

CHAPTER 5 EXISTING LAND USE AND TRANSPORTATION ANALYSIS

INTRODUCTION

As a prerequisite to preparing a plan for future land use and transportation, a survey and analysis of the existing patterns and characteristics must be completed. The data from this Chapter's existing analysis, when integrated with information pertaining to natural factors affecting development, population growth and economic factors is vital in determining what areas are best suited for the various land uses and transportation facilities over a planning period.

Due to Greeneville's and its projected growth area, it was determined that it would not be feasible or beneficial to divide the town into neighborhoods for a more detailed analysis.

EXISTING LAND USE AND TRANSPORTATION

Before a municipality can determine its future land use requirements, it is necessary that an inventory and analysis of existing land uses be completed. This land use inventory identifies and analyzes the various uses by categories and the amounts of land devoted to each.

Graph 12, depicts the various land uses in the Town of Greeneville and the projected growth areas as determined through a land use model and field survey completed by the Local Planning Assistance Office in 2009. The land uses depicted on Graph 12 are grouped into the following categories:

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 occurs. Land on which, an array of private firms that provides special services are located. This category includes hospitals, churches, banks, cemeteries, professional offices, personal services, repair services, etc. and vacant floor space.

Utilities: Land on which utility structures or facilities are located. This includes; water tanks; sewer plants and pump stations, electrical substations and telephone switching stations.

Public Services/Cultural and Recreational: Land on which educational facilities, and all federal, state, and local governmental uses are located. Also land where museums, libraries, parks, and similar uses are located.

Industrial: Land on which the assembly, processing or fabricating of raw materials or products takes place.

Transportation: Land on which municipal streets, county roads and state highways are located, including the right-of-ways.

Vacant Improved: Land which either has not been or cannot be developed. Vacant land can be divided into two general categories;

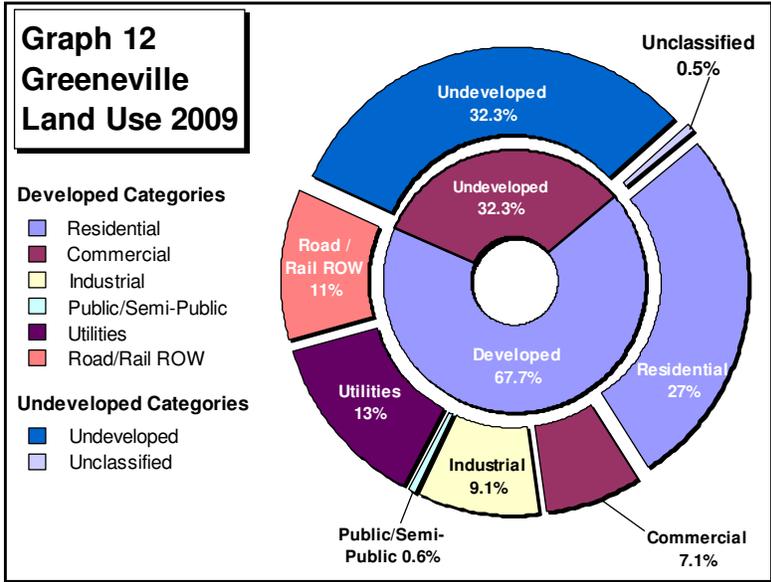
1. Vacant Unimproved: Land that currently lies idle or is used for agricultural or open space purposes and lacks the infrastructure necessary for development.
2. Vacant Improved: Land located along streets currently accessible to town services such as vacant subdivision lots.

LAND USE ANALYSIS

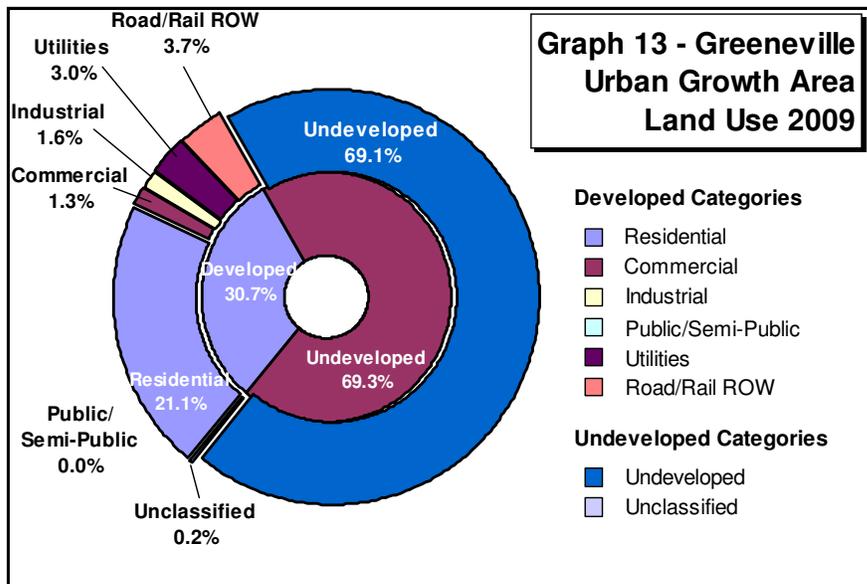
As the previous graph depicts, land use in Greeneville developed along traditional designs reflecting the grid pattern in the older portion of the municipality, and the curvilinear pattern in the more recently developed areas. Development in the potential growth area occurred in five vicinities, one being within the traditional grid pattern. The other vicinities of growth occurred in four areas; along the western portion of Highway 11-E towards Mosheim, along the eastern portion of Highway 11-E, and in northern Greeneville adjacent to the Baileyton Road, and along the old Kingsport Highway. Natural factors discussed thoroughly in Chapter 3, significantly affected the location of land use in both the municipality and its potential growth area. Conflicting land uses are

generally separated from each other in the municipality and are not yet a significant problem in the projected growth area. In a community of this size, most residents have easy access to the necessary public and private facilities and services.

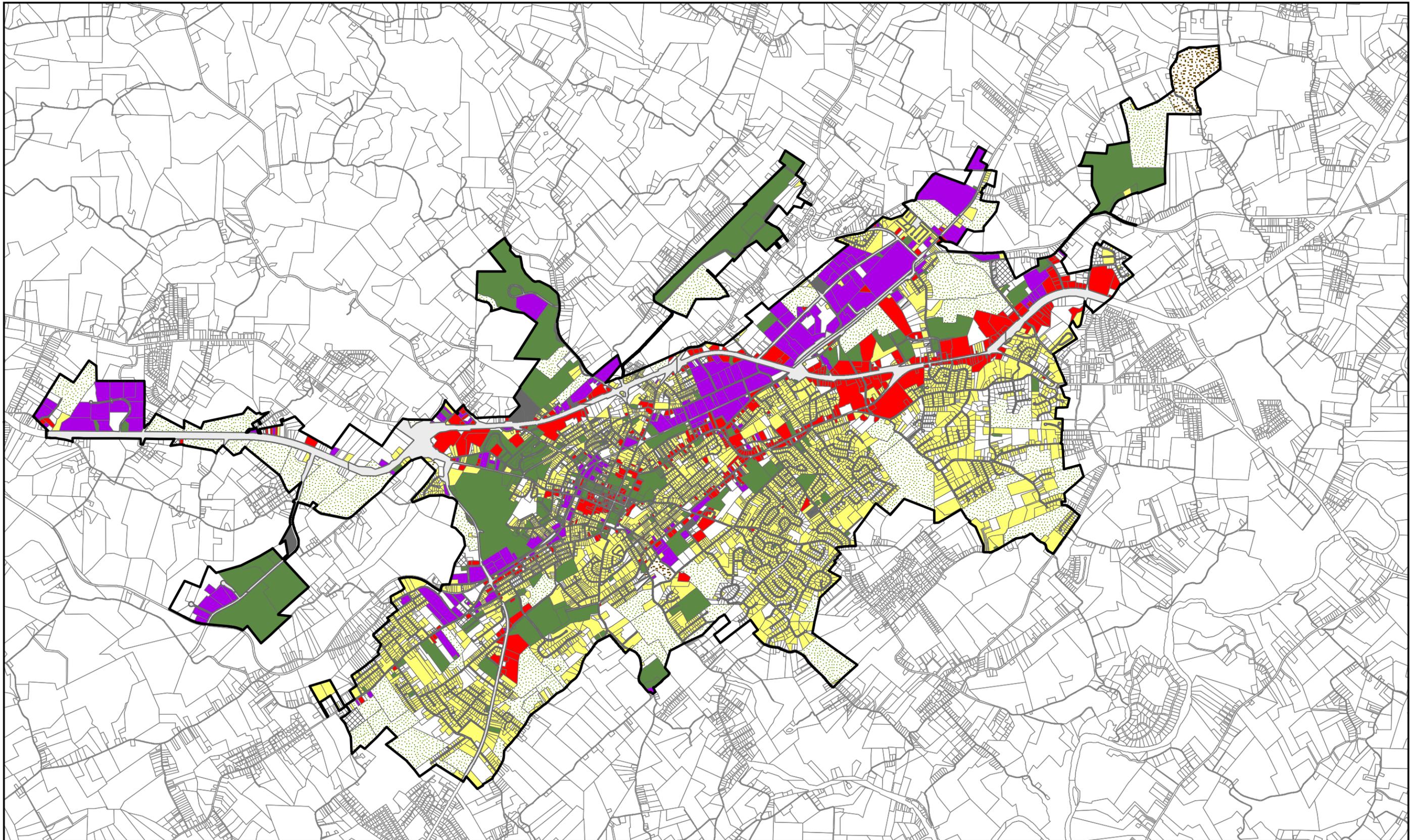
Within the corporate limits of Greeneville there are approximately 10,883 acres, or 17 square miles of land. Of this total land area, an estimated 7,364 acres, or 67.7 percent are developed. Residential land comprises 2,938 acres, or 27 percent of the total land. Industrial uses occupy 988 acres, or 9.1 percent of developed land area. Approximately 1,193 acres or 11 percent is used for transportation. 2,244 acres or 20.7 percent is divided among commercial/private services, public/cultural and recreational and utility facilities, with the remainder of 3,519 acres or 32.3 percent being undeveloped, which is reflected in Graph 12. Land use and percentages for the



Urban Growth Area are shown on Graph 13. Land use and percentages for the



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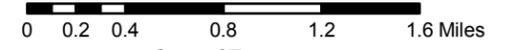
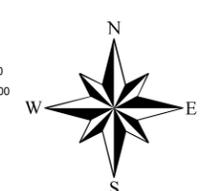
GREENEVILLE

T E N N E S S E E

Existing Land Use Illustration 5

Legend

Corporate Limits	40 - Utilities	96 - Unclassified improvements <\$30,000
00 - Residential	50 - Vacant	97 - Unclassified improvements >=\$30,000
10 - Commercial	60 - Agricultural	98 - CAAS data unavailable for parcel
20 - Industrial	70 - Timber / Forest	99 - Uncoded by Land Use Model
30 - Public / Semi-Public Uses	80 - Water Polygon Features	
	90 - Transportation	



State of Tennessee
 Department of Economic & Community Development
 Local Planning Assistance Office
 Johnson City, Tennessee
 Map Printed: March 9, 2009
 This map is not an engineering map.

TRANSPORTATION ANALYSIS

A municipality's transportation system provides a vital service function that is essential for growth and development. It forms the framework upon which a community is built. A well-planned and maintained transportation system ensures adequate access and traffic circulation, which are prerequisites for economic activity and general community development.

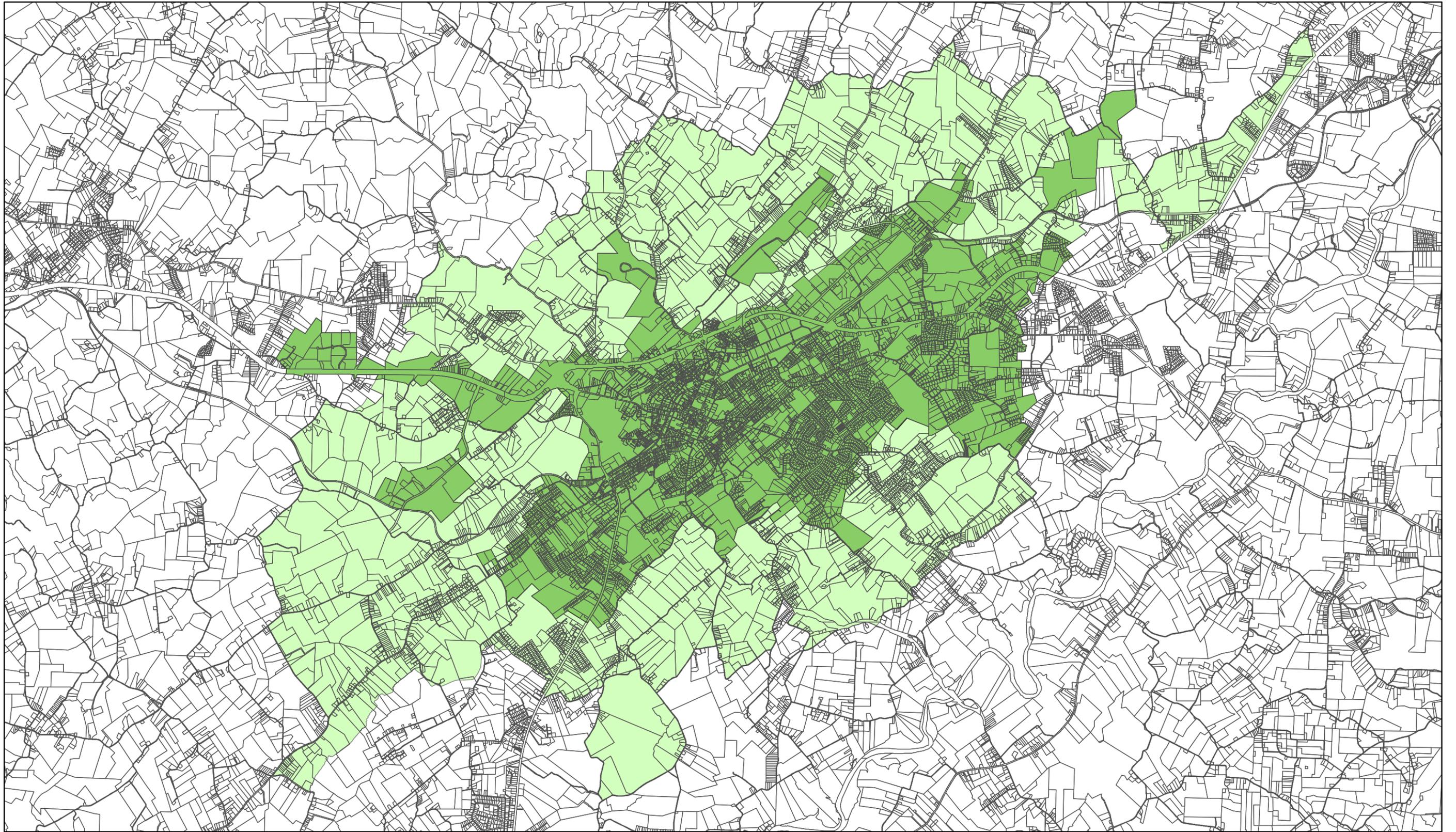
Streets and highways typically occupy a significant percentage of the developed land area in a community. Within Greeneville there are approximately 1,193 acres of land currently devoted to streets, roadways, and other rights-of-way, representing 11 percent of the Town's total area. Greeneville's Urban Growth Boundary has approximately 702 acres of land, or 3.7 percent of total land area currently devoted to streets, roadways, and other rights-of-way. All local streets, state and federal highways, and railroad rights-of-way within Greeneville are included in this land use category. Illustration 5 reflects the Urban Growth Boundary.

There are considerable design, purpose, and utilization differences between the various thoroughfares that traverse Greeneville and its potential growth area. To better understand and analyze the overall system, these local thoroughfares have been classified by their intended use. This review of the Greeneville transportation system also includes a description of the area's general traffic circulation pattern, major traffic generators, impediments to traffic flow, mass transit, and air/rail/port facilities.

Thoroughfare Classification

The primary use of a thoroughfare varies from providing access to residential and other structures, to providing uninterrupted movement of high-speed traffic. To clarify the usage, a classification has been established denoting the function served and is shown on Illustration 6.

In 1972 the Tennessee Department of Highways conducted a Major Street and Route Plan for Greeneville. It referred to the thoroughfare classifications as Arterial and Collector streets. In 1997 the Tennessee Department of Transportation conducted a limited study that expanded the classifications to (1) Principal Arterial, (2) Minor Arterial, (3) Collector and (4) Local Streets.



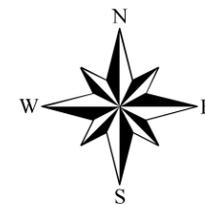
GREENEVILLE

T E N N E S S E E

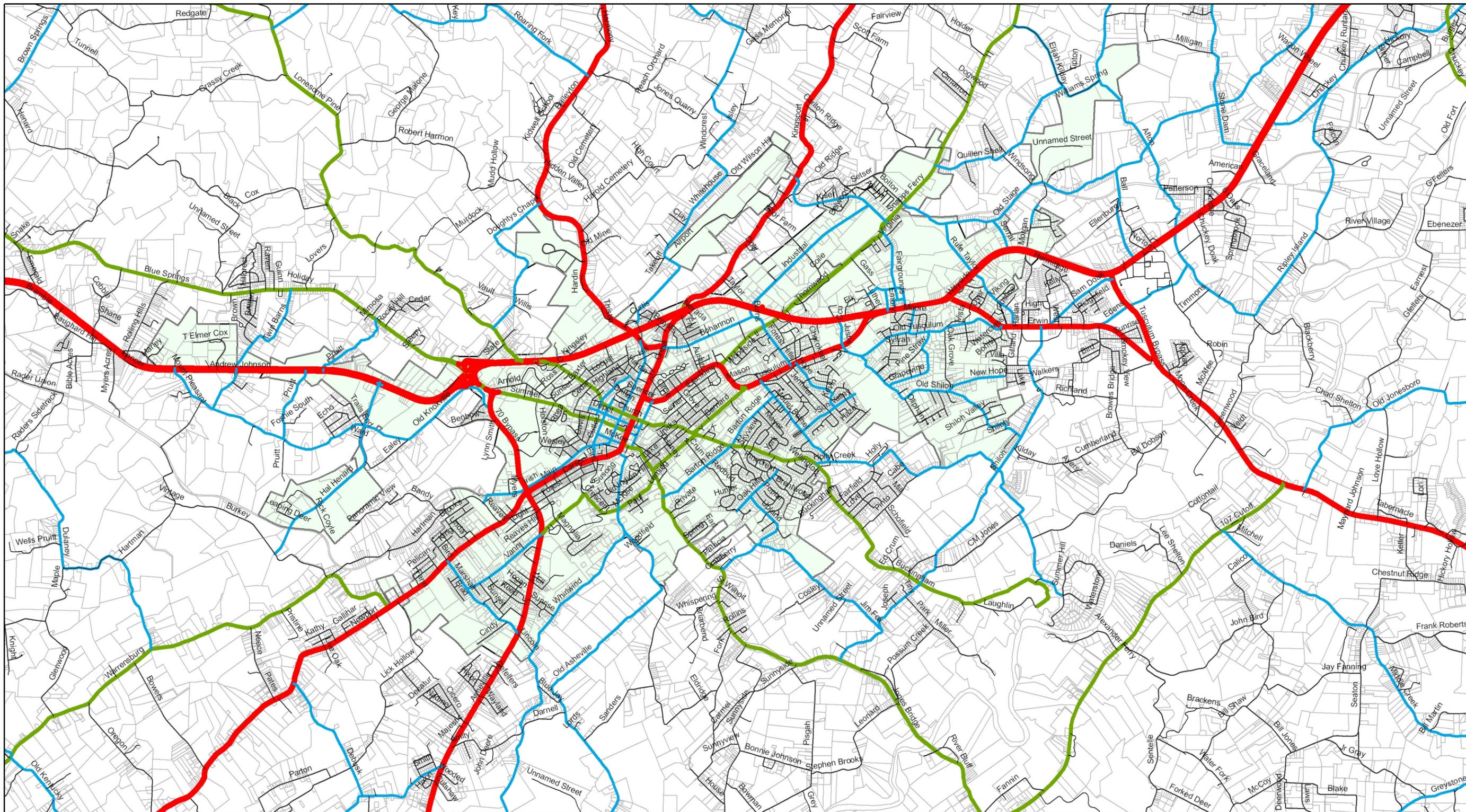
Urban Growth Area Illustration 6

Legend

-  Corporate Limits
-  Urban Growth Area
-  Parcels



State of Tennessee
Dept. of Economic & Community Development
Local Planning Assistance Office
Johnson City, Tennessee
Map Printed: March 9, 2009
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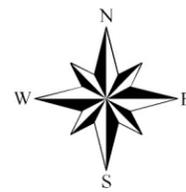


GREENEVILLE

T E N N E S S E E

Major Thoroughfare Classification Illustration 7

- Legend**
- Classification**
- Principal Arterial
 - Minor Arterial
 - Collector
 - Local Street



Town of Greenville
Public Works Department
Greenville, Tennessee
Map Printed: August 7, 2009
This map is not an engineering map.

Principal Arterial: Roadways, which link population centers, but often lack controlled access and traffic flow separation. Examples of principal arterial roadways in Greeneville are the Andrew Johnson Highway (US11-E), Asheville Highway (SR70), Baileyton Highway (SR172), Erwin Highway (SR107), Kingsport Highway (SR93), Main Street, Newport Highway (US321), Tusculum Boulevard (US11-E Bus), Tusculum Bypass (SR107), and 70 Bypass (SR70).

Minor Arterial: The town and urban growth area roadways that link small concentrations of population and provide direct access to major traffic generators such as work, shopping, and residential centers. Often these are State and Federal Aided Highways. Bernard Avenue, Blue Springs Parkway, Buckingham Road, Church Street (East and West), Jones Bridge Road (SR350), Lonesome Pine Trail (SR70), McKee Street (East & South), Snapps Ferry Road, Summer Street (West), Vann Road (East), Warrensburg Road (SR349), 107 Cutoff (SR107).

Collector: Roadways that link arterials and provide access to and between minor arterial streets to local streets. Examples of collectors in town and the urban growth area are Afton Road, Ball Road, Barton Ridge Road, Bohannon Avenue, College Street, Cutler Street, Emory Road, Fairgrounds Road, Forest Hills Drive, Grapevine Trail, Hal Henard Road, Hope Road, Industrial Road, Irish Street, Justis Drive, Kiser Boulevard, Mt. Bethelt Road, Old Tusculum Road, Roaring Forks Road, Rufe Taylor Road, Serral Drive, Sun Valley Drive, and Whitehouse Road.

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

Traffic Circulation Patterns

The traffic circulation pattern in Greeneville relies heavily on the highway system which carries traffic through Greeneville and its urban growth area. Andrew Johnson Highway carries traffic east/west connecting Greeneville with Johnson City and Interstate 26; Asheville Highway carries traffic northeast to Andrew Johnson Highway and southeast into North Carolina; Baileyton Highway carries traffic north to Interstate 26; and Newport Highway carries traffic from Main Street to the west into Cocke County.

Tusculum Boulevard, Bernard Avenue, Snapps Ferry and Main Street are important roadways carrying traffic in and around Greeneville.

Findings: The traffic circulation pattern of Greeneville and its projected growth area is dominated by Andrew Johnson Highway (US11-E) and due to the high traffic volumes, circulation problems do exist in Greeneville.

Impediments to Traffic

The major impediment to traffic flow in Greeneville is the strip commercial development along Andrew Johnson Highway. The unrestricted access points and off street parking areas for these commercial establishments along a high volume arterial roadway creates traffic congestion and traffic hazards.

Another impediment to traffic flow in Greeneville is the location of the main line of the Norfolk Southern railroad that also dips to the south inside the urban growth area. The railroad sometimes blocks roads in the area. There are bridges located at Andrew Johnson Highway, West Summer Street and South Main Street that crosses over the railroad. The railroad can temporarily block the Ashville Highway, West Church Street and North Irish Street, but the bridges over the railroad can provide a way around if the railroad has the tracks blocked for a longer time period.

Findings: The major impediment to traffic flow in Greeneville is the strip commercial development along Andrew Johnson Highway. Another impediment is the Norfolk Southern railroad that runs through the town and into the urban growth area.

Traffic Generators

There are several major traffic generators in Greeneville. These traffic generators are focal points of activity that 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 planning the traffic circulation system, and in preparing plans for improvement. The major traffic generators include:

1. Industrial areas: The primary industrial areas in Greeneville are Industrial Road, Bohannon Avenue, Snapps Ferry Road, Baileyton Highway, Hal Henard Road and T. Elmer Cox Road where several industrial operations are located.

2. Concentrated commercial areas: There are two areas in Greeneville where the concentration of commercial establishments generates large volumes of traffic. Much vehicular activity is generated by the Central Business District (CBD) of Greeneville. The second concentrated commercial area generating large volumes of traffic is the area of strip commercial development along Andrew Johnson Highway.
3. Institutional and professional areas: Located in Greeneville's Central Business District are several banks and attorney offices that generate traffic in this area.
4. Public and semi-public areas: There are two areas in Greeneville that are traffic generators. Greeneville has a concentration of Federal, State, Municipal and County governmental facilities located in the Central Business District. The second area traffic generator is the many churches located in the downtown area that mainly generate traffic when other uses are at their lowest.

Findings: In essence, employment related land uses are the traffic generators in a community. The industrial, commercial, institutional, professional, public and semi-public use areas of Greeneville are the primary traffic generators as destination points from Greeneville's residential areas. Most of these generators tend to compound traffic problems due to their relatively close proximity to each other. In addition, the limited availability of major routes within Greeneville, from which all the major traffic generators are accessed, further compounds the traffic flow problems.

Parking

The majority of the parking in the central business district of Greeneville takes place on the street right-of-way in non-metered spaces with time limitations of two hours strictly enforced. The area does contain off street areas behind the County Jail and adjacent businesses and governmental offices. Due to the lack of available property and the high costs of obtaining it, the development of off-street parking facilities in the downtown area will be difficult.

It appears that there is considerable parking around the strip commercial area on Andrew Johnson Highway.

Findings: Like most central business district areas, parking is a problem in Greeneville as well. A separate parking study would be required to expand the central business district parking in the future. There were no parking problems identified in the strip commercial area or in the projected growth area.

Air/Rail/Port

Greeneville/Greene County Municipal Airport is jointly owned by Greeneville and Greene County and is located at 246 Airport Road. The airport is operated by Greeneville Aviation and has the capacity to accommodate large corporate jets easily. This facility also offers 66 rental hangers for private aircrafts storage, aircraft maintenance, fuel sales, and hangers for the two helicopters which perform life support flight operation for the area hospitals. The current runway has sight distance problems that are in the process of being resolved.

Norfolk Southern Railway provides Greeneville and Greene County with rail connections to all regional and national markets.

The nearest ports are in Charleston, South Carolina offering world wide shipping. They are located approximately 327 miles from Greeneville.

Findings: Greeneville and Greene County have adequate access to air, rail and port facilities.

Mass Transportation

Like most rural Tennessee communities, the automobile is the preferred method of transportation. This has limited the need for public transportation facilities in the form of mass transit. Greeneville does not have a local bus service, but has access to the Greyhound Bus Line with the closest stop at Varsity Market in Mosheim. Van service for senior citizens is provided by Net Trans for medical purposes and by the Roby Center for senior activities. Greeneville is currently served by the taxi company located on Old Shiloh Road.

Findings: Mass transit is not feasible at this time due to Greeneville's population and the expense of a transit system.

Pedestrian/Non-Vehicular Circulation

Sidewalks provide a safe means for the movement of pedestrian traffic when properly and adequately constructed. They also serve as a border and a 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.

Although there are certain areas where they have deteriorated, overall, the existing sidewalks in Greeneville are in good condition. Sidewalks are present in the downtown area, and in many of the older residential areas. There are no sidewalks or other means of pedestrian circulation present in the potential growth area. Current municipal subdivision regulations do not require the provision for sidewalks in new developments in Greeneville.

Currently, there is the Greeneville Historic Walkway located between East McKee Street and North College Street leading to the Big Springs. The walkway provides a leisurely walking atmosphere while showcasing historic sites.

Findings: In general the older portion of Greeneville has adequate means for pedestrian circulation through the provision of sidewalks. Sidewalks or other means of pedestrian circulation are not available in the more recently developed areas of the municipality or within the potential growth area. This can be attributed to absence, in the past, of requirements for sidewalks in the municipality and county subdivision regulations.

There is also a need to extend the current walkway and develop a system of bike paths or routes to serve non-vehicular traffic.

Rural Planning Organization (RPO)

The Federal Highway Administration (FHWA) passed regulations requiring representation of rural areas in the transportation planning process. To comply with these regulations, the Tennessee Department of Transportation (TDOT) has created the Rural Planning Organization (RPO). Greene County and all the municipalities within the county are served by the First Tennessee Planning Organization (FTPO). The purpose of the FTPO is to involve local officials in multi-modal transportation planning. The goal is to allow local officials and citizens to have input into the transportation process and to promote unified regional transportation goals.

TDOT is considering a proposed bypass around Greeneville in Greene County. They have begun work on Environmental Impact Statement (EIS) to determine what impacts the project will have on the natural and human environment. The need for this project was identified by the Tennessee State House of Representatives in 1994 in legislation which addressed transportation issues from Pigeon Forge through Sevierville, Newport, Greeneville, and the Tri-Cities. Since the 1994 legislation, several transportation studies have been conducted for Greeneville, one in 2002 and another in 2006.

The EIS underway will examine the facts presented in the former studies and will conduct new studies which will examine all reasonable alternatives for a Greeneville bypass. The goal for the bypass will be to improve regional mobility, improve safety, promote economic growth, and reduce truck traffic on US-11E on Greeneville.

Proposed Greeneville Bypass - Greene County

Project Timeline

Transportation projects are developed in four phases:

1. Planning and Environmental
2. Design
3. Right-of-Way Acquisition
4. Construction

The project is currently in the Planning and Environmental stage. The following is a timeline of the events concerning this project:

Project History

1994:

- Tennessee State House of Representatives requests that TDOT evaluate opportunities to provide transportation improvements connecting the cities of Pigeon Forge, Sevierville, Newport, Greeneville, and the Tri-Cities.

2002:

- The TDOT Commissioner asked the Center for Transportation Research at the University of Tennessee (UT) to conduct a project assessment for SR-35 (US-321).

2003:

- The mayors of Greeneville, Tusculum, Baileyton, Mosheim, and Greene County make a request to TDOT for construction of a “Northern Loop” around Greeneville based on the findings of the UT study. The mayors emphasized that their request was consistent with TDOT’s plans for SR-35 and US-321 (from Pigeon Forge to the Tri-Cities airport).

2006:

- TDOT performs an extensive traffic study to evaluate SR-34 (US-11E) through Greeneville. The traffic study was entitled *Traffic Forecast Study Greenville, TN – US 11E Proposed Bypass From Hal Henard Road to Stone Dam Road or SR 107 Green County*.

2008:

- TDOT begins work on an Environmental Impact Statement (EIS) to study all reasonable alternatives for a bypass around Greeneville.

Scheduled Activities

2008:

- TDOT held a public meeting to provide the public an opportunity to comment on the purpose and need for the project and to help identify potential alternatives and environmental issues.
- Project alternatives will be identified. Local, state, and federal agencies will be asked to provide concurrence with the alternatives to be carried forward in the EIS.
- Preliminary investigations will be conducted for impacts to the natural and human environment.

2009:

- Detailed technical studies will be conducted and conceptual engineering plans will be developed for the alternatives in the EIS.

2010

- A Draft Environmental Impact Statement (DEIS) will be developed
- Local, state, and federal agencies will be asked to provide concurrence with the content of the DEIS.
- The notice and availability of the DEIS will be posted in the Federal Register

2011

- TDOT will hold a public hearing presenting the DEIS and will receive comments on the project
- A preferred alternative will be selected for the project
- A Final Environmental Impact Statement (FEIS) will be developed
- The FEIS will be posted in the Federal Register
- A Record of Decision (ROD) will be anticipated

More information can be found at: www.tdot.state.tn.us/greeneville/default.htm

(Source: Tennessee Department of Transportation)

SUMMARY OF FINDINGS

The traffic circulation of Greeneville and its projected growth area is dominated by Andrew Johnson Highway (11-E) and due to the high traffic volumes, circulation problems do exist in Greeneville.

The major impediment to traffic flow in Greeneville is the strip commercial development along the Andrew Johnson Highway. Another impediment is the railroad that runs through the town and into the urban growth area. Most of these generators tend to compound traffic problems due to their relatively close proximity to each other. In addition, the limited availability of major routes within Greeneville, from which all the major traffic generators are accessed, further compounds the traffic flow problems.

Like most central business district areas, parking is a problem in Greeneville as well. Given the condition of structures, vacancy rates and expense it is doubtful if property could be acquired to expand the central business district parking in the future. There were no parking problems identified in the strip commercial area or in the projected growth area.

Greeneville and Greene County has adequate access to air, rail and port facilities.

Mass transit is not feasible at this time due to Greeneville's population and the expense of a mass transit system.

In general the older portion of Greeneville has adequate means for pedestrian circulation through the provision of sidewalks. Sidewalks or other means of pedestrian circulation are not available in the more recently developed areas of the municipality or within the potential growth area. This can be attributed to absence, in the past, of requirements for sidewalks in the municipality and county subdivision regulations.