COOKEVILLE 2030 PLAN

COOKEVILLE
TENNESSEE

COOKEVILLE 2030 PLAN

(Amended by Ordinance No. O12-06-08)

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CHAPTER I

INTRODUCTION

PURPOSE OF PLAN

In October of 2000, the Cookeville City Council adopted the Cookeville Comprehensive Future Land Use Plan, 1999-2020, the first long range plan for the city in over 30 years. The purpose of this document is to provide the City of Cookeville, Tennessee with a revised plan for its future development. An update of the 1999-2020 Plan is necessary for several reasons including:

- Many of the goals and objectives specified in the 1999-2020 Plan have been achieved.
- A significant amount of development has occurred in the city since the completion of the 1999-2020 Plan.
- The city boundaries have greatly expanded since 2000.

The purpose of this comprehensive plan is to create a broad development strategy for the municipality and to identify the means for implementation. As specified in *Tennessee Code* Section 13-4-203, "The plan shall be made with the general purpose of guiding and accomplishing a coordinated, adjusted and harmonious development of the municipality which will, in accordance with existing and future needs, best promote public health, safety, morals, order, convenience, prosperity and the general welfare, as well as efficiency and economy in the process of development, and identify areas where there are inadequate or nonexistent publicly or privately owned and maintained services and facilities when the planning commission has determined the services are necessary in order for development to occur." The development of a plan is the responsibility of the Planning Commission. Section 13-4-201 of the *Tennessee Code* states, "It is the function and duty of the commission to make and adopt an official general plan for the physical development of the municipality, including any area outside of its boundaries which, in the commission's judgment, bears relations to the planning of the municipality."

The Cookeville 2030 Plan covers a planning period of approximately twenty years, from 2010 to 2030. The information presented in this plan should be used as a framework to guide municipal and county officials, community leaders, businessmen, industrialists, and others as they make decisions that affect the future growth and development of Cookeville. The plan is not intended to supersede the responsibility or authority of local officials and department heads. Instead, it is designed to give the public and private sectors a basis to constructively use the interdependencies that exist between the various elements and organizations in the community. The development goals, objectives, and policies and the implementation strategies presented in this plan should be periodically reviewed, and when necessary, updated to reflect unanticipated occurrences or trends.

SCOPE OF PLAN

This Comprehensive Plan is designed to formulate a coordinated, long-term development program for the City of Cookeville. It also includes the city's Urban Growth Boundary. The inclusion of the unincorporated portion of the Urban Growth Boundary is necessary to adequately plan for the future growth of the municipality.

The preparation of a development program requires gathering and analyzing a vast array of information. Historic events affecting development, governmental structure, environmental and natural factors, and socio-economic characteristics of Cookeville are studied to determine how these have affected and will affect land uses, utility systems, community services, and transportation facilities. Existing land uses and transportation facilities are analyzed to identify important characteristics, relationships, patterns and trends. From these analyses, pertinent problems, needs and issues relative to land use and transportation in the Cookeville Urban Growth Boundary are identified. An amalgamation of this information is utilized to produce a Development Plan. The Development Plan consists of two interdependent elements: the first being the identification of development goals and objectives and the establishment of policies for achieving them, and the second being the creation of a development plan concept which visually illustrates the goals, objectives, and policies. To achieve the goals and objectives identified in the development plan specific strategies or measures are outlined in an implementation schedule.

COMPANION PLANNING DOCUMENTS

A number of companion planning documents should be used in conjunction with this Comprehensive Future Land Use Plan. These include:

- The ***Cookeville Urban Growth Boundary Report*** was completed in October of 1999 by the Cookeville Planning Department to comply with the requirements of Public Chapter 1101 of 1998. This report was incorporated with the Putnam County Countywide Growth Plan.

- The ***Cookeville Comprehensive Future Land Use Plan, 1999-2020***, which was the municipality's first long range plan in 30 years, was adopted by the Cookeville City Council in October of 2000.

- The ***Final Report, 2003 Cookeville Citizen Survey*** was completed by the Cookeville Planning Department in June of 2003. This document served as a report to the Cookeville City Council and Planning Commission on the results of the 2003 citywide citizen survey.

- The ***Cookeville Pedestrian and Bicycle Circulation Plan*** was prepared by the Cookeville Greenways, Bike Trails, and Pedestrian Circulation Task Force in 2003 and approved by the Cookeville City Council and Planning Commission in that same year. This Plan provides a guide for the development of a comprehensive transportation network for pedestrian and non-motorized vehicles throughout the City of Cookeville and its Planning Region.

- The ***Cookeville Major Thoroughfare Plan*** is a strategic plan completed by Kimley-Horn & Associates, Inc. in August of 2003. It presents priorities for roadway improvements necessary to sustain network capacity for a 25-year planning period.

- The ***City of Cookeville Downtown Parking Study***, prepared by the Cookeville Planning Department in 2004, is another companion document. This study provided a detailed inventory and analysis of parking in the downtown area.

- One other companion study is the ***Transit Feasibility Study for the City of Cookeville***, prepared by TranSystems Corporation on behalf of the Tennessee Department of Transportation in 2005. The purpose of this study was to analyze the need for transit services in the Cookeville area.

COMMUNITY GOALS, PROCESS AND METHODOLOGIES

The development of updated community goals and objectives is a primary product of this Comprehensive Plan. Essential to the development of these goals and objectives is citizen participation. Citizen participation is necessary to identify local needs and problems perceived by the community at large. A number of methodologies are available for obtaining citizen input. The methodologies utilized in this Plan included surveys, interviews, and study groups. From citizen participation, goals and objectives addressing the recognized needs and problems were identified.

2010 Citizen Survey

One of the important tools utilized to obtain public input in the comprehensive planning process was the 2010 Cookeville Citizen Survey. In the 2010 survey 400 residents of Cookeville were randomly selected to provide opinions on various issues affecting the future development of the city. Of the 400 residents asked to participate 154 responded. A summary of findings from the survey is provided in the following:

Quality of Life

Approximately 97 percent of the respondents with an opinion indicated that the quality of life in Cookeville was either satisfactory or very satisfactory. Less than 3 percent of the respondents indicated that the quality of life was unsatisfactory or very unsatisfactory.

Most Attractive Area/Neighborhood

More than 30 areas or neighborhoods were mentioned by respondents with the Dixie Avenue area being most frequently identified as the most attractive.

Least Attractive Area/Neighborhood

The area along Highway 70N/West Broad Street was most frequently identified as the least attractive area in the city.

Community Characteristics

The community characteristic most frequently indicated as excellent or good by respondents with an opinion was geographic location at 95 percent. Community reputation and educational quality and opportunities were second and third at 87 and 81 percent. Also receiving high rating were community appearance at 81 percent, sense of safety and security at 79 percent and the provision of city services at 78 percent.

Downtown parking was the community characteristic most frequently indicated as fair or poor at 80 percent. This was followed by traffic circulation at 77 percent and traffic volume at 74 percent. Employment opportunities were rated fair or poor by 73 percent of respondents with an opinion. Approximately 64 percent of respondents with an opinion rated the provision of sidewalks as fair or poor.

Changes in Neighborhoods

The provision of city services was indicated most frequently (94 percent of respondents with an opinion) as the change in neighborhoods remaining stable or improving in the past decade. Neighborhood housing quality was the change indicated by respondents most often as improving (14 percent of respondents with an opinion). Traffic volume was the most frequently neighborhood quality indicated as declining the last ten years.

Neighborhood Design Aspects

The neighborhood design aspect most often rated by respondents with an opinion as the most desirable was single family detached dwellings surrounded by private yards (70 percent rated it first or second). Other highly rated design aspects were houses with large front yards (rated by 66 percent as first or second most desirable) and wide streets with front driveway access (rated by 61 percent as first or second most desirable.

Residential Design Types

A majority of respondents with an opinion felt that three residential development types: senior housing, assisted living facilities, and traditional detached single family houses, should increase in the future. Approximately two-thirds of respondents with an opinion indicated that they felt apartment developments should decrease in the future.

Natural Environment

All aspects of the natural environment presented for evaluation were rated as important by at least 68 percent of respondents with an opinion. The retention of trees and the encouragement of tree planting was the aspect of the natural environment most often selected as important (78 percent).

Issues of Importance over Next 10 Years

The issue most often indicated by respondents with an opinion as important in the next ten years was improvement of traffic flow and circulation routes, 77 percent. Protection of the environment, at 74 percent, was the second most important issue to respondents with an opinion over the next 10 years.

Things Liked Best about Living in Cookeville

The most frequently mentioned thing liked best about living in Cookeville was the city's location or convenience.

Things Liked Least about Living in Cookeville

The most frequently mentioned thing liked least about living in Cookeville was the traffic or traffic related issues.

Growth Alternatives

The majority of respondents, 77 percent, selected moderate growth as the best alternative for the development of the city over the next ten years. Only ten (10) percent of respondents felt the city should grow significantly during the next decade.

Capital Projects and Services

Curbside recycling was the highest ranked proposed capital project or service in terms of importance, with nearly 70 percent of respondents ranking it in the top four (4) of eight (8) possible projects or services.

Additional Taxes for Capital Projects or Services

Only 25 percent of respondents indicated that they would be willing to pay additional taxes to fund the implementation for a specific capital project or services. For those willing to pay additional taxes, the project or service most indicated by respondents was curbside recycling at 72 percent.

City Street Improvements

Over 85 percent of respondents with an opinion ranked widening East 10th Street in the top five in terms of importance, the highest of ten (10) potential city street improvement projects. The widening of East 7th and West 12th Streets were the next most frequently identified street improvements in respondents top five in terms of importance.

State Highway Improvements

Of six potential improvement projects to state highways, the widening of State Highway 136 (South Jefferson Avenue) from Interstate 40 to State Highway 111 was ranked more often, 71 percent, in the top three by respondents. Two (2) other projects, widening of Highway 70N (East Spring Street) and adding a center lane to State Highway 135 (North Willow Avenue) were ranked in the top three in terms of importance by more than 50 percent of respondents.

CHAPTER II

BACKGROUND FOR PLANNING

INTRODUCTION

To effectively plan for any community, gathering information concerning its background is necessary. Location and size are important aspects of a community. Information on a municipality's early settlement and events affecting past development assists in planning for its future development. An understanding of the community's governmental structure, planning history, and financial stability helps to reveal the atmosphere in which future planning will take place. Background data for the City of Cookeville is presented in this chapter.

Location and Size

The City of Cookeville, comprising a total land area of approximately 20,863 acres or 32.6 square miles, is situated in the center of Putnam County, Tennessee. Putnam County embraces an area of approximately 443 square miles located near the eastern center of Tennessee. It is one of fourteen counties in the Upper Cumberland Region, and is positioned in the eastern section of Middle Tennessee some 80 miles east of Nashville, approximately 100 miles west of Knoxville, and 90 miles north of Chattanooga. In the 2010 Cookeville Citizen Survey, geographic location was the community characteristic most often rated as excellent or good by respondents.

To the south Putnam County is bounded by White and DeKalb Counties, on the west by Smith County, on the north by Jackson and Overton Counties, and on the east by Cumberland County. Interstate 40 bisects Putnam County and the City of Cookeville. Highways located in Cookeville include U.S. Highway 70N, State Primary Highway 111 and State Secondary Highways 135, 136, and 290. Illustration II-1 depicts the regional setting for Cookeville and Putnam County.

Early Settlement*

Many of the first settlers in what would become Putnam County came from Virginia and North Carolina via the Walton Road in the late 1700's and the early 1800's. Most of these settlers were of English and Scotch-Irish descent. Development of the area was slow, as Putnam County was not established until 1842. The county was formed from portions of White, Overton, Jackson, Smith, and DeKalb Counties. Due to questions regarding the legality of the original establishment, the county was re-established by the General Assembly in 1854 as the eightieth county in the state. The county was named in the honor of Israel Putnam, a general in the Revolutionary Army. Also in 1854 land for the establishment of a county seat was purchased from Charles Crook. Cookeville was named for Major Richard F. Cooke, a Tennessee Senator who was active in the formation of the county.

*Delozier, Mary Jean, Putnam County, Tennessee 1850-1970, 1979.

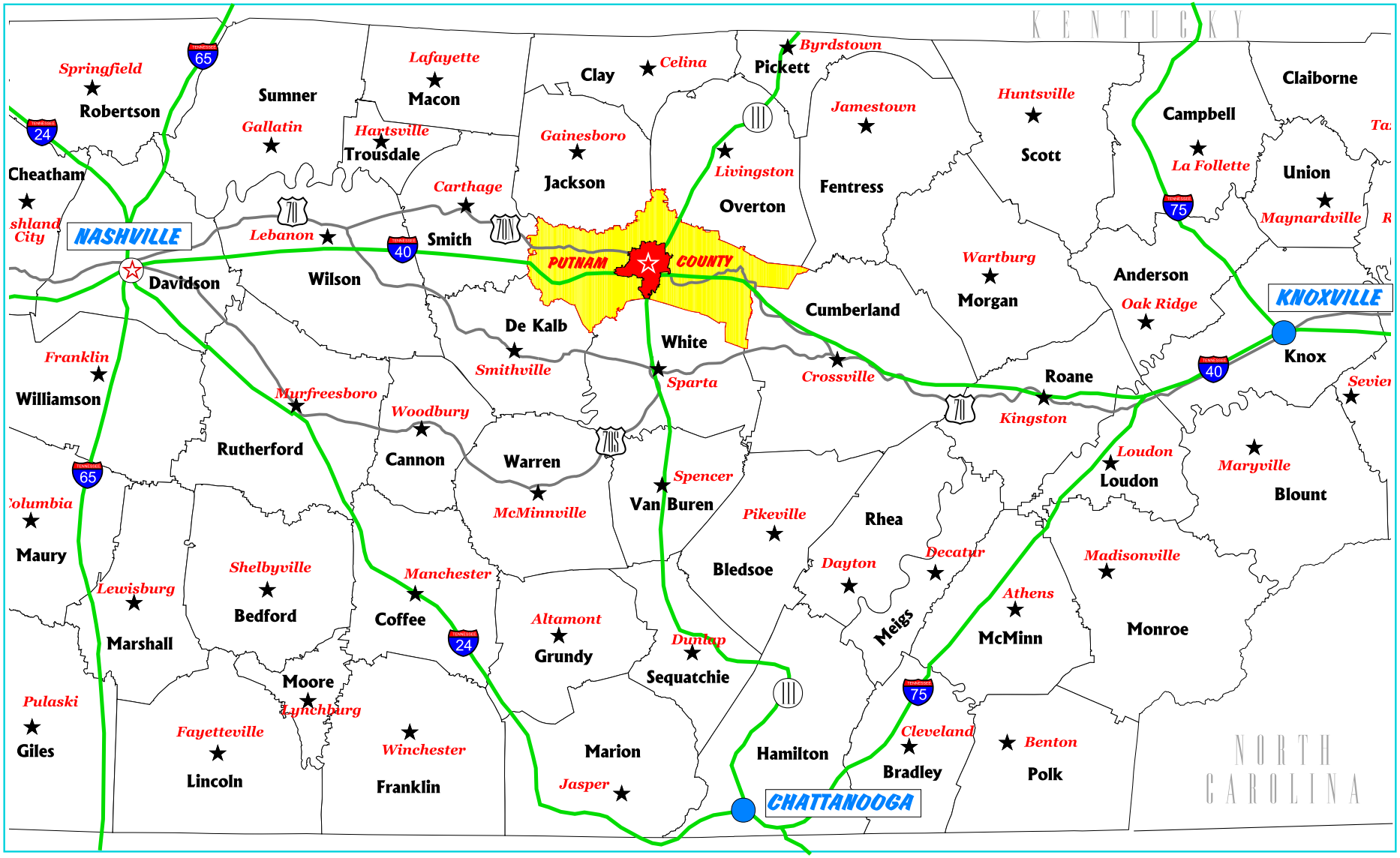


Illustration II - 1

REGIONAL SETTING

COOKEVILLE, TENNESSEE

Historical Events Affecting Development

Major historical events affecting development in the City of Cookeville include:

- The completion of the Nashville and Knoxville Railroad in 1890 improved access to Cookeville, increased trade and provided a larger market for locally produced goods.
- In 1903, a basic charter for the City of Cookeville was adopted under a private act of the State of Tennessee, Chapter 542.
- In 1905 the Cookeville Light and Water Department was organized and electric power was first provided to the city.
- Dixie College, the predecessor of Tennessee Polytechnic Institute was established in 1909, which eventually led to the city being a regional center for education.
- In 1930, Highway 70N was completed through Putnam County. This was the first modern highway in the county and placed the city on a major east-west transportation route.
- In 1946, the city's first water filtration facility was constructed on the Falling Water River.
- The opening of Cookeville General Hospital in 1950, which led to establishment of the city as a regional center for health care.
- The city's first sewage disposal plant was constructed in 1952.
- The completion of Interstate 40 in 1966 was perhaps the most significant event affecting development in Cookeville and Putnam County during the second half of the 20th Century.
- The Model Cities Program brought several million federal dollars for improvements to the city in the 1960's.
- In the 1960's and 1970's Tennessee Technological University experienced significant growth.
- The construction and completion of State Highway 111 in the late 1980's placed the city on a major north-south transportation route.
- In the 1990's the city constructed a number of local collector streets, including Interstate Drive, Neal Street, and West Jackson Street, providing access to many acres of land for development.
- The long planned construction of a northern east-west connector was indefinitely delayed by the 2003 Tennessee Department of Transportation decision not to construct State Route 451.
- Between 2000 and 2009 the city annexed over 10 square miles of territory, providing land for future development.
- The Cookeville Regional Medical Center completed a major expansion in 2008.
- The purchase of approximately 400 acres in 2007 for the development of a regional industrial-business park in western portion of the municipality.
- In 2007 plans were approved for the construction of a fifth interchange on Interstate 40 to access the proposed regional industrial-business park.

Recent Events Affecting Development

The national economic crisis of 2008 is perhaps the most important recent event affecting the future development of Cookeville and its Urban Growth Boundary. The City of Cookeville, due primarily to its diversity of employment bases, has historically been partially insulated from fluctuations in the national economy; however, the 2008 nationwide decline in the economy has impacted the city. The impacts are reflected in significant reduction in sales tax revenues, a decline in building permits issued, and an increase in unemployment. Another important recent event was the decision in 2008 to construct a K-8 public school off South

Jefferson Avenue, the first public school in the city to be located south of Interstate 40. The construction of this educational facility, which was initiated in 2009, is expected to generate significant development in the southern portion of the municipality.

Findings. Several of the major events affecting development in Cookeville in the past will continue to affect development in the future. Of these major events three (3) transportation related events, including Interstate 40, Highway 111, and the proposed construction of a fifth Interstate 40 interchange, will play an important role in the city's future development. The completion of the regional industrial-business park is expected to have a major impact on the future of the municipality and the county. The length of the recovery period from the 2008 collapse of the national economy will also greatly affect the future development of the city.

GOVERNMENTAL STRUCTURE

Knowledge of the governmental structure of the municipality is an important aspect in planning for its future. A municipality's form of government, Planning Commission status, and financial capability directly affect the ability to plan for growth and development. The purpose of this section is to provide a general examination of the governmental structure of Cookeville, to briefly describe its functions, and to assess its potential influence on future development.

Cookeville was established as the county seat of Putnam County in 1854. In 1903, the municipality was incorporated under Chapter 542 of the private acts of the State of Tennessee. This Charter established a three-member city commission to oversee the government of the city. Each commissioner supervised certain departments of the city. The original Charter of the city was amended through Chapter 223 of the private acts of 1961, which called for the qualified voters of the municipality to elect a city council consisting of five members elected at large. The regular meetings of the City Council are held on the first and third Thursdays of each month at the Cookeville Municipal Building.

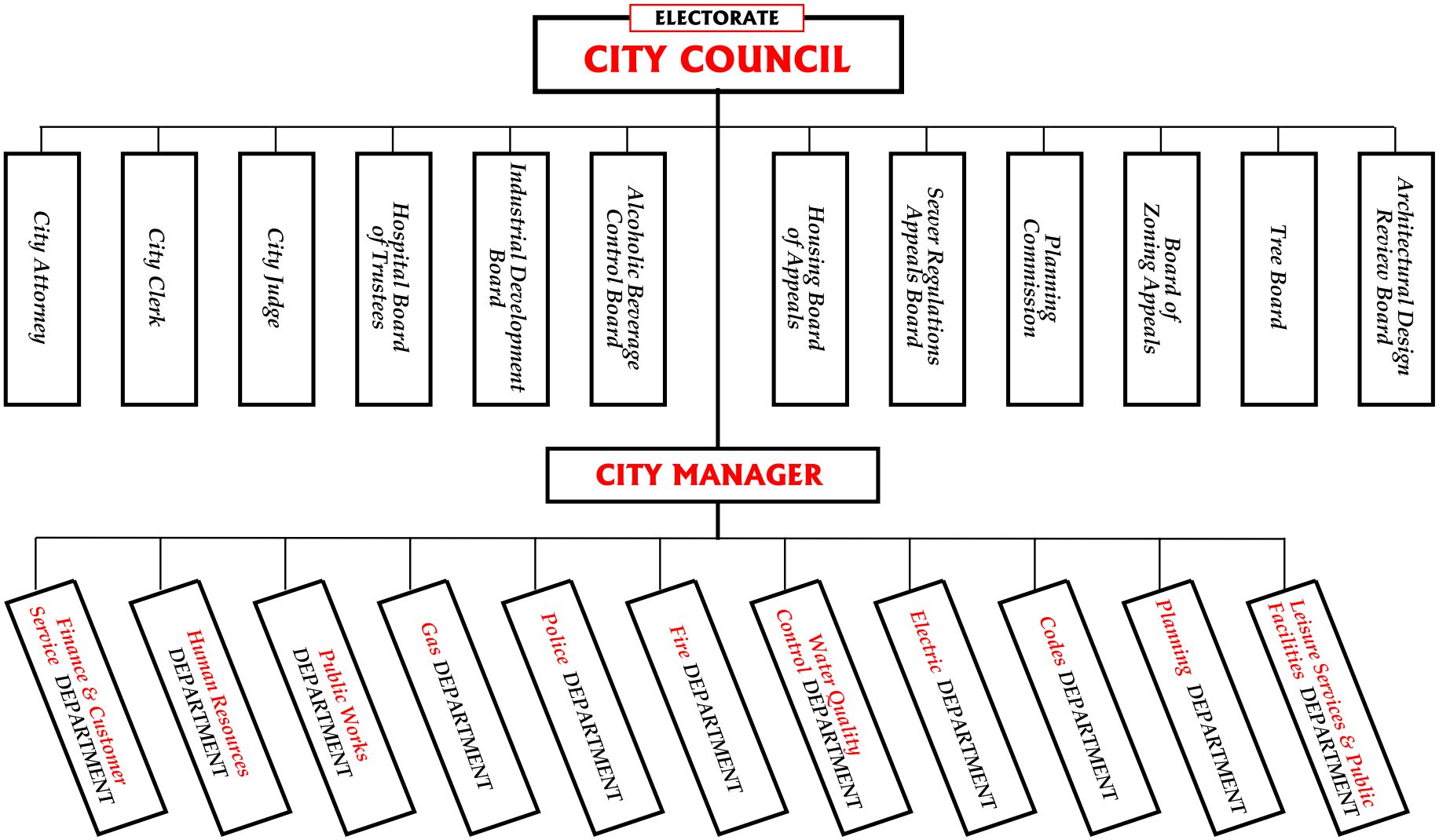
The municipality operates under the council-manager form of government with the city manager selected by the City Council. The city manager serves as chief executive officer and is responsible to the council for the proper administration of all affairs of the city. According to the Cookeville Municipal Code it is the duty of the city manager to prepare an annual budget and to be responsible for its administration after adoption. Under the authority specified in the Municipal Code, the city manager has significant influence on plans for future development.

The functions of the municipality are divided into eleven departments. A director who is under the supervision and control of the city manager oversees each of the departments. These departments are general government, finance, police, fire, planning, codes, public works, gas, electric, water quality control, and leisure services. Several advisory boards, including the Hospital Board and the Industrial Development Board, are appointed by the City Council. The Cookeville Planning Commission also advises the City Council. The City Council additionally appoints the Zoning Board of Appeals and Historic Zoning Commission. Approximately 400 persons are employed by the City of Cookeville to carry out the various municipal functions. Illustration II-2 depicts the governmental organization for the City of Cookeville.

Illustration II - 2

City of Cookeville, Tennessee

ORGANIZATIONAL CHART



Municipal Planning Commission

On February 6, 1947, the Cookeville Board of Commissioners, through Ordinance No. 366, created and established the Cookeville Planning Commission. This ordinance created an eight member Planning Commission consisting of the mayor and seven (7) citizens appointed by the mayor. On November 22, 1949, the Tennessee State Planning Commission created by resolution the Cookeville Regional Planning Commission. This action created a planning region, which extended approximately 3.5 miles out from the Putnam County Courthouse.

The city's planning region was first expanded by the Tennessee State Planning Commission in 1961 but then reduced in 1975 by the Local Government Planning Advisory Committee (LGPAC). In 1988, through Ordinance No. 88118, the Cookeville City Council increased the Planning Commission membership to nine (9), consisting of the mayor or his designee, one (1) member of the city council selected by the council, and seven (7) citizens appointed by the mayor. In 1999 the Cookeville Urban Growth Boundary was approved by LGPAC as a part of the Putnam County Countywide Growth Plan. In 2000 the Putnam County Commission approved establishing the Cookeville Urban Growth Boundary as the city's Planning Region, giving the city the authority to plan for its potential growth area. In 2008, after an amendment to TCA Section 13-3-102 requiring the appointment of two (2) members of the Planning Commission from outside the corporate limits, the City of Cookeville requested and the LGPAC approved the abolishment of the Cookeville Planning Region. Also in 2008, the Tennessee General Assembly approved an amendment to TCA Section 13-4-101, giving the authority to the City Council for appointment of members of the Planning Commission.

The officers of the Planning Commission are chairman and vice-chairman and are elected annually. The regular meetings of the Planning Commission are held monthly at the Cookeville Municipal Building. The Cookeville Planning Department serves as the staff for the Planning Commission and also functions as secretary of the Commission.

The Cookeville Planning Commission has been very active in carrying out its functions and in its role as advisor to the City Council. Some of the major accomplishments of the Cookeville Planning Program since the adoption of the 1999-2020 Comprehensive Plan include:

- Preparation and adoption of completely revised Subdivision Regulations in 2000
- Preparation and adoption of Official City Street Map in 2000, updated annually
- Preparation of Average Daily Traffic Count Map and Log on Local Streets in 2000, updated annually
- Preparation and adoption of Historic Zoning Regulations in 2000, three (3) Historic Districts have subsequently been created
- Preparation of studies, Plans of Services, Ordinances, Progress Reports and other materials for annexations resulting in the addition of over ten (10) square miles of land area from 2000 to 2009
- Preparation and adoption of completely revised Zoning Code in 2001
- Preparation and adoption of Erosion and Sediment Control Regulations in 2001
- Preparation and adoption of provisions and standards for Official Street Map, Street Names, Street Acceptance and Construction Standards, and Closure and Abandonment of Streets and Right-of-ways in 2002

- Completion, distribution and tabulation of Citywide Citizen Survey in 2003
- Preparation and adoption of Pedestrian and Bicycle Circulation Plan in 2003
- Preparation of Downtown Parking Study in 2004
- Assisted with the preparation of the Cookeville Transit Feasibility Study in 2005
- Adoption of Master Plan for the Medical Services District and Cookeville Regional Medical Center in 2006
- Preparation and adoption of Architectural Design Requirements in 2008

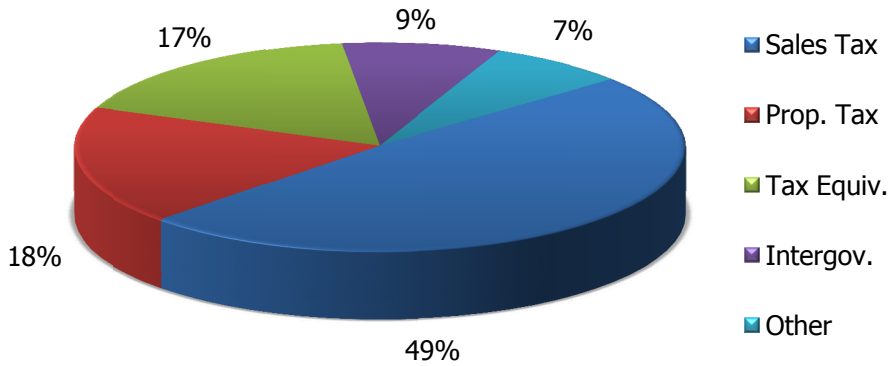
Municipal Finances

The financial stability and capability of a municipality directly affects its ability to accomplish planning goals. An analysis of the revenues and expenditures from the city's general operating fund is necessary to determine this financial stability and capability. The city's current revenues and expenditures are examined and historically compared in the following.

Revenues

The 2008 Audited Financial Statement for the City of Cookeville indicates that the city's total general operating revenue was $20,548,777. The local option sales tax is by far the largest revenue source for the city accounting for $10,005,181 or nearly 49 percent of the total revenues in fiscal year 2008. Property tax revenues accounted for $3,750,309 or approximately 18 percent of the city's total revenues in 2008. Tax equivalents, which includes in lieu of tax payments and business taxes, were the third largest source of revenue for the city at 17 percent of the total in fiscal year 2008. Intergovernmental funds, which includes the wholesale beer tax and other state shared taxes, accounted for approximately nine (9) percent of city's total revenues. The remaining seven (7) percent of revenues come primarily from charges for services, licenses and permits, fines, and interest. A summary of the city's current revenue sources, based on the City of Cookeville Audited Financial Statement for the year ending June 30, 2008, is depicted in Graph II-1.

GRAPH II-1
SUMMARY OF CITY REVENUES
FISCAL YEAR 2008



The high percentage of revenues from the sales tax has allowed the city to maintain a relatively low property tax rate of $0.87 per $100.00 of assessed value. In 2008 the city had the seventh lowest property tax rate of the 26 cities in the state with populations exceeding 20,000 according to the 2000 census. When the combined 2008 city-county property tax rate is considered Cookeville's rate of $3.62 per $100.00 of assessed value was the eighth lowest in the state for cities with populations exceeding 20,000 according to the 2000 Census. Tennessee cities with populations exceeding 20,000 according to the 2000 Census with the lowest combined (city and county) tax rates in 2008 are depicted in Table II-1.

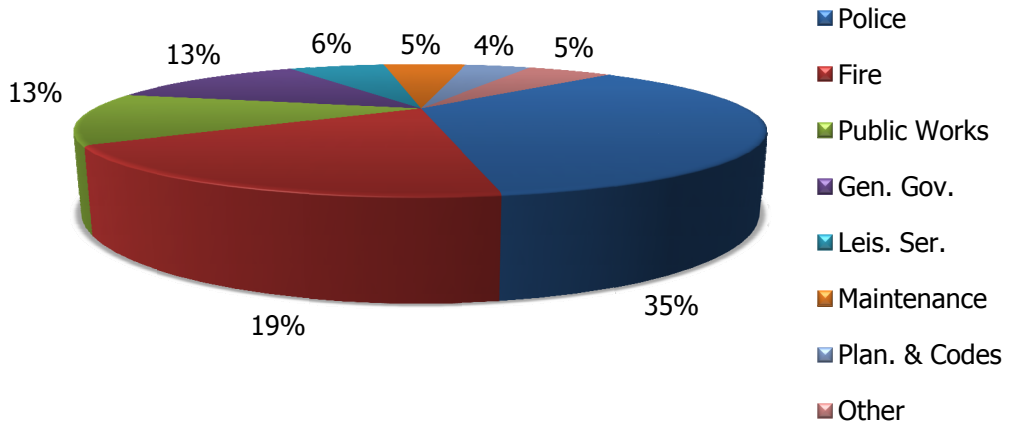
TABLE II-1
2008 COMBINED PROPERTY TAX RATES
TENNESSEE CITIES WITH POPULATIONS OVER 20,000

Rank	City	2000 Population	County Rate	City Rate	Combined Rate
1	FRANKLIN	41,842	$2.20	$0.43	$2.63
2	BRENTWOOD	23,445	$2.26	$0.49	$2.75
3	LEBANON	20,235	$2.43	$0.34	$2.77
4	HENDERSONVILLE	40,620	$2.28	$0.63	$2.91
5	MORRISTOWN	24,965	$1.94	$1.22	$3.16
6	GALLATIN	23,230	$2.28	$1.12	$3.40
7	SMYRNA	25,569	$2.56	$0.86	$3.42
8	COOKEVILLE	23,923	$2.75	$0.87	$3.62
9	CLEVELAND	37,192	$2.02	$1.65	$3.67
10	COLUMBIA	33,055	$2.50	$1.38	$3.88
11	MURFREESBORO	68,816	$2.56	$1.41	$3.97
12	JOHNSON CITY	55,469	$2.22	$1.80	$4.02
13	MARYVILLE	23,120	$2.23	$2.30	$4.30
14	EAST RIDGE	20,640	$3.15	$1.29	$4.44
15	CLARKSVILLE	103,455	$3.14	$1.31	$4.45
16	JACKSON	59,643	$2.31	$2.16	$4.47
17	NASHVILLE	545,524	$4.04	$0.65	$4.69
18	KINGSPORT	44,905	$2.61	$2.25	$4.86
19	BRISTOL	24,821	$2.53	$2.50	$5.03
20	CHATTANOOGA	155,554	$3.15	$2.20	$5.36
21	COLLIERVILLE	31,872	$4.09	$1.28	$5.37
22	OAK RIDGE	27,387	$2.68	$2.77	$5.45
23	KNOXVILLE	173,890	$2.69	$2.81	$5.50
24	BARTLETT	40,543	$4.09	$1.54	$5.63
25	GERMANTOWN	37,348	$4.09	$1.54	$5.63
26	MEMPHIS	650,100	$4.04	$3.25	$7.29

Expenditures

In fiscal year 2008 the city's general operating expenditures totaled $20,303,376 of which nearly 54 percent or $10,897,913 was expended on public safety. This includes the police department at $7,069,419 or approximately 35 percent of the total expenditures and the fire department at $3,828,494 or approximately 19 percent of the total. Expenditures for public works and general government, at $2,583,466 and $2,550,824 respectively, each accounted for approximately 13 percent of total expenditures. Leisure services ($1,240,543), maintenance ($1,083,298), and planning and codes ($852,341) at approximately six (6), five (5), and four (4) percent respectively, were the next largest expenditures. Expenses for nonprofit contributions ($627,775) and capital outlays ($467,216) made up the remaining five (5) percent of expenditures. A summary of the city's expenditures, based on the City of Cookeville Audited Financial Statement for the year ending June 30, 2008 is depicted in Graph II-2.

GRAPH II-2
SUMMARY OF CITY EXPENDITURES
FISCAL YEAR 2008



Historical Analysis

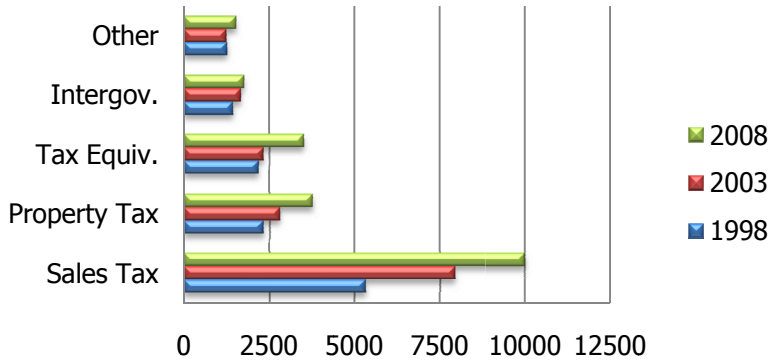
A historical analysis of revenues and expenditures can indicate trends that may affect future planning efforts. According to the City of Cookeville Audited Financial Statements for the years ending June 30, 1998, June 30, 2003, and June 30, 2008 the municipality's total revenues increased from $12,536,460 in fiscal year 1998 to $15,960,513 in fiscal year 2003 and to $20,548,777 in fiscal year 2008. These figures represent total revenue increases of $3,424,053 or 27.3 percent from 1998 to 2003 and of $4,488,264 or 28.7 percent from 2003 to 2008. For the ten-year period from 1998 to 2008 the total revenue increased by $8,012,317. This represents an annual average revenue growth rate of approximately 6.2 percent.

From 1998 to 2008 the largest total increase in revenues for the city was from the local option sales tax, which increased from $5,322,738 in 1998 to $7,947,755 in 2003 and to $10,005,181 in 2008. This is an increase of $4,682,443 or 88 percent from 1998 to 2008 and an increase of $2,057,426 or 26 percent in the last five (5) years. This increase was significantly affected by the approval of a referendum in May of 1999 to increase the local option sales

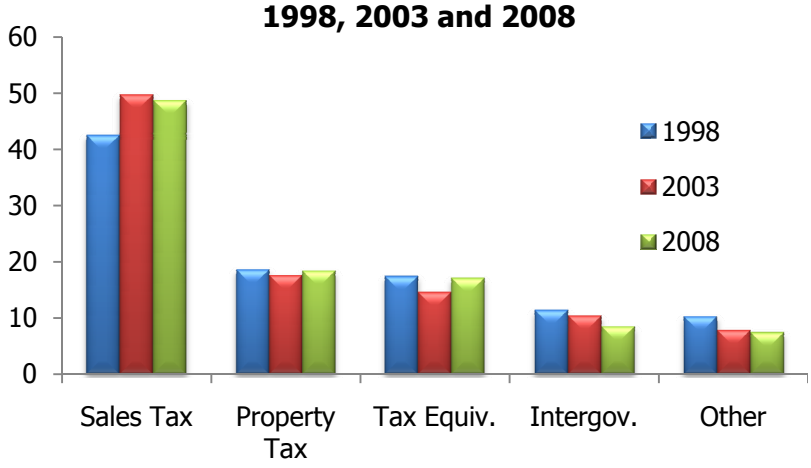
tax by one-half of one percent. The recent national economic downturn has significantly affected sales tax revenues. From fiscal year 2008 to fiscal year 2009, revenues from the local option sales tax in the City of Cookeville declined by 4.3 percent or from $10,005,181 to $9,569,652.

Local property tax revenues increased from $2,318,861 in 1998 to $2,798,609 in 2003 and to $3,750,309 in 2008. This is an increase of $951,700 or approximately 34 percent from 2003 to 2008 and of $1,431,448 or 62 percent over the ten-year period. The substantial increase from 2003 to 2008 in property tax revenues can be largely attributed to a rate increase adopted by the City Council in 2003. Revenues from tax equivalents, which includes in lieu of tax payments and business taxes, increased from $2,184,549 in 1998 to $2,327,792 in 2003 and to $3,508,288 in 2008. Changes in revenues by major sources for the city in fiscal years 1998, 2003 and 2008 based on the financial statements for those years is depicted in Graph II-3. The percentage of total revenues by major sources for fiscal years 1998, 2003, and 2008 is presented in Graph II-4.

GRAPH II-3
REVENUE GROWTH (000's)
CITY OF COOKEVILLE
1998, 2003 and 2008



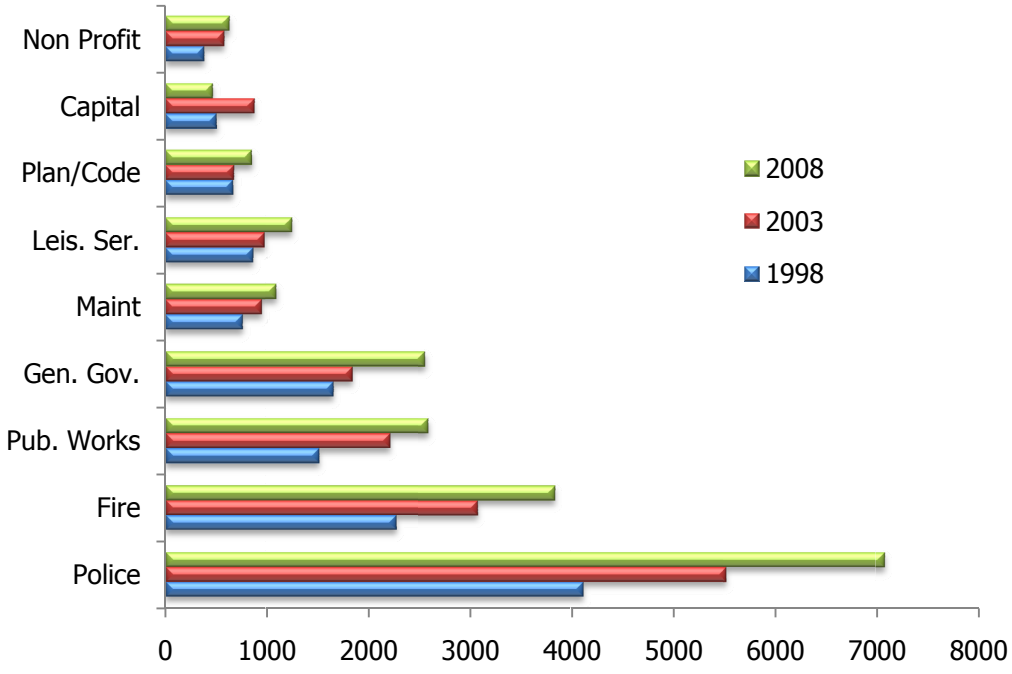
GRAPH II-4
SOURCES OF TOTAL REVENUE (%)
CITY OF COOKEVILLE
1998, 2003 and 2008



According to the City of Cookeville Audited Financial Statements, normal operating expenditures for the city increased from $12,726,456 in fiscal year 1998 to $16,702,877 in fiscal year 2003 and to $20,303,376 in fiscal year 2008. The largest increase in expenditures for the city from 1998 to 2008 was for the police department, which increased from $4,115,394 in 1998 to $5,522,986 in 2003 and to $7,069,419 in 2008. This is an increase of $1,546,433 or approximately 28 percent from 2003 to 2008 and an increase of $2,954,025 or 72 percent over the ten-year period. Expenditures for the fire department increased from $2,270,549 in 1998 to $3,072,488 in 2003 and to $3,828,494 in 2008. This is an increase of $756,006 or approximately 25 percent from 2003 to 2008 and an increase of $1,557,945 or 69 percent over the ten-year period.

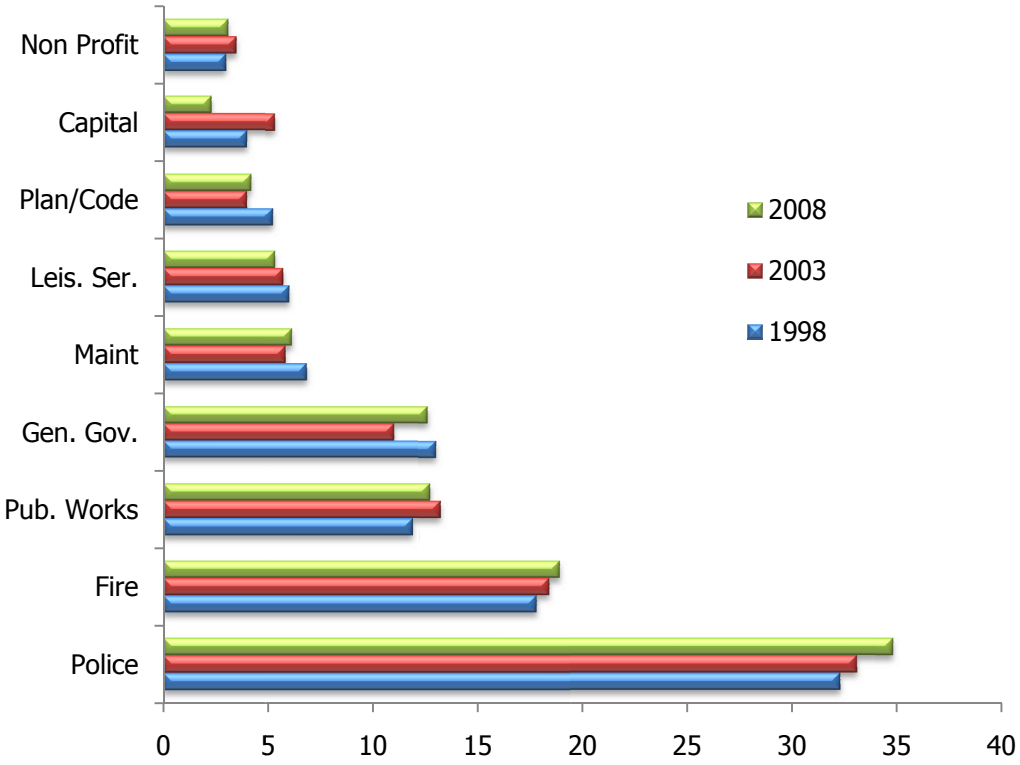
Expenditures for public works increased from $1,509,812 in 1998 to $2,211,493 in 2003, or by 46 percent, and by an additional 17 percent to $2,583,446 in 2008. The public works expense increased by 71 percent for the 10-year period. Expenditures for general government increased from $1,649,939 in 1998 to $1,838,543 in 2003 and to $2,550,824 in 2008, or by 39 percent from 2003 to 2008 and by 55 percent for the ten-year period. The next highest percentage increase in expenditures from 1998 to 2008 was for leisure services, which increased by 13 percent or from $865,484 in 1998 to $976,147 in 2003 and by an additional 27 percent to $1,240,543 in 2008. Changes in expenditures by major category for the city for fiscal years 1998, 2003 and 2008, based on the financial statements for those years, are depicted in Graph II-5.

GRAPH II-5
TOTAL EXPENDITURES BY SOURCE (000's)
CITY OF COOKEVILLE
1998, 2003 and 2008



The percentage of total expenditures by major sources for fiscal years 1998, 2003, and 2008 is presented in Graph II-6. During the ten-year period, expenditures for public safety, which consists of police and fire protection, have steadily increased as a percentage of the city's total expenditures. Expenditures for all other categories have fluctuated. As a percentage of total expenditures, expenses for general government, maintenance, leisure services, planning and codes, and capital improvements were less in 2008 than in 1998.

GRAPH II-6
SOURCES OF EXPENDITURES BY PERCENT OF TOTAL
CITY OF COOKEVILLE
1998, 2003 and 2008



Perhaps the most noteworthy aspect of the analysis of the financial stability and capability of the City of Cookeville is the percentage of the city's total revenues that are derived from the local option sales tax. The high percentage reflects the city's importance as a regional commercial center and has allowed it to maintain a relatively low property tax rate. However, a dependency on the sales tax makes the city susceptible to economic fluctuations. This first occurred in fiscal year 2003 when sales tax revenues did not reach anticipated levels. As a result of the less than expected increase in sales tax revenues, in combination with a reduction of state shared revenues, a $0.12 property tax increase, the first increase in many years, was approved for fiscal year 2003. More recently, as the result of a national economic decline, sales tax revenues have actually decreased. Due to the condition of the national economy and the emergence of major sales tax generating establishments in nearby communities, it is possible that sales tax revenues will again not reach anticipated levels or even continue to decrease in the next few years.

Findings. The city manager, under the authorities granted by the Cookeville Municipal Code, can significantly influence the direction of the municipality's planning program. The current City Council is committed to a quality planning program and is fully supportive of the role of the Planning Commission. This allows the Cookeville Planning Program to operate in an atmosphere that is very conducive to effective planning. The City of Cookeville has, as have most municipalities, been significantly affected by the national economic collapse of 2008. This is most evidenced by an actual reduction of sales tax revenues from fiscal year 2008 to fiscal year 2009. The long term impact of the national economy on the city's financial stability is difficult to predict. Of primary concern is the municipality's dependence on sales tax revenues. Additional sources of revenues, including an increase in the property tax rate, may be necessary for the municipality to maintain its current level of services.

SUMMARY OF FINDINGS

The City of Cookeville is the county seat of Putnam County, Tennessee, located in the Upper Cumberland Region about halfway between Nashville and Knoxville. For over one hundred and fifty years the community has been the center for commerce and government in Putnam County. The city is a regional hub for commerce, industry, education, and health care.

The proximity of the state's major east-west routes, first Highway 70N and then Interstate 40, and the location of a major north-south route, State Highway 111, have greatly influenced past development and will continue to affect the future development of the municipality. Tennessee Tech University and Cookeville Regional Medical Center have significantly impacted past development of the municipality and are expected to continue to do so in the future. Future growth and development of the municipality will also be influenced by the planned development of a 400 acre regional industrial-business park at a proposed fifth interchange on Interstate 40.

The municipality operates under a council-manager form of government with the day to day activities of the municipality overseen by a city manager. The planning program in Cookeville is effective and is fully supported by the local government. Financially the municipality has been impacted by the national economic downturn that began in 2008, which is substantiated by a reduction of local sales tax revenues from 2008 to 2009. This is of particular concern given the municipality's dependence on the local option sales tax as a revenue source. How long it takes for the nation's economy to recover will have a major impact on the future development of the city.

CHAPTER III

ENVIRONMENTAL AND NATURAL FACTORS

INTRODUCTION

The natural environment greatly affects the quality of life and property in a community. The development configuration is not only significantly determined by natural factors but, more importantly, the related environmental systems provide vital hydrological, geological and biological functions for a community. An inventory and evaluation of environmental factors and natural resources is particularly important when determining the suitability of areas for growth and development. Climate, air and water quality, trees and vegetation, topography, sinkholes, drainage and flooding, soil characteristics, wetlands and geology are significant natural features that affect development.

The various components of the natural environment are not independent but interrelated parts of ecosystems that spread beyond individual developments and even beyond governmental jurisdictions. It is important to recognize the interdependence of one environmental element on another. For example, the removal of trees and vegetation can result in soil erosion, loss of wildlife habitats, degradation of water quality, increase stormwater runoff, reduce air quality, and increase temperatures. Inadequate stormwater management can increase flooding potential, cause soil erosion and degrade water quality.

Ignoring these environmental and natural factors can prove to be extremely costly to specific property owners as well as the entire community. Not all land is suitable for development. The limits and type of land use should be responsive to the natural environment in order to protect the welfare of the general populace. The purpose of this chapter is to evaluate the environmental factors influencing land use patterns, to identify the natural resources that should be protected, and to recognize the interrelationships of the various components of the natural environment in the Cookeville Urban Growth Boundary.

2010 Citizen Survey

The results of the 2010 Cookeville Citizen Survey revealed that environmental issues were very important to many Cookeville residents. In fact, more than 70 percent of the respondents with an opinion in the survey indicated that the protection of the natural environment would be an important issue to them in the next ten (10) years. Furthermore, all aspects of the natural environment included in the survey were rated as important by at least 68 percent of all respondents with an opinion. The evaluated aspects were: ground water protection, protection of natural drainage areas, reduction of flooding, soil erosion prevention, surface water quality improvement, reduction of water and air pollution, retention of existing trees and encouragement of tree planting, conservation of water, preservation of farmland, and protection of wildlife habitats. The retention of existing trees and the encouragement of tree planting was the facet of the natural environment most frequently selected by respondents as important to them, with 78 percent of respondents with an opinion indicating it as important.

CLIMATE

The climate of Cookeville and Putnam County is described as humid-sub-tropical, characterized by relatively mild winters and warm summers. Although Cookeville is located well inland, it lies in the path of cold air moving southward from Canada and warm moist air currents moving northward from the Gulf of Mexico. These alternating currents frequently bring sharp daily changes and are chiefly responsible for seasonal variations.

There is normally an abundant amount of rainfall in Cookeville. Based on the standard United States Weather Bureau 35-year mean, the normal annual rainfall for the Cookeville area is approximately 51 inches. Precipitation is usually heaviest in late winter and early spring, as a result of frequent low pressure systems. The most widespread flooding occurs during this period; but flooding on a smaller scale can occur during any month. Putnam County is subject to locally heavy storms in which as much as five inches of rain may fall during a very short period. Precipitation is generally lightest in late summer and early fall; high pressure systems are most frequent at this time of year. Thus, the periods of drought are offset by periods of ample to excessive precipitation throughout the year.

The mean annual temperature of the Cookeville area is 57 degrees Fahrenheit, and the average relative humidity is 70 percent. Extremes in temperature are uncommon, seldom above 100 degrees Fahrenheit or below -5 degrees Fahrenheit. There is some variation in relative humidity during a given year with the highest average daily values recorded in winter. Although winters are not severe (the ground seldom freezes below four inches) they are often wet and outside work may be hampered around construction sites. The first fall freeze is usually in late October and the last spring freeze is usually in early April.

Global Climate Change

The gradual warming of the earth's atmosphere has been identified by many as one of the most serious global environmental concerns. While exact future climatic conditions are uncertain, projections suggest that the southern United States will be warmer (2 to 4 ° C) and between 20 percent wetter and 10 percent drier than present by the end of the 21st century. Models also project more frequent El Niño-like conditions with the frequency of extreme rainfall events escalating.

Increasing climatic variability could affect both directly and indirectly the area's water quality and quantity. For example, increased temperature could decrease streamflow by increasing evapotranspiration, although this may be buffered by increased annual precipitation. Subsequently, lower streamflow would decrease water supply, diminish water quality, and degrade aquatic communities. Concurrently, an increase in the frequency of extreme rainfall events will increase flood severity, negatively affecting human safety, human welfare, and aquatic community functioning. Most importantly, climatic change and variability have the potential to interact with land use change to exacerbate impacts of water quality and quantity.

Climate variability and increasing temperatures will also increase water and energy demands. A focus on water and energy efficiency measures to offset the added demands in the face of shrinking supplies is an important and cost effective way to manage these future resource challenges. Sustainable building practices, promotion of smart growth planning, high performance buildings, green infrastructure, and low impact development can all contribute to water and energy efficiency, air and water quality, economic prosperity and overall quality of life.

Recognizing that climate changes resulting from global warming could have significant long term impacts on the quality of life and the growth and development of Cookeville, the municipality became the first city in Tennessee to sign the U. S. Mayors Climate Protection Agreement on April 18, 2006. By signing this agreement the city acknowledged its intention to create initiatives that would help protect and preserve its natural resources. On April 15, 2009, the Mayor of Cookeville announced the official launch of the Keep Cookeville Cool Program. The goal of the Keep Cookeville Cool Program is to provide educational and outreach sessions to the citizens of Cookeville while working towards the following five (5) major objectives:

- Preservation of our Quality of Life
- Enhanced Economic Development Opportunities
- Conservation and Improvement to our Urban Forest Environment
- Protection of the Quality and Quantity of our Water Resources
- Reduction of the Total Energy Usage for the Entire City of Cookeville

Findings. The City of Cookeville presently enjoys what is often described as a pleasant climate. Relatively mild winters and warm summers have attracted many residents to the area. Of the various climatic factors, periodic heavy rain events, which can lead to inundations of floodplain and sinkhole areas, have had the greatest impact on land use. The city recognizes that climate changes may have considerable impact on its future growth and development and on the quality of life of its residents. To adapt to predicted climate changes, measures such as committing to the reduction of green house gas emissions, promoting and implementing sustainable building practices, and protecting and enhancing our forests and green infrastructure should be implemented.

AIR QUALITY

Air quality is an important factor affecting the quality of life in a community. The United States Environmental Protection Agency (EPA) utilizes the Air Quality Index (AQI) to evaluate daily air quality. The AQI measures five (5) major air pollutants: ground-level ozone, particle pollution (also known as particulate matter), carbon monoxide, sulfur dioxide, and nitrogen dioxide. National air quality standards have been developed by the EPA for each of these pollutants. The AQI indicates air quality through a scaled points system, ranging from good (0-50), moderate (51-100), unhealthy for sensitive groups (101-150), unhealthy (151-200), very unhealthy (210-300) and hazardous (301-500). According to the EPA an AQI value of 100 meets national air quality standards for the specified pollutants.

The most current AQI Report for Cookeville, Putnam County was completed in 2008. According to this report, of the 128 days reported, no air quality standards for specified pollutants were exceeded in Cookeville. Of the 128 days monitored, 108 days were evaluated as good and 20 days were evaluated as moderate. The main pollutants were particulate matter on 71 days and ozone on 57 days. The highest daily AQI level in 2008 was 88 and the median level was 32.

As recently as 2004 Putnam County was listed by the EPA as a nonattainment community for exceeding the 8-hour ozone standard. However, according to EPA's Currently Designated Nonattainment Areas for All Criteria Pollutants, released on July 31, 2009, Putnam County is no longer listed as a nonattainment community.

Findings. According to EPA data the air quality in Cookeville meets the national air quality standards. While there are currently no air quality issues directly affecting future land use in the Cookeville Urban Growth Boundary, efforts to protect and enhance air quality, including those identified to address climate changes should be taken.

WATER RESOURCES

The water resources in and around the City of Cookeville provide multiple services and amenities to the residents and the surrounding natural areas. Water supply, recreation, fishing and the natural environment all benefit from healthy abundant water. Therefore it is in the best interest of the City of Cookeville to protect and enhance its water resources whenever and wherever possible.

The primary water source for the City of Cookeville is the Center Hill Reservoir (Mine Lick Creek). According to the latest information provided by the Tennessee Department of Environment and Conservation, the City of Cookeville is under no moratoriums due to water and wastewater treatment problems. The municipality has a National Pollutant Discharge Elimination System (NPDES) permit for discharging its treated wastewater into the Pigeon Roost Creek. Adequate and appropriate management of the city's water resources will be necessary for the city to continue to operate without restrictions to water and waste water treatment facilities.

The City of Cookeville is located within the Caney Fork River and Cordell Hull Lake Watersheds. Portions of four (4) streams within the Caney Fork River Watershed, which traverse the Cookeville Urban Growth Boundary, have been placed on the Environmental Protection Agency's (EPA) 2008 303(d) List. The 303(d) list is a compilation of streams and lakes that have one or more properties that violate water quality standards. The streams in the Urban Growth Boundary with sections on the 303(d) list and the probable sources contributing to impairment are:

- Cane Creek (agriculture, urban-related runoff/stormwater)
- Hudgens Creek (agriculture, urban-related runoff/stormwater)
- Pigeon Roost Creek (urban-related runoff/stormwater, hydromodification, municipal discharges/sewer)
- Falling Water River (agriculture, urban-related runoff/stormwater, municipal discharges/sewer)

It is important to note that Mine Lick Creek, which is located just west of the Cookeville Urban Growth Boundary, has also been placed on the 303(d) list. This is significant because the stream drains directly into the City of Cookeville's water source. The EPA indicates the probable source contributing to the impairment of Mine Lick Creek as sanitary sewer overflows (collection system failures) from the Town of Baxter.

Stormwater

Stormwater/urban runoff is indicated as one of the probable pollutant sources for each of the streams listed on the 303(d) List located in the Cookeville Urban Growth Boundary. Stormwater runoff is the water that flows off roofs, driveways, parking lots, streets, agricultural lands and other surfaces during rain storms. Rather than being absorbed into the ground, it pours into ditches, culverts, catch basins, and storm sewers. It does not receive any treatment before eventually entering the community's streams and lakes.

The City of Cookeville is an EPA Phase II MS4 (municipal separate storm sewer system) NPDES (national pollutant discharge elimination system) permitted community and is required to operate a stormwater management program that addresses, through best management practices (BMPs), the following six minimum control measures:

- Public education and outreach on stormwater impacts
- Public involvement/participation
- Illicit discharge detection and elimination

- Construction site stormwater runoff control
- Post-construction stormwater management in new development and redevelopment
- Pollution prevention/good housekeeping for municipal operations

A number of steps have been taken by the City to improve the water quality of impaired streams and to protect those not impaired. An important example is the 2008 adoption of a stream buffer zone ordinance. Stream buffer zones serve as natural boundaries between local waterways and development and help protect resources by filtering pollutants, providing infiltration of stormwater runoff, providing riparian wildlife habitat, stabilizing stream banks and restoring and maintaining the chemical, physical and biological integrity of the water resources. The requirements apply to all lots which are contiguous with or directly adjoin an intermittent or perennial stream identified as such on the USGS (United States Geologic Survey) map.

The City of Cookeville recognizes the adverse affects stormwater can have on its water resources. A multi-tiered methodology to address the adverse affects should be taken. An integrated green infrastructure approach to infiltrate, reuse and evapotranspirate the maximum amount of stormwater practical from a site should be promoted. Additionally the city should encourage low impact development, minimizing of impervious surface areas, retrofits and urban tree plantings to aid in prevention of flooding, preservation of existing forests, attenuating legacy stormwater issues, and maintaining stable base flow to streams during dry periods.

Water quality and quantity can also be enhanced through water conservation measures that moderate water demands and stabilize stream flow and reservoir levels. These measures include promoting water efficiency and minimizing the unnecessary use of fresh potable water in buildings and through irrigation and landscape maintenance by promoting water conservation, high performance building practices, low impact development, and native vegetation where appropriate. Water conservation also saves energy thus serving conservation goals for water resources, air quality, energy efficiency and climate stability.

Findings. Like many urban communities, the City of Cookeville does have some water resource quality problems. Efforts are being taken by the City to restore and maintain the integrity of its water resources. Failure to adequately address the water resource problems would directly affect future land use in the Cookeville Urban Growth Boundary.

TREES AND VEGETATION

The trees and vegetation located in and around a municipality are commonly referred to as the urban forest. An urban forest includes undisturbed woodlands, tree-lined streets, trees in home and business landscapes, trees and vegetation on public properties such as parks, schools, and utility easements, and all other areas where trees grow. Trees and vegetation, in addition to improving aesthetics and contributing to community character, provide numerous tangible benefits. Examples include reduction of flooding impacts and soil erosion, mitigation of climate change, improving air quality, reduction of water and noise pollution, and providing shade and habitat.

Officials from the Tennessee Department of Agriculture, Division of Forestry, estimate the current tree canopy coverage of the Cookeville Urban Growth Boundary at 35 percent. This is an overall estimate with intense commercial areas having significantly lower canopy and rural areas having much higher canopy. According to the Division of

Forestry the average urban canopy coverage for the state's municipalities is 33 percent. American Forests, the nation's oldest nonprofit citizens' conservation organization, has established the following general canopy goals for cities in the eastern United States:

- Downtown areas: 15 % canopy
- Urban Residential areas: 25 % canopy
- Suburban Residential areas: 50 % canopy
- Overall area: 40 % canopy

The importance of trees and vegetation has been acknowledged by the City of Cookeville for many years. In 1988 the Cookeville City Council created the Cookeville Tree Board. The stated purpose of the Tree Board is "to increase the quality and quantity of trees in Cookeville". Since its inception the Tree Board has been involved in numerous activities addressing its purpose, these include: formulating the city's Tree Ordinance, establishing a City Tree Program, sponsoring annual Arbor Day festivities, providing seminars on proper tree care, receiving numerous grants for tree planting, and proclaiming the Eastern Redbud as the official City Tree.

Since 1990 the Cookeville Electric Department has employed a Utility Forester who works closely with the Tree Board. The city became registered as a Tree City USA by the National Arbor Day Foundation in 1990 and has since continually maintained that status. As a part of the adoption of a revised Zoning Code in 2000, the city adopted specific landscaping requirements. In addition to specifications for tree planting in parking lots, these new requirements included standards for street trees and landscaped buffer yards. In 2005 the Cookeville Electric Department was recognized by the National Arbor Day Foundation as Tree Line USA.

In 2007 a Certified Arborist completed an inventory-base Urban Forestry Management Plan for the City of Cookeville. The inventory located, identified and evaluated more than 2,500 trees located along major streets and on public properties. According to the management plan the city has great promise in having an improved tree canopy in the next two (2) decades as the trees mature, if proper maintenance is provided. The Management Plan also included a number of recommendations for improving the quality, size and diversity of Cookeville's urban forest.

Trees, vegetation and natural waterways are key elements of an integrated green infrastructure approach to planning and natural resource management. The fostering of an interconnected network of green spaces along streams, greenways, parks and neighborhoods is the most cost effective way to manage stormwater, enhance water and air quality, mitigate climate change and contribute to overall community growth and prosperity.

Findings. In the 2010 Citizen Survey the retention of existing trees and encouragement of tree planting was the natural environment issue most frequently rated as important. Proper stewardship of the trees and vegetation comprising Cookeville's urban forest is vital for the city's future. Specific steps are needed to increase overall tree canopy coverage and especially coverage in the more intensely developed portions of the city. Efforts should be taken to implement the recommendations of the 2007 Urban Forestry Management Plan for improving the quality, size and diversity of Cookeville's urban forest.

TOPOGRAPHY

Topography is defined as the general configuration of the earth's surface, including its slope, geological characteristics, and other natural features. Putnam County is located in three physiographic regions: the Cumberland Plateau, the Highland Rim, and the Central Basin. The Cookeville Urban Growth Boundary lies almost completely within the Highland Rim region. The area has an approximate median elevation of 1,100 feet. The surface of the county varies from flat lands and gently rolling hills to rough, steep, and rocky escarpments to the levelness of the Cumberland Plateau. In Cookeville and the surrounding Urban Growth Boundary, the surface is mostly undulating to hilly with gentle slopes and sinkholes occurring in some places. There are, however, a few areas where slopes exceed 20 percent.

Slope is a major topographic consideration impacting the developmental potential of sites. It affects access, floodability, erosion potential and soil capabilities. The rate of erosion increases exponentially with increases in the degree of slope. Slopes in the Cookeville Urban Growth Boundary range from below 5 percent to over 20 percent. In areas of greater than 20 percent slope, limitations to development are severe and development should occur only under the most guarded conditions. The area with the most significant topographic constraints in the Cookeville Urban Growth Boundary is located primarily around Pilot Knob, southwest of the Interstate 40 and South Jefferson Avenue interchange. Other areas with topographic constraints are located southwest of the intersection of Interstate 40 and Highway 70N, and to the southeast of the intersection of Highway 111 and Highway 70N. The topography of the Cookeville Urban Growth Boundary, in contour intervals of ten (10) feet, is depicted on Illustration III-1.

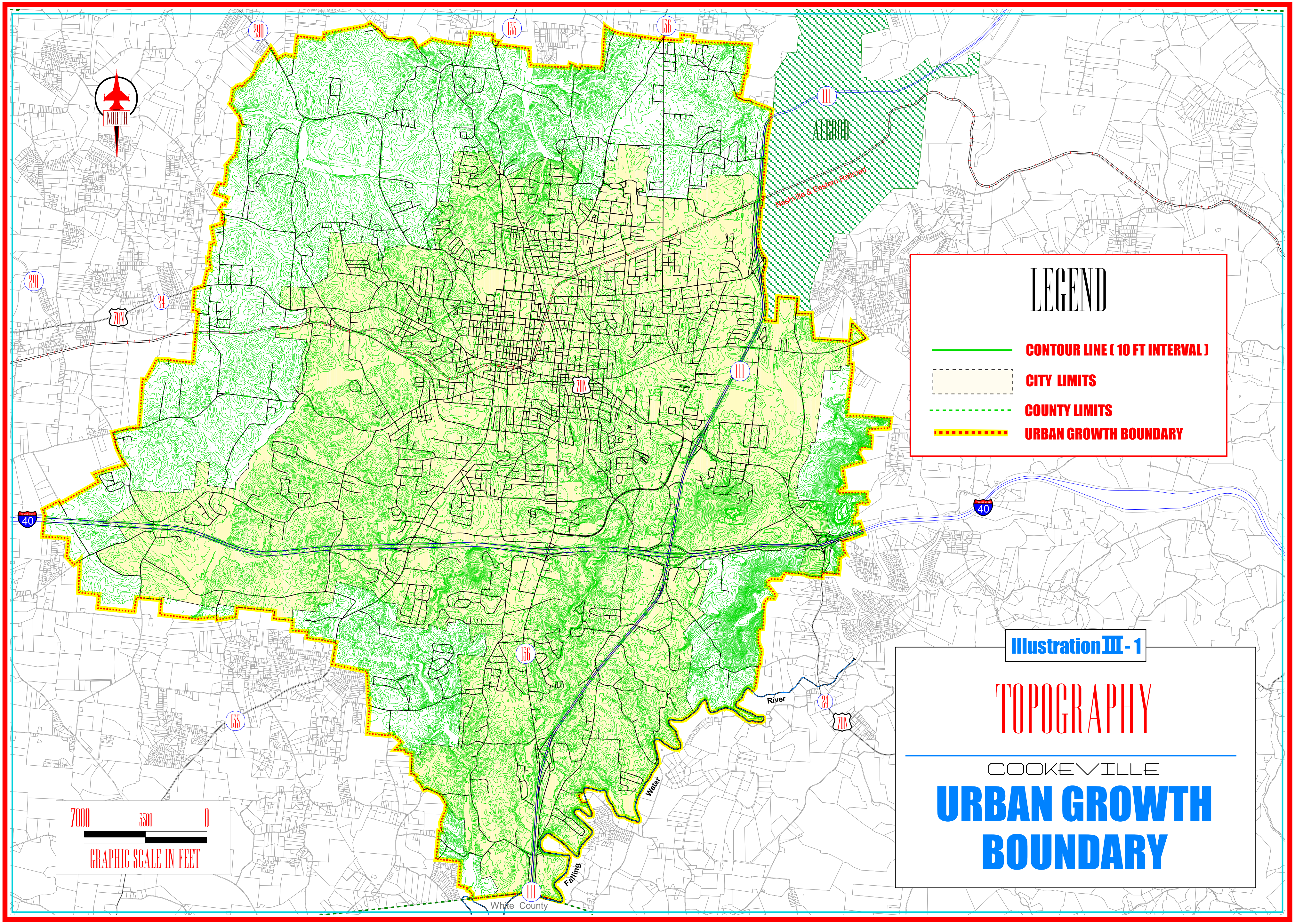
The varied character of Tennessee's topography is related to the rocks that underlie each section of the State and to their geological history. Rocks of the Mississippian Age underlie the Highland Rim region, in which the Cookeville Urban Growth Boundary is located. According to Tennessee's Division of Geology, Mississippian rocks in Tennessee are dominated by limestone.

Sinkholes and Karst Terrain

Karst topography is common in much of Putnam County where soluble limestones form the landscape. Sinkholes, collapsed sinks, springs, sinking creeks and caves, all of which are numerous in and around Cookeville, characterize this type of topography. These geological features of karst terrain play an important role in stormwater management for a significant portion of the Cookeville area. The protection and maintenance of the numerous sinkholes is essential for drainage and for reducing the potential for flooding.

Sinkholes are defined as closed depressions in soil or bedrock formed by the erosion and movement of earth material below the land surface, which is bounded by a closed topographic contour and drains to the sub-surface. Sinkhole retention areas generally refer to the area within the closed contour. Stormwater entering sinkhole retention areas typically flow into the sinkhole opening or throat, or it infiltrates the soil and moves through subsoil channels to the throat.

Significant property damage can result from sinkhole flooding and collapse. As with streams and rivers, sinkholes can flood in heavy rain events. Sinkhole flooding occurs when the amount of stormwater exceeds the drainage capacity. The drainage capacity of a sinkhole is dependent upon the size of the sinkhole throat and the level of the water table. Sinkhole collapse occurs as the result of the subsurface erosion and movement of earth materials to a point where the surface soil cannot be supported.


NORTH
7000
3500
0
GRAPHIC SCALE IN FEET
ALGOOD
Nashville & Eastern Railroad
River
Water
Falling
White County
LEGEND
CONTOUR LINE (10 FT INTERVAL)
CITY LIMITS
COUNTY LIMITS
URBAN GROWTH BOUNDARY
Illustration III - 1
TOPOGRAPHY
COOKEVILLE
URBAN GROWTH
BOUNDARY

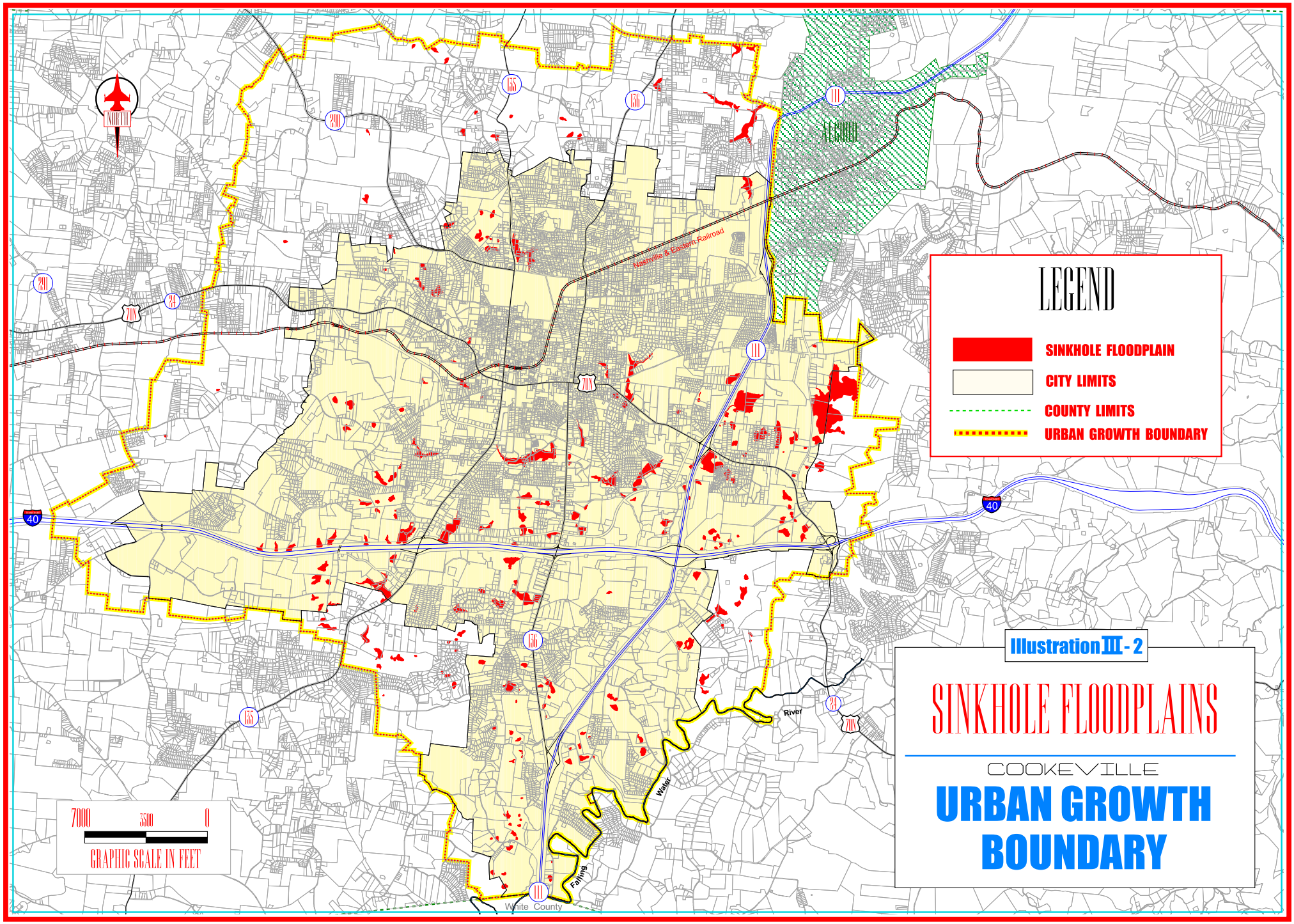
Development within areas draining into a sinkhole can increase the volume of stormwater runoff and decrease the storage capacity of the sinkhole. The filling of sinkhole retention areas, ineffective erosion and sediment control, and blasting can increase the potential for sinkhole flooding and collapse. Specific requirements for construction in and around sinkhole areas are necessary to reduce the potential for flooding and collapse.

The flooding potential of sinkholes in Cookeville was first evaluated in the late 1970's. In 1978 the Cookeville City Council adopted a map identifying the drainage basins of 117 sinkholes. In 1990, the Center for the Management, Utilization and Protection of Water Resources at Tennessee Technological University completed the Assessment of the Cookeville, Tennessee, Stormwater Management System. This study, which covered approximately 75 percent of the current corporate limits and a very small portion of the unincorporated Urban Growth Boundary, determined the flooding potential of 164 sinkholes.

In 2007 the City of Cookeville contracted with the Tennessee Tech Department of Earth Sciences to complete an evaluation of sinkholes within the Urban Growth Boundary. This study, which was completed in 2009, determined sinkhole drainage areas for 219 major sinkholes. These drainage areas cover approximately 45 percent of the land area within Cookeville Urban Growth Boundary. Sinkhole floodplains, defined as those areas predicted to flood in the 100-year, 3-hour rainfall (1.5 inches per hour), were also identified in the 2009 study. The locations of these sinkhole floodplains, occupying approximately 657 acres, are depicted on Illustration III-2. The analysis also indicated that 225 structures and 7.8 miles of streets are currently built within sinkhole floodplains.

The City of Cookeville first adopted regulations for sinkholes in 1982 through Ordinance Numbers 1072 and 1073. These Ordinances established floodplain zones for sinkhole retention areas identified in the 1978 study. In 1988 these regulations were incorporated in the Municipal Zoning Code as an overlay zone designated as SRA, Sinkhole Retention Area. The SRA district was also included in the revised Zoning Code adopted in 2001. These provisions provide basic restrictions on the utilization of sinkhole retention areas. The primary intention of the current regulations is for the protection of structures locating in retention areas. Amendments to the Municipal Zoning Code are needed to reflect the findings of the 2009 study and to provide more emphasis on preventing the malfunction of sinkholes and natural drainage ways.

Findings. The topography in Cookeville is generally characterized as undulating to slightly hilly. Primary topographic constraints to development are steep slopes and karst geological features. Areas of steep slopes are located along Pilot Knob, along an area southwest of the intersection of Interstate 40 and Highway 70N, and to the southeast of the intersection of Highway 111 and Highway 70N. There are also numerous sinkholes scattered throughout the Cookeville area. The drainage areas of these sinkholes cover 45 percent of the Cookeville Urban Growth Boundary. Steps need to be taken to ensure that development is limited on areas with steep slopes and within sinkhole drainage areas.


NORTH
LEGEND
SINKHOLE FLOODPLAIN
CITY LIMITS
COUNTY LIMITS
URBAN GROWTH BOUNDARY
Nashville & Eastern Railroad
Falling Water River
White County
7000 3500 0
GRAPHIC SCALE IN FEET
Illustration III - 2
SINKHOLE FLOODPLAINS
COOKEVILLE
URBAN GROWTH BOUNDARY

DRAINAGE AND FLOODING

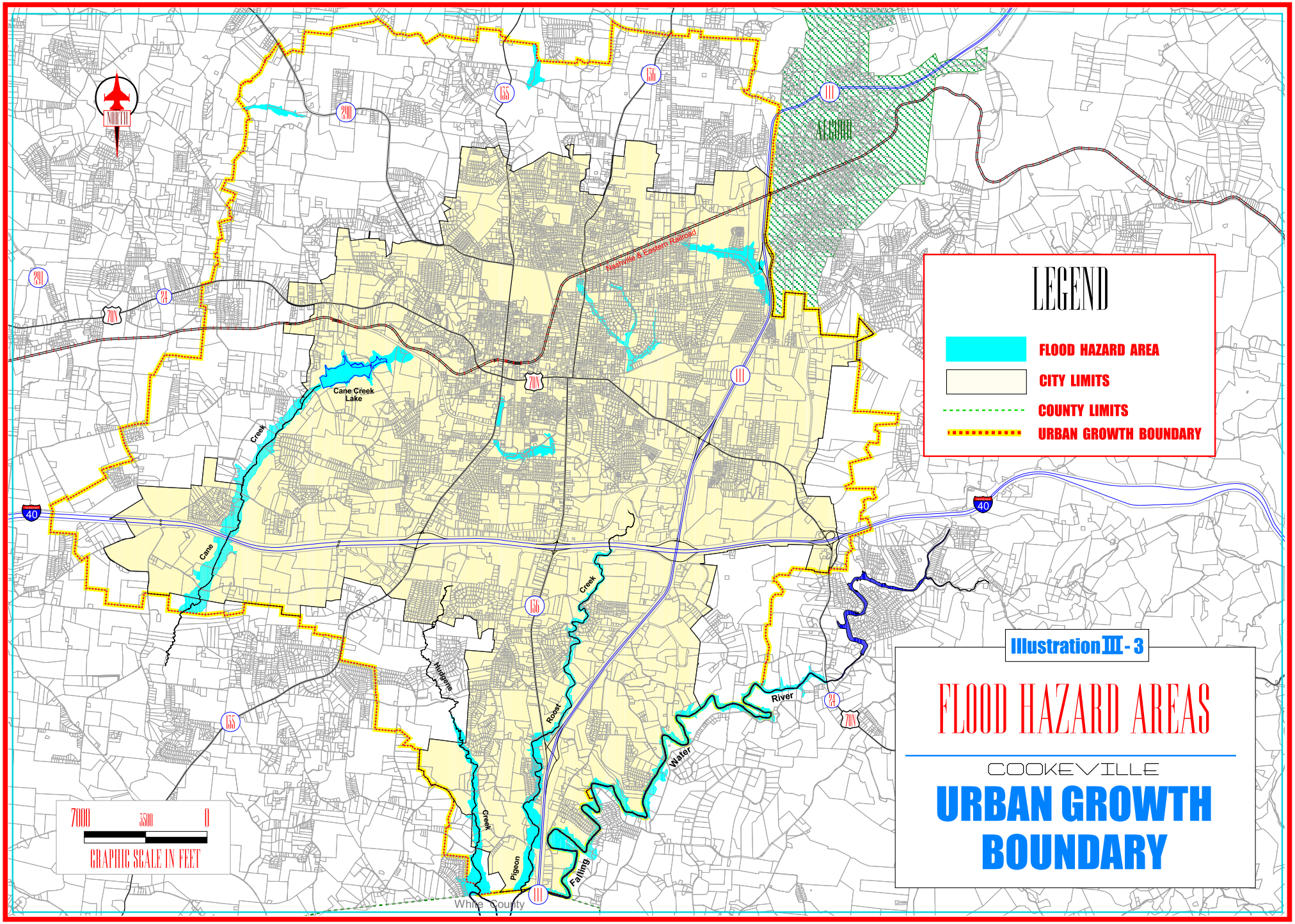
The Cookeville Urban Growth Boundary lies entirely within the Cumberland River Drainage Basin. The area's drainage pattern is well defined, and is principally accommodated by tributary streams of the Caney Fork River. The area located within the current Cookeville corporate limits is primarily drained by the Falling Water River. The Falling Water River also drains the eastern, southeastern, and southern portions of the Urban Growth Boundary, while Cane Creek drains areas in the west and southwest, Blackburn Fork drains areas in the west and northwest, and Spring Creek drains areas in the north and northeast. A large number of sinkholes scattered throughout the municipality and the Urban Growth Boundary play an important role in drainage. The drainage areas of these sinkholes cover approximately 45 percent of the total land area.

The municipality has experienced a number of minor floods in the past. The principal flood season for the streams in the Cookeville area extends from late winter through early spring. These floods are caused by prolonged heavy rainfall covering large areas. All streams rise rapidly following heavy rainfall and have dangerously high flow velocities. Sinkhole flooding within the Cookeville area is caused by large depressions in the ground, having little or no outlets, which simply store rainwater. Severe flooding, those that cause significant property damage, is rare in Cookeville. Minor flooding occurs periodically. With no solution for preventing flooding, the only remaining alternative for the municipality has been the practice of sound floodplain management techniques.

Cookeville has been a participant in the National Flood Insurance Program since December of 1977. This program identifies potential flood hazard areas within the community and provides the residents with the opportunity to purchase flood insurance. Putnam County entered the program in 1998. According to the latest information provided by the Federal Emergency Management Agency (FEMA) dated December 12, 2008, there are 47 flood insurance policies in effect in Cookeville with an insured value of 6.3 million dollars. This is an increase of 19 polices and 5 million dollars in insured value since January 2003.

Floodable areas in the City of Cookeville and its Urban Growth Boundary have been delineated by FEMA on the Flood Insurance Rate Maps (FIRM) for Putnam County, Tennessee and Incorporated Areas dated May 16, 2007. These maps replaced the FIRM prepared for Cookeville by FEMA dated August 19, 1986 and the Flood Hazard Boundary Maps (FHBM) prepared for Putnam County by FEMA dated October 21, 1977. The Flood Insurance Rate Maps depict the 100-year floodplain (1-percent chance of annual exceedence), which serves as the base flood for floodplain management purposes. Unfortunately, base flood elevations have not been determined by FEMA. The lack of base flood elevations creates difficulties in determining exact floodplain elevations.

Flood hazard areas identified by FEMA within the current Cookeville corporate limits are located primarily along Cane Creek, Burton's Branch, Hudgen's Creek, Pigeon Roost Creek, Falling Water River, and a number of unnamed drainageways. Floodable areas identified in the Urban Growth Boundary are primarily located along Falling Water River, Cane Creek, and Hudgens Creek. Approximately four (4) percent, or an estimated 821 acres, of the total land area in Cookeville is located in a flood hazard area. An additional estimated 189 acres of land in the unincorporated Urban Growth Boundary is located in flood hazard areas. These flood hazard areas are depicted on Illustration III-3.


NORTH
LEGEND
FLOOD HAZARD AREA
CITY LIMITS
COUNTY LIMITS
URBAN GROWTH BOUNDARY
Illustration III - 3
FLOOD HAZARD AREAS
COOKEVILLE
URBAN GROWTH BOUNDARY
Nashville & Eastern Railroad
Cane Creek Lake
Cane Creek
Hudgens Creek
Roost Creek
Pigeon Falling Creek
Water River
White County
GRAPHIC SCALE IN FEET
7000
3500
0

Development in the FEMA identified flood hazard areas is regulated by the Cookeville Floodplain Zoning Ordinance, as adopted in 2009 by Ordinance No. O09-07-13. This Ordinance requires that structures located in identified flood hazard areas be elevated or flood proofed to reduce the potential for flood damage. In addition these regulations prohibit encroachment, including fill material, within a distance equal to 2 times the width of the stream at the top of the bank or twenty feet on each side, whichever is greater. This no encroachment standard also applies to all unmapped streams.

Sinkhole floodplain areas in the City of Cookeville and its Urban Growth Boundary were determined by a 2009 study completed by the Department of Earth Sciences from Tennessee Tech University. This study identified floodplains with elevations for 219 major sinkholes scattered throughout the Urban Growth Boundary. Approximately two (2) percent, or an estimated 461 acres, of the total land area in Cookeville is located in sinkhole floodplains. An additional estimated 159 acres of land in the unincorporated Urban Growth Boundary is located in sinkhole floodplains. Approximately 37 acres of the sinkhole floodplain areas are also designated as FEMA floodplains. Development within sinkhole floodplain areas is regulated through the Municipal Zoning Code as an overlay zone designated as SRA, Sinkhole Retention Area.

Findings. Flooding has only minimally affected development in Cookeville in the past and it is not expected to significantly affect development in the future. The restrictions placed on the several hundred acres of land in the municipality as flood hazard areas, limit their availability for future development. As the availability of land not susceptible to flooding decreases, future pressure for development in the FEMA identified flood hazard areas and sinkhole floodplains in the Cookeville Urban Growth Boundary can be expected. Determination of base flood elevations for FEMA identified flood hazard areas and improved standards for development within sinkhole drainage basins are needed to reduce future damage from flooding and to protect the area's stormwater system.

SOILS, WETLANDS, AND GEOLOGY

One of the most important factors affecting development in any community is the content and capability of the various soils. Knowledge of the various characteristics of the soils, such as flood potential, septic tank capability, drainage qualities, depth to water table, load bearing strength, stability, shrink-swell potential, and soil depth are important in determining the appropriate land use for particular sites. The primary source for information on soils and geology for Cookeville and the surrounding Urban Growth Boundary is the Soil Survey of Putnam County, Tennessee which was prepared by the United States Department of Agriculture Soil Conservation Service in 1963 and reissued in 1992. The General Soils Map for Putnam County presented in the soil survey indicates that the Cookeville Urban Growth Boundary is located primarily within four soils associations; those being the Mountview-Bewleyville-Baxter, Christian-Mountview, Waynesboro-Holston-Baxter, and Stony colluvial-Rock land Soils Associations. Except for the Stony colluvial-Rock land Association, land located in these soil associations is characterized as gently rolling or undulating with a few areas of steep, choppy hills. In places oval and irregularly shaped sinkholes and depressions pit the surface. Steep rough slopes with many rock outcrops, loose stones, and boulders characterize the Stony colluvial-Rock land Association.

Illustration III-4 depicts the general location of the various soil series in the four soil associations situated in and around the municipality. This map is a useful guide in planning for various types of development on large tracts of land or for providing general information on the location of soils, but it does not identify the specific soils on individual tracts of land. Within the four soil associations, eight major soils series and approximately 20 minor soils series have been identified in Cookeville and the surrounding Urban Growth Boundary. Many of these soil series are subdivided into soil types and some are further subdivided into soil phases. For detailed information on these soil types and soil phases the 1963 Soil Survey of Putnam County, Tennessee should be consulted. Descriptions and interpretations of the major and minor soils series located in the Cookeville Urban Growth Boundary are available in the Cookeville Comprehensive Future Land Use Plan 1999-2020.

Soil Limitations

The soils in the Cookeville area have been rated according to their limitations for residential, commercial, industrial, recreation and open space, and street uses. Awareness of the limitations for each soil area is useful in recommending the capabilities of a parcel of land for development. Soil limitations for a particular use do not necessarily mean that the land cannot be developed for that use. It does mean that measures may have to be taken to overcome the limitations. Table III-1 presents detailed information on the characteristics and features of the soils in Cookeville and the surrounding Urban Growth Boundary. In this table the ratings of slight, moderate, and severe have the following meanings:

Slight limitations--Soils have properties available for the rated use. Limitations are so minor that they can be easily overcome. Good performance and low maintenance can be expected.

Moderate limitations--Soils have properties moderately favorable for the rated use. Limitations can be overcome or modified with planning, design or special maintenance.

Severe limitations--Soils have one or more properties unfavorable for the rated use. Limitations are difficult and costly to modify or overcome, requiring major soil reclamation, special design, or intense maintenance.

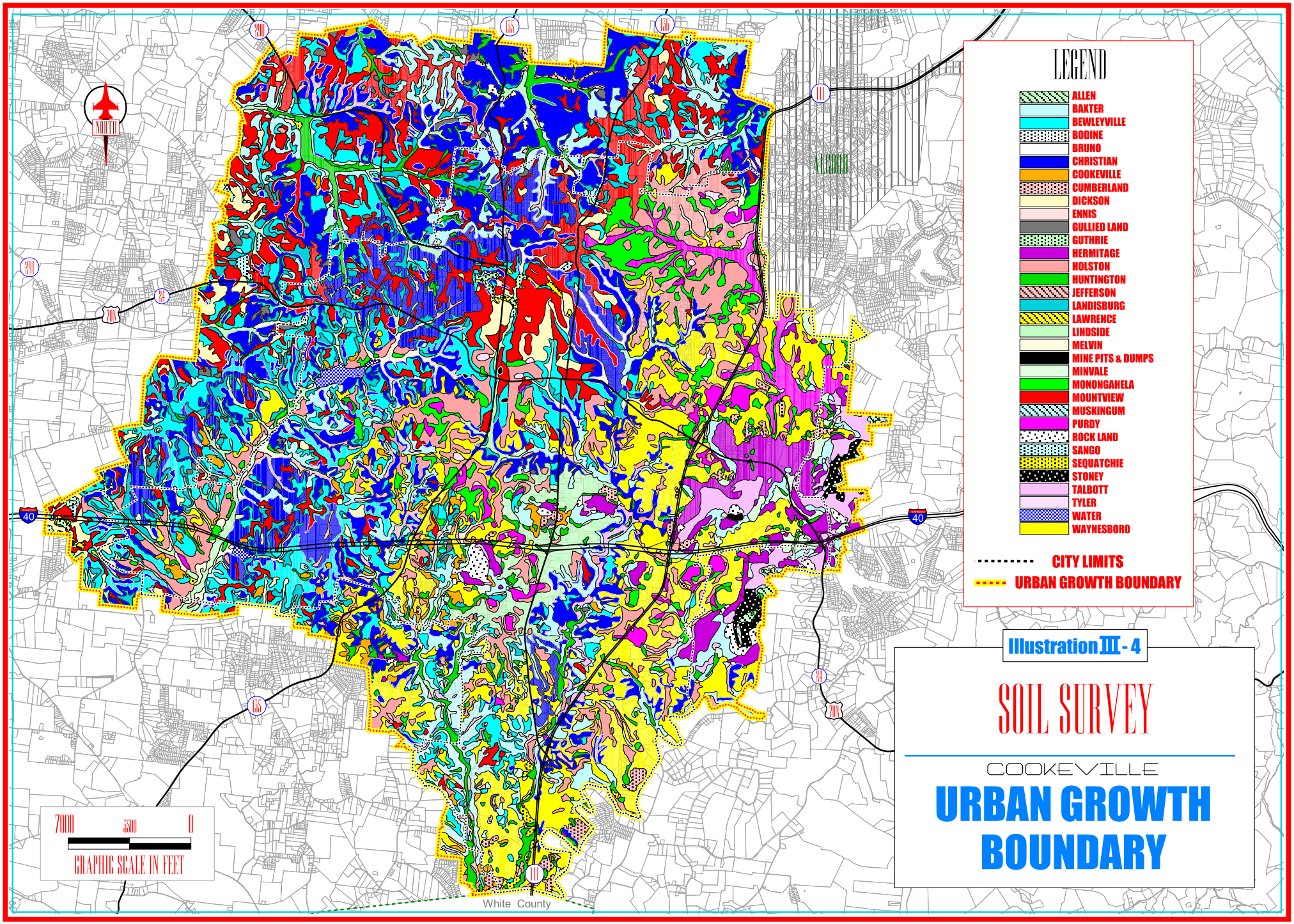

LEGEND
ALLEN
BAXTER
BEWLEYVILLE
BODINE
BRUNO
CHRISTIAN
COOKEVILLE
CUMBERLAND
DICKSON
ENNIS
GULLIED LAND
GUTHRIE
HERMITAGE
HOLSTON
HUNTINGTON
JEFFERSON
LANDISBURG
LAWRENCE
LINDSIDE
MELVIN
MINE PITS & DUMPS
MINVALE
MONONGAHELA
MOUNTVIEW
MUSKINGUM
PURDY
ROCK LAND
SANGO
SEQUATCHIE
STONEY
TALBOTT
TYLER
WATER
WAYNESBORO
CITY LIMITS
URBAN GROWTH BOUNDARY
NORTH
7000
3500
0
GRAPHIC SCALE IN FEET
White County
Illustration III - 4
SOIL SURVEY
COOKEVILLE
URBAN GROWTH BOUNDARY

TABLE III-1
SOIL LIMITATIONS FOR COOKEVILLE URBAN GROWTH BOUNDARY
DEGREE AND KIND OF LIMITATIONS FOR SELECTED COMMUNITY USES

SOILS SERIES	PUBLIC SEWER	SEPTIC TANK	COMMERCIAL/ LIGHT INDUSTRIAL	STREETS	DEVELOPED RECREATION
	DWELLINGS AND NONINTENSIVE USES				
ALLEN	SLIGHT TO SEVERE-SLOPE	SLIGHT TO SEVERE-SLOPE	SLIGHT TO SEVERE-SLOPE	SLIGHT TO SEVERE-SLOPE	SLIGHT TO SEVERE-SLOPE
BAXTER	SLIGHT TO SEVERE-SLOPE	SLIGHT TO SEVERE-SLOPE	SLIGHT TO SEVERE-SLOPE	SLIGHT TO SEVERE-SLOPE	MODERATE TO SEVERE-SLOPE, CHERT
BEWLEYVILLE	SLIGHT TO MODERATE-SLOPE	SLIGHT TO MODERATE-SLOPE	SLIGHT TO SEVERE-SLOPE	SLIGHT TO MODERATE-SLOPE	SLIGHT TO SEVERE-SLOPE
BRUNO	SEVERE-FLOOD	SEVERE-FLOOD	SEVERE-FLOOD	SEVERE-FLOOD	SEVERE-FLOOD
CHRISTIAN	SLIGHT TO SEVERE-SLOPE	MODERATE TO SEVERE-PERCOLATION	SLIGHT TO SEVERE-SLOPE	MODERATE TO SEVERE-SLOPE, STRENGTH	SEVERE-SLOPE, TEXTURE
COOKEVILLE	SLIGHT TO MODERATE-SLOPE	SLIGHT TO MODERATE-SLOPE	MODERATE TO SEVERE-SLOPE	MODERATE TO SEVERE-SLOPE, STRENGTH	MODERATE-TEXTURE, SLOPE
DICKSON	SLIGHT	SEVERE-PERCOLATION	SLIGHT	MODERATE-STRENGTH	SEVERE-PERMEABILITY
ENNIS	SEVERE-FLOOD	SEVERE-FLOOD	SEVERE-FLOOD	SEVERE-FLOOD	SEVERE-FLOOD
GUTHRIE	SEVERE-WETNESS	SEVERE-PERCOLATION, WETNESS	SEVERE-FLOOD, WETNESS	SEVERE-FLOOD, WATERTABLE	SEVERE-FLOOD
HOLSTON	SLIGHT	SLIGHT	SLIGHT TO MODERATE-SLOPE	SLIGHT	SLIGHT TO MODERATE-SLOPE
HERMITAGE	SLIGHT TO SEVERE-SLOPE	SLIGHT TO SEVERE-SLOPE	SLIGHT TO SEVERE-SLOPE	SLIGHT TO SEVERE-SLOPE	SLIGHT TO SEVERE-SLOPE
HUNTINGTON	SEVERE-FLOOD	SEVERE-FLOOD	SEVERE-FLOOD	SEVERE-FLOOD	MODERATE-FLOOD
JEFFERSON	SLIGHT TO SEVERE-SLOPE	SLIGHT TO SEVERE-SLOPE	SLIGHT TO SEVERE-SLOPE	SLIGHT TO SEVERE-SLOPE	SLIGHT TO SEVERE-SLOPE, COBBLES
LANDISBURG	SLIGHT	SEVERE-PERCOLATION	SLIGHT TO MODERATE-SLOPE	MODERATE-STRENGTH	MODERATE-PERMEABILITY
LAWRENCE	MODERATE-WETNESS	SEVERE-PERCOLATION, WETNESS	SEVERE-WATER TABLE	SLIGHT TO SEVERE-SLOPE	SEVERE-WETNESS
LINDSIDE	SEVERE-FLOOD	SEVERE-FLOOD	SEVERE-FLOOD	SEVERE-FLOOD	MODERATE-FLOOD
MELVIN	SEVERE-FLOOD	SEVERE-FLOOD, WETNESS	SEVERE-FLOOD, WATER TABLE	SEVERE-FLOOD, WATER TABLE	SEVERE-FLOOD
MINVALE	SLIGHT TO MODERATE-SLOPE	SLIGHT TO MODERATE-SLOPE	SLIGHT TO SEVERE-SLOPE	SLIGHT TO MODERATE SLOPE	SLIGHT TO SEVERE-SLOPE, CHERT
MONONGAHELA	SLIGHT	SEVERE-PERCOLATION	SLIGHT	MODERATE-WATER TABLE	MODERATE-PERMEABILITY
MOUNTVIEW	SLIGHT TO MODERATE-SLOPE	SLIGHT TO MODERATE-SLOPE	SLIGHT TO SEVERE-SLOPE	SLIGHT TO MODERATE-SLOPE	SLIGHT TO SEVERE-SLOPE
PURDY	SEVERE-WETNESS	SEVERE-PERCOLATION	SEVERE-FLOOD, WATER TABLE	SEVERE-FLOOD, WATER TABLE	SEVERE-WETNESS
SANGO	SLIGHT	SEVERE-PERCOLATION	MODERATE-WATER TABLE	MODERATE-WATER TABLE	MODERATE-PERMEABILITY
SEQUATCHIE	SLIGHT	SLIGHT	SLIGHT	SLIGHT	SLIGHT
TALBOTT	MAODERATE TO SEVERE-SLOPE, CLAYEY	SEVERE-SLOPE, PERCOLATION	SEVERE-SLOPE, SHRINK-SWELL	MODERATE TO SEVERE-SLOPE, STRENGTH	SEVERE-SLOPE, TEXTURE
TYLER	SEVERE-WETNESS	SEVERE-PERCOLATION	SEVERE-FLOOD, WATER TABLE	SEVERE-WATER TABLE	SEVERE-WETNESS
WAYNESBORO	SLIGHT TO MODERATE-SLOPE	SLIGHT TO MODERATE-SLOPE	SLIGHT TO MODERATE-SLOPE	SLIGHT TO MODERATE-SLOPE	SLIGHT TO SEVERE-SLOPE

SOURCE: SOIL INTERPRETATIONS FOR PUTNAM COUNTY, TENNESSEE, 1963.

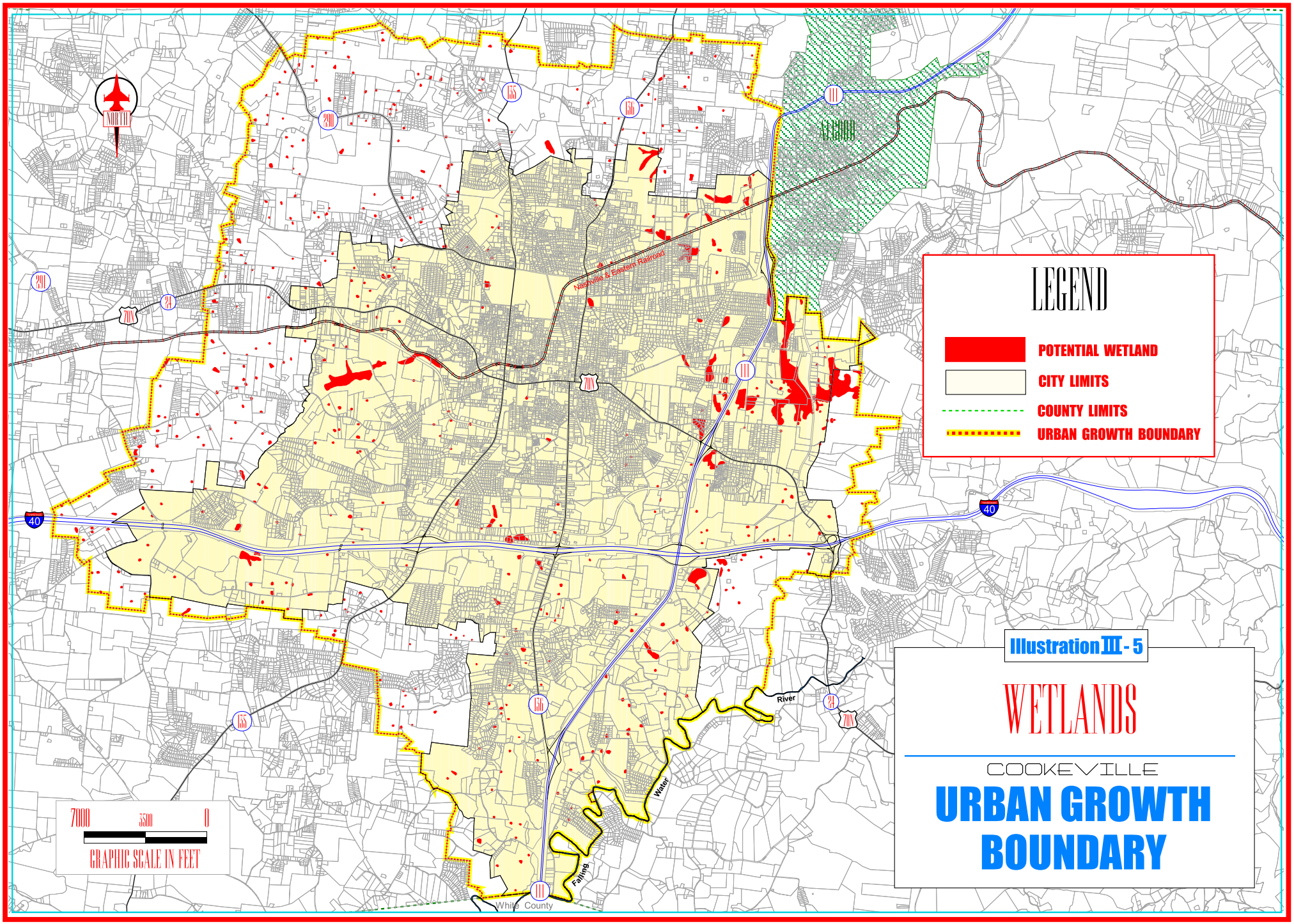
The soils characteristics that have had the greatest impacts on development in Cookeville are slope, drainage and permeability, and flood potential. The greatest extent and intensity of development in the Cookeville area has occurred on soils in the Bewleyville, Christian, Dickson, Holston, Jefferson, Mountview, and Waynesboro Series. Each of these series generally have less than 12 percent slope, are well-drained, and have low flood potential. In general the soils series in the Cookeville area with characteristics severely limiting development, which includes the Bruno, Guthrie, Huntington, Lawrence, Lindside, Melvin, Purdy, and Tyler Series, have had little development. The Guthrie, Melvin, Lindside and Purdy soils, which are poorly drained soils with fragipans, have had the most severe affect on development in Cookeville.

Wetlands

In the past wetlands were generally considered a nuisance and were often drained and filled to allow for land development. The failure to recognize the importance of wetlands has resulted in a significant reduction of such lands locally, regionally and nationally. Wetlands provide many important environmental and quality of life benefits. Wetlands help control flooding by absorbing stormwater runoff and discharging it more slowly. They also benefit water quality by trapping and filtering pollution, sediments and toxins that choke streams. Additionally, wetlands provide groundwater recharge by retaining water so that infiltration can occur; supply habitat areas for fish, wildlife, and vegetation; help stabilize stream banks with their root systems; and offer open space and recreation opportunities.

The identification of wetlands can be difficult and is often only definitively determined by a site visit from a qualified wetland biologist. The U.S. Department of the Interior's Fish and Wildlife Service uses the Cowardin *et al* (1979) definition of wetlands: *Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes, (2) the substrate is predominantly undrained hydric soil, and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year.* In general terms, wetlands are lands where saturation with water is the dominant factor in determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. The characteristic most commonly found with wetlands is soil that is at least periodically saturated with or covered by water.

Potential wetland areas within the Cookeville Urban Growth Boundary are depicted on Illustration III-5. The delineation of these areas is based upon information from the National Wetlands Inventory and on the location of hydric soils. The National Wetlands Inventory, prepared by the U.S. Fish and Wildlife Service, utilizes aerial photographs to depict wetland locations and their approximate boundaries. Hydric soils generally are soils saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions. There are three (3) soils series located in the Urban Growth Boundary that are considered hydric soils: Purdy, Melvin and Guthrie. While these are acceptable sources for estimating wetlands, it is important to note that numerous small areas of wetlands (less than one acre in size) are scattered throughout the Urban Growth Boundary.


NORTH
LEGEND
POTENTIAL WETLAND
CITY LIMITS
COUNTY LIMITS
URBAN GROWTH BOUNDARY
Nashville & Eastern Railroad
Falling Water River
White County
70000 35000 0
GRAPHIC SCALE IN FEET
Illustration III - 5
WETLANDS
COOKEVILLE
URBAN GROWTH BOUNDARY

Utilizing information from the National Wetlands Inventory and the location of hydric soils it is estimated that there are approximately 1,614 acres of wetlands in the Cookeville Urban Growth Boundary. This includes approximately 546 acres of wetlands identified on the National Wetlands Inventory and an additional approximate 1,068 acres classified as wetlands based on soils series. The National Wetlands Inventory total includes 154 acres of freshwater ponds. Excluding freshwater ponds, the majority of the identified wetlands in the Urban Growth Boundary are located along streams within flood plain areas. The most significant areas of wetlands not located within floodplain areas are located in the eastern portion of the city in the vicinity of Dry Valley and Buck Mountain Roads.

The importance of protecting and preserving wetlands is recognized in the Federal Clean Water Act. Through Section 404 of this Act, the United States Army Corps of Engineers and the Environmental Protection Agency provide regulatory oversight of wetlands. Permits are required for the lawful alteration of wetlands. In the State of Tennessee the Tennessee Department of Environment and Conservation also has jurisdiction over wetlands. Even with Federal and State supervision in place, wetland management is an important land use consideration for the City of Cookeville.

Geology

The geology of an area can also play a significant role in determining the direction and extent of development. Of particular importance is the depth of the soil covering above the underlying rock strata, or the depth to bedrock. Two soils series with little depth to bedrock, Rock land and Stony colluvial, are located in the Cookeville Urban Growth Boundary. The depth to bedrock for most of the soils in Cookeville and the Urban Growth Boundary is generally greater than five feet and there are relatively few areas with problems due to depth to bedrock.

Findings. The Cookeville Urban Growth Boundary is located primarily within four soil associations. In general the characteristics of the soils series within these associations posing the most severe limitations to development are severe slope, wetlands, poor drainage, flooding and depth to bedrock. While soils with these limitations are not widespread in Cookeville and its Urban Growth Boundary, it is anticipated that pressures for future growth will occur in areas with soil characteristics not ideal for development.

SUMMARY OF FINDINGS

Like many communities, the land use pattern of the Cookeville Urban Growth Boundary has been influenced by the natural environment. Natural factors most significantly affecting development include steep slopes, wetlands, sinkholes and floodplains. Past development has often concentrated more on mitigation or removal of natural factors instead of protection of these important resources. In certain instances this has resulted in degradation of the environment and increased risk to property. Perhaps more importantly, the benefits of natural resources such as trees, streams and wetlands when effectively managed, have not always been realized.

Balancing the protection of the environment and accommodating growth and development is difficult. The environment and natural resources in the Cookeville area are major components of the quality of life enjoyed by residents. The results of the 2010 Citizen Survey indicate that protection of the natural environment is an important issue to many Cookeville residents. With lands available for development without significant natural constraints limited, more pressure for development in environmentally sensitive areas will occur. A comprehensive system-wide approach for the management and protection of natural resources is necessary for the future development of the City of Cookeville and its Urban Growth Boundary. This approach should include the encouragement of the use of low impact development principals, the utilization, protection and enhancement of green infrastructure, and the promotion of green building programs.

CHAPTER IV

SOCIO-ECONOMIC FACTORS AFFECTING DEVELOPMENT

INTRODUCTION

The socio-economic trends pertinent to the preparation of the revised land use and transportation plans are presented herein. Strategies for community development, projections of land use and transportation needs, discussions of land use issues, are dependent upon population and economic characteristics. These demographics provide future trend projections, which can be affected, but the trends must be understood to be of planning significance.

TRENDS SUMMARY

For the purposes of this plan, past changes in population and employment were examined for their implications for development within the City of Cookeville and the surrounding planning region. Of most significance are the projected changes in the population and employment within Putnam County and Cookeville through the year 2025.

POPULATION

According to U. S. Census figures the population of Cookeville has tripled in the past 50 years, growing from 6,924 in 1950 to 23,923 in 2000. During the same 50-year period the Putnam County population more than doubled, increasing from 29,869 to 62,315. Historic population counts for Cookeville, Putnam County, the Upper Cumberland Region, and the State are presented in Table IV-1. Historic population trends for the municipality and the county are also presented in Graphs IV-1 and IV-4. Of particular interest for the City of Cookeville are the large population increases from 1960 to 1970 and from 1970 to 1980, which were followed by almost no increase from 1980 to 1990. It is also significant that the growth rates for Cookeville as indicated by the 1990 and 2000 Census were significantly less than the county's growth rates and were less than the averages for both the region and the state.

Percent of County Population

The percent of a county's population located within a municipality can have significant implications for that city. This includes the extent of representation the city has on the county legislative body. As depicted in Table IV-1 the 2000 Census indicated that 38 percent of the total county population was located within the corporate limits of Cookeville. This is a four (4) percent decrease since 1990 and a seven (7) percent reduction since 1980. The decline in the percentage of the total county population residing in City of Cookeville can be at least partially attributed to minimal annexation during the 1980's and 1990's and conversely the city's increase in its percentage of total county population in 1970 and 1980 can be at least partially attributed to aggressive annexation in the 1960's and 1970's.

Since 2000 the city has undergone significant expansion, increasing its land area by over ten (10) square miles to a total of 32.74 square miles. A special census of areas annexed since 2000 indicates that the city's population has increased by 2,472. Cookeville's 2008 state certified population of 26,656 represents 42.8 percent of the total county population.

TABLE IV-1
HISTORIC POPULATION COUNTS AND PERCENT CHANGE
1950 TO 2000

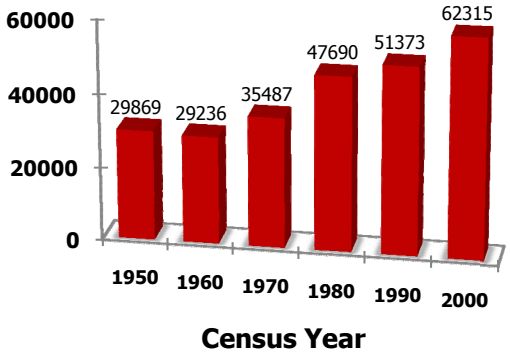
Place	1950	Percent Change 1950-60	1960	Percent Change 1960-70	1970	Percent Change 1970-80	1980	Percent Change 1980-90	1990	Percent Change 1990-00	2000
Cookeville	6,924	12.7%	7,805	84.5%	14,403	50.0%	21,604	0.7%	21,744	10.0%	23,923*
Percent of County	23.2%	3.5%	26.7%	13.9%	40.6%	4.7%	45.3%	-3.0%	42.3%	-3.9%	38.4%
Algood	729	21.5%	886	104.1%	1,808	33.1%	2,406	-0.3%	2,399	25.2%	2,942
Baxter	861	-0.9%	853	44.1%	1,229	14.8%	1,411	-8.7%	1,289	-0.8%	1,279
Monterey	2,043	1.3%	2,069	13.6%	2,351	11.0%	2,610	-1.9%	2,559	6.2%	2,717
Municipal Total	10,557	10.0%	11,613	70.4%	19,791	41.6%	28,031	-0.1%	27,991	10.3%	30,861
Putnam Co	29,869	-2.1%	29,236	21.4%	35,487	34.4%	47,690	7.7%	51,373	21.3%	62,315
UCR	198,382	-7.7%	183,190	5.8%	193,719	24.7%	241,605	4.4%	252,301	12.9%	284,880
Tennessee	3,291,718	8.4%	3,567,089	10.1%	3,926,018	16.9%	4,591,023	6.2%	4,877,185	16.7%	5,689,283

Adapted from Tennessee Statistical Abstract (2003) with addition of 1950 figures.

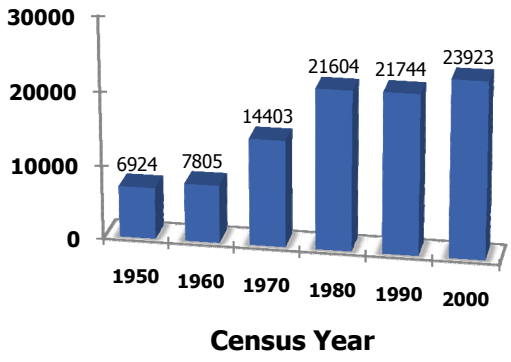
* As of July 1, 2008 the state certified population for the City of Cookeville was 26,656

Note: The Upper Cumberland Region includes the counties of Cannon, Clay, Cumberland, DeKalb, Fentress, Jackson, Macon, Overton, Pickett, Putnam, Smith, Van Buren, Warren and White.

GRAPH IV-1
PUTNAM COUNTY POPULATION 1950 TO 2000



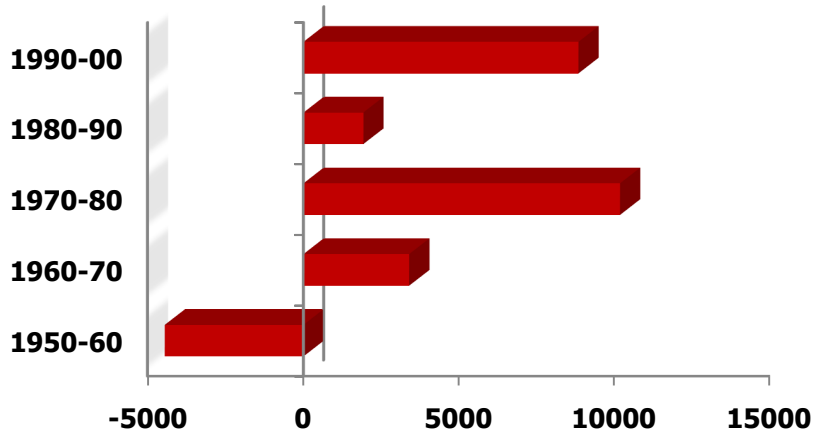
GRAPH IV-2
COOKEVILLE POPULATION 1950 to 2000



Migration

Migration, which is determined by factoring birth and death data with the total population change, has been a significant factor in population changes in Putnam County during the last half century. As Graph IV-3 depicts, Putnam County has experienced considerable migration changes during the fifty-year period from 1950 to 2000. From 1950 to 1960 the county experienced an out-migration of 4,451 persons. This was typical of many counties in the south during this period and can be at least partially attributed to residents leaving to seek employment opportunities. An in-migration of 3,407 persons occurred between 1960 and 1970. During the period from 1970 to 1980 the county had an in-migration of over 10,200 persons, which represented a net migration rate of nearly 28 percent, accounting for approximately 84 percent of the total population gain. From 1980 to 1990 net in-migration in the county dropped to just over 1,900 persons, which represented a net migration rate of only 4 percent. Net migration in Putnam County from 1990 to 2000 was 8,893, or 81 percent of the total population increase. Although significantly more than the previous decade, Putnam County's net migration rate of 17.3 percent from 1990 to 2000 was less than the Upper Cumberland Region average of 19.1 percent. The county's 1990 to 2000 net migration rate was however higher than the state average of 11.6 percent for the same period.

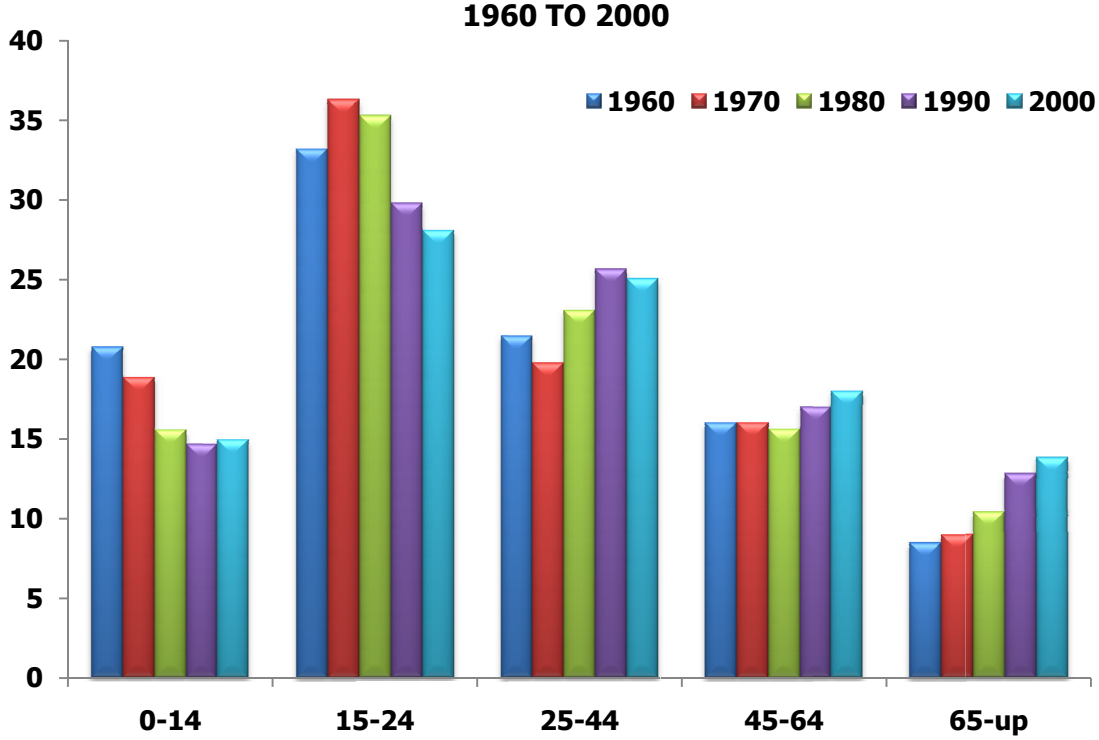
GRAPH IV-3
PUTNAM COUNTY NET MIGRATION
1950 TO 2000



Age Distribution

Trends in a community's population age distribution are important to consider when making future land use, transportation and community facility plans. Graph IV-4 depicts a summary of cohort age distribution by percentage of total population in Cookeville from 1960 to 2000. The trends, which are depicted in Graph IV-4, represent some of the forces that could account for the moderate population growth projected for the city.

GRAPH IV-4
COOKEVILLE SELECTED AGE GROUPS
1960 TO 2000



An analysis of the cohort age distribution in Cookeville from 1960 to 2000 indicates that after several decades of considerable and steady declines in the age group of 14 years and under there was a slight increase, 14.7 percent to 15.0 percent, from 1990 to 2000. The age group between 15 and 24 is the city's largest cohort, which reflects the impact of Tennessee Technological University. However, this age group has declined significantly since 1970, from 36.3 percent of the total population to 28.1 percent. In 1960, 54 percent of the Cookeville population was less than 25 years old and by 2000 only 43 percent was less than 25. The reductions in the categories of 24 years and under have long-term implications, including a potential reduction in the available labor force. These declines are also indicative of the national trend of a smaller family size.

After two decades of steady increases there was a slight decrease, 25.7 percent to 25.1 percent, in the age group of between 25 and 44 years from 1990 to 2000. This is significant because the cohort between 25 and 44 years is the primary child bearing age group. The decline in this cohort could slow the trend in the increase in the age group of 14 years and under. Also of importance is that the age group of between 25 and 64 years, which is the primary working cohort, has actually increased from 37.5 percent in 1960 to 43.1 percent in 2000.

The Cookeville population has followed the national trend of a larger senior population with the age group over 64 years increasing from 8.5 percent of the total population in 1960 to 13.8 percent in 2000. In addition the cohort of between 45 and 64 years increased from 17 to 18 percent of the city's total population from 1990 to 2000. This trend for an aging population is also reflected in the city's median age, which has increased from 23.2 in 1970 to 29.0 in 2000.

Household Characteristics

The number of households and average persons-per-household in Putnam County and Cookeville reflect the general trend of population change noted above. While the number of households in the county more than tripled from 1960 to 2000, increasing from 8,124 to 24,865, the average persons-per-household decreased from 3.41 to 2.40. Cookeville follows the county pattern in numbers of households, growing from 2,047 in 1960 to 9,938 in 2000. Persons-per-household in the municipality declined from 3.07 in 1960 to 2.19 in 2000. The decreases in persons-per-household of nearly one person in a 30-year period reflect the nationwide trend of smaller family size. The lower persons-per-household average in the city can be partially attributed to 66 percent of the county's population in the 20 to 24 age group (college age) and 40 percent of the county total population over the age of 65 residing in the city. Table IV-2 reflects selected household characteristics for Cookeville and Putnam County from 1960 to 2000.

TABLE IV-2
HOUSEHOLD CHARACTERISTICS
1960 TO 2000

	COOKEVILLE		PUTNAM COUNTY	
Year	Total Households	Persons per Household	Total Households	Persons per Household
1960	2,047	3.07	8,124	3.41
1970	4,250	2.76	11,047	2.98
1980	7,087	2.44	16,076	2.65
1990	8,563	2.23	19,753	2.45
2000	9,938	2.19	24,865	2.40

Population Projections

Population projections are essential in planning for the various needs of a municipality's population. Population counts are rarely static. They are constantly changing due to three (3) primary factors: natural increase, net migration, and expansion of jurisdictional boundaries.

Population projections for the municipalities and counties of Tennessee were prepared by the University of Tennessee Center for Business and Economic Research (UT-CBER) and the Tennessee Advisory Commission on Intergovernmental Relations (TACIR) in June 2009. The projections as prepared by UT-CBER and TACIR for the City of Cookeville, Putnam County, and the state in five (5) year increments to 2030 are presented in Table IV-3. These projections were developed utilizing the cohort-component method with the specific components being births, deaths, and migration. The potential expansion of municipal boundaries was not factored into the projections.

It is estimated by UT-CBER/TACIR that the population of Cookeville will increase to 30,676 in 2010, to 35,675 in the year 2020, and to 39,384 in the year 2030. This is graphically depicted in Graph IV-5. Graph IV-6 shows that the Putnam County population is projected to grow to 70,627 by 2010 and to 89,576 by 2030.

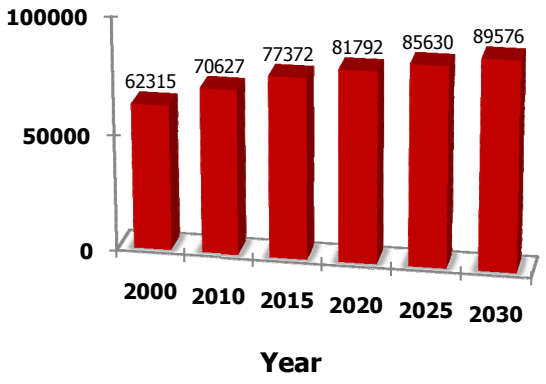
TABLE IV-3
PROJECTED POPULATION COUNTS AND PERCENT CHANGE TO 2030

Place	2000	Percent Change 2000-2010	2010	Percent Change 2010-2015	2015	Percent Change 2015-2020	2020	Percent Change 2020-2025	2025	Percent Change 2025-2030	2030
Cookeville	23,923	28.2%	30,676	10.4%	33,865	5.3%	35,675	5.0%	37,467	5.1%	39,384
Percent of County	38.4%		43.4%		43.8%		43.6%		43.8%		44.0%
Putnam County	62,315	13.3%	70,627	9.6%	77,372	5.7%	81,792	4.7%	85,630	4.6%	89,576
Unincorporated	31,454	3.2%	32,466	8.9%	35,368	6.1%	37,516	4.4%	39,178	4.0%	40,764
Percent of County	50.1%		46.0%		45.7%		45.9%		45.8%		45.5%
Tennessee	5,689,283	9.5%	6,229,564	6.0%	6,600,486	3.9%	6,860,231	3.9%	7,130,776	3.7%	7,397,302

Projections prepared by the University of Tennessee Center for Business and Economic Research (UT-CBER) and the Tennessee Advisory Commission on Intergovernmental Relations (TACIR), June 2009.

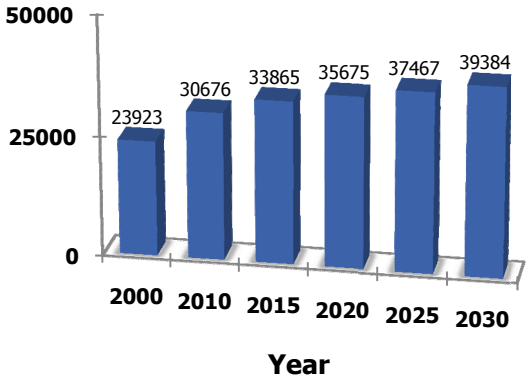
GRAPH IV-5

PUTNAM COUNTY POPULATION PROJECTIONS TO 2030



GRAPH IV-6

COOKEVILLE POPULATION PROJECTIONS TO 2030



The projections prepared by UT-CBER/TACIR reflect approximate growth rates for Cookeville of 28 percent from 2000 to 2010, and of 16 percent from 2010 to 2020, and 10 percent from 2020 to 2030. Total growth for Cookeville for the 30-year period is projected to be 15,461 or 65 percent. For the period between 2000 and 2010, UT-CBER/TACIR projects for Putnam County an approximate growth rate of 13 percent, 16 percent between 2010 and 2020, and 9 percent between 2020 and 2030. Total growth for the county during the 30-year period is projected to be 27,261 or 44 percent. The projections also indicate that the percent of Putnam County's total population located within the corporate limits of Cookeville will increase from 38 percent in 2000 to 44 percent in 2030.

Findings. The moderate population increase projected for both Putnam County and Cookeville is supported by the decline in the younger population, the decrease in household size, and the growing numbers of elderly as indicated in the 2000 Census. These parallel trends, if they continue through the planning period, will have significant implications for planning within the City of Cookeville, in both land use and the delivery and types of services required by the resulting population. Population growth will also be greatly affected by the considerable amount of annexation completed by Cookeville since 2000.

ECONOMY

An understanding of a municipality's economic characteristics is important in developing plans for future development. In this section employment by occupation, employment by industrial sectors, historical employment, major employers, unemployment, place of work, income levels, and poverty rates are analyzed.

Current Occupations

A comparison of employment in Cookeville and Putnam County to the State employment pattern is important to understand current trends. As depicted in Table IV-4, according to the 2000 Census, the highest percentage of the Cookeville population is employed in service occupations, while in the county it is in production occupations and for the State it is in office and administrative occupations. This is indicative of Cookeville's importance as a service center for the Upper Cumberland Region.

TABLE IV-4
EMPLOYMENT BY OCCUPATION
2000

Occupation	City	%	County	%	State	%
Management & Related	1,245	10.7	2,982	10.0	312,868	11.8
Professional & Related	1,550	13.3	3,459	11.7	333,616	12.6
Education & Related	1,072	9.2	2,079	7.0	134,669	5.1
Service	1,891	16.3	4,290	14.5	362,941	13.7
Sales & Related	1,478	12.7	3,548	12.0	296,090	11.2
Office & Administrative	1,450	12.5	3,993	13.4	396,409	14.9
Farming, & Related	60	0.5	219	0.7	14,645	0.5
Construction & Maintenance	674	5.8	2,563	8.6	272,164	10.3
Production	1,493	12.9	4,466	15.0	328,053	12.4
Transportation & Related	707	6.1	2,095	7.1	200,183	7.5
Total	11,620	100	29,694	100	2,651,638	100

A significantly higher percentage of the Cookeville population is employed in professional and related and education, training and library occupations than is employed in the county and the State. This most likely is reflective of the impact of a major university and regional medical center being located in the city. A much lower percentage of the Cookeville population is employed in construction, extraction and maintenance occupations than is employed in the county and the State.

Employment by Industrial Sectors

Table IV-5 depicts the 1980, 1990 and 2000 employment figures by major industrial sector for the State, Putnam County and the City of Cookeville. As Table IV-5 reflects, a total of 11,620 persons were employed in Cookeville in 2000, which was an increase of 1,237 or 11.9 percent from 1990. Total employment in Putnam County increased by approximately 21.8 percent over the same period while the State increased by approximately 17.8 percent. These increases correspond closely to the 1990 to 2000 population growth rates for each of the governmental levels.

Nearly 25 percent of the employed Cookeville population was employed in the wholesale and retail trade industrial sector in 2000. This sector was followed by employment in the manufacturing sector at 20 percent and employment in the educational services sector at 15 percent of the total employment. The high percentage of the city's population employed in wholesale and retail trade reflects the community's importance as a commercial center for the region.

The manufacturing sector, closely followed by the wholesale and retail trade sector, account for the largest percentage of employment in Putnam County. Employment statewide mirrors that of Cookeville with the top sector of employment being wholesale and retail trade followed by manufacturing. It is significant that for all three government levels the percentage of total employment in the manufacturing sector has steadily declined from 1980 to 2000. For the City of Cookeville and the state manufacturing actually dropped by 2000 to below 19 percent of the total employment. According to the 2000 figures, Putnam County employs a higher percentage in manufacturing than the State.

Both Putnam County and Cookeville employ a much higher percentage of persons in the educational services sector than the State average, which is reflective of Tennessee Tech University. The city actually employs double the percentage of the state in the educational services sector. The city and the county each employ a lower percentage of persons than the State in the industrial sectors of construction; transportation; finance, insurance and real estate; and public administration. The State also employs a higher percentage in the health and social services sector than both Cookeville and Putnam County, which is surprising given the location of a major medical center in the city.

TABLE IV-5
HISTORICAL EMPLOYMENT BY MAJOR INDUSTRIAL SECTOR
STATE, PUTNAM COUNTY, AND CITY OF COOKEVILLE
1980, 1990 & 2000

	STATE						PUTNAM COUNTY						COOKEVILLE					
	1980		1990		2000		1980		1990		2000		1980		1990		2000	
INDUSTRIAL SECTOR	Persons Employed	%	Persons Employed	%	Persons Employed	%	Persons Employed	%	Persons Employed	%	Persons Employed	%	Persons Employed	%	Persons Employed	%	Persons Employed	%
Agriculture, Forestry, Fishing & Hunting	50,517	2.64	50,796	2.26	31,628	1.19	467	2.32	446	1.83	371	1.25	75	0.86	92	0.88	88	0.75
Mining	11,088	0.58	7,707	0.34	4,423	0.16	125	0.62	93	0.38	54	0.18	60	0.69	13	0.12	6	0.05
Construction	119,059	6.22	142,280	6.32	193,255	7.29	1,343	6.68	1,375	5.64	1,916	6.45	406	4.67	372	3.58	575	4.95
Manufacturing	511,129	26.69	523,813	23.27	501,836	18.93	5,792	28.81	6,508	26.70	6,846	23.06	1,912	22.01	2,060	19.84	2,191	18.86
Transportation & Warehousing	81,573	4.26	107,574	4.78	135,706	5.12	555	2.76	828	3.39	1,171	3.95	174	2.00	333	3.21	386	3.32
Utilities & Information	72,330	3.78	63,441	2.82	93,638	3.53	665	3.31	497	2.04	944	3.18	214	2.46	179	1.72	422	3.63
Wholesale & Retail Trade	379,394	19.81	480,155	21.33	576,231	21.73	3,959	19.69	5,689	23.34	6,733	22.67	1,975	22.73	2,825	27.21	2,893	24.90
Finance, Insurance & Real Estate	93,492	4.88	120,371	5.35	153,323	5.78	733	3.65	1,007	4.13	1,039	3.50	338	3.89	502	4.84	481	4.14
Entertainment & Recreational Services	15,337	0.80	24,924	1.11	37,204	1.40	189	0.94	256	1.05	377	1.27	137	1.58	185	1.78	252	2.17
Health & Social Services	172,804	9.02	191,134	8.49	292,591	11.04	1,458	7.25	1,669	6.85	2,812	9.47	775	8.92	719	6.93	1,042	8.97
Educational Services	154,307	8.06	165,498	7.35	201,082	7.58	2,663	13.25	2,765	11.34	3,490	11.75	1,708	19.67	1,562	15.05	1,779	15.31
Personal, Professional & Other Services	162,478	8.49	279,100	12.40	324,770	12.25	1,331	6.62	2,476	10.16	2,723	9.17	564	6.49	1193	11.49	1,088	9.36
Public Administration	91,412	4.77	94,049	4.18	105,951	4.00	825	4.10	767	3.15	1,218	4.10	350	4.03	348	3.35	417	3.59
TOTALS	**1,914,920**	**100**	**2,250,842**	**100**	**2,651,638**	**100**	**20,105**	**100**	**24,376**	**100**	**29,694**	**100**	**8,688**	**100**	**10,383**	**100**	**11,620**	**100**

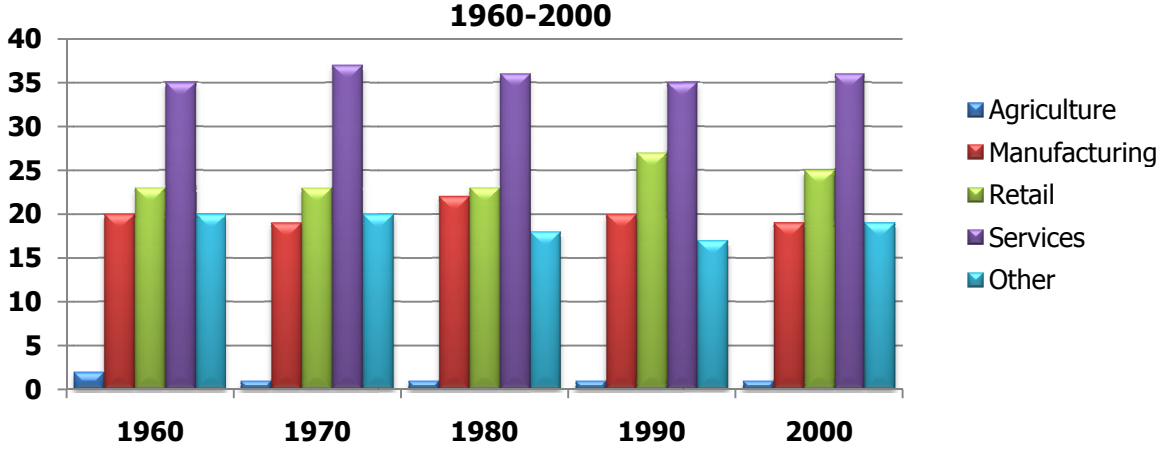
Note: Figures do not reflect location of employment. 1980 and 1990 Census figures have been adjusted to fit 2000 Census sectors.

SOURCE: U.S. Department of Commerce, Bureau of the Census, 1980, 1990, and 2000.

Historical Employment

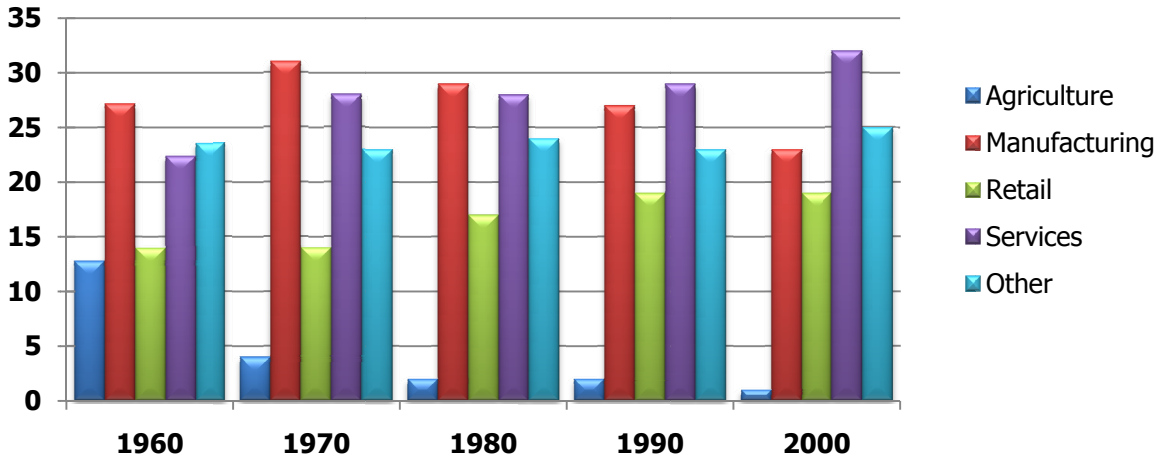
As depicted in Graph IV-7, employment has not changed appreciably for Cookeville during the past four decades. The service and retail trade sectors have been the top two employment sectors in the city for the past 40 years. The most significant change for the city has been in employment in the manufacturing sector from 1980 to 2000, which declined from 22 percent of the total employment to 19 percent. Employment in the services sector has been stable, remaining at approximately 35 percent of the city's total employment.

GRAPH IV-7
COOKEVILLE EMPLOYMENT
1960-2000



In Putnam County the most dramatic change over the 40-year period is the decline in agriculture employment, which decreased from 13 percent of the work force in 1960 to approximately 1 percent in 2000. The county's loss in agriculture employment has been made up for with significant increases of employment in the retail trade and service sectors. Since 1970 employment in the manufacturing sector has declined as a percentage of total county employment from 31 percent to 23 percent. In 1990 manufacturing was replaced by service as the sector with the highest percentage of employment and by 2000 manufacturing trailed both service and other sectors. Historical employment percentages for Putnam County from 1960 to 2000 are presented in Graph IV-8.

GRAPH IV-8
PUTNAM COUNTY EMPLOYMENT
1960-2000



Major Employers

The major employers located in the City of Cookeville for 1998 and 2009 according to the Cookeville/Putnam County Chamber of Commerce, are identified in Table IV-6. In 2009, the 16 employers listed in Table IV-6 provided full-time employment for an estimated 8,875 persons, with Cookeville Regional Medical Center and Tennessee Tech University being the largest employers. The major industrial employers in Cookeville include Averitt Express, Oreck, and Cummings Filtration. Since 1998 four (4) major industrial employers, Russell Stover Candies, Aquatech, Red Kap Industries, and TRW Vehicle Safety Systems have ceased their operations in Cookeville and several others have significantly reduced their workforce. Some of this loss in employment has been absorbed by the addition of the Oreck Corporation and a SunTrust Banks Call Center and by increases in employment at the Cookeville Regional Medical Center and Averitt Express. A very important aspect of the major employers in Cookeville is the diversity. This diversification reduces the susceptibility of an impact on the economy of Cookeville from large fluctuations in the national employment trends of any one industrial category.

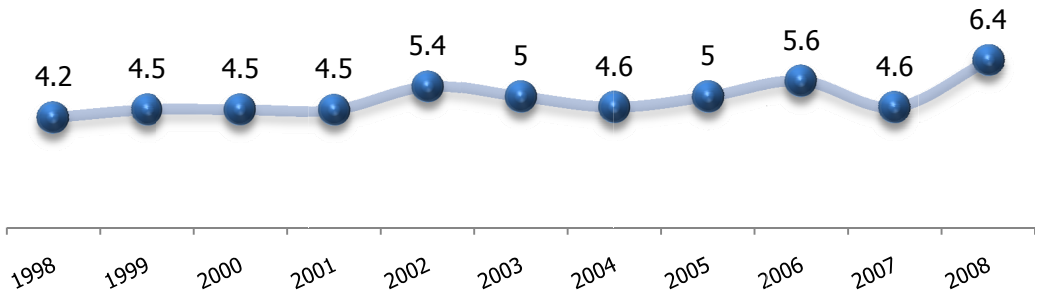
TABLE IV-6
MAJOR EMPLOYERS
CITY OF COOKEVILLE
1998 and 2009

1998		2009	
Employer	**Number of Employees**	**Employer**	**Number of Employees**
Tennessee Technological University	1,200	Cookeville Regional Medical Center	1,600
Cummings Filtration (Fleetguard)	1,000	Tennessee Technological University	1,500
Putnam County Board of Education	1,000	Putnam County Board of Education	1,200
Cookeville Regional Medical Center	930	Averitt Express	600
Russell Stover Candies	900	Oreck	550
Aquatech	650	Cummings Filtration (Fleetguard)	470
TRW Vehicle Safety Systems	620	State of Tennessee	440
DACCO	460	City of Cookeville	400
Tutco	450	Tutco	360
State of Tennessee	440	Suntrust	350
City of Cookeville	385	Flowserve	310
Averitt Express	370	Identity Group	270
Red Kap Industries	350	DACCO	265
Adams Industries	300	Putnam County Government	260
Flowserve	290	Wal-Mart	175
Putnam County Government	260	Adams USA Athletics	125

Unemployment

According to statistics provided by the Tennessee Department of Labor and Workforce Development, of the 35,360 persons in the civilian labor force in Putnam County 33,110 were employed in 2008. This represents a 2008 unemployment rate of 6.4 percent, which is an increase of 1.8 percent from 2007. The 2008 annual average unemployment rate in Putnam County was the same as the state average and 0.6 percent higher than the national average. As depicted in Graph IV-9, unemployment rates have been relatively low in Putnam County for the past several years. Of concern is the sharp increase in unemployment in 2008, which is reflective of the national economic downturn.

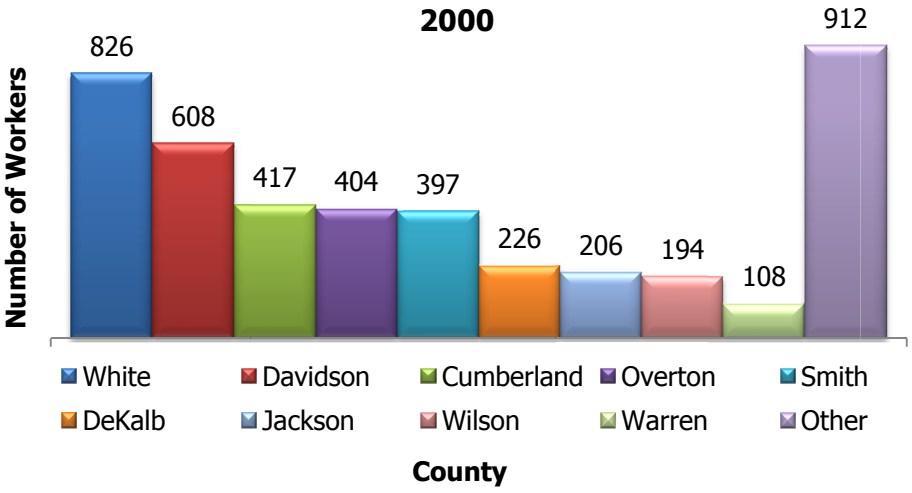
GRAPH IV-9
UNEMPLOYMENT RATES
PUTNAM COUNTY
1998-2008



Place of Work

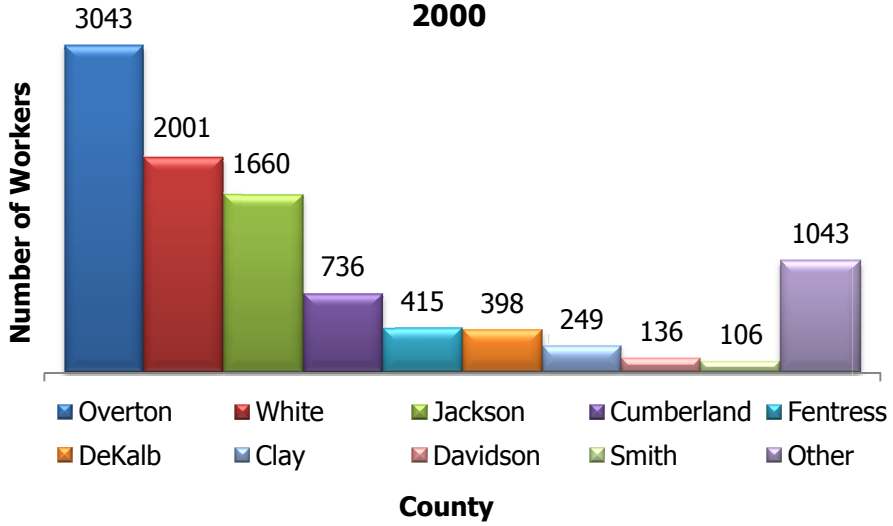
Employment and place of work are important issues. The availability of employment opportunities can greatly affect the long-term growth and development of a municipality. In 1990, Putnam County employed 21,534 or 89.9 percent of its working population, with 2,421 or 10.1 percent commuting to other counties. By 2000, the percentage of workers in Putnam County employed in Putnam County decreased to 85.2 percent (24,687 of 28,985 workers), with 4,298 or 14.8 percent of the workers commuting to areas outside Putnam County for employment. This is an indication that while unemployment rates in the county remain low some workers have had to seek employment outside the county. However, the 14.8 commuting percentage is the lowest in the region. As depicted in Graph IV-10, White (826 workers), Davidson (608 workers), Cumberland (417 workers) and Overton (404 workers) Counties employ the highest percentage of commuting Putnam County workers.

GRAPH IV-10
PLACE OF WORK
COMMUTING PUTNAM COUNTY WORKERS
2000



According to the 2000 Census, 34,474 persons were employed in Putnam County. Of this total, 24,687 or 72 percent resided in Putnam County. The number of persons commuting to Putnam County for employment in 2000 was 9,787, which is an increase of over 3,450 commuting workers since 1990. This high percentage of workers from other counties indicates the importance of Cookeville and Putnam County as an employment hub for the Upper Cumberland Region. This is further reflected in that Putnam County is one of only two counties in the region (surplus of 5,489 workers), the other being Warren County (surplus of 1,499 workers), with a higher number of workers commuting into the county for employment than commuting out for employment. As depicted in Graph IV-11, Overton (3,043 workers), White (2,001 workers), Jackson (1,660), and Cumberland (736 workers) Counties provide the most workers from outside Putnam County. It is also significant to note that of the 121,504 workers in the 14 county region over 28 percent are employed in Cookeville and Putnam County.

GRAPH IV-11
PLACE OF RESIDENCE
WORKERS IN PUTNAM COUNTY
2000



Income Levels and Poverty Rates

Income levels and poverty rates are also significant characteristics of employment pertinent to long range planning. According to the U. S. Bureau of Economic Analysis (BEA), per capita personal income in Putnam County in 2006 was $26,459, which was approximately 18 percent lower than the State average of $32,172. Of the 95 counties, Putnam County ranked 38th in 2006. In 2006, according to the BEA, the compound annual growth rate for personal incomes in Putnam County was 2.46 percent and for the state it was 3.55 percent.

Poverty rate is defined as the proportion of the population that lives below the official poverty line. The 2000 Census indicated that the percent of families below the poverty level in Cookeville was 13.1 percent. The percent of families below the poverty level in 2000 was 10.3 percent in both Putnam County and the State.

Findings. The status of employment in a community has long term planning implications, and is significant in both land use decisions and decisions of economic strategy. A comparison with state averages indicates that a higher percentage of the city's population is employed in the wholesale and retail trade and the educational services sectors. This is reflective of the city's prominence as a regional commercial center and of the importance of Tennessee Tech University. One of the most significant aspects of employment in the city is the diversification. Employment characteristics, prior to the national economic collapse in 2008, indicated a stable economy for Cookeville and Putnam County. The affect of the economic downturn is reflected in the rise of the Putnam County unemployment rate from 2007 to 2008.

SUMMARY OF FINDINGS

Based on 2009 UT-CBER/TACIR estimates, the population of Cookeville is projected to exceed 30,000 by 2010, an increase of approximately 28 percent from 2000, and to approach 40,000 by 2030, which is an increase of 65 percent from 2000. Putnam County's population is projected to increase by over 8,000 persons from 2000 to 2010, or by approximately 13 percent, and by an additional 19,000 persons from 2010 to 2030. The projected population increases for both the municipality and the county could be significantly augmented if the in-migration trend from 1990 to 2000 continues in the future. The city's population growth will also be positively influenced if the recent trend of jurisdictional boundary expansion continues.

A continued decline in the average persons-per-household will have a significant impact on planning issues. The decrease in persons-per-household reflects smaller family sizes and an increasing age of the Cookeville and Putnam County populations. This may be important in the planning of facilities as well as the projection of land use needs and housing demands.

The creation of employment opportunities within Cookeville and Putnam County offers an opportunity to affect long term population trends. The current balance of jobs, weighted heavily toward wholesale and retail trade, is reflective of the regional importance of Cookeville as a commercial hub. Employment in the educational and medical services sectors is significantly higher than the State average, which reflects the importance of Tennessee Tech University and the Cookeville Regional Medical Center. A considerable loss of manufacturing jobs since 1998 has been partially absorbed by increases in employment in other sectors. Diversification of employment opportunities in Cookeville is a significant benefit to the city's overall economy. This diversification has helped to minimize the impact of the 2008 national economic collapse on the Cookeville economy.

CHAPTER V

EXISTING LAND USE ANALYSIS

INTRODUCTION

A survey and analysis of the existing land use patterns and characteristics must be completed as a prerequisite to preparing a plan for future land use. The data from this existing land use analysis when integrated with information pertaining to natural factors affecting development, the population, economic factors, utilities and transportation facilities is vital in determining what areas are best suited for the various land uses and transportation facilities over a planning period. In addition a thorough analysis of existing land use will facilitate a more accurate projection of future land use needs. The last comprehensive inventory of existing land use in the City of Cookeville and its projected growth area (Urban Growth Boundary) was completed in 1999. A historical analysis of land use patterns is useful to identify trends in land use development. For this purpose, comparisons of the 1999 and 2008 land use inventories are included in the following existing land use analysis.

EXISTING LAND USE INVENTORY

The staff of the Cookeville Planning Department conducted field surveys of the City of Cookeville and the projected growth area in early 2008 for the purpose of determining how each parcel of land was utilized. Illustration V-1 depicts the various land uses in Cookeville and the surrounding planning area as determined by the 2008 land use survey.

Land Use Categories

Each individual land use identified in the 2008 field survey of Cookeville and its Urban Growth Boundary was assigned to a general land use category for the purpose of analysis. The same categories used in the 1999 inventory were used in the 2008 inventory. These land use categories are as follows:

- **Residential**: Land on which one or more dwelling units are located. This includes all single-family and multi-family residences, mobile homes, and public housing.

- **Commercial/Private Services**: Land on which retail and wholesale trade activities and/or services occur, including vacant floor space. Land on which an array of private firms that provide special services are located. This category includes hospitals, professional offices, banks, personal services, repair services, etc.

- **Industrial**: Land on which activities of processing or fabricating raw materials, or producing commodities takes place, including manufacturing uses.

- **Public Services/Religious/Cultural/Recreational**: Land on which educational facilities, and all federal, state, and local governmental uses are located. This category also includes land on which churches, cemeteries, museums, libraries, parks, and similar uses are located.

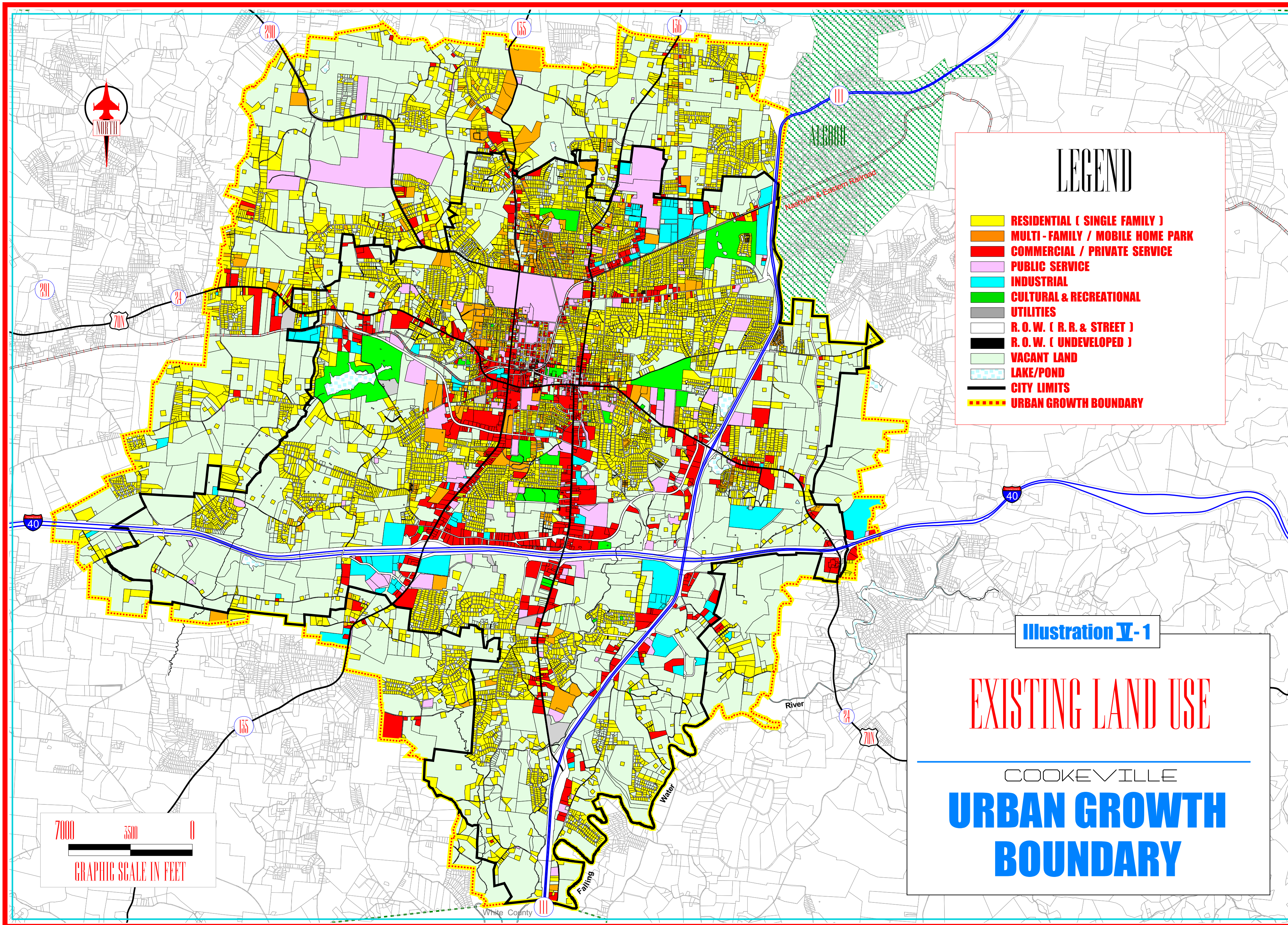


Illustration V-1

EXISTING LAND USE

COOKEVILLE

URBAN GROWTH BOUNDARY

- **Utilities**: Land on which utility structures or facilities are located.
- **Transportation**: Land on which municipal streets, county roads, state highways, interstates and rail lines are located, including the right-of-ways.
- **Vacant Land**: Land that either has not been or cannot be developed. Vacant land can be divided into two general categories:

  1. Vacant Developable. Land that has no physical or other constraints which prohibit it from being developed.
  2. Vacant Undevelopable. Land that has physical or other constraints which prohibit or limit it from being developed.

GENERAL ANALYSIS OF EXISTING LAND USE

As Illustration V-1 reflects, land use in the older sections of Cookeville has developed primarily along traditional designs reflective of the grid pattern. In the more recently developed portions of the municipality, and in most of the unincorporated Urban Growth Boundary, the curvilinear pattern has been utilized. The most intense development has occurred along major thoroughfares. Natural factors, such as flood plains and steep topography, have affected the location of land use in both the municipality and the projected growth area. Conflicting land uses are generally well separated from each other in the municipality and it is not yet a significant problem in the growth area. As a mid-size community, most residents have easy access to the necessary public and private facilities and services.

Corporate Limits

Within the corporate limits of Cookeville there are approximately 20,857 acres, or 32.6 square miles of land. Since 1999 the city has increased its land area through annexation by 6,778 acres or approximately 10.6 square miles. This represents an increase of 48 percent in total land area in an eight-year period. As depicted in Table V-1, the corporate limits of Cookeville has expanded by approximately 19,210 acres, or an annual average increase of 360 acres, over the 53-year period from 1955 through 2008. Even with this substantial growth, the land area currently within the corporate limits of Cookeville represents only approximately eight (8) percent of the total land area within Putnam County.

TABLE V-1
CITY OF COOKEVILLE
ANNEXATION HISTORY

DECADE	NUMBER OF ANNEXATIONS	ACRES ANNEXED	PERCENT INCREASE
1955 LAND AREA		1,647	
1955-1959	7	322	19.6
1960-1969	13	4,578	232.5
1970-1979	25	3,781	57.8
1980-1989	13	3,012	29.2
1990-1999	14	739	5.5
2000-2008	15	6,778	48.1
TOTALS 1955-2008	87	19,210	1,166.4
2008 LAND AREA		20,857	

According to the 2008 land use survey, an estimated 57 percent, or 11,833 acres, of the total land area in Cookeville is developed with the remaining approximately 43 percent, or 9,024 acres vacant. Since 1999 the percentage of developed land has declined by eleven (11) percent, which can be attributed to the annexation of vacant land. Table V-2 depicts a summary of the existing land use in the City of Cookeville as determined by the 1999 and 2008 inventories.

TABLE V-2
LAND USE IN CORPORATE LIMITS 1999 AND 2008
BY ACREAGE AND AS PERCENT OF TOTAL LAND

LAND USE	1999		2008	
	ACRES	PERCENT	ACRES	PERCENT
Residential	4,178	29.7	5,313	25.5
Commercial / Private Services	1,176	8.4	1,572	7.5
Industrial	638	4.5	690	3.3
Public / Religious / Cultural / Recreational	1,480	10.5	1,660	8.0
Utilities	71	0.5	91	0.4
Transportation	1,982	14.1	2,507	12.0
DEVELOPED LAND	9,525	67.7	11,833	56.7
VACANT LAND	4,554	32.3	9,024	43.3
TOTAL LAND	14,079	100	20,857	100

Projected Growth Area

The area of the Cookeville Urban Growth Boundary outside the corporate limits consists of approximately 11,745 acres, or 18.4 square miles. According to the 2008 land use survey an estimated 4,285 acres or 36 percent of this land is developed and approximately 7,460 acres or 64 percent is vacant. Table V-3 depicts a summary of the existing land use in the projected growth area as determined by the 1999 and 2008 inventories.

TABLE V-3
LAND USE IN PROJECTED GROWTH AREA 1999 AND 2008
BY ACREAGE AND AS PERCENT OF TOTAL LAND

LAND USE	1999		2008	
	ACRES	PERCENT	ACRES	PERCENT
Residential	3,729	20.1	3,012	25.7
Commercial / Private Services	365	2.0	217	1.8
Industrial	144	0.8	133	1.1
Public / Religious / Cultural / Recreational	660	3.6	409	3.5
Utilities	7	0.0	21	0.2
Transportation	949	5.1	493	4.2
DEVELOPED LAND	5,854	31.6	4,285	36.5
VACANT LAND	12,687	68.4	7,460	63.5
TOTAL LAND	18,541	100	11,745	100

As indicated in Tables V-2 and V-3, the area within the corporate limits of Cookeville is substantially more developed than the surrounding growth area. A detailed analysis of this developed land use is presented in the following section.

ANALYSIS OF EXISTING DEVELOPED LAND USE

The 2008 land use inventory indicates that approximately 57 percent (11,833 acres) of the total land area in Cookeville is developed while in 1999 approximately 68 percent (9,525 acres) of the total land area was identified as being developed. A summary of the developed land uses within the municipality by acreage and percent of total in 1999 and 2008 is presented in Table V-4. Table V-4 also indicates the acreage and percent of change for each land use over the 10 year period. The largest percentage of the developed land area in Cookeville, at approximately 45 percent, is used for residential purposes, including single-family, multi-family and mobile homes. Residential uses are followed by land used for transportation purposes at 21 percent of the total developed land. This includes the right-of-ways for all streets and highways and all railways. Approximately 14 percent of the developed land in Cookeville is occupied by public, religious, cultural and recreational uses. Commercial and private service uses account for approximately 13 percent of the developed land. Industrial uses total less than six (6) percent of the developed land and land occupied by utility facilities account for less than one (1) percent.

From 1999 to 2008, in terms of percent of total developed land, commercial/private service use increased the most, increasing by almost one (1) percent. For this same period commercial/private service uses increased in total acreage by nearly 34 percent. The largest percent increase in land use acreage occurred with multi-family residential at 34 percent. Total acreage occupied by single-family residential uses increased by almost 27 percent since 1999; however, unlike multi-family residential and commercial/private service land uses, most of this growth can be attributed to annexation. Land utilized for public services, religious, cultural and recreational uses increased by 180 acres, or 12 percent, from 1999 to 2008. While industrial uses are indicated as increasing by only an estimated 57 acres since 1999 it is important to note that this figure does not include approximately 365 acres acquired by the city and county north of Lee Seminary Road for the future development of an industrial/business park.

TABLE V-4
DEVELOPED LAND USE IN CORPORATE LIMITS 1999 AND 2008 BY ACREAGE AND PERCENT

LAND USE	1999		2008		CHANGE	
	ACRES	PERCENT	ACRES	PERCENT	ACRES	PERCENT
Single-Family Residential	3,620	38.0	4,580	38.7	960	26.5
Multi-Family Residential	441	4.6	591	5.0	150	34.0
Mobile Homes	117	1.2	142	1.2	25	21.4
Commercial/Private Services	1,176	12.4	1,572	13.3	396	33.7
Industrial	638	6.7	690	5.8	57	9.0
Public Services	685	7.2	790	6.7	105	15.3
Religious/Cultural/ Recreational	795	8.4	870	7.3	75	9.4
Utilities	71	0.7	91	0.8	20	28.2
Transportation	1,982	20.8	2,507	21.2	525	26.5
TOTAL DEVELOPED LAND	9,525	100	11,833	100	2,308	24.2

According to the 2008 land use inventory approximately 4,285 acres or 36 percent of the total land area in the projected growth area is developed. Similar to the municipality, residential uses occupy the largest portion of the developed land area. Approximately 71 percent, or an estimated 3,012 acres, of the developed land in the projected growth area is occupied for residential purposes. Street, highway, and railroad right-of-ways occupy approximately 493 acres or 11 percent of the developed land. In the projected growth area, 378 acres are occupied by public service land uses. Approximately 217 acres, or approximately five (5) percent of the developed land, are used for commercial/private services uses. Industrial land uses account for approximately 133 acres or about three (3) percent of the developed land. Religious, cultural and recreational land uses account for only 31 acres, or less than one (1) percent of the developed land. The remaining 21 acres of developed land in the projected growth area are occupied by utility facilities. A summary of the developed land uses by acreage and percent total in the growth area in 1999 and 2008 is presented in Table V-5. The acreage and percent of change for each land use over the 10 year period is also indicated in Table V-5.

TABLE V-5
DEVELOPED LAND USE IN PROJECTED GROWTH AREA 1999 AND 2008
BY ACREAGE AND PERCENT

	1999		2008		CHANGE	
LAND USE	ACRES	PERCENT	ACRES	PERCENT	ACRES	PERCENT
Single-Family Residential	3,276	56.0	2,587	60.4	-689	-21.0
Multi-Family Residential	101	1.7	174	4.1	73	72.2
Mobile Homes	352	6.0	251	5.8	-101	-28.5
Commercial/Private Services	365	6.2	217	5.1	-148	-40.5
Industrial	144	2.5	133	3.1	-11	-7.6
Public Services	581	10.0	378	8.8	-203	-34.7
Religious/Cultural/ Recreational	79	1.3	31	0.7	-48	-60.8
Utilities	7	0.1	21	0.5	14	200.0
Transportation	949	16.2	493	11.5	-456	-48.1
TOTAL DEVELOPED LAND	5,854	100	4,285	100	-1,569	-26.8

In the projected growth area, most land use categories experienced a decline in total acreage primarily due to annexation. The two (2) exceptions were land used for multi-family purposes, which increased by 73 acres, and land used for utilities, which increased by 14 acres. In terms of percent of total developed land, land used for single-family residential purposes increased the most from 1999 to 2008, increasing by over four (4) percent despite a reduction of 689 acres in land area. Land used for multi-family purposes also increased significantly as a percent of total developed land from 1999 to 2008, increasing from 1.7 percent to 4.1 percent. The second largest decrease in land area occurred in the transportation category, which can be attributed to annexation. Annexation is also the primary reason for significant declines in land used for commercial/private service, public service, and religious/cultural/recreational purposes in the projected growth area.

A detailed analysis of existing land use in the municipality and the projected growth area by land use category is presented in the following.

Residential

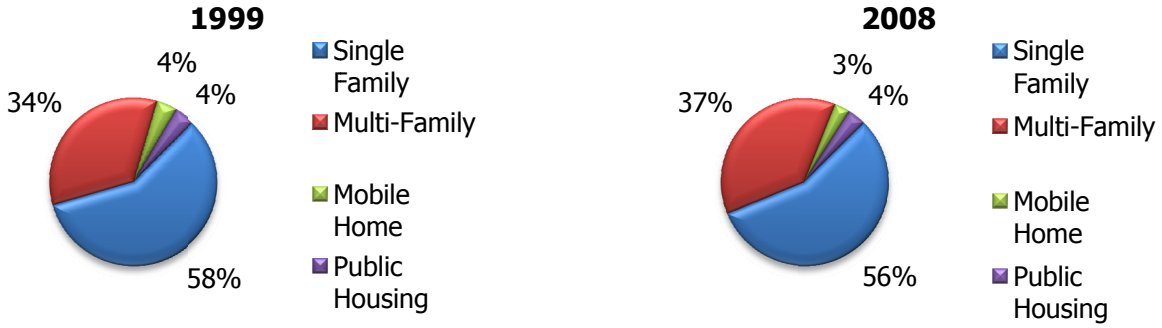
The residential land use category, like in most communities, occupies the largest portion of developed land in Cookeville and the surrounding growth area. Also, like most communities, the traditional single-family detached dwelling unit is the predominant form of residential land use in both areas. However, as discussed in the following, multi-family dwelling units are increasing in percentage of total dwelling units.

Corporate Limits

Residential development in Cookeville is scattered throughout the municipality with the older neighborhoods located on traditional grid pattern streets branching out from the downtown area. The grid pattern streets are typical in areas with few physical constraints to development. Some of the newer residential subdivisions have occurred in areas with topographic constraints and have developed on curvilinear pattern streets. Natural factors have had only a minor effect on residential development in the planning area. Several of the oldest neighborhoods have undergone a transition from traditional single family developments to multi-family developments and, in some cases, to commercial/private service developments. This is especially true for the areas in the vicinity of downtown, the hospital, and the university. As a part of the revised Municipal Zoning Code adopted in 2001, several areas with concentrations of older single family homes previously zoned as multi-family were zoned as single family in an effort to hinder this transition.

The residential areas in Cookeville occupy 45 percent of the total developed land, or about 5,313 acres. Since 1999 the total land area occupied by residential land uses increased by approximately 1,135 acres, with most of this increase a result of annexation. Total housing units have increased by 2,935 since 1999 with 1,351, or 46 percent, of these units the result of annexation. The 2008 land use inventory identified a total of 13,003 housing units located on the 5,313 acres of residential land use. This represents an average lot size of less than 18,000 square feet and an approximate density of 2.4 housing units per acre. Student housing located on the university campus, which totals more than 300 units, is not included in the municipality's residential acreage or housing unit totals. Graph V-1 reflects the percentage of housing units in Cookeville by type of housing.

GRAPH V-1
PERCENTAGE OF HOUSING UNITS BY TYPE IN CORPORATE LIMITS
1999 AND 2008



Of the 13,003 housing units in Cookeville, 7,291 or 56 percent are traditional single-family detached residences. Since 1999 the number of single family detached homes has increased by 1,463 or 25 percent. The majority of this increase, 1,046 units or approximately 72 percent, is a result of annexation. As a percent of total housing units in the municipality, single-family homes have declined by two (2) percent since 1999. The single family residences are scattered throughout the municipality with large concentrations located off most major thoroughfares. Most of the single-family residential lots have a lot width of at least 80 feet and are generally well-shaped with good lot width-to-depth ratio. This is reflective of residential development associated with the grid pattern. Although the majority of the lots occupied by single-family detached residences are of adequate size, there are some narrow and smaller lots located primarily in the oldest sections of the municipality to the north and south of the downtown.

Multi-family housing units, including both private and public units, represent approximately 40 percent, or 5,272 of the total housing units in Cookeville. Since 1999 the number of multi-family units has increased by 1,486 or approximately 40 percent. Only 227 units, or approximately 15 percent, are a result of annexation. As a percent of total housing units, multi-family housing has increased by three (3) percent since 1999. Private multi-family housing consists of 4,840 units, or 37 percent of the total housing units. Although the majority of these are located within traditional multi-family complexes, a significant portion of these units developed as conversions of older single-family detached structures, especially in the vicinity of Tennessee Tech University. This has resulted in several multi-family structures being located in areas with insufficient transportation facilities and inadequate off-street parking. In addition, a small portion of the private multi-family units is located, as a result of adaptive reuse, in the second stories of structures in downtown area. Public, multi-family housing consists of 432 units, or less than four (4) percent of the total housing units. These 432 units are divided among six (6) public housing complexes. All are located within close proximity of shopping areas.

The 2008 survey identified 440 mobile homes in Cookeville, which account for approximately four (4) percent of the total housing units. This is a decrease of 15 mobile homes, or three (3) percent, since 1999. Of the 440 mobile homes found in the inventory 78 are located in areas annexed by the city since 1999. Only approximately 25 percent or 115 mobile homes, including all those annexed since 1999, are not situated within one of the 15 mobile home parks located in the municipality. This can be attributed to a municipal zoning requirement that restricts the location of mobile homes to mobile home parks. All of these mobile home parks were developed prior to the current zoning regulations and as a result most have substandard infrastructure. In many of these mobile home parks the mobile homes are rental and have not been well maintained. The municipality periodically receives requests for mobile homes on individual lots; however, the city's zoning code prohibits this.

Residential construction in Cookeville during the past 25 years has been steady. According to the city's building permit records, a total of 4,755 dwelling units were built between 1984 and 2008. Of the 4,836 dwelling units constructed during the 25-year period 2,200 or 45 percent were single-family units. This represents a construction rate of approximately 88 single-family structures per year. During the same 25-year period a total of 2,636 multi-family dwelling units were built. This represents a construction rate of approximately 105 multi-family units per year. The largest year for single-family construction in the past 25 years occurred in 1987 when 130 units were built and for multi-family developments it was 2003 when 323 units were built. It is significant to note that from 2000 to 2008 the construction of multi-family units exceeded the construction of single-family units by 203 units. A summary of residential construction in Cookeville during the past 25 years is presented in Table V-6.

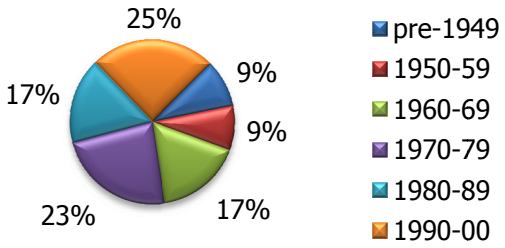
TABLE V-6
RESIDENTIAL CONSTRUCTION
BY BUILDING PERMITS ISSUED
1984-2008

YEAR	SINGLE-FAMILY	MULTI-FAMILY	TOTAL UNITS
1984	43	49	92
1985	67	75	142
1986	115	138	253
1987	130	111	241
1988	108	210	318
1989	108	73	181
1990	123	23	146
1991	82	62	144
1992	102	72	174
1993	93	93	186
1994	77	267	344
1995	77	246	323
1996	93	85	178
1997	78	53	131
1998	50	19	69
1999	66	69	135
2000	69	152	221
2001	69	17	86
2002	91	32	123
2003	92	323	415
2004	111	53	164
2005	120	193	313
2006	90	53	143
2007	92	32	124
2008	54	136	190
TOTAL	2200	2636	4836

Preservation of housing stock is as important as the development of new residential areas. According to the 2008 land use inventory, 7,089 of the 7,291 single-family housing units, or over 98.9 percent, are in sound structural condition. Since 1999 the percentage of single-family housing units in sound structural condition has improved from 98.6 percent to 98.9 percent. While still relatively low, the percent of the single-family housing units in sound condition which are vacant has increased from 0.9 percent in 1999 to 1.7 percent in 2008. There are 54 housing units considered to be in need of extensive repairs, which is a decrease of 11 units since 1999. Eighteen of these units are vacant. Of the housing units in deteriorated condition 18 are located in areas annexed since 1999. Only seven (7) single-family housing units are considered to be in an unsound condition and all of these units are vacant. This is a decrease of nine (9) units since 1999. Three (3) of these unsound housing units are located in areas annexed since 1999. There are no concentrated areas of residential structures in less than sound condition located within the municipality. The low percentage of housing in less than sound condition can be partly attributed to an effective codes enforcement policy.

According to the 2000 Census, nearly 25 percent of the total housing stock in Cookeville has been constructed since 1990. Over 40 percent of the housing stock was constructed between 1970 and 1989. Less than 26 percent of the housing stock in Cookeville was constructed between 1950 and 1969. Approximately nine (9) percent of the housing stock was constructed prior to 1950. In 2000, the median age of single family housing units was 19 years. Due to the number of housing units constructed since 2000, the percentage of older housing is expected to have declined. Graph V-2 below depicts the percentage of housing units in Cookeville by age of construction according to the 2000 Census.

GRAPH V-2
PERCENTAGE OF HOUSING UNITS BY TYPE IN CORPORATE LIMITS
1999 AND 2008



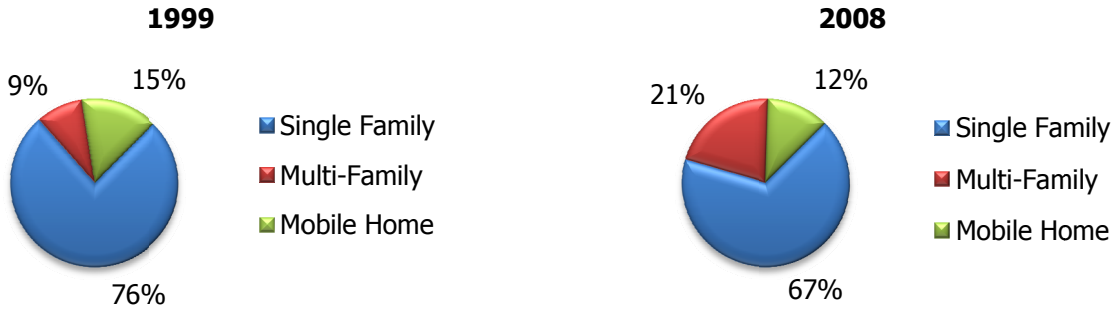
According to the 2000 Census 45.5 percent of the occupied housing units in Cookeville were owner occupied with 54.5 percent occupied by renters. This is a significant change from the figures from the 1990 Census, which indicated that 50.3 percent of the housing units were owner occupied and 49.7 percent were occupied by renters. The gap between owner occupied and renter occupied housing is expected to have increased since 2000 when, according to municipal building permit records, multi-family developments have outpaced single family developments by more than 200 units.

Projected Growth Area

Residential development is scattered throughout the projected growth area of Cookeville with large concentrations to the northeast, northwest, and southwest of the municipality. Since 1999 the unincorporated urban growth boundary has experienced moderate residential construction with the majority of the development consisting of multi-family units. The substantial construction of multi-family units in the growth area is surprising considering the lack of public sanitary sewer outside the corporate limits. Natural factors should not significantly affect the potential for future residential development in the growth area.

Residential land use in the growth area is by far the largest occupier of developed land, accounting for 3,012 acres, or approximately 71 percent of the developed land. The 2008 land use survey identified 2,989 housing units on these 3,012 acres which represents an approximate density of less than one (1) housing unit per acre. The average residential lot size in the potential growth area exceeds one (1) acre. The larger lots and lower densities can be primarily attributed to the lack of public sanitary sewer in the growth area. Graph V-3 reflects the percentage of housing units in the growth area by type of housing.

GRAPH V-3
PERCENTAGE OF HOUSING UNITS BY TYPE IN PROJECTED GROWTH AREA
1999 AND 2008



The 2008 inventory determined that 1,995, or approximately 67 percent, of the housing units in the projected growth area are in the form of traditional detached single-family structures located on significantly larger lots than within Cookeville. This is a reduction of 454 units since 1999, most of which can be attributed to annexation. Since 1999 there have been few new single-family subdivision developments in the unincorporated growth area. As a percentage of total housing units in the growth area, single-family housing actually decreased by nine (9) percent from 1999 to 2008. Most of the single-family units are located in large lot subdivisions situated on the fringe of the current corporate limits.

In the projected growth area 643 or 21 percent of the total housing units are private, multi-family units. Since 1999, multi-family units in the growth area have increased by 356 units or by 124 percent. The increase in multi-family units is even more substantial when considering that more than 225 multi-family dwelling units have been annexed since 1999. This high number is unusual when considering the lack of necessary infrastructure, primarily public sanitary sewer, outside the corporate limits. It may also be indicative of the lack of available land within the municipality. There are no public, multi-family housing units in the unincorporated planning region.

Mobile homes make up approximately 12 percent, 351 total units, of the housing units in the growth area. This is a decrease of 127 mobile homes since 1999. Annexation contributed to a reduction of 78 mobile homes in the growth area. Approximately half of the mobile homes, 174 units, are located in the 16 mobile home parks in the projected growth area. The condition of many of these mobile home parks is indicative of the lack of regulatory controls.

In the projected growth area of Cookeville, 1,931, or over 96 percent, of the 1,995 single-family housing units are considered to be in sound structural condition with 15 units vacant. Of the remaining single-family housing units 36 are considered to be in need of extensive repairs and 13 are considered to be in an unsound condition. Only 31 of the housing units are vacant and 16 of these units are in less than sound condition. Approximately ten (10) percent, 34, of the mobile homes in the growth area are vacant, with most of these in less than sound structural condition. There are no concentrated areas of blight located in the unincorporated urban growth boundary.

Findings. Housing in Cookeville is basically in very good condition and there are no concentrated areas of blighted housing. Generally, all residential properties have good access to community goods and services. Multi-family construction has outpaced

single-family construction over the past 25 years. The decline in owner occupied dwelling units within the municipality over the past two (2) decades is a concern. A major finding in the 1999 Comprehensive Plan was the lack of land in Cookeville without severe physical limitations available for residential development. The limited availability of land in Cookeville for residential development resulted in requests for annexation for new subdivision development. This lack of available land also resulted in the development of numerous subdivisions on the fringe of the municipality. Substantial annexation since 1999 has partially addressed this concern; however, a demand for developable lots, multi-family housing units, and mobile home park spaces within the municipality continues to exist. Informal surveys indicate a very strong local community demand for low to moderately priced single-family housing. In the projected growth area the frequency of new single-family subdivision development has decreased in recent years while multi-family development has increased significantly. The reduction of subdivision development can to some extent be attributed to significant development in the vicinity of a new K-8 elementary school outside the Cookeville Urban Growth Boundary. The proliferation of multi-family development in the growth area can partially be explained by the decision of the municipality to rezone areas previously zoned for multi-family use to single family use and by the lack of regulations outside the municipality.

Commercial/Private Services

As the retail trade and service center for Putnam County and much of the Upper Cumberland Region, 1,572 acres, or 13.3 percent of the total developed land within Cookeville, is commercial/private service use oriented. Since 1999, land used for commercial and private service purposes in the municipality has increased by 396 acres or by 34 percent. Commercial retail sale establishments occupy 877 acres or seven (7) percent of the developed land in Cookeville. Private service uses account for 695 acres or six (6) percent of the developed land. The vast majority of the private services are in the form of professional offices, financial facilities, and repair or personal services, many of which are located in or near the downtown area.

As with most municipalities, the core area of the municipality, the Central Business District (CBD), has been its traditional economic center. Cookeville is unique in that it developed with two separate downtown areas between Spring and Broad Streets, one evolving around the courthouse and the other around the train depot. Over time these two areas grew together and in 2002 a comprehensive contiguous area was zoned as CBD. The CBD consists of an area generally defined by 1st and Freeze Streets to the north, by Spring Street to the south, by Whitney Avenue to the west and by Maple Avenue to the east.

There are few vacant parcels and very little vacant floor space in the downtown area available for development. Commercial/private service growth in the CBD is primarily limited to retrofitting and reuse of some of the oldest structures in the municipality or to demolition and new construction. However, the Cookeville CBD, unlike many, remains viable. This is largely due to the CBD still serving as the governmental center of Putnam County and to a concentrated effort by the city and the downtown merchants to maintain and enhance the area. A cityscape project by the municipality in the 1990's greatly enhanced the infrastructure and appearance of the downtown area. Other significant factors occurring in recent years that have helped keep the downtown area viable include the establishment of a "Mainstreet" program, the development of housing near and within the downtown area, and the creation of historic districts on the eastern and western ends of the CBD. In 2007, the City Council committed to a multi-million dollar project for the development of a "central park" in the downtown.

The transition from a pedestrian oriented society to a vehicular oriented society has had its impacts on Cookeville with numerous commercial developments branching out away from the downtown. Like other communities, strip commercial developments along major thoroughfares have expanded and shifted Cookeville's commercial/private service center from the CBD to other areas. There are several areas of concentrated commercial/private service development in Cookeville located outside the CBD. The first areas of commercial/private service development to spread out away from the downtown area were along Broad and Spring Streets and South Jefferson Avenue. With the completion of Interstate 40, two primary corridors of commercial development outside the CBD developed along Jefferson Avenue from the CBD south to Highway 111 and along Willow Avenue from Tennessee Tech University south to Interstate 40. In recent years the municipality has experienced significant commercial development along Interstate Drive, East Neal and West Jackson Streets.

The commercial/private service areas on South Jefferson and Willow Avenues have developed in both a strip development pattern and a shopping center development pattern. The location of strip commercial areas on both of these thoroughfares near Interstate 40 has resulted in traffic congestion and safety problems due to a large number of curb cuts in close proximity along high traffic volume thoroughfares. The shopping center areas on these thoroughfares all generally have an adequate means of ingress-egress and have an ample amount of parking available. Areas for future commercial development on these two thoroughfares north of Interstate 40 are limited. Some redevelopment of existing commercial sites along Jefferson and Willow Avenues north of Interstate 40 has recently occurred and this trend is expected to continue. There are scattered areas with vacant floor space available for reoccupancy. Due to the lack of available land on South Jefferson and Willow Avenues north of Interstate 40 the city has experienced a significant amount of commercial development on Interstate Drive, East Neal Street, West Jackson Street and more recently on South Jefferson Avenue south of Interstate 40. There are still some limited areas available in the municipality for commercial/private service development primarily along East Neal and West Jackson Streets and along Jefferson and Willow Avenues south of Interstate 40.

In the projected growth area 217 acres, or approximately five (5) percent of the total developed land, is devoted to commercial/private service uses. This development has occurred primarily in a strip commercial fashion along state highways branching out from Cookeville. The majority of this commercial development is adequately setback from the highway right-of-way, has sufficient off-street parking, and satisfactory loading and unloading space. Land for further commercial/private service development is limited and is expected to occur off the state highways. Of significance is the lack of zoning restrictions in the growth area, which could lead to development problems such as unlimited curb cuts and inadequate off-street parking.

Findings. The primary commercial areas of Cookeville have shifted from the downtown area to strip commercial/shopping center areas along South Jefferson and South Willow Avenues and more recently along Interstate Drive, Neal Street and West Jackson Street. The CBD is now dominated by private service uses. In general, the commercial/private service sector of Cookeville is strong and viable as evidenced by the very low vacant floor space available. There are some traffic safety and congestion problems in the downtown area and along Jefferson and Willow Avenues in the strip commercial areas. Areas for further expansion of commercial and private service uses are very limited in the municipality. This has resulted in spillage of this type of development into areas outside the corporate limits. This erodes the city's sales tax base and also results in development without any local regulatory controls or review. Redevelopment of older commercial areas has recently started occurring.

Industrial

The City of Cookeville is the center for manufacturing and industrial development in Putnam County and for much of the region. Like most municipalities, industrial development in Cookeville has been greatly influenced by transportation systems. The first areas of industrial development in the city were located in the vicinity of the railroad depot and additional areas followed along the rail line to the west and northeast. The more recently developed industrial areas in the city have occurred in the vicinity of Interstate 40 and Highway 111.

According to the 2008 inventory, industrial land uses in Cookeville occupy 690 acres, or less than six (6) percent of the developed land area. This industrial acreage is primarily concentrated within three (3) areas that are located to the southwest off Gould Drive, to the southeast off Highway 111, and to the northeast off the Nashville and Eastern Rail line. There is also a limited amount of industrial development located along the rail line west from the downtown. Since 1999, land used for industrial purposes in the municipality has increased by only 57 acres or approximately nine (9) percent.

In the growth area approximately 133 acres of land are used for industrial purposes. This acreage accounts for approximately three (3) percent of the total developed land use. The largest concentrations of industrial properties in the projected growth area are located to the southwest off Highway 135. Since 1999, land used for industrial purposes in the growth area has decreased by eleven acres.

Although the City of Cookeville remains the industrial hub for Putnam County, significant changes have occurred since 1999. One major industrial employer, TRW, closed and another, Russell Stover, significantly reduced its work force. Fortunately, the TRW facility has been occupied by Oreck. The completion of the Lemon Farris Industrial Park and the location of three (3) industries in the park also helped to offset the impact of the industrial job loss.

The need for additional land for industrial development was recognized in the 1999 Comprehensive Plan and an area for industrial growth was identified in the Future Land Use Plan component. In 2002 this area was annexed by the city and in 2007 the city, in partnership with the county, purchased nearly 400 acres of this area for the development of a regional industrial/business park. A planning and engineering firm was hired in 2007 to prepare plans for the development of the industrial/business park. The completion of this park and the development of adjacent properties is expected to supply much of the municipality's future industrial land use needs.

Findings. Cookeville continues to be a primary location for industrial land uses in Putnam County. Since 1999 land used for industrial purposes has only increased by approximately nine (9) percent. A primary effort during the past decade has been to reoccupy existing sites. Recognizing the need for sites for large-scale industrial development, the city, in partnership with county, has purchased approximately 400 acres for the development of a regional industrial/business park. Within the planned growth area of Cookeville there are limited sites with potential for industrial development, all of which will require significant expenditures for infrastructure improvements.

Public, Religious, Cultural, Recreational

The City of Cookeville, as the county seat, serves as the center for public, religious, cultural, and recreational land uses in Putnam County. This very broad classification covers numerous uses including all educational facilities, governmental facilities, public medical facilities, recreational facilities, and all churches and cemeteries. Combined, the land uses in this category occupy 1,660 acres within the corporate limits of Cookeville. These acres represent approximately 14 percent of the total developed land acreage. Since 1999 land used for public, religious, cultural or recreational purposes has increased by 180 acres or approximately 12 percent. Nearly half of this increase can be attributed to the annexation of property around Cookeville High School. In the projected growth area approximately 409 acres of land, or approximately ten (10) percent of the total developed land area, are devoted to public, religious, cultural, or recreational uses. This is a decrease of approximately 251 acres or 38 percent since 1999, most of which is a result of annexation.

Public service facilities occupy 790 acres or 48 percent of the land area in this category in the municipality. Educational facilities account for 437 acres or nearly 50 percent of the acreage devoted to public services. The campus of Tennessee Tech University, which occupies approximately 231 acres, accounts for much of this acreage. Other principal land users in this category are the public educational facilities, which include Cookeville Senior High School, Avery Trace and Prescott Central Middle Schools, and Cane Creek, Capshaw, Jere Whitson, Northeast, Park View, and Sycamore Elementary Schools. Nashville Tech-Cookeville Center and Cumberland School of Technology are additional educational facilities located in Cookeville. The Putnam County Board of Education also recently purchased 60 acres of property off South Jefferson Avenue for the construction of a new K-8 school. This facility, which is expected to be completed by the fall of 2010, will be the first public school within the municipality located south of Interstate 40. There are no educational facilities located within the projected growth area.

Approximately 261 acres of land in Cookeville classified as public services are occupied by governmental facilities. Many of these governmental facilities are concentrated in or near the central portion of the municipality including the Cookeville Municipal Building, the Cookeville Police Department, the Putnam County Courthouse, the Putnam County Justice Center, the Town Center/Chamber of Commerce, and the U. S. Post Office. Governmental facilities situated outside the CBD include the National Guard Armory, the Tennessee Department of Transportation Regional Office, the U. S. Post Office on South Willow Avenue, the Putnam County Animal Shelter, the South Jefferson Avenue Police Department Substation, the Cookeville Public Works Department, three (3) fire department substations, and several state and federal office buildings scattered around the municipality.

Public medical facilities are also included in the public service category. Three (3) such facilities, the Cookeville Regional Medical Center, the Putnam County Health Department, and the Regional Health Department are located in the City of Cookeville. Since 1999 the Cookeville Regional Medical Center has increased its land area from approximately 12 acres to 37 acres and additional growth can be expected. Both the county (South Willow Avenue) and regional (England Drive) health departments are in the process of constructing new facilities.

Public service facilities occupy 378 acres or approximately eight (8) percent of the land area in this category in the growth area. The majority of this land, 333 acres, is accounted for by three (3) public service uses, the Hyder Burk Pavilion, Hyder Farm and Shipley Farm. There are no educational or public medical facilities located in the projected growth area. This is an indication of this area's reliance on Cookeville to provide such facilities and services.

Religious, cultural and recreational facilities occupy 870 acres or 53 percent of the land area in this category within the municipality. A total of 64 churches and 16 cemeteries are located within the City of Cookeville. These land uses occupy an estimated 250 acres. Most of the cultural and recreational facilities are municipally owned. The Cookeville Department of Leisure Services operates and maintains approximately 340 acres of park land and open space. The city facilities include Cane Creek Park, Cane Creek Sportsplex, Cane Creek Gymnasium, Park View Park and Athletic Fields, Depot Museum, History Museum, Cookeville Performing Arts Center, Cookeville Senior Citizens Center, the Ensor Sink, and several neighborhood parks. The city has also recently purchased six (6) acres of property for the development of a downtown park. There are no municipal recreational facilities located south of Interstate 40. County operated recreational facilities located in the city include the Putnam County Fairgrounds, the Putnam County Soccer Complex, the Cookeville Community Center and the Jere Whitson Park and Ballfields. Other recreational facilities located in the city include the Putnam County Library, the Cookeville Golf Club, the Belle Acres Golf Course, and the Cookeville-Putnam County YMCA. The municipality's location is such that there are several state and federal park facilities within a relative short distance for its citizens to utilize as well. These facilities remove some of the burden for Cookeville to provide more facilities than are available.

In the unincorporated urban growth boundary religious, cultural and recreational land uses occupy 31 acres. This is a decrease of 48 acres since 1999 and can primarily be attributed to annexation. The facilities in this category in the growth area consist of 12 churches and 14 cemeteries. There are no cultural or recreational facilities located in the growth area, which indicates this area’s dependency on the municipality to provide such facilities.

The age of the public, cultural and recreational structures tend to vary significantly, but in most cases such facilities are in satisfactory condition and basically meet current demands.

Findings. Adequate space is available to meet the current public, religious, cultural, and recreational needs of Cookeville and the projected growth area. This is significant since the municipality does provide such facilities in this category for most of Putnam County. It is anticipated, based upon future population projections, that a sufficient amount of space is available to meet most future needs. There is a need for recreational facilities south of Interstate 40. More land for the construction of public schools is expected to be required during the planning period. Also the need for the provision of an additional Fire Department Substation in the western section of the municipality has been identified. An additional factor that could significantly affect future land use would be the expansion of the Tennessee Tech University campus.

Utilities

The City of Cookeville is the primary provider and location in Putnam County for utility services and facilities. Land uses in this category occupy 91 acres or less than one (1) percent of the developed land in the municipality. This is an increase of approximately 20 acres since 1999. The utility uses within the municipality include the municipal wastewater treatment facility, all water and sewer pump stations, all water storage tanks, the Cookeville Water Quality Control Department, the Cookeville Gas Department, the Cookeville Electric Department, all electrical substations, and all communication tower locations.

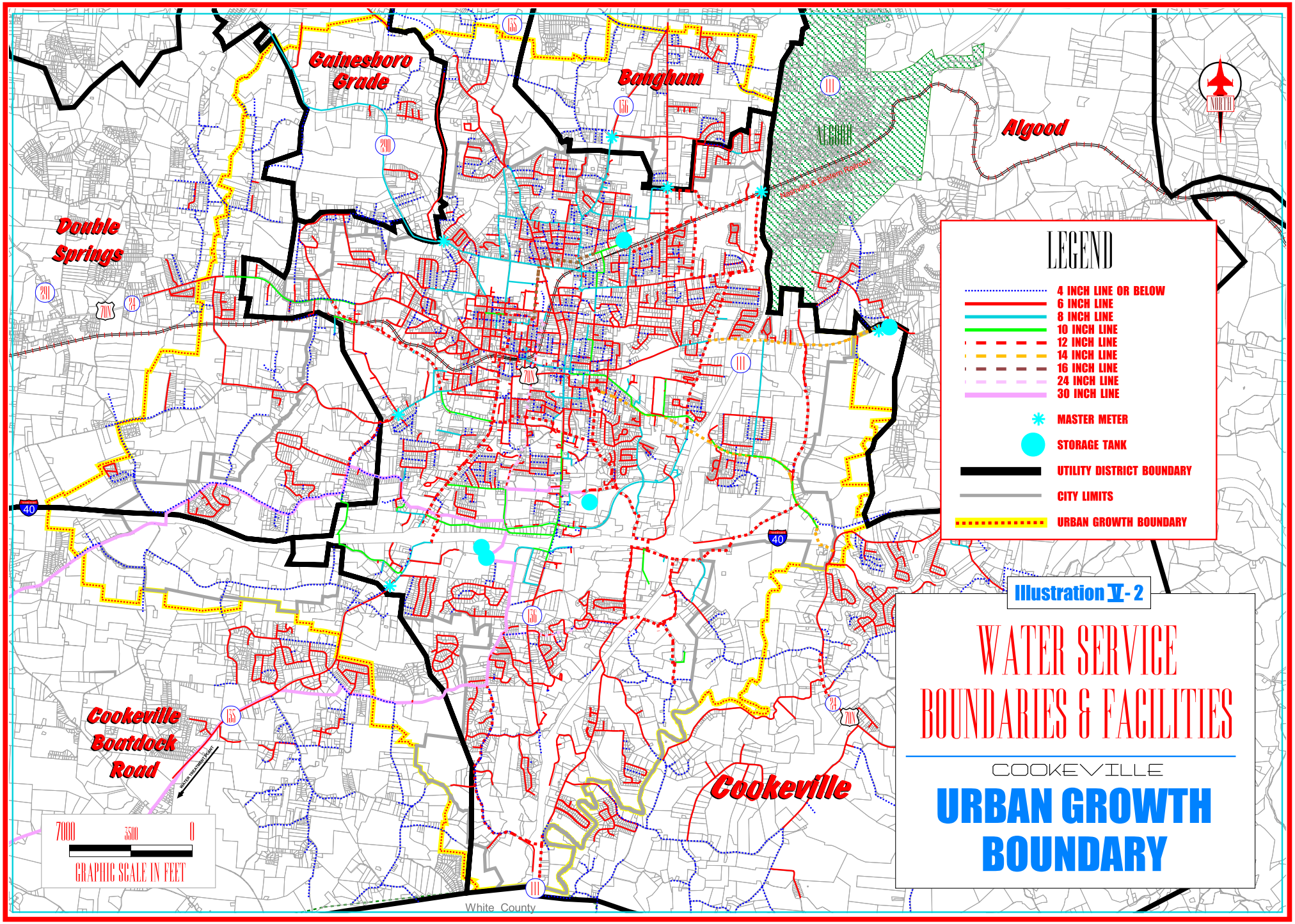
In the projected growth area approximately 21 acres are devoted to utility land uses. This is an increase of 14 acres since 1999, most of which can be attributed to the expansion of an electric cooperative facility on U. S. Highway 70N. The utility uses in the growth area include the Upper Cumberland Electric Membership Cooperative office, the Cookeville Boat Dock Water Utility District office, the Bangham Water Utility District office, water pump stations, water storage tanks, and electrical substations.

Water Service

Public water service is available to all developed portions of the municipality and is provided primarily by the Cookeville Department of Water Quality Control. Western portions of the municipality annexed in 2002 are provided water service by water utility districts. This includes the Park West Subdivision, which is served by the Double Springs Utility District, and the area of the proposed regional industrial/business park west of Holladay Road, which is served by the Cookeville Boat Dock Utility District. Both the City of Cookeville and a number of water utility districts serve the unincorporated growth area. The eastern and southeastern sections of the growth area are served by Cookeville, the northern portion is served by the Bangham and Gainesboro Grade Utility Districts, the western portion is served by the Double Springs Utility District, and the southwestern section is served by the Cookeville Boat Dock Utility District. The City of Cookeville supplies water to each of the utility districts serving the growth area, and also supplies water to the cities of Algood and Baxter. The water service areas and locations and sizes of existing water lines in the Cookeville Urban Growth Boundary are reflected in Illustration V-2.

Cookeville's water treatment facility is located off Water Plant Road on Mine Lick Creek near the Putnam-Dekalb County line. This facility was originally constructed in 1971 with a seven (7) million gallon per day (MGD) treatment capacity. The current capacity of the treatment plant is 15 MGD. Center Hill Reservoir (Mine Lick Creek) provides the municipality with a perpetual source of water. Two (2) 30-inch transmission lines connect the treatment facility with the municipality. A two (2) MGD membrane recovery system, which significantly improved the efficiency of the treatment facility, was completed in 2008. An expansion of the raw water intake facility was completed in 2009, which brought the raw water pumping capabilities up to a capacity of 22 MGD. An expansion of the treatment/pumping capacity to approximately 22 MGD is planned within the next ten (10) years. There is sufficient land available at the existing water treatment site for this expansion.

Since 1999 the Department of Water Quality Control has increased its total water storage capacity from 10 to 20 million gallons. Four (4) ground storage tanks (Pilot Knob - 5 million gallons and 10 million gallons, Buck Mountain - 2 million gallons, and Shoneys - 2 million gallons) and two elevated tanks (Capshaw - 500,000 gallons and East 15th Street - 500,000 gallons), provide this storage. The Capshaw tank was removed in 2009, which reduced the department's water storage capacity to 19.5


Gainesboro Grade
Bangham
Algood
Double Springs
Cookeville Boatdock Road
Cookeville
White County
LEGEND
4 INCH LINE OR BELOW
6 INCH LINE
8 INCH LINE
10 INCH LINE
12 INCH LINE
14 INCH LINE
16 INCH LINE
24 INCH LINE
30 INCH LINE
MASTER METER
STORAGE TANK
UTILITY DISTRICT BOUNDARY
CITY LIMITS
URBAN GROWTH BOUNDARY
7000
3500
0
GRAPHIC SCALE IN FEET
Illustration V-2
WATER SERVICE BOUNDARIES & FACILITIES
COOKEVILLE
URBAN GROWTH BOUNDARY

million gallons. The construction of additional water storage tanks, including one in the northwestern portion of the urban growth boundary, can be anticipated during the planning period. While the exact location and size of these storage facilities has not yet been determined, the land area required should range from one (1) to five (5) acres.

The Cookeville Water System currently has a total of approximately 13,125 customers, an increase of approximately 1,700 customers since 1999. Of the total customers, approximately 11,010 are located within the corporate limits and approximately 2,115 are located outside the city. In the past ten (10) years the average daily water consumption rate has increased from 8.9 MGD, or approximately 64 percent of capacity, to 11 MGD, or approximately 73 percent of capacity. The municipality can provide for the immediate future demand. The completion of the planned expansion of the treatment facility within ten (10) years should allow the municipality to meet expected water demands through the 20-year planning period and beyond.

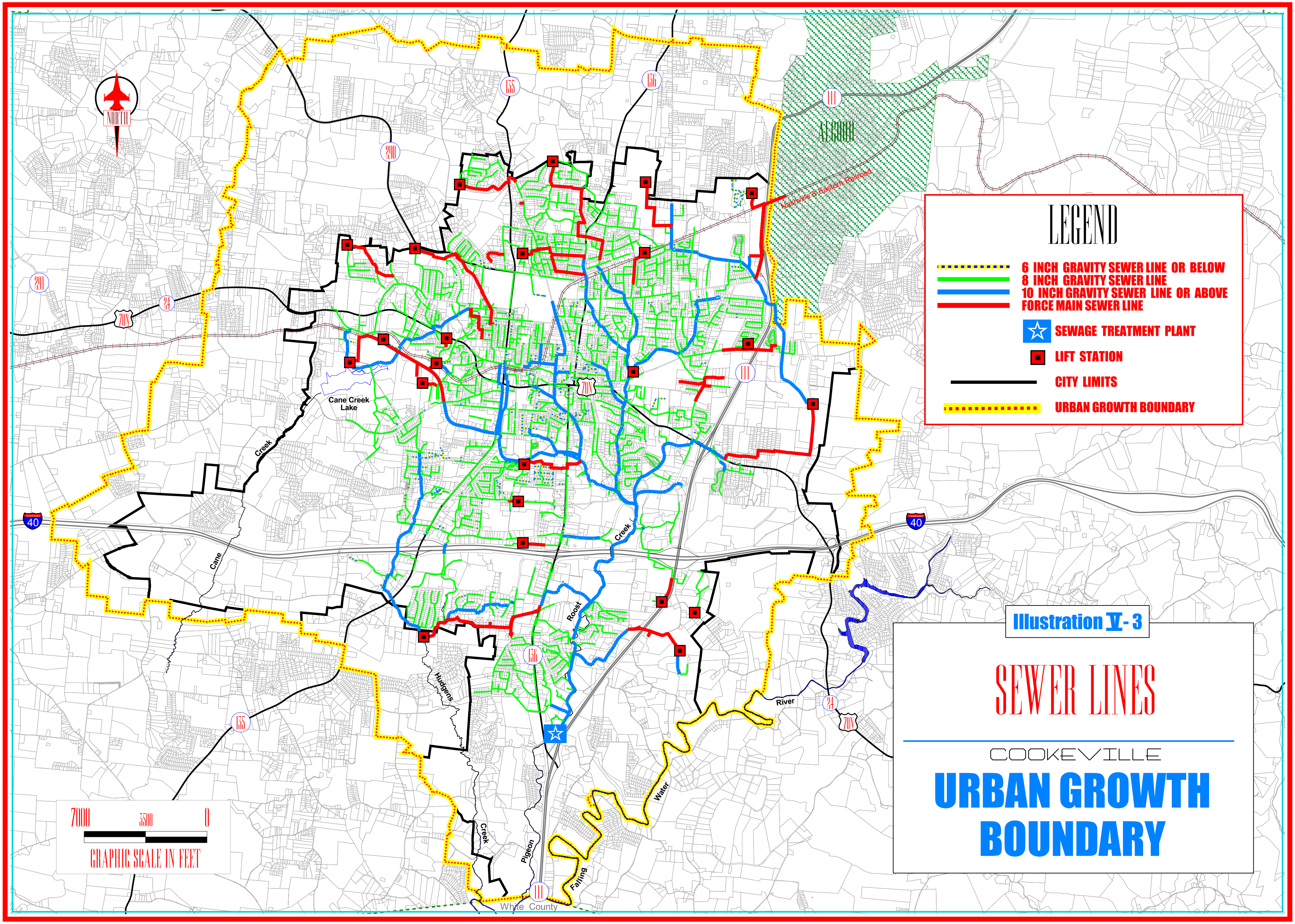
Sewer Service

The Cookeville Department of Water Quality Control currently provides public sewer service to an estimated 9,730 customers, all located within the corporate limits of Cookeville. Approximately 88 percent of the department's water customers are provided sewer service. Public sewer service is available to approximately 85 percent of parcels and approximately 65 percent of the land area within the municipality. Public sewer service is not available in the unincorporated growth area. Illustration V-3 depicts the location of sewer service within the city.

The Cookeville wastewater treatment facility is located off South Jefferson Avenue. This facility has a treatment capacity of 14 MGD. In 2006, an average of 6.34 MGD of sewage were treated, or approximately 46 percent of treatment capacity. Since 1999, the daily amount of sewage treated by the municipality has actually declined. This can be partially attributed to the closing of large industrial water users. There should be no need for a major expansion of the Cookeville wastewater treatment facility during the next ten (10) years. Passage of new federal regulations concerning wastewater treatment could alter this time line. The Water Quality Control Department indicates that land for a second treatment plant/facility should be identified and possibly obtained within the next ten (10) years. The land area required for the second plant/facility is dependent upon the type of facility and can range from ten (10) acres to several hundred acres. It is likely that the second plant/facility will be located outside the current Cookeville Urban Growth Boundary.

Most of the properties within the municipality with no access to public sewer service have been annexed since 1999. The most densely developed areas without public sewer service are the Burton Estates, River Bend, Waconda Hills, Victory Hills, South Creek, Rebecca Place, Park West, and Apple Valley Subdivisions. The provision of sewer service to these areas should be completed within the next 15 to 30 years. The Water Quality Control Department anticipates that the remaining developed areas within the municipality will be provided public sewer service as need dictates. The lack of public sewer to vacant lands within the municipality significantly affects their development potential.

The extension of sewer service to properties in Cookeville with topographic constraints will require additional sites for the location of sewer pump stations. The provision of public sewer service to many of the properties in the growth area that may be annexed will also require sites for the location of lift stations. Such facilities, however, require very minimal land area with physical locations being the primary engineering concern.



LEGEND
6 INCH GRAVITY SEWER LINE OR BELOW
8 INCH GRAVITY SEWER LINE
10 INCH GRAVITY SEWER LINE OR ABOVE
FORCE MAIN SEWER LINE
SEWAGE TREATMENT PLANT
LIFT STATION
CITY LIMITS
URBAN GROWTH BOUNDARY
NORTH
Nashville & Eastern Railroad
Cane Creek Lake
Creek
Cane
Roost
Hudgens
Pigeon
Water
Falling
River
White County
40
111
135
136
290
291
24
70N
7000
3500
0
GRAPHIC SCALE IN FEET
Illustration V - 3
SEWER LINES
COOKEVILLE
URBAN GROWTH
BOUNDARY

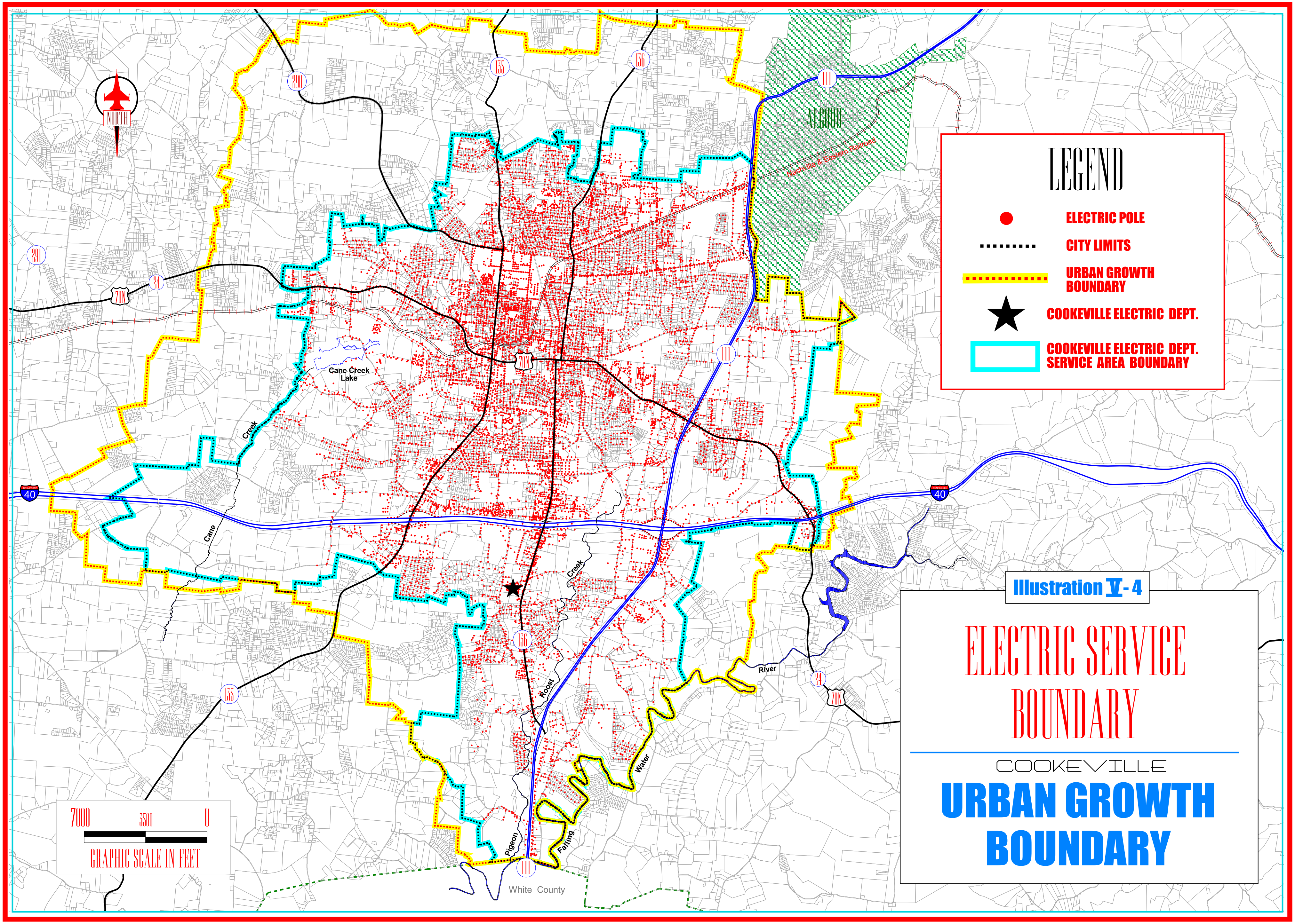
Electrical Service

The Cookeville Electric System is municipally owned. It serves much of Cookeville and a very limited area outside the corporate limits. Electrical service is available to all developed areas in the municipality and its growth area. The Upper Cumberland Electric Membership Cooperative serves the portions of the municipality and its urban growth area not served by the City of Cookeville. Both providers receive electricity from the Tennessee Valley Authority.

The areas within the corporate limits not served by the Cookeville Electric System primarily consist of areas annexed by the city since 2000. Property owners served by the electric membership cooperative pay a rate approximately 11 percent higher than those served by the City of Cookeville. The city attempted to acquire, in accordance with the provisions of Section 6-51-112 of the *Tennessee Code*, the service rights for the areas annexed since 2000 as they were annexed. The electric co-op declined to relinquish the annexed areas and the municipality was forced into litigation. Following several years of litigation, a settlement was reached with the co-op in 2008 to permit the city to serve the areas within its corporate limits. As a result of the settlement, the Cookeville Electric System will be able to serve the area within the Cookeville corporate limits as it existed on June 26, 2008 on or before December 31, 2011. Also, as a result of the settlement, any portions of the growth area annexed in the future will continue to be provided electrical service by the co-op for period of at least 25 years from the date of the settlement. This stipulation could have a major impact on the future growth of the municipality. Illustration V-4 depicts the location of the Cookeville Electric Department's service boundary as of October 2008.

The Cookeville Electric Department is situated on a 22 acre site located on West Davis Road. Approximately 11.5 acres of the site are developed and the remaining estimated 10.5 acres should adequately provide for the future needs of the department. The existing service center has 35,525 square feet with 12,475 square feet of ancillary facilities. The electric department operates four (4) electrical substations located on West Broad Street (West Substation), Fisk Road (North Substation), Ruby Lane (East Substation) and Southwood Drive (South Substation). The need for an additional substation is anticipated in the western portion of the municipality with the development of the proposed regional industrial/business park.

Currently, the Cookeville Electric Department serves an estimated 15,000 customers of which approximately 11,800 are residential. Once the areas annexed between 2000 and 2007 are acquired it is anticipated that the electric department will have a customer base of 17,000. The present power supply should more than adequately meet the future electrical needs of its service area.



LEGEND
ELECTRIC POLE
CITY LIMITS
URBAN GROWTH BOUNDARY
COOKEVILLE ELECTRIC DEPT.
COOKEVILLE ELECTRIC DEPT. SERVICE AREA BOUNDARY
Illustration V - 4
ELECTRIC SERVICE BOUNDARY
COOKEVILLE
URBAN GROWTH BOUNDARY
NORTH
ALGOOD
Nashville & Eastern Railroad
Cane Creek Lake
Cane Creek
Roost Creek
Falling Water River
Pigeon
White County
40
111
136
135
290
70N
24
291
7000
3500
0
GRAPHIC SCALE IN FEET

Natural Gas Service

Natural gas service within the City of Cookeville and the projected growth area is provided by the Cookeville Natural Gas System. Approximately 98 percent of the developed areas within the corporate limits and approximately 75 percent of the properties within the projected growth area have access to natural gas. Most of the properties within the municipality with no access to natural gas service have been annexed since 1999. The Cookeville Gas Department also provides natural gas service to the Town of Algood. Illustration V-5 depicts the location of the Cookeville Gas Department's service boundary.

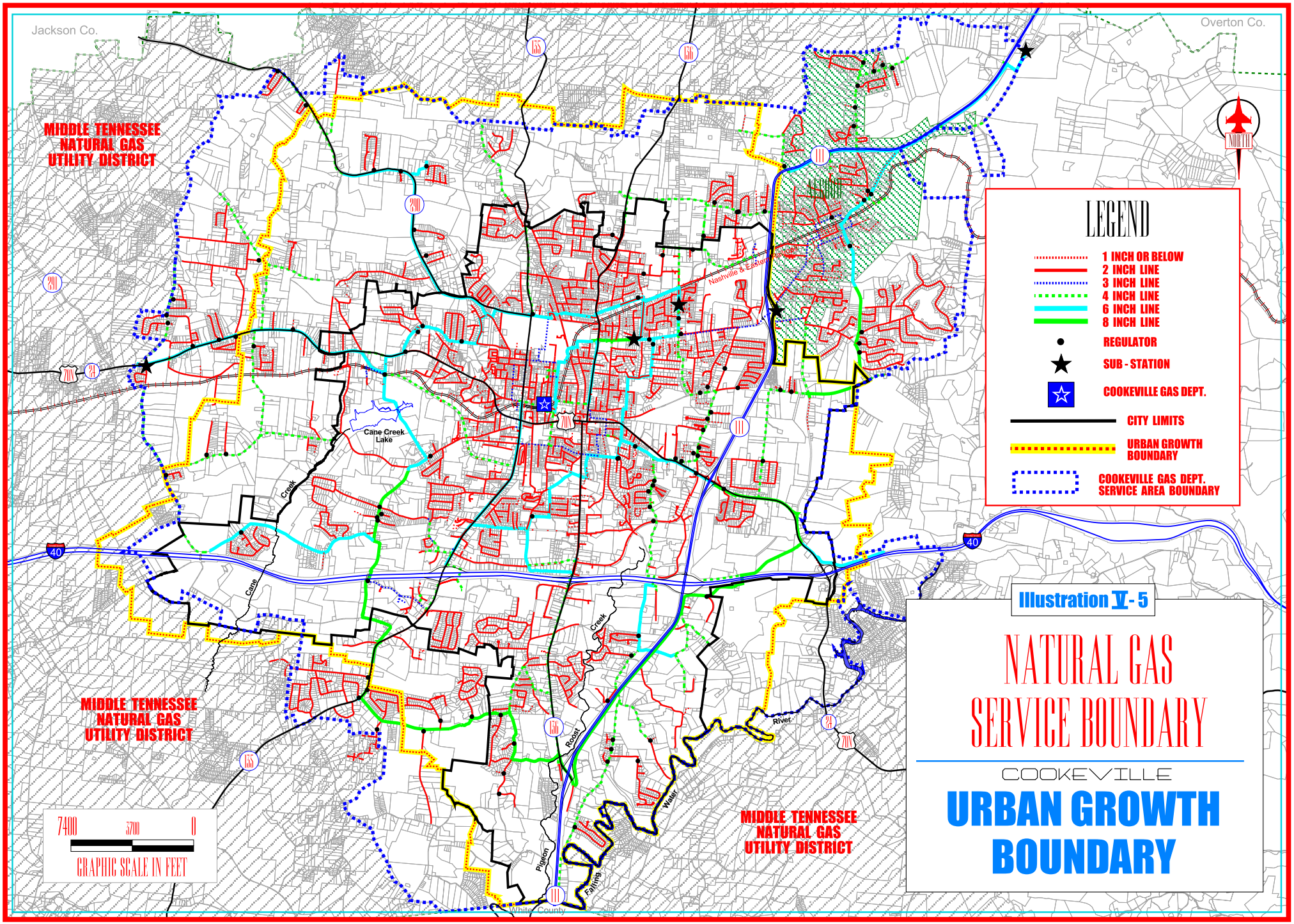
The Cookeville Gas Department is a municipally owned local distribution company (LDC). The service center has been located in 33,739 square foot facility on North Oak Street since 1991. Natural gas is supplied to the Cookeville Gas Department by East Tennessee Natural Gas from two (2) gate stations. Only one of these gate stations, which located off Fisk Road north of East 10th Street, is located within the corporate limits of Cookeville. The second gate station is located outside the Urban Growth Boundary off Turkey Creek Road north of the City of Algood. The city also has the capability of purchasing gas from Middle Tennessee Natural Gas at a gate station located off West Broad Street near Plunk Whitson Road. No new facilities requiring the acquisition of properties are expected to be required during the planning period.

Currently, the Cookeville Gas Department serves an estimated 9,700 customers of which approximately 7,600 are residential. Approximately 5,600 of these residential customers are located within the corporate limits of Cookeville. In Fiscal Year 2007-2008 the volume of gas sales for the department was 1,096,259 MCF. The present natural gas supply should more than adequately meet the future natural gas needs of the service area.

Other Utilities

The remaining facilities within this land use category, including telephone and cable television service, appear to have sufficient land available to expand at their current sites. Therefore, any growth would not correspondingly require additional land of any significance for these uses.

Findings. It is anticipated that adequate land will be available in Cookeville and its projected growth area for land uses in the utility category. One factor that could impact this projection is a decision to locate a second sewer treatment facility. Minimal future land acquisition would be required for those areas where sewer or water pump or electrical substations would be required. It is anticipated that the necessary land will be provided in conjunction with any major developments requiring such facilities.


Jackson Co.
Overton Co.
MIDDLE TENNESSEE NATURAL GAS UTILITY DISTRICT
MIDDLE TENNESSEE NATURAL GAS UTILITY DISTRICT
MIDDLE TENNESSEE NATURAL GAS UTILITY DISTRICT
NORTH
LEGEND
1 INCH OR BELOW
2 INCH LINE
3 INCH LINE
4 INCH LINE
6 INCH LINE
8 INCH LINE
REGULATOR
SUB - STATION
COOKEVILLE GAS DEPT.
CITY LIMITS
URBAN GROWTH BOUNDARY
COOKEVILLE GAS DEPT. SERVICE AREA BOUNDARY
Cane Creek Lake
Cane Creek
Roost Creek
Pigeon Falling Water River
Nashville & Eastern
7400 3700 0
GRAPHIC SCALE IN FEET
White County
Illustration V - 5
NATURAL GAS SERVICE BOUNDARY
COOKEVILLE
URBAN GROWTH BOUNDARY

Transportation

The transportation land use category includes the right-of-ways for all local streets and roads, federal and state highways, and rail lines. Transportation systems occupy a significant percentage of the developed land area in the municipality and the projected growth area. Within the municipal boundaries an estimated 2,507 acres of land are devoted to transportation uses. This represents approximately 12 percent of the total land area and 27 of the developed land. Since 1999 land use for transportation purposes within the municipality has increased by 525 acres or 27 percent. The majority of this increase is the result of annexation. Within the projected growth area an estimated 493 acres of land are used for transportation purposes. This corresponds to approximately four (4) percent of the total land area and 12 percent of the developed land. Since 1999 land use for transportation purposes within the growth area has decreased by 421 acres or 46 percent.

Street and highway right-of-ways account for 2,446 of the 2,507 acres of land dedicated to transportation uses in Cookeville. Of these 2,446 acres, 561 acres are occupied by Interstate 40, State and U. S. highways occupy 616 acres, local streets occupy 1,237 acres and 32 acres are undeveloped right-of-ways. In the projected growth area, street and highway right-of-ways account for 482 of the 493 acres used for transportation systems. Of these 482 acres, 62 acres are occupied by Interstate 40, State and U. S. highways occupy 141 acres, local roads occupy 290 acres, and undeveloped right-of-ways occupy less than one (1) acre.

Railroad right-of-ways occupy approximately 61 acres of land within the municipality and approximately 19 acres of land in the growth area.

A number of improvements to the municipality's existing street and highway system are planned. Several of these improvements will require the acquisition of additional right-of-way. Likewise, the construction of new streets or highways in the municipality and the projected growth area will require the acquisition or dedication of right-of-ways.

Findings.

Land used for transportation purposes greatly affects land used for other purposes. The movement of people and goods from one point to another is, of course, the primary purpose of transportation systems. However, transportation systems also provide access to properties, which allows for development. It is anticipated that land for the future development of transportation systems in the Cookeville Urban Growth Boundary will be obtained as necessary. Where improvements to existing streets and highways or the construction of new thoroughfares requires the acquisition of lands used for other purposes, then land for the relocation of the acquired land uses will have to be accounted for.

VACANT LAND ANALYSIS

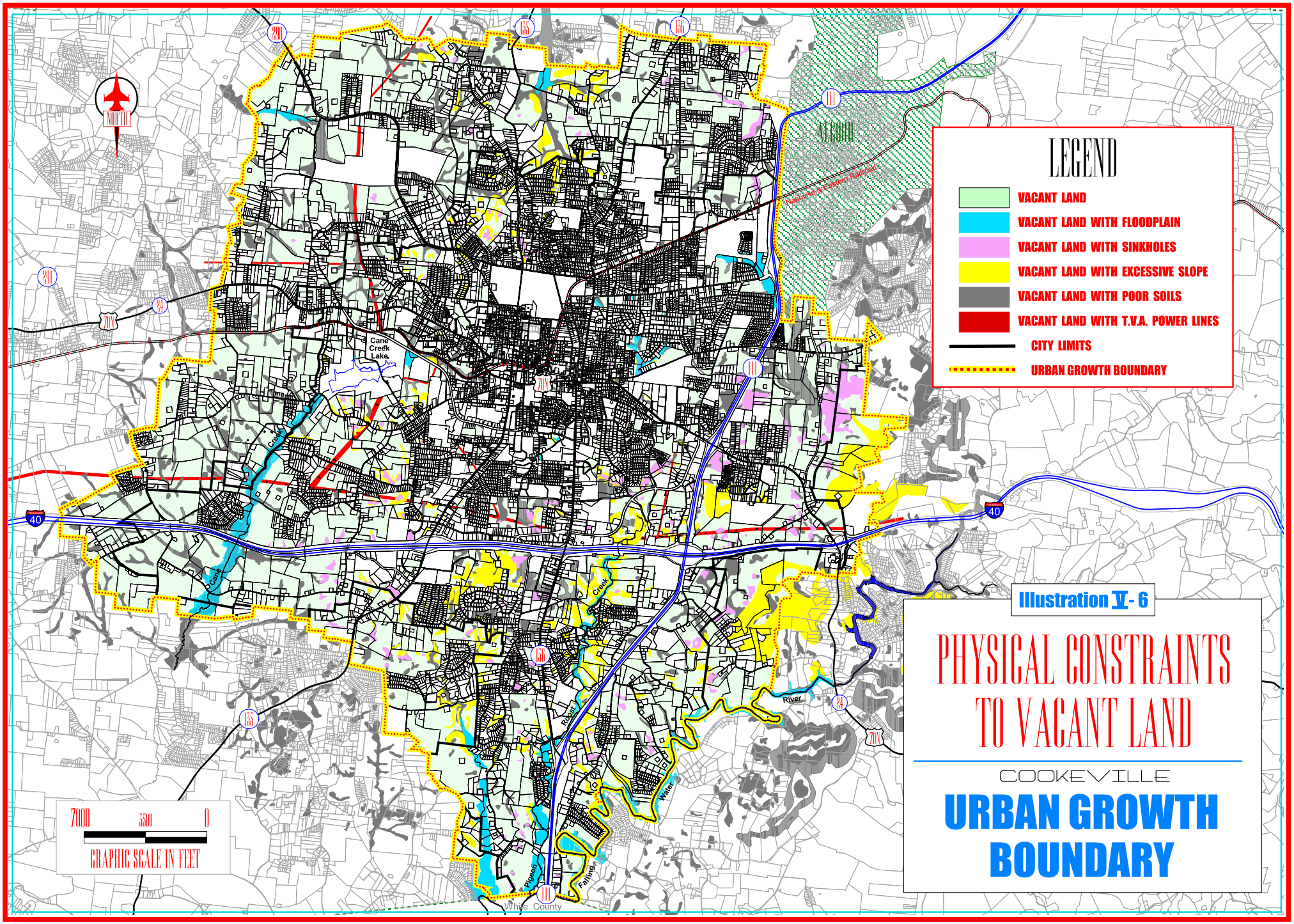
Within the municipality approximately 9,024 acres or 43 percent of the total land area is vacant land. As the result of annexation the supply of vacant land within the municipality has increased by 4,470 acres or by approximately 98 percent since 1999. As a percent of the total land area within the municipality, vacant land has increased by 11 percent since 1999. Although the acreage of vacant land has significantly risen since 1999, a large portion of this land is affected by factors limiting its development potential. The restraints to development of vacant land include access to infrastructure and physical constraints.

Access to adequate infrastructure is one of the most important factors affecting the development potential of property. The majority of the vacant land within the municipality has sufficient street access and availability to water and electric services; however, public sewer service is not yet available in many areas. It is roughly estimated that in excess of 75 percent, or more than 7,000 acres, of the vacant land in the municipality does not have access to public sewer, including nearly all of the acreage annexed since 1999. While land can be developed without access to public sewer, the intensity of development is greatly reduced. Additionally, the expense to the municipality for the provision of sewer post-development is considerably higher than pre-development. The extension of public sewer to the unserved portions of the municipality is vital for vacant lands to be developed in a cost-effective manner.

A significant amount of the vacant land in the municipality has severe physical limitations, including topographic constraints, susceptibility to flooding, sinkholes, or poor soils, which make it either not developable or cost prohibitive to develop. In addition, a moderate percentage of the vacant land is subject to other constraints, such as power line and other utility easements, which will prohibit it from being developed. Table V-7 depicts a summary of the vacant land in the municipality by physical constraints to development. In those cases where the same property is affected by more than one physical constraint, such as steep topography and poor soils, the acreage is assigned to only one constraint. Illustration V-6 reflects the location of vacant land in the municipality and its projected growth area with physical constraints to development.

TABLE V-7
SUMMARY OF VACANT LAND BY PHYSICAL CONSTRAINTS TO DEVELOPMENT IN CORPORATE LIMITS

CONSTRAINT	ACREAGE	PERCENT
Topography	703	7.8
Flood Plain	477	5.3
Sinkholes	332	3.7
Poor Soils	979	10.9
Utility Easements	120	1.3
Subtotal	2,611	29.0
No Constraints	6,413	71.0
Total Vacant Land	9,024	100%


NORTH
LEGEND
VACANT LAND
VACANT LAND WITH FLOODPLAIN
VACANT LAND WITH SINKHOLES
VACANT LAND WITH EXCESSIVE SLOPE
VACANT LAND WITH POOR SOILS
VACANT LAND WITH T.V.A. POWER LINES
CITY LIMITS
URBAN GROWTH BOUNDARY
Illustration V- 6
PHYSICAL CONSTRAINTS TO VACANT LAND
COOKEVILLE
URBAN GROWTH BOUNDARY
7000 3500 0
GRAPHIC SCALE IN FEET
Cane Creek Lakes
White County

Approximately 703 acres of the vacant land in Cookeville have severe topographic constraints, slopes exceeding 20 percent, which limit the potential for development. The largest concentration of vacant land with severe topographic constraints, consisting of an estimated 80 acres, is located on Pilot Knob just south of Interstate 40. Other significant areas of vacant land with topographic problems are located along Pigeon Roost Creek south from Neal Street East and near the northeast intersection of Highway 111 and Interstate 40.

An estimated 477 acres of the vacant land in Cookeville are located in areas with designated flood hazards areas. Much of this land is situated along the Falling Water River, Burton Branch, Pigeon Roost, Hudgens and Cane Creeks. There are also vacant lands affected by flood plains located off Cookeville Creek and Cookeville Creek Tributary near Loweland Road, East 6th Street, North Ferguson Avenue, East Broad Street, and Bunker Hill Road. Although potentially developable, properties located in identified flood hazard areas are subject to the municipality's flood hazard regulations, which in some cases can make the development of this land cost prohibitive.

Sinkholes and their retention areas occupy approximately 332 acres of vacant land in the city. These sinkholes are scattered throughout the municipality. Lands located in sinkhole retention areas generally cannot be developed. The City of Cookeville has contracted with the Tennessee Technological University Department of Earth Sciences to identify and map the floodplains of sinkholes within the City of Cookeville and its Urban Growth Boundary. The project is scheduled to be completed by the fall of 2009. Once completed, the municipality will be better able to protect these vital areas.

Poor soils affect an estimated 979 acres of vacant land in Cookeville. The soils' characteristics limiting the development potential of vacant land include slow drainage and permeability, wetlands, high potential for flooding, and shallow depth to bedrock. Vacant land with soils generally unsuitable for development is scattered throughout the municipality with some of the largest concentrations located in the vicinity of Interstate 40 between South Jefferson and South Willow Avenues.

Approximately 120 acres of vacant land are subject to the restraints of various utility easements for major transmission lines. In most cases, no development, other than parking, can occur on lands within these easements. The largest percentage of vacant land affected by utility easements is that located under TVA power line easements, some of which are 150 feet or more in width, that traverse the city.

Within the city there are approximately 6,413 acres of vacant land that are not susceptible to some physical constraint that would limit or in some cases prohibit their development. This is an increase of an estimated 3,145 acres since 1999, which can be attributed to annexation. The vacant developable land consists primarily of smaller tracts scattered throughout the older portions of the municipality and several larger tracts within areas annexed since 1999. Most of the smaller tracts in the older portions of the municipality have access to the infrastructure necessary for development. Unfortunately most of the larger tracts of vacant land, including the majority of those annexed since 1999, do not yet have access to public sewer. Failure to extend public sewer to these areas in a timely manner will have a major impact on the future development of the municipality.

As the amount of vacant land in Cookeville suitable for development or with the infrastructure required for development is limited, it will be necessary that the municipality provide the infrastructure and annex areas to accommodate expected growth. Within the unincorporated urban growth area there are approximately 7,460 acres of vacant land. This represents approximately 64 percent of the total land area. As is the case in the municipality a portion of this vacant land has severe physical

constraints that limit their potential for development. A summary of vacant land by constraints to development in the unincorporated planning region is presented in Table V-8.

TABLE V-8
SUMMARY OF VACANT LAND BY PHYSICAL CONSTRAINTS TO DEVELOPMENT
PROJECTED GROWTH AREA

CONSTRAINT	ACREAGE	PERCENT
Topography	530	7.1
Flood Plain	175	2.3
Sinkholes	143	1.9
Poor Soils	825	11.1
Utility Easements	39	0.5
Subtotal	1,712	22.9
No Constraints	5,748	77.1
Total Vacant Land	7,460	100

Approximately 530 acres of the vacant land in the unincorporated planning area have severe topographic constraints that limit the potential for development. The vast majority of vacant land with severe topographic constraints is located to the north of the Interstate 40 and Highway 70N Interchange and to the southeast of the Interstate 40 and Highway 111 Interchange. Another area of vacant land with topographic problems is located north of the municipality between Highways 135 and 136.

An estimated 175 acres of the vacant land in the growth area are located in areas with designated flood hazards areas. Much of this land is situated along Cane Creek. There are also identified floodplains located along Little Creek, West Blackburn Fork, East Blackburn Fork, and Hudgens Creek. Flood prone properties located outside the municipality are subject to the provisions of the Putnam County Floodplain Regulations.

Sinkholes and their retention areas occupy approximately 143 acres of vacant land in the growth area. These sinkholes are scattered throughout the unincorporated urban growth boundary. Although sinkhole areas should not be considered as developable, there are no county regulations prohibiting them from development.

Poor soils affect an estimated 825 acres of vacant land scattered throughout the projected growth area. The constraints of poor soils are much more significant outside the municipality because public sewer service is not available.

Approximately 39 acres of vacant land in the projected growth area are subject to the restraints of various utility easements for major transmission lines. As is the case in the municipality, the largest percentage of vacant land affected by utility easements is that located under TVA power line easements.

There are approximately 5,748 acres of vacant land in the unincorporated urban growth boundary that are not susceptible to physical or other constraints which limit their development potential. Unfortunately, only a very small percentage of this vacant land has the infrastructure in place necessary to support an intensive level of development. Public sewer service, which is required for intense development, is not available outside

the incorporated area. There are, however; several large parcels of land and numerous lots available in the planning area that are prime for development provided the necessary infrastructure is made available.

Findings. Approximately 9,024 acres of land, or 43 percent of the total land area of Cookeville, is classified as vacant. The supply of vacant land within the municipality has increased by 4,470 acres or by approximately 98 percent as a result of annexation since 1999. An estimated 71 percent, or 6,413 acres, of this vacant land does not have significant physical constraints limiting or prohibiting development. It is essential that proper standards be followed for the development of any areas with physical limitations. Most of the vacant land with severe physical constraints should not be developed.

The primary hindrance to the development of the vacant land within the municipality is the lack of adequate infrastructure. It is estimated that more than 75 percent, or in excess of 7,000 acres, of the vacant land does not have access to public sewer. While land can be developed without public sewer, the density of development is greatly restricted.

There is a substantial amount of vacant land available in the projected growth area that could be developed if the necessary infrastructure is provided. It is anticipated that the municipality will expand into its growth area to meet some of the demands for future development.

ANALYSIS OF EXISTING LAND USE BY ZONING

Land use in Cookeville is significantly affected by zoning. The zoning designation for a parcel of property is the major determinate of how it may be utilized. The City of Cookeville Zoning Code divides the municipality into 21 zoning districts. Approximately 68 percent of the city's total land area, or 14,169 acres, is zoned for residential purposes. Of the acreage zoned residential, approximately 13,002 acres, or 62 percent of the total land area, is zoned for lower density single-family use as RS-20, RS-15, RS-10 or RS-5. Since 1999, as a percentage of the total land area, land zoned for single-family use increased by 11 percent. This can be largely attributed to annexation and the subsequent zoning of most of these areas as RS-20.

Higher density residential uses, which are in districts zoned RD, RM-8, RM-14, PRD, or RMHP, occupy approximately 1,167 acres or six (6) percent of the total land area in Cookeville. Since 1999, as a percentage of total land area, land zoned primarily for higher density residential purposes decreased by seven (7) percent. This decline mainly results from the adoption of a revised municipal zoning code in 2001. As a part of the revised zoning code, areas previously zoned for higher density residential use were intentionally rezoned for lower density residential use. It should be noted, however, that the 2001 zoning code also included revisions allowing multi-family residential uses in certain commercial zones, including the CL and CG Districts. As a result of these revisions, zoning districts that allow higher density residential uses comprise over 3,500 acres.

An estimated 4,047 acres or 19 percent of the total land area in Cookeville is zoned for commercial or private service use, which includes the CBD, CN, CL, CG, CR, PCD, MS and UNV Districts. While the percentage of total land area zoned for commercial or private service uses decreased by 3 percent, land zoned for such uses increased by 941 acres from 1999 to 2008. Properties zoned for industrial use, which includes the CI, LM, HM and QM Districts, occupy approximately 2,641 acres or 13 percent of the total land area. There is no zoning in effect outside the corporate limits of Cookeville. Graph V-4 below reflects the percentage of land area in the municipality by zoning category in 1999 and 2008. Table V-9 depicts the acreage and percent of total land area for each zoning district as of October 2008.

GRAPH V-4
PERCENTAGE OF LAND AREA BY ZONING
1999 AND 2008

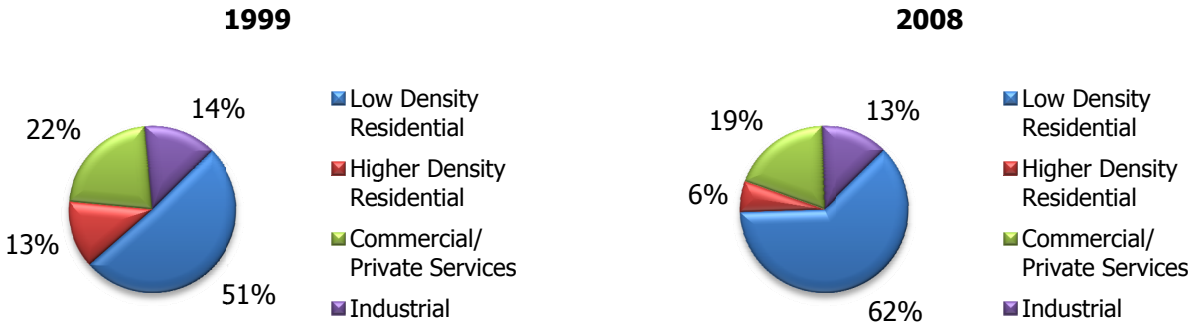


TABLE V-9
ACREAGE BY ZONING DISTRICTS
OCTOBER 2008

ZONING DISTRICT	ACREAGE	PERCENT
RS-20, Single Family Residential	6,800	32.6 %
RS-15, Single Family Residential	2,861	13.7 %
RS-10, Single Family Residential	3,057	14.7 %
RS-5, Single Family Residential	284	1.4 %
RD, Single Family & Duplex Residential	322	1.5 %
RM-8, Multi-Family Residential	544	2.6 %
RM-14, Multi-Family Residential	148	0.7 %
PRD, Planned Residential Development	124	0.6 %
RMHP, Residential Mobile Home Park	29	0.1 %
CBD, Central Business	90	0.4 %
CN, Neighborhood Commercial	104	0.5 %
CL, Local Commercial	859	4.1 %
CG, General Commercial	1,544	7.4 %
CR, Regional Commercial	911	4.4 %
PCD, Planned Commercial Development	102	0.5 %
MS, Medical Services	156	0.7 %
UNV, University	281	1.3 %
CI, Commercial-Industrial Mixed Use	1,554	7.5 %
LM, Light Manufacturing	868	4.2 %
HM, Heavy Manufacturing	219	1.1 %
QM, Quarry and Mining	0	0 %
TOTALS	20,857	100 %

Zoning of Vacant Land

Zoning of vacant land will greatly affect the future development of the City of Cookeville. Table V-10 presents the acreage of vacant land by zoning district, percent of district, and percent of total vacant land. As indicated in Table V-10, more than 50 percent of the total vacant land is zoned as RS-20, Single Family Residential. Within this zoning district the maximum density for development is approximately two (2) dwelling units per acre. Approximately 67 percent of the total land zoned as RS-20 is currently vacant. Most of the vacant land zoned as RS-20 is located in areas annexed in the last decade which currently do not have access to public sewer.

Land zoned as RS-15, Single Family Residential accounts for the second highest percentage of total vacant land at 12.7 percent. Approximately 40 percent of the acreage zoned as RS-15 is currently vacant. The third highest percentage of total vacant land is zoned as RS-10, Single Family Residential. In this zoning district approximately 26 percent of the acreage is vacant. Higher density residential districts including the RS-5, Single Family Residential, RD, Single Family and Duplex Residential, RM-8, Multi-Family Residential, RM-8, Multi-Family Residential, and PRD, Planned Residential Development, combined account for less than 4 percent of the total vacant land.

The largest percentage of the total vacant land zoned for other than residential purposes is zoned as CI, Commercial-Industrial Mixed Use at 8.4 percent. More than half of this vacant land was purchased by the City of Cookeville and Putnam County for the development of a regional industrial-business park. Land zoned as CR, Regional

Commercial accounts for the second highest percentage of total non-residential land at 5.2 percent. Much of this vacant land is located along Neal Street. The third highest percentage of total non-residential vacant land is zoned as CG, General Commercial at 4.7 percent of the total. The majority of this vacant land is located along South Jefferson Avenue south of Interstate 40 and along East Spring Street north of Interstate 40.

It is important to recognize that very little vacant land is currently available in zoning districts with major employment centers including the UNV, University, MS, Medical Services, and HM, Heavy Manufacturing Districts. With only four (4) acres of vacant land zoned as UNV, expansion of the Tennessee Tech campus is significantly limited. While there are only 11 acres of vacant land zoned as MS, a large portion of the land area in this zone is used for purposes other than medical services and is expected to be available for redevelopment.

Zoning districts with no vacant land include the RMHP, Residential Mobile Home Park, PCD, Planned Commercial Development, and QM, Quarry and Mining. There have been no mobile home park developments within the municipality for many years. This may be attributed to the high standards of construction for such developments in the city. There are no vacant PCD zoned properties because this zone is approved only with specific development proposals. Currently there are no properties in the municipality zoned as QM.

TABLE V-10
VACANT LAND ACREAGE BY ZONING DISTRICTS
OCTOBER 2008

ZONING DISTRICT	TOTAL ACREAGE	VACANT	PERCENT OF ZONE	PERCENT OF VACANT
RS-20, Single Family Residential	6,800	4,541	67 %	50.3 %
RS-15, Single Family Residential	2,861	1,148	40 %	12.7 %
RS-10, Single Family Residential	3,057	780	26 %	8.6 %
RS-5, Single Family Residential	284	138	49 %	1.5 %
RD, Single Family & Duplex Residential	322	70	22 %	0.8 %
RM-8, Multi-Family Residential	544	88	16 %	1.0 %
RM-14, Multi-Family Residential	148	8	5 %	0.1 %
PRD, Planned Residential Development	124	14	11 %	0.2 %
RMHP, Residential Mobile Home Park	29	0	0 %	0 %
CBD, Central Business	90	11	12 %	0.1 %
CN, Neighborhood Commercial	104	20	19 %	0.2 %
CL, Local Commercial	859	250	29 %	2.8 %
CG, General Commercial	1,544	422	27 %	4.7 %
CR, Regional Commercial	911	466	51 %	5.2 %
PCD, Planned Commercial Development	102	0	0 %	0.0 %
MS, Medical Services	156	11	7 %	0.1 %
UNV, University	281	4	1 %	0.1 %
CI, Commercial-Industrial Mixed Use	1,554	757	49 %	8.4 %
LM, Light Manufacturing	868	274	32 %	3.0 %
HM, Heavy Manufacturing	219	22	10 %	0.2 %
QM, Quarry and Mining	0	0	n/a	0 %
TOTALS	20,857	9,024		100 %

EXISTING LAND USE ANALYSIS BY PLANNING NEIGHBORHOODS

In the 1999 Comprehensive Plan, the City of Cookeville was divided into nine (9) planning neighborhoods to allow a more detailed analysis of the various land uses. To provide some permanence of boundary lines, the neighborhood divisions generally follow major transportation routes. Illustration V-7 depicts the boundaries of each neighborhood. The neighborhood boundary lines have been extended through the current corporate limits to reflect annexations occurring since 1999. The utilization of planning neighborhoods allows for a more thorough analysis of land use trends. The compiled information can be used as base data for comparison to determine where and at what levels growth and development are occurring.

In the following, an analysis of the existing land use in each of the nine (9) planning neighborhoods is presented. Descriptions of the boundaries and the general character of each neighborhood are included. Land use by acreage and percentages of the total land area within each neighborhood in 2008 are determined and compared with the findings from 1999. Detailed examinations and comparisons of residential land use, including types of housing and housing conditions, are also provided. To gauge and tract levels of development in each neighborhood, building permits for new construction are evaluated for the period from 1999 through 2007. Table V-11 depicts a summary of the land uses in 1999 and 2008 for each neighborhood by acreage and percentage allotted. Table V-12 depicts a summary of housing units and conditions by planning neighborhood according to the 1999 and 2008 inventories. Building permit data for new commercial and residential construction between 1999 and 2007 by planning neighborhood is presented in Table V-13.

Neighborhood One

Neighborhood One is identified as the northwestern sector of Cookeville generally bounded by North Washington Avenue and Freehill Road to the east and West 12th Street/State Highway 290 to the south. This neighborhood consists of approximately 1,089 acres and is overwhelmingly residential in character with the exception of a strip commercial area along North Willow Avenue. Approximately 27 percent of the land area or 295 acres in Neighborhood One is vacant, which is a decrease of 30 acres since 1999. An estimated 131 acres, or 12 percent, of the land area in this neighborhood is used for transportation purposes.

Within Neighborhood One approximately 52 percent of the land area or 568 acres is occupied by residential uses. This includes an estimated 436 acres for single family structures, 112 acres for multi-family housing, and 20 acres for mobile homes. There are 803 single family structures located in Neighborhood One, which is an increase of 80 units since 1999. From 1999 to 2008 the number of vacant single family structures decreased from 24 to 17 and the number of such structures in less than sound condition decreased from 15 to five (5). In this neighborhood there are 1,386 multi-family dwelling units, which is an increase of 326 units since 1999. It also contains 91 mobile homes, ten (10) less than in 1999.

Non-residential land uses in Neighborhood One occupy approximately nine (9) percent of the land area or 92 acres. The majority of this non-residential land use is limited to along North Willow Avenue and along North Washington Avenue. There are 44 commercial/private service uses located in Neighborhood One, which is an increase of ten (10) such uses since 1999. Two (2) public service land uses, Jere Whitson Elementary School and the Fire Department's North Substation are located in this neighborhood. The neighborhood has seven (7) churches and one (1) cultural/recreational land use, Jere Whitson Park. Mega Trend Furniture is the only industrial use located within this neighborhood.

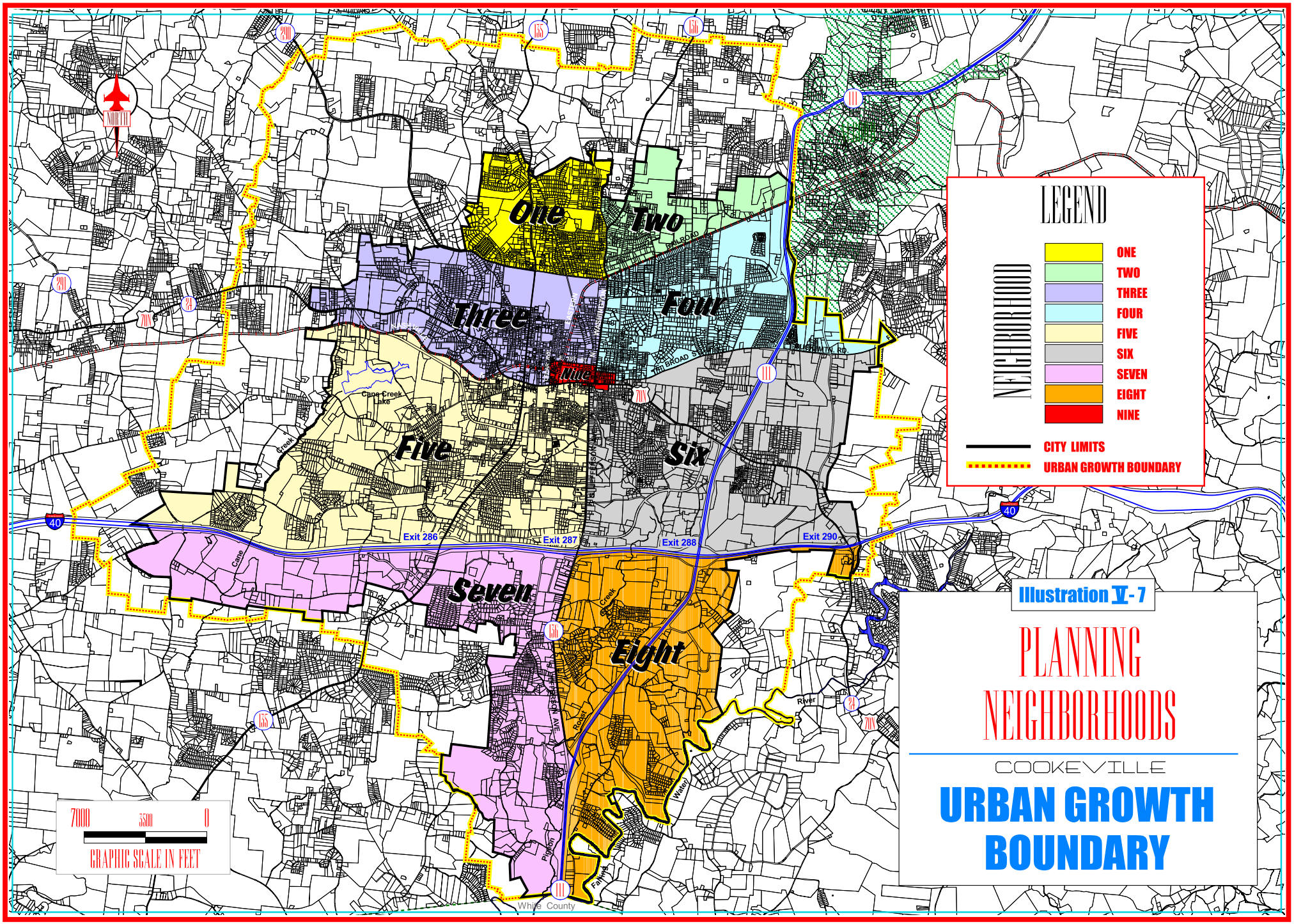

LEGEND
NEIGHBORHOOD
ONE
TWO
THREE
FOUR
FIVE
SIX
SEVEN
EIGHT
NINE
CITY LIMITS
URBAN GROWTH BOUNDARY
One
Two
Three
Four
Five
Six
Seven
Eight
Exit 286
Exit 287
Exit 288
Exit 290
Illustration V - 7
PLANNING
NEIGHBORHOODS
COOKEVILLE
URBAN GROWTH
BOUNDARY
7000
3500
0
GRAPHIC SCALE IN FEET
White County

TABLE V-11
EXISTING LAND USE BY ACREAGE AND PERCENTAGE IN PLANNING NEIGHBORHOODS
CITY OF COOKEVILLE
1999 AND 2008

PLANNING NEIGHBORHOOD		SINGLE-FAMILY RESIDENTIAL		MULTI-FAMILY RESIDENTIAL		MOBILE HOMES		NON-RESIDENTIAL		TRANSPORTATION		VACANT LAND		TOTAL LAND	
	YEAR	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
1	1999	424	39%	96	9%	23	2%	92	9%	124	11%	323	30%	1,082	100%
	2008	436	40%	110	10%	21	2%	95	9%	132	12%	295	27%	1,089	100%
2	1999	111	16%	7	1%	20	3%	303	45%	64	9%	175	26%	680	100%
	2008	123	15%	11	1%	19	2%	401	49%	71	9%	194	24%	819	100%
3	1999	615	33%	81	5%	6	0%	525	28%	245	13%	382	21%	1,854	100%
	2008	536	28%	125	6%	4	0%	534	28%	254	13%	495	25%	1,948	100%
4	1999	812	46%	33	2%	0	0%	239	13%	265	15%	437	24%	1,786	100%
	2008	847	44%	49	3%	3	0%	252	13%	292	15%	490	25%	1,933	100%
5	1999	680	21%	107	4%	37	1%	1,025	32%	379	12%	947	30%	3,175	100%
	2008	993	22%	169	4%	42	1%	1,156	25%	488	10%	1,730	38%	4,578	100%
6	1999	417	20%	50	2%	6	0%	532	25%	352	17%	765	36%	2,122	100%
	2008	649	18%	61	2%	5	0%	751	20%	482	13%	1,749	47%	3,697	100%
7	1999	361	22%	21	1%	15	1%	299	19%	242	15%	681	42%	1,619	100%
	2008	598	17%	20	0%	38	1%	334	10%	353	10%	2,227	62%	3,570	100%
8	1999	189	11%	46	3%	10	1%	295	18%	284	17%	841	50%	1,665	100%
	2008	388	13%	45	1%	10	0%	437	14%	409	13%	1,838	59%	3,127	100%
9	1999	11	12%	0	0%	0	0%	55	57%	27	28%	3	3%	96	100%
	2008	10	11%	1	1%	0	0%	53	55%	26	27%	6	6%	96	100%
TOTAL	1999	3,620	26%	441	3%	117	1%	3,365	24%	1,982	14%	4,554	32%	14,079	100%
	2008	4,580	22%	591	3%	142	1%	4,013	19%	2,507	12%	9,024	43%	20,857	100%

SOURCE: City of Cookeville, Department of Planning, May 1999 and August 2008.

TABLE V-12
SUMMARY OF HOUSING UNITS AND CONDITIONS BY PLANNING NEIGHBORHOOD
CITY OF COOKEVILLE
1999 AND 2008

PLANNING NEIGHBORHOOD	YEAR	SINGLE FAMILY					MULTI-FAMILY UNITS	MOBILE HOMES	TOTAL HOUSING UNITS	UNITS FROM ANNEXATION
		SOUND/ VACANT	DETERIORATED/ VACANT	DILAPIDATED/ VACANT	TOTAL VACANT	TOTAL SINGLE FAMILY UNITS				
	1999	712/20	9/2	2/2	24	723	1,060	101	**1,884**	
1	2008	783/15	3/2	0/0	17	803	1,386	91	**2,280**	
CHANGE		**+71/-5**	**-6/0**	**-2/-2**	**-7**	**+80**	**+326**	**-10**	**+396**	**+10**
	1999	216/3	13/0	1/1	4	230	46	131	**407**	
2	2008	246/10	2/1	0/1	12	260	98	138	**496**	
CHANGE		**+30/+7**	**-11/+1**	**-1/0**	**+8**	**+30**	**+52**	**+7**	**+89**	**+14**
	1999	987/18	22/5	3/3	26	1,012	821	21	**1,854**	
3	2008	914/31	16/4	0/0	35	965	1,286	19	**2,270**	
CHANGE		**-73/+13**	**-6/-1**	**-3/-3**	**+9**	**-47**	**+465**	**-2**	**+417**	**+140**
	1999	1,334/6	2/1	3/3	10	1,339	550	0	**1,889**	
4	2008	1,508/17	2/1	0/1	19	1,529	702	1	**2,232**	
CHANGE		**+174/+11**	**0/0**	**-3/-2**	**+9**	**+190**	**+152**	**+1**	**+343**	**+13**
	1999	1,157/5	10/3	4/4	12	1,171	747	136	**2,054**	
5	2008	1,463/23	13/4	0/2	29	1,505	985	101	**2,591**	
CHANGE		**+306/+18**	**+3/+1**	**-4/-2**	**+17**	**+334**	**+238**	**-35**	**+537**	**+365**
	1999	667/2	1/0	2/2	4	670	337	24	**1,031**	
6	2008	1,019/5	5/2	0/1	8	1,032	528	22	**1,582**	
CHANGE		**+352/+3**	**+4/+2**	**-2/-1**	**+4**	**+362**	**+191**	**-2**	**+551**	**+318**
	1999	421/0	7/0	0/0	0	428	122	26	**576**	
7	2008	683/7	8/3	0/0	10	701	133	51	**885**	
CHANGE		**+262/+7**	**+1/+3**	**0/0**	**+10**	**+273**	**+11**	**+25**	**+309**	**+250**
	1999	226/2	1/1	1/1	4	228	98	16	**342**	
8	2008	452/12	5/1	0/2	15	472	144	17	**633**	
CHANGE		**+226/+10**	**+4/0**	**-1/+1**	**+11**	**+244**	**+46**	**+1**	**+291**	**+241**
	1999	27/0	0/0	0/0	0	27	5	0	**32**	
9	2008	21/3	0/0	0/0	3	24	10	0	**34**	
CHANGE		**-6/+3**	**0/0**	**0/0**	**+3**	**-3**	**+5**	**0**	**+2**	**NA**
	1999	**5,747/56**	**65/12**	**16/16**	**84**	**5,828**	**3,786**	**455**	**10,069**	**NA**
TOTALS	**2008**	**7,089/123**	**54/18**	**0/7**	**148**	**7,291**	**5,272**	**440**	**13,003**	**1,351**
CHANGE		**+1,342/+67**	**-11/+6**	**-16/-9**	**+64**	**+1,463**	**+1,486**	**-15**	**+2,934**	

SOURCE: City of Cookeville, Department of Planning, May 1999 and August 2008.

TABLE V-13
BUILDING PERMITS BY PLANNING NEIGHBORHOODS
CITY OF COOKEVILLE
1999 THROUGH 2007

PLANNING NEIGHBORHOOD	SINGLE FAMILY RESIDENTIAL PERMITS ISSUED	TOTAL UNITS	MULTI-FAMILY RESIDENTIAL PERMITS ISSUED	TOTAL UNITS	NON-RESIDENTIAL PERMITS ISSUED	TOTAL UNITS	TOTAL PERMITS ISSUED
1	106	106	61	234	4	4	171
2	34	34	12	52	13	15	59
3	73	73	50	266	25	28	148
4	208	208	12	31	7	12	227
5	119	119	33	152	95	168	247
6	152	152	21	101	46	88	219
7	59	59	3	6	23	31	85
8	91	91	8	35	20	20	119
9	0	0	0	0	1	1	1
TOTALS	842	842	200	877	234	367	1,276

SOURCE: City of Cookeville, Department of Codes, August 2008.

Most of the growth in Neighborhood One is not a result of annexation as only approximately seven (7) acres of property have been added to the neighborhood since 1999. The Shipley Road annexation in 2000 included four (4) sound single family structures, six (6) mobile homes and one (1) private service. The 2006 Gaw-Dodson Branch Road annexation included only two (2) private services.

For the time period from 1999 through 2007 a total of 171 permits for new construction were issued by the Cookeville Codes Department in Neighborhood One. The largest number of permits issued in this neighborhood was for single family residential dwellings with 106 permits. A total of 61 permits for 234 multi-family residential units were issued during the period. In this neighborhood only four (4) permits were issued for non-residential construction.

Neighborhood Two

Neighborhood Two is identified as the northeastern sector of Cookeville generally bounded by North Washington Avenue and Freehill Road to the west and the Nashville and Eastern Railroad to the south. This neighborhood consists of approximately 819 acres and is primarily non-residential in character. Approximately 24 percent of the land area in Neighborhood Two is vacant and an estimated nine (9) percent is used for transportation purposes.

Within Neighborhood Two approximately 18 percent of the land area or 153 acres is occupied by residential uses. This includes an estimated 123 acres for single family structures, 11 acres for multi-family housing, and 19 acres for mobile homes. There are 260 single family structures located in Neighborhood Two, which is an increase of 30 units since 1999. From 1999 to 2008 the number of vacant single family structures increased from four (4) to 12 and the number of such structures in less than sound condition decreased from 15 to four (4). In this neighborhood there are 98 multi-family dwelling units, which is an increase of 52 units since 1999. It also contains 131 mobile homes, which is an increase of seven (7) since 1999.

Non-residential land uses in Neighborhood Two occupy approximately 49 percent of the land area or 401 acres. As a percentage of total land in this neighborhood non-residential uses have increased by four (4) percent since 1999. The bulk of this acreage is occupied by 37 industrial land uses with the largest concentration located in the industrial park off Fisk Road. Since 1999 industrial uses have increased by seven (7). In this neighborhood there are 98 commercial/private service uses, which are primarily located along East 15th Street and North Washington Avenue. Two (2) public service land uses are located in this neighborhood, which includes Cookeville Senior High School. This neighborhood also has four (4) utility land uses which includes the city's gas distribution center, the city's water department warehouse, and an electrical substation. Seven (7) churches are in this neighborhood. The only cultural/recreational land use located in this neighborhood is the Putnam County Soccer Complex adjacent to the High School.

As a result of annexation since 1999 the land area within Neighborhood 2 has increased by 139 acres. The 85 acres of territory in the 2003 Putnam County-North Washington Avenue annexation consisted of property owned by the county around Cookeville High School. The Putnam County Soccer Complex was constructed on this property following annexation. In 2006 the Shag Rag Road Area annexation added 54 acres to this neighborhood. While the majority of the acreage in this annexation was vacant land, the area also included 14 private service uses and 14 single family residential units.

In Neighborhood Two a total of 59 permits were issued from 1999 through 2007. Single family residential construction accounted for 34 of the permits and permits for 12 multi-family projects with 52 units were issued. A total 13 permits for non-residential construction were approved.

Neighborhood Three

Neighborhood Three is identified as the sector of Cookeville generally bounded by West 12th Street and Benton Young Road to the north, by North Washington Avenue to the east, and by the Nashville and Eastern Railroad to the south. This neighborhood consists of approximately 1,948 acres. The character of this area is diversified with significant residential development and large concentrations of commercial/private service and public service land uses. It is also the location of two (2) of the municipality's largest employers, the Cookeville Regional Medical Center and Tennessee Technological University.

Within Neighborhood Three approximately 34 percent of the land area or 665 acres is occupied by residential uses. This includes an estimated 536 acres for single family structures, 125 acres for multi-family housing, and four (4) acres for mobile homes. There are 965 single family structures located in this neighborhood of which 35 are vacant and 16 are in less than sound condition. Other than the downtown area in Neighborhood Nine, Neighborhood Three is the only neighborhood to experience a reduction in single-family dwellings, decreasing by 47 units. In this neighborhood there are 1,286 multi-family dwelling units, which include a 129-unit public housing complex and 12 fraternity houses. Since 1999 the total number of multi-family dwelling units has increased by 465 units. The neighborhood also includes 19 mobile homes of which 13 are located within one (1) mobile home park. Since 1999 residential land use has declined as percentage of total land area in this neighborhood by four (4) percent. The majority of this decline occurred with single family residential use which decreased by 79 acres. Multi-family residential use has increased by 44 acres since 1999.

Non-residential land uses in Neighborhood Three occupy approximately 28 percent of the land area or 534 acres, which is an increase of just nine (9) acres since 1999. A large percentage of this non-residential land use is utilized by 11 public service land uses of which the Tennessee Tech Campus occupies the most acreage. Other significant public service land uses in this area include the Cookeville Regional Medical Center, Prescott Central Middle School and Sycamore Elementary School. There are 393 commercial/private service uses located in Neighborhood Three, which is an increase of 64 such uses since 1999. Commercial uses are primarily located along Spring and Broad Streets and along Willow Avenue. Many of the private services in this neighborhood are medical related and are located in the vicinity of the medical center. One of the larger private service land users at approximately 56 acres is an auto salvage yard located along Highway 70N. Three (3) cultural/recreational land uses are located in this neighborhood including the West End and Franklin Avenue Parks, and the Depot Museum. There are five (5) industrial land uses located within this neighborhood with the largest land user being a vacant facility located off Mill Avenue. Approximately 495 acres or 25 percent of the land area in Neighborhood Three is vacant. This is an increase of 113 acres of vacant land since 1999.

The land area in Neighborhood Three has increased by 94 acres as the result of three (3) annexations since 1999. The 2002 Matheney-Cora Road Area annexation consisted of 35 acres, the O'Neill-West 12th Street Area annexation consisted of 11 acres, and the Presley-West 12th Street Area annexation consisted of 48 acres. These annexations significantly contributed to the increases in multi-family use (16 of the 44 acre increase), and in vacant land (69 acres) in this neighborhood.

Building permit records indicate that 148 permits for new construction were issued for Neighborhood Three from 1999 through 2007. The majority, a total of 73 permits, were issued for single family residential development. Permits for 50 multi-family residential construction involving 266 units were approved. There were 25 permits issued for non-residential developments.

Neighborhood Four

Neighborhood Four is identified as the sector of Cookeville generally bounded by the Nashville and Eastern Railroad to the north, by North Washington Avenue to the west, and by East Broad Street to the south. This neighborhood consists of approximately 1,933 acres. The area is primarily residential in character.

Within Neighborhood Four approximately 47 percent of the land area or 899 acres is occupied by residential uses. Since 1999 land used for residential purposes has increased by 54 acres. The residential acreage includes an estimated 847 acres for single family structures and 49 acres for multi-family housing. There are 1,529 single family structures located in Neighborhood Four of which only 19 are vacant and only four (4) are in less than sound condition. In this neighborhood there are 702 multi-family dwelling units and one (1) mobile home. Since 1999 the number of dwelling units in this area has increased by 343 units consisting of 190 single family units, 152 multi-family units and one (1) mobile home.

Non-residential land uses in Neighborhood Four occupy approximately 13 percent of the land area or 252 acres. This is an increase of 14 acres since 1999. There are 78 commercial/private service uses located in Neighborhood Four, which is an increase of 19 such uses since 1999. Most of this commercial/private service land use is situated in strip commercial developments along East 10th Street and within a small area on North Washington Avenue. Only one (1) public service land use, Northeast Elementary School is located in this neighborhood. The number of churches has increased from four (4) to seven (7) since 1999. Three cultural/recreational land uses, including Cinderella Park and the Cookeville Golf Club, are located in Neighborhood Four. There are two (2) industrial land uses situated within this neighborhood, the largest being the Russell Stover Candies facility located off Chocolate Drive. It should be noted that this industry has greatly reduced its operation since 1999 and the facility is now mostly unused. Approximately 490 acres or 25 percent of the land area in Neighborhood Three is vacant. This is an increase of 53 acres of vacant land since 1999.

Since 1999 the land area within this neighborhood has increased by 147 acres as the result of annexation. The Buck Mountain Road/Dry Valley Road Area annexation in 2000 added 134 acres and ten (10) single family residential structures to this neighborhood. This 2000 annexation also increased the amount of vacant land in this neighborhood by 106 acres. In 2006, 13 acres occupied by two (2) single family residential units, one (1) mobile home, and one (1) private service were added to Neighborhood Four through the Shag Rag Road Area annexation.

A total of 227 building permits for new construction were approved for Neighborhood Four from 1999 through 2007. More permits for single family construction, 208, were approved for this neighborhood than any other neighborhood. A total of 12 permits for multi-family development, involving 31 units, were approved. Only seven (7) permits for non-residential projects were approved for this neighborhood.

Neighborhood Five

Neighborhood Five is the largest of the planning neighborhoods consisting of approximately 4,578 acres. It is identified as the sector of Cookeville generally bounded by the Nashville and Eastern Railroad to the north, by South Jefferson Avenue to the east, and by Interstate 40 to the south. The character of this neighborhood is diversified with significant residential development and large concentrations of commercial/private service and public service land uses.

Within Neighborhood Five approximately 27 percent of the land area or 1,204 acres is occupied by residential uses. This includes an estimated 993 acres for single family structures, 169 acres for multi-family housing, and 42 acres for mobile homes. Since 1999 land used for residential purposes has increased by 380 acres. Total housing units in Neighborhood Five have increased from 2,054 to 2,591. There are 1,505 single family structures of which 29 are vacant and 15 are in less than sound condition. There are 985 multi-family dwelling units, which includes 307 units located in five public housing complexes. Since 1999, multi-family dwelling units increased by 238 units with only ten (10) of these units added from annexation. The neighborhood also includes 101 mobile homes of which 48 are located within three (3) mobile home parks. The total number of mobile homes in this neighborhood has declined by 35 units since 1999.

Non-residential land uses in Neighborhood Five occupy approximately 25 percent of the land area or 1,156 acres. While this is an increase of 131 acres since 1999, non-residential uses declined as percent of the land area by eight (8) percent. There are 670 commercial/private service uses located in Neighborhood Five, which is an increase of 232 such uses since 1999. Most of this commercial/private service land use is situated in strip commercial developments located along South Jefferson and South Willow Avenues, Interstate Drive, and West Jackson and Spring Streets. There are 28 public service land uses located in this neighborhood which includes Park View and Cane Creek Elementary Schools, and the Upper Cumberland Regional Library. Neighborhood Five contains 21 churches and nine (9) cultural/recreational land uses, including Cane Creek Park, Cane Creek Sportsplex, Park View Park and Pool, Ensor Sink Park and the Putnam County Fairgrounds. There are 15 industrial land uses situated within this neighborhood. Most of these industrial land uses are concentrated along the N & E Railroad and along Interstate and Foreman Drives. Approximately 38 percent of the total land area in Neighborhood Five is vacant, increasing from 30 percent since 1999, and an estimated 10 percent is used for transportation purposes.

In 2002 the land area within this neighborhood increased by 1,403 acres as the result of the West Cookeville/Interstate 40 annexation. This annexation added 357 acres of residential property and 365 dwelling units to this neighborhood. It also increased the amount of vacant land in this neighborhood by 933 acres.

Neighborhood Five, with 247 building permits for new construction, was the neighborhood with the most permits issued from 1999 through 2007. A total of 119 permits for single family dwellings and 33 permits for multi-family residential projects consisting of 152 units were approved. With 95 permits issued, this neighborhood has the largest number of permits for non-residential construction from 1999 to 2007.

Neighborhood Six

Neighborhood Six consists of approximately 3,697 acres. It is identified as the eastern middle sector of Cookeville generally bounded by East Broad Street to the north, by South Jefferson Avenue to the west, and by Interstate 40 to the south. Neighborhood Six can be characterized as mixed use with significant commercial/private service and public service uses located along the major thoroughfares and considerable residential development along local streets.

Within Neighborhood Six approximately 20 percent of the total land area or 715 acres is occupied by residential uses. This includes an estimated 649 acres for single family structures, 61 acres for multi-family housing, and five (5) acres for mobile homes. Since 1999 land used for residential purposes has increased by 242 acres but decreased by two (2) percent as a percentage of the total land area. Total housing units in Neighborhood Six have increased from 1,031 to 1,582. There are 1,032 single family structures located in this neighborhood of which only eight (8) are vacant and only four (4) are in less than sound condition. This neighborhood experienced the largest increase in single family units since 1999 increasing by 362 units. Approximately 71 percent of this increase, or 257 units, resulted from annexation. In this neighborhood there are 528 multi-family dwelling units, which is an increase of 191 units since 1999. Approximately 30 percent of this increase, or 58 units, resulted from annexation. The area also contains 22 mobile homes of which 18 are located within one (1) mobile home park.

Non-residential land uses in Neighborhood Six occupy approximately 20 percent of the land area or 751 acres. While this is an increase of 219 acres since 1999, non-residential uses declined as percent of the land area by five (5) percent. There are 288 commercial/private service uses located in Neighborhood Six, which is an increase of 80 such uses since 1999. Most of this commercial/private service land use is situated in strip commercial developments along South Jefferson Avenue, Neal Street East, and East Spring Street. There are 38 public service land uses located in this neighborhood which includes Capshaw Elementary School, Avery Trace Middle School, Nashville Tech-Cookeville Center, and several state and county facilities. The area includes eight (8) churches. Five (5) cultural/recreational land uses, including the Putnam County Community Center, Capshaw Park, Belle Acres Golf Course and the Putnam County YMCA, are located in Neighborhood Six. There are seven (7) industrial land uses situated within this neighborhood, the largest of which is a rock quarry located off East Spring Street. An estimated 1,749 acres or approximately 47 percent of the land area in this neighborhood is vacant. This is an increase of 984 acres of vacant land since 1999 and can be attributed to annexation. Approximately 13 percent of the total land area, or 482 acres, is used for transportation purposes.

Since 1999 the land area within this neighborhood has increased by 1,575 acres as the result of annexation. The Buck Mountain Road/Dry Valley Road Area annexation in 2000 added 454 acres and 31 dwelling units to this neighborhood. This 2000 annexation also increased the amount of vacant land in this neighborhood by 341 acres. In 2001, 1,121 acres were added to Neighborhood Six through the East Highway 70N/Interstate 40 annexation. This annexation included 287 dwelling units and 31 commercial/private service uses. It also increased the amount of vacant land by 719 acres.

Records indicate that 219 permits for new construction were issued for Neighborhood Six from 1999 through 2007. The majority of the permits issued, 152, were for single family residential development. Permits for 21 multi-family residential construction involving 101 units were approved. There were 46 permits issued for non-residential developments.

Neighborhood Seven

Neighborhood Seven is identified as the southwestern sector of Cookeville generally bounded by Interstate 40 to the north and by South Jefferson Avenue to the east. It consists of approximately 3,570 acres. This neighborhood is primarily residential in character in the central portion, commercial on the eastern perimeter, and industrial on the western perimeter.

Within Neighborhood Seven approximately 18 percent of the land area or 656 acres is occupied by residential uses. This includes an estimated 598 acres for single family structures, 20 acres for multi-family housing, and 38 acres for mobile homes. Since 1999 land used for residential purposes has increased by 259 acres but decreased by six (6) percent as a percentage of the total land area. Total housing units in Neighborhood Seven have increased from 576 to 885. Approximately 81 percent of this increase, or 250 housing units, can be attributed to annexation. There are 683 single family structures located in Neighborhood Seven, of which ten (10) are vacant and 11 are in less than sound condition. In this neighborhood there are 133 multi-family dwelling units, which is an increase of only 11 units since 1999. Primarily due to annexation since 1999 the number of mobile homes in this neighborhood has increased from 26 to 51.

Non-residential land uses in Neighborhood Seven occupy 334 acres. While this is an increase of 35 acres since 1999, non-residential uses declined as percent of the land area from 19 percent to ten (10) percent. There are 82 commercial/private service uses located in Neighborhood Seven, which is an increase of 54 such uses since 1999. This commercial/private service land use is concentrated along South Willow and South Jefferson Avenues. There are six (6) public service land uses located in this neighborhood which includes the Fire Department's South Substation and the National Guard Armory. Only one (1) cultural/recreational land use is located in Neighborhood Seven. Three (3) utility land uses, including the Cookeville Electric Department on West Davis Road and two (2) water tanks, are located in this neighborhood. There are 13 industrial land uses, which are concentrated along South Willow Avenue and Gould Drive. The Norwalk industrial site is currently vacant. An estimated 2,227 acres or approximately 62 percent of the land area in this neighborhood is vacant. This neighborhood has the highest percentage of vacant land. As a result of annexations since 1999, 1,546 acres of vacant land has been added to Neighborhood Seven. Approximately ten (10) percent of the total land area, or 353 acres, is used for transportation purposes.

The land area within Neighborhood Seven has increased more than any other area since 1999, enlarging by 1,951 acres as the result of four (4) annexations. The Old Sparta Road/Horace Lewis Road Area annexation in 2000 added approximately 32 acres. In 2002, the West Cookeville/Interstate 40 Area annexation increased the neighborhood land area by 979 acres. This annexation included 853 acres of vacant land. Two (2) contiguous annexations in 2007, the Rebecca Place/Bunker Hill Road and the Bunker Hill Road/Lovelady Road areas, added 940 acres of land area to this neighborhood. Both of these areas were almost entirely residential in character and combined included 217 dwelling units.

In Neighborhood Seven a total of 85 permits for new construction were issued from 1999 through 2007. Single family residential construction accounted for 59 of the permits and permits for three (3) multi-family projects with six (6) units were issued. A total 23 permits for non-residential construction were approved.

Neighborhood Eight

Neighborhood Eight is identified as the southeastern sector of Cookeville generally bounded by Interstate 40 to the north and by South Jefferson Avenue to the west. It consists of approximately 3,127 acres. This neighborhood can be characterized as mixed use with commercial and industrial land uses along major thoroughfares and primarily low density residential development along local streets.

Within Neighborhood Eight approximately 14 percent of the land area or 443 acres is occupied by residential uses. This includes an estimated 388 acres for single family structures, 45 acres for multi-family housing, and ten (10) acres for mobile homes. Since 1999 land used for residential purposes has increased by 198 acres and by two (2) percent as a percentage of the total land area. Total housing units in Neighborhood Eight have increased by 291 units. Approximately 83 percent of this increase, or 241 housing units, can be attributed to annexation. There are 472 single family structures located in Neighborhood Eight of which 15 are vacant and eight (8) are in less than sound condition. In this neighborhood there are 144 multi-family dwelling units, which is an increase of 46 units since 1999. It also contains 17 mobile homes of which 15 are located within one (1) mobile home park.

Non-residential land uses in Neighborhood Eight occupy approximately 14 percent of the land area or 437 acres. While this is an increase of 142 acres since 1999, non-residential uses declined as percent of the land area from 18 percent to 14 percent. There are 93 commercial/private service uses located in Neighborhood Eight, which is an increase of 49 such uses since 1999. Most of this commercial/private service land use is situated along South Jefferson Avenue and off Highway 111. Seven (7) public service land uses are located in this neighborhood which includes the Tennessee Department of Transportation Regional Office and the Solid Waste Transfer Station. There is one (1) cultural/recreational land use located in Neighborhood Eight. There are 14 industrial land uses situated within this neighborhood, which is an increase of eight (8) since 1999. The largest of the industrial uses are Oreck, Dacco, and Fleetguard all of which are located off Highway 111. An estimated 1,838 acres or approximately 59 percent of the land area in this neighborhood is vacant. This neighborhood has the second highest percentage of vacant land. As a result of annexations since 1999, 1,038 acres of vacant land has been added to Neighborhood Eight. Approximately 13 percent of the total land area, or 409 acres, is used for transportation purposes.

Since 1999 the land area within this neighborhood has increased by 1,462 acres as the result of annexation. The Old Sparta Road/Horace Lewis Road Area and Old Bridge Road/Falling Water River Area annexations in 2000 added over 1,300 acres. Combined these two annexations included 240 residential units. In 2001 approximately 93 acres of land area were added with the East Highway 70N/Interstate 40 Area annexation. The Hall/Salem Road Area annexation in 2004 consisted of 67 acres.

A total of 119 building permits for new construction were approved for Neighborhood Eight from 1999 through 2007. The majority, 91 permits, were approved for single family construction. Permits were issued for eight (8) multi-family projects, involving 35 units. There were 20 permits for non-residential projects approved for this neighborhood.

Neighborhood Nine

Neighborhood Nine is identified as the downtown sector of Cookeville which is generally bounded by South Cedar Avenue on the west, Maple Avenue on the east, East 1st and Freeze Streets on the north, and Spring Street on the south. It consists of 96 acres and because it is land locked the land area has not increased since 1999. This neighborhood is primarily commercial/private service in character. It is also the principal location in the city for public service land uses. Permit records from 1999 to 2007 indicate that only one (1) building permit was issued for this neighborhood.

Within Neighborhood Nine approximately 12 percent of the land area or 11 acres is occupied by residential uses. Most of this residential acreage is occupied by single family residential structures. There are 24 single family structures located in Neighborhood Nine of which three (3) are vacant. The majority of these residential structures are located along East First and Freeze Streets. In this neighborhood there are ten (10) multi-family dwelling units, which is an increase of five (5) units since 1999. Most of these units have developed through adaptive reuse of upper floors in existing commercial structures. There are no mobile homes located in this neighborhood.

Non-residential land uses in Neighborhood Nine occupy approximately 55 percent of the land area or 53 acres. There are 196 commercial/private service uses located in Neighborhood Nine, which is an increase of 15 such uses since 1999. This commercial/private service land use is situated throughout the neighborhood. There are 16 public service land uses located in this neighborhood which includes the Cookeville Municipal Building and Fire Station, the Putnam County Courthouse, the Putnam County Justice Center, and the U. S. Courthouse and Post Office. The neighborhood includes nine (9) churches. There are four (4) cultural/recreational land uses, including the Cookeville Drama Center and the Putnam County Library, located in Neighborhood Nine. Four (4) utility land uses, including local telephone and cable television offices, are located in this neighborhood. There are no industrial land uses situated within this neighborhood. Only six (6) acres or approximately six (6) percent of the land area in this neighborhood is vacant and an estimated 27 percent is used for transportation purposes.

Findings

Approximately 26 percent of the total land area within the City of Cookeville is occupied by residential uses, which is a reduction from 30 percent in 1999. Planning Neighborhoods One, Four, and Three, at 52, 47 and 34 percent respectively, have the highest percentages of their land area occupied by residential uses. These three (3) neighborhoods also have the highest percentage of their land area utilized for single-family residential purposes. Neighborhoods One, Three, and Five, at ten (10), six (6) and four (4) percent respectively, have the highest percentage of their land area utilized for multi-family purposes. The neighborhoods with the highest percentages of their land area occupied by mobile homes are Neighborhoods One and Two.

Total housing units within the municipality have increased by 2,934 units since 1999. Approximately 46 percent or 1,351 of these units were added through annexation. Neighborhood One experienced the largest increase in housing units not due to annexation with an increase of 386 units. Of this increase 320 units were multi-family units. Other neighborhoods experiencing significant residential development not due to annexation since 1999 were Neighborhood Four with 330 units, Neighborhood Three with 277 units and Neighborhood Six with 233 units.

An estimated 19 percent of the total land area within the municipality is utilized for non-residential purposes, which is a reduction from 24 percent in 1999. Neighborhoods Nine and Two, at 55 and 49 percent respectively, have the highest percentage of their land area occupied by non-residential uses. Three (3) other neighborhoods, Neighborhoods Three, Five, and Six, have higher percentages of their total land area used for non-residential purposes than the city as a whole.

As a result of annexation since 1999, vacant land as a percent total land has increased from 32 to 43 percent in the city. Neighborhoods Seven, Eight and Six, at 62, 59 and 47 percent respectively, have the highest percentage of vacant land. It is anticipated that these neighborhoods will undergo the greatest amount of change over the 20 year planning period. Only one (1) neighborhood, Neighborhood One, experienced a decline in acreage of vacant land, decreasing from 323 acres to 295 acres.

Historical building permit data indicates that Neighborhoods Five, Four and Six, in that order, experienced the greatest amount of development from 1999 through 2007. These neighborhoods also had the largest number of single family residential permits issued. Since 1999 the most significant multi-family construction took place in Neighborhoods Three and One. Neighborhood Five, with 95 permits issued, had the largest number of non-residential permits issued.

SUMMARY OF FINDINGS

The Cookeville land use pattern is similar to many municipalities, with the oldest and most dense development occurring in the immediate vicinity of the downtown area and the more recent developments branching out from the downtown. Approximately 11,833 acres, or 57 percent, of the 20,857 acres within the municipality are developed. Residential land uses occupy the largest percentage of the developed land, followed by streets and right-of-ways, public/religious/cultural/recreational uses, and commercial/private service uses.

Since 1999, land used for residential purposes in the municipality has expanded by 1,135 acres or approximately 26 percent. The majority of this increase is the direct result of annexation. Since 1999 the total number of housing units has increased by nearly 3,000 with approximately 46 percent of the increase attributed to annexation. In the last decade single family housing units increased by 1,463, with 1,046 units, or 72 percent, added as a result of annexation. Over the same period multi-family housing units increased by 1,486 units, with only 227 units, or 15 percent, added as a result of annexation. With the substantial increase in multi-family units, the gap found in the 2000 Census between owner occupied housing (45.5 percent) and renter occupied housing (54.5 percent) is likely to have widened. The number of public housing units has remained stable during the last ten (10) years while the number of mobile home units has declined slightly despite the annexation of several units.

The municipality has experienced substantial growth in the last decade in the non-residential land use categories. Most of this growth is not the result of annexation. Land used for commercial/private service uses has increased the most rising by nearly 400 acres or approximately 34 percent. Land used for public services, religious, cultural and recreational uses also increased with expansions of public medical and educational facilities leading the way. Industrial land uses grew by only 57 acres; however, nearly 400 acres have been acquired by the city and the county for the purpose of industrial development.

The demand for uses in all land use categories appears to remain strong. This demand is reflected in the low vacancy rates of structures in each land use category. These low vacancy rates have resulted in good maintenance of most structures, which has in turn resulted in the absence of areas of substantial blight in Cookeville. Demand for a diversity of land uses in the residential category is indicated by the low number of vacant single-family homes and in the high prices of homes and lots in the municipality. It is further indicated in the substantial amount of multi-family residential development in both the municipality and the projected growth area. Demand for land uses in the non-residential land use categories, especially commercial and private service uses, is reflected in the low vacancy rates of existing structures, the expansion of existing structures, and the significant development of these land uses.

A major finding from the 1999 Cookeville Comprehensive Future Land Use Plan was the lack of land available for future development. Since 1999 the municipality has increased its total land area by over 6,800 acres. As a result of this annexation effort, the amount of vacant land available for future development has been nearly doubled in the past decade. Unfortunately most of this vacant land does not yet have the necessary infrastructure available. With more than 50 percent of these vacant lands without sewer currently zoned for very low density residential development, meeting the demand for future development will be difficult without rezoning.

Three (3) main alternatives are available to the City of Cookeville to meet the future demand for land in each of the land use categories. First, it is essential that the necessary infrastructure, which primarily consists of public sewer, be provided to the vacant developable lands and that these lands will be appropriately zoned to accommodate future land use needs. Second, annexation of additional land within the projected growth area will be required during the planning period. Lastly, redevelopment and reuse of existing properties is expected and should be encouraged.

CHAPTER VI

TRANSPORTATION ANALYSIS AND PLAN

INTRODUCTION

Land use and transportation are integrally linked, each affecting the other. Streets and other circulation components shape land development, while the types and intensities of land uses impact transportation facilities and travel patterns. To develop an effective comprehensive plan for future development the interrelationship between land use and transportation must be recognized.

The transportation network forms the framework upon which a community is built, and adequate traffic circulation is a prerequisite to economic activity and general community development. In this chapter an analysis of the existing transportation structure is completed for the purpose of developing a revised plan for the future development of a comprehensive circulation system in the municipality and its urban growth boundary. While a primary objective of this element is the development of an updated Major Street Plan, it addresses all transportation modes, including streets and highways, transit, aviation, rails, ports, and non-motorized circulation.

Companion Planning Documents

Since the adoption of the Comprehensive Plan in 1999 a number of important planning documents relative to transportation in Cookeville have been completed. These plans and reports, which serve as supplements to this plan and are referenced throughout, include the following:

- The first document is the ***2003 Major Route Transportation Plan, Cookeville, Tennessee*** prepared for the City of Cookeville by Kimley-Horn & Associates, Inc. In this 25-year Strategic Transportation Plan the major thoroughfares of the municipality were analyzed and priorities for improvements to the major streets were established.

- The ***2003 Cookeville Citizen Survey***, completed by the Cookeville Planning Department, is an important ancillary document. This citywide survey was intended to obtain public input on numerous issues including street conditions, parking, traffic congestion, and pedestrian circulation.

- A third supplementary plan is the ***Pedestrian and Bicycle Circulation Plan, Cookeville, Tennessee,*** prepared by the Cookeville Greenways, Bike Trails, and Pedestrian Circulation Task Force and the Cookeville Planning Department in 2003. This document, which covers a planning period through 2020, provides a guide for development of a comprehensive transportation network for pedestrians and non-motorized vehicles throughout the municipality and its unincorporated urban growth boundary.

- The ***City of Cookeville Downtown Parking Study***, prepared by the Cookeville Planning Department in 2004, is another companion document. This study provided a detailed inventory and analysis of parking in the downtown area.

- One other companion study is the ***Transit Feasibility Study for the City of Cookeville***, prepared by TranSystems Corporation on behalf of the Tennessee Department of Transportation in 2005. The purpose of this study was to analyze the need for transit services in the Cookeville area.

2010 Citizen Survey

The results of the 2010 Cookeville Citizen Survey indicated that transportation issues were very important to many Cookeville residents. Nearly 80 percent of the respondents with an opinion in the survey indicated that improvement of traffic flow and circulation routes would be an important issue to them in the next ten (10) years, the highest of any rated issue. Five (5) of the six (6) community characteristics most often rated as fair or poor were transportation related: downtown parking (80 percent), traffic circulation (77 percent), traffic volume (74 percent), provision of sidewalks (64 percent) and condition of streets (52 percent). Similarly the most frequently mentioned thing least liked about living in Cookeville by respondents with an opinion was traffic and traffic related issues.

Recent Events Affecting the Transportation System

Since the adoption of the Comprehensive Plan in 1999 a number of important events have occurred affecting the transportation system in and around the City of Cookeville. These events include the following:

- Amendments to Land Use Regulations. Amendments to the City of Cookeville land use regulations since 1999 have significantly affected the provision of pedestrian and non-vehicular circulation facilities. In April of 2000, revised Cookeville Subdivision Regulations were adopted. The revised regulations included new provisions requiring the installation of sidewalks or an alternate means of non-vehicular movement in all new subdivision developments involving new street construction and with access to public sanitary sewer. In December of 2001, a revised Cookeville Zoning Code was adopted. The revised zoning code included provisions requiring the installation of sidewalks along all public streets for all new developments and for expansions of existing developments involving increases in floor areas by 25 percent or more. Individual single-family and two-family residential developments were excluded from this requirement.

- Cancellation of Northern Connector Project. In October of 2003, TDOT announced that it was cancelling plans for the construction of a northern connector route (also referred to as State Route 451) from State Highway 111 to State Highway 56. The estimated $90 million project was to be funded through the Appalachian Regional Commission (ARC) “Corridor J” plan. This route closely followed the northern portion of a circumferential route proposed for the City of Cookeville in numerous thoroughfare studies and plans over many years.

- Establishment of Regional Transportation Planning Organization. In August of 2005 the Tennessee Department of Transportation established a Rural Transportation Planning Organization (RTPO) for the Upper Cumberland area. The region was further divided into sub areas with the City of Cookeville placed in the Center Hill RTPO that serves the counties of Cannon, Cumberland, DeKalb, Putnam, Van Buren, Warren and White. The stated purpose of an RTPO is to provide local rural officials a way to have structured input into the TDOT multi-modal transportation planning process. The Center Hill RTPO consists of an Executive Board made up of local elected officials and a Technical Committee made up of County Road Superintendents, Planners and Engineers from the various cities and counties, and representatives of public transit, aviation, trucking, rail, port authority, and biking/pedestrian. A recommendation from the RTPO is required before TDOT will consider participation in a thoroughfare improvement project.

- Rising Cost of Fuel/Oil. According to the Energy Information Administration, in 1999 the nationwide average cost for a gallon of regular unleaded gas was $1.17 by 2008 the average cost had risen to over $4.00, and leveling at approximately $2.50 in 2009. In 1999 the cost per barrel of oil was approximately $25.00 by 2008 the cost had exceeded $145.00. These increases will have numerous major affects on the future transportation system. The higher cost of gasoline is expected to increase the demand for alternative modes of transportation, including pedestrian and other non-motorized means of circulation. It is also anticipated that the desire for transit service will rise significantly. The higher price of oil, and the consequent higher price of asphalt, has greatly increased the cost for the construction of new streets and that the maintenance of existing streets. Without additional revenue or a decrease in the cost of paving materials, it can be anticipated that the number of new street projects will be reduced and that the overall condition of existing streets will decline.

- Implementation of 1999 Major Street Plan. The Major Street Plan developed as a part of the 1999 Comprehensive Future Land Use Plan identified 30 major street projects. A number of these projects have been completed or partially completed including the following:

Projects Completed

  - (Project No. 5) Widening of South Willow Avenue/I-40 Overpass
  - (Project No. 12) Construction of Veterans Drive (formerly Palkway Drive)
  - (Project No. 13) Realignment and widening of Bunker Hill Road, South Walnut and Mahler Avenues
  - (Project No. 18) Realignment and widening of Crescent Drive and West 9th Street
  - (Project No. 21) Improvements to South Maple Avenue Intersections at Spring and Broad Streets
  - (Project No. 22) Realignment of East 6th Street
  - (Project No. 23) Widening of Old Kentucky Road
  - (Project No. 25) Widening of North Washington Avenue
  - (Project No. 29) Construction of Jeffery Circle Extension (England Drive) to State Highway 111

Projects Partially Completed

  - (Project No. 11) Construction of South Jefferson Avenue to Veterans Drive (formerly Jeffery Circle) Connector (Commerce Avenue)
  - (Project No. 14) Construction of West Jackson Turn Lane

ANALYSIS OF EXISTING TRANSPORTATION SYSTEM

To develop plans for the future circulation system a thorough analysis of the existing transportation facilities must first be completed. A community's street system is the backbone of its transportation system and a detailed assessment of the existing thoroughfare system is required. This examination consists of classifying the thoroughfares, and reviewing and studying traffic circulation patterns, traffic volumes, level of service and traffic capacity, frequency of accidents, major impediments to traffic, major traffic generators, existing street conditions, and parking. In addition to the examination of the thoroughfare system, the analysis of the Cookeville transportation system includes a review of air, rail, and port transportation facilities; mass transit; and pedestrian/non-vehicular circulation facilities.

Classification of Thoroughfares

The numerous thoroughfares that traverse the Cookeville Planning Area vary in their design, purpose and utilization. The primary or intended use of a thoroughfare can range from that of providing access to residential, commercial and other land uses, to providing uninterrupted movement of high-speed traffic. To clarify the usage, a classification system has been established denoting the function served. These classifications, as shown on Illustration VI-1, include (1) interstate/limited access highway, (2) principal/major arterial, (3) minor/secondary arterial, (4) principal/major collector, (5) minor collector, and (6) local road/minor street.

Interstate/Limited Access Highway: Access controlled roadways connecting major population centers devoted to serving high traffic volumes and long distance trips. The only such roadways in the Cookeville Planning Area are Interstate 40 and U.S. Highway 111.

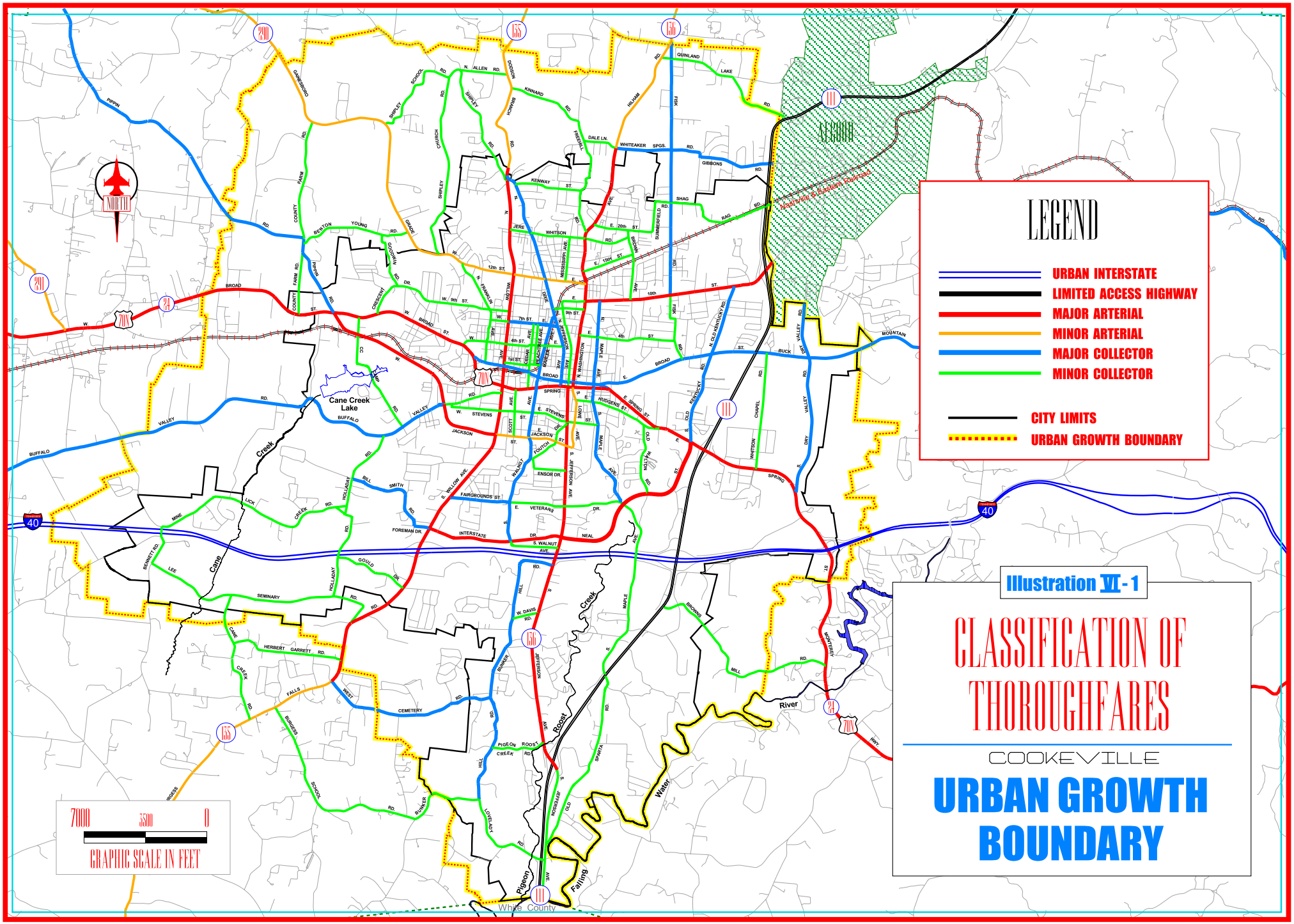
Major/Principal Arterial: Roadways that link population centers, but usually lack controlled access and traffic flow separation. Often these are numbered U.S. Highways or State Primary Highways. U. S. Highway 70N, and State Primary Highways 135 and 136 (Willow and Jefferson-Lowe-Washington Avenues) can be defined as major arterials. Local streets classified as major arterials include East 10th Street, Neal Street, Interstate Drive, and West Jackson Street.

Minor/Secondary Arterial: Roadways that link small population nodes and provide direct access to major traffic generators such as work, shopping, and residential centers. Often these are State Secondary Highways. State Highway 290-West 12th Street, East Jackson Street-South Lowe Avenue, and Hilham Road can be classified as minor arterials.

Major Collector: Roadways that link arterials and distribute traffic onto minor streets. These links also provide direct access to major traffic generators. Major collectors identified in the Cookeville Planning Area include Broad Street-Buck Mountain Road, North Old Kentucky Road, Buffalo Valley Road, Bunker Hill Road, Dixie Avenue, Maple Avenue, East 7th Street, Fairground Street, Fisk Road, West Cemetery Road, and Dry Valley Road.

Minor Collector: Roadways that link and provide access to and between local roads and minor streets. Ideally these are internal to or abutting neighborhoods. There are numerous streets classified as minor collectors in the Cookeville Planning Area. These include: Stevens Street, Old Walton Road, East 6th Street, Hudgens Street, Jere Whitson Road, Holladay Road, and Old Sparta Road.

Minor Street/Local Road: Roadways that function primarily as the means for accessing individual properties. Most often minor streets are intended for limited capacities, carrying traffic for short distances, and serving residential uses. The majority of Cookeville's streets are of this classification.


LEGEND
URBAN INTERSTATE
LIMITED ACCESS HIGHWAY
MAJOR ARTERIAL
MINOR ARTERIAL
MAJOR COLLECTOR
MINOR COLLECTOR
CITY LIMITS
URBAN GROWTH BOUNDARY
Illustration VI - 1
CLASSIFICATION OF THOROUGHFARES
COOKEVILLE
URBAN GROWTH BOUNDARY
7000 3500 0
GRAPHIC SCALE IN FEET
NORTH
Cane Creek Lake
White County

Traffic Circulation Patterns

The traffic circulation pattern in the Cookeville Urban Growth Boundary is greatly influenced by Interstate 40 and to a lesser degree by Highway 111. Interstate 40 bisects the municipality from east to west. Only seven (7) means of access are available to motorists wishing to traverse from the north side of the interstate to the south side. Highway 111 provides circumferential movement on the eastern side of the city. There are no acceptable circumferential routes available on the north, south, and west sides of the city.

The city's internal north-south circulation depends heavily on Willow Avenue and Jefferson-Lowe-Washington Avenues, which feed directly into Interstate 40. Due to high traffic volumes and intense land use development, traffic circulation is, at times, a problem on both of these north-south thoroughfares. Willow Avenue is the only continuous internal north-south route through the city. The Jefferson-Lowe-Washington Avenue route, which requires a turning movement at the intersection of Jefferson and Lowe, also travels through the Central Business District (CBD) which additionally hampers its carrying capacity. Maple Avenue, Old Kentucky Road, Fisk Road, Dixie Avenue, South Walnut Avenue/Mahler Avenue, Dry Valley Road, and Bunker Hill Road/Lovelady Road also provide limited north-south traffic movement within the city. Maple Avenue, Holladay Road, and Mine Lick Creek Road are the only thoroughfares providing north-south circulation across Interstate 40 not involving an interchange.

Internal east-west circulation is very much reliant on the only continuous east-west route through the city, Highway 70N (Spring and Broad Streets). Traffic circulation along this route is hampered due to an inadequate number of travel lanes and due to the route traveling through the CBD. In a more limited capacity East 10th Street, Interstate Drive/Neal Street, 12th Street/Gainesboro Grade, Veterans Drive/Fairground Street, Jackson Street, Stevens Street, and Buffalo Valley Road also provide east-west movement. All other east-west routes involve offsets that prohibit continuity of movement. The lack of continuous east-west routes also hinders traffic circulation in the northern and southern portions of the unincorporated planning area.

The grid pattern of street design dominates the minor/local street layout in the central portion of the municipality. The curvilinear pattern has been primarily utilized where topographic constraints have limited the extension of the grid pattern. In some instances where the curvilinear pattern has been used in residential subdivision development an adequate number of access points have not been provided.

Findings. The traffic circulation pattern of Cookeville Planning Area is greatly influenced by Interstate 40, which bisects the city from the east to the west. A primary hindrance to traffic circulation is insufficient availability of continuous routes through the municipality and the unincorporated planning area. Due to high traffic volumes and intense land use development, circulation problems exist on the city's two primary internal north-south routes. This is particularly apparent at the convergence of these routes at the Interstate 40 interchanges where traffic congestion is common. Traffic circulation is further hampered with the primary internal east-west route and one of the primary north-south routes intersecting in the CBD. In the 2010 city survey, improvement of traffic flow and circulation routes was the issue most often rated as important by respondents with an opinion.

Traffic Volumes

Traffic volumes are an important indication of how well a thoroughfare is functioning. An historical analysis of traffic volumes can be useful in identifying transportation trends and potential problems. In this section an examination of traffic volumes by street classifications is completed. Traffic volumes typically vary by month of the year, day of the week and time of the day. The standard measurement of traffic volumes is by Average Daily Traffic (ADT) counts. The ADT counts utilized in this analysis were compiled by the Tennessee Department of Transportation (TDOT). The locations of these traffic counts are depicted on Illustration VI-2.

Table VI-1 provides TDOT's ADT counts, with numerical and percent change, at ten (10) locations on thoroughfares classified as interstate or limited access highways in or near the municipality for the years 1987, 1997 and 2007. In 2007 the highest average daily traffic in the municipality was on Interstate 40 with volumes ranging from 38,500 vehicles east of Highway 111 to 44,500 vehicles west of Highway 111. The two (2) counts on Interstate 40 between South Willow Avenue and Highway 111 are significantly higher than the counts on Interstate 40 on the eastern and western fringes of the municipality. The additional 3,000 to 7,000 vehicles per day on the two (2) interior counts can most likely be attributed to local traffic utilization of the interstate to traverse the municipality.

TABLE VI-1
TRAFFIC COUNTS, NUMERICAL AND PERCENT CHANGE
INTERSTATE 40 AND STATE HIGHWAY 111
1987, 1997, 2007

TDOT STATION NUMBER	LOCATION DESCRIPTION	1987 COUNT	1997 COUNT	2007 COUNT	1987-1997 CHANGE # / %	1997-2007 CHANGE # / %	1987-2007 CHANGE # / %
65	I-40 west of 111	25000	32776	44507	7,776 / 31 %	11,731 / 36 %	19,507 / 78 %
66	I-40 west of Jefferson	25000	32339	43858	7,339 / 29 %	11,519 / 36 %	18,858 / 75 %
67	I-40 east of Bennett	24700	32720	40991	8,020 / 32 %	8,271 / 25 %	16,291 / 66 %
72	I-40 east U.S. 70N	20599	30372	38654	9,773 / 47 %	8,282 / 27 %	18,055 / 88 %
94	I-40 east of 111	21000	25656	38559	4,656 / 22 %	12,903 / 50 %	17,559 / 84 %
123	SR 111 north of 10th	6670	13474	20114	6,804 / 102 %	6,640 / 49 %	13,444 / 202%
106	SR 111 north of Buck Mt	8470	16196	19942	7,726 / 91 %	3,746 / 23 %	11,472 / 135 %
96	SR 111 north of I-40	9294	12846	16650	3,552 / 38 %	3,804 / 30 %	7,356 / 79 %
135	SR 111 south of Lovelady	8758	11964	16014	3,206 / 37 %	4,050 / 34 %	7,256 / 83 %
97	SR 111 south of I-40	6749	10915	14680	4,166 / 62 %	3,765 / 35 %	7,931 / 118 %

According to TDOT, in 2007, daily traffic volumes on Highway 111 within the municipality ranged from 14,700 vehicles to 20,000 vehicles. The higher volumes were recorded between East Spring and East 10th Streets and north of East 10th Street. As with the higher counts along Interstate 40, these higher volumes can most likely be attributed to local traffic utilization of the limited access highway.

The largest increase in daily traffic volume in the municipality from 1987 to 2007 occurred on Interstate 40 east of Highway 111. Volumes at this location increased by 19,500 vehicles or nearly 80 percent. Daily traffic counts at four (4) other locations along Interstate 40 each increased by a minimum of 16,000 vehicles or at least 66 percent over the 20 year period. Average daily traffic has also significantly increased along Highway 111 during the past 20 years with the largest increase occurring north of East 10th Street. Daily traffic at this location increased by approximately 13,500 vehicles or over 200 percent. Increases of between 7,000 and 11,000 vehicles per day, or between 79 and 135 percent, have been calculated by TDOT at the four (4) other locations along Highway 111.

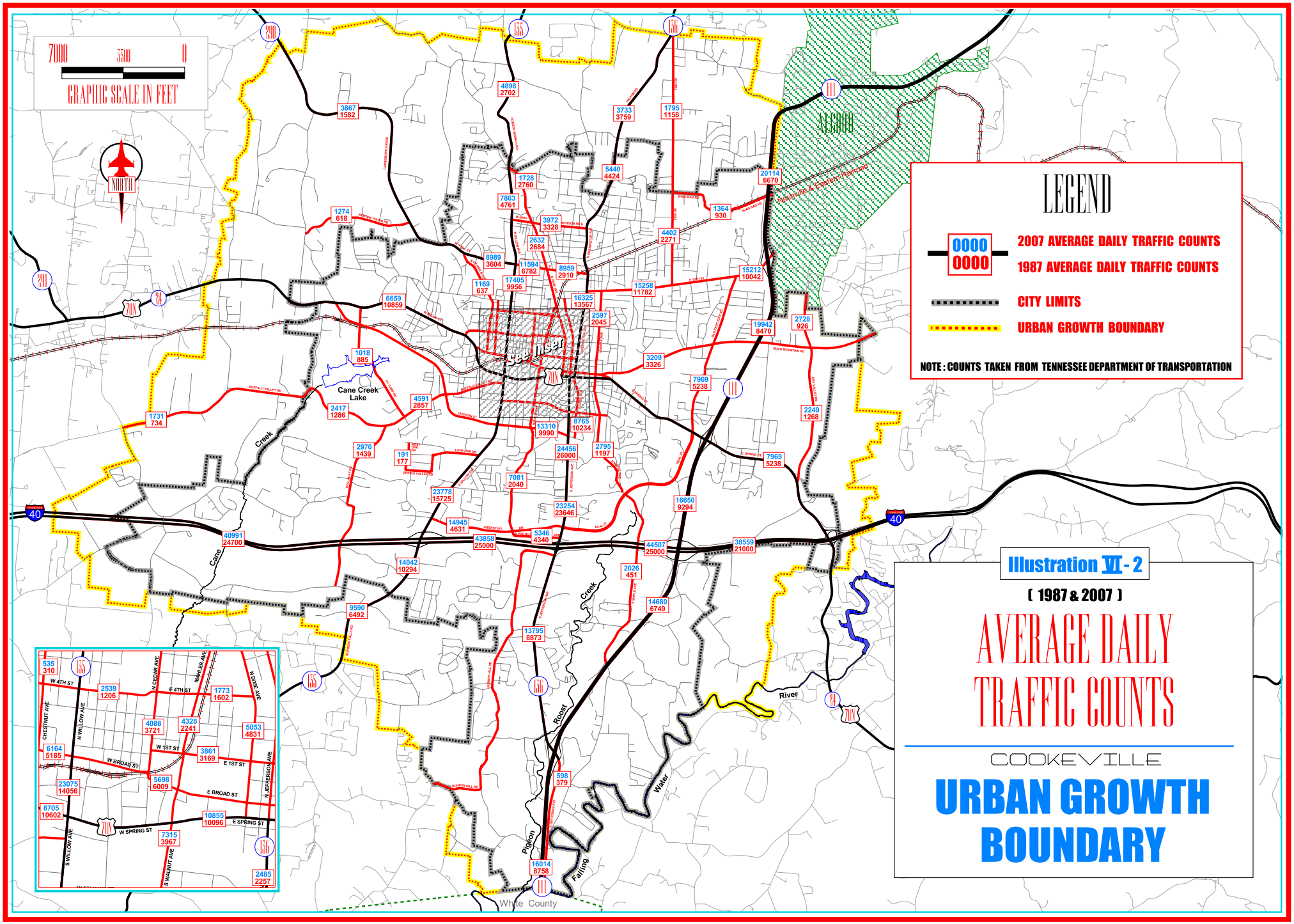

7000 3500 0
GRAPHIC SCALE IN FEET
NORTH
LEGEND
0000
0000
2007 AVERAGE DAILY TRAFFIC COUNTS
1987 AVERAGE DAILY TRAFFIC COUNTS
CITY LIMITS
URBAN GROWTH BOUNDARY
NOTE : COUNTS TAKEN FROM TENNESSEE DEPARTMENT OF TRANSPORTATION
Illustration VI - 2
(1987 & 2007)
AVERAGE DAILY TRAFFIC COUNTS
COOKEVILLE
URBAN GROWTH BOUNDARY
Cane Creek Lake
Cane Creek
Roost Creek
Pigeon Falling Water River
White County
Tennessee & Eastern Railroad
W 4TH ST
E 4TH ST
W 1ST ST
E 1ST ST
W BROAD ST
E BROAD ST
W SPRING ST
E SPRING ST
N CEDAR AVE
MAHLER AVE
N DIXIE AVE
CHESTNUT AVE
N WILLOW AVE
N JEFFERSON AVE
S WILLOW AVE
S WALNUT AVE

Table VI-2 provides TDOT's ADT counts and numerical change at 57 locations on streets classified as arterials and collectors in or near the municipality for the years 1987, 1997 and 2007. The rankings in this table are based on the highest counts for 2007. According to the 2007 TDOT averages, the highest daily traffic volumes in the city on north-south arterials occurred on South Jefferson Avenue at the intersection with West Jackson Street (ADT 24,456) and on South Willow Avenue south of Veterans Drive (ADT 23,778). In 2007 the highest daily traffic volumes in the city on east-west arterials occurred on West Jackson Street west of South Willow Avenue (ADT 16,995) and on East 10th Street west of Fisk Road (ADT 15,258).

The largest increases in traffic volumes from 1987 to 2007 on arterial and collector streets occurred on Interstate Drive east of South Willow Avenue (increase of 10,000 vehicles) and on North Willow Avenue south of West Broad Street (increase of 9,000 vehicles). Other notable increases over the 20-year period occurred on South Willow Avenue just south of Veterans Drive (8,000 vehicles), on North Willow south of West 12th Street (7,400 vehicles) and on East 12th Street west of North Washington Avenue (6,000 vehicles). Increases of over 5,000 vehicles per day during the past 20 years have also occurred on East 10th Street east of Old Kentucky Road, East Spring Street west of Hudgens Street, South Walnut Avenue north of Fairground Street, and South Jefferson Avenue south of Interstate 40.

In the past ten (10) years the largest increases in traffic volumes on arterial and collector streets occurred on West Jackson Street west of South Willow Avenue (9,000 vehicles) and East 10th Street east of Old Kentucky Road (4,000 vehicles). During the last five (5) years the largest increases occurred on West Jackson Street west of South Willow Avenue (4,500 vehicles), South Walnut Avenue north of Fairground Street (3,500 vehicles), and East 12th Street west of North Washington Avenue (2,800 vehicles).

During the past 20 years daily traffic volumes have actually declined on a number of streets. The largest decline (4,200 vehicles) occurred on West Broad Street west of Davidson Avenue. From 1987 to 2007 traffic volumes on West Spring Street west of North Willow Avenue declined by approximately 1,900 vehicles per day. The decreases in traffic volumes on both these streets can be attributed mostly to the completion of West Jackson Street. In the last ten (10) years the largest declines in daily traffic volumes occurred on South Jefferson Avenue south of West Jackson Street and south of Proffitt Street. Both of these decreases can be at least partially attributed to completion of improvements to South Walnut Avenue which led to an increase use of that street. Since 2002 the two (2) locations with the largest declines were on South Jefferson Avenue south of Veterans Drive (3,600) and on West Broad Street west of Davidson Avenue (1,800). The decreases can be partially accounted for by motorist utilizing the alternate routes of South Walnut Avenue and West Jackson Street.

Table VI-3 provides the TDOT ADT counts and percent change at 57 locations on streets classified as arterials and collectors in or near the municipality for the years 1987, 1997, 2002, and 2007. The rankings in this table are based on highest percent change from 1987 to 2007 with the highest 10 percent changes for each time period highlighted. According to the TDOT counts, South Maple Avenue south of Interstate 40 had the highest percentage increase in daily traffic from 1987 to 2007, increasing by approximately 350 percent. The elevated percent of increase on this two (2) lane collector street may be partially attributed to motorists from the south choosing to avoid South Jefferson Avenue as a direct route to and from the center of the municipality.

TABLE VI-2
TRAFFIC COUNTS AND NUMERICAL CHANGE
ARTERIALS AND COLLECTORS
1987, 1997, 2007

STATION NUMBER	LOCATION DESCRIPTION	1987 COUNT	1997 COUNT	2007 COUNT	1987-1997 CHANGE	1997-2007 CHANGE	1987-2007 CHANGE
49	Jefferson south of Jackson	26000	26388	24456	388	-1,932	-1,544
51	Willow south of Fairground	15725	22104	23778	6,379	1,674	8,053
101	Jefferson south of Veterans	23646	22019	23254	-1,627	1,235	-392
98	Willow north of Spring	14056	20057	23075	6,001	3,018	9,019
99	Willow south of 12th	9956	13576	17405	3,620	3,829	7,449
176	Jackson west of Willow	NA	7905	16995	NA	9,090	NA
79	Washington south of 10th	13567	14555	16325	988	1,770	2,758
28	10th west of Fisk	11782	12651	15258	869	2,607	3,476
108	10th east of Old Kentucky	10042	11183	15212	1,141	4,029	5,170
47	Spring west of Hudgens	9988	12303	15143	2,315	2,840	5,155
141	Interstate Dr east of Willow	4631	11608	14645	6,977	3,037	10,014
75	Jefferson north of Proffitt	14393	15938	14570	1,545	-1,368	177
132	Willow south of I-40	10294	14775	14042	4,481	-733	3,748
83	Jefferson south of I-40	8873	11773	13795	2,900	2,022	4,922
131	Jackson east of Walnut	9990	10690	13310	700	2,620	3,320
170	Neal east of Jefferson	NA	9585	12016	NA	2,431	NA
74	Broad west of Jefferson	10096	9013	10855	-1,083	1,842	759
175	Jackson north of Buffalo Valley	NA	6625	9122	NA	2,497	NA
133	12th west of Willow	3604	6303	8989	2,699	2,686	5,385
156	12th west of Washington	2910	5808	8959	2,898	3,151	6,049
134	Lowe south of Stevens	10234	9272	8765	-962	-507	-1,469
145	Spring west of Willow	10602	8200	8705	-2,402	505	-1,897
115	7th west of Cedar	4701	7899	8096	3,198	197	3,395
109	Spring east of SR 111	5238	7444	7969	2,206	525	2,731
103	Willow north of Jere Whitson	4761	5844	7863	1,083	2,019	3,102
174	Jackson south of Broad	NA	5661	7842	NA	2,181	NA
19	Broad east of Double Springs	6640	6803	7560	163	757	920
122	Walnut north of Proffitt	3967	4674	7315	707	2,641	3,348
50	Walnut north of Fairground	2040	3408	7081	1,368	3,673	5,041
172	Old Kentucky south of Broad	NA	5534	6760	NA	1,226	NA
25	Broad east of Crescent	10859	7139	6659	-3,720	-480	-4,200
119	Broad west of Willow	5185	5411	6164	226	753	979
113	Broad east of Cedar	6009	6167	5698	158	-469	-311
81	Washington north of 22nd	4424	5241	5440	817	199	1,016
110	Willow north of city limits	2702	3643	4898	941	1,255	2,196
24	Buffalo Valley west of Jackson	2857	4080	4591	1,223	511	1,734
29	Fisk north of 10th	2271	4028	4402	1,757	374	2,131
78	Dixie north of 7th	4952	5306	4380	354	-926	-572
121	Stevens west of Walnut	3587	2957	4284	-630	1,327	697
130	Jere Whitson east of Dixie	3328	3438	3972	110	534	644
107	Hwy 290 west of city limits	1582	3526	3867	1,944	341	2,285
27	Washington north of city limits	3759	4494	3733	735	-761	-26
77	Broad east of Ferguson	3326	3785	3209	459	-576	-117
88	Holladay south of Buffalo Valley	1439	2594	2970	1,155	376	1,531
48	Maple south of Stevens	1197	2254	2795	1,057	541	1,598
33	Dry Valley north of Buck Mt	926	1788	2728	862	940	1,802
80	Dixie south of Jere Whitson	2684	3179	2632	495	-547	-52
146	Stevens east of Lowe	2257	1868	2485	-389	617	228
87	Buffalo Valley west of Holladay	1286	2009	2417	723	408	1,131
46	Dry Valley south of Buck Mt	1268	2000	2249	732	249	981
139	Maple south of I-40	451	960	2026	509	1,066	1,575
159	Fisk north of city limits	1158	1693	1795	535	102	637
26	Dixie north of Kenway	2760	1596	1728	-1,164	132	-1,032
158	Shag Rag west of Bowser	930	1582	1364	652	-218	434
155	Benton Young west of Cora	618	1103	1274	485	171	656
154	Franklin north of 9th	637	1032	1169	395	137	532
169	Bunker Hill north of Davis	NA	644	835	NA	191	NA

TABLE VI-3
TRAFFIC COUNTS AND PERCENT CHANGE
ARTERIALS AND COLLECTORS
1987, 1997, 2002, 2007

	LOCATION DESCRIPTION	1987 Count	1997 Count	2002 Count	2007 Count	'87-'97 %	'97-'07 %	'02-'07 %	'87-'07 %
139	Maple south of I-40	451	960	1469	2026	112.86%	111.04%	37.92%	349.22%
50	Walnut north of Fairground	2040	3408	3568	7081	67.06%	107.78%	98.46%	247.11%
141	Interstate Dr east of Willow	4631	11608	13188	14645	150.66%	26.16%	11.05%	216.24%
156	12th west of Washington	2910	5808	6146	8959	99.59%	54.25%	45.77%	207.87%
33	Dry Valley north of Buck Mt	926	1788	2019	2728	93.09%	52.57%	35.12%	194.60%
133	12th west of Willow	3604	6303	8356	8989	74.89%	42.61%	7.58%	149.42%
107	Hwy 290 west of city limits	1582	3526	4018	3867	122.88%	9.67%	-3.76%	144.44%
48	Maple south of Stevens	1197	2254	2719	2795	88.30%	24.00%	2.80%	133.50%
88	Holladay south of Buffalo Valley	1439	2594	3226	2970	80.26%	14.49%	-7.94%	106.39%
155	Benton Young west of Cora	618	1103	1380	1274	78.48%	15.50%	-7.68%	106.15%
29	Fisk north of 10th	2271	4028	5204	4402	77.37%	9.29%	-15.41%	93.84%
87	Buffalo Valley west of Holladay	1286	2009	2710	2417	56.22%	20.31%	-10.81%	87.95%
122	Walnut north of Proffitt	3967	4674	4991	7315	17.82%	56.50%	46.56%	84.40%
154	Franklin north of 9th	637	1032	1131	1169	62.01%	13.28%	3.36%	83.52%
110	Willow north of city limits	2702	3643	5156	4898	34.83%	34.45%	-5.00%	81.27%
46	Dry Valley south of Buck Mt	1268	2000	2256	2249	57.73%	12.45%	-0.31%	77.37%
99	Willow south of 12th	9956	13576	16112	17405	36.36%	28.20%	8.03%	74.82%
115	7th west of Cedar	4701	7899	7882	8096	68.03%	2.49%	2.72%	72.22%
103	Willow north of Jere Whitson	4761	5844	8123	7863	22.75%	34.55%	-3.20%	65.15%
98	Willow north of Spring	14056	20057	20939	23075	42.69%	15.05%	10.20%	64.16%
24	Buffalo Valley west of Jackson	2857	4080	4943	4591	42.81%	12.52%	-7.12%	60.69%
83	Jefferson south of I-40	8873	11773	14361	13795	32.68%	17.17%	-3.94%	55.47%
159	Fisk north of city limits	1158	1693	2223	1795	46.20%	6.02%	-19.25%	55.01%
109	Spring east of SR 111	5238	7444	8112	7969	42.12%	7.05%	-1.76%	52.14%
47	Spring west of Hudgens	9988	12303	15190	15143	23.18%	23.08%	-0.31%	51.61%
108	10th east of Old Kentucky	10042	11183	12530	15212	11.36%	36.03%	21.40%	51.48%
51	Willow south of Fairground	15725	22104	22080	23778	40.57%	7.57%	7.69%	51.21%
158	Shag Rag west of Bowser	930	1582	1542	1364	70.11%	-13.78%	-11.54%	46.67%
132	Willow south of I-40	10294	14775	14651	14042	43.53%	-4.96%	-4.16%	36.41%
131	Jackson east of Walnut	9990	10690	12617	13310	7.01%	24.51%	5.49%	33.23%
28	10th west of Fisk	11782	12651	13838	15258	7.38%	20.61%	10.26%	29.50%
81	Washington north of 22nd	4424	5241	5670	5440	18.47%	3.80%	-4.06%	22.97%
79	Washington south of 10th	13567	14555	14273	16325	7.28%	12.16%	14.38%	20.33%
121	Stevens west of Walnut	3587	2957	3603	4284	-17.56%	44.88%	18.90%	19.43%
130	Jere Whitson east of Dixie	3328	3438	3656	3972	3.31%	15.53%	8.64%	19.35%
119	Broad west of Willow	5185	5411	5293	6164	4.36%	13.92%	16.46%	18.88%
19	Broad east of Double Springs	6640	6803	7092	7560	2.45%	11.13%	6.60%	13.86%
146	Stevens east of Lowe	2257	1868	2221	2485	-17.24%	33.03%	11.89%	10.10%
74	Broad west of Jefferson	10096	9013	10061	10855	-10.73%	20.44%	7.89%	7.52%
75	Jefferson north of Proffitt	14393	15938	14860	14570	10.73%	-8.58%	-1.95%	1.23%
27	Washington north of city limits	3759	4494	3036	3733	19.55%	-16.93%	22.96%	-0.69%
101	Jefferson south of Veterans	23646	22019	26913	23254	-6.88%	5.61%	-13.60%	-1.66%
80	Dixie south of Jere Whitson	2684	3179	3853	2632	18.44%	-17.21%	-31.69%	-1.94%
77	Broad east of Ferguson	3326	3785	4198	3209	13.80%	-15.22%	-23.56%	-3.52%
113	Broad east of Cedar	6009	6167	5578	5698	2.63%	-7.60%	2.15%	-5.18%
49	Jefferson south of Jackson	26000	26388	25620	24456	1.49%	-7.32%	-4.54%	-5.94%
78	Dixie north of 7th	4952	5306	5010	4380	7.15%	-17.45%	-12.57%	-11.55%
134	Lowe south of Stevens	10234	9272	10072	8765	-9.40%	-5.47%	-12.98%	-14.35%
145	Spring west of Willow	10602	8200	7940	8705	-22.66%	6.16%	9.63%	-17.89%
26	Dixie north of Kenway	2760	1596	1846	1728	-42.17%	8.27%	-6.39%	-37.39%
25	Broad east of Crescent	10859	7139	8477	6659	-34.26%	-6.72%	-21.45%	-38.68%
169	Bunker Hill north of Davis	NA	644	755	835	NA	29.66%	10.60%	NA
170	Neal east of Jefferson	NA	9585	12398	12016	NA	25.36%	-3.08%	NA
172	Old Kentucky south of Broad	NA	5534	7116	6760	NA	22.15%	-5.00%	NA
174	Jackson south of Broad	NA	5661	8293	7842	NA	38.53%	-5.44%	NA
175	Jackson north of Buffalo Valley	NA	6625	10124	9122	NA	37.69%	-9.90%	NA
176	Jackson west of Willow	NA	7905	12438	16995	NA	114.99%	36.64%	NA

Another street experiencing a significant percentage increase in daily traffic over the 20 year period was South Walnut Avenue north of Fairground Street, increasing by approximately 250 percent. This increase reflects the growing importance of this street as a north-south route through the municipality. Two other streets, Interstate Drive east of South Willow Avenue and East 12th Street west of North Washington Avenue, experienced increases in daily traffic of over 200 percent. The increase on Interstate Drive is partly the result of street improvements and significant land use development along the street. Traffic to and from Cookeville High School is likely the cause for a portion of the increase in daily volumes on East 12th Street.

During the 10 year period from 1997 to 2007 daily traffic increased by the highest percentage on West Jackson Street west of South Willow Avenue, increasing by 115 percent. This increase can be mostly attributed to the substantial commercial growth along this street. Increases of over 100 percent during the 10 year period were identified at two other locations, South Maple Avenue south of Interstate 40 and South Walnut Avenue south of Fairground Street.

The two (2) locations with the highest percent increase in average daily traffic in the five (5) year period between 2002 and 2007 were both located on South Walnut Avenue. North of Fairground Street average daily traffic on South Walnut Avenue increased by almost 100 percent and north of Proffitt Street it increased by over 46 percent. Other streets with significant increases during the five (5) year period were East 12th Street west of North Washington Avenue (46 percent), South Maple Avenue south of Interstate 40 (38 percent) and West Jackson Street west of South Willow Avenue (37 percent).

The location with the largest percentage decrease in average daily traffic volumes from 1987 to 2007 was on West Broad Street east of Crescent Drive, decreasing by almost 39 percent. This decline can primarily be attributed to motorist electing to utilize West Jackson Street. Another street with a significant percentage decline over the 20 year period was North Dixie Avenue north of Kenway Street, with daily volumes declining by over 37 percent. Daily traffic on West Spring Street west of North Willow Avenue declined by 18 percent and volumes on South Lowe Avenue declined by over 14 percent over the 20 year period.

Two (2) locations on North Dixie Avenue, north of East 7th Street and south of Jere Whitson Road, had the highest percentage decreases from 1997 to 2007. This decline can possibly be attributed to motorists choosing to avoid the university campus. The North Dixie Avenue location south of Jere Whitson Road also had the highest percentage decline from 2002 to 2007, at over 31 percent.

Findings. A comparison of traffic volumes from 1987 to 2007 indicates the increasing importance of Willow Avenue and Highway 111 as north-south routes in the city. Comparing changes in volumes over the past ten (10) and five (5) years reveals the emergence of South Walnut Avenue and South Maple Avenue as alternate north-south routes. For east-west routes traffic volume comparisons reveal the importance of the offset corridor of 10th Street - 12th Street in the north and Interstate Drive - Neal Street in the south. The completion of West Jackson Street has greatly reduced traffic volumes on Highway 70N/West Broad Street.

Traffic Capacity and Level of Service

Traffic capacity is the measure of a street's ability to accommodate the traffic volume along the street. Level of Service (LOS) is a qualitative rating of a street's traffic capacity in which factors including traffic volumes, number of travel lanes, turning movements and signalization are evaluated. LOS describes the character of traffic conditions for a specific segment of street related to speed and travel time, maneuverability, and congestion. A LOS evaluation of streets consists of six (6) levels of traffic flow conditions, ranging from "A" to "F" with "F" being the worst. A description of the operating conditions for each level is provided in Table VI-4.

TABLE VI-4
DESCRIPTION OF LEVEL OF SERVICE

LOS	TRAFFIC FLOW CONDITION
A	Completely free flow conditions. Vehicle operation is virtually unaffected by the presence of other vehicles. Minor disruptions are easily absorbed without causing significant delays.
B	Reasonably free flow, the presence of other vehicles begins to be noticeable. Disruptions are still easily absorbed. The ability to maneuver with the traffic stream is only slightly restricted.
C	The ability to maneuver and select an operating speed is clearly affected by the presence of other vehicles. Minor disruptions may be expected to cause serious local deterioration in service and queues may form behind for major disruptions.
D	High density, but stable traffic flow. Speeds reduced and freedom to maneuver is restricted. Only minor disruptions can be absorbed without the formation of extensive queues and deterioration of service to LOS F.
E	Operating conditions at or near capacity level. Speed and maneuverability significantly reduced with few gaps in traffic stream. Any disruption will cause queues to form and service to deteriorate to LOS F.
F	Heavy congestion. Forced or breakdown flow. Operation within queues is unstable and characterized by short spurts of movement followed by stoppages. Extensive vehicle stacking at intersections.

A LOS of between "C" and "D" is generally the recommended level of service for most municipal streets and is also the recommended level for street design purposes. It should be noted that a LOS rating for a particular street does not reflect a constant state, but rather an average or typical service. For example, a street might operate at LOS D during morning and afternoon hours, but have traffic conditions consistent with LOS C for other hours of the day.

In the ***2003 Major Route Transportation Plan, Cookeville, Tennessee*** a LOS analysis of many of the municipality's arterial and collector streets was completed by Kimley-Horn & Associates. This LOS analysis was based on 2002 ADT counts. Utilizing historic growth rates to calculate forecasted traffic volumes, Kimley-Horn & Associates also developed projected Levels of Service for the same streets for the years 2007 and 2027. Table VI-5 depicts the LOS ratings presented in the 2003 Major Route Transportation Plan for the segments of arterial and collector streets with LOS of D or lower for the years 2002, 2007 and 2027.

TABLE VI-5
ARTERIAL AND COLLECTOR STREET SEGMENTS
LEVEL OF SERVICE D OR LOWER
2002, 2007, 2027

STREET NAME	SEGMENT DESCRIPTION	2002 ADT	2002 LOS	2007 ADT*	2007 LOS	2027 ADT*	2027 LOS
West-East 7th	Willow to Dixie	8711	D	9582	D	14286	E
East 10th	Washington to Chocolate	14127	D	15540	E	23168	F
West 12th	City limits to Franklin	7500	C	8250	C	12300	D
West Broad	City limits to Jackson	8588	C	9447	C	14085	F
West Broad	Jackson to Spring	8588	C	9447	C	14085	F
West-East Broad	Cedar to Washington	7030	D	7733	D	11529	D
East Broad	Washington to Spring	7568	C	8325	C	12412	D
North Dixie	Spring to 1st	7109	D	7820	D	11659	D
North Dixie	1st to Mahler	7109	C	7820	C	11659	D
North Dixie	Mahler to 12th	7308	C	8039	C	11985	D
North Dixie	12th to Willow	6606	C	7267	C	10834	D
West Jackson	Willow to Scott	13117	D	14429	D	22512	D
West Jackson	Scott to Jefferson	13117	D	14429	D	22512	E
South Jefferson	Davis to Hwy 111	13331	D	14665	D	21863	F
South Jefferson	Bunker Hill to I40	13331	D	14665	D	21863	D
South Jefferson	I40 to Stevens	25551	D	28106	D	41904	F
South Jefferson	Stevens to Spring	15280	D	16808	D	25059	F
South Lowe	Jackson to Spring	11870	D	13057	D	19467	D
South Walnut	Interstate to Jefferson	4056	D	4461	D	6651	D
North Washington	Spring to Broad	12495	E	13745	E	20492	F
North Washington	1st to 10th	13484	D	14833	E	22114	F
North Washington	15th to Whitaker Springs	5582	D	6141	D	9155	D
North Willow	Dixie to 12th	7711	C	8482	C	12646	E
North Willow	12th to Broad	15361	C	16897	C	25192	F
South Willow	Broad to I40	23878	C	26266	D	39160	F
South Willow	I40 to city limits	14983	F	16437	F	24507	F
East Spring	City limits to Hwy 111	8170	C	8987	C	13399	F
East Spring	Hwy 111 to Old Kentucky	12294	D	13523	D	20162	D
East Spring	Old Kentucky to Raider	13495	D	14844	D	22131	F
East Spring	Raider to Broad	13495	F	14844	F	22131	F
East Spring	Broad to Walnut	10312	D	11343	D	16912	F
West Spring	Walnut to Broad	8415	C	9257	C	13801	D

*2007 and 2027 ADTs were estimated by Kimley-Horn & Associates

Source: *2003 Major Route Transportation Plan Cookeville, Tennessee*, Kimley-Horn & Associates

As indicated in Table VI-5, two (2) segments of streets classified as arterials or collectors were determined to be operating at LOS F in 2002, South Willow Avenue from Interstate 40 south to the city limits and East Spring Street from Raider Drive east to East Broad Street. In addition one (1) street segment, North Washington Avenue from East Spring Street to East Broad Street, was determined to be operating at LOS E. Since the preparation of the 2003 LOS analysis improvements to South Willow Avenue from Interstate 40 south to Gould Drive have been completed that should have improved the LOS.

According to the analysis completed by Kimley-Horn & Associates, in 2007 two additional street segments, East 10th Street from North Washington Avenue to Chocolate Drive and North Washington Avenue from East 1st Street to East 10th Street would be operating at LOS E. By 2027, Kimley-Horn & Associates anticipates that 18 street segments will be operating at LOS E or F if no improvements are completed by that time. The segments include portions West and East 7th Street, East 10th Street, West Broad Street, West Jackson Street, South Jefferson Avenue, North Washington Avenue, North and South Willow Avenue, and East Spring Street.

For evaluation purposes the predicted 2007 ADT counts utilized by Kimley-Horn & Associates were compared to the actual counts compiled by TDOT in 2007. The actual 2007 ADT most exceeding the projected 2007 ADT was for North Washington Avenue between East 1st Street and East 10th Street (16,625 actual versus 14,833 projected). Other ADT counts that compared most accurately were:

- East Spring Street from Old Kentucky Road to East Broad Street (14,844 projected/ 15,190 actual)
- North Willow Avenue from West 12th Street to West Broad Street (16,897 projected/ 17,405 actual)
- East 10th Street from North Washington Avenue to Chocolate Drive (15,540 projected/ 15,212 actual).

The projected ADT counts that compared least favorably were:

- South Lowe Avenue from East Spring Street to East Jackson Street (13,057 projected/ 8,765 actual)
- South Jefferson Avenue from East Stevens Street to Interstate 40 (28,106 projected/ 24,456 actual)
- West Broad Street from the city limits east to West Spring Street (9,447 projected/6,659 actual)
- South Willow Avenue between West Broad Street and I-40 (26,266 projected/23,778 actual)
- Broad Street from Cedar Street to North Washington Avenue (7,733 projected/5,698 actual)
- South Willow Avenue from I40 south to the city limits (16,437 projected/14,651 actual).

Findings. Level of Service studies completed as a part of the ***2003 Major Route Transportation Plan, Cookeville, Tennessee*** when compared with actual 2007 ADT counts indicate significant LOS concerns for segments of North Washington Avenue, East Spring Street, North Willow Avenue and East 10th Street.

Frequency of Accidents

The frequency of traffic accidents is another important indicator of how well a street is operating. Annual records of vehicle crashes at intersections within the municipality are maintained by the Cookeville Police Department. Table VI-6 depicts annual vehicle crash data for the intersections with the most accidents for the years 2002 through 2007.

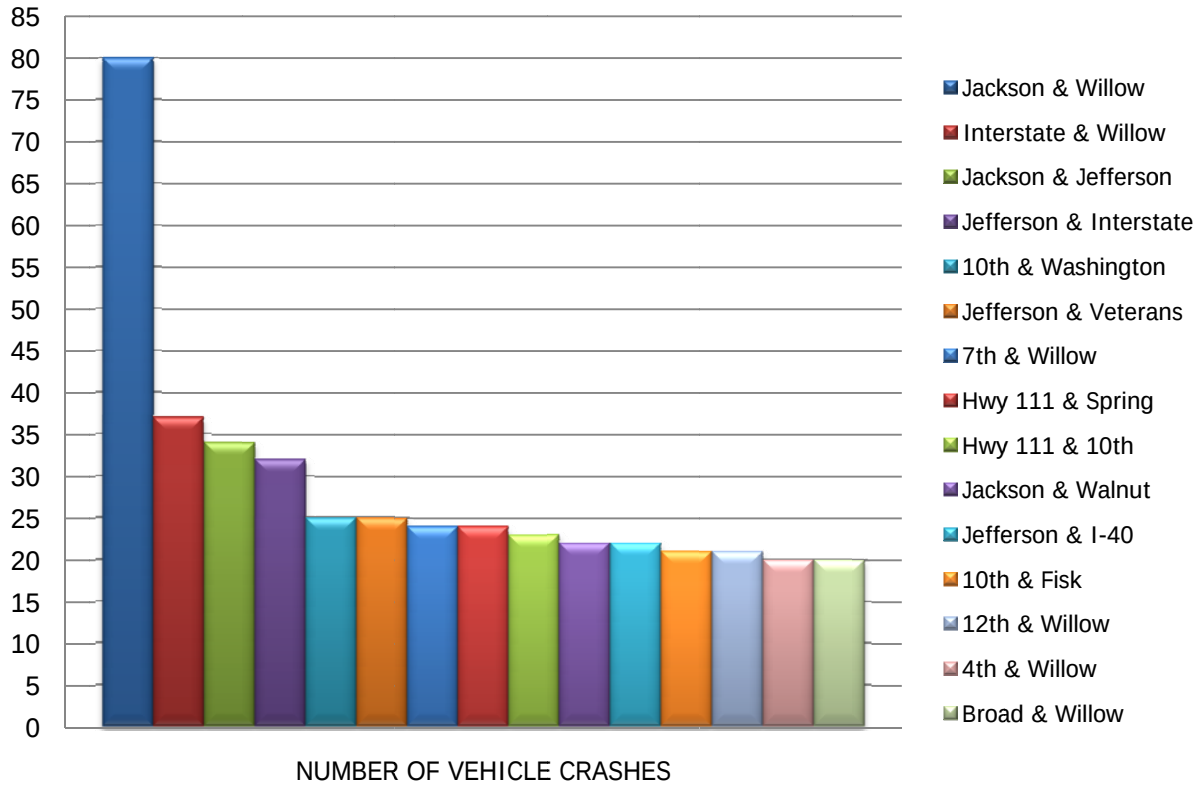
TABLE VI-6
ANNUAL VEHICLE CRASHES BY INTERSECTION
2002 - 2007

INTERSECTION	VEHICLE CRASHES					
	2002	2003	2004	2005	2006	2007
WEST JACKSON ST. & SOUTH WILLOW AVE.	64	57	70	87	73	80
INTERSTATE DR. & SOUTH WILLOW AVE.	26	29	35	31	24	37
EAST JACKSON ST. & SOUTH JEFFERSON AVE.	59	29	35	36	31	34
INTERSTATE DR. & SOUTH JEFFERSON AVE.	31	17	17	21	28	32
EAST 10TH ST. & NORTH WASHINGTON AVE.	23	23	18	17	23	25
VETERANS DR. & SOUTH JEFFERSON AVE.	7	26	32	17	28	25
WEST 7TH ST. & NORTH WILLOW AVE.	18	18	15	17	26	24
HIGHWAY 111 & EAST SPRING ST.	29	21	22	20	25	24
HIGHWAY 111 & EAST 10TH ST.	16	24	27	26	33	23
WEST JACKSON ST. & SOUTH WALNUT AVE.	9	8	19	17	20	22
SOUTH JEFFERSON AVE. & I-40	25	28	20	27	21	22
EAST 10TH ST. & FISK RD.	15	17	11	14	17	21
WEST 12TH ST. & NORTH WILLOW AVE.	21	23	16	19	18	21
WEST 4TH ST. & NORTH WILLOW AVE.	12	17	12	13	16	20
WEST BROAD ST. & NORTH WILLOW AVE.	17	18	18	19	12	20
SOUTH WALNUT AVE. & SOUTH JEFFERSON AVE.	17	23	22	15	12	18
WEST SPRING ST. & SOUTH WILLOW AVE.	29	33	27	17	23	17
BUFFALO VALLEY RD. & WEST JACKSON ST.	7	9	14	14	16	16
OLD KENTUCKY RD. & EAST SPRING ST.	40	22	20	22	24	16
NEAL ST. & SOUTH JEFFERSON AVE.	28	17	32	17	18	15
WEST STEVENS ST. & SOUTH WILLOW AVE.	19	10	20	26	18	15
SOUTH WILLOW AVE. & INTERSTATE 40	29	23	14	19	18	13
HIGHWAY 111 & I-40	7	8	13	7	6	12
SLIGER RD. & SOUTH JEFFERSON AVE.	5	8	6	0	2	12
EAST SPRING ST. & SOUTH WASHINGTON AVE.	12	8	6	13	14	12
BROWN AVE. & EAST 10TH ST.	12	19	12	9	13	11

While the number of accidents at intersections can fluctuate as much as the cause of an accident, an examination of historical crash data can reveal certain trends. As depicted in Table VI-6, since 2002 the number of accidents at the intersection of Old Kentucky Road and East Spring Street has declined by 60 percent. This decrease can likely be attributed to improvements of Old Kentucky Road and the establishment of restrictions on turning movements near the intersection. Street improvements are also the likely reason for a 55 percent reduction in vehicle crashes at the intersection of South Willow Avenue and Interstate 40. The 40 percent decline in accidents at the intersection of West Spring Street and South Willow Avenue can partially be attributed to motorists using alternate routes such at West Jackson Street, which has seen a 25 percent increase in accidents at the intersection with South Willow Avenue.

The fifteen intersections with the highest number of vehicle crashes in 2007 are illustrated in Graph VI-1. In 2007, the intersection of West Jackson Street and South Willow Avenue had the highest frequency of accidents, with 80 vehicle crashes reported by the Cookeville Police Department. The frequency at this intersection was more than double the frequency of the next highest intersection, Interstate Drive and South Willow Avenue with 37 vehicle crashes recorded. Of the 15 intersections with the highest frequency of accidents, six (6) occurred on Willow Avenue, four (4) occurred on South Jefferson Avenue, and three (3) occurred on Jackson Street. With the exception of the intersection of West 4th Street and North Willow Avenue, all of the intersections with the highest frequencies of accidents are signalized.

GRAPH VI-1
VEHICLE CRASHES BY INTERSECTION
2007



Findings. The highest frequencies of accidents within the municipality generally occur at the intersections of streets with the highest volumes of traffic. As all but one of these intersections is signalized most of these accidents could likely be attributed to driver error. Signalization of the intersection of West 4th Street and North Willow Avenue may reduce the frequency of accidents.

Traffic Impediments

Historically, the major impediment to traffic flow in Cookeville was the location of the primary north-south and east-west routes of Putnam County through the center of the city. Where these routes intersect in the downtown area traffic congestion remains a problem. As the city has grown several other impediments to circulation have materialized.

One of the more significant impediments to traffic flow in the city and the unincorporated urban growth boundary is an insufficiency of adequate internal north-south and east-west routes. The problems include the lack of available routes, discontinuous routes, and inadequate lanes on existing routes. In the past 20 years several improvements have been made to address some of these problems. These include the construction of Lowe Avenue to connect Jefferson and Washington Avenues; the construction of Interstate Drive, Neal Street, West Jackson Street, and Veterans Drive; and the widening of South Willow Avenue, East 10th Street, Old Kentucky Road, East 9th Street, and South Walnut Avenue. Although improvements have been made, there are still deficiencies.

Another major impediment to traffic flow in Cookeville is intense commercial development along major internal routes. This is especially a problem on South Jefferson and South Willow Avenues. Numerous ingress/egress points on these thoroughfares for the commercial developments impede traffic flow and create traffic hazards. A similar problem also exists along Highway 70N. This problem is compounded by an inadequate number of traffic lanes on Highway 70N.

The lack of a complete circumferential route on the periphery of the city is also an impediment to traffic flow. Traffic, which would bypass the city, must travel through internal streets. Highway 111 acts as a circumferential north-south south route along the eastern portion of the municipality. An east-west route to the north and to the south and a north-south route to the west are needed to complete an outer circumferential route. As noted previously, in 2003 TDOT cancelled plans for the construction of a route that would have functioned as an east-west circumferential route along the northern portion of the municipality. The cancellation of the project was in large part due to opposition from citizenry. Reasons for this opposition included concerns over the impact on property owners along the proposed route and a general resistance to new routes.

Findings. There are four (4) primary impediments to traffic flow in the Cookeville Planning Area that will directly affect future land use development. These impediments are (1) traffic congestion at the intersections of major thoroughfares; (2) inadequacies of internal north-south and east-west routes; (3) intense commercial development on major thoroughfares; and (4) lack of a complete circumferential route.

Traffic Generators

There are several major traffic generators in Cookeville. These traffic generators are focal points of activity which are the origin and destination of numerous automobile trips during certain times of the day. Having an awareness of the location of these generators is necessary in analyzing the traffic circulation system and in preparing plans for improvement. The major traffic generators in Cookeville are grouped into three principal categories, which are as follows:

Industrial Areas

There are three primary industrial areas in Cookeville. The first of these areas is located in the northeast section of the city to the east and west of Fisk Road. The industrial operations located in this area employ a total of more than 1,500 persons. Compounding the traffic generation in this vicinity is the close proximity of Cookeville Senior High School. Traffic problems in this area are mostly the result of inadequate access. The second major industrial area is located in the southwest section of the city off South Willow Avenue near Interstate 40. An estimated 1,500 persons are employed by the industrial operations located in this area. Traffic flow in this area was greatly improved with the widening of South Willow Avenue to five (5) lanes from Interstate 40 to Gould Drive in the early 2000s. The third industrial area in the city is located off Highway 111 just south of Interstate 40. The industries located in this area employ more than 2,000 persons. Traffic problems in this area are generally caused during shift changes when a large amount of traffic enters and exits Highway 111, which is a high volume, high speed thoroughfare. Problems in this area will be compounded when the Lemon Farris Industrial Park is fully developed.

Concentrated Commercial Areas

There are several areas in Cookeville where large volumes of traffic are generated due to the concentration of commercial establishments. The downtown area of Cookeville generates much vehicular activity. The location of several public and private services and numerous retail establishments in the downtown area contributes to the traffic volumes generated. Intense commercial development has occurred on West Jackson Street, between South Willow Avenue and Buffalo Valley Road. This commercial growth has led to vast increases in traffic at the intersection of West Jackson Street and South Willow Avenue, which, as noted above, has the highest number of vehicle crashes in the municipality. Other concentrated commercial areas generating large volumes of traffic are the strip commercial developments along South Jefferson and South Willow Avenues and along Interstate Drive and Neal Street. There are also concentrated commercial areas located along Spring Street, North Washington Avenue, East 10th Street, and East Jackson Street.

Institutional and Professional Areas

The area north of West 2nd Street, south of 12th Street, west of Willow Avenue, and east of the Nashville and Eastern Railroad, in which Tennessee Tech University and Cookeville Regional Medical Center are located, is a source of major traffic generation. Contributing to the traffic generation of this area are the many auxiliary medical facilities and physicians' offices located around the hospital and the numerous multi-family residential units located to the north and south of the university. Other institutions that are major generators of traffic include Cookeville High School, two Middle Schools and six Elementary Schools located on major collectors or minor collectors rather than arterials.

At the current time no major traffic generators are located in the unincorporated planning area.

Findings. In essence, employment related land uses are the traffic generators in a community. The industrial, commercial, institutional and professional service use areas of Cookeville are the primary traffic generators as destination points from the residential areas in the city and county. Many of these generators tend to compound traffic problems due to their relatively close proximity to each other. Additional problems exist where these major traffic generators are located on streets of less than adequate classification.

Intersection Deficiencies

Problematic street intersections can impede traffic flow and create traffic hazards. Deficiencies include substandard alignment, including angled and off-set intersections; insufficient separation; poor visibility due to steep grades and curves or obstructions; and inadequate turning radius. The general standards for intersection design are specified in the Cookeville Subdivision Regulations. Relative provisions from these regulations include the following:

- Intersections shall be as nearly at right angles (90 degrees) as is possible.
- Street jogs of less than 150 feet on arterial and collector streets and of less than 125 feet on local streets are not allowed.
- Intersections shall be spaced at a minimum of 200 feet for local streets and 300 feet for collector streets.
- Steep grades and curves at intersections shall be avoided.
- Obstructions at intersections above the level of three (3) feet higher than the centerline of the street are prohibited.
- Adequate turning radius is required, with radius at the intersection dependent on the angle of the street intersection.

Intersections not meeting these standards can inhibit vehicular turning movement, increase the exposure time for vehicles and pedestrians, restrict the crossroad sight distance, and create driver and pedestrian discomfort. Intersections identified as having deficiencies which impede traffic flow and/or create traffic hazards are depicted in Table VI-7.

TABLE VI-7
INTERSECTIONS WITH DEFICIENCIES

INTERSECTION	DESCRIPTION OF DEFICIENCY
East Hudgens St. at East Spring St.	Angle
East Hudgens St. at South Maple Ave.	Off-set
North Jefferson Ave. at East 7th St.	Off-set, poor visibility – obstruction
Southgate Dr. and Orchard St. at South Willow Ave.	Angle, separation
East Broad St. at East Spring St.	Angle
East 6th St. at North Washington Ave.	Off-set
North Cedar Ave. at Broad St. and Depot St.	Separation
Bay View Dr. at Old Sparta Rd.	Poor visibility – grade
Messenger Rd. at South Jefferson Ave.	Poor visibility – grade
1st St. at North Cedar Ave.	Off-set, poor visibility – obstruction
Southwood Dr. and Southgate Dr. at Fairgrounds St.	Off-set
Lee Seminary Rd. at South Willow Ave.	Angle
West Cemetery Rd. at Bunker Hill Rd.	Poor visibility – grade
East 10th St. at Brown Ave.	Off-set
1st St. at North Maple Ave.	Poor visibility – grade
West Davis Rd. at Bunker Hill Rd.	Angle

Existing Street Conditions

The condition of a community's existing streets directly affects the overall capability of the street system. Streets with pavement in need of major repairs or those of inadequate width cannot carry traffic at appropriate volumes or speeds. Furthermore, streets in poor condition can create traffic hazards. Of the 265 miles of streets located within the City of Cookeville, 36.3 miles are either interstate (7.8 miles) or state highways (28.5 miles) which are maintained by the Tennessee Department of Transportation. These non-local streets are considered to be in good condition and have not been evaluated as a part of this plan.

The local streets in the City of Cookeville and the unincorporated Urban Growth Boundary have been categorized as to their condition based on field surveys conducted by the Planning Department in March of 2008. The condition of existing streets was previously determined in July of 1999. Since 1999 the total miles of local streets for which the City of Cookeville is responsible for maintenance has increased from 187.4 miles to 228.7 miles. This increase of 43.8 miles is due to several factors including substantial annexation, new subdivision development, and new street construction by the municipality. The total miles of local streets within the unincorporated portions of the UGB have decreased from 138.3 miles in 1999 to 62.1 in 2008. This decrease can be attributed to the annexation of a significant portion of the UGB since 1999.

Illustration VI-3 presents information on the street conditions in Cookeville and the unincorporated portions of the Urban Growth Boundary in 2008. The condition ratings depicted in Illustration VI-3 are based on the following criteria:

- Good: Pavement is generally smooth with no immediate repairs needed.
- Good to Fair: Pavement beginning to break down, scattered areas of broken pavement, potholes in beginning stages, moderate narrowness of pavement or shoulders, repairs may be needed in near future.
- Fair: Pavement broken in numerous areas, potholes present, moderate to excessive narrowness of pavement or shoulders, repairs or resurfacing generally needed.
- Fair to Poor: Pavement mostly broken, numerous potholes, excessive narrowness of pavement or shoulders, extensive repairs or resurfacing needed.
- Poor: Pavement completely deteriorated or nonexistent, excessive narrowness of pavement or shoulders, street is in generally hazardous condition.
- Undeveloped: Right-of-ways shown on recorded plats or tax maps but which have not been built.

Table VI-8 presents the 2008 condition of local streets by mileage and percent for Cookeville and the unincorporated urban growth boundary. Of the 228.7 miles of local streets in Cookeville 85.0 percent are in good or good to fair condition, 12.4 percent are in fair or fair to poor condition, and 2.6 percent are in poor condition. Of the 62.1 miles of local roads in the unincorporated urban growth boundary 85.7 percent are in good or good to fair condition, 13.2 percent are in fair or fair to poor condition, and 1.1 percent are in poor condition.

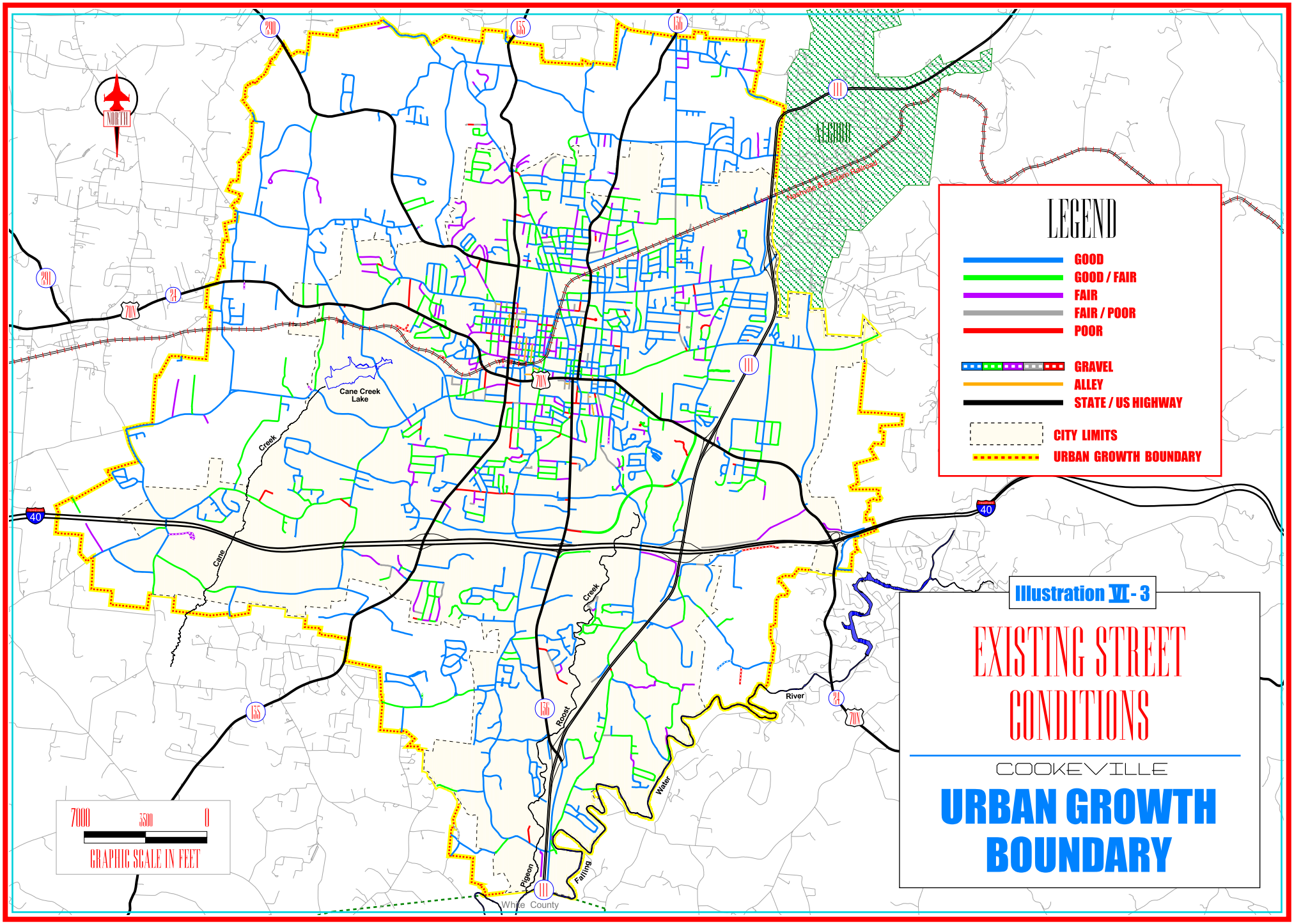

NORTH
LEGEND
GOOD
GOOD / FAIR
FAIR
FAIR / POOR
POOR
GRAVEL
ALLEY
STATE / US HIGHWAY
CITY LIMITS
URBAN GROWTH BOUNDARY
Cane Creek Lake
Cane Creek
Roost Creek
Falling Water River
Pigeon River
White County
Illustration VI - 3
EXISTING STREET CONDITIONS
COOKEVILLE
URBAN GROWTH BOUNDARY
7000 3500 0
GRAPHIC SCALE IN FEET

TABLE VI-8
2008 LOCAL STREET CONDITIONS

	COOKEVILLE		URBAN GROWTH BOUNDARY	
Condition	**Miles**	**Percent**	**Miles**	**Percent**
Good	126.0	55.1 %	43.2	69.6 %
Good to Fair	68.4	29.9 %	10.0	16.1 %
Fair	22.5	9.8 %	6.1	9.8 %
Fair to Poor	5.9	2.6 %	2.1	3.4 %
Poor	5.9	2.6 %	0.7	1.1 %
TOTAL	228.7	100	62.1	100

Approximately 103 miles or 44.9 percent of the 228.7 miles of developed local streets in Cookeville are in less than good condition. Upgrading these streets could be an expensive process. A systematic approach through the planning and budgeting process should be implemented to complete the needed street improvements.

The streets in the unincorporated urban growth boundary are generally in as good a condition as those within the municipality. Approximately 8.9 miles or 14.3 percent of the 62.1 miles of local streets in the urban growth boundary are in fair or worse condition. These street conditions should be evaluated whenever an area is considered for annexation.

Table VI-9 presents the condition of local streets by percentage for the municipality and the unincorporated urban growth boundary for the years 1999 and 2008. For both areas the percent of streets in good condition has declined significantly during the past ten (10) years. This is further indication of the need for a systematic approach for street improvements.

TABLE VI-9
COMPARISON OF LOCAL STREET CONDITIONS BY PERCENT
1999-2008

	COOKEVILLE		URBAN GROWTH BOUNDARY	
Condition	**1999 Percent**	**2008 Percent**	**1999 Percent**	**2008 Percent**
Good	61.8 %	55.1 %	79.8 %	69.6 %
Good to Fair	15.0 %	29.9 %	2.5 %	16.1 %
Fair	12.6 %	9.8 %	10.1 %	9.8 %
Fair to Poor	3.8 %	2.6 %	3.7 %	3.4 %
Poor	1.6 %	2.6 %	3.9 %	1.1 %
TOTAL	100 %	100 %	100 %	100 %

Parking

With the exception of the downtown area parking is not a significant problem within the City of Cookeville. In June of 2004 the Planning Department completed a detailed analysis of parking in the downtown area. The area studied consisted of the properties within the municipality zoned as CBD, Central Business District comprising approximately 91 acres. The major findings of this study are as follows:

- An estimated total of 3,518 parking spaces were identified to serve land uses occupying over 1.5 million square feet of floor space

- ❖ The parking supply is almost equally divided between publicly provided and privately provided spaces (1,710 spaces and 1,808 spaces respectively)

- ❖ The parking supply consists of 68 accessible parking spaces, eight (8) spaces less than specified in the ADA Standards for Accessible Design

- ❖ Maximum use of the parking supply is not achieved because nearly one-third of the total spaces (1,119 of 3,518 spaces) consist of spaces that are not surfaced and/or are not marked

- ❖ Applying a parking ratio to the square feet of existing land use and comparing the results with the available parking supply indicates the CBD has a parking deficit of approximately 750 parking spaces

The study also determined that approximately 700 parking spaces in the downtown area are on-street parking spaces. Curb or on-street parking obstructs the flow of traffic with motorists maneuvering in and out of parking spaces. This problem is compounded in the downtown by the high traffic volumes on Broad and Spring Streets and Washington and Jefferson Avenues.

So far, the development associated with the unincorporated Urban Growth Boundary has had sufficient land area and the uses are such that parking has been safely provided on site thereby preventing parking problems. However, the lack of zoning regulations outside the corporate limits may result in future problems.

Findings. Like most CBD areas, parking is a problem in Cookeville as well. In the 2010 citizen survey, downtown parking was the community characteristic most frequently rated as fair or poor by respondents with an opinion. Given the relatively good condition of structures and low vacancy rates, it is doubtful if property could be acquired to expand the CBD parking in the future. No parking problems were identified in the unincorporated planning area.

Air/Rail/Port

Although there are no general aviation airport facilities located within Putnam County, the area is served by a regional airport, which is located off Highway 111 approximately 15 miles south of Cookeville. The Upper Cumberland Regional Airport was established in 1993 and is jointly owned by the City of Cookeville, the Town of Sparta, and Putnam and White Counties. The airport has a 6,000 foot lighted asphalt-surface runway and has an instrument landing system. Airport operational statistics indicate that from March of 2006 through March of 2007 that a daily average of 64 aircraft operations occurred at the regional airport.

Cookeville is served by the Nashville and Eastern Railroad. An estimated 6 miles of rail line occupy approximately 62 acres of land within the City of Cookeville and an estimated 1.3 miles of rail line occupy approximately 14 acres of land in the unincorporated planning area. This rail line bisects the city from east to west and it provides a direct link to Nashville. A significant amount of industrial development is located along the rail line. In 1999, the Nashville and Eastern Railroad announced plans for development of rail lines east to Knoxville. Improvements to the rail lines through Putnam County were completed in 2008.

There are no navigable waterways located in the Cookeville Urban Growth Boundary. The nearest port is the Port of Gainesboro located on the Cumberland River, 15 miles northeast of Cookeville.

Findings. The City of Cookeville is served by a rail system and has access to air and port facilities. The impact of the improvements to the Nashville and Eastern Railway which will result in increased usage should be considered in future land use decisions.

Public/Mass Transportation

Like most mid-sized communities, the private automobile is the preferred method of transportation in Cookeville. The 2000 Census indicates that of the 28,200 commuter trips in Putnam County only 0.2 percent were made by public/mass transit. The Upper Cumberland Area Rural Transportation System (UCARTS) is the only provider of public transportation services in Cookeville, providing demand response and fixed route services.

The demand response service provided by UCARTS consists primarily of passenger vans. It is available to all citizens; however, due to limited resources, priority is given to elderly, disabled, and economically disadvantaged with medical needs.

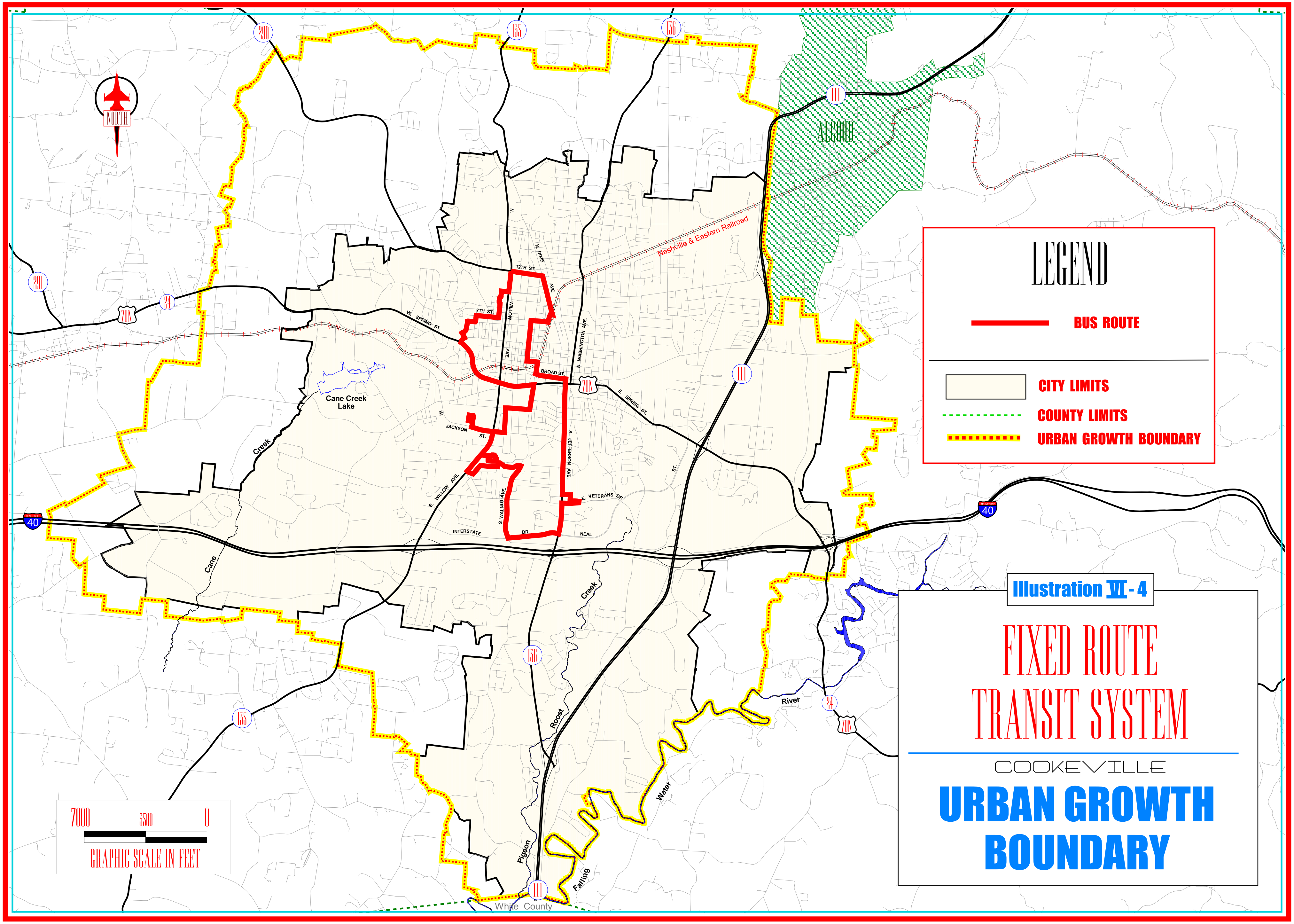
In 2005 TranSystems Corporation completed a study on the feasibility of an enhanced transit system in the City of Cookeville. This study concluded that the municipality had a significant transit dependent market with sufficient density and economic activity to support a transit system. This conclusion was based on a number of factors including the percentage of households with incomes below the poverty level and the number of households not owning a vehicle. The report proposed a transit service alternative composed of two (2) components, an expansion of the demand response service provided by UCARTS and a fixed route.

In 2009, UCARTS received grant monies through the American Recovery Reinvestment Act (ARRA) for the establishment of the city's first fixed route transit service. The Cookeville Area Transit Service (CATS) was initiated in February of 2010. Many of the recommendations from the 2005 transit study were followed in the development of the CATS. Two (2) twenty-six passenger buses provide public transportation along a route with 44 stops that connects Tennessee Technological University, the Cookeville Regional Medical Center, the downtown area, and the commercial/private service uses on Jefferson Avenue and Interstate Drive. Monthly ridership is estimated at 2,000 or 24,000 annually. The location of the fixed route transit system is depicted on Illustration VI-4.

The capital start up cost for the fixed route service was approximately $150,000 and the annual operating cost is estimated at $233,000. Portions of the annual operating cost are covered by contributions from Tennessee Tech University, advertisements and other local sources. It is anticipated that future operating costs will be partially covered through the Federal Transit Administration's Section 5311 program. Currently the City of Cookeville provides no direct funding. The city has not been designated as an urbanized area that can receive funding under the Federal Transit Administration's Section 5307 program. If, as a result of the 2010 Census, the city is designated as an urbanized area, Section 5307 monies can be utilized for up to 50 percent of the operating costs of a transit system.

Three companies provide public taxi service in Cookeville. The municipality is served by Greyhound Bus Lines, which has a terminal located off Veterans Drive. In addition a limousine service provides transportation to the Nashville and Knoxville Airports.

Findings. A 2005 transit study indicated that some form of an enhanced public transportation system would be feasible for the City of Cookeville. In 2010, as a result of economic stimulus monies, the city's first fixed route public transit system was created by UCARTS.


LEGEND
BUS ROUTE
CITY LIMITS
COUNTY LIMITS
URBAN GROWTH BOUNDARY
Illustration VI - 4
FIXED ROUTE
TRANSIT SYSTEM
COOKEVILLE
URBAN GROWTH
BOUNDARY
GRAPHIC SCALE IN FEET
7000
3500
0
NORTH
Nashville & Eastern Railroad
Cane Creek Lake
White County
Pigeon Roost Creek
Falling Water River
Cane Creek
12TH ST.
N. DIXIE AVE.
7TH ST.
WILLOW AVE.
W. SPRING ST.
N. WASHINGTON AVE.
BROAD ST.
E. SPRING ST.
W. JACKSON ST.
S. JEFFERSON AVE.
S. WILLOW AVE.
S. WALNUT AVE.
E. VETERANS DR.
INTERSTATE DR.
NEAL ST.
ALGOOD
40
111
136
135
290
24
70N
291

Pedestrian/Non-Vehicular Circulation

The provision of adequate pedestrian/non-vehicular means of transportation can greatly improve the quality of life for the residents of a city. When properly and adequately constructed, sidewalks, trails, greenways, and bike paths can provide a safe means for the movement of pedestrian traffic. They can also serve as a border and buffer between the street and existing development. Sidewalks or other means of pedestrian circulation are especially needed in areas around schools, in downtown commercial areas, and in residential areas.

In the 2003 Pedestrian and Bicycle Circulation Plan a thorough inventory and analysis of existing pedestrian and non-vehicular facilities was completed. According to this Plan, the pedestrian and non-vehicular system available in Cookeville and its Urban Growth Boundary consists of sidewalks, trails, greenways bike lanes and bike routes. In April of 2009 an updated inventory of these facilities was completed. These facilities are depicted in Illustration VI-5 and examined in the following:

Sidewalks

An inventory completed as a part of the 1999 Comprehensive Future Land Use Plan indicated that there were approximately 234,545 linear feet, or 44.4 miles of sidewalks within the corporate limits of Cookeville in 1999. The inventory completed as a part of the Pedestrian and Bicycle Circulation Plan revealed that the linear feet of sidewalks had increased to approximately 264,435, or 50.1 miles by 2003. In the 2009 inventory approximately 343,203 linear feet, or 65.0 miles of sidewalks, were identified within the corporate limits of Cookeville.

The 20.6 miles or over 46 percent increase in sidewalks since 1999 can be attributed to two (2) primary factors. The first of these factors was a decision by the Cookeville City Council in 1999 to pursue the provision of sidewalks and other pedestrian means of circulation throughout the city. This decision included the purchasing of equipment specifically designed for the installation of sidewalks. It also involved the establishment of the Cookeville Greenways, Bike Trails, and Pedestrian Circulation Task Force. This task force was charged with the responsibility of developing a comprehensive plan for the provision of sidewalks and other non-motorized modes of circulation. The second factor was amendments to the land use regulations requiring the installation of sidewalks in subdivision developments involving new street construction and along existing streets for all new non-residential developments.

The existing sidewalks range in widths of 3 to 5 feet and are primarily concrete construction. The 2009 inventory indicated that 75 percent (48.8 miles) of sidewalks are in good condition, 19 percent (11.9 miles) are in fair condition, and 6 percent (4.3 miles) are in poor condition. Sidewalks are present near most public school facilities, in the downtown area, and in many of the older and newest residential areas. Pedestrian access to some of the city parks is limited due to the lack of sidewalks or other method of non-vehicular movement. There are no sidewalks present in the unincorporated planning area.

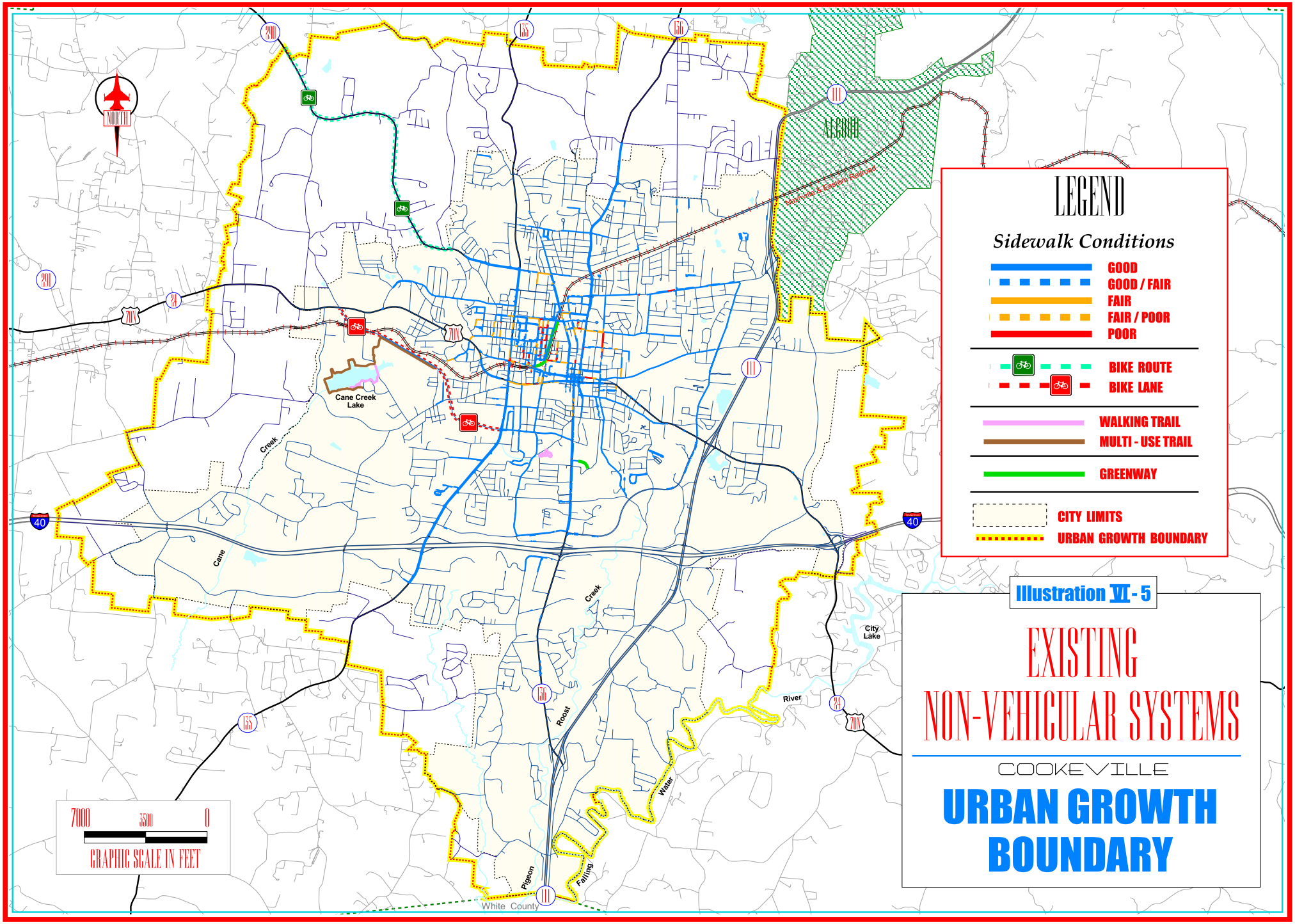


Illustration VI - 5

EXISTING NON-VEHICULAR SYSTEMS

COOKEVILLE

URBAN GROWTH BOUNDARY

Trails

The City of Cookeville has approximately 17,180 linear feet of trails within its corporate limits. The trail at the city owned City Lake Park, which is located outside the city, adds another 1,540 feet to the total length of trails maintained by the city. A description of each of these trails is presented in the following.

- The Cane Creek Park Bike Path is a multi-use facility located in Cane Creek Park. This trail has an 8 foot wide paved surface and has a length of 7,595 feet. Most of this facility was built in 1985 when Cane Creek Park was developed. A number of extensions and improvements have been added to this facility since its original construction. The last of which included the construction of a bridge to the north side of the lake in 2001, which was partially funded through a Local Parks and Recreation Fund grant.

- The Cane Creek Trail is a multi-use facility located in Cane Creek Park. This trail has a mulched surface 8 feet in width and has a length of 3,460 feet. This trail has been developed in stages with the most recent addition completed in 2001. The trail was constructed by city workers and by volunteers.

- The Ensor Sink Trail is a pedestrian only facility located within Ensor Sink Park. It is a mulched trail with a width of 8 feet and a length of 2,566 feet. This trail was constructed in 2001 as a part of the development of Ensor Sink Park, which was partially funded through a Local Parks and Recreation Fund grant.

- The Tommy Thomas Memorial Bike Trail is located to the south of West Jackson Street and has a total length of 3,562 feet. This trail is physically separated from West Jackson Street and has a paved surface with a width of 10 feet. It is a multi-use facility that connects Cane Creek Elementary School with the Cane Creek Sportsplex.

- The City Lake Trail is a multi-use facility located in City Lake Park and has a total length of 1,540 feet. Approximately 1,000 feet of the trail has a paved surface with a width of 8 feet and the remaining 540 feet has a mulched surface. The trail was constructed as a part of the development of City Lake Park, which was partially funded through a Land and Water Conservation Fund grant.

Greenways

There are two (2) facilities developed as greenways located within the municipality. These consist of the following:

- The Cookeville Greenway, which is located along Mahler Avenue from 1st Street to 7th Street, connects the Cookeville Downtown area with the Tennessee Tech University Campus. It has a length of approximately 2,380 feet, which consists of 1,795 feet of concrete sidewalk 8 feet in width and 585 feet of asphalt trail eight (8) feet in width. The Cookeville Farmer's Market was constructed along this greenway in 2002.

- The Ensor Sink Greenway is located along Commerce Avenue from South Jefferson Avenue to Whitson Avenue. It has a length of approximately 1,150 feet consisting of an asphalt trail eight (8) feet in width. The construction of this greenway was recommended in the 2003 Pedestrian and Bicycle Circulation Plan and was originally envisioned to connect Ensor Sink Park with sidewalks along South Maple Avenue. This section of the greenway was completed in 2005 during the construction of Commerce Avenue.

Bike Lanes

The only bike lanes currently located within the City of Cookeville are located along West Jackson Street from South Willow Avenue to West Broad Street (Highway 70N). These bike lanes, which have an approximate length of 12,250 feet on either side of West Jackson Street, consist of paved shoulders 5 feet in width separated from the roadway by a rumble strip.

Bike Routes

Prior to the completion of the 2003 Pedestrian and Bicycle Circulation Plan there was only one (1) designated bike route within the Cookeville Urban Growth Boundary, located along State Highway 290. As part of the implementation of this plan bike routes have subsequently been established on the following locations:

- East 10 Street
- South Maple Avenue
- Old Kentucky Road
- North Dixie Avenue
- Bunker Hill Road
- Buffalo Valley Road

In the evaluation of the existing pedestrian and non-vehicular circulation system completed in the 2003 Pedestrian and Bicycle Circulation Plan a number of deficiencies were identified and include the following:

- General lack of facilities
- Fragmentation of existing network
- Unsafe and insufficient crossing along major streets
- Poor maintenance of existing facilities
- Deterioration of existing facilities
- Lack of crosswalks
- Obstructions of facilities, such as electric poles, street lights, and mailboxes
- Inadequate accessibility for persons with disabilities

Findings. In general the oldest and most recently developed sections of the municipality have adequate means for pedestrian circulation through the provision of sidewalks. Actions taken by the City of Cookeville in the early 2000s has resulted in several thousand feet of sidewalks being installed; however, sidewalks or other means of pedestrian circulation are not available in much of the municipality, or in the unincorporated growth area.

FUTURE TRANSPORTATION PLAN

The future transportation system in Cookeville and the surrounding planning area will be affected by a number of factors. These factors include the existing street pattern, major impediments to traffic, location of major traffic generators, parking needs, growth trends, construction of new thoroughfares, and the location and preferences of new development. Although the municipality cannot control all the factors which will influence its future transportation system, it can provide some direction through such measures as enforcing land use regulations, executing a major street plan, utilizing a street improvements plan, and implementing a non-vehicular circulation plan.

Land Use Regulations

Subdivision and zoning regulations are the two primary land use controls that can have a direct influence on a municipality's future transportation system. The city's subdivision regulations have specific standards for the construction of streets in subdivision developments. These regulations can also be used to require the construction of sidewalks in new subdivisions. Zoning regulations can be used to guide the location of major traffic generators to areas appropriate to the transportation network and can insure that adequate off-street parking and safe ingress-egress points are provided.

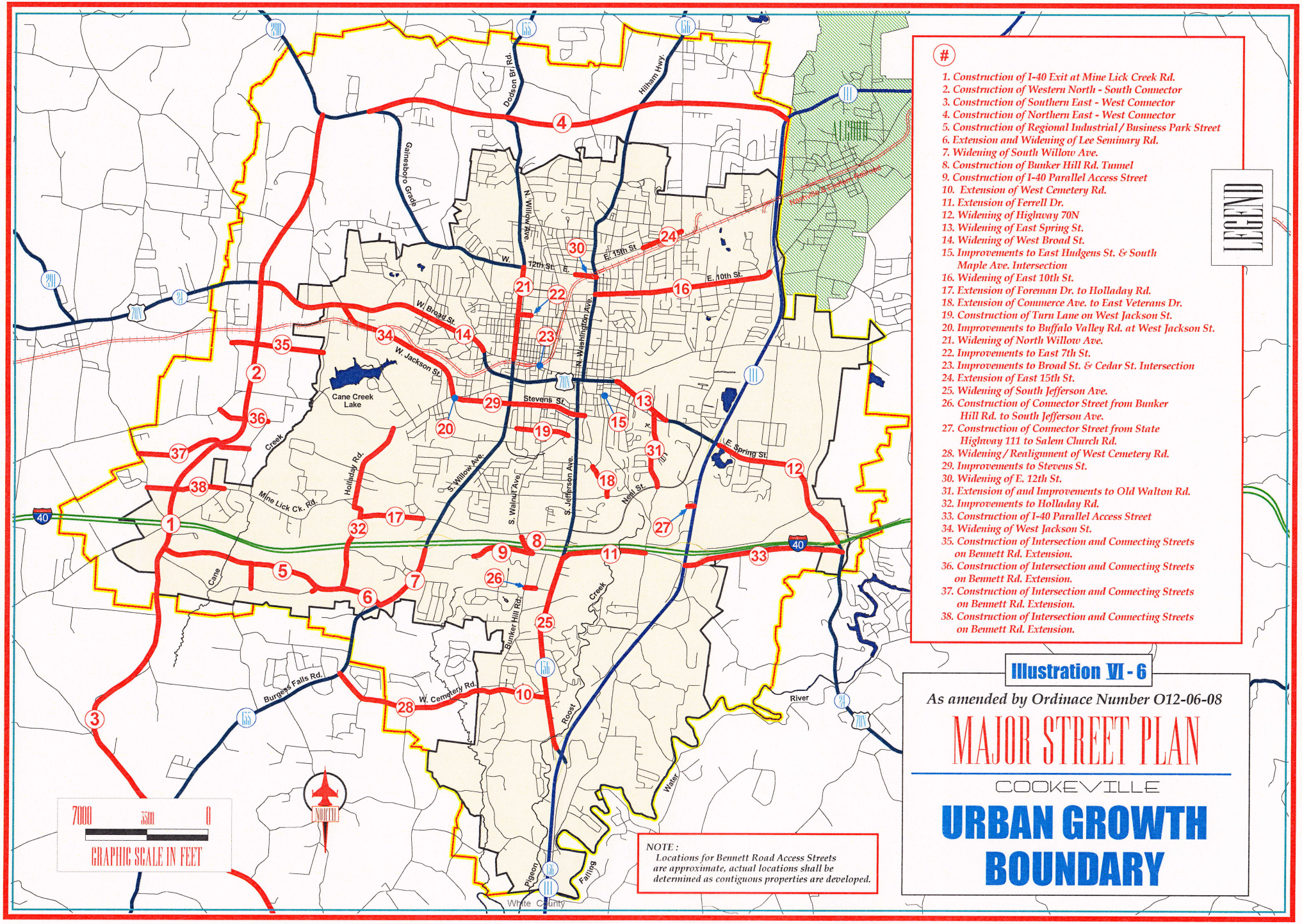
Major Street Plan

The primary purpose of a Major Street Plan is to establish a transportation system that promotes ease of movement and access to lands for development throughout the municipality and its planning area. It accomplishes this by identifying or designating existing or proposed streets which can best provide for the adequate circulation of traffic. The Cookeville Major Street Plan depicts the proposed construction of a number of new local streets. Several improvements to existing streets, such as additional lanes or realignments, are also recommended in the Plan. The completion of the improvements to existing streets or the construction of new streets identified in the plan will require funding from the local, state, and federal levels.

Illustration VI-6 depicts the Major Street Plan for the City of Cookeville and the unincorporated portions of the Urban Growth Boundary. A total of 38 projects are identified on the Major Street Plan. A summary of these projects, with no reflection of priority, is presented in the following:

1. Construction of I-40 Exit at Mine Lick Creek Road. This project involves the construction of an interchange on I-40 at Mine Lick Creek Road and is locally referred to as the "5th Exit". It was identified in the 1999 Major Street Plan. The completion of the "5th Exit" is vital for access to a proposed regional industrial/business park. It will also serve as a connection point for a proposed western north-south route between I-40 and State Highway 290. Funding for this project is expected to primarily be from federal and state monies.

2. Construction of Western North-South Connector. This project involves the construction of a three to five lane major arterial connecting I-40 to State Route 290. It was identified in the 1999 Major Street Plan. It will provide enhanced traffic circulation for the western and northern sections of Cookeville and Putnam County and direct access for these areas to the proposed regional industrial/business park. Funding for this project is expected to be from federal, state, and local monies.


LEGEND
#
1. Construction of I-40 Exit at Mine Lick Creek Rd.
2. Construction of Western North - South Connector
3. Construction of Southern East - West Connector
4. Construction of Northern East - West Connector
5. Construction of Regional Industrial / Business Park Street
6. Extension and Widening of Lee Seminary Rd.
7. Widening of South Willow Ave.
8. Construction of Bunker Hill Rd. Tunnel
9. Construction of I-40 Parallel Access Street
10. Extension of West Cemetery Rd.
11. Extension of Ferrell Dr.
12. Widening of Highway 70N
13. Widening of East Spring St.
14. Widening of West Broad St.
15. Improvements to East Hudgens St. & South Maple Ave. Intersection
16. Widening of East 10th St.
17. Extension of Foreman Dr. to Holladay Rd.
18. Extension of Commerce Ave. to East Veterans Dr.
19. Construction of Turn Lane on West Jackson St.
20. Improvements to Buffalo Valley Rd. at West Jackson St.
21. Widening of North Willow Ave.
22. Improvements to East 7th St.
23. Improvements to Broad St. & Cedar St. Intersection
24. Extension of East 15th St.
25. Widening of South Jefferson Ave.
26. Construction of Connector Street from Bunker Hill Rd. to South Jefferson Ave.
27. Construction of Connector Street from State Highway 111 to Salem Church Rd.
28. Widening / Realignment of West Cemetery Rd.
29. Improvements to Stevens St.
30. Widening of E. 12th St.
31. Extension of and Improvements to Old Walton Rd.
32. Improvements to Holladay Rd.
33. Construction of I-40 Parallel Access Street
34. Widening of West Jackson St.
35. Construction of Intersection and Connecting Streets on Bennett Rd. Extension.
36. Construction of Intersection and Connecting Streets on Bennett Rd. Extension.
37. Construction of Intersection and Connecting Streets on Bennett Rd. Extension.
38. Construction of Intersection and Connecting Streets on Bennett Rd. Extension.
Illustration VI - 6
As amended by Ordinace Number O12-06-08
MAJOR STREET PLAN
COOKEVILLE
URBAN GROWTH BOUNDARY
NOTE :
Locations for Bennett Road Access Streets are approximate, actual locations shall be determined as contiguous properties are developed.
7000 3500 0
GRAPHIC SCALE IN FEET
NORTH
Cane Creek Lake
Gainesboro Grade
Dodson Br. Rd.
Hillham Hwy.
N. Willow Ave.
W. 12th St.
E. 15th St
E. 10th St.
W. Broad St.
W. Jackson St.
N. Washington Ave.
Stevens St.
E. Spring St.
Neill St.
S. Willow Ave.
S. Walnut Ave.
S. Jefferson Ave.
Holladay Rd.
Mine Lick Ck. Rd.
Creek
Cane
Bunker Hill Rd.
Creek
Burgess Falls Rd.
W. Cemetery Rd.
Roost
Water
River
Pigeon
Falling
White County

3. Construction of Southern East-West Connector. This project involves the construction of a three to five lane major arterial connecting State Highway 111 in White County to the "5th Exit" on I-40. It was identified in the 1999 Major Street Plan. This project would provide enhanced traffic circulation for the southwestern section of Cookeville and Putnam County and connect the proposed regional industrial/business park with the regional airport in White County. Funding for this project would include federal, state, and local monies.

4. Construction of Northern East-West Connector. This project involves the construction of a three to five lane major arterial connecting State Highway 111 with State Highway 290. It was identified in the 1999 Major Street Plan. Funding for this project would include federal, state and local monies.

5. Construction of Regional Industrial/Business Park Street. The project involves the construction of a three to five lane street for the development of regional industrial/business park south I-40 and east from Holladay Road to the proposed "5th Exit" at Mine Lick Creek Road. Funding for this project would include federal, state and local monies.

6. Extension and Widening of Lee Seminary Road. This project involves extending and widening Lee Seminary Road westward from South Willow Avenue to Holladay Road. It is intended to provide access from South Willow Avenue to the proposed regional industrial/business park. Funding for this project would primarily involve local monies with possible industrial grant monies.

7. Widening of South Willow Avenue. This project involves widening South Willow Avenue to five lanes south from I-40 to the proposed extension of Lee Seminary Road. It was identified in the 1999 Major Street Plan. It is necessary due to existing traffic volumes and to provide better access to the proposed regional industrial/business park. Funding would include state and local monies.

8. Construction of Bunker Hill Road Tunnel/Bridge. This project involves the construction of a tunnel under or a bridge over I-40 to connect Bunker Hill Road with South Walnut Avenue on the north side of I-40. It was identified in the 1999 Major Street Plan. It will enhance traffic flows by providing an additional route connecting the municipality on either side of I-40. Funding would include federal, state, and local monies.

9. Construction of I-40 Parallel Access Street. This project involves the construction of a two or three lane parallel access street extending westward from Bunker Hill Road south of I-40 to Green Gate Lane. It is intended to connect South Willow Avenue and South Jefferson Avenue and provide access to lands for development. Funding for this project would primarily be local monies with possible developer participation.

10. Extension of West Cemetery Road. This project involves extending West Cemetery Road eastward from Bunker Hill Road to South Jefferson Avenue. It was identified in the 1999 Major Street Plan. It will improve traffic flows by providing enhanced east-west movement and will provide access to a proposed K-8 school on South Jefferson Avenue. Funding for this project would be primarily local monies.

11. Extension of Ferrell Drive. This project involves extending Ferrell Drive eastward from South Jefferson Avenue parallel to I-40 to South Maple Avenue. It was identified in the 1999 Major Street Plan. It is intended to enhance traffic flow by addressing the lack of connection between South Jefferson Avenue and South Maple Avenue south of I-40. Funding would include state and local monies.

12. Widening of Highway 70N. This project involves widening Highway 70N to five lanes east from Highway 111 to I-40. It was identified in the 1999 Major Street Plan. It is intended to improve east-west traffic circulation through the municipality. Funding for this project would primarily be federal and state monies.

13. Widening of East Spring Street. This project involves widening East Spring Street to three or five lanes from Avery Trace Middle School west to Broad Street. It is intended to improve traffic flow on this section of Highway 70N, which is currently operating at the lowest Level of Service. Funding would include state and local monies.

14. Widening of West Broad Street. This project involves widening West Broad Street to three or five lanes from West Spring Street west to the proposed western north-south connector. It was identified in the 1999 Major Street Plan. It is intended to improve traffic flow on this section of Highway 70N, which is projected to be operating at the lowest Level of Service during the planning period. Funding would involve state and local monies.

15. Improvements to East Hudgens Street and South Maple Avenue Intersection. This project involves the realignment of the intersection East Hudgens Street and South Maple Avenue. Funding would involve local monies.

16. Widening of East 10th Street. This project involves widening East 10th Street to five lanes from State Highway 111 east to North Washington Avenue. It is intended to improve traffic flow on a street that is currently operating at the next to lowest Level of Service. Funding would primarily be local monies with the possibility of grants.

17. Extension of Foreman Drive. The project involves the extension of Foreman Drive to Holladay Road. It is intended to enhance traffic flows by providing a continuous east-west route through the municipality. Funding would involve local monies.

18. Extension of Commerce Avenue to Veterans Drive. This project involves the extension of Commerce Avenue from Whitson Avenue to Veterans Drive. It was identified in the 1999 Major Street Plan and was partially completed with the construction of Commerce Drive from South Jefferson Avenue to Whitson Avenue. It is intended to improve traffic flows by reducing the amount of traffic on South Jefferson Avenue. Additionally it will provide access to lands for development. Funding for this project would primarily be local monies with possible developer participation.

19. Construction of Turn Lane on West Jackson Street. This project involves the construction of a turn lane on West Jackson Street from South Jefferson to South Willow Avenues. It was identified in the 1999 Major Street Plan and has been partially completed with a turn lane installed at Scott Avenue. Funding would involve local monies.

20. Improvements to Buffalo Valley Road at West Jackson Street Intersection. This project involves the construction of turn lanes on Buffalo Valley Road at its intersection with West Jackson Street. It was identified in the 1999 Major Street Plan. Funding would involve local monies.

21. Widening of North Willow Avenue. This project involves constructing a turn lane on North Willow Avenue from Broad Street to 12th Street. It was identified in the 1999 Major Street Plan. It is intended to improve traffic flow on a street that provides the primary access to Tennessee Technological University and Cookeville Regional Medical Center. Funding for this project would primarily be state monies.

22. Improvements to East 7th Street. This project involves widening East 7th Street to three or four lanes from Medical Center Boulevard eastward to North Willow Avenue. The improvements would also include the provision of sidewalks. It is intended to provide enhanced access to the university and regional medical center. Funding would involve local monies.

23. Improvements to Broad Street and Cedar Street Intersection. This project involves realignment of the intersection. It was identified in the 1999 Major Street Plan. Funding would involve local monies.

24. Extension of East 15th Street. This project involves extending East 15th Street eastward from Brown Avenue to Fisk Road. It was identified in the 1999 Major Street Plan. It is intended to provide improved traffic circulation. Funding would be through local monies.

25. Widening of South Jefferson Avenue. This project involves widening to five lanes South Jefferson Avenue from Interstate 40 to State Highway 111. It was identified in the 1999 Major Street Plan. Funding would primarily involve state monies.

26. Construction of Connector Street from Bunker Hill Road to South Jefferson Avenue. This project involves the construction of a three lane connector street from Bunker Hill Road to South Jefferson Avenue south of Interstate 40. It was identified in the 1999 Major Street Plan. Funding would involve local and possibly private monies.

27. Construction of Connector Street from State Highway 111 to Salem Church Road. This project involves the construction of a three lane connector street and the signalization of State Highway 111. It is intended to provide enhanced access to properties for commercial development on the eastern and western sides of State Highway 111. Funding would involve private, state and local monies.

28. Widening of West Cemetery Road. This project involves widening and realigning West Cemetery Road from Bunker Hill Road west to South Willow Avenue. This project is intended to enhance east-west traffic flow. Funding would be through local monies.

29. Improvements to Stevens Street. This project involves widening the existing lanes of Stevens Street from South Lowe Avenue west to Buffalo Valley Road and the realignment of the intersection of Stevens Street and Buffalo Valley Road so that Stevens Street connects with West Jackson Street. This project is intended to enhance traffic flow by providing a longer direct east-west route through the city. Funding would be through local monies.

30. Widening of West 12th Street. This project involves widening West 12th Street from North Washington Avenue west to match the width of the remaining portion of the street. Funding would be through local monies.

31. Extension of and improvements to Old Walton Road. The project involves widening the existing lanes and providing sidewalks along Old Walton Road from Neal Street north and extending the street to East Spring Street. This project is intended to enhance north-south traffic flow. Funding would be through local monies.

32. Improvements to Holladay Road. The project involves widening the existing lanes and providing sidewalks along Holladay Road between Lee Seminary and Buffalo Valley Roads. This project is intended to enhance north-south traffic flow and provide improved access to a proposed regional industrial-business park. Funding would be through local monies.

33. Construction of I-40 Parallel Access Street. This project involves the construction of a two or three lane parallel access street extending eastward to State Highway 111 south of I-40 to U. S. Highway 70N. It is intended to increase east-west mobility south of I-40 and provide access to lands for development. Funding for this project would primarily be local monies with possible developer participation.

34. Widening of West Jackson Street. This project involves constructing a turn lane on West Jackson Street from Buffalo Valley Road to West Broad Street. It is intended to improve traffic flow. Funding would be through local monies.

Street Improvements Plan

As a means of providing a coordinated effort for completing needed improvements to existing municipal streets, the preparation of a systematic Street Improvements Plan is essential. The purpose of this plan is to identify and prioritize local streets for improvement. The necessary improvements can range from general repairs to complete reconstruction. In most cases, however, the improvements consist of street resurfacing. It is important that the street upgrades scheduled in the plan be coordinated with any underground utility repairs or replacements.

To establish the priorities for improvements to the municipality's streets the existing street conditions identified in the 2008 inventory can be utilized. Other factors to be considered in determining the priorities are traffic volumes and land use density. When street upgrades involve widening of the pavement surface, it is also important that available rights-of-way be considered.

Illustration VI-7 depicts the recommended priorities for street improvements in the municipality. Three priority levels are depicted on the illustration. First priority reflects improvements that should be completed in one to two years, second priority reflects improvements that should be completed in three to five years, and third priority reflects improvements that should be completed in more than five years. The improvement of the local street system in the City of Cookeville will primarily be the responsibility of the Public Works Department.

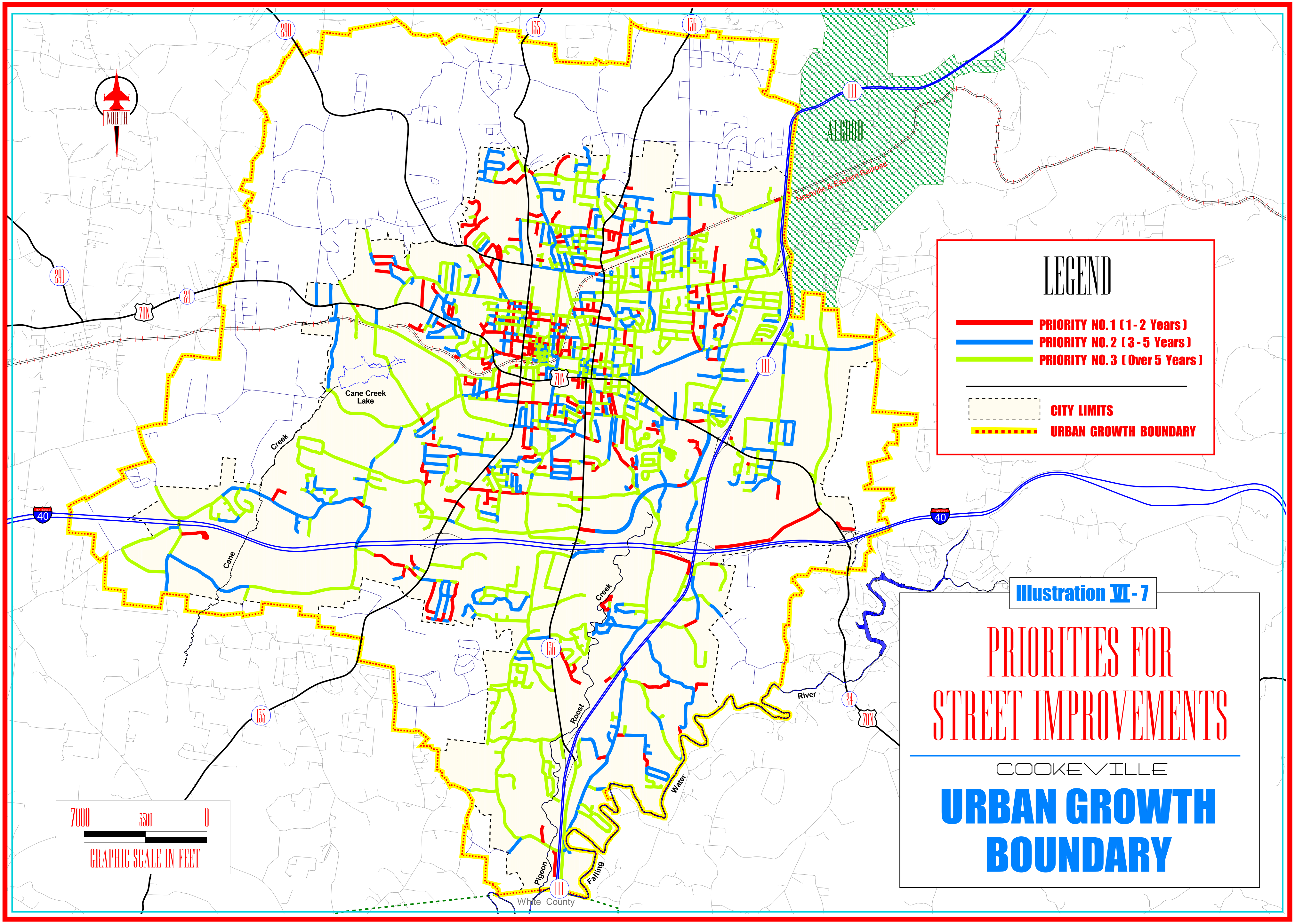


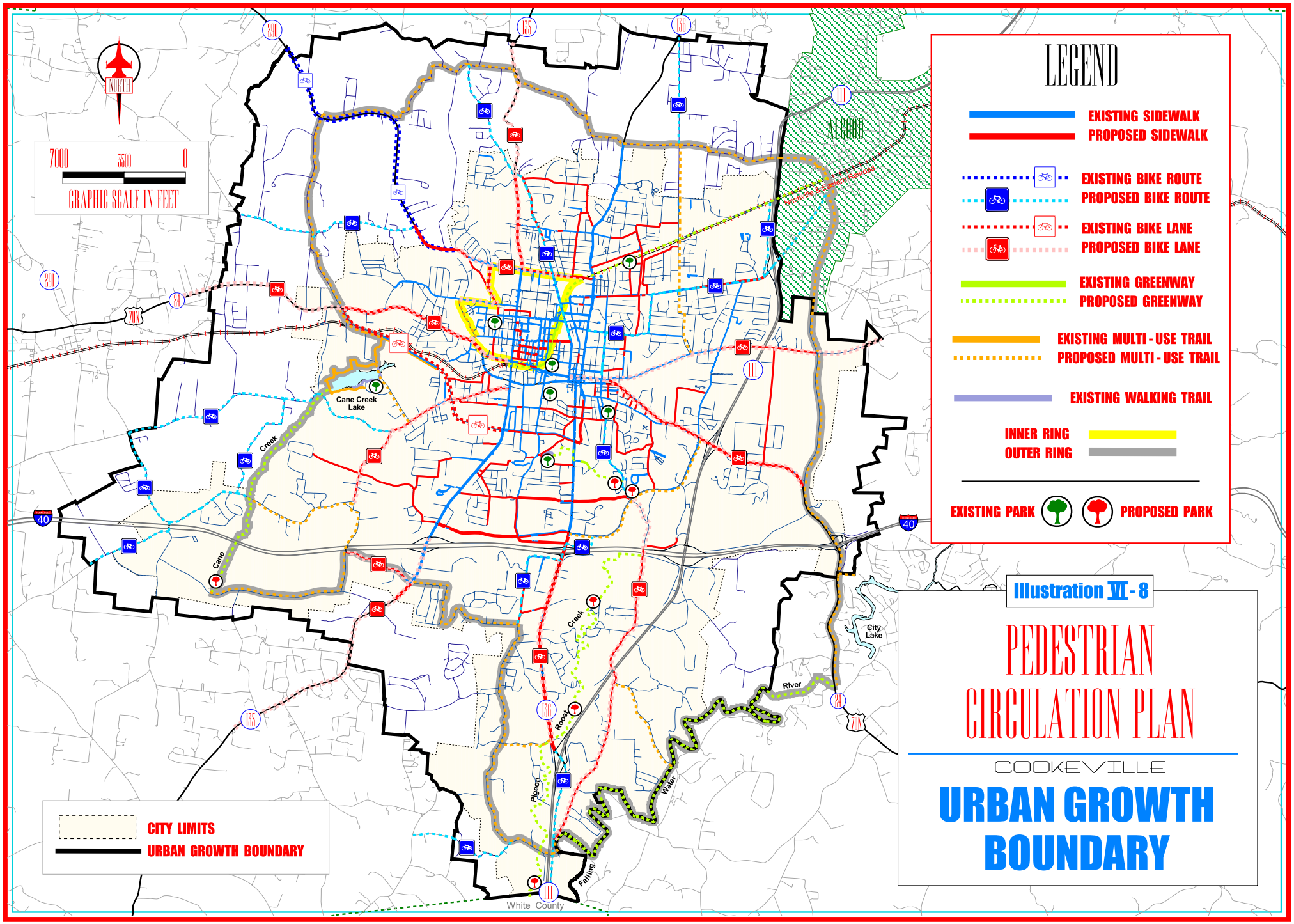
Illustration VI-7
PRIORITIES FOR
STREET IMPROVEMENTS
COOKEVILLE
URBAN GROWTH
BOUNDARY
LEGEND
PRIORITY NO. 1 (1 - 2 Years)
PRIORITY NO. 2 (3 - 5 Years)
PRIORITY NO. 3 (Over 5 Years)
CITY LIMITS
URBAN GROWTH BOUNDARY
NORTH
7000
3500
0
GRAPHIC SCALE IN FEET
ALGOOD
Nashville & Eastern Railroad
Cane Creek Lake
Cane
Creek
Roost
Pigeon
Falling
Water
River
White County
40
111
70N
24
135
136
290
291

Pedestrian/Non-Vehicular Circulation Plan

The Pedestrian and Bicycle Circulation Plan prepared by the Cookeville Greenways, Bike Trails, and Pedestrian Circulation Task Force and adopted by the City of Cookeville in 2003 remains current. The envisioned pedestrian and non-vehicular network is depicted in Illustration VI-8. Approximately 195 miles or over 1,000,000 linear feet of facilities are recommended for development. The plan consists of three (3) primary components (an outer ring, an inner ring, and spoke routes) composed of a mixture of facilities.

The outer ring is proposed for a location along the perimeter of the city and the unincorporated planning area. It has an estimated length of 34 miles and would consist of primarily multi-purpose facilities. The inner ring would have at its center the campus of Tennessee Tech and would connect with the Cookeville Regional Medical Center and the downtown area. It is also composed mostly of multi-use facilities with a total estimated length of 4.3 miles. Approximately 157 miles of spoke routes are proposed. These spoke routes would serve to link the outer and inner rings and connect to routes leading out of the city. Of the facilities proposed in the Plan sidewalks, at over 66 miles, make up the largest portion in terms of length. Over 53 miles of bike lanes, 31 miles of trails, 24 miles of bike routes, and 20 miles of greenways are proposed.

In the 2003 Pedestrian and Bicycle Circulation Plan, priorities, design guidelines, and implementation strategies were established and funding sources identified for the completion of the recommended improvements and are incorporated as a part of this Plan.


NORTH
7000 3500 0
GRAPHIC SCALE IN FEET
LEGEND
EXISTING SIDEWALK
PROPOSED SIDEWALK
EXISTING BIKE ROUTE
PROPOSED BIKE ROUTE
EXISTING BIKE LANE
PROPOSED BIKE LANE
EXISTING GREENWAY
PROPOSED GREENWAY
EXISTING MULTI-USE TRAIL
PROPOSED MULTI-USE TRAIL
EXISTING WALKING TRAIL
INNER RING
OUTER RING
EXISTING PARK
PROPOSED PARK
Illustration VI-8
PEDESTRIAN CIRCULATION PLAN
COOKEVILLE
URBAN GROWTH BOUNDARY
CITY LIMITS
URBAN GROWTH BOUNDARY
Cane Creek Lake
Cane Creek
Roosy Creek
Pigeon Falling Water
City Lake
River
White County
Tennessee & Western Railroad

CHAPTER VII

THE DEVELOPMENT PLAN

INTRODUCTION

A primary concern for most progressive communities is whether they will be able to guide and provide for their future growth and development. The Cookeville Comprehensive Plan, through the Development Plan presented in this Chapter, establishes how the municipality can best accommodate spatial growth during the twenty-year planning period. The Development Plan should serve as a general guide for the City of Cookeville and its urban growth area. It is derived from an analysis made of past events affecting development, governmental structure, natural factors, socio-economic factors, existing land use and the existing transportation system. It is also directly based on several major assumptions, factors, issues and trends.

The Development Plan requires the establishment of development goals reflective of the level of the growth desired. Objectives based on the development goals, and policies to achieve these objectives, are presented in this Chapter. These goals, objectives and policies represent detailed guidelines for future development decisions. These goals, objectives and policies are further reflected in the Future Land Use Concept Plan which is intended as a general guide for physical development decisions.

MAJOR ASSUMPTIONS, FACTORS, ISSUES AND TRENDS

The major assumptions, findings, and trends identified in the preparation of this plan are presented below. These assumptions represent the findings of the previous chapters, and are the forces which frame the goals, objectives, and policies of this plan. The major assumptions, factors, issues and trends identified in this plan that will directly affect the future land use and transportation of the City of Cookeville, are as follows:

- The local government will continue to support economic and community development and the municipality will continue to have a strong planning program.
- The impact of the national economic collapse on the local economy will be minimal.
- The municipality currently has funds available, although limited, for capital budgeting and the implementation of a public improvements program.
- Natural factors, primarily flooding, sinkholes, and topographic constraints, moderately limit areas for development in the municipality and its urban growth area.
- Appropriate actions will be taken to protect the environment and to promote green infrastructure and the utilization of low impact and sustainable development.
- Moderate population growth is projected for the municipality and county during the planning period.

- The elderly sector of the municipality's population is expected to moderately increase as a percentage of the total population.
- The percentage of the population with incomes below the poverty level is not expected to increase.
- Public and private services, retail, and to a lesser degree, light industrial are projected to be the primary sources of employment for the municipality and county during the planning period.
- Tennessee Tech University and the Cookeville Regional Medical Center will continue to grow and expand during the planning period.
- There are small concentrations of dilapidated or deteriorated housing located within the municipality.
- The municipality has a limited number of large vacant commercial parcels for large scale commercial development.
- The municipality's CBD has become a viable location for private and public service enterprises and is expected to remain so.
- The proposed development of a Regional Industrial-Business Park in the western portion of the municipality is expected to significantly address the availability of land for large-scale industrial/business development during the planning period.
- The municipality is projected to continue to be a primary provider of locations for large-scale commercial and industrial developments.
- Interstate 40 and State Highway 111 will continue to serve as major transportation routes.
- The primary transportation problems in the municipality are the lack of a complete circumferential route and an inadequate amount of continuous streets through the city.
- Multi-modal forms of transportation, including transit, will be sought and supported during the planning period.
- The municipality's water and sewer treatment capacities will be expanded, if necessary, to meet the projected demands for future development.
- The extension and upgrading of utility lines will be necessary to accommodate significant growth and development.
- The municipality has a limited amount of unconstrained vacant land to satisfy future land use needs.
- Annexation into the urban growth area is expected to provide some of the necessary lands for future residential and commercial development.

FUTURE LAND USE NEEDS

The population projections presented in Chapter IV indicate that the city's population will increase to 39,384 by the year 2030. This is an increase of 12,728 from the 2009 certified population of 26,656. To determine future land use needs the inventory of existing land use completed in Chapter V is utilized to calculate existing densities of development. The existing land use densities are then applied to the projected population counts to estimate future land use needs. Presented in the following are projected land use needs to the year 2030 for each of the land use categories.

Residential

Based on the 2008 existing land use inventory, approximately 25 percent of the total land area or 5,313 acres in Cookeville is occupied by residential land uses. These residential land uses consists of approximately 13,003 dwelling units. The 5,313 acres of residential land use, when applied to the 2009 certified population of 26,656, result in a residential density of 5.0 per persons per acre. When this density is applied to the projected population increase then an additional 2,546 acres of land will be necessary to meet the residential land use demands by the year 2030.

Commercial/Private Services

According to the 2008 inventory, 1,572 acres of land in Cookeville are occupied by commercial and/or private service land uses. This results in a commercial/private service density of 17.0 persons per acre. When this density is applied to the projected population increase then an additional approximately 749 acres of land will be needed to meet the commercial/private service land use demands by the year 2030.

Industrial

It is expected that the City of Cookeville will continue as the major employment center for Putnam County and for a number of adjacent counties. The 2008 land use inventory indicates that 690 acres of land in Cookeville are used for industrial purposes. This indicates an industrial land use density of 38.6 persons per acre of industrial land. When this density is applied to the projected population increase then approximately 330 additional acres of land will be needed to meet the industrial land use needs by the year 2030.

Public/Religious/Cultural/Recreational

The importance of the City of Cookeville to Putnam County and the Upper Cumberland Region as a principal provider of public services, religious, cultural and recreational land uses is projected to continue through the 20-year planning period. According to the 2008 inventory 1,660 acres of land in Cookeville are utilized by public services, cultural or recreational land uses. This results in a density of 16.1 persons per acre. Applying this density to the projected population increase indicates that an additional approximately 790 acres of land will be needed to meet the public service, cultural and recreational land use demands by the year 2030.

Utilities

The City of Cookeville is the largest provider and location for utilities in Putnam County. Within the municipality approximately 91 acres of land are occupied by various utilities, which include the facilities necessary for the city's water, sewer, electric and gas systems. The 91 acres represents a density of 293.0 persons per acre of land used for utilities. When this density is applied to the projected population increase approximately 43 additional acres of land will be needed to meet the land use needs of the various utilities by the year 2030.

Transportation

Land used for transportation purposes occupy approximately 2,507 acres of land in the City of Cookeville. This indicates a density of 10.6 persons per acre of land occupied by transportation uses. Applying this density to the projected population increase indicates that an additional approximately 1,200 acres of land will be needed to meet the transportation land use demands by the year 2020.

Market Factor

The exact projection of future land use needs is difficult if not impossible due to unpredictable events. Dramatic upswings or downswings in the national economy will affect future land use development. The construction of major thoroughfares will spur construction. A decision by a major employer to locate in the area will affect all areas of land use development. To account for the impact of unpredictable events a market or safety factor is traditionally applied to future land use projections. A conservative market factor of ten (10) percent is utilized in the projected future land use needs for the City of Cookeville.

Summary of Future Land Use Needs

A summary of the year 2030 projected land use needs for the City of Cookeville by land use category are presented in Table VII-1.

TABLE VII-1
CITY OF COOKEVILLE
PROJECTED LAND USE NEEDS
BY 2030

LAND USE CATEGORY	CURRENT DENSITY PER ACRE	FUTURE ACREAGE NEEDED
Residential	**5.0**	**2,546**
Commercial	**17.0**	**749**
Industrial	**38.6**	**330**
Public, Religious, Cultural, and Recreational	**16.1**	**790**
Utilities	**293.0**	**43**
Transportation	**10.6**	**1,200**
SUBTOTAL		**5,658**
Plus 10 % Market Factor		**566**
TOTAL		**6,224**

DEVELOPMENT GOALS

To adequately plan and allocate for its future land use, it is necessary that a community establish general developmental goals. In the context of a future land use plan, a goal is a general statement reflecting the objectives in the areas of environmental protection, land development, transportation, and service delivery the community wants to achieve. The overall goal of this land use plan for the City of Cookeville is to provide a quality living and working environment for the residents of the municipality.

The following goals are general statements that the Cookeville Planning Commission believes to be the desires of the citizens regarding the future development of the municipality.

- *To preserve, protect and enhance the quality of life in Cookeville while encouraging a more harmonious and higher standard of development.*
- *To promote orderly, desirable growth in appropriate locations at a rate in accord with the desires of the citizens of Cookeville.*
- *To preserve the natural beauty of the Cookeville area and to protect and rebuild the ecosystem components providing vital hydrological, geological and biological functions.*
- *To promote and support developments that are sustainable, have a low impact on the environment, and utilize green infrastructure.*
- *To provide for adequate housing to meet the needs of all residents while ensuring that all residential developments provide pleasant and harmonious living environments, are served by adequate vehicular and pedestrian circulation systems, are served by adequate infrastructure, and are properly related to other municipal land uses.*
- *To provide for an adequate supply of goods and commercial services with varied sites suitable for a variety of outlets.*
- *To retain and expand the industrial development base to provide for the essential employment needs of Cookeville and Putnam County.*
- *To promote and support those activities that are designed to maintain Cookeville as the public and private service center for the Upper Cumberland Region.*
- *To provide adequate and efficient public facilities and services, and to provide a diversity of cultural and recreational opportunities.*
- *To provide utility services that meet and anticipate the needs of the municipality.*
- *To provide an efficient and effective multi-modal transportation system, including non-vehicular and transit facilities, with appropriate linkages and capacities.*
- *To encourage the development of vacant land which has less natural restrictions and which has the necessary infrastructure.*

DEVELOPMENT OBJECTIVES AND POLICIES

To achieve the development goals established in this plan, objectives and policies are utilized. Objectives are more specific, measurable statements of the desired goals. Policies represent rules or courses of action that indicate how the goals and objectives of the plan will be realized.

The objectives and policies contained in this document represent the official public policy guidelines concerning land use and transportation matters for decision-making by the City of Cookeville. The policies are presented as guidelines to be followed by developers, builders, neighborhood groups, civic organizations, and other private and public interests engaged in and concerned about growth and development in the community. The policies are also presented so that interested individuals and groups can better anticipate the City's decisions on future matters.

In the following section general growth management objectives and policies are presented. This section is followed by objectives and policies for the natural environment and for each of the specific land use categories.

GENERAL DEVELOPMENT AND GROWTH MANAGEMENT

Growth has always been viewed as an inherent component of urban settlements. Most cities understand that growth is necessary for long-term viability and most encourage growth to varying extents. However, in more and more communities the costs and benefits of continued growth have emerged as public issues. There is often hesitation over accommodating further development with its consequences of greater numbers of residents and higher densities, economic expansion, rapid consumption of land, and alteration of the natural environment.

The City of Cookeville fully anticipates growth and understands its importance as a part of those forces that beneficially affect the community's quality of life. At the other end of the spectrum, the policy of growth at any cost has long-term detrimental impacts and is not supported by the municipality. The approach taken by Cookeville will be that of managed growth. To guide general growth and development the following objectives and policies are adopted:

A. Objective - Protection and enhancement of the natural environment.

Policies

1. Ensure that areas less suitable for development due to natural factors are avoided or preserved when possible and, if developed, that appropriate remedial measures are taken.

2. The City shall promote and support the use of green infrastructure for all new development.

3. Decisions on development proposals shall be based on an analysis of soils, wetlands, slope, depth to bedrock, and location relative to sinkholes and floodable areas.

4. Where the condition of the land is in doubt, and it appears that an unsuitable condition might exist, the potential developer shall be responsible for undertaking the necessary studies to prove the feasibility of the land to support the proposed development.

5. All development proposals will be assessed for the appropriateness of engineering design and the installation of all necessary drainage facilities and appurtenances.

6. In each drainage basin, the effect of future development on drainage and flooding should assist in formulating land use decisions within that basin.

7. The City should not accept the dedication of drainage facilities or appurtenances which have not been designed and installed in accordance with approved standards and these development policies.

8. The City shall ensure that the pre-development run-off discharge rate of any site is not increased as a result of development. Proposed future developments should not increase flooding potential, substantially alter drainage patterns, or degrade natural water quality. Reductions of the run-off discharge rate shall be sought for the redevelopment of existing sites.

9. Areas located in a designated floodplain should be developed only in conformance with the National Flood Insurance Program.

10. Major natural drainage ways, including sinkhole areas, which are a part of the natural system of dispersing normal flood run-off in any drainage basin, shall not be altered unless in accordance with the provisions of the City of Cookeville and appropriate state and federal regulations.

11. Ground water shall be protected by restricting the use of septic tanks to appropriate soil types and land formations.

12. Development proposals involving soil disturbance shall be in conformance with appropriate sediment and erosion control measures.

13. Areas of excessive slope and those with highly erodible soils should be conserved as open space if development would cause soil and/or water degradation, or where the terrain possesses special scenic or recreational value.

14. Areas with slopes in excess of ten (10) percent should only be developed where engineering documentation is available to prove that no adverse affects will occur to housing construction, road stability, drainage and erosion.

15. Mature vegetation, particularly trees, should be protected and replanting should be required where existing vegetation is removed or disturbed during construction.

16. Vegetation, preferably trees and shrubs, should be used as an alternative to man-made devices for buffering, insulation, erosion control and water quality protection, whenever practical.

17. The City shall develop appropriate criteria or measures to ensure the protection of environmentally sensitive and other valuable areas.

B. Objective - Coordination of the demand for public services with the City's capacity to supply them.

Policies

1. All new development, whether public or private, shall have appropriate infrastructure which shall be properly installed at the expense of the developer.

2. All future expansions or extensions of the City's services, facilities, or utilities should be in conformance with an adopted phasing plan based on the Community Facilities Plan and Capital Budget.

3. Services provided by the City should be used as a tool to direct or discourage development in specific directions.

4. Availability and capacity of existing services and utilities should be used as criteria in determining the location of higher intensity uses in the City and in decisions concerning annexation.

5. To aid developers in determining those areas most conducive to development, status reports on the infrastructure system should be routinely updated.

6. Developments with requirements beyond existing levels of police and fire protection, parks and recreation, and utilities shall only be allowed to develop when such services can be adequately provided and maintained.

7. Inventories of existing public and private recreational facilities and of community needs should be used as input for planning future facilities and prioritizing the upgrading of existing recreational areas.

8. Appropriate infill development should be encouraged to enhance existing development and to make more efficient use of existing services and utilities.

C. Objective - Preservation of the City's fiscal stability.

Policies

1. Fiscal decisions concerning capital improvements and expenditures shall be based on a Community Facilities Plan and a multi-year Public Improvements Program and Capital Budget. These documents should be reviewed and updated annually by the Planning Commission and the City Council.

2. The City should establish annexation criteria in a long-range urban fringe study/annexation plan through which it will consider annexation proposals.

3. Urban development proposals that are contiguous with existing development within the City limits, or consistent with the City's phasing and annexation plans, should be encouraged through the extension of services.

4. Services provided by the City should be in conformance with an adopted phasing plan and, with the exception of water, natural gas and electricity, shall not be provided outside the City.

5. The City should continue to utilize funds from the economic development fund from the municipal budget to provide financing for industrial, business, and economic growth.

6. The City should continuously seek grant and loan opportunities to assist in the financing of infrastructure and capital facility improvements.

7. The City should encourage the preservation of the tax base through the practice of sound land use decisions.

D. Objective - Protection and enhancement of present and future livability.

Policies

1. The City should establish livability standards or criteria for assessing the impacts of development projects on the continued livability of the community. For growth management these standards or criteria should assess:

   a. Environmental impacts such as water quality degradation, destruction of wetlands, tree canopy reduction, etc.

   b. Social impacts such as public safety, availability of community services, etc.

   c. Economical and fiscal impacts such as budget constraints, job creation or loss, etc.

   d. Impacts to transportation systems and public services and facilities, such as traffic volumes, water production and treatment capacity, sewer treatment capacity, etc.

2. Land use, site planning, and urban design criteria should be utilized to promote pleasant, functional and understandable relationships between land uses.

3. Development standards promoting quality design shall be created to encourage desired types of development.

4. Planning for community facilities and services should be based on the principal of maintaining or increasing the current levels of service provision.

5. Community development should concentrate on ways to encourage young people to remain in Cookeville/Putnam County to live and work.

NATURAL ENVIRONMENT

To ensure that the vital hydrological, geological and biological functions of the ecosystem are adequately protected and the various components of the natural environment are properly managed the following objectives and policies are adopted:

A. Objective – Protect critical environmental areas and encourage and support responsible use of natural resources.

Policies

1. Critical natural resource areas should be identified and acquired by the City when feasible.

2. Public education and involvement shall be pursued for natural resource and environmental protection.

3. The City should provide incentives for property owners and developers that utilize preferred stewardship practices.

4. The City shall protect critical natural resource areas such as floodplains, streams, riparian zones, wetlands and sinkholes.

5. The City should protect surface water functions by preserving and enhancing natural drainage systems whenever possible.

6. The critical natural drainage function of sinkholes should be protected by minimizing surface water, drainage and structural impacts within sinkhole areas and by prohibiting blockage from trash and debris.

7. The City should promote and support activities to reduce the pollution of streams and water resources.

8. The City should encourage no net loss and the restoration of designated wetlands in the Urban Growth Boundary.

9. The City recognizes that development outside its Urban Growth Boundary can affect the city's natural environment and should support regional watershed management and conservation efforts.

10. The City should promote and support water conservation efforts.

B. Objective – Ensure environmental quality of air, water resources and soils and a reduction of factors affecting climate change.

Policies

1. To limit the negative effects of vehicle emissions, the City shall support and promote pedestrian and other non-motorized means of transportation and the development of public transit.

2. Compact/mixed use developments that reduce vehicular traffic should be promoted and encouraged.

3. Sustainable development practices for public and private development projects should be supported and encouraged.

4. Infill development, redevelopment of existing sites, and new development that minimizes waste stream production shall be encouraged.

5. The City shall support tree planting and the retention of existing trees.

6. Trees and vegetation on public property and rights-of-way should be protected and maintained.

7. The City should promote and support activities that will increase the overall tree canopy.

8. The City should encourage the preservation of vegetation, in particular trees, and the limitation of clearing for new development sites.

9. The City should promote and support policies and activities that reduce impermeable surfaces.

10. The City should encourage low impact development techniques designed to reduce the quantity and improve the quality of stormwater runoff.

11. Stormwater should be managed utilizing Best Management Practices and other methods to minimize non-point pollution to streams and other water bodies and to reduce downstream impacts.

12. The development of areas with slopes of 15 percent or greater shall be discouraged and shall be limited to low impact development.

13. The removal of vegetation from and the disturbance of steep slopes shall be avoided.

14. Vegetative buffers, especially trees and shrubs, should be established and maintained adjacent to streams, sinkholes, wetlands and other water features to protect water quality and prevent contamination from land disturbing activities, agricultural uses, and other possible sources.

15. The City should encourage activities that lead to preserving and connecting wildlife habitat corridors.

16. The City should promote stream bank enhancement and stream restoration.

17. Streams and other water bodies should be protected from sanitary sewer impacts.

18. The City should support standards and programs to promote adequate soil management practices.

19. Soil characteristics and capabilities should be evaluated prior to the approval of any development.

20. The City shall require adequate sediment collection, erosion control, and soil stabilization techniques at all construction sites.

RESIDENTIAL

To ensure the most appropriate development of existing and future residential areas in Cookeville and its urban growth area, the following developmental objectives and policies are adopted:

A. Objective - Provide for a variety of housing types and densities for a wide range of family incomes, sizes and life-styles while protecting and maintaining existing neighborhoods.

Policies

1. Allow housing types ranging from single-family structures to multi-family developments, including mobile homes properly located in mobile home parks.

2. Higher density infill developments should be permitted only in locations which are comparable with surrounding residential densities.

3. Land use controls should be used to foster a variety of housing types compatible with the natural landscape.

4. Encourage and concentrate higher-density housing development in the central city area and along major traffic corridors with access to retail business, pedestrian amenities, cultural activities, schools and parks.

5. Encourage lower-density housing along local streets within proximity to service centers, which are buffered from excessive noise, traffic, and conflicting development.

6. Higher density residential uses should locate in planned unit developments or in close proximity to existing higher density developments.

7. In response to erosion and drainage considerations, hillside or slope developments shall reflect design considerations and densities to minimize negative impacts.

8. Encourage the rehabilitation of existing residences, which can be purchased by low and moderate-income residents.

9. Discourage the conversion of single-family dwellings to multi-family dwellings.

10. Encourage the preservation and revitalization of older neighborhoods.

11. Encourage sound development in suitable areas by maintaining and improving transportation facilities.

12. New residential development should be designed to encourage the neighborhood concept and should be situated to be easily accessible to collector or arterial status streets.

13. Encourage the development of housing in and near the downtown area.

14. Transitional land uses or areas (linear greenbelts) or other design elements should be provided between residential neighborhoods and commercial areas in order to enhance the compatibility of land uses.

15. Encourage the averaging of housing densities throughout residential areas to promote creative design and preservation of open spaces.

16. Improve the quality of existing residential areas where necessary and feasible through both building improvements and infrastructure improvements, including the provision of public sewer, installation of underground electric service, and construction of sidewalks.

17. Encourage the provision of pedestrian oriented transportation options such as bicycle and walking paths in residential neighborhoods.

B. Objective - Ensure that new residential developments meet appropriate standards and guidelines.

Policies

1. Promote the location of new residential developments in environmentally safe and pleasing areas.

2. Natural vegetation and topography shall be preserved to the extent possible for new residential subdivisions and multi-family developments.

3. All residential subdivisions, multi-family developments and mobile home parks shall be designed in compliance with appropriate site development standards.

4. Ensure that the existing housing stock continues to be maintained and that new residential construction is developed to appropriate standards and guidelines.

5. New or expanded residential development shall be located where adequate infrastructure necessary to support such development is available or will be provided concurrently with the development.

6. Residential developments shall be designed so as to minimize the impact from contiguous incompatible uses and to enhance the aesthetics of such developments.

7. Multi-family developments, when adjacent to single family areas, should be compatible in terms of height, scale, design lighting, and landscaping.

8. Off-street parking areas for higher density developments shall be encouraged to locate to the side or rear of the structures and shall be screened from adjacent single-family areas.

COMMERCIAL AND PRIVATE SERVICES

Commercial and private services involve a wide variety of uses and range in scale from small offices and neighborhood shops to regional shopping centers. The vital business areas of the community should be protected and enhanced to help ensure their continued development in a planned context which will strengthen the local economy. To guide the continuation and expansion of these essential commercial activities, the following objectives and policies are adopted:

A. Objective - Take appropriate measures to ensure that the City of Cookeville remains as the regional center for commercial and private service land uses.

Policies

1. In conjunction with the Chamber of Commerce, recruit and retain business and service outlets that fulfill local market demands.

2. Strengthen viability of commercial developments by promoting quality design and compatibility with the existing and/or planned land use characteristics of the area.

3. Encourage and support the expansion of existing commercial areas and those that will result in the consolidation of commercial activities at central locations.

4. Promote maintenance, rehabilitation and beautification of existing commercial developments.

5. Promote the CBD as a public and private services focal point of the community.

6. Limit commercial services in the CBD to low intensity uses and low traffic generators.

7. Encourage the adaptive reuse and revitalization of existing vacant commercial structures and sites.

8. Promote the expansion of off-street parking options within the CBD area.

B. Objective - Ensure that new commercial developments or the redevelopment of existing commercial areas meet appropriate standards and guidelines.

Policies

1. All commercial developments shall be designed in compliance with appropriate site development standards.

2. Commercial development shall be approved in only those areas where adequate infrastructure is available to support such development or will be provided concurrently with such development.

3. Encourage and support the utilization of green infrastructure and sustainable building practices in new commercial developments.

4. Ensure that new commercial developments are compatible with existing or planned development of the area relative to building orientation and scale, vehicular access, lighting, noise, landscaping and signage.

5. Commercial developments should be designed so as to minimize negative impacts to residential developments and to enhance the aesthetics of such developments.

6. Commercial development should be designed so as to minimize negative impacts to the existing transportation system.

7. Strip commercial developments should be discouraged in favor of cluster developments with limited entrance and exit points.

8. Commercial uses which are high intensity traffic generators shall be located away from the CBD and on major collector or arterial status roads.

9. All new large-scale commercial developments shall be located on frontage or access roads with controlled ingress and egress points, when feasible.

10. All commercial and private service developments shall be provided with an adequate number of off-street parking spaces.

11. Commercial developments should be discouraged from providing excessive off-street parking spaces and when parking spaces above the minimum required are provided such spaces shall be constructed with pervious surfaces.

12. To the extent feasible, landscaping or other screening shall be provided between commercial and residential land uses.

13. Neighborhood commercial areas should be provided to make convenience goods and services available to residential neighborhoods.

INDUSTRIAL

The City of Cookeville is projected to remain as the primary location in Putnam County for industrial uses. The acquisition of approximately 400 acres of land for the development of a regional industrial/business park in the western portion of the municipality significantly addressed the need for additional land for industrial development identified in the 1999 Comprehensive Plan. The development of the industrial/business park and the recruitment of appropriate businesses and industries for location in the park is a primary goal of this plan. Efforts should also be taken to ensure that existing industries are retained and are able to expand when feasible.

To meet the goals for industrial land use activities, the following objectives and policies are adopted:

A. Objective - Retain and expand existing industrial base, provide adequate locations for light industrial facilities in the regional industrial/business park, and secure additional land for industrial development as necessary.

   Policies

   1. Support improvements in the local economy by providing new industrial site locations in the regional industrial/business park and by maintaining and improving existing industrial site locations.

   2. Existing industrial parks should be provided adequate services and be expanded as needed and adequate public services should be provided to private industrial parks.

   3. Encourage brownfield assessments and cleanup programs so that abandoned industrial land can be reused.

   4. Protect existing vacant industrial land by limiting rezoning and restricting the location of unrelated commercial and residential uses in industrial areas.

   5. Promote reuse and intensification of underutilized industrial buildings and sites.

   6. To provide for additional industrial land and employment in Cookeville and provide city services to those industrial activities, the City should adopt a policy to annex additional industrial properties where it is determined that such annexations are feasible.

   7. The City Council and Planning Commission should support appropriate street and traffic improvements at locations suitable for the expansion of existing industrial areas.

   8. Public officials should cooperate with, and actively support, the Putnam County Industrial Board and the Chamber of Commerce in their efforts to attract industrial prospects and to retain and promote the expansion of existing industries.

   9. Promote diversification in industrial employment opportunities to mitigate impact of potential economic down turns.

10. Encourage the recruitment of high-tech and clean industries and those involved in green technology for location in the regional industrial/business park.

11. Encourage small start up and creative industries by providing incubator space.

12. Based on locally developed criteria, industrial land uses known or suspected of having harmful impacts on the health, safety, and welfare of people, and those activities and uses which would degrade, retard, or otherwise harm the natural environment, or the economic potential of the community, shall be discouraged from locating in the City.

B. Objective - Provide appropriate standards and guidelines for new industrial development and for expansion of existing industrial uses.

Policies

1. All industrial developments shall be designed in compliance with appropriate site development standards.

2. Encourage the location of industrial uses in planned industrial parks or appropriately sited and designed mixed use developments.

3. Encourage and support the utilization of green infrastructure and sustainable building practices in new industrial developments.

4. Industrial uses should locate near transportation facilities that offer the access required by the industry. Such uses should not be allowed to create demands that exceed the capacity of the existing and future transportation network.

5. Industrial development should locate within the City consistent with the phasing plan for infrastructure, where the proper sizing of facilities such as water, sewer and transportation has occurred or is planned.

6. To the extent feasible, landscaping or other screening shall be provided to reduce the conflict and soften the impact between industrial uses and other land uses.

PUBLIC AND SEMI-PUBLIC

Even though public and semi-public facilities usually only consume a relatively small percent of an area's total development, these facilities are extremely important land uses within a community. This is especially true for the City of Cookeville as the county seat and primary provider of services in Putnam County. These uses should be convenient to the population and enhance the community's appearance, while at the same time creating the least possible conflict with adjacent land uses. The objectives and policies to be used as guidelines for public and semi-public uses are as follows:

A. Objective - Provide adequate and efficient public services and facilities which meet appropriate standards and guidelines.

Policies

1. The City should prepare a Comprehensive Community Facilities Plan based on local standards and location criteria.

2. Public facilities and services should be improved and expanded in accordance with an adopted Public Improvement Program and Capital Budget.

3. Existing facilities and services shall be adequately maintained and upgraded when necessary to meet the needs of the community.

4. Make public uses accessible by multiple modes of transportation whenever possible.

B. Objective - Provide a diversity of quality cultural and recreational opportunities.

Policies

1. Decisions concerning the provision of recreation facilities shall be guided by a Community Facilities Plan for such facilities, and shall be consistent with the Capital Budget. The Leisure Services Department's Master Plan should be used to direct detailed attention of both recreational facilities and programs.

2. Promote the joint use of parks and other public facilities, especially schools.

3. Enhance the opportunities for passive recreation through the creation of a city-wide greenway system which includes hiking and biking trails.

4. Community and neighborhood parks should be developed and appropriately located within the City.

5. The City should maximize the use of public recreational land through close coordination with federal, state and local officials.

6. Promote efforts to document, preserve and protect historic sites and structures.

7. The City should recognize the cultural contributions of religious, ethnic and educational institutions, and coordinate their efforts with publicly supported cultural institutions, events and performances.

8. Support and encourage cultural festivals as vehicles for bringing the arts to the public at low cost.

UTILITIES

Land development without the extension of adequate utilities is costly to the general public. The City of Cookeville is fortunate that it has the capability through its Water Quality Control, Electric, Natural Gas, and Public Works Departments to control the extension of utilities in most of the urban growth area. In order to achieve proper development and facilitate saving public funds, it is extremely important to coordinate the extension of utilities with the community's development plan. Therefore, the following objectives and policies should be adopted by all agencies responsible for the operation or extension of public utilities:

A. Objective - Provide adequate and efficient public utilities that are environmentally sensitive, safe and reliable, aesthetically compatible with the surrounding land uses, and available at a reasonable economic cost.

Policies

1. To meet future needs and provide for future growth, long range plans for expansion and enhancement of public utility facilities shall be developed by each of the applicable municipal departments and shall be incorporated in the municipality's Community Facilities Plan and capital budget process.

2. All new development should have adequate utilities which shall be properly installed at the expense of the developer.

3. The City should ensure that the municipal water, sewer, electric, natural gas, and storm sewer systems are adequate to meet current and future needs.

4. The health of residents shall be protected through the production of State approved potable water and the safe and efficient collection and treatment of wastewater.

5. Support technologies and techniques that reduce the consumption of natural resources and minimize the impact on the environment.

6. Support water conservation and reuse measures that reduce water supply demands.

7. Encourage energy efficiency certification in building design and operation.

8. Encourage the underground placement of overhead utilities when streets are widened and areas are redeveloped.

9. Support the rehabilitation of aging sewer and water supply infrastructure.

10. Support a regional approach to stormwater management with an emphasis on prevention of water quality degradation.

11. Promote the design, location and construction of utility facilities that reasonably minimize adverse impacts to the environment and that protect environmentally sensitive areas.

B. Objective - Provide appropriate standards and guidelines for utility facility improvements and extensions.

Policies

1. Adequate utilities should be extended into urbanizing areas on a priority basis with a rate differential between such areas and the municipality. These extensions shall meet health and safety standards.

2. Water and sewer lines of adequate size and location shall be required in all new developments and redevelopments.

3. Proper design and maintenance of stormwater management infrastructure that will reduce runoff, erosion, flooding and drainage problems shall be required in all new developments and redevelopments.

4. Promote the utilization of stormwater management facilities that result in peak rate flow and infiltration levels at new developments not exceeding pre-development levels.

5. The use of underground electrical, telephone and cable television utilities shall be required in new developments.

6. The location of utility structures for storage of equipment, substations, pump stations or similar structures should be adequately buffered and landscaped so as not to detract from the surrounding area.

7. The water distribution system should be periodically evaluated to ensure that water lines are of adequate size to provide adequate pressure for fire fighting, and that a suitable number of fire hydrants are present in all developed areas.

8. The water quality and facility guidelines set forth in the 201 Facility Plan shall be followed.

9. The City should require appropriate maintenance and repair of any privately controlled drainage facilities or appurtenances which tie into any portion of the public or other existing natural drainage systems.

10. Encourage coordination of all street construction and resurfacing and sidewalk installation and repair projects with utility construction and maintenance.

VACANT LAND AND OPEN SPACE

The land use survey indicated that there were 9,024 acres of vacant land in the City of Cookeville. As the community grows, a significant amount of this land will be pressed into urban development. Approximately 2,611 acres, or 29 percent, of this vacant land cannot be developed or would be cost prohibitive to develop due to natural factors. In addition, some of this vacant land would best be utilized as open space. To guide the future development of the vacant lands in the City of Cookeville and its projected growth area, the following objectives and policies are adopted:

A. Objective - Ensure that adequate open space is provided in the municipality to enhance its aesthetic quality.

Policies

1. Appropriately located public open spaces and general recreational uses should be provided to serve the local residents as well as visitors. These areas should be readily available and designed to serve all age groups.

2. The City should ensure that adequate amounts of open space areas are available for future populations.

3. Open space should be included as a requirement to serve every major development.

4. Encourage the preservation of environmentally fragile and sensitive areas, including wetlands, prime forestlands, floodplains and sinkhole areas.

5. Places of rare natural beauty and areas of historic interest should be preserved and maintained.

6. All publicly-owned land should be examined for its potential open space or recreational use before being sold or disposed of by the City.

7. Support the pursuit and utilization of funding mechanisms to preserve lands of environmental, scenic, historical and architectural value.

B. Objective - Ensure that appropriate standards and guidelines are followed for development of vacant land and for the provision of open space.

Policies

1. Public support and approval of development proposals that result in the conversion of prime farmlands should be reserved for those developments consistent with this plan and required for urban growth and development.

2. Areas of excessive slope should be conserved as open space, when possible, if development would cause significant soil and/or water degradation, or where the terrain possesses special scenic or recreational value.

3. Vegetation should be used as an alternative to man-made devices for buffering, insulation, erosion control and water quality protection.

4. Filling and excavation in floodplains shall only be allowed when consistent with National Flood Insurance Program regulations and allowed only after careful review of appropriate alternatives.

5. Mature vegetation, especially along stream banks should be protected from indiscriminate removal in order to enhance the aesthetic value of the landscape as well as to control erosion.

6. Consistent with National Flood Insurance Program regulations, the City shall prohibit any development in areas that have been officially designated as floodways.

7. The City should encourage light recreational and open space uses such as greenbelts within designated floodplains.

8. The City shall develop appropriate criteria and measures to ensure the protection and enhancement of environmentally sensitive and other valuable areas.

TRANSPORTATION

The future transportation system in Cookeville and its projected growth area will be affected by a number of factors. These factors include the existing street pattern, major impediments to traffic, location of major traffic generators, parking needs, growth trends, construction of new thoroughfares, and the location preferences of new development. Although the municipality cannot control all the factors that will influence its future transportation system, it can provide some direction. The following objectives and policies are presented as a guide to achieving an adequate and efficient future transportation system:

A. Objective - Provide a multi-modal transportation system that will adequately meet the future needs for growth and development.

Policies

1. All new development, whether public or private, should have an adequate transportation system which shall be properly installed at the expense of the developer.

2. Continue to coordinate planned transportation projects with the Center Hill Rural Transportation Planning Organization (RTPO).

3. All new major streets should be located in a manner that will minimize disruption to neighborhoods, open space-recreational areas, and/or environmentally sensitive areas.

4. All segments of the transportation system should be designed and located to meet future as well as present demands.

5. Promote off-street parking requirements that adequately meet the demand for parking but do not result in an oversupply of parking.

6. On-street parking for existing uses shall be permitted only where adequate street widths are available and where such parking will not reduce the current level of service of the street.

7. Promote and provide a safe and comprehensive pedestrian and bicycle circulation system.

8. Sidewalks should be extended throughout the City and should be maintained in good repair.

9. Sidewalks, or similar means of non-vehicular circulation, shall be required in new residential and commercial developments, and for all new street construction.

10. Storm sewers and curbs and gutters shall be encouraged on all new streets.

11. Streets in less than sound condition should be upgraded or improved through a street improvements program.

12. Promote and support the development and implementation of a public transit system.

13. Seek and utilize federal and state funding for the implementation of a public transit system.

B. Objective - Provide appropriate standards and guidelines for the construction of new streets and other transportation facilities.

Policies

1. Streets should be related to the topography and designed to minimize the points of traffic conflict and turning movements.

2. Ensure that environmental impacts are considered and adverse affects are minimized on all transportation improvement projects.

3. All new streets and other public ways shall be designed to incorporate storm water drainage systems that are adequate in size to handle runoff from anticipated developments.

4. All streets and other public ways shall be designed so as to provide the least interference with natural drainage ways.

5. All new streets and other public ways shall be designed and located in a manner that offers the maximum protection from flood and erosion damage.

6. New streets should be designed to incorporate appropriate landscaping to heighten the aesthetic and functional appeal both to motorists and surrounding residents.

7. Street signage and other safety features should be required at the time of development.

8. Encourage the use of traffic calming techniques such as roundabouts, grated street sections, and parking or sidewalk bump outs, to enhance existing neighborhoods and new development areas.

FUTURE LAND USE CONCEPT MAP

The Future Land Use Concept Map is intended to be visually compatible with the goals, objectives and policies of the Development Plan. The same factors from which these goals, objectives and policies were derived serve as its basis. These factors include the natural environment, socio-economic existing land use patterns, and the existing transportation system. The Future Land Use Concept Map reflects a decision-making process culminating in a desired development pattern for the municipality and its potential growth area. It is intended for use in conjunction with the goals, objectives and policies to form a framework to guide future land development decisions. These elements provide the mechanisms for coordinating and promoting different types of development based on the desires of the municipality while conserving and protecting the quality of life and natural environment.

The Future Land Use Concept Map for Cookeville and its urban growth area was created by a series of overlays utilizing the Major Street Plan from Chapter VI as a base. The overlays reflect the existing parameters and patterns of development including the environment and natural factors discussed in Chapter III, the population and employment projections presented in Chapter IV, and the existing land use, utilities and transportation facilities analyzed in Chapter V. With the Major Street Plan as the basis, general location and spatial patterns for residential, commercial, and industrial land uses were identified. This technique also allowed the municipality to make decisions where a mixture of land uses was suggested by the overlaying process. While several conceptual land use and spatial patterns were possible, Illustration VII-1 represents the municipality's choice of conceptual patterns based on local needs and desires in conformity with adopted policies.

Future Land Use Classifications

The spatial patterns of land use depicted on the Future Land Use Concept Map are based on several land use classifications. Land uses appropriate for each of these classifications are described as follows:

Open Space/Parks/Recreational – Open space and parks and recreational uses.

Rural Residential – Open space, agricultural land, and single-family residential development at a density of two (2) dwelling units per acre or less.

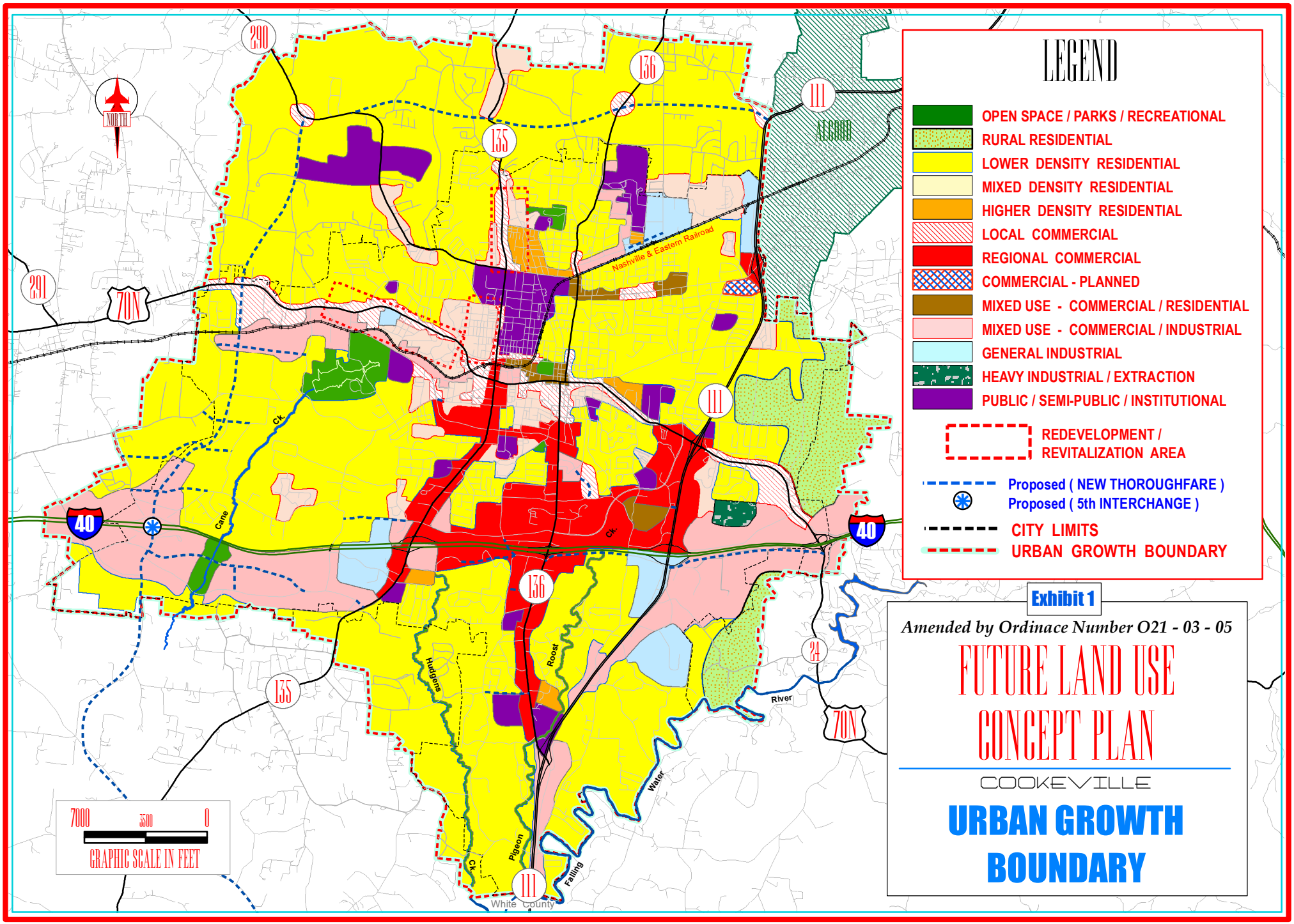
Lower Density Residential – Single-family residential development at a density of approximately four (4) dwelling units per acre or less.

Mixed Density Residential – Single-family, two-family, and multi-family residential development at a density of between four (4) and eight (8) dwelling units per acre.

Higher Density Residential – Multi-family and manufactured residential development at a density of greater than eight (8) dwelling units per acre.

Local Commercial – Commercial, public and private service uses of a neighborhood–scale (market area of one to two miles) or community-scale (market area of two to five miles).

Regional Commercial – Commercial and private service uses of a regional-scale.


LEGEND
OPEN SPACE / PARKS / RECREATIONAL
RURAL RESIDENTIAL
LOWER DENSITY RESIDENTIAL
MIXED DENSITY RESIDENTIAL
HIGHER DENSITY RESIDENTIAL
LOCAL COMMERCIAL
REGIONAL COMMERCIAL
COMMERCIAL - PLANNED
MIXED USE - COMMERCIAL / RESIDENTIAL
MIXED USE - COMMERCIAL / INDUSTRIAL
GENERAL INDUSTRIAL
HEAVY INDUSTRIAL / EXTRACTION
PUBLIC / SEMI-PUBLIC / INSTITUTIONAL
REDEVELOPMENT / REVITALIZATION AREA
Proposed (NEW THOROUGHFARE)
Proposed (5th INTERCHANGE)
CITY LIMITS
URBAN GROWTH BOUNDARY
Exhibit 1
Amended by Ordinace Number O21 - 03 - 05
FUTURE LAND USE CONCEPT PLAN
COOKEVILLE
URBAN GROWTH BOUNDARY
NORTH
290
136
135
111
291
70N
40
24
Nashville & Eastern Railroad
Cane Ck.
Ck.
Hudgens
Roost
River
Water
Pigeon
Falling
Ck.
White County
7000
3500
0
GRAPHIC SCALE IN FEET

Commercial-Planned – Commercial and private service uses of a regional-scale for which a site plan is approved as a condition for zoning

Commercial/Residential Mixed Use – Commercial and private services of a neighborhood or community-scale and single-family, two-family and multi-family residential developments at a density of between four (4) and eight (8) dwelling units per acre.

Commercial/Industrial Mixed Use – Commercial and private service uses of a regional nature and light industrial developments.

General Industrial – Light to medium impact industrial developments and wholesale and distribution uses.

Heavy Industrial/Extractive – Industrial uses which by their nature can create problems of compatibility with other land uses.

Public/Semi-Public/Institutional – Community facilities, schools, public parks and recreational facilities, governmental and quasi-government developments and related private service uses.

Redevelopment/Revitalization Areas

Certain areas within Cookeville and its Urban Growth Boundary have been identified as in need of special emphasis for redevelopment or revitalization. These areas are depicted as overlays on the Future Land Use Concept Map. The areas were frequently mentioned in the 2010 Citizen Survey as the least attractive areas or neighborhoods in the city. The reasons these areas are in need of special attention are varied. Many of the land uses within these areas are nonconforming with the zoning district in which they are located. These nonconformities include inappropriate use, inadequate setbacks, excessive density, insufficient parking, and lack of landscaping. The areas are often characterized by dilapidated or deteriorating structures. Infrastructure improvements, including street widening or resurfacing, sidewalk construction, drainage enhancement, and utility replacement, may also be needed in these areas.

It is anticipated that individual Redevelopment Plans will be prepared for the specific areas identified as in need of redevelopment or revitalization. The purpose of the Redevelopment Plan is to identify particular liabilities and assets of a designated area, evaluate existing and potential uses, and ascertain methods for encouraging redevelopment or revitalization. The objectives of the Redevelopment Plans will be to increase property values and improve attractiveness, with the goal of enhancing the quality of life for the residents in and near these areas.

Conceptual Land Use and Spatial Patterns

The following courses of action, reflecting development policies identified in this chapter, influenced many of the land use and spatial concepts of the Future Land Use Concept Map:

- Most long-range development, particularly lower density residential, will have to occur in the areas annexed by the city since 2000 where a limited quantity of suitable land is available, and where utilities may be feasibly provided.

- To accommodate anticipated growth, significant portions of the land area annexed since 2000 will have to be rezoned when the appropriate infrastructure is provided.

- Limitations on the availability of utilities will encourage development and redevelopment on the limited supply of suitable land currently in the municipality.

- Allowing some mixture of compatible land uses in new developments and re-developments will make the most efficient use of the limited land supply and existing utilities.

Accommodating the future housing needs of the residents of Cookeville is a major goal of the Cookeville Future Land Use Concept Map. This is expected to be accomplished by both protecting the established residential areas and by identifying areas for future residential development. It is anticipated that the future demand for housing will be met by a variety of residential development options.

Single family detached housing was rated by respondents as the most desirable neighborhood design aspect in the 2010 Citizen Survey. Low to moderate density residential development is indicated on the Concept Plan where such developments represent the existing dominant pattern. It is expected that these areas will be maintained with close proximity to commercial and employment areas yet buffered from excessive noise and traffic and from incompatible developments. Low to moderate density residential areas are the predominant land use in the municipality and the unincorporated urban growth area and it is intended that these areas will be protected and preserved.

A primary finding of Existing Land Use analysis was the growth in multi-family or higher density residential development in the city since 2000. As a result of this increase the gap between owner occupied housing and rental occupied housing has likely widened. Approximately two-thirds of respondents in the 2010 Citizen Survey indicated that they would like to see the development frequency of apartments decrease in the future. Higher density residential developments are indicated along major traffic corridors and in close proximity to the primary commercial/employment/educational areas. These areas are also located in the vicinity of existing higher density residential areas. New areas exclusively designated for higher density residential development are intentionally limited on the Concept Plan. A large higher density residential area is depicted north of 12th Street. This area has direct access to Tennessee Tech University. Additional areas for higher density residential use are located along Willow Avenue, U.S. Highway 70N, and South Jefferson Avenue.

As in the 2000 Comprehensive Plan, a primary goal of this plan is to maintain and enhance the importance of Cookeville as the commercial and private service center of the Upper Cumberland Region. The principal commercial areas along Willow and Jefferson Avenues and along East 10th and Spring Streets are expected to continue to be prime locations for commercial and private service development and re-development. It is anticipated most of the new commercial development will occur within corridors along East Neal Street, West Jackson Street, and along South Jefferson and South Willow Avenues south of Interstate 40.

Much of the city's future land use needs for large scale commercial and light industrial uses are expected to be met in a large regional commercial/light

industrial area is identified in a corridor west of South Willow Avenue between Interstate 40 and Lee Seminary Road. The primary access to this area is a proposed Interstate 40 interchange west of Mine Lick Creek Road. A smaller but similar area is depicted in the vicinity of the Interstate 40 - Highway 70N intersection. Areas of commercial/private service development of neighborhood and community-scales are located in the urban growth area in corridors along Highway 70N and at intersections of existing and proposed major thoroughfares.

Another goal reflected in the Cookeville Future Land Use Concept Map is to maintain Cookeville as the public service and cultural center of Putnam County and the region and the CBD as the center of such activity within the municipality. The expanded CBD area of mixed-use development will include transitional residential living, retail specialty shopping, governmental services, financial services, cultural activities, and business and professional services. Development standards and policies in this area will favor a compact urban business area with centralized parking. The area is also intended to serve pedestrian clientele and central city residents.

The goal of maintaining the prominence of Cookeville as a provider of public services is further addressed in the Concept Map by identifying a large area south of 12th Street between Willow and Mahler Avenues for public/semi-public/institutional land uses. This area is intended for growth of the Cookeville Regional Medical Center and the medical related services around it and for the expansion of Tennessee Tech University.

It is anticipated that the City of Cookeville will continue its role as the primary provider of industrial development in Putnam County. The three existing major industrial areas in the city, which are situated in the northeast, southeast, and southwest sections of the municipality, are expected to continue as principal locations for new and expanded industrial development. Of these three existing industrial areas, the Lemon Farris Industrial Park has the greatest potential for new industrial development.

Two additional areas are identified in the Concept Plan for new light industrial development. The first is located along Lee Seminary Road west of Holladay Road to the proposed location of an Interstate 40 interchange in the vicinity of Mine Lick Creek Road. The second is located northwest of the intersection of Interstate 40 and Highway 70N. The development of both of these areas is dependent upon the provision of the necessary infrastructure.

One other feature of the Future Land Use Concept Map is the identification of open space and land for parks and recreation. In addition to existing park and recreational facilities, a new park area is identified along Cane Creek north of Lee Seminary Road. Greenways are also identified along Cane Creek, Hudgens Creek, and Pigeon Roost Creek. Although not specifically identified on the Concept Plan, it is further anticipated that smaller neighborhood and community-scaled parks will be located in areas identified for residential development.

CHAPTER VIII

IMPLEMENTATION

INTRODUCTION

The goals, objectives and policies identified in this plan cannot be achieved without specific actions. In this Chapter several methods for implementation are reviewed. Many of these methods for implementation are already being utilized by the City of Cookeville. The Planning Commission and the City Council may need to examine the effectiveness of current practices or regulations in achieving the stated objectives and policies. Where the identified methods are not currently being used, the municipality should consider taking the appropriate steps to do so.

Also, in this Chapter an Implementation Schedule is presented. It is intended to provide specific strategies for implementing the objectives and policies recommended in this plan. The Implementation Schedule proposes individual strategies for each of the specific land use categories, establishes time frames for completion, and identifies the parties responsible for implementation.

METHODS FOR IMPLEMENTATION

There are many types of programs available to a municipality for plan-implementation, including construction of physical facilities, provision of services, regulation of land use and development, project review, and fiscal policies. Several specific methods of plan implementation are identified for Cookeville to utilize in the execution of this plan. Each of these methods are reviewed within this section.

Planning Commission Project Review

Under *Tennessee Code* Section 13-4-104, after the adoption of a plan, no public improvement project can be authorized or constructed in the municipality until and unless the location and extent of the project have been submitted to the Planning Commission for its review. This review authority enables the Planning Commission to ensure that all public improvement projects are in compliance with the Comprehensive Plan.

The Cookeville Planning Commission generally has been given the opportunity to review major public improvement projects prior to inclusion in the municipal budget. This should be an annual step in the City's budgetary process and should be complemented by the preparation of a public improvements program. All utility, public works, drainage, and transportation projects should be reviewed by the Cookeville Planning Commission prior to incorporation into the municipality's Public Improvement Program and Capital Budget.

Zoning

Zoning is a legal mechanism that can assist the municipality in implementing a future land use plan. A zoning ordinance is designed to regulate the type and intensity of land use. It divides a community into specific districts corresponding to the intended use of the land as guided by the policies of the future land use plan. For each district, zoning regulates the location, height, bulk, and size of buildings and other structures, the percentage of the lot that may be occupied, the sizes of yards, courts and other open spaces, and the density of population. Zoning can assure the proper location of residential, commercial, and industrial uses. It can protect street right-of-ways so that future widening is feasible. It can also prohibit overcrowding of building lots. In addition, zoning can help stabilize property values and can help prevent deterioration of neighborhoods.

Zoning regulations were first adopted by the City of Cookeville in 1949 through Ordinance No. 388. The current Zoning Code and Map were adopted on December 20, 2001 by Ordinance No. O01-11-15. They replaced the previous code and map originally adopted in 1988. The current Zoning Code included numerous changes to reflect objectives, policies, and strategies adopted in the Comprehensive Future Land Use Plan 1999-2020. Some of the more significant provisions added to the 2001 Zoning Code included:

- Requirements for sidewalk installation to increase opportunities for pedestrian circulation
- Requirements for landscaping to improve the appearance of the city
- Requirements for screening and buffer yards to reduce the impact of non-residential uses on residential uses
- Restrictions on number of access points for developments to improve traffic flow and safety
- Standards for certain uses that can pose problems or safety concerns to reduce impact on other uses
- Additional single family residential districts with varying lot size requirements to increase the range of housing opportunities and to protect existing larger lot subdivisions from resubdivision
- Multi-family residential uses permitted in certain commercial zones to allow such developments to locate on streets that are designed to carry higher volumes of traffic
- Commercial Neighborhood District created to allow a mixture of low density residential uses with limited retail and office uses
- Medical Services District revised to be more medical services related and less commercial related
- University District revised to be more university related and less commercial related
- Commercial-Industrial Mixed Use District created to allow a mixture of compatible commercial and light industrial uses

In addition to changes to the Zoning Code text, numerous changes were made to the Zoning Map in 2001 to implement objectives, policies, and strategies from the 1999 Plan. Some of the more significant changes to the Zoning Map included the following:

- Several areas zoned for multi-family use changed to single family and/or duplex residential use to protect existing viable single family developments and to locate higher density developments on major streets
- Older large lot residential subdivisions zoned to protect from smaller lot resubdivision

- Most areas without sewer service zoned for large lot single family development
- Medical Services District enlarged to allow for expansion of the regional medical center and medical related facilities

The 2001 Zoning Code has been amended several times since its adoption. Several of these amendments specifically addressed policies and strategies from the 1999 Plan. These include the adoption of provisions for historic zoning and the establishment of architectural design standards.

While no major revisions of the 2001 Zoning Code are anticipated, amendments need to be considered to implement the policies and strategies recommended in this Plan. Revisions that should be examined include incentives to encourage sustainable development practices, provisions for tree preservation, standards to limit development in sinkhole areas, requirements to limit excessive off-street parking and encourage the use of pervious paving materials, and measures that will encourage home ownership.

Subdivision Regulations

Subdivision regulations, used in a coordinated manner with zoning, are another legal mechanism to carry out the recommendations of the Comprehensive Land Use Plan. Like zoning, these regulations control private development. They serve as guidelines for the conversion of raw land into building sites. Subdivision regulations provide the guide by which a Planning Commission can review all proposed plats for subdivision in an equitable manner. These controls are necessary if sound, economical development is to be achieved. Through enforcement of these regulations, the design and quality of subdivisions will be improved, resulting in better living conditions and greater stability of property values for the individual property owner. Such controls over land subdivision ensure the installation of adequate utilities that may be economically serviced and maintained. These controls are also used in providing a coordinated street system and to ensure that sufficient open space for recreation and other public services is provided.

Subdivision regulations were first adopted by the Cookeville Regional Planning Commission in 1961. The current regulations were adopted in 2000 replacing the previous regulations adopted in 1990. Several new provisions included in the 2000 Subdivision Regulations addressed policies and strategies presented in the 1999 Plan. Major revisions related to the 1999 Plan included requirements for the construction of sidewalks and for the installation of underground utilities.

While no major revisions of the 2000 Subdivision Regulations are anticipated, amendments need to be considered to implement certain policies and strategies recommended in this Plan. Revisions that should be evaluated include requirements to encourage the protection of environmentally sensitive areas, preservation of trees, the provision of open space, and the utilization of green infrastructure.

Codes Enforcement

There are various types of codes that municipalities can adopt to ensure that construction standards are sufficient to protect the health and safety of occupants. The housing code is designed to ensure that existing dwellings are safe, sanitary, and fit for human habitation. Other codes, such as building, electrical, fire, gas, and plumbing codes, provide minimum standards for the construction of new buildings and facilities, and the alteration of existing structures and facilities. These codes are uniform in character and are applied to the municipality as a whole.

A system of codes functions only if accompanied by an inspection system. Code enforcement ensures the adequacy of new residential, commercial and industrial structures while also detecting and preventing the deterioration of existing facilities through periodic inspection. By reducing blight, property values become more stable and tax bases protected.

The City of Cookeville has adopted the Southern Standard Building Codes for construction. The municipality, through its Codes Department, employs four certified building inspectors and a codes enforcement official. Specific emphasis should be directed toward the enforcement of all existing codes.

Utility Extension Policies

Another significant tool for effective land use planning is the control over the extension of municipally owned and operated utility services. The City of Cookeville is fortunate in that it owns and operates the major utilities necessary for development. Utility extension policies can be used for controlling the location and timing of development in a rational, coherent and efficient fashion. Since utility services, such as water and sewer, are so important to any major development, the refusal to extend such services into an area generally assures that only limited development can occur.

Within the City of Cookeville and its Urban Growth Boundary, the extension of utilities is normally the responsibility of the developer. The municipality generally does not extend sewer service outside its corporate limits. Water and natural gas are provided to limited services areas outside the corporate limits at an additional cost to the customer.

Public Improvements Program And Capital Budget

A public improvements program and capital budget provides the means through which the local government can effectively undertake a properly planned and programmed approach toward utilizing its financial resources in the most efficient way possible to meet the service and facility needs of the community. The public improvements program identifies recommendations for capital improvements, estimates their costs, and identifies possible financing alternatives. The capital budget is a method of developing and scheduling a way to finance the projects identified in the public improvements program.

The City of Cookeville does not currently follow a multi-year public improvements program and capital budget. It is necessary that this important planning tool be developed and kept up to date.

Infill Development

Utilization of existing, developable vacant land within a municipality is often an overlooked mechanism to implement a future land use plan. In most cases, these areas tend to be served by existing infrastructure such as streets, water, sewer, electric and gas; thereby eliminating normal costs associated with additional development. An abundance of vacant developable land is a costly luxury to a municipality. It results in under utilization of infrastructure due to low density development. Infill development of serviced areas will expand the local tax base while better utilizing the infrastructure system.

Although there are only limited areas where an infill strategy can be fully utilized in the City of Cookeville, it is recommended that a vacant land and resource development study be completed. This study should identify those areas available for immediate development and those needing certain services, facilities, or zoning amendments. A primary purpose of this study should be to promote infill development. Targeting vacant land areas that need services or facilities in the public improvements plan and capital budget will help to accomplish the infill strategy.

Annexation

Historically, as the population of municipalities increased, so has that of the suburban fringe areas that surround them. Residents and businesses are attracted to these fringe areas primarily because they can reap many of the benefits which municipalities provide without having to bear the costs. Land developers are attracted to these areas because the standards for development are often much lower.

Intense development of these fringe areas can result in serious consequences such as public health hazards, substandard services, wasteful duplication of services, inequitable distribution of tax burdens and benefits, and undesirable development resulting from non-existent or poor planning and zoning controls. Municipalities can best plan for and deliver the urban services required by fringe areas through annexation. If a municipality fails to expand its corporate limits, development will locate in the urban fringe where it will contribute little to the finances of the municipality, while increasing pressure on the facilities and services provided by the municipality.

For many years prior to 2000, annexation was an underutilized growth mechanism for the City of Cookeville. One of the more significant findings from the 1999 Plan was the need for additional land to meet the demands of projected growth. Since 2000 the city has increased its total land area by about one-third through annexation. While the annexation activity during the past decade will enable the city to meet much of its future needs, some additional expansion will likely be necessary. To ensure orderly development and future growth through annexation, it is recommended that the Planning Commission prepare a Fringe Area Study. This study should examine the unincorporated territory within the Urban Growth Boundary, with the intent of identifying those properties with the highest feasibility for annexation. It should include a multi-year annexation schedule which can be considered for implementation by the City Council.

Citizen Participation

Citizen participation is an important factor in determining the success of a land use plan. An informed citizenry that is willing to work to achieve the goals, objectives, and policies set forth in this plan can be a tremendous asset. Citizens can offer support for programs designed to achieve community goals. Successful citizen participation can be achieved through a public education program designed to inform the community of the various purposes and reasons for the actions of both the Planning Commission and the City Council. Specific efforts should be taken to obtain input from the general public through organizational public meetings, public hearings, and surveys. News articles should be utilized to educate the public regarding the work activities of the Planning Commission. Utilization of the internet via the city's website is also an important means of keeping the public informed and obtaining citizen participation in the planning process.

The municipality recognizes the need for citizen participation in the planning process. One example of this is the 2010 Citizen Survey. Many of the findings from this survey have been incorporated into this Plan. Efforts should be made to ensure continued public participation in all aspects of implementing this plan.

Local Leadership

The Cookeville City Council bears most of the responsibility for the implementation of this land use plan. As the municipality's decision makers, these elected officials have the authority to adopt appropriate implementation strategies that will fulfill the goals, objectives and policies developed in this Plan. It is important that the legislative body maintain a close working relationship with the Planning Commission so that the planning process is properly coordinated.