417	2,000,000
Morgan Road (placed in operation Aug. 2000)	470	597	5,000,000
Cedar Ridge	417	521	1,000,000
Pine Hill	457	521	300,000
Rose Hill	412	457	2,000,000
Wallie Drive	457	457	300,000
Total Ground Storage			20,850,000
Pine Hill	521	521	150,000
Highway 56	457	457	500,000
Tobacco Road	597	597	500,000
Fairington Drive	597	597	500,000
Georgetown	597	597	500,000
Lumpkin Road	597	597	250,000
Old Waynesboro Road	521	521	500,000
Greenland Road	597	57	500,000
Total Elevated Storage			3,150,000

6.5.4 Future Water Needs

Augusta's projection of future water production needs is based on the anticipated total population, excluding Fort Gordon. The geographical distribution of population is not a

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factor in the plant-level planning, but is important with respect to water transmission as part of the hydraulic distribution of water to customers.

With the current level of conservation, Augusta is expected to experience a small increase in per capita use over the next 20 years. The Technical Memorandum prepared to analyze the projected water demand estimates that the system will experience a 2 percent (0.09 percent per year) increase in per capital water usage by the year 2020.

Table C-7 presents Augusta's 2000 and projected per capita water usage in gallons per day. This usage rate is determined by dividing total water produced by population. This rate includes both customer-billed usage plus unaccounted for water. The per capita needs include residential and commercial usage. Industrial needs are presented separately because they are not expected to be directly linked to population growth. The projected annual average production in million gallons per day (mgd) and maximum day production are intended to be planning-level estimates of the city's future needs.

Table C-7 Projected Water Consumption, 2001 to 2020 Augusta-Richmond County			
	2000	2010	2020
Total Population	199,775	222,497	242,150
Per Capita Water Usage, gpd (commercial and residential)	151	153	154
Industrial Usage, mgd	10.3	10.5	10.7
Annual Avg. Water Usage, mgd	41.3	44.5	48.0
Max. Day Water Usage, mgd	61.1	71.2	77.0
Source: Augusta, GA - Water & Sewerage Revenue Bonds, Series 2002, Engineer's Report, June 13, 2002, Prepared by CH2MHill, Table 3-12.			

While the city is taking steps to encourage water conservation, the development pattern and population distribution will also affect the amount of water consumption. As outlined in the Population Element the southern part of the city is projected to experience significant growth that will increase water demand even with conservation measures. In contrast, the northeastern part of the city is expected to have limited population growth over the next 20 years, resulting in a relatively small net increase in water demand.

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6.5.5 Wastewater Treatment Facilities

The city of Augusta's sanitary sewerage system serves approximately 44,048 residential and 5,591 commercial and industrial customers (as of December 31, 2001). The sewer system covers an area of approximately 106 square miles and serves an estimated population in excess of 150,000. For Gordon and the cities of Hephzibah and Blythe have separate sewer systems.

Augusta's wastewater collection and conveyance system consists of 8 drainage basins, 28 wastewater pumping stations, and approximately 640 miles of collection sewers. The sewers transport primarily sanitary sewage, but there is evidence of storm water infiltration in some of the basins. Approximately 80 percent of the sewer system is drained by gravity; the remainder requires pumping at least once. Sewer lines range from 8 inches to 72 inches in diameter. Most lines are made of vitrified clay, but other materials present include brick, concrete, and polyvinyl chloride (PVC). Approximately 20 percent of the sewer lines have been in service for 50 years or more.

Augusta owns and operates two wastewater treatment plants: the J. B. Messerly Wastewater Treatment Plant (WWTP) located on Doug Barnard Parkway, and the Spirit Creek WWTP on Bennock Mill Road. The Messerly WWTP is the much larger of the two plants in terms of facilities and treatment capacity (see Table C-8). The Messerly WWTP has two separate treatment facilities, the North Plant and the South Plant. The North Plant, constructed in 1976, includes equipment providing primary and secondary treatment with a capacity of 17.8 million gallons per day (mgd). The South Plant was constructed in 1984 with a design capacity of 28.4 mgd. Flow equalization basins were added in 1995.

In 1999, the city hired the firm Operations Management International (OMI) to operate and maintain the Messerly WWTP. OMI also operates the Spirit Creek WWTP. The firm was hired in the wake of an order by the Georgia Environmental Protection Division (EPD) for the city to correct many deficiencies in the wastewater treatment system. Of particular concern to the EPD was the city's failure to punish industrial customers that inadequately pre-treat their wastewater. Since taking over management of the Messerly plant, OMI has issued hundreds of notices to industries for wastewater infractions, and has levied stiff fines against the violators. According to news accounts, the firm has also achieved cost savings at the plant.

In 1997, the first stage of a wetlands system was constructed to provide additional ammonia-nitrogen removal from wastewater at the Messerly plant. The second and third stages of the wetlands system were completed in 2001 and 2002. The constructed wetlands, located on a 400-acre site next to the plant, filter sewerage before it is released into Butler Creek. Discharges from the treatment plant also flow to the river via Butler Creek.

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The Spirit Creek WWTP, constructed in 1988, serves the Spirit Creek basin in the southern part of the city. Wastewater is subjected to chlorination and aeration, and passes into the Savannah River. The plant has a rated treatment capacity of 2.23 mgd.

Table C-8 Wastewater Treatment Plants Augusta-Richmond County					
Plant	Permitted Treatment Capacity (monthly Avg.)	2001 Treated Wastewater (Max. Day)	Date of Original Construction	Dates of Improvements	Receiving Stream
James B. Messerly	46.1 mgd	36.8 mgd	1968	1976, 1984 1995, 1997 2001, 2002	Butler Creek
Spirit Creek	2.24 mgd	3.2 mgd	1988	1995	Spirit Creek
Total	48.34 mgd	40.0 mgd			
Source: Augusta, GA - Water & Sewerage Revenue Bonds, Series 2002, Engineer's Report, June 13, 2002, Prepared by CH2MHill, Table 4-1.					

6.5.6 Projected Wastewater Flows

A consulting firm, CH2MHill, prepared the Master Plan 2000 for Water and Wastewater Systems in Augusta. The Plan included projections of wastewater flows to the year 2020. Factors considered in projecting wastewater flows included population projections and the proportion of water accounts connected to the wastewater system. The population projections for the city indicate that much of the growth will occur in the Spirit and Little Spirit Creek drainage basins. The proportion of residences and businesses connected to the system is expected to increase as new residences and businesses are added and as some portion of existing residents connect to the system. Table C-9, reprinted from CH2MHill's Engineer's Report, summarized the sewered population, percentage change in sewered population and the projected wastewater flows through the two WWTP's.

Table C-9 Wastewater Flows by Plant, 2000 to 2020 Augusta-Richmond County			
Plant	2000	2010	2020
Spirit Creek WWTP Capacity: 3 mgd Sewered Population Percent Change Average Annual Flow (mgd) Max. Month Flow (mgd)	10,950 14.2% 3.4 4.0	24,924 127.6% 7.2 8.6	35,577 42.7% 10.0 12.0
Messerly WWTP Capacity: 46.1 mgd Sewered Population Percent Change Average Annual Flow (mgd) Max. Month Flow (mgd)	139,732 2.8% 31.5 37.8	156,5489 12.0% 34.8 41.8	165,603 5.8% 36.7 44.1
<p>Note: Flows will be impacted by changes in the level of Infiltration/Inflow levels in the WWTP service areas.</p> <p>Source: Augusta, GA - Water & Sewerage Revenue Bonds, Series 2002, Engineer's Report, June 13, 2002, Prepared by CH2MHill, Table 4-4.</p>			

The wastewater flow projections reveal two major needs regarding the WWTPs. The first is that the Spirit Creek WWTP needs to be expanded in the near future to accommodate projected flows. The second is that the Messerly WWTP does have sufficient capacity to treat maximum month wastewater flows.

6.5.7 Water and Wastewater System Improvements

The Master Plan 2000 includes a ten-year Capital Improvement Plan (CIP) for the city's water and sewerage systems. Projects are to be financed by scheduled debt issues in 2000, 2002, 2005 and 2008. The projects include a mix of improvements to water treatment facilities, the water distribution system, the wastewater treatment plants, the wastewater conveyance system, and system-wide projects. Table C-10 summarized the source and use of estimated funds for the recommended CIP.

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Table C-10
10 Year Capital Improvement Plan – Cost Estimates
Water & Wastewater Systems
Augusta-Richmond County

Recommended Improvements	Cost Estimate 2000 Bonds	Cost Estimate 2002 Funds	Cost Estimate 2005 Funds	Cost Estimate 2008 Funds
Water Treatment Facilities	\$28,655,000	\$57,829,000	\$38,500,000	\$ 2,000,000
Water Distribution System	19,789,000	14,739,000	13,700,000	1,500,000
Water Treatment Plants	-	8,867,800	33,100,000	15,200,000
Wastewater Conveyance System	9,322,000	41,219,200	20,000,000	4,200,000
System-Wide Projects	5,895,000	7,345,000	7,200,000	2,100,000
10-Year Capital Improvement Plan	\$90,127,000	\$130,000,000	\$112,500,000	\$25,000,000

SOURCE: Engineer's Report, Augusta Utilities Department, Water and Sewerage Revenue Bonds, Series 2000, Appendix C and Engineer's Report, Water and Sewerage Revenue Bonds, Series 2002, Appendix D.

NOTE: All estimated costs in 2002 dollars.

The City sold revenue bonds in the year 2000 to finance the first three years (2001-2003) of the CIP. The year 2000 CIP is summarized in Table C-11. For the water system, the CIP provides for significant improvements to the Highland Avenue WTP, improvements to the water distribution system, and pre-construction activities (i.e. siting, permitting and design) for a new water treatment plant. For the wastewater system, the three-year CIP provides for significant improvements to the Messerly WWTP and the wastewater conveyance system. Improvements to the wastewater conveyance system include interceptor line upgrades, expansion and extensions, infiltration/inflow reduction, and extending service to a number of unsewered pockets.

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Table C-11
Series 2000 Bond Projects: Summary of Estimated Cost
Augusta-Richmond County

Recommended Improvements	Estimated Cost
Water Treatment Facilities	\$28,655,000
Water Distribution System	\$19,789,000
Wastewater Treatment Plants	\$ 9,322,800
Wastewater Conveyance System	\$26,466,000
System-Wide Projects	\$ 5,895,000
Total System	\$ 90,127,000

A second set of revenue bonds was sold in the summer of 2002. The 5-year CIP to be financed with the Series 2002 bonds is summarized in Table C-12. The CIP provides for upgrades and development of the water treatment and distribution system, wastewater conveyance, and wastewater treatment facilities. For the water system the CIP provides for significant improvements to the Highland Avenue WTP, improvements to the water distribution system, and construction of a new water treatment plant. The new water treatment plant is to be located on a site near the intersection of Tobacco Road and Mike Padgett Highway. For the wastewater system, the CIP provides for additional improvements to the Messerly WWTP and expansions and extensions of the wastewater conveyance system.

Table C-12
Series 2002 Bond Projects: Summary of Estimated Cost
Augusta-Richmond County

Recommended Improvements	Estimated Cost
Water Treatment Facilities	\$57,829,000
Water Distribution System	\$14,739,000
Wastewater Treatment Plants	\$ 8,867,800
Wastewater Conveyance System	\$41,219,000
System-Wide Projects	\$ 7,345,000
Total System	\$130,000,000

6.6 Stormwater Management

Richmond County, including Augusta, is situated in the Middle Savannah River drainage basin. According to the *Augusta Watershed Assessment Report* (2003), there are nine drainage basins in the county. The northern portion of the county generally drains in an eastern and southeastern direction and includes Rock, Rae's, Oates, Rocky and Butler Creeks. Spirit Creek, including Little Spirit Creek, drains the central part of the county. McBean Creek drains the southeastern part, and Sandy Run Creek and Boggy Gut Creek, both tributaries to Brier Creek, drain the southwest portion. The ninth drainage basin, commonly referred to as the River's Edge, includes the downtown area along the Augusta canal, the area near Phinizy Swamp, and the area south of the swamp.

The municipal stormwater drainage system includes a variety of inlets, catch basins, drain pipes, open channels, culverts, detention and retention ponds and outlet structures. Generally speaking, in the urban service district stormwater is collected in catch basins and piped to a receiving channel or creek located in one of the major drainage basins. In the suburban service district, storm water from residential and commercial development is usually piped to a retention pond. The retention pond holds the storm water and releases it at a controlled rate either into the city's conveyance system or into a natural drainage area.

The city of Augusta has adopted a watershed approach to protect and improve water quality in local streams and the Savannah River. The city's stormwater regulations require all new commercial and residential development to maintain runoff release rates at pre-development levels. More stringent requirements are in place for development in the Rock, Rae's and Rocky Creek basins. These three basins have been heavily impacted by urban development.

The city holds a National Pollution Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit issued on April 14, 2000. In February 2003, the city submitted a Consolidated Stormwater Management Program to the Georgia Environmental Protection Division. The city's stormwater management program includes the following components:

- **Structural and Source Control Measures** – This program is designed to reduce pollutants in runoff from commercial and residential development. Major activities under this program include maintenance of structural controls, establishing post-construction controls over new development, cleaning public streets, flood water quality assessment, monitoring of runoff from the city's landfill, reducing pollutants used in environmental control, and administering and enforcing local development ordinances and programs. Examples of regulations and programs affecting stormwater drainage and water quality include the Stormwater Management Ordinance and Technical Manual, the Flood Damage Prevention Ordinance, the Soil Erosion and Sediment Control Ordinance, the Site Plan and Subdivision Regulations, the Zoning Ordinance, and the Community Greenspace Program. The Greenspace and Natural

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Resources chapter provides more information on these and other ordinances affecting water drainage and quality.

- **Detect and Eliminate Illicit Discharges** – In recent years the city has completed a series of capital improvement projects to eliminate the last of the Combined Sewer Overflows (CSOs). The city now has eliminated all known CSOs by separating storm and sanitary sewer flows. There is an ongoing effort by the Augusta Utilities Department (AUD) to replace the aging sewer conveyance system, address infiltration / inflow problems and extend sanitary sewer service to pockets currently served by septic tanks. Other measures being undertaken include periodic evaluation of significant discharge facilities, field screening of highly visible potential pollutant sources, enforcing existing ordinances and enacting new ones as necessary, responding to public complaints about discharges, and establishing procedures to prevent, contain and respond to spills.
- **Industrial Monitoring Program** – This program involves monitoring and controlling pollutants in stormwater discharges from the city’s system, the landfill, hazardous waste treatment and disposal and recovery facilities, industrial facilities subject to the Superfund Act, and industrial facilities that the city determines are contributing a substantial pollutant loading to the system.
- **Reduce Pollutants from Construction Sites** – This includes site planning, development of appropriate structural and nonstructural Best Management Practices (BMPs), inspection of construction sites, enforcement measures for noncompliance, and educational and training measures for construction site operators. Many of the methods and techniques needed to minimize the impact of construction on stormwater quality are addressed under existing ordinances and regulations.
- **Outreach and Public Education** – Metro Augusta Clean and Beautiful and the EcoSystems Institute coordinate public awareness and participation in activities to prevent stormwater pollution and improve water quality. Activities include stream cleanup, workshops, educational programs, classes, tours and the dissemination of information through websites. The city is also developing an outreach program to highlight water quality issues. The outreach program will include visits to schools; presentations to civic groups, neighborhood associations, and homebuilders; and dissemination of information through the Internet, newsletters, mailings and flyers.
- **Activities in Impacted Water Bodies** - According to analysis done as part of the Augusta Watershed Assessment (2003), water quality in Augusta’s streams is good-to-excellent except for fecal coliform levels. Segments of three streams – Spirit Creek, Butler Creek, and Rocky Creek – are listed on the active 303 (d) list for fecal coliform. Butler Creek is also listed for Dissolved Oxygen and Selenium, and Rocky Creek is listed for toxicity. The city will take the following steps to address the problems in these three water bodies; delineate the limits of the drainage basin, conduct field assessment to identify possible sources of pollution, evaluate the impact of possible

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pollution sources, implement measures to address the pollution, and implement appropriate preventive measures.

Damaging floods in recent years highlighted the need for improvements to the storm water drainage system and changes to local development ordinances. All of the major drainage basins have been the focus of engineering studies in recent years. Projects resulting from the studies have included new retention facilities, channel improvements, upgrades to drainage pipes and installation of new bridges and culverts. The Short Term Work Program lists some of the drainage projects that have yet to be completed. The U. S. Army Corps of Engineers is completing the Regional Flood Control Feasibility Study. This study will include recommended structural and non-structural drainage improvement projects in the following basins: Rae’s Creek, Rocky Creek, the Augusta Canal and Phinizy Swamp.

6.7 Solid Waste Management

The Augusta-Richmond County Solid Waste Facility (the landfill), located at 4330 Deans Bridge Road, operates as an enterprise fund (i.e., it is funded by dollars generated from tipping fees) and receives municipal solid waste generated in the CSRA. Following consolidation of the city and county in 1996, solid waste collection service was gradually extended from the Urban Services District (the former city) to parts of the Suburban Services District. The goal was to provide area-wide solid waste collection service. As of 2002 approximately 85% of the suburban area is served by the city-provided collection services. The service will be extended to the entire suburban area in the next few years.

Collection services also include curbside recycling and bulky waste collection. The Solid Waste Facility also has a courtesy drop off area for residents to dispose of one to two bags of household waste at no charge. The waste collected at the courtesy drop off area is moved to the landfill active-area by the facility staff. To keep the recyclable waste out of the waste stream, the facility operations also include metal recycling, scrap tire recycling and composting operations.

Private haulers provide solid waste collection and disposal services to commercial, institutional and industrial customers. Private companies provide dumpsters, compactors and roll-off containers to their customers and dispose of collected solid waste at the landfill. The haulers have contracts with the city to provide these services and equipment.

The city will continue to cut down on the amount of solid waste generated and disposed of in the landfill, primarily by encouraging more recycling. The city provides curbside recycling as a part of its area-wide waste collection services and has established recycling drop off locations at fire stations.

The solid waste facility is located on part of a 1,187 acre site off Deans Bridge Road in South Richmond County, and is the only public municipal solid waste (MSW) Subtitle D landfill located in the Richmond County. Of the total acreage, 790 acres are usable for landfill. The landfill started operations in 1987. Initially a 100-acre part of the area designated for solid waste operation was used. This section of the landfill was not lined

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and was properly closed in 1994 to comply with the new solid waste federal and state regulations that required installation of liners and leachate collection and monitoring systems.

In 1994 a new lined section with a leachate collection system (Subtitle D) was constructed on an approximately 92-acre area with a footprint of 40.8 acres for solid waste disposal. This section is expected to reach its design capacity in early 2005 and will be properly closed. A 437-acre tract is proposed for development as a Subtitle D landfill expansion directly east of the currently permitted Landfill. Of the 437 acres in the expansion area, 310 acres are planned for waste disposal. This section is currently in the permitting phase. The permitting process is most likely to be completed by the end of 2003 and construction at the new section will start in late 2004. This section is expected to open in 2005 and will have a useful life of over 50 years.

The landfill is staffed by county employees and is operated as a division of the Public Works and Engineering Department. The landfill is currently receiving approximately 650 tons of solid waste per day. As of April 1, 2000, tipping fees at the landfill were: \$32.50 per ton for general, mixed or demolition waste; \$16.75 per ton for inert waste; \$20.00 per cubic yard for asbestos; and \$1.25 and \$5.00 each of car or small truck, and tractor tires, respectively. Metals and tires are stored separately and sold to recyclers. The landfill's year-2002 operating cost was approximately \$26 per ton.

The landfill is in compliance with Georgia Solid Waste Management Act of 1990, and all applicable federal and state rules and regulations. The facility is operating under the 1998 Solid Waste Management Plan that will be updated in 2003 for next five years.

6.8 Cultural Facilities

6.8.1 Libraries

The East Central Georgia Regional Library serves the six counties of Burke, Columbia, Glascock, Lincoln, Richmond and Warren. The headquarters branch for the system is located at 902 Greene Street in downtown Augusta. There are four other branches in the city: Appleby Branch, 2260 Walton Way; Friedman Branch, 1447 Jackson Road; Maxwell Branch, 1927 Lumpkin Road, and Wallace Branch, 1237 Laney-Walker Boulevard. The Talking Book Center for the Blind and Physically Handicapped is located across the parking lot from the headquarters building. The region is also served by a bookmobile, which visits daycare centers and group housing facilities.

The library offers a wide range of services including videotapes, audio books, reference sources and computers with Internet access as well as print books. It has programming for all age levels from preschool through classes for senior citizens. The summer concert series in the Appleby Branch gardens is a longstanding tradition.

A SPLOST-funded branch library is planned for a shared facility with a recreation center at Diamond Lakes Park. Groundbreaking is planned for summer of 2003 with an opening

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date in early 2005 and is funded by the SPLOST. SPLOST money also has been allocated for a new headquarters library, to be located on a site in downtown Augusta. The exact site has not been determined and additional funding will be needed to complete the project.

6.8.2 Museums

The **Augusta Museum of History** is located at 560 Reynolds Street in a 45,000 square foot building that opened in 1995. A 10,000-square-foot addition, to be used as archive and storage space, is scheduled to open in the fall of 2003. Permanent exhibits include "Augusta's Story", the community's medical history, a restored 1917-steam locomotive and a reconstructed 1930s gas station. Visitors can clean cotton in a replica cotton gin and view a 56-foot long Petersburg boat. Children can learn history through interactive exhibits in the "Susan L. Still Children's Discovery Gallery". Documentaries are shown continuously and there is a museum shop.

The **Morris Museum of Art** is housed in the Augusta Riverfront Center located on the Riverwalk in downtown Augusta. The museum is home to a broad-based survey collection of Southern Art. A series of galleries include works from the antebellum period, Civil War Art, the Black Presence in Southern Art, Southern Impressionism, early 20th century painting and contemporary works. The museum also includes Southern Landscape paintings and a gallery for changing exhibitions. The museum's Center for the Study of Southern Art is a reference and research library on more than 1,000 artists who have worked in the South. The museum store offers exhibition catalogues, art books, handcrafted jewelry and unique gift items. William S. Morris, III, chairman and CEO of Morris Communications Corporation, established the museum in memory of his parents.

The **Lucy Craft Laney House and Museum of Black History** is located at 1116 Phillips Street in the Laney-Walker Historic District. Restored in the late 1980s by Delta House, Inc., the house includes a conference center, computer center and period garden. Programs include art and history exhibits, lectures and tours, Youth Leadership Academy, and senior citizens activities.

The **Gertrude Herbert Institute of Art** is located at 506 Telfair Street in the historic "Ware's Folly" building. The Gertrude Herbert serves as the CSRA's only independent non-profit art school and gallery. The Institute offers visual arts education opportunities for students of all ages, provides outreach instruction to elementary school students and senior citizens, and hosts at least six major exhibits of contemporary art each year.

Augusta is also home to house museums reflecting the diverse history and culture of the community. Table C-13 lists the major house museums in the city.

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Table C-13 Augusta House Museums	
Name & Location	Description
Meadow Garden (c.1795) 1320 Independence Drive	Built for George Walton, the youngest original signer of the Declaration of Independence and twice Georgia Governor. It is the oldest documented house in Augusta.
Ezekiel Harris House (c.1797) 1822 Broad Street	Built by tobacco merchant Ezekiel Harris, this Federal-era style house is a reminder of Augusta's importance as a colonial-era trading center.
Boyhood Home of Woodrow Wilson (c.1850) 419 Seventh Street	The future president lived here from 1860-1870 during the years his father served as pastor of the First Presbyterian Church. The house was recently restored by Historic Augusta, Inc.
Lucy Craft Laney House and Museum of Black History (c.1911) 1116 Phillips Street	Lucy Laney was born into slavery yet went on to become one of the most outstanding educators in post-Civil War Georgia. She started Augusta's first black kindergarten and nurses' training program. Restored in the late 1980s by Delta House, Inc., the house includes a conference center, computer center and period garden. Programs include art and history exhibits, lectures and tours, Youth Leadership Academy, and senior citizens activities.

6.8.3 Augusta Welcome Center

For the past 12 years the city's Visitor Welcome Center has been located in the historic Cotton Exchange building at the corner of Eighth and Reynolds Street near Riverwalk Augusta. The center, operated by the Augusta Metropolitan Convention and Visitors Bureau (CVB), has information on area attractions and events. Visitors can also set up tours of historic Augusta at the center. The Cotton Exchange building also contains artifacts from the days when the c.1886 structure housed the local cotton exchange. The building was the center of activity for Augusta cotton brokers, especially from the late nineteenth to early twentieth century.

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In January 2004 the Welcome Center will move to the first floor of the Augusta Museum of History. Georgia Bank and Trust will occupy the space in the Cotton Exchange building vacated by the Welcome Center.

6.8.4 Fort Discovery

The National Science Center's Fort Discovery is an interactive math and science museum located at #1 Seventh Street adjacent to Riverwalk. The two floors of Fort Discovery cover 128,000 square feet and house more than 280 interactive exhibits. Other facilities include science teacher learning labs, a theatre, retail store, meeting space and a restaurant. Interactive exhibits focus on three technologies: electronics, computer arts and communications. The National Science Center (NSC) represents a partnership between a non-profit organization (National Science Center, Inc.) and the U. S. Army. The primary mission of the NSC is to improve technical literacy and to encourage an interest in math and science careers.

6.9 Civic Center, Auditoriums and Performing Arts Center

Augusta has a civic center, auditoriums and performing arts facilities used to host a wide variety of events and performances. The major facilities are listed below.

6.9.1 Augusta-Richmond County Civic Center

The Augusta-Richmond County Civic Center, which opened in 1979, is located at 601 Seventh Street in downtown Augusta. The Civic Center Complex features an 8,500-seat arena, 2,690-seat theater (i.e. Bell Auditorium) and 14,500 square foot exhibit hall that opens into a 23,000 square foot arena floor. The Center has eight permanent concession stands and offers barrier-free seating. The Center annually hosts the Augusta Futurity, an eight-day event, the National Barrel Horse Championships, and springtime and Christmas Made in the South. The Civic Center is also home to the Augusta Lynx of the East Coast Hockey League. The Center was home to the Augusta Stallions and arena football team for three seasons between 2000 and 2002.

6.9.2 Bell Auditorium

Part of the Civic Center Complex, the 2,690-seat theater is Augusta's principal arena for Broadway productions, musical acts, and local school performances. The Bell opened in 1938 and underwent extensive renovations in the late 1980s. The Bell is located at 712 Telfair Street in downtown Augusta.

6.9.3 Imperial Theatre

The Imperial Theatre is located at 745 Broad Street in downtown Augusta. The theater opened as "The Wells" in February 1918, and hosted vaudeville acts and such stars as Charlie Chaplin. The theater was renamed the Imperial after being purchased by Lynch Enterprises in late 1918. The Imperial also served Augusta as a motion picture theater for

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many years. The theater, which currently has 903 seats, was restored in 1985 and began its second life as a performing arts center. Today it hosts a variety of performances, including productions of the Augusta Ballet and the Augusta Opera.

6.9.4 Sacred Heart Cultural Center

The Sacred Heart Cultural Center is located at 1301 Greene Street in downtown Augusta. This late Victorian era edifice (c.1898) served as a Catholic Church from 1900 to 1971. The church was restored in the mid-1980s under the auspices of a local partnership. It reopened as the Cultural Center and now serves the community both as a home for non-profit organizations and as a unique venue for cultural and social events.

6.9.5 Maxwell Performing Arts Theatre

The Grover C. Maxwell Performing Arts Theatre is located at 2500 Walton Way on the campus of Augusta State University. The theatre is a 750-seat facility used for a wide variety of musical events and plays. The facility is available to both on-campus and off-campus users.

6.10 Other Attractions

6.10.1 Riverwalk Augusta

Riverwalk Augusta is a riverside park conceived in 1982 as a part of a revitalization plan for downtown Augusta. Developed in phases between 1986 and 1992, this award-winning facility includes a brick-paved esplanade atop the river levee, a shaded walkway on the river side of the bulkhead, a playground and picnic area, the Jessye Norman Amphitheater, three landscaped bulkheads, and breaches in the levee at Eighth and Tenth Streets. A full-service marine was added in 1994. The park hosts a variety of special events each year and is close to other major attractions.

6.10.2 Augusta Golf and Gardens

Augusta Golf and Gardens, future home of the Georgia Golf Hall of Fame, currently consists of eight acres of display gardens, including a butterfly garden, rose garden and pergola garden. The gardens are also home to bronze sculptures of golf legends such as Bobby Jones, Ben Hogan, Raymond Floyd, Arnold Palmer, Jack Nicklaus and Byron Nelson. The attraction will eventually encompass 17 acres along the Savannah River levee in downtown Augusta, and will include a 55,000 square-foot facility housing the Hall of Fame rotunda interactive exhibits, a 150-seat theater, a garden and a gift shop.

6.10.3 Springfield Village Park

Located on two acres at the intersection of Twelfth and Reynolds Streets, this park pays tribute to Springfield Baptist Church, the oldest independent African-American congregation in the United States with an unbroken record of existence. The park includes

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walkways, floral landscaping fountains, and the 45-foot tall sculpture "The Tower of Aspirations". Planned improvements include artifact and living history museums. Springfield Baptist Church is located across the street from the park.

6.10.4 Augusta Common

The Augusta Common is a 2½-acre park located in the 800 block of Broad Street in downtown Augusta. The park opened in October 2002 and is designed to connect Broad Street to the revitalized riverfront area. Park amenities include paved walkways, park benches, trees, raised planting beds, lighting fixtures, historical markers, and a statue of the city's founder, James Oglethorpe. Since opening, the Common has hosted a variety of festivals, music shows and special events.

6.10.5 Lake Olmstead Stadium

Lake Olmstead Stadium, located on Milledge Road, is the home of the Class "A" Augusta Greenjackets baseball team. The Greenjackets play in the South Atlantic League and have an affiliation agreement with the Boston Red Sox. Lake Olmstead Stadium was built during the fall and winter of 1994-95, replacing Heaton Stadium. The Stadium seats approximately 4,400 and has a large picnic area down the left field line and a grill and bar area down the right field line. In addition to being the home of the Greenjackets, the stadium hosts concerts and special events throughout the year.

6.10.6 Phinizy Swamp Nature Park

Located on 1,100 acres near Augusta Regional Airport, Phinizy Swamp Nature Park offers visitors an opportunity to see a variety of wildlife and vegetation in a natural setting. Established in 1999, the park offers education and research opportunities for students and teachers, and gives residents and visitors a chance to interact with nature in many ways. The park enjoys growing support from a variety of volunteers including individuals, families, non-profit organizations, corporations, area school systems, and government. Facilities at the park include seven trails, two observation decks, and a wooden footbridge. An education facility is under construction, and upcoming projects include the re-design of a parking area, construction of a new research facility, visitor's center and restrooms, and completion of the Floodplain Boardwalk extension project. The park is operated by the non-profit Southeastern Natural Sciences Academy.

6.10.7 Augusta Canal National Heritage Area

The Augusta Canal National Heritage Area (i.e. The Augusta Canal) is among the nation's best examples of a 19th Century industrial canal system. Constructed in 1845, and enlarged in 1876, the canal continues to provide power to historic mills alongside its banks, supplies water to the city, and forms a boat channel stretching approximately 8 miles from the Headgates in Columbia County to downtown Augusta. A number of historic structures associated with the canal still stand: the locks and dam at the headwaters, the lock keepers cottage, a dance pavilion and barbecue shed, Sibley Mill, King Mill, the Confederate Powder Works Chimney, Enterprise Mill (recently renovated into loft apartments and

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commercial space), and the Butt Memorial Bridge. Several historic neighborhoods adjoin the canal. The canal and its towpath tie these resources together, providing a ready-made walking (or canoeing) venue for users.

The canal is managed by the Augusta Canal Authority and is being revitalized in accordance with a master plan that includes a combination of preservation, conservation, education and interpretation, recreation and economic development activities. Among the projects either underway or in the design phase are the Bikeway/Multi-Use Trail Improvements, restoration of historic structures at the Headgates, Restoration of the Locks and Headgates Building, and Petersburg Boat (Tour Boat) construction. The Augusta Canal Interpretive Center, located in the Enterprise Mill, opened to the public in April 2003.

6.11 Hospitals and Related Health Care Facilities

Augusta has a long history of service in the field of medicine. As a result, medical care, research and education facilities are vital to community life and the area economy. There are several major medical facilities in Augusta employing thousands of people. These facilities include acute care hospitals, psychiatric facilities, and extended care centers. Several of these facilities are located in a medical complex near downtown, and others are on individual sites elsewhere in the City. In addition to the facility-based employment, there are 1,111 physicians in private practice and many other residents employed in nursing homes, chiropractic clinics, dental offices, medical and dental laboratories, and other health services.

6.11.1 University Hospital

A 612-bed acute care facility located at the intersection of Walton Way and D'Antignac Street. University Hospital is part of the University Health Care System that employs approximately 3,000 people. Hospital services and facilities are numerous and include the W. G. Watson, M.D. Women's Center, the Georgia Heart Institute, University's Cancer Center, and the University Breast Health Center. University Home Health Services provides care to more than 3,000 patients in Georgia and South Carolina. University also operates two nursing facilities, Kentwood and Westwood. Besides the hospital, other facilities on the main campus include four professional office buildings, outpatient treatment facilities, three parking decks, and surface parking lots. Satellite medical centers are located on Peach Orchard Road in south Augusta and on Belair Road in Evans (Columbia County).

6.11.2 Veterans Affairs Medical Center

This two-division medical center, operated by the United States Department of Veterans Affairs, provides tertiary care in medicine, surgery, neurology, psychiatry, rehabilitation medicine, and spinal cord injury. With emphasis on providing the most appropriate care, out outpatient visits exceed 244,000 annually. In addition to health care, the Augusta VA is an active teaching and research facility that employs approximately 1,900 people.

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The Downtown Division is a 155-bed acute care facility located at the intersection of Fifteenth Street and Walton Way in Augusta. This division provides primary care, surgical, neurosciences and spinal cord injury treatment for veterans. A Women Veterans Clinic, Agent Orange/Gulf War Examinations, Former POW and other registry services are offered at this division.

The Uptown Division, located at the intersection of Wrightsboro Road and Freedom Way, has 165 beds. In addition to psychiatry and intermediate medicine beds, this division houses a 15-bed Blind Rehabilitation Center, a 60-bed Restorative Nursing Home Care Center and a 60-bed Domiciliary. Specialty programs include Post Traumatic Stress Disorder (PTSD), substance abuse, hospice and residential care.

6.11.3 St. Joseph Hospital

A 236-bed acute care facility located at the intersection of Winter Street and Wrightsboro Road in Augusta. The hospital offers a wide range of medical and surgical services including the only hospital-based, inpatient hospice unit in the state of Georgia. St. Joseph is a member of the Carondelet Health System and employs about 900 people.

6.11.4 Walton Rehabilitation Hospital

A 58-bed not-for-profit hospital located at the intersection of Thirteenth Street and Independence Drive in downtown Augusta. The hospital offers adult and pediatric inpatient and outpatient programs for persons recovering from stroke, head injuries, chronic pain and other disabling illnesses and injuries. Walton's continuum of care includes Walton Community Services offering residential and assisted living options to individuals with disabilities. Walton Options for Independent Living offers accessible housing, employment, assistive technology, alternative formats and advocacy, and Walton Foundation for Independence, which supports all of the above organizations. The Walton organizations employ approximately 300 people.

6.11.5 Doctors Hospital

Doctors Hospital is a 354-bed full-service facility and home to the nationally acclaimed Joseph M. Still Burn Center. The hospital is located on J. Dewey Gray Circle in west Augusta. Doctors Hospital was recently named one of the 100 Top Hospitals™, a national award for superior performance by hospitals with regard to high quality of care, efficient delivery of care and value to its patients and community. The hospital employs approximately 1,000 full-time and part-time staff.

6.11.6 Georgia Regional Hospital at Augusta (GRHA)

A 269-bed, licensed, state-supported facility located at 3405 Mike Padgett Highway in south Augusta. The facility serves consumers with disabilities including mental illnesses, substance abuse and mental retardation. The hospital is designated as an Emergency

Chapter 6– Community Facilities and Services

Receiving Facility for mental illness and drug abuse for Regions 3 and 12 which encompass a 23 county area in East Central Georgia. The facility is operated by the Georgia Department of Human Resources and employs approximately 500 people.

6.11.7 Gracewood State School and Hospital

A 500-bed, state-supported facility located off Tobacco Road in south Augusta. Gracewood provides residential and other services to mentally retarded clients from a 47-county service area. The hospital is operated by the Georgia Department of Human Resources and employs about 1,200 people.

6.11.8 Dwight David Eisenhower Army Medical Center

A 426-bed hospital located at Fort Gordon in south Augusta. The facility offers medical care to active duty military personnel, military retirees and family members, and is the regional tertiary-care referral center for all the armed forces in seven southeastern states, Puerto Rico, and the Caribbean. Eisenhower is operated by the U. S. Army and employs approximately 2,000 people.

6.11.9 Medical College of Georgia (MCG) and Hospitals

MCG is the health sciences school for the University System of Georgia. Founded in 1829 at a location in downtown Augusta, MCG currently occupies a campus in the area roughly bounded by the triangle formed by Harper Street, Fifteenth Street and R. A. Dent Blvd. A number of other MCG facilities are located nearby. In addition to teaching, research, clinics and housing facilities, the MCG campus includes the 544-bed Eugene Talmadge Memorial Hospital and Sydenstricker Wing, the 340,000 square-foot Ambulatory Care Center, and the five-story, 149-bed Children’s Medical Center. MCG also features the Georgia Radiation Therapy Center, a regional trauma center, and a regional perinatal center. Approximately 6,300 people are employed throughout the MCG complex.

Augusta-Richmond County, GA

Transit Routes



Geographic Information Systems

Date:
August 22, 2003
Prepared By:
Paul DeCamp

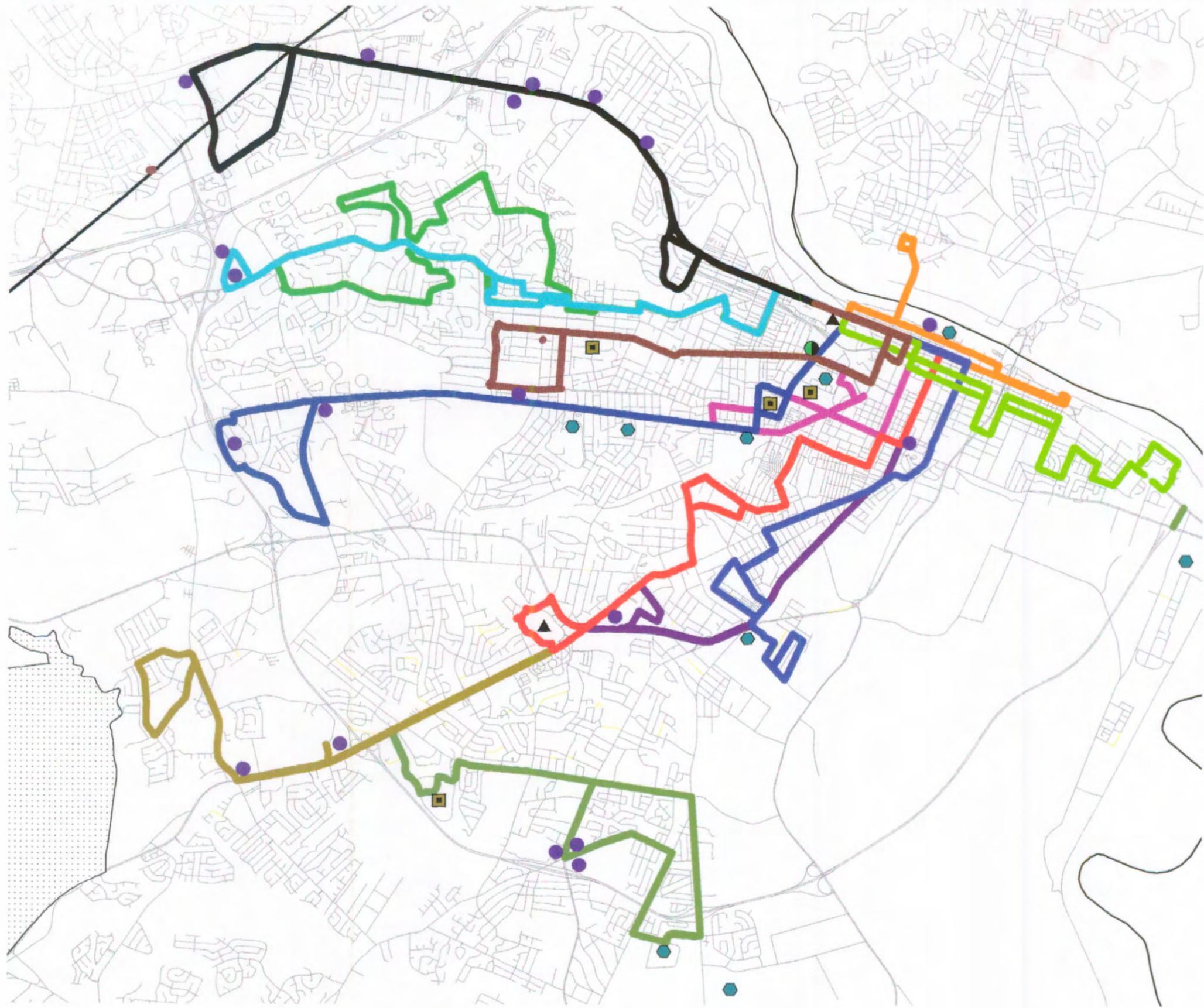
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- Transit Maintenance Facility
- Transit Transfer Facility
- Shopping / Entertainment
- Major Employers
- College / University
- # 1 - Walton Way
- # 3 - East Augusta
- # 4 - Turpin Hill
- # 5 - Washington Rd.
- # 6 - Regency Mall
- # 7 - Southgate Plaza
- # 10 - Sand Hills
- # 10A - Berckmans
- # 12 - Augusta Mall
- # 13 - Barton Chapel
- # 16 - Lumpkin Road
- # 15 - Medical Complex Shuttle
- # 18 - Downtown Shuttle



0.07 0 0.07 0.14 Miles



Augusta-Richmond County, GA

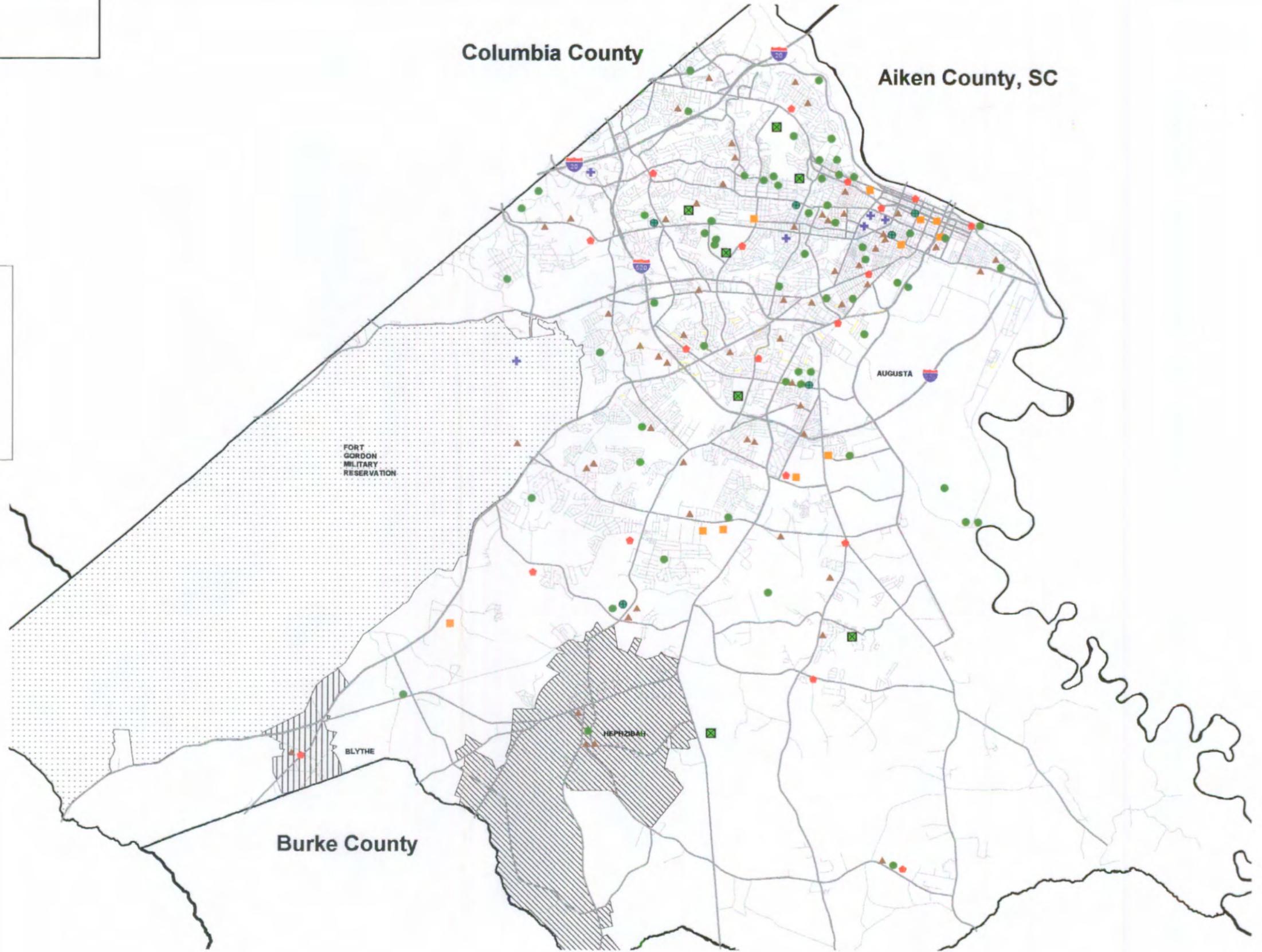
Community Facilities

 **Geographic Information Systems**

Date: June 20, 2003
Prepared By: Paul DeCamp

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-  Public Schools
-  Parks & Recreation Facilities
-  Government / Law Enforcement Facilities
-  Fire Stations
-  Libraries
-  Hospitals
-  Golf Courses
-  Roads



Augusta-Richmond County, GA

Public Water System



Geographic Information Systems

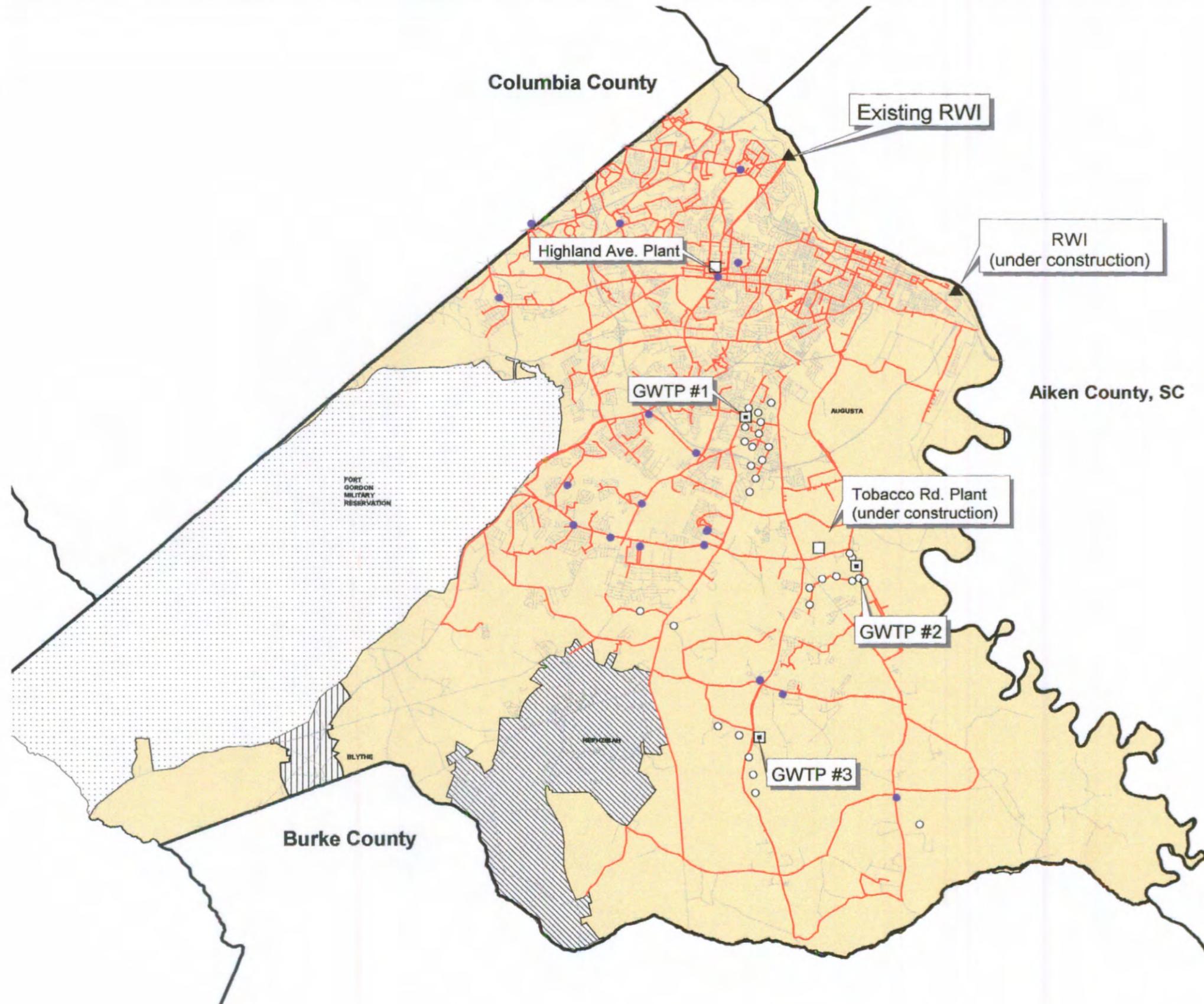
Date: June 27, 2003
Prepared By: Paul DeCamp

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LEGEND:

- Augusta Water Service Area
- Raw Water Intake
- Ground Water Treatment Plant
- Surface Water Treatment Plant
- Wells
- Water Storage Tank
- Major Water Lines



Columbia County

Existing RWI

RWI (under construction)

Highland Ave. Plant

GWTP #1

AUGUSTA

Aiken County, SC

Tobacco Rd. Plant (under construction)

GWTP #2

GWTP #3

Burke County

FORT GORDON MILITARY RESERVATION

BLYTHE

HOPWELL

Augusta-Richmond County, GA

Public Wastewater System



Geographic Information Systems

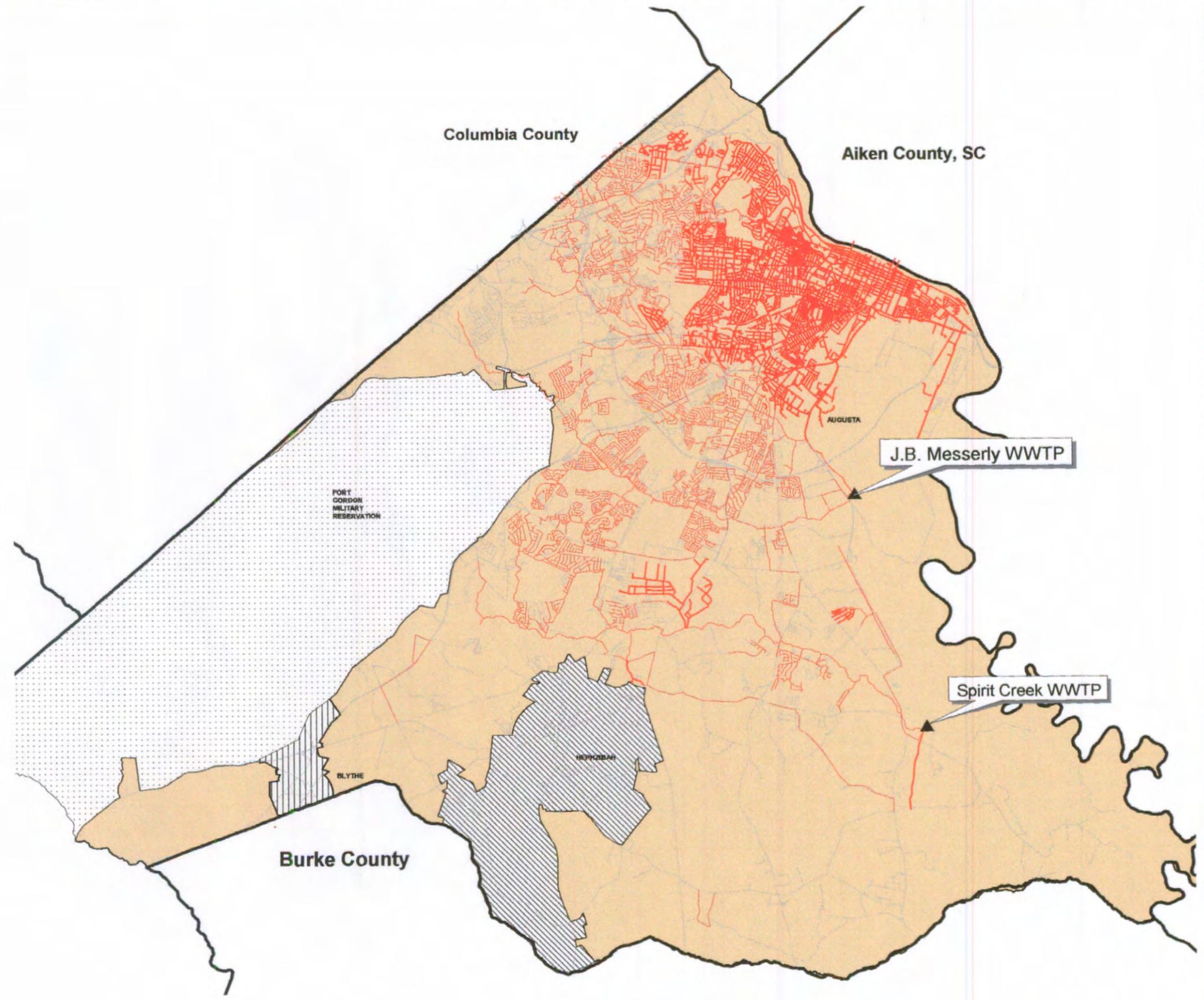
Date:
June 27, 2003
Prepared By:
Paul DeCamp

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LEGEND:

- Augusta Sewerage Service Area
- Wastewater Treatment Plant
- Sewerage Lines



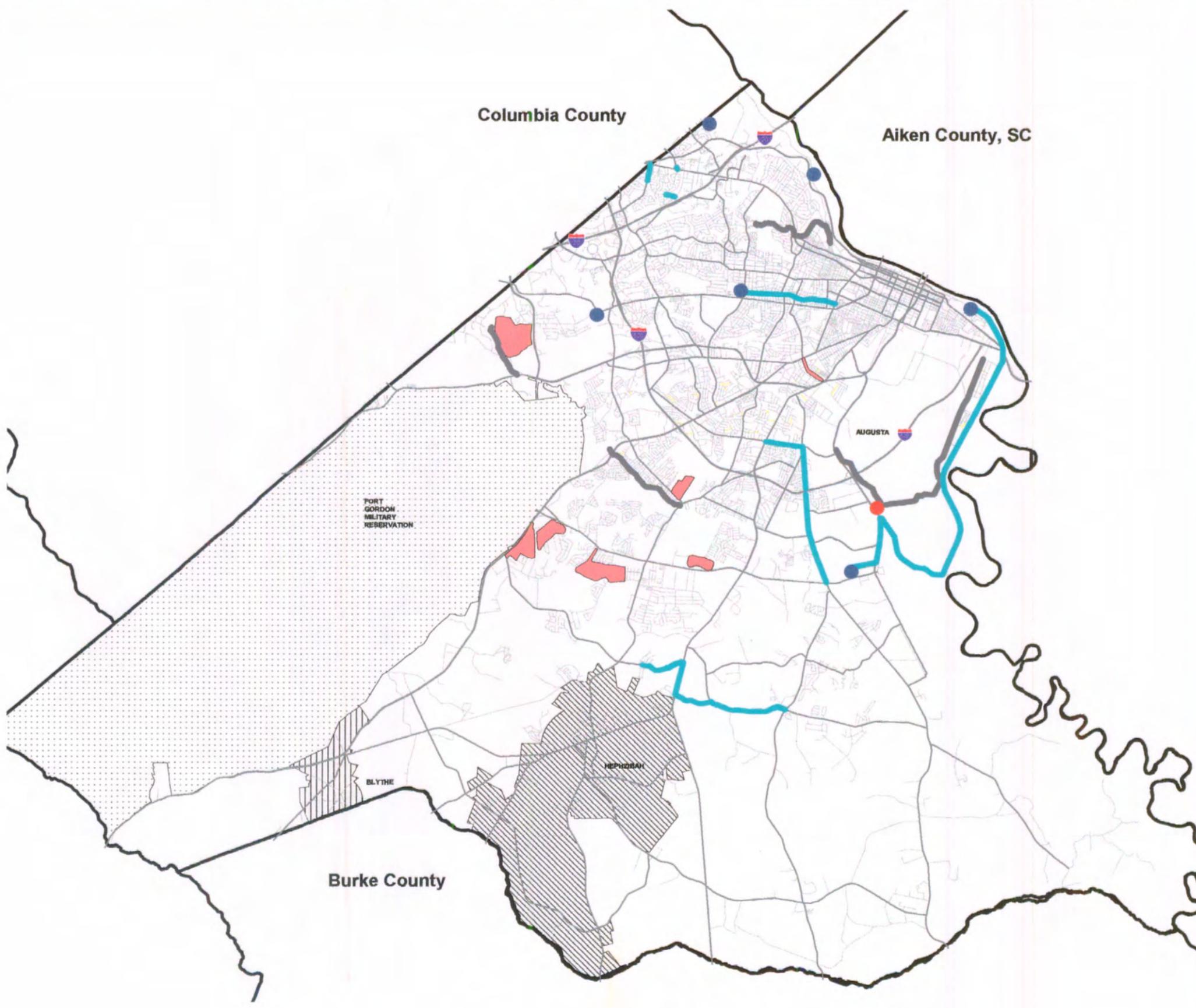
Augusta-Richmond County, GA

Water and Sewer Projects - 2002 Series Bonds

 **Geographic Information Systems**
Date: June 25, 2003
Prepared By: Paul DeCamp

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 **Water Facility Improvements**
 **New Water Lines**
 **Wastewater Plant Improvements**
 **New Trunk Sewer Lines**
 **Unsewered Pockets**
 **Roads**



Chapter 7 – Historic Resources

7. Historic Overview

The Creek Indians, whose lower trading paths passed through the area, first inhabited Augusta and Richmond County. The first Europeans to visit the area were members of an expedition led by the Spanish explorer Hernando DeSoto, around 1540. The area around Augusta was settled by English fur traders just prior to the city's founding. One of these early settlements, known as St. Paul's Parish, was settled mainly by people from Virginia and North Carolina.

In 1736, British General James Edward Oglethorpe had surveyor Noble Jones lay out the first forty lots for what would become Augusta. In taking this action, Oglethorpe was motivated in part by a desire to control the fur trade, which was already flourishing at Fort Moore on the South Carolina side of the Savannah River. Named in honor of Princess Augusta, wife of the Prince of the Wales, the city developed as a trade center (fur, tobacco, cotton) and gateway for new settlers heading west to other parts of Georgia.

Richmond County, one of the eight original counties in Georgia, was formed from St. Paul's Parish in 1777. The county was named in honor of the Duke of Richmond, Charles Lenox, a friend of some of the settlers in America. Columbia and McDuffie Counties were later formed from parts of Richmond County. During the American Revolution, the British used Augusta as a communications center. When Light Horse Harry Lee captured Augusta in 1781, the British had to relinquish their claim to most of Georgia. Augusta then served as the capital of Georgia from 1785 to 1795.

Tobacco was the dominant cash crop in the early years of the county. The invention of the cotton gin made cotton a more profitable crop than tobacco. Eli Whitney, the inventor of the cotton gin, built one of his early prototypes on Rocky Creek in the county. By 1820, the Augusta area was the terminus for riverboats, barges, wagon trains, and traders carrying staples and produce to be shipped to overseas markets.

During the Ante-Bellum period, area residents began to realize the importance of processing and manufacturing goods made from cotton and other crops. In 1834, John Schley located a factory, called Belleville, on Butler Creek. In the same year, William Schley, George Schley, and Daniel Cook built Richmond Factory on Spirit Creek. In 1845, the Augusta Canal was constructed through the western part of the city to handle barge traffic and provide a power source for industry. By 1850 two flourmills and one textile mill were located on the canal. The development of the steam locomotive engine fostered the creation of the Georgia Railroad Company in 1833 and the construction of a railroad line from Augusta to Athens. Additional railroad lines were built in the following years.

The canal, the mills and other industries in the Augusta area were important to the Confederate war effort. The Confederate Powderworks, said to be the largest munitions factory in the world, stretched for some two miles along the canal bank. An ornate chimney stands as the sole remnant of the powderworks complex. General William T.

Chapter 7 – Historic Resources

Sherman's "March to the Sea" in November 1864 avoided a well-fortified Augusta, thereby sparing the area serious damage.

Following the war, the canal was enlarged and several new textile mills were constructed on its banks. In addition to the mills, brick factories, lumber mills, railroad shops and related businesses were started in Augusta. Several new banks, warehouses and wharves also were constructed in the postwar years. The culmination of this period of industrial expansion was the designation of Augusta as the "Lowell of the South", and the presentation of an industrial exposition in the city in 1888.

While Augusta developed as a manufacturing center following the war, the rest of Richmond County remained agrarian. There were several communities within the county - Summerville, Bath, Blythe, Mt. Enon, Gracewood, and Hephzibah - but none approached Augusta in size or population. Incorporated in 1861, Summerville developed as a winter resort area for wealthy northerners. Many local residents also had summer homes in the community. Summerville became a part of the city of Augusta in 1911. Bath was settled around 1800 by Presbyterians from neighboring Burke County. At about the same time, Mt. Enon was settled as a Baptist village. The first Baptist College in the state was established here in 1807. The Gracewood community developed with the construction of the Augusta Southern Railroad. It was in Gracewood, beginning in 1869, that the Richmond Camp meetings were held for over half a century.

Historically, Augusta had developed from the banks of the Savannah River outward to the south and west. This same pattern of development continued at the turn of the century. In 1885 the trustees of Paine Institute secured the Douglas estate in Woodlawn for the present site of Paine College. With the construction of the Bon Air Hotel and the Partridge Inn, Augusta became a winter resort for corporate executives and heads of state. New residential development took place in various locations around town. The medical complex, located southwest of Georgia moved to the former site of the Orphan Asylum in 1913.

Several military camps were located in the Augusta area during this period, thereby continuing the community's long-time support for the military. In 1898, Camp Dyer was established in Turpin Hill and Camp McKenzie was developed at Wheelless Station. Camp Wheeler was located near Lake Aumond in 1914, and Camp Hancock was constructed in the vicinity of present-day Daniel Field in 1917. In 1928, Camp Lenwood was established on the site of what is now the Lenwood (Uptown) Veterans Administration Hospital.

Following the Great Depression, Augusta and Richmond County played an important role in World War II. Army personnel and equipment were assigned to Daniel Field. In 1942, the Forrest-Ricker Hotel was converted into an army hospital, and Camp (later Fort) Gordon was established in south Richmond County. An airfield for the training of army pilots was constructed on the site of what is now Augusta Regional Airport at Bush Field. The Augusta Arsenal - now the site of Augusta State University - served as a

Chapter 7 – Historic Resources

prisoner-of-war camp and produced bombsights and other lens instruments for the war effort.

Several postwar developments served to expand Augusta and Richmond County's role as the center of a growing metropolitan area. The construction of Clarks Hill Dam and Reservoir on the Savannah River (c. 1945-50), the development of the Savannah River Plant (now Savannah River Site) in Aiken and Barnwell Counties, South Carolina (c. 1951-53), and the establishment of Fort Gordon as a permanent military facility (c. 1956) contributed to population growth and economic development. In addition, the medical complex continued to develop near downtown Augusta. The complex now includes the Medical College of Georgia, Eugene Talmadge Memorial Hospital (c. 1956), MCG Sydenstricker Wing (c. 1979), University Hospital (c. 1970), Veterans Administration Hospital (c. 1980), and Walton Rehabilitation Hospital (c. 1989-90). Transportation improvements and the development of industrial parks and sites resulted in new manufacturing facilities in Richmond County. The county is now home to a variety of manufacturing facilities producing both durable and non-durable goods. The major categories of products include food, textiles, apparel, lumber, paper, printing, transportation equipment, chemicals, and stone, clay and glass products.

7.1 Inventory of Historic Resources

There are currently nine (9) National Register Historic Districts in Augusta, encompassing approximately 5,800 properties. Twenty-nine (29) properties are listed individually on the National Register. These districts and properties represent many aspects of Augusta's history and include the central business district, industrial facilities, urban neighborhoods, institutional buildings, and rural resources. They reflect the significant contributions made by statesmen, businessmen, religious leaders, ethnic groups, racial minorities, and ordinary citizens to the history and development of the community. Collectively the districts are significant in such areas as architecture, commerce, community planning, education, engineering, industry, landscape architecture, military, politics/government, religion, and transportation. Table HR-1 provides summary information on the National Register Historic Districts in Augusta.

Three areas - Downtown, Bethlehem, and Summerville have also been designated as local historic districts under the city's historic preservation ordinance. The ordinance specifies that the Historic Preservation Commission review work affecting the exterior appearance of any property in a local historic district prior to a building permit being issued. The objective of the design review requirement is to protect the integrity of designated historic properties and ensure that new development is compatible with the district's historic character. In addition to the districts, six individual properties have been designated as historic under the local ordinance. Table HR-2 lists the districts and properties designated under the local ordinance.

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Table HR-1 National Register Historic Districts Augusta-Richmond County		
Name	Number of Resources/ Properties (Approximate)	Dates(s) Listed in National Register
Augusta Canal	15	May 27, 1971; May 18, 1976; and Dec. 22, 1977 (Nat. Landmark)
Pinched Gut	700	March 6, 1980
Broad Street*	250	April 28, 1980
Summerville	2,000	May 22, 1980
Greene Street*	50	Dec. 3, 1980
Laney-Walker North	500	September 5, 1985
Harrisburg-West End	1,187	June 7, 1990
Sand Hills	335	July 9, 1997
Bethlehem	754	December 1, 1997
*Note: A National Register nomination is pending that will combine the Broad Street and Greene Street districts, along with other historic resources, into a single district.		

There are many historic resources in Augusta despite the changes the community has undergone over the years. Historic Augusta, Inc. maintains a file containing survey cards on approximately 2,000 historic buildings in the "former" city of Augusta. The survey cards represent work completed during the 1960s and 1970s by volunteers from the Junior League of Augusta, historic preservation consultants, and staff of the Augusta-Richmond County Planning Commission. The survey formed the basis for several National Register nominations during the 1970s. The number of documented resources increased dramatically during the 1980s and 1990s as additional surveys were completed and more properties were listed in the National Register. African-American resources were surveyed and the work resulted in the listing of three minority neighborhoods - Laney-Walker, Sand Hills and Bethlehem - in the National Register.

A separate survey completed by a historic preservation consultant in 1989 identified another 277 historic properties in unincorporated Richmond County, Hephzibah and

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Blythe. Of this total 49 are located in Hephzibah, 31 in Blythe, and the remainder are scattered throughout the county (now part of the city). Building examples survive from every period of the county's history and reflect such architectural styles as Federal, Greek Revival, Gothic Revival, Queen Anne, Colonial Revival, Neo-Classical, Bungalow, Craftsman, Tudor and Art Moderne. The majority of the structures are houses dating from the late nineteenth and early twentieth centuries. The Augusta-Richmond County Historic Preservation Plan (1991) contains more detailed information on historic resource surveys completed on Augusta and Richmond County.

Table HR-2 Local Historic Districts and Properties, 2002* Augusta-Richmond County		
Name	Number of Properties	Date Designated
Local Historic Districts		
Bethlehem District	1,260	April 5, 1993
Downtown District	1,300	June 6, 1994
Summerville District	1,435	Dec. 19, 1994; Oct. 5, 1999
Local Historic Properties		
Christ Episcopal Church, 1902 Greene St	1	April 4, 1994
Trinity C.M.E. Church, 818 Eighth St,	1	Oct. 18, 1993
Bath Presbyterian Church, Bath-Edie Road	1	Dec. 15, 1992
Liberty United Methodist Church, Liberty Church Rd	1	Dec. 18, 1992
Seclusaval-Windsor Spring, Windsor Spring Rd	1	Dec. 15, 1992
Mattox Property, Windsor Spring Rd	1	Sept. 5, 1995
*Note - All of the local designations were completed prior to consolidation and re-adopted by the Augusta Commission following consolidation.		

Archaeological resources are located on sites throughout Richmond County. Many of these sites have been discovered as part of the environmental review process required for federally funded or licensed projects. Some sites contain either pre-historic or historic artifacts. Sites along and near the Savannah River floodplains have yielded the most information.

Chapter 7 – Historic Resources

7.2 Historic Preservation Activities

Historic preservation in Augusta is marked by a wide variety of activities. From preparation of National Register nominations, to rehabilitation of historic buildings, to participation in historic preservation programs, individuals and organizations are interested in preserving the past and at the same time make it a part of the city's future. Beginning with the first historic resource surveys in the 1930s and the preservation of some notable structures in the 1940s, the local historic preservation movement has grown to the point where it is now an integral part of neighborhood revitalization, economic development and tourism. What follows is a summary of the historic preservation activities in recent years.

7.2.1 Survey and Nomination

Historic resource surveys document the age, condition and important characteristics of historic structures and sites, and provide a context or picture of how a community developed over time. As noted in the previous section, historic resource surveys have been completed on a number of occasions in the past with the help of many individuals and organizations. Surveys do need to be updated periodically in order to document changes in the condition or status of resources.

Nomination and listing of individual properties or districts in the National Register of Historic Places, Georgia Register of Historic Places, or as local historic property or district is a related activity that has generated much involvement over the years. Property owners, non-profit organizations, neighborhood associations, local government and many others have supported property and district nominations over the years. Listing in the National Register and the Georgia Register brings recognition to properties and makes owner/investors eligible to apply for tax credits and local property tax abatement when substantial rehabilitation work is completed on such properties. National Register listing also affords properties a measure of protection when projects are undertaken that involve federal loans, grants, licenses or permits. Designation under the city's historic preservation ordinance triggers a local design review process whenever changes to the exterior of a historic property are proposed.

7.2.2 Property Restoration

Restoration is the process of returning a historic property to its original state (i.e. how it appeared at the time of its construction) or to its condition at some known point in its history. This is different from rehabilitation, which involves fixing up a property for a more contemporary use. Historic preservation in Augusta first focused on the restoration of notable structures. The Daughters of the American Revolution purchased the George Walton House (Meadow Garden) in 1895 to preserve the residence of one of the signers of the Declaration of Independence. Meadow Garden remains in use today as a house museum.

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In 1947, the Richmond County Historical Society was founded in order to help restore what is now known as the Ezekiel Harris House. The city purchased the property in 1984 and subsequently made improvements to the house, caretaker's cottage and grounds of the property. Historic Augusta, Inc. now manages the house museum on behalf of the city. In 1987, the city purchased the Old Government House (c. 1801), rehabilitated the property, and makes it available for both public and private functions. In the spring of 1991 the city purchased the Boyhood Home of Woodrow Wilson and leased it for use by Historic Augusta. The property was restored with a combination of public and private funds and re-opened in 2001 as a house museum. Delta House, Inc. purchased the home of noted black educator Lucy Craft Laney. During the early 1990s the house was restored and a community meeting room was constructed on the property. Today, the Lucy C. Laney House and Museum is home to artifacts related to Ms. Laney's life, and hosts computer classes for children, art exhibits and community meetings.

7.2.3 Property Rehabilitation and Adaptive Reuse

Property rehabilitation and reuse is another integral part of historic preservation in Augusta. Every day property owners and investors rehabilitate historic structures for use as homes, apartments, offices, and retail establishments. Most such projects are privately financed, but some owners take advantage of rehabilitation tax credit and tax abatement programs. For a number of years the city used Community Development Block Grant (CDBG) funds to finance a façade rehabilitation program. Over the last 20 years, façade grants have helped finance the rehabilitation of approximately 150 historic commercial and residential structures. In recent years non-profit organizations and local authorities have started taking a more active role in the rehabilitation and reuse of historic properties. Non-profits such as the Augusta Neighborhood Improvement Corporation are rehabilitating neglected structures for use as affordable housing. The Augusta Canal Authority has several projects either planned or underway that will result in the rehabilitation and adaptive reuse of several structures in the Augusta Canal National Heritage Area. These resources will receive much needed improvements and have a new lease on life as tourist attractions.

7.2.4 Local Historic Preservation Programs

Organizations such as the Richmond County Historical Society and Historic Augusta were at the forefront of the local preservation movement. The local governments were supportive of these organizations and, as time went by, recognized that they themselves could play a more direct role in historic preservation. In 1970, the Georgia General Assembly passed a constitutional amendment authorizing the city of Augusta to establish historic preservation zones in downtown Augusta. In the following year, the city council adopted a historic preservation zone ordinance. The ordinance made it possible to overlay-historic preservation zoning on the base zoning classification for qualifying properties in downtown Augusta. Once historic preservation zoning was established, any material change in the exterior appearance of a designated property was subject to review by a five-member board of review. This local ordinance stayed in place for over two

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decades, but changes were happening at the state level that would alter the way local historic preservation programs were implemented across the state.

In 1980, the Georgia General Assembly enacted the "Georgia Historic Preservation Act". This law established a uniform procedure for use by cities and counties in the state in enacting local historic preservation ordinance. Among other things the state law established the powers for a local historic preservation commission, the procedure for designation of local historic properties and districts, and the process for carrying out design review requirements. A couple of years after the state law passed, the State Historic Preservation Office (SHPO) published a model historic preservation ordinance for use by local governments.

Augusta could have continued with its original historic preservation zone ordinance, as pre-existing local ordinances were deemed valid under a provision in the 1980 state law. However, by the late 1980s pressure was building to update the local ordinance and bring it in line with state law. In 1990, city council appointed an ad hoc committee to review the entire matter and make a recommendation regarding the form and content of the local historic preservation ordinance. The committee recommended that city council adopt a new ordinance very similar to the SHPO model ordinance. The city council adopted the ordinance in January 1992.

About the same time, the Richmond County Commission was taking steps to become more directly involved in historic preservation. In May 1988, the county commission established nine-member historic sites' committee to identify properties within the then unincorporated area of Richmond County that would be likely candidates for listing in the National Register. Subsequently, Historic Augusta was awarded a contract to complete a survey of historic resources in unincorporated Richmond County, Hephzibah and Blythe. The county commission adopted a historic preservation ordinance of its own on March 20, 1990, and appointed the five-member historic preservation commission on October 2, 1990. The county's ordinance was also very similar to the model ordinance. In 1991, the city and county jointly sponsored the development of the community's first historic preservation plan.

Today, the consolidated government's Historic Preservation Commission continues the work started by its predecessors. The 12-member commission meets monthly to consider applications for Certificate of Appropriateness, review ongoing preservation projects, and discuss other matters of interest. The Commission has taken steps to raise community awareness about historic preservation and works cooperatively with others to implement preservation planning projects.

7.2.5 Participation in Preservation Programs

Augustans have long been involved in a variety of historic preservation programs. The National Register of Historic Places is probably the most well known of the Federal preservation programs. Participation in the program has resulted in the listing of 9 districts and 29 individual properties in the National Register. Additional districts have

Chapter 7 – Historic Resources

been marked as potentially eligible for listing. Since the late 1970s, many local property owners and investors have taken advantage of the Federal Historic Rehabilitation Tax Credit program. This program enables owner/investors to claim a tax credit for substantial rehabilitation of income-producing historic properties. Property owners have also participated in a state-level program that allows some property tax relief for historic properties that are rehabilitated.

Because Augusta routinely receives Federal grant funds for expenditure on community development and transportation projects, it is subject to the requirements of Section 106 of the National Historic Preservation Act. Section 106 mandates that the State Historic Preservation Office and the Advisory Council on Historic Preservation be afforded an opportunity to review and comment on the impact of federally-funded projects on properties listed in or eligible for listing in the National Register. The goal of the review process is to avoid or mitigate any adverse impacts on historic resources. Participation in this program helps avoid adverse impacts on some historic properties, ensures that new construction is compatible with existing resources, and results in archive-quality documentation for historic properties demolished as a part of larger projects.

The community has participated in the Certified Local Government (CLG) Program for approximately 16 years. This federal program recognizes communities that establish historic preservation ordinances and programs that meet certain standards. As a CLG, Augusta receives technical assistance on preservation issues, is part of a nationwide network of local governments involved in preservation, and is eligible to apply for a special setaside of preservation planning grant funds. The former city of Augusta was designated a CLG in May 1987, and the former county in March 1991. The consolidated government achieved the designation in 1997.

The community has also taken advantage of historic preservation grant programs. Over the last 15 years, grant awards under the U. S. Department of the Interior's Historic Preservation Fund (HPF) Program have funded a variety of preservation planning projects. Examples include historic resource surveys, a draft local historic preservation ordinance, the Augusta-Richmond County Historic Preservation Plan, National Register nominations, and design guidelines for two of the three local historic districts (Bethlehem and Downtown). The Summerville Neighborhood Association financed the development of the Summerville Design Guidelines, and a HPF grant funded publication of the same. Property owners and non-profit organizations have used the Heritage Grant Program to help finance the stabilization and rehabilitation of selected historic properties in the city.

7.2.6 Historic Documents and Records

People and organizations have long taken action to record historic events and make sure that the rich and varied of Augusta is maintained. Over the years monuments and markers have been erected throughout the community to commemorate notable statesmen, events (e.g. wars, natural disasters), educators, community leaders, religious leaders, and the location of historic events and structures. A number of organizations and institutions are responsible for the maintenance of historic documents, artifacts and

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records. These include the Augusta Museum of History, Richmond County Historical Society, Historic Augusta, Inc., Augusta Genealogical Society, and libraries at Augusta State University, Paine College and the East Central Georgia Regional Library. In addition, a number of local ethnic organizations and clubs work hard to preserve the rich and varied cultural history of Augusta and Richmond County. Ethnic cultural and arts festivals provide an opportunity for residents and visitors to learn more about local history and keep important traditions alive.

7.3 Assessment of Historic Preservation Needs

The community has made great strides in bringing recognition to Augusta's historic resources, restoring and rehabilitating them, and making them a part of daily life. The Augusta-Richmond County Historic Preservation Plan (1991) identified the following major needs in local historic preservation:

1. Establish procedures for ongoing identification, nomination and protection of historic resources.
2. Develop strategies for preserving and enhancing historic residential neighborhoods.
3. Develop strategies for revitalizing and preserving historic business districts, including neighborhood and small town business districts.
4. Develop strategies for preserving isolated rural historic resources.
5. Enhance monetary incentives for preserving historic resources.
6. Improve and enhance environmental design, including landscaping and aesthetic improvements.
7. Develop an ongoing heritage education program for children and adults.

Programs and projects are in place to deal with many of these needs, but some have not been addressed. There is a need to update and consolidate the local historic resource surveys that are 20-30 years old. Many resources continue to be threatened due to neglect or insensitive rehabilitation. Strategies are needed to encourage ordinary maintenance and repair or the mothballing of vacant buildings. There is a need to continue to stress the economic benefits of historic preservation and how it contributes to education and neighborhood revitalization. Finally, the local historic preservation plan requires updating to better reflect the changes in Augusta's preservation activities and establish a comprehensive set of goals for the future.

Augusta-Richmond County, GA

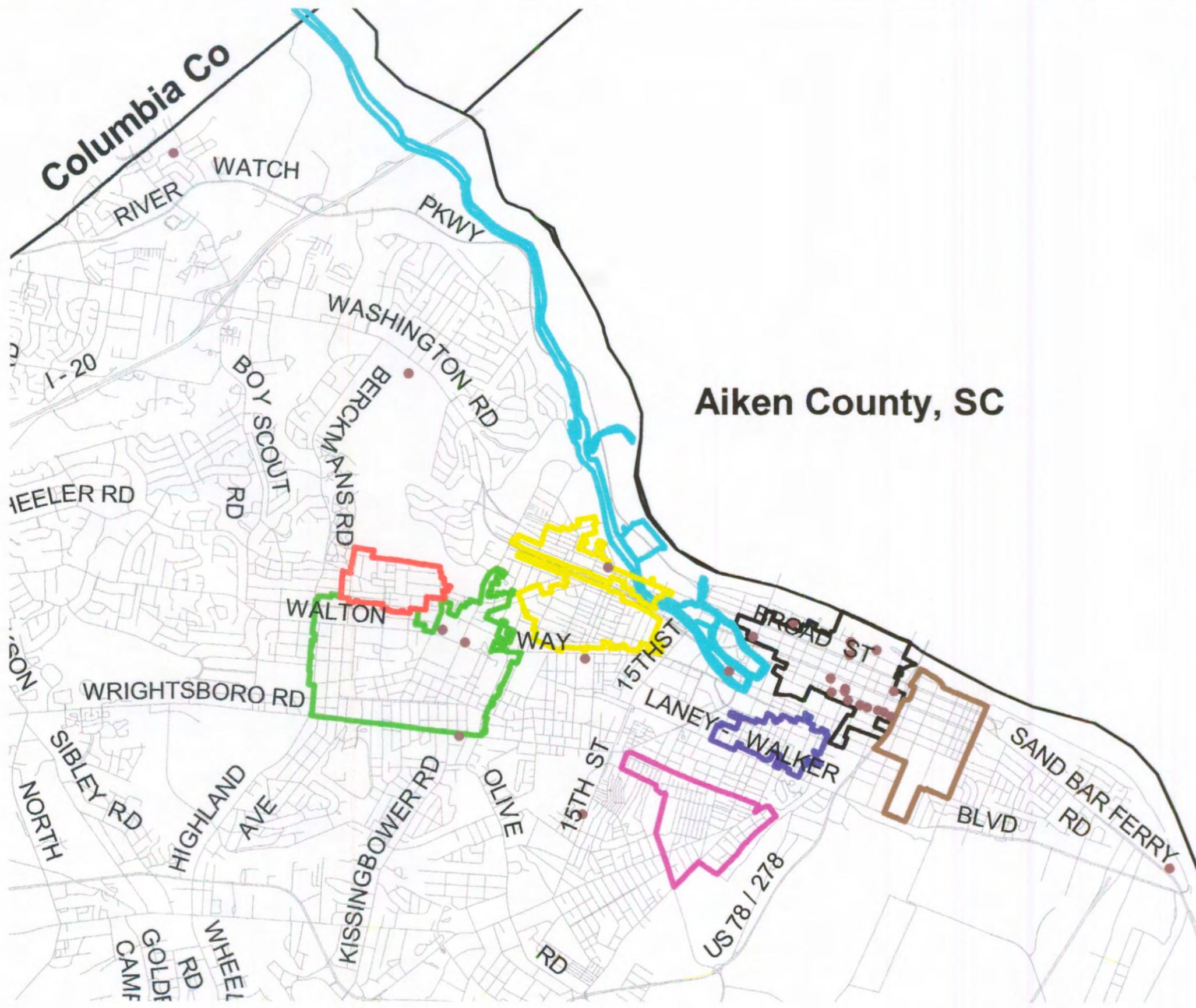
National Register Districts & Properties


Geographic Information Systems
 Date: August 26, 2003
 Prepared By: Paul DeCamp

August, GA Disclaimer
 The data represented on this map has been compiled by the best methods available. Accuracy is contingent upon the source information as compiled by various agencies and departments both internal and external to the jurisdictional government of Augusta, GA. Augusta, GA and the mapmaker disclaim any liability for any errors or omissions on this map. It is strictly forbidden to make any reproduction of this map for any reason without the written consent of the Augusta-Richmond County Council.

- Historic Property
- Laney Walker North - 1985
- Bethlehem - 1997
- Sand Hills - 1997
- Pinch Gut - 1980
- Harrisburg - 1990
- Summerville - 1980
- Augusta Canal N. H. Landmark- 1977
- Downtown - 2003

Notes:
 Downtown District Pending
 Individual properties listed in National Register and not shown are Windsor Spring and Liberty United Methodist Church



Chapter 8 – Natural Resources & Greenspace

8. Introduction

Physical characteristics and natural resources have played an important role in the development of Augusta and Richmond County. Crops and timber have been produced from local soils for many years. Fine kaolin and the raw materials for brick, tile and concrete products are mined in the county. Water supplies from both deep wells and surface sources have contributed to farming, domestic use, and commerce. The land and water also combine to support a variety of plant and animal life.

As urban land use continues to spread throughout the city, interest is growing in striking a balance between protecting natural resources and accommodating new urban development. This chapter includes an inventory and assessment of local natural resources and outlines the steps being taken to protect them. These resources include floodplains, soils, aquifers, water recharge areas, watersheds, wetlands, prime agricultural and forestlands, and scenic views and sites. Historic and archaeological resources are addressed in a separate chapter. Included is an overview of the programs, policies, and development regulations used to manage these natural resources in accordance with the desires of the public and to implement the Comprehensive Plan.

8.1 Richmond County's Natural Environment

Richmond County is located in east central Georgia next to the Savannah River. The Savannah River separates Georgia from the neighboring state of South Carolina. Adjoining counties include Columbia and McDuffie to the north and west and Burke and Jefferson to the south. Richmond County occupies a land area of 207,386 acres, or 324.04 square miles, plus 2,823 acres (4.41 sq. mi.) of water area. Table N-1 shows that Augusta accounts for approximately 93% of the total acreage in the county. Richmond County straddles the "Fall Line", a geologic boundary following the Appalachian Mountain range from Alabama to New York. In Georgia and South Carolina the Fall Line separates the Piedmont from the Coastal Plain. The Savannah River and its tributaries drain most of the county.

8.1.1 Climate

Richmond County has a relatively mild climate characterized by long hot summers and short cool winters. Prevailing winds are from the southeast and southwest, bringing in moist tropical air from the Atlantic Ocean and the Gulf of Mexico. In summer the average temperature is 79 degrees, and the average daily high exceeds 90 degrees F in June, July and August. In winter the average temperature is 47 degrees F, and the average daily minimum temperature is 35 degrees. Total annual precipitation is 46 inches, with 23 inches falling in April through September. Annual precipitation amounts have been below normal for the last 45 years. The average relative humidity in mid afternoon is about 50 percent. Humidity is higher at night, and the average at dawn is about 90 percent.

**Table N-1
Land and Water Area, 2000
Richmond County, GA**

	Area in Square Miles			Persons per Square Mile
	Land	Water	Total	
Richmond County	324.04	4.41	328.45	616.5
Augusta	302.13	4.35	306.48	646.0
Hephzibah	19.36	0.06	19.42	200.4
Blythe	2.54	0.06	2.55	280.4

SOURCE: U.S. Bureau of the Census, Census 2000 Summary File 1

8.1.2 Topography

Richmond County is situated in three major land resource areas: the Southern Piedmont, the Carolina and Georgia Sand Hills, and the Southern Coastal Plain. The Southern Piedmont covers the extreme northern part of the county and consists of broad to narrow ridgetops and long irregular hillsides bisected by numerous small winding drainageways. The Carolina and Georgia Sand Hills are located in the northern and western parts of the county and separate the Southern Piedmont from the Southern Coastal Plain. The Southern Coastal Plain covers the southern and southeastern parts of the county and is characterized by broad ridgetops and hillsides extending to drainageways. Nearly level floodplains of the Savannah River are located in the eastern and northern parts of the county and on the narrower basins of its tributaries.

Elevations range between 100 and 140 feet along the Savannah River and 500 feet or more on high ridges on Fort Gordon. More than half of the total land area has a slope of less than 5%, and more than 85% of the land has less than 10% slope. Less than 2% of the land area has slope greater than 15%. The steepest slopes are found along Butler, Spirit and Little Spirit Creeks. The majority of areas with steep slopes are either within floodplains, which are regulated by local ordinance, or are located on Fort Gordon

8.1.3 Soils

Soils in Richmond County are grouped into eight (8) associations. A soil association is a landscape that has a distinctive proportional pattern of soils. A soil association usually consists of one or more major soils, for which it is named, and at least one minor soil. Soils in one association may also occur in another, but in a different pattern.

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Soils on ridgetops and hillsides of the Southern Piedmont: well-drained soils on very gently sloping and sloping ridgetops and hillsides. Slopes range from 2 to 15 percent. The soils have a loamy surface layer and predominantly firm clayey or loamy subsoil.

- Georgville-Wedowee - Very gently sloping to sloping, well drained soils that have a loamy surface layer and predominantly firm clayey or loamy subsoil. Moderate permeability limits the use of these soils for septic tanks absorption fields. These soils account for 3 percent of all soils and are found in the northeastern part of the county. The areas are a combination of woods, residential subdivisions, shopping centers and industry.

Soils on ridgetops and hillsides of the Sand Hills: well-drained and excessively drained soils on very gently sloping and gently sloping ridgetops and hillsides. Slopes range from 1 to 10 percent. The soils have a thick sandy surface layer and friable loamy subsoil and others that are sandy throughout.

- Troup -Lakeland - Very gently sloping and gently sloping, well drained soils that have a thick sandy surface layer and friable loamy subsoil and excessively drained soils that are loose and sandy throughout. These soils are well suited to most urban uses. These soils account for 27 percent of all soils and are scattered throughout the central and southern parts of the county. The areas are a combination of urban land uses and woodlands.
- Troup - Vaucluse - Ailey - Very gently sloping and gently sloping, well drained soils that have a predominantly sandy surface layer and friable or mostly firm and brittle loamy subsoil. These soils are well suited to most urban uses. These soils account for 17 percent of all soils and are scattered throughout the northern part of the county. The areas are a combination of urban land uses and woodlands.

Soils on ridgetops and hillsides of the Southern Coast Plain: well-drained soils on nearly level to gently sloping ridgetops and hillsides. Slopes range from 0 to 8 percent. The soils have a predominantly sandy surface layer and friable loamy subsoil.

- Orangeburg-Lucy-Dothan - Nearly level to gently sloping, well drained soils that have a predominantly sandy surface layer and friable loamy subsoil. These soils account for about 13 percent of all soils and are found in the south central part of the county. Areas are used mainly for farming and woodlands.

Soils on hillsides of the Sand Hills and Southern Coastal Plain: well-drained soils on strongly sloping and moderately steep hillsides. Slopes range from 8 to 17 percent. The soils have a sandy surface layer and friable or mostly firm and brittle loamy subsoil.

- Troup-Vaucluse-Ailey - Strongly sloping and moderately steep, well drained soils that have a sandy surface layer and friable or most firm and brittle subsoil. These soils are poorly suited for farming and only moderately suited for wood crops and

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must urban uses. These soils account for about 14 percent of all soils and are located across the southern part of the county.

Soils on/near Floodplains: poorly drained soils that are nearly level. Soils have a loamy surface layer and friable loamy or firm clayey subsoil.

- Riverview-Chewacla-Chastain - Nearly level, well drained and somewhat poorly drained soils that are friable throughout and poorly drained soils that have a loamy surface layer and firm clayey subsoil. These soils are located in the floodplains of the Savannah River in the eastern part of the county. They comprise about 11 percent of the county. Primarily wooded, this association does have areas that are used for cultivated crops or pasture. There is considerable industrial and residential development in areas protected by the Savannah River levee. Clay has been mined for the manufacture of bricks, and the excavated areas are filled with water.
- Bibb-Osier - Nearly level, poorly drained, predominantly loamy soils that are friable and sandy soils that are loose. These soils are located on floodplains of the major tributaries of the Savannah River and account for 9 percent of all soils. Major tributaries include the following creeks: Rae's, Rocky, Butler, Spirit, Little Spirit and McBean. Primarily wooded, this association is poorly suited for farming and urban uses.
- Dogue-Goldsboro-Roanoke - Nearly level, moderately well drained and poorly drained soils that have a loamy surface layer and friable loamy or firm clayey subsoil. These soils are located on stream terraces and low-lying uplands adjacent to flood plains. They comprise about 6 percent of all soils and are found primarily in the northeastern part of the county. This association includes a mix of urban development, industry, wooded areas, and swampland.

8.1.4 Agricultural and Forest Land

The Georgia County Guide classified 14,775 acres as non-forestry farmland in 1997 or 7.1 % of the land in Richmond County. In 1997 there were 106 farms in the county. The average farm size was 139 acres and the median size was 50 acres. Crops include corn, soybeans and peanuts. Commodities include forestry, dairy, beef cows and ornamental horticulture. The county ranked 94th within the state for acres of harvested cropland. The 7,189 acres in harvested cropland is up 15.9% from the 5,565 acres reported in 1992.

Currently, 121,200 acres in Richmond County are forested, or 58.4% of the entire county. Of this total 56,000 acres are owned by private individuals, 39,000 acres by the Federal government (Fort Gordon), and 17,000 acres by the forest industry. The breakdown of major forest groups is Loblolly-short leaf pine - 32,800 acres, Long-leaf slash pine - 26,100 acres, and Oak-pine - 24,200 acres. Much of the forested land is undeveloped at the present time. Outside of Fort Gordon, forestlands in the county are subject to more intense development. The forestland on Fort Gordon is less likely to be converted to other uses.

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As Richmond County continues to grow, the remaining farmland and forestland will come under more development pressure. A number of local development regulations help to minimize the impact of proposed land use changes. These include zoning restrictions on allowable densities, landscaping requirements for commercial development, and soil erosion and sediment control requirements. Augusta-Richmond County also has in place regulations for the protection of wetlands, groundwater recharge areas, water supply watersheds, and the Savannah River corridor. These regulations were adopted in October 1998 in compliance with the Georgia Department of Natural Resources, Rules for Environmental Planning Criteria.

8.1.5 Plant and Animal Habitat

Richmond County is home to several plants and one animal (an invertebrate) classified as endangered, threatened, unusual or rare. Four of the plants are listed as “candidates” for federal protection under the Endangered Species Act of 1973. One plant, the Sweet Pitcherplant, has “partial status”, meaning that the plant is federally protected in only a portion of the species’ range. All projects that require a direct federal approval, permit, grant, loan or loan guarantee must comply with provisions of the Endangered Species Act. This includes consulting with the Department of the Interior to avoid adverse impacts on endangered species.

Table N-2 State and Federally Protected Plants and Animals Richmond County, GA		
Plants:	Federal Status	State Status
• Georgia Aster	Candidate	None
• Atlantic White-cedar	None	Rare
• Pink Ladyslipper	None	Unusual
• Shoals Spiderlily	Candidate	Endangered
• Indian Olive	None	Threatened
• Sweet Pitcherplant	Partial Status	Endangered
• Ocmulgee Skullcap	Candidate	Threatened
• Silky Camellia	None	Rare
• Pickering Morning-glory	Candidate	Threatened
Animals:		
• Pigtoe Mussel	None	Endangered
Source: Georgia Department of Natural Resources, Protected Species List, DNR Website, May 6, 2003		

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Some plants are protected solely under provisions of the Georgia Wildflower Preservation Act of 1973. The act authorizes rules for the collection, transport, sale and listing of protected plants. The Georgia Environmental Policy Act (GEPA) requires that impacts to protected species be addressed for all projects on state-owned lands and for all municipal or county projects if funded half or more by state funds, or by a state grant of more than \$250,000.

8.2 Major Parks, Recreation and Conservation Areas

Richmond County has several conservation, recreation and natural areas. Following is a brief description of the major natural attractions within the county. Additional information can be found in the Historic Resources and Community Facilities chapters.

8.2.1 Savannah River

The Savannah River is an exceptional resource that has had a tremendous impact on the history and development of the community. The stretch of the river adjacent to Augusta and Richmond County is one of the more unique parts of the waterway. It is just upstream from the city where the river rolls over the fall line separating the Piedmont and Coastal Plain physiographic provinces. The shallow waters at the fall line served as a river crossing for centuries, and have characteristics that are in sharp contrast to the deeper, navigable reaches downstream. This change in the river's environment allows it to support a variety of plants, animals, and wildlife, and gives residents a greater appreciation of the natural environment. Over the years, a number of archaeological sites have been identified in the area, many of which are located in the floodplains and swamps near the river corridor.

8.2.2 Augusta Canal

The Augusta Canal is a man-made resource located next to the Savannah River in Richmond and Columbia Counties. Owned by the city of Augusta, and managed by the Augusta Canal Authority, the canal is a designated National Historic Landmark (1977), a Regionally Important Resource (Georgia-1994), and a National Heritage Area (U. S. Congress-1996). National Heritage Area designation recognizes the canal as a treasure of national significance, spotlights Augusta on national tourist maps, and makes technical assistance and resources available through the National Park Service.

Constructed in 1845, and enlarged in 1876, the Augusta Canal is among the nation's best examples of a 19th century industrial canal system. When first built the canal's three main functions were to provide water power for industry, waterborne transportation for commodities (e.g. cotton), and a source of water for

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the community. Today, the canal continues to provide water power to two textile mills and powers the pumps at the city's raw water pumping station. The canal provides residents and visitors with a variety of recreational opportunities, including hiking, boating, bicycling and fishing. There are scenic views of the Savannah River and several historic structures adjoining the canal. For several years the Augusta Canal Authority has been implementing projects contained in the Augusta Canal Master Plan. This includes projects to renovate many of the historic structures associated within the canal, improve and expand the canal towpath, improve access to the canal, and make the canal a tourist destination.

8.2.3 Phinizy Swamp Wildlife Management Area

This 1,500-acre, state-owned cypress wetland is located in east Augusta approximately two miles south of downtown. The wildlife management area is owned by the Georgia Department of Transportation (GDOT) and managed by the Georgia Department of Natural Resources. It was created as a result of a compromise brokered with environmental agencies to allow construction of Bobby Jones Expressway through the swamp. GDOT agreed to purchase and preserve the acreage in exchange for approval of the road project by the U. S. Fish and Wildlife Service and the U. S. Environmental Protection Agency. The expressway extension, which opened in the summer of 1998, bisects the wildlife management area.

The Merry Brickyard ponds border the wildlife management area on one side and the 1,100-acre Phinizy Swamp Nature Park on another. It is home to over 100 species of waterfowl, and a variety of wildlife that includes deer, alligators, bald eagles, bobcat, beaver, snakes, and panthers. Permitted public use activities include hunting (archery only), fishing, hiking, and birdwatching. Access points are located off of Gravel Pit Road and from a half-mile long gravel road behind the Messerly Wastewater Treatment Plant.

8.2.4 Phinizy Swamp Nature Park

This 1,100-acre nature park is located south of the Phinizy Swamp Wildlife Management Area and adjacent to the Messerly Wastewater Treatment Plant. The Nature Park is owned by the city of Augusta and managed by the Southeastern Natural Sciences Academy - a nonprofit educational organization. Like the wildlife management area, the Swamp Park is home to a variety of plant and animal life coexisting in an ancient wetland area. The mission of the Southeastern Natural Sciences Academy is to promote environmental stewardship through education, research, land conservation and public outreach. The Academy has established partnerships with area school systems and has booked 8,000 students for its on-site education programs during the 2002-03 school year. Field trip demand has risen steadily since programs began in 1998.

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The Academy offers classes, tours and workshops at the Nature Park. A typical monthly calendar of events includes a tour of the park, a family bike tour, a "waterfowl" walk, and a clean-up day. The park offers endless opportunities for learning, volunteering, and working with others to promote environmental stewardship.

Included within the park is an innovative sewage treatment system where semi-treated wastewater from the Messerly Wastewater Treatment Plant flows into a series of man-made wetland cells. There microbes and bacteria break down harmful waste products and the cleansed water then flows back into Butler Creek on its way to the Savannah River. The constructed wetlands clean municipal wastewater, provide habitat for plants and wildlife, and serve as a learning environment for park visitors. The Academy has plans for improvements at the Nature Park including construction of a research facility, visitor's center, and extension of the Floodplain Boardwalk. The Academy is also finalizing an agreement with GDOT and GA DNR to incorporate part of the Phinizy Swamp WMA into its education programs.

8.2.5 Merry Brickyard Ponds

Merry Brickyard Ponds is a semi-public fishing area located immediately north of the Phinizy Swamp Wildlife Management Area. The ponds are actually a series of strip mines that nature has transformed into a nationally known waterfowl habitat. The ponds lie among 3,100 acres owned by Merry Land Properties, Inc., which still has active clay mining leases on parts of the site.

Plans are underway to transform much of the area into new uses that will include a wetland mitigation bank. A wetlands mitigation bank offers credits to developers whose projects disrupt sensitive natural areas elsewhere. A developer can "buy" land in a mitigation bank to offset losses of wetlands elsewhere. The result is the preservation and restoration of large habitats such as the Brickyard Ponds. What the owners envision is the gradual transition of the ponds from a fishing resource to more of a conservation resource. While there will be fishing for many years to come, some ponds will be drained, filled and planted with trees to foster more diversity in the ecosystem.

8.2.6 Spirit Creek Education Forest

Spirit Creek Education Forest is 570 acres of wetlands, planted loblolly pine and bottomland hardwoods located in the midst of urban development in south Richmond County. The Georgia Forestry Commission owns and maintains the property. The Forestry Commission offers a number of educational programs and activities on-site including the following:

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- A self-guided interpretive trail through a tupelo swamp on a handicapped-accessible boardwalk
- An arboretum displaying native trees and ecosystems of Georgia
- Interpretive nature trails
- Fields displaying three different stages of a sandhill natural succession and the wildlife inhabiting the sites
- Soil investigation studies and wetland habitat and quality studies
- Experimental wooden bridge
- Timber management practices of thinning, harvesting and regeneration
- A prescribed burning demonstration
- Wildlife management
- Agricultural crop terracing practices

8.3 Air Quality

Air quality is an issue in communities throughout the country, including Augusta. Air pollution has a direct impact on public health and well being. It also has implications for economic development, transportation, and the quality of life in communities.

Ozone, the main ingredient of smog, is a serious air quality problem. Even at low levels ozone can have a number of effects on the respiratory system. Ozone is a gas that occurs both in the Earth's upper atmosphere and at ground level. Ozone can be good or bad, depending on where it is found. Ozone occurs naturally in the Earth's upper atmosphere - 10 to 30 miles above the Earth's surface - where it shields us from the sun's harmful ultraviolet rays.

In the Earth's lower atmosphere, near ground level, ozone is formed when pollutants emitted by cars, power plants, chemical plants, and other sources react chemically in the presence of sunlight. Ozone pollution is a concern during the summer months when the weather conditions needed to form ground-level ozone - lots of sun and hot temperatures - normally occur.

Particulate matter (PM) is another type of air pollutant. Particulate matter is any material that exists as solid or liquid in the atmosphere. Particulate matter may be in the form of fly ash, soot, dust, fog, fumes or other materials. Particulate matter causes irritation and damage to the respiratory system. This can result in difficulty breathing, induce bronchitis and aggravate existing respiratory disease. Exposure to particulates impacts individuals with chronic pulmonary or cardiovascular disease, people with influenza or asthma, children and elderly persons.

Local officials have taken proactive steps to deal with air pollution. In 1999 the Augusta Air Quality Task Force (AQTF) was formed under the auspices of the Metro Augusta Chamber of Commerce. The mission of the AQTF is to advise the Georgia Environmental Protection Division (EPD) on local compliance with the Clean Air Act.

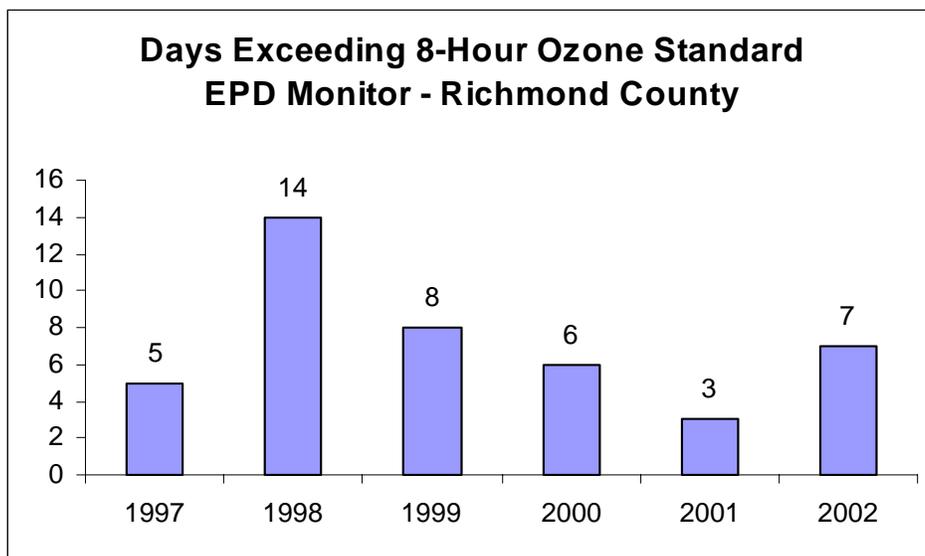
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The task force is comprised of business leaders, transportation planners, real estate developers, environmentalists, and government officials.

In the fall of 1999, the AQTF joined forces with similar groups in Macon and Columbus to pursue completion of a detailed study of air quality in the three "Fall Line" cities. As a result of their efforts, and with funding from the state of Georgia, the Fall Line Air Quality Study (FAQS) started in 2000. The Georgia Tech Center for Urban and Regional Ecology is directing the study. FAQS consists of four primary components: 1) enhanced monitoring of air pollution, 2) development of an emissions inventory, 3) modeling of air quality, and 4) analysis, assessment, and recommendations.

Data indicate that the Augusta area has an ozone problem. The EPD has had a permanent ozone monitoring station in Augusta since 1989. The station is located at Bayvale Elementary School in south Augusta. In recent years, ozone levels recorded at the station have exceeded allowable standards on several occasions. Under the Federal Clean Air Act Amendments, violations occur when 8-hour ozone averages exceed 0.085 parts per million. Data recorded by EPD at a monitoring station located at Bayvale Elementary School indicate that ozone levels in Augusta have exceeded the 8-hour standard, on varying numbers of days, for several years (see chart below).

As part of the FAQS, a second monitoring station was established in the Augusta area. This station is located near Riverside Elementary School in Columbia County. Air quality data collected at this location confirmed the ozone levels recorded at the EPD site. The data from FAQS monitoring sites across the state also indicate that Augusta's air quality problems are a product of regional factors, meaning that there is little individual communities can do to resolve pollution on their own. EPD officials believe that most solutions to air quality problems in Augusta will come from planned control measures at the state and federal levels.



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Communities whose three-year averages for ozone exceed the national 8-hour standard of 0.085 ppm are to be designated as non-attainment areas. Based on the monitoring data, it appears likely that Augusta will be designated an ozone non-attainment area by the U. S. Environmental Protection agency in the spring of 2004. Augusta may also be designated non-attainment for fine particulate Matter (PM 2.5). Monitoring data for the years 2000 – 2002 indicates that the amount of PM 2.5 is slightly above the standard of 15 micrograms per cubic meter.

Non-attainment designation has implications for economic development and transportation in the city. Under non-attainment, new or expanding industry that generates emissions would be subject to EPA's New Source Review program. The program requires that new plants and major modifications of existing plants obtain a permit before construction, which will be issued only if the new plant or major modification includes pollution control measures that reflect the best technology available.

Under the Clean Air Act, Metropolitan Planning Organizations (MPOs) in non-attainment areas must demonstrate through the transportation conformity process that planned transportation investments, strategies and programs, taken as a whole, have air quality impacts consistent with the Georgia State Implementation Plan (SIP), and that emissions do not exceed the SIP targets for emissions from mobile sources. Transportation conformity is essentially a way to ensure that Federal funding and approval are given to those transportation activities that are consistent with air quality goals. If the Augusta area's transportation plan, program, or an individual project does not meet conformity, transportation officials have the following options:

- ❑ Modify the plan, program, or project to offset the expected emissions
- ❑ Work with the Georgia EPD to modify the SIP to offset the plan, program, or project emissions

Should the modifications not be achieved, and if a conformity determination cannot be made within certain time frames after amending the SIP, conformity lapses and no new transportation projects may advance until a new conformity determination can be made. During a conformity lapse, FHWA and FTA can only make approvals on grants for projects that are exempt from the conformity process, such as safety projects, and transportation control measures included in an approved SIP.

As the FAQs continued, local and state officials took additional steps to prepare for non-attainment designation. Between September 2000 and June 2001, The Augusta MPO sponsored three Interagency Consultation meetings. Interagency consultation is an integral part of the transportation conformity process designed to ensure that state and local agencies work cooperatively to resolve air quality and related transportation issues. The IAC meetings provided an opportunity for all the stakeholders to get acquainted and to discuss relevant issues. IAC meetings were suspended when it became apparent that non-attainment designations were going to be delayed. It is anticipated that IAC meetings will resume after non-attainment designations are official.

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In March, 2001, the Augusta MPO 's Policy Committee endorsed a resolution authorizing the MPO to enter into a memorandum of agreement with certain federal agencies and the South Carolina Department of Transportation regarding interagency consultation procedures in South Carolina. Part of Aiken County is within the Augusta MPO's study area. The memorandum of agreement spells out the criteria and procedures for the determination of the conformity of transportation plans, programs and projects in South Carolina areas designated as non-attainment or maintenance for national air quality standards. By the spring of 2002, the memorandum of agreement was signed by Augusta MPO representatives, the other MPOs in South Carolina, and the relevant state and federal agencies.

In December 2002, the city of Augusta entered into an Early Action Compact (EAC) with Georgia EPD and U. S. EPA. The EAC is a Memorandum of Agreement for the express purpose of developing and implementing an Early Action Plan (EAP) that will reduce ozone levels in the Augusta area to maintain compliance with the 8-hour ozone standard. The EAC represents a proactive effort to meet air quality standards sooner than required (by December 31, 2007) under the 8-hour ozone implementation rule. Among the potential benefits of participation in the EAC are the following:

- ❑ A positive impact on public health and the environment.
- ❑ Public health benefits will be realized by meeting the more stringent 8-hour ozone standard sooner than required.
- ❑ Partnerships working together to implement local control strategies to maintain clean air and provide public health protection.
- ❑ Positive public reaction for voluntarily addressing air pollution problems ahead of federal requirements.
- ❑ Deferral of effective date of non-attainment designation thereby deferring costly and potentially unnecessary requirements associated with non-attainment. This includes deferral of New Source Review and Transportation Conformity requirements.

Since signing the EAC, the city has worked with other stakeholders to evaluate possible emission reduction control strategies and to develop a public involvement strategy that will become part of Augusta's Early Action Plan. On July 18, 2003, the Georgia Department of Natural Resources recommended to the U.S. EPA that Richmond County be designated an 8-hour ozone nonattainment area. EPA will make the final decision on the nonattainment designation in April 2004.

8.4 Water Resources

Water resources are a defining characteristic of Richmond County and vital to the community's future. The Savannah River is the most visible surface water resource. The Savannah and its tributaries drain much of the county. Three creeks located in the Southern Piedmont area of the county - Rock, Rae's, and Crane - drain the northwest part of the county. Rocky, Butler, Spirit and Little Spirit Creeks drain the Sand Hills

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province, consisting of a series of valleys and broad, level ridges. The remaining creeks - Sandy Run, New Hope Branch and Rebecca Walker Creek, drain to McBean Creek on the Burke County line. The Savannah River floodplain extends along the entire northeastern side of the county and covers approximately 63 square miles. The river floodplain is relatively flat and includes areas that are continuously wet and swampy (e.g. Phinizy Swamp) and areas that are subject to periodic flooding.

Groundwater resources in Richmond County are found in two major aquifers: the Upper Cretaceous and Basal Cretaceous aquifers. The Upper Cretaceous aquifer, the shallower of the two reservoirs, is not extensively developed. Most of the groundwater used in the county is pumped from the Basal Cretaceous aquifer. The Georgia Department of Natural Resources classifies the Cretaceous aquifer as a significant groundwater recharge area.

In recent years, the city of Augusta has taken several steps to protect its water resources. These steps include:

- ❑ Adoption of ordinances and regulations to protect aquifers and groundwater recharge areas, water supply watersheds, and the Savannah River Corridor. These ordinances enacted in accordance with environmental standards established by the Georgia Department of Natural Resources.
- ❑ Amendments to the Flood Damage Prevention Ordinance to increase restrictions on developing within the 100-year floodplain of streams and rivers.
- ❑ Completed the Augusta Watershed Assessment. This two-year project identified areas where surface water is affected by pollution and developed strategies for protecting and improving water quality.
- ❑ Completed the Augusta-Central Savannah River Basin Source Water Assessment. This two-year project evaluated the susceptibility of public water systems in the river basin to draw water contaminated by identified sources at concentrations that would pose a health concern. In addition to Augusta, other communities that participate in the project included Columbia County, the City of Waynesboro, the City of Lincolnton, and Thomson-McDuffie County.
- ❑ Completed Fecal Coliform TMDL Implementation Plans for Rocky Creek and Butler Creek. The plans identify regulatory and non-regulatory measures designed to reduce fecal coliform levels in these two creeks so that they meet the applicable water quality standards.
- ❑ Implementation of water and sewer system improvement projects. Bond-financed projects that will impact water quality and quantity include providing sewer service to unsewered areas, upgrading and expanding water and wastewater treatment facilities, upgrading existing wastewater interceptor lines, and infiltration/inflow reductions in the wastewater collection system.
- ❑ Implementation of a Stormwater Management Program and a Water Quality Monitoring Program in accordance with requirements of the Federal Clean Water Act. The Stormwater Management Program is designed to reduce non-

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point source pollution. The objective of the Water Quality Monitoring Program is to monitor the health of local watersheds and develop procedures to maintain water quality.

- Developed and implemented a Community Greenspace Program in accordance with Sec. 36-22-1 et seq. of the Official Code of Georgia Annotated. Adopted by the Augusta Commission in November 2000, and updated in October 2002, the Greenspace Program is designed to preserve up to 20% of the city's land area as greenspace. Areas targeted for protection include lands along the Savannah River, within Phinizy Swamp, and adjacent to local creeks and streams.

8.4.1 Aquifer and Groundwater Recharge Areas

Aquifers are soils or rocks in which groundwater is stored. Aquifers vary widely in size and depth and are used for drinking water, irrigation, and manufacturing processes. Recharge is the process by which precipitation infiltrates soil and rock to add to the volume of water stored in aquifers. A recharge area is any portion of the earth's surface where water infiltrates into the ground to replenish an aquifer

The two major aquifers in Augusta-Richmond County are the Upper Cretaceous and Basal Cretaceous aquifers. The Upper Cretaceous aquifer is the shallower of the two reservoirs, and is not extensively developed. Most of the groundwater used in the city is pumped from the Basal Cretaceous aquifer. The recharge area for the Cretaceous aquifer covers the majority of Richmond County, and is classified as a significant groundwater recharge area by the Georgia Department of Natural Resources. According to DNR's Ground-Water Pollution Susceptibility Map of Georgia, Hydrologic Atlas 20, some of the recharge area has a high susceptibility to pollution and some has a medium susceptibility to pollution.

At the present time, groundwater availability in the aquifers is still good. However, DNR is concerned about the stress placed on the aquifers and has urged the city to pursue surface water as an alternative source of supply for drinking water. The city is in the process of making improvements to the water supply system that will reduce the reliance on groundwater sources (see discussion of water system in Community Facilities chapter). Pumping in the vicinity of Augusta Regional Airport has modified the natural west-to-east flow system of the aquifer. A cone of depression exists immediately west of the airport, and data indicates that the aquifer is also stressed in the vicinity of a nearby industrial complex. In the spring of 2001 the city had to discontinue pumping from four existing wells to compensate for new well fields that were brought on line off Old Waynesboro Road.

In October 1998 the Augusta Commission adopted a Groundwater Recharge Area Protection Ordinance in accordance with state environmental standards. The objectives of the ordinance are:

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1. Protect groundwater quality by restricting land uses that generate, use or store dangerous pollutants in recharge areas;
2. Protect groundwater quality by limiting the density of development; and
3. Protect groundwater quality by ensuring that any development that occurs within the recharge area shall have no adverse effect on groundwater quality.

The ordinance established the Groundwater Recharge Area District that coincides with the Cretaceous aquifer recharge area. Within the district, no building permit, site plan or subdivision plan will be approved unless it is in compliance with the groundwater protection standards. The standards that apply throughout the district include the following:

- ❑ New hazardous waste treatment or disposal facilities are prohibited.
- ❑ New waste disposal facilities must have synthetic liners and leachate collection systems.
- ❑ New facilities involving the handling, storage and disposal of hazardous materials shall take place on an impermeable surface having an approved spill and leak collection system.
- ❑ New above-ground chemical or petroleum storage tanks larger than 660 gallons must have a secondary containment of 110% of the volume of the tank or 110% of the volume of the largest tank in a cluster of tanks.

Additional standards apply depending on whether the affected site within the district has a low, medium or high susceptibility to pollution. The requirements are as follows:

Recharge Areas with Low Susceptibility to Pollution

- ❑ New agricultural waste impoundment sites larger than 50 acre-feet must be lined.
- ❑ Any new home served by septic tank/drain field system must be approved by the Richmond County Health Department and must have a lot that is at least 110% of the minimum lot size required by Table MT-1 of the Department of Human Resource's Manual for On-site Sewage Management Systems.
- ❑ Any new manufactured home park served by a septic tank/drain field system must be approved by the Richmond County Health Department and must have a lot or space that is at least 110% of the minimum lot or space size required by Table MT-2 of the Department of Human Resource's Manual for On-Site Sewage Management Systems.

Recharge Areas with Medium Susceptibility to Pollution

- ❑ New agricultural waste impoundment sites larger than 15 acre-feet must be lined.
- ❑ Any new home served by septic tank/drain field system must be approved by the Richmond County Health Department and must have a lot that is at least

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125% of the minimum lot size required by Table MT-1 of the Department of Human Resource's Manual for On-site Sewage Management Systems.

- ❑ A new manufactured home park served by a septic tank/drain field system must be approved by the Richmond County Health Department and must have a lot or space that is at least 125% of the minimum lot or space size required by Table MT-2 of the Department of Human Resource's Manual for On-Site Sewage Management Systems.

Recharge Areas with High Susceptibility to Pollution

- ❑ All new agricultural waste impoundment sites must be lined.
- ❑ Any new home served by septic tank/drain field system must be approved by the Richmond County Health Department and must have a lot that is at least 150% of the minimum lot size required by Table MT-1 of the Department of Human Resource's Manual for On-site Sewage Management Systems.
- ❑ Any new manufactured home park served by a septic tank/drain field system must be approved by the Richmond County Health Department and must have a lot or space that is at least 150% of the minimum lot or space size required by Table MT-2 of the Department of Human Resource's Manual for On-Site Sewage Management Systems.
- ❑ Spray irrigation of wastewater or the land spreading of wastewater sludges must be approved by DNR.
- ❑ Permanent storm water infiltration basins are prohibited.
- ❑ New wastewater treatment basins (except for mining settling basins) must have an impermeable liner and be approved by DNR.

To date, the primary impact of the Groundwater Recharge Ordinance has been on the minimum lot size for homes (stick-built or manufactured) with septic tanks and located in agricultural zones. Prior to enactment of the ordinance the minimum lot size for any new home served by a septic tank/drain field, and located in an Agricultural Zone, was 16,000 square feet (20,000 sq. ft. for a flagpole lot). The new minimum lot size requirements vary, depending on the soil type, slope of the lot, and level of pollution susceptibility, but the overall effect is that the minimum lot size has increased to an average of 37,500 square feet (.86 acre).

In addition to the Groundwater Recharge Area Protection Ordinance, Augusta continues to implement other projects to protect groundwater and recharge areas:

- ❑ Separation of remaining combined storm and sanitary sewer collection systems.
- ❑ Implementation of infiltration/inflow reductions in the sanitary sewer collection systems.
- ❑ Extending sanitary sewer service to unsewered subdivisions.
- ❑ Extending sanitary sewer service to growth areas.

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8.4.2 Wetlands

Under the Clean Water Act, the term wetlands means "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas." (EPA Regulations at 40 CFR 230.3) Wetlands are important to both the environment and the economy. Wetlands provide a wide range of benefits that include habitat, support of commercial and recreational fisheries, reduction of flood damages, and abatement of water pollution.

In Richmond County wetlands are located adjacent to the Savannah River, the Augusta Canal, and the major creeks and tributaries that drain the county. The largest concentration of wetlands is found in the Phinizy Swamp, the large floodplain of the Savannah River located on the east side of the county. Local wetlands provide a habitat for native plants and animals, provide a place for migrating birds to rest and feed, absorb and slow floodwaters, and filter pollutants before they reach the Savannah River and other waterbodies. The Phinizy Swamp is being used to educate children and adults about the important functions of wetlands and the need to protect and preserve them.

The U. S. Environmental Protection Agency (EPA) estimates that more than half of the original wetlands in the continental United States have been drained and converted to other uses. Common human activities that degrade wetlands include hydrologic alterations, pollution inputs, and vegetation damage. Examples of hydrologic alterations include:

- ❑ Deposition of fill material for development.
- ❑ Drainage of development, farming and mosquito controls.
- ❑ Dredging and stream channelization for navigation, development and flood control.
- ❑ Diking and damming to form ponds and lakes.
- ❑ Diversion of flow to or from wetlands
- ❑ Addition of impervious surfaces in the watershed, thereby increasing water and pollutant runoff into wetlands.

Examples of pollutants that degrade wetlands include sediment, fertilizer, human sewage, animal waste, pesticides, and heavy metals. Wetland plants are susceptible to degradation from hydrological changes, pollution inputs, grazing by domestic animals, and the introduction of nonnative plants. Storms and droughts are examples of natural activities that can damage wetlands.

The city of Augusta, in cooperation with residents, developers, environmental organizations, educators, and others, participates in a variety of programs to protect wetlands and improve water quality. The types of active programs include the monitoring and assessment of water quality, permitting, TMDLs, and public outreach/education.

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Monitoring/Assessment - Monitoring and assessment of water quality on local creeks was an integral part of the recently-completed Augusta Watershed Assessment. As part of the project, Parsons Engineering Science, Inc. and CSRA Laboratories installed eight (8) water quality monitoring stations throughout the county. At least one monitoring station was located on each of the major creeks. These stations monitor flow, temperature, rainfall and chemical composition of the creeks. Additionally, Parsons conducted biological monitoring within the creek watersheds. Assessment of the monitoring data pinpointed water quality issues in each of the creeks. The monitoring stations will remain and be used by the Augusta Utilities Department to track future changes in water quality.

Permitting - The City of Augusta participates in the major permitting programs of the Clean Water Act including the following:

Clean Water Act Section 404 - Section 404 establishes program to regulate the discharge of dredged and fill material into waters of the United States, including wetlands. Activities that are regulated include fills for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports), and conversion of wetlands to uplands for farming and forestry. Augusta's land subdivision and site plan regulations require applicants to delineate affected wetlands on all submittals, and to provide evidence that a Section 404 permit has been issued by the U. S. Army Corps of Engineers, prior to approval of any development plan or site plan.

NPDES Permit - As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Examples of regulated point sources include industrial and municipal wastewater treatment systems that discharge directly to surface waters. The city of Augusta participates in this program, which is administered at the state level by the Georgia DNR Environmental Protection Division (EPD). The City holds valid NPDES Permits for both the Messerly and Spirit Creek wastewater treatment plants.

Georgia EPD currently requires municipalities with population generally over 100,000 to obtain an NPDES permit to operate a Municipal Separate Storm Sewer System (MS4). Augusta has an MS4 permit for a program to reduce nonpoint source pollution and monitor water quality. In 2003 EPD will prepare a general permit under which Augusta and other communities will have to implement a stormwater management program. The MS4 permit mandates a minimum of six control measures:

- ❑ Public education and outreach
- ❑ Public participation/involvement

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- ❑ Illicit discharge detection and elimination
- ❑ Construction site runoff
- ❑ Post-construction runoff control
- ❑ Pollution prevention/good housekeeping

The stormwater management program must be phased in over the initial 5-year permit period.

TMDLs - A TMDL or Total Maximum Daily Load is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. The state of Georgia has a court-mandated schedule for development of TMDLs that is the most aggressive in the country. Augusta has completed TMDL Implementation Plans for Rocky and Butler Creeks with the help of the CSRA Regional Development Center. The implementation plans identify regulatory and non-regulatory measures designed to reduce fecal coliform levels in the two creeks. Recently completed watershed assessments for Augusta and the Central Savannah River Basin provide additional strategies for watershed management to meet the anticipated TMDLs.

Public Outreach/Education - Recent watershed planning projects have afforded the city an opportunity to increase public outreach and education regarding water quality and protection. A website was established to keep the public informed about progress on the Augusta Watershed Assessment. A project newsletter was published that provided information on a wide variety of water related issues. An Enviroscope watershed model is used to teach children about how a watershed works. Enviroscope demonstrations have been conducted at area schools, the Phinizy Swamp Nature Park and Fort Discovery. In cooperation with the Southeastern Natural Sciences Academy, the city sponsors tours of its "constructed" wetlands project located within the Phinizy Swamp Nature Park. The wetland cells serve to reduce the nutrients in Augusta's wastewater using bacteria, plants and soils. The plants provide a place for the bacteria to break down the nutrients before the water is released into Butler Creek. As a follow-up to the Watershed Assessment, the city established the Watershed Roundtable, a committee charged with continuing water resource planning and developing public outreach initiatives. The Watershed Roundtable includes representatives from government, the private sector, non-profit organizations and environmental groups.

8.4.3 Water Supply Watersheds

The Georgia Department of Natural Resources (DNR) defines a water supply watershed as the area of land upstream of a governmentally owned public drinking water intake or water supply reservoir. DNR has established minimum criteria for the protection of drinking water watersheds. This protection is necessary for the enhancement of public health, safety and welfare, as well as to assure that surface sources of drinking water are of high quality in order to be treated to meet all State and Federal drinking water standards. Separate criteria have been established for large watersheds (100+ square

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miles in the drainage basin) and small watersheds (<100 square miles in the drainage basin).

The removal of vegetation and the introduction of paving for roads, parking lots, driveways and other impervious services increase run-off on a site. This in turn increases erosion, flooding and sedimentation of water sources. The DNR criteria establish buffer zone requirements adjacent to perennial streams and specify allowable impervious surface densities adjacent to such streams. These requirements are designed to prevent intensive development of a water supply watershed from contaminating a water source to a point where it cannot be treated to meet drinking water standards.

Richmond County contains one large watershed and one small watershed. The Middle Savannah River Watershed is the large watershed. The City of Augusta's water supply comes from the Savannah River via the Augusta Canal. The Augusta Lock and Dam, located on the canal approximately 4 miles above the raw water pumping station, controls water flow into the canal.

The part of the Butler Creek Watershed above Butler Reservoir is the small watershed. The watershed is located in northwest Richmond County, and a portion of Columbia County, and covers approximately 15 square miles. The watershed drains to Butler Reservoir, which is the source of water for Fort Gordon. The Fort is permitted to withdraw 5.4 MGD from the reservoir. The watershed is characterized by low-density residential development, woodlands and scattered commercial uses. Since the opening of the Jimmie Dyess Parkway in 1998, urban development has increased in the watershed area. Other planned road improvement projects will no doubt increase development pressure.

Augusta currently has in place several ordinances and programs to protect water supply watersheds from pollution or alteration. This includes a group of land use and development ordinances, as well as an ordinance that applies to the large Middle Savannah River Watershed. A brief summary of the ordinances follows.

Water Supply Watershed Protection Ordinance – The purpose of this ordinance is to establish measures to protect the quality and quantity of the surface water supply for the city. It establishes a water supply watershed district covering an area within a seven (7) mile radius of the city's water supply intake on the Augusta Canal (Savannah River). Within the district, any new facilities that handle hazardous materials must perform their operations on impermeable surfaces having spill and leak collection systems. The Augusta Commission adopted the ordinance in October 1998 to comply with Georgia DNR's Part V environmental standards.

Soil Erosion and Sediment Control Ordinance – The purpose of this ordinance is to control soil erosion and sedimentation resulting from land-disturbing activity. The ordinance includes minimum requirements or best management practices (BMPs) for erosion and sedimentation control, and establishes a process for the review and approval

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of Soil Erosion and Sediment Control Plans. The ordinance also includes enforcement and penalty provisions.

Tree Ordinance – This ordinance, first enacted in 1992, provides standards for the protection of trees located on public property, designates landmark trees, and establishes landscaping standards that apply to the development of private property. A Tree Commission is charged with reviewing and approving the Greenspace Plans submitted by private developers. Among other things, the ordinance is designed to prevent soil erosion, retard storm water runoff, and reduce the amount of impervious surfaces on development sites.

Other Ordinances and Regulations – Other ordinances and regulations that serve in part to protect water resources include the City's zoning ordinance, subdivision regulations, site plan regulations, grading ordinance, flood damage prevention ordinance, and stormwater management ordinance. Among other things, these ordinances and regulations limit the types of land uses allowed in an area, restrict the amount of impervious surface on a lot, require retention and detention facilities to control surface water runoff, and restrict development within floodplains.

8.4.4 River and Stream Corridors

Floodplains – As a body of water (e.g. river, stream, or creek) erodes and deposits material, it may shift its course and over a period of time build up a deposit of material in its valley bottom. This deposited material takes the shape of a plain, called a floodplain, which forms at elevations near that of the water's surface. About 25 percent of Richmond County (43,600 acres) is comprised of floodplains, stream terraces, and interstream divides. According to Flood Insurance Rates Maps / Flood Boundary and Floodway Maps published by the Federal Emergency Management Agency (FEMA), floodplains are located within and adjacent to the Savannah River and its tributaries (e.g. Rock, Rae's, Crane, Rocky, Butler, Spirit and McBean Creeks). The 100-year flood also referred to as the "base flood" is defined as the flood having a one percent probability of being equaled or exceeded in any given year.

Congress established the National Flood Insurance Program (NFIP) with the passage of the National Flood Insurance Act of 1968. The National Flood Insurance Program enables property owners in participating communities to purchase insurance protection against losses from flooding. The insurance is designed to provide an insurance alternative to disaster assistance to meet the escalating cost of repairing damage to buildings and their contents caused by floods. The NFIP was broadened and modified with the passage of the Flood Disaster Protection Act of 1973 and other legislative measures. The program is administered by the Federal Insurance Administration, a division of the Federal Emergency Management Agency (FEMA).

Participation in the NFIP is based on an agreement between local communities and the federal government. Basically, if a community adopts and enforces measures to reduce future flood risks to new construction in special flood hazard areas, the federal

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government makes flood insurance available within the community as a financial protection against flood losses which do occur.

Augusta has participated in the NFIP for approximately 30 years. The city also has Flood Damage Prevention Ordinance that is based on FEMA's model ordinance. The ordinance requires anyone who wants to grade, fill, erect a structure, or otherwise develop in a floodplain to obtain a permit before starting any land disturbance or construction. The ordinance includes specific standards for development in floodplains and requires the filing of an Elevation Certificate before the city issues a certificate of occupancy. A group of maps delineate the applicable areas in the city susceptible to flooding during the 100-year and 500-year design floods. The maps are the basis for determining the areas regulated by the Flood Damage Prevention Ordinance.

The flood ordinance is amended on occasion to conform to new federal regulations, to correct deficiencies, and to address new issues. Areawide flooding caused by tropical downpours in October 1990 is one event that triggered ordinance revisions in recent years. Some of the recent ordinance amendments include:

- ❑ Separating the floodway fringe into two areas, the upper floodway fringe and the lower floodway fringe. No encroachments, structures, or fill are permitted in the lower floodway fringe unless an engineer certifies that the encroachments will not trigger a rise in the base flood elevation.
- ❑ Manufacture homes must meet all the requirements for new construction, including elevation and anchoring.
- ❑ New construction or substantial improvement of any structure or manufactured home located in a Special Flood Hazard Area shall have the lowest floor elevated at least three (3) feet above the base flood elevation.

The city has also developed a Flood Hazard Mitigation Plan. The purpose of the Flood Hazard Mitigation Plan is to assess flood risks and to articulate a comprehensive strategy for implementing flood mitigation activities. The plan outlines the risks associated with flooding, describes the existing conditions in Augusta, describes existing mitigation programs and activities, and presents a list of recommended mitigation strategies and activities.

Having a Flood Hazard Mitigation Plan makes the city eligible to apply for Flood Mitigation Assistance (FMA) Grants from FEMA. FMA project grants are an integral part of the city's strategy to purchase property with a history of repeat damage from floods. Since 2000, the city has purchased a total of 12 homes in the vicinity of Rae's and Rocky Creeks. FMA grants have funded 75 percent of the cost of the buyouts, with state (15%) and local (10%) government funds accounting for the rest. The Augusta Emergency Management Agency is also developing a data base of additional properties with repetitive flood losses. The data base will be used to target additional properties for acquisition, and to identify flooding problems that can be corrected by local storm drainage improvements.

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8.4.5 Protected River Corridor

The Savannah River is a protected river under the Georgia Mountain and River Corridor Protection Act. The Savannah River is a unique resource and has played a central role in the history and development of Augusta and surrounding communities. At Augusta the river rolls over the fall line separating the Piedmont and Coastal Plain physiographic provinces. The river supports a variety of plants, animals and wildlife and enhances the quality of life for residents.

Floodways, floodplains and wetlands are the predominant land uses along the Savannah River. The shallow waters at the fall line expose several small islands in the river just upstream from downtown Augusta. Other land uses within the river corridor include part of a stone quarry, part of the Augusta Canal, the Augusta Waterworks pumping station, part of the Savannah River levee, and some single-family residences.

In 1994 the city adopted a River Corridor Protection Plan as an amendment to the Comprehensive Plan. The Protection Plan includes an overview of the river corridor, an assessment of corridor protection measures and an implementation strategy. In 1998 the city amended the zoning ordinance by establishing the Savannah River Corridor Protection District. The river corridor protection district extends 100 feet horizontally from the river bank. The existing natural vegetative buffer must be maintained within the district and new land uses are limited to single-family residences (minimum 2-acre lot), agricultural and timber production, wildlife and fisheries management, recreational uses, and some other public facilities and utilities. Handling, receiving, storage and disposal of hazardous wastes are prohibited in the district.

8.5 Greenspace Program

In November 2000 the city of Augusta adopted a Community Greenspace Program in accordance with regulations in the Official Code of Georgia Annotated, Section 36-22-2 et seq. The city's Greenspace Program was updated in the fall of 2002. The goal of the program is to permanently preserve twenty percent (20%) of Augusta's land area as greenspace. The Greenspace Program identifies areas for protection, including lands along the Savannah River, within Phinizy Swamp, and along the major creeks (Butler, Rae's, Rock, Rocky, Spirit and McBean). It lists the tools to preserve greenspace, including fee simple acquisition, conservation easement acquisition, restrictive covenants, and negotiated or privately-initiated easements or covenants. There are also a number of local ordinances that protect lands along the river and creeks.

The Greenspace Program serves as the basis for the expenditure of funds (local, donated, grants from the Georgia Greenspace Commission) for greenspace protection. To date the local Greenspace program has received \$1,113,013 in grant funds for the Georgia Greenspace Commission (FY 2001 and FY 2002 funds combined). Some of these funds have been used to permanently protect 649 acres of land along the Savannah River and parts of Butler and Spirit Creeks.

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The objective of the program is to permanently protect land along the Savannah River and all major creeks in the county. Greenspace along the river will include multi-use trails along the Augusta Canal and the river levee from Columbia County to the New Savannah Bluff Lock and Dam Recreational Area and the Phinizy Swamp Nature Park, both located south of downtown. The Butler Creek Greenway will extend for nine miles along the creek from north of Deans Bridge Road to New Savannah Bluff. Connections to greenspace areas in Columbia County and North Augusta, South Carolina are envisioned as part of the trail network. In addition, local funds are being used by the Central Savannah River Land Trust to market the program and to conduct negotiations with property owners.

The Augusta-Richmond County Planning Commission and the Central Savannah River Land Trust jointly administer the Greenspace Program on behalf of the city. The Land Trust is a non-profit organization capable of accepting donations of land and conservation easements designed to permanently protect sensitive environmental resources. A broad-based group of citizens and organizations are involved in the Greenspace program. Among them are the Southeastern Natural Sciences Academy, the Augusta Canal Authority, Augusta Metro Chamber of Commerce, Sierra Club, the Nature Conservancy, the Builders Association of Metro Augusta, Savannah Riverkeeper, the Georgia Forestry Commission, and several neighborhood organizations.

8.6 Summary and Needs Assessment

Augusta is blessed with natural resources that contribute to progress and enhance the quality of life in the community. The local climate, soils, air quality, water resources, plant and animal habitat, forests and park and recreation areas serve as attractors for new development. As urban development continues it is important to protect natural resources and enlist public support and participation in protection measures.

Fortunately, environmental stewardship is a goal of many in the community, not just the local government. Educators and non-profit organizations teach children and adults about how the natural environment works and methods to protect natural resources. Hands-on activities and experiences are available at facilities such as the Phinizy Swamp Nature Park and the Spirit Creek Educational Forest. Business and industry support the work of environmental organizations, participate in programs related to air and water quality assessment, and comply with applicable environmental regulations in their own operations. Stakeholders as diverse as farmers, hunters, bird watchers, and environmental engineers are working together to protect our natural resources.

This chapter provided an overview of natural resources in Augusta and the steps being taken by the local government to protect them. Examples of local government measures include the monitoring and assessment of some resources, planning for long-term protection, enforcement of ordinances and regulations, public outreach and education, and capital improvements. These and other initiatives have improved the condition of some resources and heightened community awareness of the continuing threats to the natural environment. Still, much remains to be done to correct past mistakes and assure a

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better future for our remaining natural resources. The city of Augusta intends to continue the following natural resource protection activities.

Administer and Enforce Ordinances - The City will continue to administer and enforce the natural resource protection ordinances outlined in this chapter. The city will amend the ordinances as necessary and respond with new ordinances if the need arises. In the near term, water supply watershed protection is needed in the Butler Creek watershed above Butler Reservoir.

Implementation of Best Management Practices - The City will implement structural and non-structural BMPs in order to protect water resources and limit the effect of point and non-point sources of pollution. This includes such initiatives as making improvements to the water and sewer systems, adopting appropriate stormwater management guidelines, and establishing a long-term surface water-monitoring program.

Public Outreach / Education - The City will work with stakeholders to develop solutions to environmental problems and to foster the sharing of information related to environmental quality and protection. The recently formed Watershed Roundtable is one example of the city's public outreach efforts.

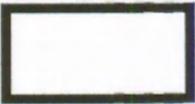
Expand Community Greenspace Program - The City will build on the initial success of the Community Greenspace program. The city will aggressively pursue the protection of additional lands through fee simple acquisition, purchase of easements, restrictive covenants and donation of land. The city will also take steps to reduce or eliminate the barriers to achieving greenspace protection, as detailed in the Community Greenspace Program.

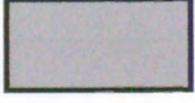
Augusta-Richmond County, GA

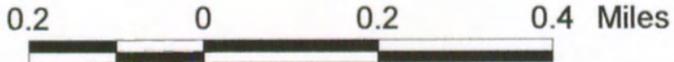
Drainage Basins

 **Geographic Information Systems**
Date: August 22, 2003
Prepared By: Paul DeCamp

Augusta, GA Disclaimer
The data represented on this map has been compiled by the best methods available. Accuracy is contingent upon the source information as compiled by various agencies and departments to the Internal and External to the consolidated government of Augusta, GA. Augusta, GA and the map are not liable for any errors or omissions in the data or for any reasons without the written consent of the Augusta-Richmond County Commission.

 Drainage Basin

 Creeks & Streams



Augusta-Richmond County, GA

Greenspace Program

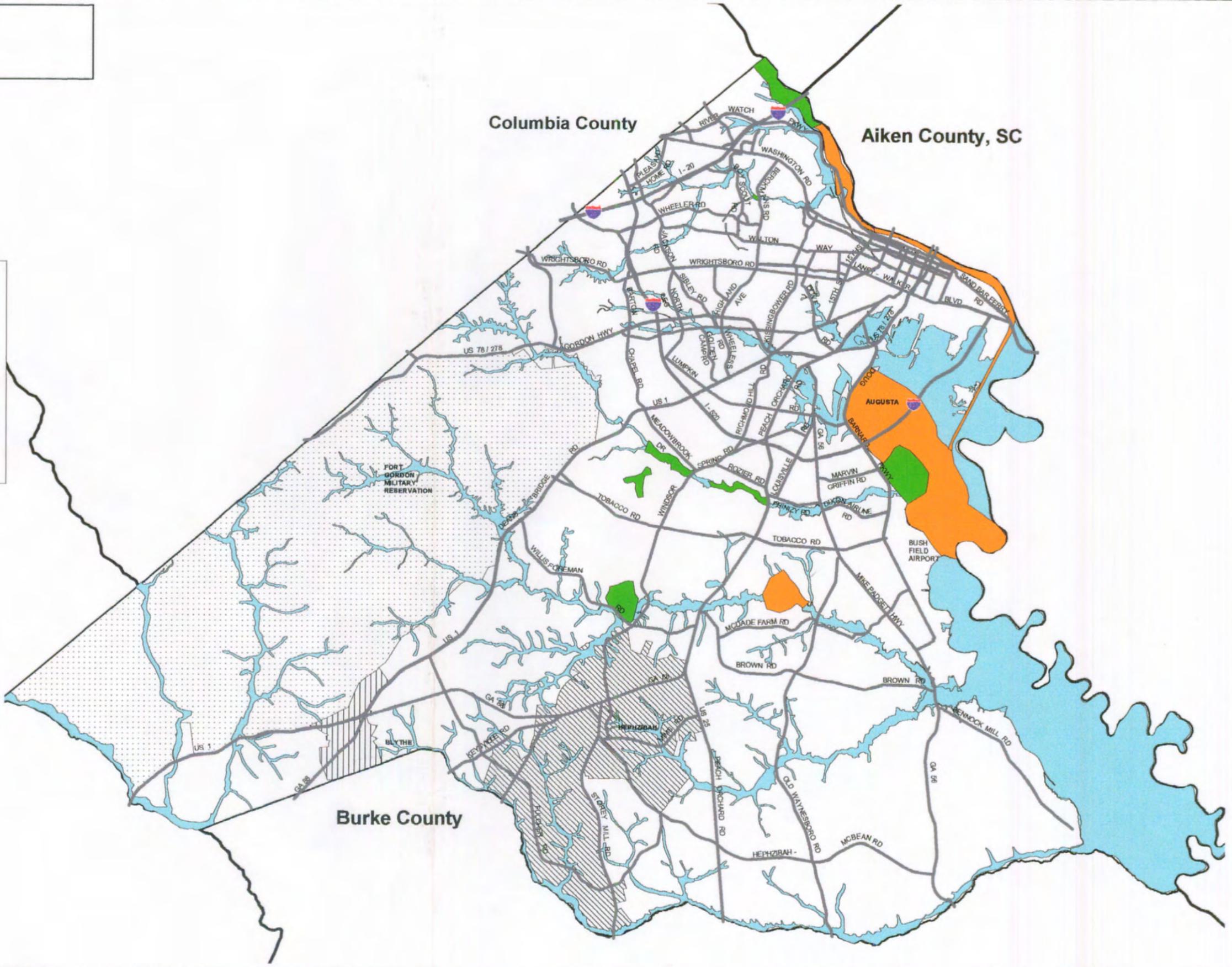
 **Geographic Information Systems**
Date: June 24, 2003
Prepared By: Paul DeCamp

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 **Permanently Protected Greenspace**

 **Public Land to be Considered for Greenspace Protection**

 **Private Land to be Considered for Greenspace Protection**



Chapter 9- Land Use

9. Introduction

Land use is at the heart of planning for the future of the city. The extent, timing, and location of new development, or reuse of existing developed land, depend in large part on the factors covered in the preceding chapters. Population growth, economic development, community facilities, housing, the transportation system, and natural and historic resources all impact land use.

The purpose of this chapter is to profile existing land use patterns and trends and forecast future land use in Augusta. In assessing existing land use, the chapter reviews the factors contributing to land use patterns, the problems with development patterns, and the constraints placed on development. The future land use plan reflects the community's desire to guide and direct future growth, and includes policies that support and reflect the economic, housing, community facilities, and natural and historic resource goals and policies of the comprehensive plan. A future land use map is included that reflects these overriding goals, policies and strategies.

9.1 Inventory of Existing Land Use

A mix of land uses that reflect an older city combined with newer suburbs and semi-rural areas characterizes Augusta. Land use within the "old" city limits includes neighborhoods of varying ages, a central business district, concentrations of public / institutional uses, commercial uses in shopping centers and on individual sites, and industrial uses on scattered sites. These uses are connected by a series of streets and highways, most of which are laid out on a grid pattern. In many cases, residential, commercial and industrial uses are in close proximity to one another, reflecting development that occurred prior to enactment of the local zoning ordinance.

In contrast, that part of the city formerly in unincorporated Richmond County is characterized by a land use pattern more like a community that developed after World War II. Major urban land uses (residential, commercial, industrial and institutional) are separated from one another. Detached, single-family residences in subdivisions, apartment complexes, and manufactured homes are the predominant residential uses. Strip commercial development is prevalent along all of the major arterial highways and consists of shopping centers, office complexes, and businesses on individual sites. Major manufacturing plants are situated in industrial parks or on individual sites in close proximity to highways and railroad lines. At the fringe of the urbanized part of the city, development becomes sparse and gives way to more open space, some farms, residences on larger lots, and woodlands.

An inventory of existing land use was completed to establish the type, spatial distribution, and intensity of development within Augusta. Individual parcels or groups of parcels were classified by primary use and the classifications were then transferred to a map depicting existing land use. The inventory is based on a combination of information from several sources, including the original comprehensive plan completed in 1992, the 1995 land use update, neighborhood plans completed in 1995-1996, and a digitized land

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use inventory completed by the CSRA Regional Development Center in 1999-2001. Planning Commission staff used aerial photographs, site plans, subdivision plats and other sources to document the most recent land use changes.

Land uses are classified under the following twelve categories on both the Existing and Future Land Use maps.

- **Rural Residential** – This category includes residential uses at a density of less than one unit per acre. The majority of this acreage consists of single-family detached homes and manufactured homes on relatively large lots, most of which are located in the extreme southern part of the city.
- **Low-Density Urban Residential** – This category includes residential uses at a density of one-to-six units per acre. The majority of this acreage consists of single-family, detached houses clustered in subdivisions located between major arterial highways and collector streets. Several older neighborhoods contain high concentrations of historic single-family and duplex residential structures. Manufactured homes comprise about 10% of the housing market and are located on individual lots and in manufactured home parks.
- **High-Density Urban Residential** - The bulk of the high-density residential land use is in apartment complexes located in close proximity to major roads, shopping centers and entertainment facilities. It also includes Augusta Housing Authority complexes scattered around the city.
- **Professional Office** – Professional offices are located in a variety of settings, including high-rise office buildings, office parks, stand-alone structures, and converted residences. In Augusta they tend to be concentrated near institutional uses, such as hospitals and government facilities, and in suburban locations visible and accessible to the general public. The few high-rise office buildings in Augusta are located downtown and in the vicinity of the I-520 / Wheeler Road interchange.
- **Commercial** – Commercial uses are concentrated in the central business district, in strip centers and individual lots on arterial streets, in shopping centers, and on scattered sites in older neighborhoods. The largest centers are located at interstate highway interchanges or in close proximity to them. In terms of square footage, the largest shopping centers in Augusta are Augusta Mall and the Augusta Exchange Shopping Center.
- **Industrial** – This category includes manufacturing, warehousing, and surface mining land uses. It also includes the city landfill. Major manufacturing plants are situated in industrial parks, or on individual sites, in the east and southeast portions of the city. Some are also located on scattered sites in the downtown area and in the older city neighborhoods. Light industrial uses and warehousing operations are located along some of the collector roads near Interstate 20 and the Bobby Jones Expressway.

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Surface mining operations (e.g. rock, clay, kaolin) are located in the north and east parts of the city and near Hephzibah.

- **Public / Institutional** – This category includes certain government offices and facilities, and institutional land uses. Government uses include the municipal building and other government structures, police and fire stations, libraries, prisons, post offices, schools, military installations and similar uses. Examples of institutional land uses include hospitals, churches, cemeteries and colleges.

A number of government offices and facilities are located in downtown Augusta, including the city's municipal building, the state Department of Labor, the main U.S. Post Office, the main branch of the regional library, and federal, state and local courts. The mid-town area includes a mix of public and institutional uses, including University Hospital, the Medical College of Georgia (MCG), MCG Hospital and Clinics, MCG Children's Medical Center, the Veterans Administration Hospital, Paine College, and Walton Rehabilitation Hospital. Augusta State University, the Uptown VA Hospital, St. Joseph's Hospital and Doctors Hospital are other major institutional uses. Elementary and secondary schools, churches, city fire stations, branch libraries and post offices are scattered throughout the city. Major state and federal institutions include Gracewood State School and Hospital, Georgia Regional Hospital, the Youth Development Center, and the Fort Gordon Military Reservation. Fort Gordon, which covers about 44,000 acres, is by far the largest facility in this land use category.

- **Transportation / Communications / Utilities** - The vast majority of this acreage is in street and highway rights-of-way, but there are also two airports, parts of two railroad mainlines and two switchyards, utility substations, radio towers and cellular towers. The city's Geographic Information System indicates there is a total of 1,391 miles of roads in Augusta: Interstate highways (43 mi.), state roads (85 mi.), major county roads (196 mi.), and other roads (1,067 mi.).
- **Park / Recreation / Conservation** – This category includes land dedicated to active or passive recreational uses. Examples include the city's park and recreation facilities scattered throughout the community, several public and private golf courses, the Augusta Canal National Heritage Area, the Phinizy Swamp Wildlife Management Area, and land purchased or donated under the Community Greenspace Program. The largest recreation facilities include Diamond Lakes Regional Park, Pendleton King Park, Lake Olmstead and Julian Smith Casino. Golf Courses include the Augusta Golf Club, Forest Hills Golf Course, and Augusta Country Club, the Augusta National, Goshen Plantation, Green Meadows and Pointe South.
- **Agriculture** – This category includes land dedicated to agriculture, farming (cropland, livestock production, specialty farms) or other similar rural uses such as pasture land not in commercial use. Such uses are scattered across the southern part of the city.

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- **Forestry** – This category includes land dedicated to commercial timber or pulpwood harvesting or similar uses such as woodlands not in commercial use. Such uses are scattered across the southern part of the city and on Fort Gordon.
- **Undeveloped** – This category includes land not developed or not being used for a specific purpose. Examples include vacant lots scattered throughout many neighborhoods, vacant structures that are dilapidated, and floodplains of the Savannah River and local creeks.

Table L-1 Existing Land Use, 2003 Augusta-Richmond County		
	Augusta	Richmond County
Residential	52,052	54,328
Professional Office	635	643
Commercial	5,081	5,129
Industrial	9,203	9,402
Public/Institutional	52,753*	52,890*
Transportation/Communications/Utilities	11,520	11,893
Park/Recreation/Conservation	5,873	5,903
Agriculture	10,528	14,775
Forestry	18,708	18,800
Undeveloped/Unused	29,794	36,445
TOTAL	196,147	210,208
*Includes 44,286 acres at Fort Gordon		
SOURCES: Comprehensive Plan, Neighborhood Plans, Georgia County Guide, SCS, FEMA, Site Plans, Subdivision Plats, Tax Records, Aerial Photographs and Field Surveys		

9.2 Assessment of Existing Land Use

Augusta's development has been influenced by many of the same factors that have affected cities throughout the country, including major historic events, the ups and downs of the nation's economy, advancements in transportation and communication systems, improvements in building practices, and national trends in the growth of urban areas. Land use patterns also have been influenced by the area's geography and climate, the

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location of natural features, natural and man-made disasters, the timing and location of major federal and state facilities, the extension public utilities, and local development regulations.

9.2.1 Factors Affecting Land Use

Existing land use in Augusta reflects the development history of the area. The city was founded on a site in the downtown area, and for many years development (residential, institutional, commercial and industrial) was concentrated in this general vicinity. As years passed, changes and improvements in such areas as transportation, manufacturing processes, building practices and utilities caused new development to take place to the south and west of the downtown. At the same time, smaller, agriculture-based settlements were established elsewhere in Richmond County. Some of these small communities either ceased to exist after a time, or were eventually absorbed by Fort Gordon, but the remnants of some are still evident. Natural and man-made disasters also influenced development patterns. Periodic outbreaks of disease and flooding along the Savannah River made areas outside of low-lying downtown Augusta more desirable. The March 1916 fire destroyed many downtown buildings and displaced residents of the Olde Town neighborhood.

Thousands of temporary jobs were created when major regional public facilities such as Thurmond Dam and Lake (1948-54), the Savannah River Site (1951-53) and Fort Gordon (1942, 1956) were first constructed. SRS and Fort Gordon have provided thousands of permanent jobs for three generations of area residents. Thurmond Lake, located in neighboring Columbia County, is the region's top recreation attraction, a habitat for fish and fowl, and a source of hydroelectric power and flood control. Not surprisingly, Thurmond Lake has attracted suburban residential and commercial development in the decades since it was constructed. The expansion of public medical (MCG, VA) and educational (ASU, Paine, Augusta Technical College) facilities also created new jobs and increased the demand for housing and retail services.

During the 1950s and 1960s, industrial recruitment and construction of suburban industrial parks resulted in the expansion of paper, chemical and other manufacturing facilities. The establishment of the Augusta Corporate Park, a 1,700-acre industrial park located about 15 miles south of downtown, is one indicator that the suburbanization trend continues to this day. New residential subdivisions were developed in south and west Augusta in response to demand from people moving into the area and local residents desiring newer housing. Suburban shopping centers, malls and office complexes were built to serve the new residential areas and provide more jobs. These trends in suburban residential and commercial development continue to the present day.

Public utilities and roads have been improved and extended to meet the demand in suburban and semi-rural parts of the city. The public water, sewer and solid waste systems now cover much of the city, and other utility (electricity, natural gas) and communications (phone, internet, cable TV) providers serve much of the community. Over the last 50 years, the construction of major roads, such as Gordon Highway,

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Interstate 20, Bobby Jones Expressway, J. C. Calhoun Expressway, Jimmie Dyess Parkway and Riverwatch Parkway, has facilitated the movement of people and goods throughout the greater Augusta area. They also fostered additional residential and commercial development. The paving, widening and extension of other arterial highways, such as Deans Bridge Road, Peach Orchard Road, Tobacco Road, Windsor Spring Road and Washington Road, also contributed to development.

Local zoning, subdivision and development regulations also have affected land use patterns. The fundamental purpose of local zoning regulations, which have been in place in Augusta for several decades, is to segregate land uses from one another in order to protect public health, safety and welfare. The local zoning ordinance separates land uses into zones (e.g. agricultural, residential, commercial, industrial) and establishes basic standards related to lot size, lot coverage, height of structures, and setback from property lines and other use zones. The ordinance also includes parking requirements for the different land uses.

The city's subdivision regulations set forth the standards for converting raw land into building lots. The regulations include the general design standards for streets, markers, utility easements, and lots. They also spell out the requirements for preliminary and final plats and the process for approval of both. A number of other related city ordinances include more detailed requirements for drainage structures, water and sewer lines, street and road design, flood damage protection, grading and soil erosion control, and use of public rights-of-way.

9.2.2 Current Land Use Trends

In recent decades the city of Augusta has experienced the “urban sprawl” development patterns evident in communities throughout the country. There is an ongoing national debate about the cause and effect of sprawl, and whether or not this decentralized pattern of metropolitan development is good or bad. This is not an attempt to settle the debate about sprawl, but to point out that development patterns in Augusta have the characteristics of sprawl.

Professor Randall G. Holcombe of Florida State University has written that three kinds of development are typical of “urban sprawl.” They include leapfrog development, strip or ribbon development, and low-density, single-dimensional development. Examples of each type of development are present in Augusta.

- **Leapfrog Development** - Leapfrog development occurs when a new urban use, such as a residential subdivision, is developed in a rural or semi-rural location removed from existing urbanized areas. The new subdivision is attractive to homebuyers because of its remote location, but is close enough to still take advantage of urban services and amenities. When new subdivisions are developed in this manner they increase the demand for public facilities and services (schools, police and fire protection), often conflict with their rural neighbors (e.g. farms), and increase development pressures on surrounding undeveloped land. Residential subdivisions

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and homes on individual lots (stick-built and manufactured) are the primary examples of leapfrog development in Augusta.

The flagpole lot subdivision is a notable part of leapfrog development in Augusta. A flagpole lot subdivision is created when a lot with a limited amount of frontage on a public road is subdivided into multiple lots. Typically, each flagpole lot has a 25-foot wide access drive (“the pole”) extending back from the road some distance to the wider “flag” part of the lot. The home and any accessory structures are sited on the flag part of the lot. The narrow width of the access drive makes it possible to “stack” multiple flagpole lots next to one another.

The flagpole lot development pattern is attractive because it is a relatively cheap and inexpensive way to develop home sites, especially when a large lot is not conducive to development of conventional subdivision lots. Unfortunately, many flagpole lots in Augusta have driveways that are poorly constructed and maintained, resulting in erosion problems and making it difficult for public safety vehicles to access them. Local flagpole lot regulations have been tightened up in recent years to address these impacts and make it prohibitive to develop additional flagpole lots. However, hundreds of flagpole lot subdivisions remain in the city, with the largest concentrations located in the rural and semi-rural parts of the community.

- **Strip Development** – Strip or ribbon development is marked by extensive commercial development along both sides of major arterial roads. In Augusta a combination of individual businesses and large shopping centers occur in a linear pattern on virtually all of the major arterials and some of the adjoining collector streets. The largest concentration of such development occurs near interstate highway interchanges and where major arterial roads intersect one another. Typical characteristics of strip commercial development include multiple curb cuts, large expanses of asphalt parking lots and many commercial signs.

Such factors as the desire to separate land uses, the widening and construction of roads, and trends in the commercial real estate market have contributed to strip commercial development. This type of development pattern, while widely accepted, is often cited as unsightly, an inefficient use of land, and a contributor to traffic congestion.

- **Single-Use Development** - Like many other communities, Augusta has large expanses of low-density, single use development. Low-density, single-family residential subdivisions are the most obvious example of this type of development. Typically, detached single-family residences are located on lots of a quarter-acre or more. The houses front one or more local streets connected to a nearby arterial or collector road. In many cases only one of the subdivision streets connects directly to an arterial or collector road. With a few exceptions, there are no other complimentary improvements or land uses, such as sidewalks, neighborhood parks or open space.

There is no denying that low-density, single-family residential subdivisions are

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widely accepted in the marketplace, and a living environment that many families desire. Local zoning regulations, the extension of public utilities, and the availability of cheaper land on the fringe of the city are some of the factors that have contributed to the proliferation of single-use development in recent decades. Augusta's zoning ordinance separates major land uses into different use zones. With some exceptions, the administration of the ordinance has had the effect of keeping residential, commercial, industrial and institutional uses completely separate from one another. The extension of public water and sewer service to cheaper land on the fringe of the city has had the effect of encouraging additional low-density, single-use development.

Single-use development is often criticized as being an inefficient use of land, for increasing dependence on the automobile, and contributing to traffic congestion. Most residential subdivisions tend to be developed at the low densities mandated by the zoning ordinance, when even slightly higher densities or a cluster development pattern could save valuable open space. Subdivisions are often developed in isolation from one another, putting more traffic on collector streets and making it more difficult for pedestrians and bicyclists. Separation from otherwise complimentary uses, such as parks, open space and even some neighborhood-type businesses, makes residents almost totally dependent on the automobile to get from home to other locations. Development at low densities also makes it difficult to provide public transit service in a cost-efficient manner.

9.2.3 Effect of Land Use Patterns

Whether it is called "sprawl" or simply development patterns resulting from the working of a free-market economy, Augusta's land use pattern has many impacts on the community. The impacts vary by type, location and intensity. For example, the impact of growth on downtown and older neighborhoods is different from those in the suburbs and semi-rural areas.

Some impacts, such as increased dependence on the automobile and traffic congestion, have already been mentioned. For purposes of this section, impacts are grouped into four categories: blight and lack of investment, demand on public facilities and services, impacts on the natural environment, and impacts on the quality of life. This grouping provides a way to identify the major impacts of growth on Augusta and Richmond County.

- **Blight and Lack of Investment** - Shifts in population, housing and commercial development have resulted in blight and lack of investment in downtown Augusta and some older neighborhoods. Population shifts had been underway for several decades, but the opening of two suburban shopping malls in 1978 had an immediate and devastating effect on downtown Augusta. Major retailers relocated to the malls, followed by many of the small retailers that depended on the business generated by the large stores. Some businesses remained to serve the daytime working population and residents of neighborhoods near downtown. However, vacant storefronts, empty parking lots and general neglect characterized downtown.

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Several inner city neighborhoods experienced problems similar to downtown. Declining population resulted in deterioration and abandonment of housing in some neighborhoods. Dilapidated housing was torn down, leaving vacant lots to sit idle and collect trash and debris. As the population declined, neighborhood businesses closed up, giving the impression that the market for private investment was weak and that the remaining residents could not support business. Industrial facilities were abandoned as manufacturing operations ceased or relocated. Investment in new public facilities was limited and general property maintenance was sporadic. The general impression was that certain neighborhoods were not safe and healthy places to live and work.

Interestingly, some of the older suburban shopping centers and “first ring” suburbs in Augusta are now experiencing some of the same problems. In recent years both anchor tenants and small retailers have left some of the strip shopping centers located on major highways. The result has been the blight caused by abandoned storefronts (e.g. boarded-up display windows, empty parking lots) and a decrease in services available to adjoining suburban neighborhoods. Some of these same suburban neighborhoods are experiencing a decline in resident population. These neighborhoods are experiencing the effects of an aging population and are competing for residents with newer subdivisions.

- **Demand on Public Facilities and Services** - While the downtown and older neighborhoods are struggling, other parts of the city are transitioning from a rural or semi-rural environment to one characterized by a predominance of urban uses. New subdivisions, homes on individual lots, commercial establishments, professional offices, and institutional uses are being established in a variety of locations, primarily on the south and west sides of the city. Some development is taking place on an infill basis in areas that have already experienced substantial urban development. Other uses are locating on sites in rural or semi-rural areas.

Development in these transitional areas increases the demand on public facilities and services. Locally this demand is particularly evident in the areas of education, fire protection, roads and public utilities. New public schools have been built in these transitional areas in response to shifts in the school-age population. At the same time, some inner-city schools have been consolidated with one another. The same trend is evident in fire protection facilities. The Fire Department is in the midst of building new fire stations to serve transitional areas. Other new stations are being built in older neighborhoods to consolidate the services of two or more existing stations.

The suburban growth has also increased vehicular traffic on area roads. Increased traffic volumes trigger the need to pave dirt roads, improve major intersections, install new traffic signals and controllers, and widen or extend collector and arterial roads. Demand has also grown for expansion of alternative modes of transportation, including public transit and paratransit service and bicycle and pedestrian facilities. Over the last 15 years the SPLOST program has helped finance many road paving

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and improvement projects throughout the city. Many unmet needs remain and the demand on existing facilities continues to grow.

The impact of growth on the city's water and sewer systems has been particularly noticeable. At the time of consolidation in 1996, the new government faced the daunting task of combining city and county water and sewer systems and correcting deficiencies in some of the facilities, all while accommodating new users. At the same time, the area was entering a period of several years in which rainfall levels were well below normal. The combination of drought and increased demand taxed the systems and led to service interruptions, environmental problems, and complaints from the public.

With the publication of *The Master Plan 2000 for Water and Wastewater Systems*, the city embarked on an aggressive program to consolidate and update water and sewer facilities and meet expected demands in the transitional areas. Bond-financed projects are replacing aging water and sewer facilities, making critical connections between the "old" city and county systems, and extending service to transitional areas. New surface water collection, treatment and distribution facilities are being constructed under the program. The goal is to make surface water the primary source of the city's water supply and meet expected future demands on the water and sewer systems.

- **Impact on the Natural Environment** – The impact of the local land use pattern on natural resources is very typical of most urban development. Over the years, development has replaced natural ground cover with impervious surfaces. New roads, buildings, and parking lots all contribute to the increase in impervious surfaces. While drainage facilities are built in conjunction with these new uses, there is an increase in stormwater runoff to local creeks. Often, the stormwater introduces new pollutants to these water bodies.

Development also alters local floodplains and wetlands, which has environmental and economic consequences. Alteration of floodplains and wetlands make it more difficult for creeks to handle large volumes of water during periods of heavy rainfall. The resulting flooding further alters the floodplain and has an economic cost to both the community and property owners adjacent to the creeks. Soil contamination has occurred on scattered sites, most notably on some industrial sites whose operations pre-date modern environmental regulations. Clean up of these contaminated sites has been costly and time-consuming, and has had social and economic impacts on adjacent property.

The land use pattern also impacts air quality. As pointed out in the Natural Resources chapter, Augusta has a problem with ground level ozone. Ozone is formed when pollutants emitted by cars, manufacturing plants and other sources react chemically in the presence of sunlight. Increased urban development has introduced more sources of air pollution to the area, which has implications for the health of residents, economic development, and investments in transportation projects. Finally, the pattern of land development in Augusta disrupts or eliminates plant and animal

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habitats and reduces the amount of open space. Some animals can adapt to these changes, but others cannot.

- **Impact on the Quality of Life** – Quality of life is a term that is hard to define because it means different things to different people. In an urban setting, “good” quality of life usually means that an area has advantages in such areas as climate, employment, housing price and choice, schools, transportation facilities, and cultural and recreational amenities.

Planning literature is full of conflicting viewpoints on the impact of decentralized growth patterns on the quality of life in urban areas. Advocates of more compact development argue that “sprawl” takes up valuable open space and agricultural land, increases congestion and the time spent in highway traffic, creates remote and isolated neighborhoods on the fringes of cities, and contributes to the decline of downtown and older neighborhoods. Others point out that most Americans prefer a low-density living environment, that suburbanization actually reduces traffic congestion, that the efficiencies of compact development have not been proven, and that cities have to compete with suburban communities to survive.

How has decentralized growth affected the quality of life in Augusta? Has the effect been mostly positive or negative? It is difficult to say if local development patterns are adversely affecting the quality of life. No independent surveys have been conducted on the topic. Comments made during the comprehensive plan public meetings show that those who attended are concerned about a variety of issues, many of which are related to quality of life. Among the concerns expressed during the meetings were the following:

- ◆ Preserve remaining open space, agricultural land, and timberland.
- ◆ City should provide public facilities and services (water, sewer, drainage structures, streetlights, and solid waste collection) to underserved areas.
- ◆ Concern expressed about property values in areas containing a mix of conventional lots and flagpole lots, and a mix of stick-built and manufactured housing.
- ◆ Better enforcement of building codes and development regulations so that poorly developed projects do not impact adjoining properties and result in costly repairs by the city.
- ◆ Rezone more agricultural zones to residential zones to encourage more conventional subdivision development.
- ◆ Concern expressed about proliferation of personal care homes in neighborhoods.
- ◆ Make sidewalks mandatory in new subdivisions and neighborhoods.
- ◆ Promote business development throughout the city (i.e. in inner city, older commercial centers and newer industrial parks).
- ◆ Improve the appearance of the city by beautifying gateways, removing dilapidate structures and cleaning up vacant lots.

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9.3 Opportunities for Encouraging Infill Development

Infill development includes projects that use vacant or underutilized land in previously developed areas for buildings, parking and other uses. Cities throughout the country are using infill development to create bustling neighborhoods, downtowns and cultural districts. Infill development is transforming cities and suburbs by creating walkable retail districts and neighborhoods, introducing successful mixed-use projects, and emphasizing human-scale development that preserves land and fosters balanced communities.

Augustans realize that there are many community assets that can become catalysts for successful infill development. These assets include a strong and diverse employment base; natural features like the Savannah River and Phinizy Swamp; underused historic buildings; a good transportation network, including transit; and a mix of neighborhoods and housing types. Over the last 20-30 years a number of plans have been developed that emphasize infill development. Many specific projects have resulted from these plans, and there continue to be a wide range of infill development opportunities.

9.3.1 Downtown Redevelopment

Downtown redevelopment has been ongoing for over twenty years. A Downtown Development Plan, first published in 1982 and updated in 1995 and 2000, has directly or indirectly resulted in a number of large public and private infill projects. These projects serve as major attractions for both residents and tourists, and create demand for other businesses. These projects include the Augusta Riverwalk, Augusta Riverfront Center, Riverplace Condominiums and Fort Discovery, Augusta Golf and Gardens, the Augusta Museum of History, and Springfield Village Park. More information on each of these facilities is contained in the Community Facilities and Services chapter.

Countless developers, merchants and property owners have initiated downtown redevelopment projects on their own. Many historic buildings have been renovated and are being adaptively reused as restaurants, nightclubs, artist galleries, antique shops, meeting and reception facilities, and specialty shops. Apartments have been created on the upper floors of many commercial buildings. Many merchants have weathered the “bad times” and continue to provide vital goods and services to residents of downtown and the adjoining neighborhoods. The result is a downtown that is beginning to make a comeback due to the commitment of many people and sizable private and public investment.

Additional large-scale infill projects are on the horizon. Three separate studies recommend the construction of a new regional coliseum/sports arena, a new performing arts center, and a new convention center. Though the recommended site for the coliseum is outside downtown, project consultants envision the development of a new municipal campus downtown on the site of the existing civic center. The municipal campus would be a group of low-rise structures housing city government offices, a new public library, a performing arts center, and related parking and support structures. Greenspace would

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surround the structures, and pedestrian-friendly improvements would be made along Eighth Street.

The Performing Arts Center Study, commissioned by the Greater Augusta Council, recommends construction of a multi-purpose facility on a site near the riverfront between Seventh and Eighth Streets. The center would include a 2,000-seat theater with a main floor, a mezzanine and a balcony, and a separate 400-seat theater with fully equipped stage for smaller productions. The center is estimated to cost approximately \$55 million.

A feasibility study completed for the Augusta Convention and Visitors Bureau concluded that the city could support a new exhibit hall and trade center approximately 40,000 square feet in size. The preferred location for the facility is a site that would connect to the Augusta Riverfront Center (Radisson Hotel and Convention Center, Country Suites Hotel). This would put the exhibit hall space and Riverfront Center convention meeting rooms within walking distance of one another. Project consultants estimate that the facility - to include exhibit space, service areas, a new parking deck, and meeting rooms - would cost between \$16.4 and \$20.2 million.

The expectation is that these new large-scale projects will complement other planned projects, such as the new federal office building/bankruptcy court facility, the relocation of downtown railroad tracks, and the renovation of the Municipal Building. These projects will also advance the master plan for downtown and connect to improvement projects in the Laney-Walker neighborhood.

9.3.2 Neighborhood Revitalization

Neighborhood revitalization is another means for encouraging infill development. The condition and health of neighborhoods has been a concern in Augusta for many years. Plans were first developed for neighborhoods within the former city limits in the mid-1970s. These neighborhood plans were updated in the mid-1990s. Demographic profiles of the neighborhoods in the former county were published in 1980. Countless grant applications have documented the needs and opportunities for infill development in individual neighborhoods. In recent years, the City's Consolidated Plan and Strategy - a needs assessment and action plan submitted each year to the U. S. Department of Housing and Urban Development - has focused attention on revitalization projects in the neediest areas of the city.

The city and other stakeholders have successfully implemented infill development projects at the neighborhood level. As a result, the level of sophistication in projects has grown. In July 2003 the Augusta Commission adopted a revitalization strategy and redevelopment plan for a target area encompassing several inner city neighborhoods. The plan is unique in that it seeks to coordinate the ongoing infill development work being undertaken by several non-profit organizations (see additional information in Housing chapter). At the same time, the plan brings together several major institutions - the Medical College of Georgia, Paine College, the Augusta Housing Authority, the Richmond County Board of Education, and the MCG Foundation - to collaborate on

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some innovative projects. These projects are designed to improve housing conditions, provide more jobs, and increase education levels within the target area. Improvements to some transportation corridors (Laney-Walker Blvd., 15th Street, St. Sebastian Way), and storm sewer systems will augment the other projects.

9.3.3 Commercial Center Redevelopment

The redevelopment of older commercial centers offers another outlet for infill development. The condition and occupancy of older strip commercial centers and shopping malls is of concern to many people in Augusta. Locally, Regency Mall is the most visible vacant commercial property, but there are a number of other smaller centers that are having problems retaining anchor tenants and smaller businesses. The closing of Macy's Department Store at Augusta Mall in 2002 heightened awareness of the issue.

Several strip centers are being successfully reused. The Medical College of Georgia uses the former Sears store on 15th Street as an office building. MCG also converted the adjacent Sears Automotive Center into a vehicle maintenance facility and public safety offices. The Sitel Corporation invested \$5.0 million to establish a call and contact center inside a vacant Wal-Mart at Colony Plaza shopping center on Windsor Spring Road. BellSouth and Care South, a home health care management company, are planning to occupy vacant space in the Walton's Corner shopping center on Walton Way Extension. Peach Orchard Plaza recently received a facelift and commercial realtors are marketing the strip center to a mix of retailers, professional offices and food stores. Religious organizations, fitness clubs, and discount retailers are successfully reusing space in other older commercial centers.

There remain several vacant commercial properties in the city, the most conspicuous one being the 800,000 square foot Regency Mall. In 1999, Greater Augusta Progress, Inc. commissioned a study of Regency Mall. The resulting redevelopment strategy, published in January 2000, recommended that the property be converted to a mixed-use development with office, entertainment, sports-oriented retail and value-oriented outlet retail. The plan emphasized that the design of the development be friendly to automobile, transit and pedestrian traffic, because the various tenants/users would depend on each other for patrons. The plan envisioned a defined core of mixed-use buildings organized around a series of streets and public open spaces. Rocky Creek, which passes through the mall property, would be enhanced as part of the plan. In the long term some housing and local-serving retail might be feasible once other uses have been established.

A separate Corridor and Gateway Enhancement Demonstration Project, completed in June 2000, documented the problems and opportunities along parts of Peach Orchard Road and Gordon Highway, two of Augusta's oldest commercial corridors. Among the challenges identified were various types of physical blight, lack of adequate street lights, lack of maintenance of public spaces, high number of curb cuts, and presence of vacant storefronts. The Corridor and Gateway Action Plan included goals to clean up and maintain the corridors, attract and retain businesses, and enhance the appearance of parking lots, building facades and the public right-of-way. The plan includes general

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design guidelines for such things as signage, pedestrian crossings, buffers and building enhancements, and an economic development plan for the Peach Orchard Road corridor. A key to plan implementation is establishing a corridor enhancement committee to direct business development, marketing and related activities. The report also outlines a 10-step process for developing action plans for other commercial corridors in the city.

9.4 Smart Growth and Growth Management Initiatives

The activities and initiatives outlined in the preceding section – downtown redevelopment, neighborhood revitalization, and commercial center redevelopment – indicate that city of Augusta residents are embracing some of the key principles of the so-called “smart growth” movement. This is a nationwide movement in which communities are adopting policies and programs that result in development that serves the economy, the community and the environment. The International City Management Association recently published a report, “Getting to Smart Growth: 100 Policies for Implementation”, that identifies ten smart growth principles. These principles include:

1. Mix land uses
2. Take advantage of compact building design
3. Create a range of housing opportunities and choices
4. Create walkable neighborhoods
5. Foster distinctive, attractive communities with a strong sense of place
6. Preserve open space, farmland, natural beauty, and critical environmental areas
7. Strengthen and direct development towards existing communities
8. Provide a variety of transportation choices
9. Make development decisions predictable, fair and cost effective
10. Encourage community and stakeholder collaboration in development decisions

Even a brief review of these principles indicates that they can guide the way in which the city addresses critical needs outlined in this comprehensive plan. These principles are reflected in the land use policies in this chapter and the goals, needs and strategies listed in the following chapter.

Growth management – defined as government programs that control the timing, location and character of land use and development – is another component of the smart growth movement. Several of the policies included in the 1995 Land Use and Public Facilities Update – and carried forward in this plan – reflect growth management principles. The applicable policies are designed to encourage infill residential and commercial development, confine new development to targeted areas, and promote mixed land uses in appropriate locations. Additional analysis is needed to address some of these issues, such as the appropriate locations for mixed-use development, and the community as a whole needs to review the applicability of other growth management tools.

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One popular tool for mixing land uses is the town center or activity center. A town center is a location or part of a community where a variety of uses – retail, housing, offices, entertainment, lodging, public buildings – are co-mingled with one another. Typically, the town center uses are grouped in a pedestrian-oriented environment in which multiple uses are within a five-minute walk of one another. Town centers are present in urban and suburban locations and in cities and suburbs. Neighboring Columbia County has a growth management plan built around the town center concept and a separate town center plan for the Evans area. Downtown Augusta has some of the major characteristics of a town center, such as a mix of land uses in close proximity to one another, open space and pedestrian facilities, and buildings of similar height, design and setback.

Communities across the country have developed comprehensive plans and growth management plans based on the town center concept. In many of these plans mixed use centers are grouped into categories, such as urban, town and neighborhood centers, based on such factors as the density of employment and housing, the frequency of transit service, and the amount of open space and bicycle and pedestrian facilities. In some plans the town center concept is employed to meet state-mandated growth management objectives. In other plans town centers are viewed as a way to concentrate activity in strategic locations in the community, protect the environment and enhance the quality of life for residents. Design guidelines are employed to assure compatibility in the design and location of buildings, sidewalks, landscaping, outdoor lighting, open space and parking in town centers.

The city of Augusta and all community stakeholders will continue to refine existing smart growth initiatives and explore the applicability of other items in the “smart growth toolkit” to address critical community needs related to future growth and development. One good place to start is the smart growth toolkit compiled by the Georgia Quality Growth Partnership (GQGP), and accessible on the organization’s website (www.georgiaqualitygrowth.org). The Georgia Quality Growth Partnership is a collaboration among diverse public and private organizations formed out of a desire to coordinate their efforts at promoting quality growth approaches throughout the state of Georgia. Among the 37 participating organizations are the Georgia Municipal Association (GMA), the Association County Commissioners of Georgia (ACCG) and the HomeBuilders Association of Georgia.

9.5 Future Land Use

Table L-2 compares existing and future land use by category in Augusta-Richmond County. The projections of future land use are based on a combination of service standards and basic assumptions about development activity and intensity. Future land use will be influenced by such factors as current development patterns and trends, the presence of utilities and improved roads, environmental constraints, the availability of land, proximity to complementary land uses, and the application of land use policies and regulations.

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9.5.1 Estimate of Future Residential Acreage

Over the next twenty years new residential development in Augusta will include a mix of housing types in a variety of settings. The majority of new units will be single-family detached units built in conventional suburban subdivisions. Areas in south Augusta and west of Augusta Mall are the most likely locations for both new site-built units and manufactured housing units. Higher-density single-family residences (townhouses, patio homes) and apartments will be sited where land is in short supply and where proximity to employment and commercial centers is important. Infill residential development will continue in older neighborhoods and additional downtown buildings will be converted to residential use.

The estimate of future residential acreage is based on the population and household projections in the Population chapter. The new housing units were allocated across four classes of residential land use based on the existing distribution. The four classes include Rural Residential (<1 unit / acre), Low-Density Urban Residential (2-4 units / acre), Medium Density Urban Residential (5-10 units / acre), and High Density Urban Residential (>10 units / acre). An estimate was generated of the acreage added within each residential class based on the various densities. Each residential classification is expected to retain about the same proportion to total residential acreage over the forecast period. For example, low-density urban residential use is expected to account for 53-55% of the acreage in all residential uses.

9.5.2 Estimate of Future Commercial & Industrial Acreage

The continued diversification of the area's economy and employment will generate additional commercial and industrial development over the next two decades. The majority of new commercial development will be attracted to sites located in the suburbs and transitional urban/rural areas. Sites on roads and intersections with high vehicle traffic counts will continue to be especially attractive.

Some of the new/expanded retail and professional office development will be accommodated in existing facilities. As noted in the Economic Development chapter, several existing shopping centers are being adaptively reused. In addition, community leaders are focused on attracting additional retail development to the city in order to fill up the estimated one million square feet of vacant retail space. Additional commercial and office development will be attracted to the revitalized downtown and inner city neighborhoods.

New industrial development will be located in the Augusta Corporate Park and on other sites suitably zoned and with good connections to the surface and air transportation networks. The majority of such sites are located in east and south Augusta. Expansion of existing manufacturing and warehousing operations will account for a significant amount of investment, but probably not consume a great deal of additional land.

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Estimates of future commercial and professional office land use were based on the assumption that the number of employees per acre will remain the same as it is now. The same basic assumption was made in calculating future industrial acreage. These assumptions result in an increase of about 1,600 acres used for commercial and professional development, and another 1,900 acres devoted to industrial and warehousing establishments.

9.5.3 Estimate of Future Acreage in Other Land Uses

In the Public/Institutional category it was assumed that Fort Gordon will remain approximately the same size and that other related uses will increase marginally over the next twenty years. The Public/Institutional uses most likely to consume additional acreage include churches, public schools, fire stations and government buildings. Some public uses, such as the Phinizy Road Detention Center, already have additional land on which to expand. The net increase in the Public/Institutional category is 402 acres.

A modest increase of 250 acres is forecast in the Transportation, Communications and Utilities category. Road construction and widening projects, cell tower installation, and utility extensions will lead the way in the category. Airport and railroad acreage is expected to remain unchanged, even though some rail line abandonment is expected.

The expected change in the amount of land used for Parks, Recreation and Conservation is based on a combination of service standards and assumptions about conservation activities. The forecast of acreage devoted to active recreation in the year 2025 is based on the city reaching the minimum standard of 6.25 acres / 1,000 population set by the National Recreation and Parks Association. The city currently has 5.31 acres for every 1,000 population. The forecast of passive recreation and conservation acreage is based on the assumption that an additional 400 acres will be added to the Merry Brickyard Ponds Wetlands Mitigation Bank, and that an average of 75 acres/year will be added to the city's Greenspace Program.

9.6 Policies Guiding Future Land Use Plan

This section of the chapter lists the land use policies that will guide the implementation of Augusta's Comprehensive Plan. Over the years, Augusta has used a number of land use policies, including growth management policies, to guide land use decisions and to designate areas for specific land uses on the Future Land Use map. The policies outlined here build on the existing policies, taking into account the future vision for the city, recent changes in land use, and the public input provided during the development of the plan. They reflect the city's basic approach to future land use, which is to encourage a mix of infill development and new construction in areas where urban services are either available or planned.

The policy recommendations are the product of a comprehensive, general, and long-range planning process. These should be consulted in making any decisions that impact growth and development. Many of the recommendations will need to be "fleshed out" through

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more specific planning and engineering studies. Some will require the alteration of existing ordinances or the creation of new ordinances.

Guiding Policy: Encourage the preservation of residential areas by protecting them from the encroachment of conflicting land uses

Augusta has many well-established, low-density neighborhoods. In many instances there are active neighborhood associations committed to protecting the integrity of the neighborhood and the quality of life. It is critical that neighborhoods are protected from other land uses that are not compatible with them, such as higher-density residential development, industrial facilities and commercial uses that generate high traffic volumes. Maintaining the integrity of existing low-density, single-family zones is the primary means for preserving established neighborhoods. Installing natural buffers or allowing transitional land uses (e.g. professional offices, townhouses) are examples of other methods used to minimize the impact of more intense land uses on neighborhoods.

Guiding Policy: Protect neighborhoods from the adverse effects of special exceptions

Special Exceptions are land uses permitted in any zone when the local government finds that such use is essential or desirable to the public and is in keeping with the goals of the land use plan. Examples of land uses permitted by special exception under the local zoning ordinance include churches, nursing homes, personal care homes, day care facilities (children and adults), transitional housing, funeral homes and private recreation facilities.

Special exceptions are carefully scrutinized because their impact on adjoining residential areas can vary depending on the proposed use. For example, the effect of a new church and related use is different from a family day care home. For this reason, special exceptions are considered on a case-by-case basis in accordance with the requirements and standards in the zoning ordinance. Minimum lot sizes, minimum road frontage, restrictions on hours of operation, limits on outdoor lighting and minimum spacing requirements are examples of the restrictions or conditions placed on special exceptions to minimize their impact on adjoining residential areas. For many special exceptions, a concept plan must be submitted at the time of application so that the effect of the use can be evaluated

Guiding Policy: Encourage the redevelopment of older neighborhoods

It is imperative that all of Augusta's neighborhoods be desirable places in which to live and recreate. It is clear from the facts and issues covered in the population, housing, land use, and economic development chapters that some neighborhoods have experienced loss of population, housing deterioration, and economic decline in the last few decades. The resulting blight directly affects the remaining neighborhood residents and reduces the quality of life for all residents of Augusta. It also is clear that the public, private and non-profit sectors are working cooperatively to address many of the problems in older neighborhoods. Their combined efforts have resulted in the construction and

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rehabilitation of housing, improvements to public facilities, expansion of business, and creation of jobs. Much remains to be done, and this policy support efforts to redevelop neighborhoods in accordance with more specific revitalization strategies.

Guiding Policy: Encourage infill development

This policy complements the policy to redevelop older residential and commercial areas. It is designed to promote a more compact urban form and discourage the sprawl pattern of development. The policy encourages development in areas where adequate infrastructure (roads, utilities) and public facilities and services (fire and police protection, parks) already exist. This policy will likely result in higher density development on some infill sites. Overlay zoning and design guidelines are two of the tools most often used to assure that infill development is compatible with existing residential and commercial development. The following policies should be applied as necessary to protect established neighborhoods adjacent to infill sites:

- **Multiple family and high-density, single-family residential development (six units or more per acre) should be permitted only in commercial areas and transitional commercial/residential areas. Spot zoning for such uses should not be permitted.**
- **Planned medium density single-family residential development (four to six units per acre), should be integrated into existing residential areas but consideration should be given as to the impact on traffic, schools, and recreation facilities. The subdivision of lots to create density greater than the surrounding areas should not be permitted.**

Guiding Policy: Encourage mixed-use development

Mixed-use development (i.e. the town center concept) allows housing, some retail uses, and professional offices to locate in close proximity to one another. While contrary to the separation of land uses mandated by most local zoning ordinances, mixed-use development can be an effective tool to counteract the effects of sprawl. Depending on the location and scale, mixed-use development can be less costly than conventional development and can be employed in both urban and suburban settings. Mixed-use development is practiced on a limited scale in Augusta. The zoning ordinance permits residential development in commercial zones. Some property owners have used this provision to establish apartments on the upper stories of commercial buildings in downtown Augusta.

It is difficult to specify appropriate locations for mixed-use development. Land use categories on the Future Land Use map reflect the predominant future use of the property. Depending on the location, mixed-use development, including housing, may be appropriate in an area designated for professional or commercial development. Once an appropriate location is identified, another option is to establish an overlay zone, including design guidelines, applicable to the mixed-use development.

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Guiding Policy: Provide zoning for land suitable for projected new conventional single-family residential development

Most new low-density, single-family residential development is anticipated to be located on sites south and west of the Bobby Jones Expressway (I-520). Other parts of the city are already heavily developed and infill development will be the pattern in them. The current agricultural zoning in many of the areas outside the Bobby Jones allows for a mix of conventional and manufactured home development. It is recommended that land be rezoned from A (agricultural) to either R-1 (one-family residential) or R-MH (residential manufactured home) in areas where the average lot size is less than two (2) acres. If more than 40% of the housing units in the area are manufactured homes, then rezoning to R-MH is appropriate. Otherwise, the area should be rezoned to R-1. This would leave substantial remaining areas where manufactured home development is permitted.

Guiding Policy: Provide zoning for land suitable for new manufactured homes

Manufactured housing currently represents about 10% of the housing market in Augusta, and is expected to remain about the same percentage in the future. Manufactured housing generally represents the most affordable housing available in the area. To accommodate them, this policy recommends the following actions:

- Amend the zoning ordinance to raise the minimum lot size in Agricultural zones to 2 acres,
- Rezone from Agricultural to Residential Manufactured Home those areas where manufactured homes comprise more than 40% of all units and the majority of lots are less than 2 acres in size.

Guiding Policy: Encourage the redevelopment of older commercial centers

An important part of the overall land use strategy is to encourage the redevelopment and reuse of older commercial centers that have been abandoned or vacated. Redevelopment makes use of existing infrastructure (roads, utilities, and buildings) and brings jobs and needed services to adjoining neighborhoods. It is also consistent with other policies in the land use plan designed to discourage additional commercial zoning, especially General Business zoning, except at major intersections.

Some older centers in Augusta have been successfully redeveloped and reoccupied. Others, most notably Regency Mall, remain vacant and a blight on the community and adjacent neighborhoods. It is important to recognize that a single redevelopment strategy will not fit all of the older commercial centers. The existing success stories offer some important clues for how to reoccupy traditional strip centers with a mix of institutional and business establishments. Regency Mall is a unique situation because of its size and the high cost to redevelop. As the Regency Mall Redevelopment Strategy makes clear, successful reuse of the property will take a broader mix of land uses (institutional, commercial, office, housing, and recreation) and a longer period of time.

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Guiding Policy: Encourage commercial development on principal arterial highways where commercial and / or industrial development is already established

This policy reflects a goal of the plan to limit most commercial development to major roadways. The fact is that principal arterial roads are the most appropriate locations for commercial development because they are designed to handle the vehicle traffic generated by such uses, thereby keeping such traffic out of residential areas. It also reflects the fact that under current Georgia law, governing bodies are almost compelled to permit commercialization of such areas, and seemingly have limited ability to prevent "strip" development of major roads in favor of nodal development at intersections.

Commercial zoning on the principal arterial roads should be limited to a maximum depth of 400 feet, measured from the right-of-way line, except at major intersections or at malls and regional shopping centers. For purposes of this policy, the applicable roads include those identified as "Urban Principal Arterial" and "Principal Arterial" (Rural Legend) on the Highway Functional Classification Maps for the Augusta Urban Area, prepared in accordance with Federal Highway Administration guidelines, and adopted by the Augusta Commission.

It is important to minimize the impact of new commercial uses on adjoining residential areas. Some of the common measures used to screen or buffer new commercial uses from adjoining residential uses include retaining natural vegetative buffers that are already in place, planting trees and other natural vegetation in accordance with the requirements of the city's tree ordinance, and erecting fences or walls. A combination of these measures may be necessary in some instances.

Guiding Policy: Discourage commercial and professional office development on minor arterials and collector roads where such development has not been established, except at major intersections

This policy is designed to limit commercial and professional office development on arterial roads and collector roads in order to protect established residential areas. The policy is also applicable in undeveloped areas where it is desirable to limit such development to major intersections in order to protect open space, agricultural land, and future residential areas.

In the areas where there is a precedent for commercial and professional office development, commercial and professional zoning should be limited to a radius of approximately 500 feet from the center of intersections, and to a strip not more than 300 feet deep, if appropriate. For purposes of this policy, the applicable roads include those identified as "Minor Arterial", "Collector" (Urban and Rural Legends) on the Highway Functional Classification Maps for the Augusta Urban Area, prepared in accordance with Federal Highway Administration guidelines, and adopted by the Augusta Commission.

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There will be instances in which an existing residential structure is proposed for adaptive reuse as a professional office or neighborhood business. This will most often happen in older neighborhoods and at intersections that are transitioning from residential to non-residential use. Where such property is located within the 500-foot radius, the rezoning may be appropriate under the following conditions:

1. The zoning or development is restricted to the subject parcel,
2. The existing residential structure can be adaptively reused without drastically changing the exterior appearance,
3. Required off-street vehicle parking and loading areas are located in a side or rear yard, and
4. Required parking is screened from adjoining residential uses.

Guiding Policy: Encourage industrial development in appropriate locations

Most existing industrial facilities in Augusta are located in close proximity to needed resources (water, utilities) and transportation facilities and away from residential areas. There are exceptions and existing neighborhoods in close proximity to industrial uses need to be accommodated through appropriate emergency management assistance programs. To avoid potential land use conflict in the future, industrial development should be confined to specific areas and spot zoning for industrial sites should not be permitted. Heavy industrial development should be confined to the area east of Georgia Highway 56 and the remainder of east Augusta, and to industrial parks and sites already zoned for such uses. Light industrial development should be confined to several general areas that are identified on the future land use map. Spot zoning for industrial development in areas other than those identified should be prohibited.

Guiding Policy: Protect environmentally sensitive areas

Augusta-Richmond County has many environmentally sensitive areas, including floodplains, wetlands, aquifer recharge areas, natural habitats, and open space. The local government, private sector, and residents recognize the value of these resources and use a variety of tools to preserve them, educate the community, and protect them from insensitive development. Among the tools used are local development regulations and ordinances, flood mitigation planning, the Community Greenspace Program, and community outreach and education initiatives. As the city continues to grow, it will be important to use as many tools as possible to protect these resources.

One tool recently incorporated into the city's zoning ordinance is the conservation subdivision design. Conservation subdivisions are residential or mixed-use developments in which a significant portion of the land is set aside as undivided, permanently protected open space (approximately 25 to 40%) and the houses are clustered on smaller sized lots. Depending on the setting, green space in conservation subdivisions is used for passive recreation, habitat for wildlife, and to protect wetlands and floodplains.

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Augusta's zoning ordinance allows conservation subdivisions to be developed at varying densities in most single-family residential zones. The ordinance specifies that a minimum of 40% of the conservation subdivision be permanently protected greenspace. A local builder is currently developing the plans for Augusta's first conservation subdivision. Augusta will also continue to implement the Community Greenspace Program using Georgia Greenspace funds and other available funding and incentives that can be used to convert sensitive environmental areas to permanently protected greenspace.

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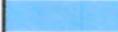
Table L-2 Future Land Use, 2025 Augusta-Richmond County				
	2003		2025	
	Acres	Total	Acres	Total
Residential		52,052		59,886
Rural Residential	19,853		21,465	
Urban Residential - Low Density	27,700		33,246	
Urban Residential - Medium Density	3,078		3,541	
Urban Residential - High Density	1,421		1,634	
Professional Office		635		985
Commercial		5,081		6,371
Industrial		9,203		11,174
Manufacturing/Warehousing	6,071		8,042	
Mining	1,945		1,945	
Landfill	1,187		1,187	
Public/Institutional		52,753*		53,155*
Trans./Comm./Utilities		11,520		11,770
Park/Rec./Conservation		5,873		12,296
Recreation - Active	1,033		1,406	
Recreation- Passive & Conservation	3,798		9,698	
Golf Courses	1,042		1,192	
Agriculture		10,528		6,228
Forestry		18,708		15,902
Undeveloped/Unused		29,794		18,380
Vacant Land	27,016		15,602	
Water	2,778		2,778	
TOTAL – All Land Uses		196,147		196,147
*Includes 44,286 acres at Fort Gordon				
SOURCES: Comprehensive Plan, Neighborhood Plans, Georgia County Guide, SCS, FEMA, Site Plans, Subdivision Plats, Tax Records, Aerial Photographs and Field Surveys				

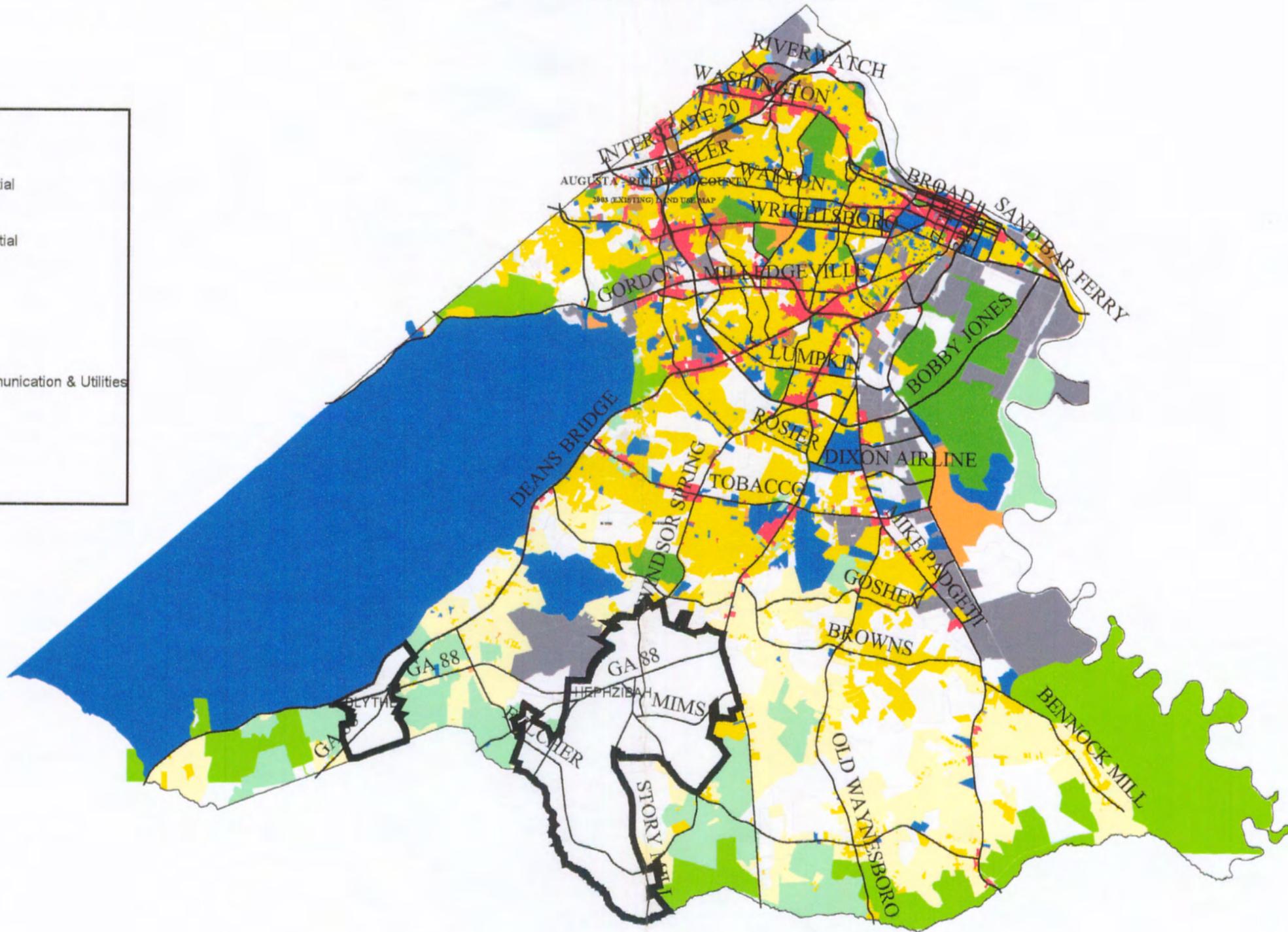
AUGUSTA - RICHMOND COUNTY

EXISTING (2003) LAND USE MAP

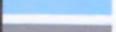
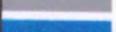
Legend

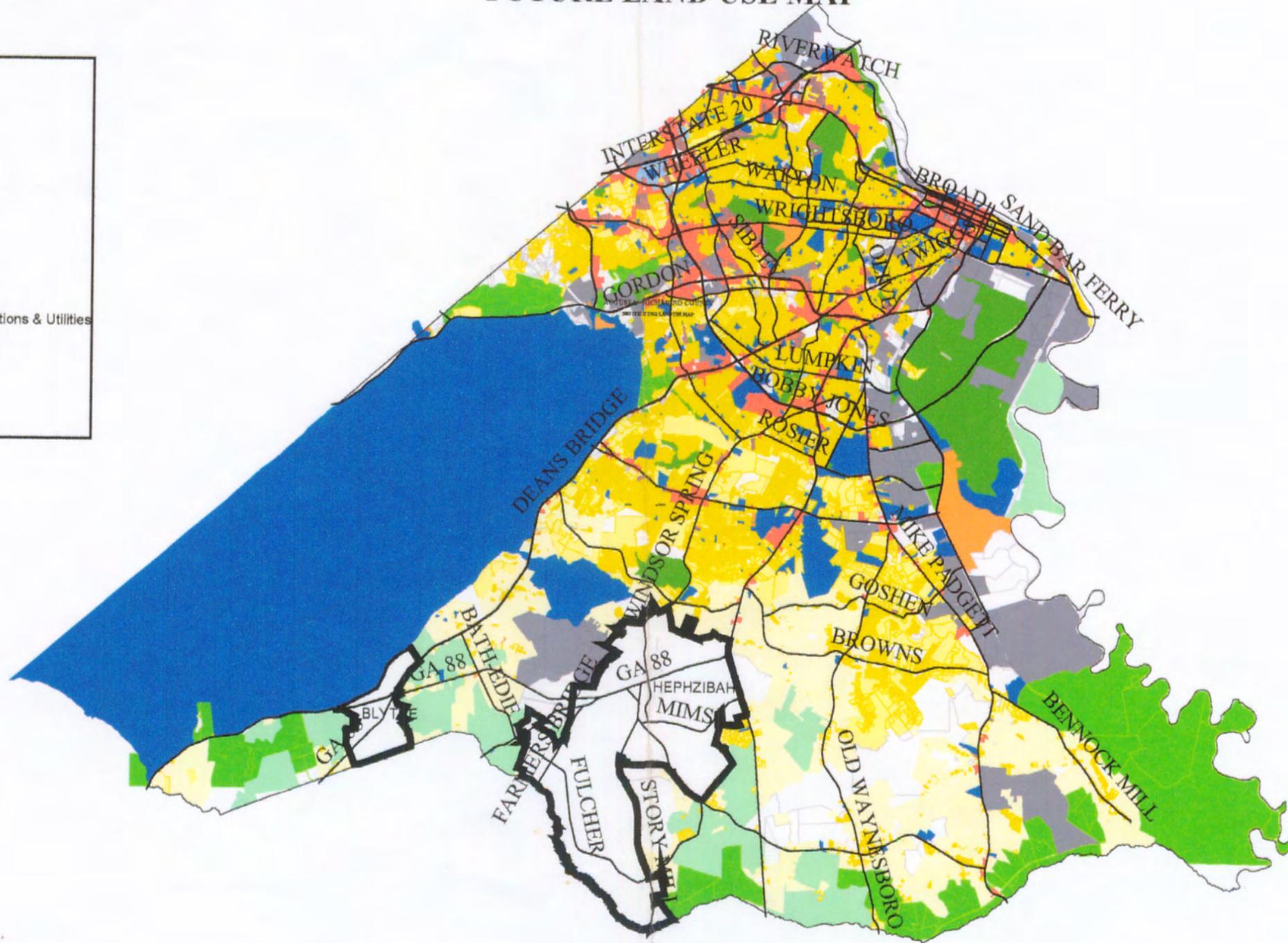
Land Use Classification

	Low Density Residential
	RR
	High Density Residential
	Commercial
	Office
	Industrial
	Public Institutional
	Transportation, Communication & Utilities
	Parks & Recreation
	Agriculture
	Forestry
	Unused



AUGUSTA RICHMOND COUNTY FUTURE LAND USE MAP

Legend	
Land Use Classification	
	Low Density Residential
	Rural Residential
	High Density Residential
	Commercial
	Office
	Industrial
	Public Institutional
	Transportation, Communications & Utilities
	Parks & Recreation
	Agriculture
	Forestry
	Unused



Chapter 10 – Implementation Strategy

10. Introduction

This chapter outlines the strategy for implementing the comprehensive plan. The chapter begins with a statement of the goals and strategies for each of the plan elements covered in the preceding chapters: Economic Development, Transportation, Natural Resources, Historic Resources, Community Facilities and Services, Housing, and Land Use/Growth Management. The goals and strategies reflect the needs and desires identified in the preceding chapters, as well as those enumerated by the public.

Coordination is the key to assuring that plan projects and programs are successfully implemented and adverse impacts are avoided or minimized. The second part of the chapter provides an overview of the mechanisms in place to coordinate implementation of the comprehensive plan. This includes both intergovernmental and intra-governmental mechanisms such as written agreements, formal partnerships, joint meetings and work groups. The chapter concludes with the Short Term Work Program (STWP), the City's five-year plan of action for implementing the comprehensive plan.

10.1 Goals and Strategies

The following goals reflect the assessment of existing conditions and needs, the public input received and the desired future land use pattern outlined in the preceding chapters.

- **Housing Goal - Provide housing choice, in a variety of price ranges, for both homeowners and renters.**

To address this goal the City needs to -

- ❑ Assemble land and vacant properties
- ❑ Provide a regulatory climate conducive to housing development in a variety of price ranges.
- ❑ Preserve the existing housing stock through repair, rehabilitation and code enforcement.
- ❑ Provide access to homeownership for first time buyers, especially low and moderate- income households.
- ❑ Increase the supply of affordable housing for low and moderate-income households.
- ❑ Partner with Community Housing Development Organizations (CHDOs) and other entities to provide affordable housing for low and moderate-income households.

Strategies that will address these needs include -

- ❑ Implement the *Target Area Master Plan* (2003)
- ❑ Provide training and capacity-building assistance to established CHDOs
- ❑ Develop and implement neighborhood improvement strategies in Sand Hills, Harrisburg and other identified areas
- ❑ Rehabilitate owner and renter housing units occupied by low and moderate-income households
- ❑ Construct affordable housing units for low and moderate-income households
- ❑ Establish homeownership counseling and training programs in cooperation with local providers
- ❑ Provide down payment assistance to first-time homebuyers
- ❑ Establish a citywide homeownership resource center (The "Home Shop")
- ❑ Capitalize the Augusta Housing Trust Fund with \$100,000 in seed funds

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- ***Economic Development Goal - Maintain the economic diversity of the community and foster a climate that is conducive to business growth and development.***

To address this goal the City needs to -

- ❑ Promote quality of life enhancements
- ❑ Attract new business and industry to the city
- ❑ Promote the growth and expansion of existing business and industry
- ❑ Retain Fort Gordon
- ❑ Provide a trained, educated labor force for new and expanding business
- ❑ Foster job creation and economic development in distressed neighborhoods
- ❑ Encourage the redevelopment of older retail shopping centers and districts
- ❑ Promote the revitalization of downtown Augusta
- ❑ Maintain data on vacant commercial and industrial properties

Strategies that will address these needs include -

- ❑ Locate appropriate new industries in the Augusta Corporate Park
 - ❑ Assure that Fort Gordon remains open by developing new missions, building more support in the metro area, and protecting the Fort from encroachment by conflicting land uses
 - ❑ Continue to offer financing programs, tax incentives and credits, and technical assistance to new and existing business and industry
 - ❑ Continue to support and advertise job training, business assistance and education programs available through the University of Georgia Small Business Development Center, CSRA Business League, Inc., Augusta Technical College, Georgia Tech Economic Development Institute and the CSRA Regional Development Center
 - ❑ Use authority granted under the Georgia Enterprise Zone Employment Act to create jobs and economic activity in distressed neighborhoods
 - ❑ Implement recommended actions in the Corridor/Gateway Action Plan
 - ❑ Implement recommended projects in the *Augusta 2000 City Center Master Plan*
 - ❑ Implement work program included in the JOBS NOW! Economic development plan for Augusta
- ***Transportation Goal – A transportation system that is accessible to all citizens, provides for the efficient movement of people, goods and services, is integrated with planned land use, and provides mode choice.***

To address this goal the City needs to -

- ❑ Promote planned improvements to the surface transportation network, including critical connections to other parts of Georgia and the Nation
- ❑ Make more efficient use of the existing surface transportation system
- ❑ Promote and support planned improvements to local airports
- ❑ Maintain and expand the local public transportation system
- ❑ Reduce or eliminate conflicts between freight railroad and vehicular traffic
- ❑ Promote passenger rail service to/from Augusta

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- ❑ Increase the number and extent of bicycle and pedestrian facilities
- ❑ Improve access to/use of transportation facilities by the handicapped and disabled

Strategies that will address these needs include –

- ❑ Implement transportation improvement projects in the Augusta Regional Transportation Study (ARTS) *Long Range Transportation Plan* and *Transportation Improvement Program*
 - ❑ Support completion of the remaining segments of the Savannah River Parkway and Fall Line Freeway
 - ❑ Implement transportation improvement projects in the City's SPLOST-funded Construction Work Program
 - ❑ Implement projects in the ARTS *Advanced Transportation Management System (ATMS) Master Plan* (February 2002)
 - ❑ Implement applicable improvement projects at Augusta Regional Airport and Daniel Field
 - ❑ Implement rail relocation projects in cooperation with the railroads and other stakeholders
 - ❑ Promote the implementation of commuter and intercity rail passenger service through Augusta
 - ❑ Implement projects in the *Augusta Public Transit, Transit System Analysis* (November 2001)
 - ❑ Implement projects in the ARTS *Bicycle and Pedestrian Plan* (January 2003)
- ***Community Facilities and Services Goal*** -Provide public facilities and services that meet the needs of residents and businesses, enhance the quality of life, and protect natural resources.

To address this goal the City needs to -

- ❑ Expand municipal water and sewer systems in accordance with established plans.
- ❑ Adjust the location of fire stations in response to shifts in residential and commercial development patterns, and to replace outdated fire stations.
- ❑ Make improvements to roads and bridges that enhance safety, reduce congestion and respond to expected growth patterns.
- ❑ Maintain and expand alternative modes of transportation and encourage connections between modes of transportation
- ❑ Work with the Board of Education to maintain existing public schools and facilitate the development of new ones in appropriate locations.
- ❑ Provide and maintain recreation and park facilities that meet the needs of residents and visitors, contribute to economic development, and help protect natural resources.
- ❑ Provide alternative modes of transportation that meet the needs of those without automobiles, connect neighborhoods to schools and workplaces, and enhance recreation opportunities.
- ❑ Support cultural and entertainment facilities that enhance the quality of life and contribute to tourism and economic development.
- ❑ Employ solid waste management practices that reduce the amount of waste going to the city landfill each year.
- ❑ Provide law enforcement facilities and services that protect the health, safety and welfare of residents, businesses and institutions.
- ❑ Make the Greenspace Plan an integral part of the city's land use plan.

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Strategies that will address these needs include -

- ❑ Implement improvements to the water and sewer systems in accordance with the Master Plan 2000 for Waster and Wastewater Systems, 2000, and any subsequent amendments to the plan.
- ❑ Implement road, bridge and drainage improvement projects included in the Construction Work Program for the City’s Special Purpose Local Option Sales Tax Program
- ❑ Implement road, bridge, transit, enhancement, and related projects included in the Transportation Improvement Program for the Augusta Regional Transportation Study
- ❑ Make improvements to public safety facilities (police, fire, jail, EMS) as necessary to accommodate increased demand.
- ❑ Implement recreation and park projects included in the City’s Special Purpose Local Option Sales Tax Program
- ❑ Acquire properties, or interests in properties, through donation, conservation easements or purchase for the Community Greenspace Program.
- ❑ Coordinate the Community Greenspace Program with the activities of other stakeholders, such as the Augusta Canal Authority, Phinizy Swamp Nature Park, and the Recreation and Parks Department

➤ ***Historic Resources Goal - Preserve historic resources and make them an integral part of tourism, economic development, neighborhood revitalization and heritage education.***

To address this goal the City needs to -

- ❑ Establish procedures for ongoing identification, nomination and protection of historic resources.
- ❑ Implement strategies for preserving and enhancing historic residential neighborhoods.
- ❑ Implement strategies for revitalizing and preserving the downtown historic district.
- ❑ Establish or continue monetary incentives for the preservation of historic resources.
- ❑ Continue programs and initiatives that improve the appearance of historic neighborhoods and the downtown historic district.
- ❑ Develop heritage education programs for children and adults.

Strategies that will address these needs include -

- ❑ Nominate new properties and districts to the National Register and to the Georgia Register of Historic Places.
- ❑ Designate additional local historic districts and properties.
- ❑ Provide property owners and investors with information
- ❑ Partner with neighborhood associations to increase public awareness about the history and significance of older neighborhoods.
- ❑ Partner with Main Street Augusta and the Downtown Development Authority to continue revitalization of historic downtown Augusta.
- ❑ Continue to offer financial incentives to rehabilitate the facades of historic commercial buildings.
- ❑ Encourage residential development in the upper floors of historic commercial buildings.
- ❑ Offer incentives for rehabilitating and reoccupying vacant, historic residential structures.
- ❑ Develop design guidelines for any newly designated historic districts.

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- ❑ Continue to improve the aesthetics of historic districts with signage, lighting, landscaping and other public improvements.
- ❑ Establish heritage education as part of the curriculum in local schools.
- ❑ Reassess the local historic district designation and/or design guidelines for the Bethlehem neighborhood.

➤ ***Natural Resources and Greenspace Goal - Protect natural resources and use them as appropriate to provide recreation opportunities, educate the public and increase tourism. Use Green space to protect natural resources, provide additional recreation resources and enhance the quality of life for all.***

To address this goal the City needs to -

- ❑ Preserve and enhance water quality in the Savannah River and along creeks and tributaries
- ❑ Protect floodplains and wetlands
- ❑ Reduce soil erosion
- ❑ Reduce non-point source pollution of groundwater and surface water sources
- ❑ Assess the health of local watersheds and develop procedures to maintain the water quality in the Savannah River and local creeks and tributaries

Strategies that will address these needs include -

- ❑ Acquire properties, or interests in properties, through donation, conservation easements or purchase for the Community Greenspace Program
- ❑ Encourage the expansion of the 400-acre wetlands mitigation bank on Merry Land property as credits are sold
- ❑ Implement Best Management Practices included in the Augusta-Richmond County Watershed Assessment
- ❑ Develop a Watershed Protection Plan
- ❑ Organize and implement education and outreach programs related to water pollution and water quality issues
- ❑ Detect and eliminate illicit discharges into local creeks and tributaries
- ❑ Encourage the continuation of voluntary actions by citizens, agencies and organizations related to water protection and water quality

➤ ***Growth Management / Land Use Goal - Promote a land use pattern that accommodates growth and revitalization while protecting established residential areas and natural resources.***

To address this goal the City needs to -

- ❑ Accommodate additional residential, commercial and industrial development in the areas designated on the Future Land Use map.
- ❑ Protect residential areas from encroachment by conflicting commercial, industrial and institutional land uses
- ❑ Encourage the revitalization of older neighborhoods
- ❑ Encourage infill housing in older neighborhoods
- ❑ Protect established neighborhoods from commercial encroachment

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- Encourage more pedestrian-friendly development throughout the city

Strategies that will address these needs include -

- Ensure that all necessary utilities are available to a site before development is approved
- Grant setback variances to allow infill housing on vacant lots
- Increase the minimum lot size in agricultural zones to discourage sprawl and the conversion of agricultural land to other uses
- Restrict commercial zoning in rural areas to identified nodes
- Identify additional areas currently zoned Agricultural for conversion to One-family Residential Zones
- Periodically (generally once every 5 years) review entire zoning map to identify and rezone parcels that are inconsistent with the comprehensive plan (i.e. future land use) and the surrounding zoning and land use patterns. The following criteria will be use to identify candidate parcels for rezoning:
 - Zoning classification is clearly inconsistent with the Comprehensive Plan
 - Zoning classification is clearly inconsistent with the surrounding zoning pattern
 - Zoning classification is clearly inconsistent with the surrounding land use pattern
 - Current use of the property could occur at a lesser zoning classification
 - No plans for development of the property, dependent on current zoning classification, have been submitted
 - Zoning classification has been in place for more than 18 months; and
 - Development of the property consistent with the current zoning classification poses a significant threat to the surrounding area

10.2 Coordinated Implementation

Coordination will be vital to the successful implementation of the Comprehensive Plan. Intergovernmental coordination will involve such as activities as explaining the vision for the future of Augusta to others in the metropolitan area, sharing information about projects and activities in the Short Term Work Program, participating in intergovernmental forums and programs, and assessing the potential impact of projects on adjacent communities. Some of the primary intergovernmental coordination tools include the following:

- **Service Delivery Strategy** – In 1999, Augusta-Richmond County, Hephzibah and Blythe developed a Service Delivery Strategy (SDS) in compliance with the Georgia Service Delivery Strategy Law (House Bill 489 – 1997). The adopted SDS includes a summary of service delivery agreements among the three local governments, copies of applicable agreements and contracts, and maps of applicable service delivery areas. The SDS is designed to promote effectiveness, cost efficiency, and funding equity in the delivery of essential public services. The SDS also includes an Agreement to Resolve Land Use Classification Disputes. The agreement spells out an intergovernmental review process for proposed zoning or land use map changes affecting property within 1,000 feet of a common boundary.
- **Developments of Regional Impact** - The City carries out the applicable responsibilities for intergovernmental review for Developments of Regional Impact (DRIs) as required under the Georgia Planning Act of 1989. DRIs are defined as large-scale developments that are likely to have

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effects outside of the local government jurisdiction in which they are located. The DRI review process is designed to improve communication between affected governments and to provide a means of revealing and assessing potential impacts of large-scale developments before conflicts relating to them arise.

- **Regionally Important Resources** - The City carries out the applicable responsibilities for intergovernmental review for Regionally Important Resources (RIRs) as required under the Georgia Planning Act of 1989. A RIR is a natural or historic resource that is of sufficient size or importance to warrant special consideration by the local governments having jurisdiction over that resource. The Augusta Canal National Heritage Area is a designated RIR. A management plan for the Canal is in effect. Activities sponsored by the City that may have an impact on the Canal, such as issuing a permit or building a public facility, are subject to intergovernmental review for consistency with the management plan.
- **Regional Planning and Development** – The City participates in a wide variety of regional planning activities related to transportation, economic development, water quality, land use and other issues. The City has been a part of the Augusta Regional Transportation Study since its inception in the mid-1960s. The City is a long-time member of the CSRA Regional Development Center and the CSRA Unified Development Council, and recently joined the CSRA Unified Development Authority. The City is also joining with Burke and Columbia Counties to form the Greater Regional Partnership for Economic Development. The partnership would be set up separately from the Augusta Metro Chamber of Commerce and would focus on recruiting new industry and expanding existing businesses. The City recently participated in a regional water quality assessment project covering the Savannah River Basin, and is partnering with four adjacent counties to study the feasibility of a regional “Recovered Materials Processing Facility” for recyclable materials.

It will also be important for city departments and local stakeholders to work together to implement the plan. Several city departments and other agencies work together to review all subdivision plans and site plans for compliance with applicable ordinances and regulations. Many of the same agencies, as well as the local development community, are represented on the Subdivision Regulation Review Committee. The committee meets quarterly and coordinates any updates or amendments to the 17 "Development Documents" regulating development in Augusta. Quarterly meetings are held to review the status of SPLOST funded projects, giving city departments an opportunity to share information and coordinate activities. The City also works closely with the Richmond County Board of Education in evaluating sites for new schools.

10.3 Short Term Work Program

The Short Term Work Program (STWP) is included at the end of this chapter. The STWP lists the specific actions that the City and other community stakeholders will undertake during each of the next five years to implement the approved comprehensive plan. The STWP is designed to address community needs and implement the plan strategies. STWP projects are grouped by major functional category (e.g. Housing, Transportation, Community Facilities and Services). Projects include capital improvements planned by the City, administrative or regulatory changes to be made by the City, activities to be undertaken by the private and/or non-profit sectors, and activities involving public/private partnerships. Each project description includes the time frame for implementation, the responsible party or parties, the estimated cost, and the potential fund source or sources.

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10.4 Plan Amendments and Updates

Community planning is a continuous process and the Comprehensive Plan will be amended and updated in accordance with the Minimum Planning Standards. The City will monitor change in such areas as housing, population, employment, and land use, and amend the plan in response to such changes. The City will consult with the CSRA Regional Development Center in determining whether a proposed amendment to the Comprehensive Plan is a major or minor amendment. Depending on the scope and extent of the change, the City will complete either a minor or major plan amendment to the plan.

The City will also update the STWP every five (5) years and, in accordance with an agreement with the Georgia Department of Community Affairs, update the Comprehensive Plan in five years (2008). Thereafter, the Comprehensive Plan will be updated, at a minimum, every ten years. Amendment and updates will be completed in accordance with the applicable submittal, review and public participation procedures.

10.4.1 Minor Plan Amendment

A minor plan amendment will be triggered by changes that are purely local in nature and do not affect another local government. The Augusta Commission will adopt a minor amendment at any time during the year, and send a summary of such action to the CSRA Regional Development Center on an annual basis.

10.4.2 Major Plan Amendment

A major amendment will be triggered by significant changes that alter the basic tenets of all or part of the Comprehensive Plan or potentially affect another local government. Examples of significant changes include: (1) changes of 10% or more in the population (increase or decrease) on which the plan is based; (2) changes in the Future Land Use Map that propose more intense or dense uses located in close proximity to an adjoining local government; (3) and changes in the planned location of public facilities (water, sewer, transportation) to areas not previously projected to receive such facilities.

10.4.3 Short Term Work Program Update

Augusta –Richmond County will update the STWP every five years. The next STWP will therefore cover the years 2008-2012. In keeping with the Minimum Planning Standards, the STWP update will include a list of projects for the subsequent five-year period, and report of plan accomplishments that identifies the status of each activity in the current STWP. The report of accomplishments will classify projects in one of four categories: completed, underway, postpone, or deleted. A minimum of one public hearing will be held to inform the public of the City’s intent to update the STWP and to receive suggestions and comments on the proposed update.

10.4.4 Comprehensive Plan Update

In accordance with a memorandum from the Georgia Department of Community Affairs dated April 17, 2001, Augusta-Richmond County will complete the next full update of its Comprehensive Plan in five years (2008). Thereafter the plan will be updated, at a minimum, every ten years. After five years,

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in 2013, the City will determine if the Comprehensive Plan warrants a major update based on the extent of change that has occurred by then. If changes have occurred and not been included in the Plan through amendments, then a complete update will be undertaken in accordance with the Minimum Planning Standards.

10.4.5 Annual Monitoring of Comprehensive Plan

The Comprehensive Plan will be monitored on an annual basis. The Augusta-Richmond County Planning Commission will prepare a written report for the Augusta Commission summarizing, at a minimum, changes in the number of housing units, population estimates, land absorbed by residential and non-residential development, rezoning in relation to the Future Land Use Map, and status of projects in the Short Term Work Program. The results of the monitoring will be used to decide whether or not to make minor and major amendments to the plan.

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SHORT TERM WORK PROGRAM: 2003-2007

AUGUSTA-RICHMOND COUNTY

Project	Year of Implementation					Responsibility	Estimated Cost	Funding Source
	2003	2004	2005	2006	2007			
LAND USE / GROWTH MANAGEMENT								
Identify areas of potential development for conversion from Agricultural zoning to Residential zoning	■	■				City Commission, Planning Commission	Staff Time	City
Identify areas with a majority of manufactured housing and rezone to Residential or R-MH		■	■			City Commission, Planning Commission	Staff Time	City
Inventory location and amount of vacant space in strip commercial centers		■				Planning Commission	Staff Time	City
Update zoning map to reflect Comprehensive Plan, existing land use and other relevant considerations	■				■	City Commission, Planning Commission	Staff Time	City
Update local zoning and development ordinances as necessary to achieve quality growth	■	■	■	■	■	City Commission, Planning Commission	Staff Time	City
Address growth management issues through use of the Georgia Quality Growth Partnership's <i>Smart Growth Toolkit</i>	■	■	■	■	■	City Commission, Planning Commission	Staff Time	City
Promote cooperation with adjacent communities and Fort Gordon regarding land use and re-zoning actions	■	■	■	■	■	City, Fort Gordon and adjacent communities	Staff Time	City, Fort Gordon
Participate in joint land use study with Fort Gordon	■	■				City, Fort Gordon	Staff Time	City, Fort Gordon
HOUSING								
Continue to implement modernization projects at Housing Authority sites	■	■	■	■	■	Augusta Housing Authority (AHA)	\$24,470,785	HUD

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Project	Year of Implementation					Responsibility	Estimated Cost	Funding Source
	2003	2004	2005	2006	2007			
Rehabilitate 275 housing units for low income homeowners	■	■	■	■	■	HND	\$6,475,000	HUD, Program Income
Rehabilitate 150 housing units for low income renters	■	■	■	■	■	HND	\$2,250,000	HUD, Program Income
Complete emergency repairs on 75 housing units occupied by low income households	■	■	■	■	■	HND	\$375,000	HUD, Program Income
Provide downpayment assistance to 100 first-time homebuyers	■	■	■	■	■	HND	\$125,000	HUD
Demolish 50 dilapidated housing units and rebuild new units on site for low income homeowners	■	■	■	■	■	HND	\$2,283,000	HUD
Establish Redevelopment Organization to coordinate all projects per the <i>Target Area Master Plan (2003)</i>	■					HND	N/A	City
Implement new and renovated housing projects in inner-city target area per the <i>Target Area Master Plan (2003)</i>	■	■	■	■	■	City, CHDOs, Private Developers	N/A	Various, including local housing trust fund
Implement economic development programs in inner-city target area per <i>Target Area Master Plan (2003)</i>		■	■	■	■	City, GMCA, MCG, Private Sector	N/A	Bonds, tax credits, private, Section 108 loan
Implement “quality of life enhancements” in inner-city target area per <i>Target Area Master Plan (2003)</i>		■	■	■	■	City, Institutional Partners, Private Sector	N/A	Bonds, tax credits, private, Section 108 loan
Implement code enforcement program in the inner-city target area per <i>Target Area Master Plan (2003)</i>	■					Augusta License & Inspection Department	N/A	City
Use the Augusta Land Bank to acquire tax delinquent and abandoned properties per <i>Target Area Master Plan (2003)</i>	■	■	■	■	■	Land Bank Authority, Law Department	N/A	Bond funds, CDBG, City

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Project	Year of Implementation					Responsibility	Estimated Cost	Funding Source
	2003	2004	2005	2006	2007			
ECONOMIC DEVELOPMENT								
Attract industry to the Augusta Corporate Park	■	■	■	■	■	County Development Authority, Chamber, City	Staff Time	County Develop Auth., Chamber, City
Implement downtown revitalization projects through public-private partnerships	■	■	■	■	■	City, DDA, AT, Private	N/A	City, DDA, AT, Private
Implement enhancement projects on gateways into the city	■	■	■	■	■	City, GAP, Chamber, Private	N/A	City, GAP, Chamber, Private
Create a Business Improvement District (BID) in downtown Augusta	■					BID Steering Committee, DDA, City	N/A	Property Tax in the BID
Complete and open Augusta Canal Interpretive Center	■					Augusta Canal Authority	\$3,000,000	Augusta Canal Authority
Designate and market additional enterprise zones	■	■				Housing & Neighborhood Development Department	Staff Time	City
Attract new missions / partnerships to Fort Gordon	■	■	■	■	■	Fort Gordon, Chamber, City, CSRA Alliance for Fort Gordon	N/A	City, Private Sector, Others
Develop a BioBusiness Center on a small site proximate to the Medical Center. BioBusiness Center to be an incubator for start-up companies.	■	■	■	■	■	Georgia Medical Center Authority, MCG	\$3,000,000	Georgia Medical Center Authority
Explore alternative sites for a Biomedical Research and Technology Park	■	■	■	■	■	Georgia Medical Center Authority	Staff Time	Georgia Medical Center Authority

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Project	Year of Implementation					Responsibility	Estimated Cost	Funding Source
	2003	2004	2005	2006	2007			
HISTORIC RESOURCES								
Issue Certificates of Appropriateness for 300 projects in local historic districts	■	■	■	■	■	Historic Preservation Commission	Staff Time	City, Historic Augusta, Inc.
Complete restoration of Joseph Lamar House	■	■				Historic Augusta, Inc.	\$1,147,900	City, State, Historic Augusta, Inc., Private Donations
Complete historic resource survey of Pinch Gut National Register District	■					City, Consultant	\$9,166	DNR, City
Complete Historic Structure Assessment – Appleby Library Outbuilding		■				City, Consultant	\$10,000	DNR, City
GREENSPACE AND NATURAL RESOURCES								
Continue to participate in the Georgia Greenspace Program and protection of environmentally sensitive lands as open space	■	■	■	■	■	Central Savannah River Land Trust, City	N/A	State, City, Private Sector
Develop a greenway along the river levee linking downtown to Phinizy Swamp Nature Park. Link to Augusta Canal and North Augusta trails.	■	■	■	■	■	Central Savannah River Land Trust, City	\$1,560,259	State, City, Private Sector
Develop Butler Creek Greenway*			■	■		City	\$5,000,000	SPLOST Phase V

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Project	Year of Implementation					Responsibility	Estimated Cost	Funding Source
	2003	2004	2005	2006	2007			
Implement recommendations for community outreach, long-term stream monitoring, & sewer system maintenance & procedural improvements contained in the <i>Augusta Watershed Assessment Report (Jan. 2003)</i>	■	■	■	■	■	APW&E, AUD, Augusta Watershed Roundtable, Consultant, Planning Commission	\$500,000	State, City, Private Sector, Non-profits
Develop Early Action Plan to meet federal air quality standards. Incorporate into State Implementation Plan	■	■	■			GA EPD, City, Various Stakeholders	Staff Time	State, City
Implement emission reduction strategies to demonstrate compliance with federal air quality standards				■	■	GA EPD, City, Various Stakeholders	N/A	State, City, Private Sector
Support implementation of the Phinizy Swamp Park Master Plan (buildings, education, research, land management)	■	■	■	■	■	Southeastern Natural Sciences Academy, Private, City, School Systems	N/A	City, Grants, Private donations
COMMUNITY FACILITIES AND SERVICES								
Complete water & sewer projects funded by Series 2000 Bonds	■	■	■	■	■	AUD	\$90.127 M	Series 2000 Bonds
Complete / Initiate water & sewer projects funded by Series 2002 Bonds	■	■	■	■	■	AUD	\$130 M	Series 2002 Bonds
Select site, design and construct a new Judicial Center	■	■	■	■	■	City, Court Officials	\$74 M	SPLOST Phases II, IV, & V
Select site, design & construct new municipal administrative building *		■	■	■	■	City	\$20 M	SPLOST Phase V
Select site, design & construct new main branch of Augusta Regional Library		■	■	■	■	City	\$15 M	SPLOST Phases IV & V, Private

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Project	Year of Implementation					Responsibility	Estimated Cost	Funding Source
	2003	2004	2005	2006	2007			
Design & construct new facility for Public Works and Utilities Departments	■	■	■			APW&E, AUD	\$19.5 M	SPLOST Phase V, Bonds
Complete construction of new animal control center	■					APW&E	\$2.080 M	SPLOST
Design & construct new building for federal agencies, U.S. Bankruptcy Court, U.S. Attorney, etc.	■	■	■			GSA, City	\$20 M	Federal
Design & construct new regional coliseum*		■	■	■	■	City, Private, Other Local Governments	\$89.7 M	SPLOST Phase V, State, Private
Select site, design and construct new exhibit hall and trade center *	■	■	■	■	■	City, CVB	\$20 M	SPLOST Phase V
Select site, design & construct new performing arts center *	■	■	■	■	■	City, Arts Council	\$55.0 M	Public, Private
Design & construct new pod at the Phinizy Road Jail *		■	■			City, Sheriff's Department	\$4.5 M	SPLOST Phase V
Complete construction of 5 new fire stations at various locations	■	■				Fire Department	\$6.6 M	SPLOST Phase IV
Complete construction of Brookfield Park	■					Recreation and Parks Department	\$1.2 M	SPLOST Phase IV
Complete construction of Sand Hills Park	■	■				Recreation and Parks Department	\$1.08 M	SPLOST Phase IV
Complete design and construction of library and community center at Diamond Lakes Park	■	■				Recreation and Parks Department	\$5.8 M	SPLOST Phase IV
Upgrade existing parks as detailed in the Recreation and Parks Capital Improvements Plan. *	■	■	■	■	■	Recreation and Parks Department	N/A	SPLOST Phase V
ARC drainage improvements, Phase I	■	■				APW&E	\$1,458,750	SPLOST Phase III
ARC drainage improvements, Phase II	■	■				APW&E	\$84,100	SPLOST Phase III

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Project	Year of Implementation					Responsibility	Estimated Cost	Funding Source
	2003	2004	2005	2006	2007			
Bungalow Rd. drainage improvements	■	■				APW&E	\$2,131,780	SPLOST Phase III
Engineer and complete East Boundary St. drainage improvements	■	■				APW&E	\$1,167,000	SPLOST Phase IV
Green Meadows drainage improvements	■	■				APW&E	\$200,000	Local
Repair and replace exterior finishes on JLEC	■	■				APW&E	\$500,000	SPLOST Phase IV
Replace roofing on JLEC	■	■				APW&E	\$350,000	SPLOST Phase IV
Phinzy Rd. Jail - install lightning protection equipment	■					APW&E	\$250,000	SPLOST Phase IV
Raes Creek, Sec. III drainage improvements – Lake Olmstead to Berckmans Rd.	■	■				APW&E	\$880,000	SPLOST Phases I & II
Complete Regional Flood Control Feasibility Study	■					APW&E, US Army Corps of Engineers	\$1,637,649	SPLOST Phases I & III
Skinner Mill Rd. culvert extension	■					APW&E	\$156,100	SPLOST Phase II
Travis Rd./Plantation Rd. drainage improvements		■	■			APW&E	\$2,361,000	SPLOST Phase III
Woodlake drainage improvements	■	■				APW&E	\$939,000	SPLOST Phase III
Complete Phase II public school construction, renovation and expansion projects.	■	■	■	■	■	RCBOE	\$162 million	Sales Tax
TRANSPORTATION								
Implement projects in the Augusta Regional Airport Master Plan	■	■	■	■	■	Augusta Aviation Commission	N/A	Federal
Activities (engineering, land acquisition, etc.) related to relocating NS Railroad mainline off of 6 th Street right-of-way. *	■	■	■	■	■	City, North Augusta, Railroads	70,000,000	Federal, SPLOST Phase V, South Carolina

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Project	Year of Implementation					Responsibility	Estimated Cost	Funding Source
	2003	2004	2005	2006	2007			
Establish transportation control center within new public works/utilities building		■	■			APW&E	1,200,000	FHWA, GDOT
Widen Walton Way Ext./Davis Rd. from 2 to 4 lanes from Skinner Mill Rd. to Columbia Co. Includes ½ diamond interchange @ I-20		■	■	■		GDOT, APW&E	\$14,004,241	FHWA, GDOT
Reconstruct I-20 @ I-520 Interchange				■	■	GDOT, APW&E	\$85,672,660	FHWA, GDOT
Widen Alexander Drive from 2 to 4 lanes from Washington Rd. to River Watch Pkwy.					■	GDOT, APW&E	\$6,850,027	FHWA, GDOT SPLOST Phase III
Acquire right-of-way and complete drainage improvements on I-20 @ Crane Creek			■	■	■	GDOT	\$9,047,000	FHWA, GDOT
Complete design and start construction for widening of I-20 from 4 to 6 lanes from Belair Rd. to River Watch Pkwy.				■	■	GDOT	\$2,021,000 (PE) \$31,307,000 (CST)	FHWA, GDOT, SPLOST Phase III
Acquire right-of-way to widen 15 th St./MLK Blvd. from Government St. to Milledgeville Rd.				■	■	GDOT, APW&E	\$1,350,000	FHWA, GDOT
Acquire right-of-way to widen Wrightsboro Rd. from 2 to 4 lanes from Jimmie Dyess Pkwy. to I-520 SB ramp		■	■			GDOT, APW&E	\$5,540,000	FHWA, GDOT, SPLOST Phase III
Widen bridge on Windsor Spring Rd. @ NS Railroad from 2 to 4 lanes					■	GDOT, APW&E	\$967,000	FHWA, GDOT, SPLOST Phases III & IV
Widen bridge on Windsor Spring Rd. @ Spirit Creek from 2 to 4 lanes				■		GDOT, APW&E	\$648,000	FHWA, GDOT, SPLOST Phases III & IV
Acquire right-of-way & widen Windsor Spring Rd. from 2 to 4 lanes from Willis Foreman Rd. to Tobacco Rd.				■	■	GDOT, APW&E	\$10,825,000	FHWA, GDOT, SPLOST Phases III & IV

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Project	Year of Implementation					Responsibility	Estimated Cost	Funding Source
	2003	2004	2005	2006	2007			
Acquire right-of-way & widen Windsor Spring Rd. from 2 to 4 lanes from Willis Foreman Rd. to SR 88 in Hephzibah				■	■	GDOT, APW&E	\$8,686,000	FHWA, GDOT, SPLOST Phases III & IV
Acquire right-of-way & construct St. Sebastian / Greene St. Ext. in vicinity of CSX Railroad & 15 th St.		■	■	■	■	GDOT, APW&E	\$15,771,000	FHWA, GDOT
Railroad Street slope repair		■				APW&E	\$289,500	SPLOST Phase III
Complete preliminary engineering for widening of I-520 from 4 to 6 lanes from Gordon Hwy. to Deans Bridge Rd.				■	■	GDOT	\$200,000 (PE)	FHWA, GDOT SPLOST Phase III
Intersection improvements on Mike Padgett Hwy. (SR 56) @ New Goshen Rd. & Goshen Industrial Blvd.	■	■				GDOT, APW&E	\$543,000	FHWA, GDOT, SPLOST Phase III
15 th St. (SR 4) intersection improvements @ Central Ave.	■	■			■	GDOT	\$117,000	FHWA, GDOT
Peach Orchard Rd. (SR 121) intersection improvements @ Windsor Spring Rd.	■	■				GDOT, APW&E	\$810,700	FHWA, GDOT, SPLOST Phase II
Traffic signal upgrades @ 13 locations (8 on SR 104, 3 on SR 232 & 2 off-system)	■	■				GDOT	\$900,000	FHWA, GDOT
Traffic engineering, Phase II- add turn lanes, accel/decel lanes & signal adjustments at various locations		■	■			APW&E	\$505,000	SPLOST Phase III
Widen Warren Rd., from Washington Rd. to Warren Bridge Rd., and install sidewalks and storm drains. Realign Warren Rd. intersection @ Washington Rd. & Beverly Heights Drive	■	■				APW&E	\$2,362,000	SPLOST Phase III

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Project	Year of Implementation					Responsibility	Estimated Cost	Funding Source
	2003	2004	2005	2006	2007			
Design & construct intersection improvements on Washington Rd @ Boy Scout Rd. & Center West Pkwy.	■	■	■			APW&E	\$752,000	SPLOST Phase IV
Windsor Spring Rd. improvements from Peach Orchard Rd. to Wyman St. to Old Louisville Rd.	■	■				APW&E	\$2,133,000	SPLOST Phases I & III
Wrightsboro Rd. widening, Phase I from Augusta West Parkway to Marks Church Rd.	■	■	■			APW&E	\$2,782,000	SPLOST Phase IV
Complete Augusta Canal Multi-use Trail, Phase II	■	■				GDOT, Augusta Canal Authority	\$1,250,000	GDOT, Augusta Canal Authority
Complete rehabilitation of Augusta Canal Headgates & locks	■	■				GDOT, Augusta Canal Authority	\$1,120,750	GDOT, Augusta Canal Authority
Complete construction of two replica Petersburg boats for use on Augusta Canal	■					GDOT, Augusta Canal Authority	\$772,000	GDOT, Augusta Canal Authority
Complete rehabilitation of historic structures at Augusta Canal Headgates	■	■				GDOT, Augusta Canal Authority	\$942,304	GDOT, Augusta Canal Authority
Develop multiuse facility on the Savannah River levee from Gordon Highway to Sand Bar Ferry Rd. Project # R51				■	■	City, ARTS	\$816,326	Federal, Local
Widen Peach Orchard Rd. from 2 to 4 lanes with median from SR bb to Burke Co.		■	■	■		GDOT	\$21,298,000	FHWA, GDOT
Widen Barton Chapel Rd. from 2 to 3 lanes from Glenn Hills Dr. to Barton Chapel Rd. (Barton Chapel Rd. Phase II)	■	■				APW&E	\$2,896,000	SPLOST Phase II

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Project	Year of Implementation					Responsibility	Estimated Cost	Funding Source
	2003	2004	2005	2006	2007			
Extend Bobby Jones Exp. (I-520) from Laney-Walker Blvd. to Savannah River	■	■				GDOT	\$7,830,000	FHWA, GDOT
Engineer and install downtown traffic signal & lighting upgrades – Broad St. area	■	■				APW&E	\$2,323,000	SPLOST Phase IV
Engineer and install downtown traffic signal & lighting upgrades – Telfair St. area	■	■				APW&E	\$1,300,000	SPLOST Phase IV
Engineer, acquire right-of-way & widen Marvin Griffin Rd. from 2 to 4 lanes from Mike Padgett Hwy. to Doug Barnard Pkwy.	■	■	■	■		APW&E	\$3,467,000	SPLOST Phases II & III
Widen Morgan Rd. from Tobacco Rd. to Deans Bridge Rd.	■	■				APW&E	\$2,340,000	SPLOST Phases I & III
Engineering and design of widening of Old Savannah Rd./Twiggs St. from 6 th Ave. to Nicholas St.	■					APW&E	\$136,000 (PE)	SPLOST Phase III
Acquire right-of-way and relocate utilities for Parham Rd. improvements from Gordon Hwy. to Columbia Co.	■	■				APW&E	\$9,500	SPLOST Phase II
Paving Various Roads, Phase VIII	■	■	■	■	■	APW&E	N/A	SPLOST Phase III, & IV
Engineer, acquire right-of-way & widen Belair Road from Wrightsboro Rd. to Jimmie Dyess Pkwy.	■	■	■			APW&E	\$2,361,000	SPLOST Phase III
Widen Bungalow Road from Richmond Hill Rd. to Peach Orchard Rd.	■	■				APW&E	\$2,131,780	SPLOST Phase III

Note: Projects with an asterisk (*) are contingent on being included on the SPLOST Phase V project list

Chapter 10 – Implementation Strategy

KEY TO ABBREVIATIONS:

- FHWA – Federal Highway Administration
- HUD – Housing and Urban Development Department
- GSA – General Services Administration
- GDOT – Georgia Department of Transportation
- GA EPD – Georgia Environmental Protection Division
- MCG – Medical College of Georgia
- City – City of Augusta
- AT – Augusta Tomorrow
- RCBOE – Richmond County Board of Education
- AHA – Augusta Housing Authority
- APW&E – Augusta Public Works & Engineering Department
- AUD – Augusta Utilities Department
- HND – Augusta Housing & Neighborhood Development Department
- CVB – Augusta Metro Convention & Visitors Bureau
- Chamber – Augusta Metro Chamber of Commerce
- GAP – Greater Augusta Progress
- ARTS – Augusta Regional Transportation Study
- Arts Council – Greater Augusta Arts Council