

# CITY OF EMPORIA COMPREHENSIVE PLAN



**EMPORIA  
IN BLOOM!**



Planning Commission Adopted February 25, 2008  
City Commission Adopted March 5, 2008

**EMPORIA  
IN BLOOM!**



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# CHAPTER 1

# INTRODUCTION

## OVERVIEW

A Comprehensive Plan is more than a collection of land use and infrastructure goals. It is a document that reflects the values and needs of the community. The underlying goal of the Comprehensive Plan is to identify policies that improve the quality of life for all residents within that community. As such, it takes collaboration and coordination between everyone who is concerned about the future of his or her community. A Comprehensive Plan is a useful tool to review, discuss and document important community opportunities and constraints.

The **2008 City of Emporia Comprehensive Plan** (the Plan) serves as the principle public policy tool for guiding decisions concerning land use, transportation, infrastructure and services within the Metropolitan Planning Area (MPA). The Plan serves as a guide for the physical, social and fiscal health and well being of the City and MPA. As such, its goals and objectives, policies and recommendations are to be used to guide the community's future.

## PURPOSE AND NEED

The Plan is prepared in accordance with state statutes that authorize the City Planning Commission to develop a comprehensive plan for the physical development within the City and MPA. All jurisdictions in Kansas must have an adopted plan to regulate the subdivision of land.

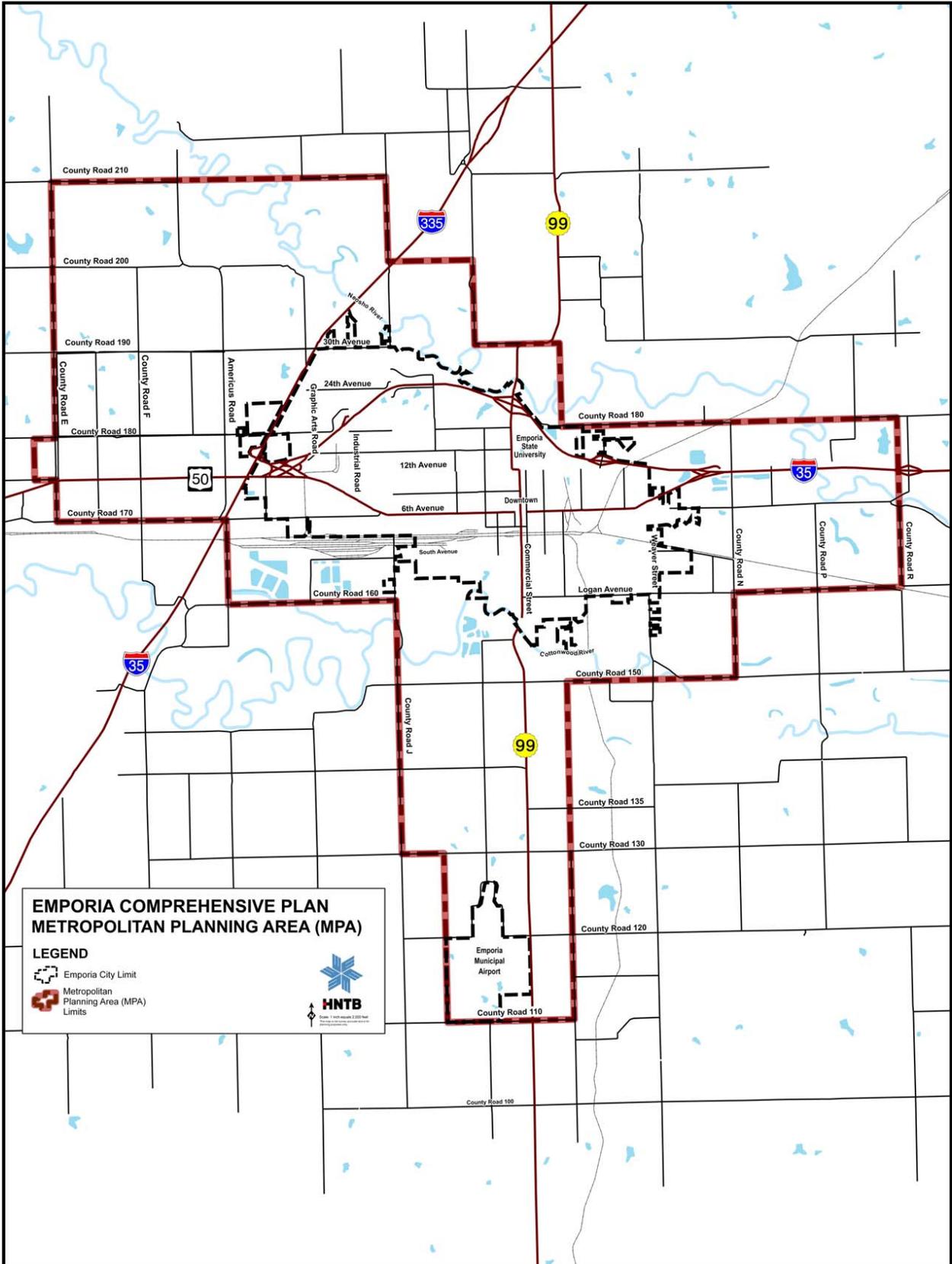
Although advisory in nature, the Plan is the basis for regulatory measures including zoning and subdivision code updates, the development review process and serves as the foundation for future capital improvement programming. The Plan also provides a database of community information which can be used as supporting documentation for pursuing grants, development activities and infrastructure improvements.

## JURISDICTION

The Plan has jurisdiction within the existing city limits of Emporia and within the Metropolitan Planning Area. See Map 1 on the following page.

# INTRODUCTION

Map 1: Metropolitan Planning Area (MPA)



# INTRODUCTION

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The Plan's concepts, direction and final recommendations all were created as a result of an inclusive public process that identified and addressed Emporia's weaknesses and challenges and maximized its strengths and opportunities. This public process included an active Advisory Committee and several community-wide public meetings.

## **ADVISORY COMMITTEE**

The Advisory Committee, appointed by the City Commission, provided guidance, input and direction to the consultant team and City staff throughout the process. This Committee represented a mixture of interested citizens who represented various interests throughout the community.

## **PUBLIC MEETINGS**

Community-wide public meetings were held throughout the process. Each of these meetings was designed to promote an open dialogue between citizens, the consultant team and City staff to maximize input. In addition to the public meetings, the Project Team met with several stakeholders including Emporia State University and Newman Regional Hospital.

## **PLAN ORGANIZATION**

Following this Introduction, Chapter Two (Plan Influences) establishes the fundamental background information and mapping that will influence the guiding principles, goals, objectives and policies summarized in proceeding chapters. This analysis includes a summary of existing conditions including existing land use patterns, demographic trends and key environmental issues. Chapter Three (Goals, Objectives and Policies) identifies Plan goals, objectives and policies. Chapter Four (Future Land Use Plan) identifies recommended future land uses and recommendations for focus areas including Downtown, Emporia State University and Newman Regional Hospital. Chapter Five (Transportation) provides Major Street Plan standards and recommendations. Chapter Six (Infrastructure Plan) identifies infrastructure recommendations.

## **PLAN USE**

Upon the recommendation of the Planning Commission and adoption by the City Commission, this document will serve as the official land use guide for the City of Emporia and MPA. As such, the Plan should be consulted by the City Commission, the Planning Commission and City staff when considering development proposals, updating land use regulations, working on intergovernmental issues, outlining work programs, preparing annual budgets, and reviewing progress toward meeting identified goals. The Plan should be also used to guide residents, land owners, project applicants and other parties concerning land planning and community development objectives.

The Plan should be reviewed annually by City staff and revised as specific actions are achieved and new strategies are identified. The goals, objectives and polices should also be reviewed periodically when new circumstances or changing conditions warrant reconsideration.

# CHAPTER 2

# PLAN INFLUENCES

## OVERVIEW

This Chapter provides a brief summary of the existing conditions and background information that influence the decision-making process concerning the development of the Plan goals, objectives and policies. This summary includes the following:

- Historic Context;
- Existing Land Use and Development Trends;
- Demographic Trends; and
- Environmental Considerations.

## HISTORIC CONTEXT

Emporia was founded in 1857, six miles above the confluence of the Neosho and Cottonwood Rivers in what was then Breckinridge County. Almost immediately the town attracted settlers, tradesmen and new businesses, one of the first being a newspaper titled *The Kansas News*. The newspaper helped advertise the town's potential and prosperity, and is often cited as being the driving force behind Emporia's early growth and development.

Soon after its modest beginnings, Emporia saw the arrival of a post office, the State Normal School (known today as Emporia State University) and two rail lines. In 1895 William Allen White, a man who would arguably become Emporia's most famous citizen, purchased a newspaper titled *The Emporia Gazette*. White's editorials became influential in both state and national politics, and in 1923 he was awarded a Pulitzer Prize.

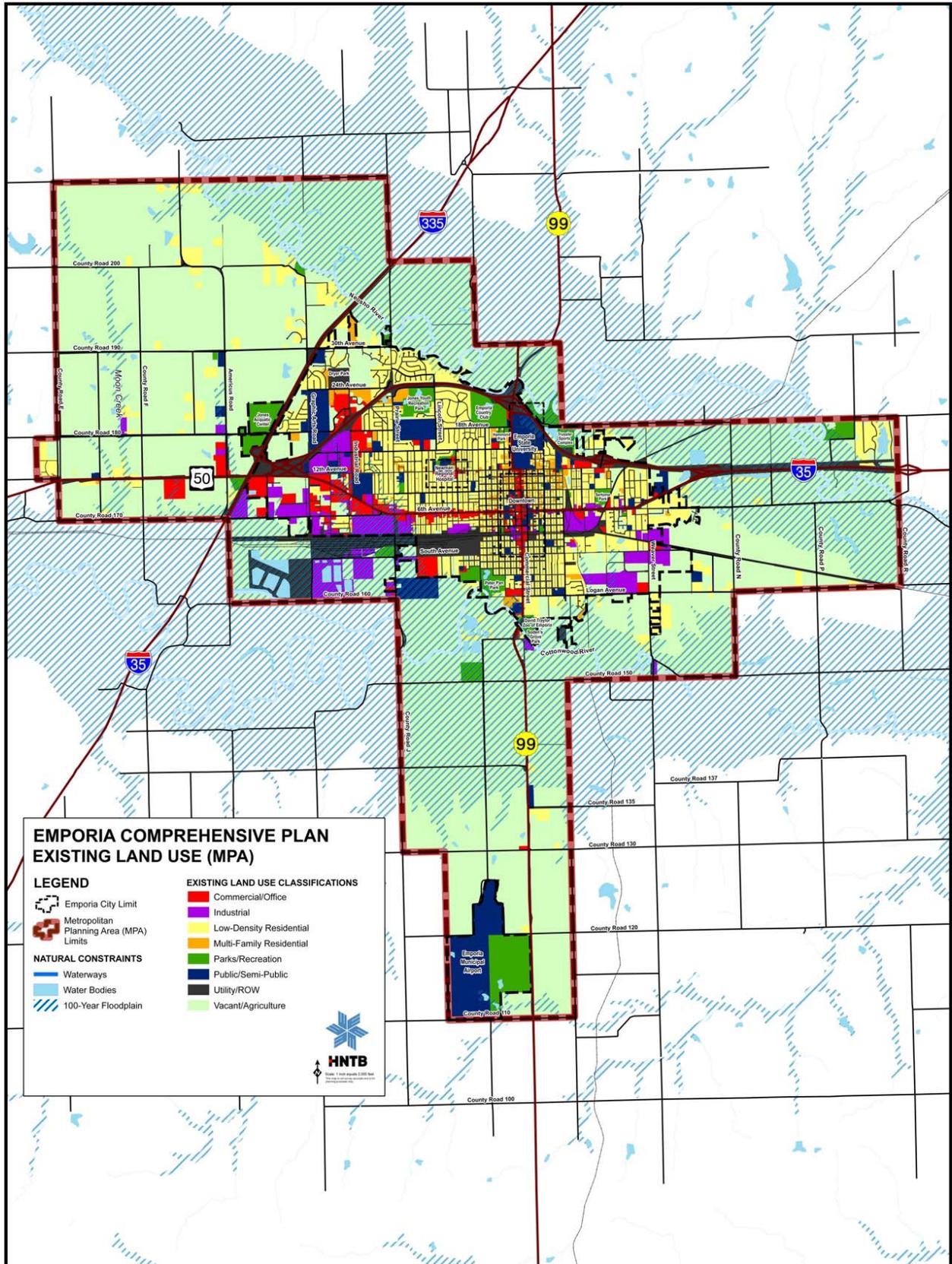
Since its earliest days, Emporia has been a home to leaders and businessmen. The city has experienced periodic lulls in development over the years, but the will to succeed that could be found in Emporia's first settlers has been a constant presence, one that has resulted in steady, long-term growth.

## EXISTING LAND USE AND DEVELOPMENT TRENDS

Tracking development trends helps paint a picture of how Emporia has evolved over the years. Trends also reveal how geographic, demographic, economic, and governmental forces influenced change. Map 2 and Table 1 show how the land in the Emporia Metropolitan Planning Area (MPA) is currently used, as well as how much land is devoted to each land use.

# PLAN INFLUENCES

Map 2: Existing Land Use (MPA)



## PLAN INFLUENCES

The MPA, covering 28,163 acres, is largely rural. As such, approximately 66% of the land in the MPA is undeveloped or used for agricultural purposes. The next most prevalent type of land use is that used as right-of-way for utilities and transportation, covering almost 3,100 acres, or 11%, of the MPA. Low-density single-family residential uses comprise nearly 2,846 acres, or 10%, of the MPA.

<b>Land Use</b>	<b>Area (ac.)</b>	<b>% of Total</b>
Commercial/Office	576.9	2%
Industrial	839.0	3%
Low-Density Residential	2,846.4	10%
Multi-Family Residential	252.7	1%
Parks/Recreation	891.6	3%
Public/Semi-Public	1,084.6	4%
Utility/ROW	3,136.1	11%
Vacant/Agriculture	18,535.7	66%
<b>Total</b>	<b>28,163.1</b>	<b>100%</b>

Table 2 and Map 3 show how the land in the City of Emporia is currently used. The city covers roughly 7,437 acres of land and makes up just over 26% of the MPA. The majority of the land inside the city limit is used for low-density residential housing.

<b>Land Use</b>	<b>Area (ac.)</b>	<b>% of Total</b>
Commercial/Office	498.2	7%
Industrial	565.6	8%
Low-Density Residential	1,878.6	25%
Multi-Family Residential	355.8	5%
Parks/Recreation	706.2	9%
Public/Semi-Public	943.1	13%
Utility/ROW	1,666.3	22%
Vacant/Agriculture	823.4	11%
<b>Total</b>	<b>7,437.2</b>	<b>100%</b>

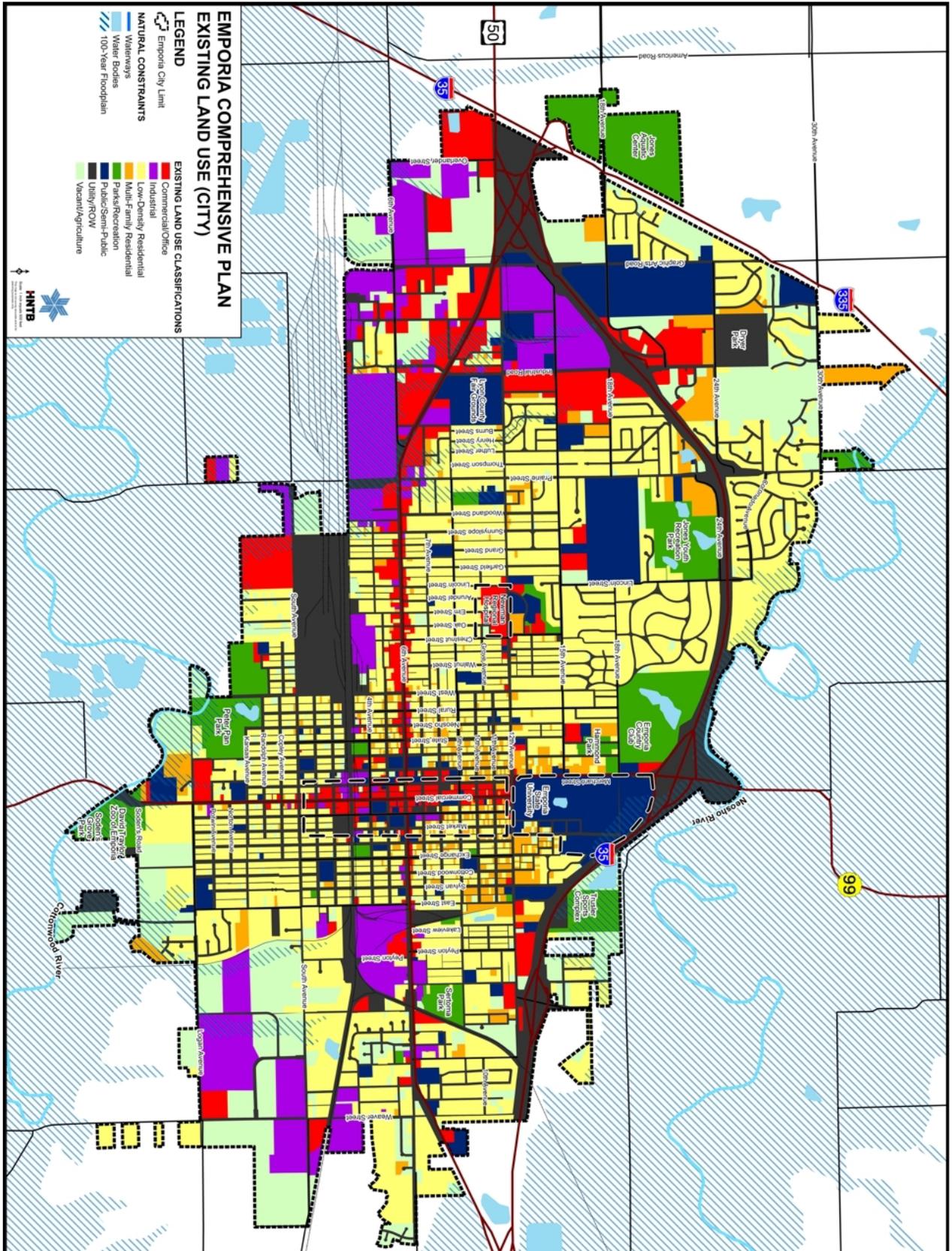
### Existing Commercial/Office

The first commercial and office land uses in the City of Emporia were located at the intersection of 6<sup>th</sup> Avenue and Commercial Street, or the Central Business District (CBD). Today, commercial land uses still exist in the area along 6<sup>th</sup> Avenue to the east and west of Commercial Street and along Commercial Street from 12<sup>th</sup> Avenue to South Avenue.

However, as the city has grown so too have the commercial areas, which now also include locations along major thoroughfares and at major intersections outside the CBD. For example, commercial developments now extend west along 6<sup>th</sup> Avenue to Graphic Arts Road. Similar developments exist at or near major transportation nodes, such as Industrial Road and I-35, and I-35 and US-50.

# PLAN INFLUENCES

Map 3: Existing Land Use (City Limits)



## PLAN INFLUENCES

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Smaller commercial developments are sprinkled throughout the city and as a whole, commercial and office land uses account for nearly 6% of the city's total land.

### Existing Industrial

Much of Emporia's industrial land use has been influenced by proximity to rail lines and access to US-50, I-35 and the Kansas Turnpike. Most industrial uses are located within the southwest and southeast portions of the City. Today, industrial land uses make up almost 8% of the city's land.

### Existing Low-Density Residential

The 2000 Census indicates that there were approximately 11,000 housing units in the City, with over 60% of those units being of the single-family, detached variety. As such, the residential character of the city is that of low-density, single-family development. Currently, this type of housing can be found in most parts of the city, with the exception being the western edge of Emporia. Overall, low-density residential areas account for just over 25% of the city's land.

### Existing Multi-Family Residential

The 2000 Census indicates that there were just over 4,000 multi-family housing units in Emporia. Ranging in size from duplexes to large apartment complexes, most of this type of housing can be found around the Emporia State University campus as well as north of I-35. Today, this type of land uses comprises nearly 5% of the city's land.

### Existing Parks/Recreation

Presently, the majority of the Emporia's parks and recreational areas can be found on the periphery of the city, and include such amenities as the Jones Aquatic Center, Peter Pan Park, the Emporia Country Club and the Jones Youth Recreation Park. Collectively, these passive and active recreational areas cover just over 9% of the city.

### Existing Public/Semi-Public

Public/semi-public land can be found throughout the city, with various civic and public buildings being located in or near the CBD and a few larger land users such as the Lyon County Fair Grounds and Emporia State University being located to the north and west. As a whole, public and public/semi-public land accounts for over 13% of Emporia's land use.

### Existing Utility/Right-of-Way

Utility and right-of-way land comprises 1,666-acres and include I-35, the Kansas Turnpike, City streets and the railroad. A majority of the land used for right-of-way is consolidated in a few areas, including the railroad yards just north of South Avenue and at the interchanges along I-35. Overall, utility and right-of-way land use accounts for almost 22% of the city's land use.

### Existing Vacant/Agriculture

While most of Lyon County is rural and undeveloped, only 9.6% of the land inside Emporia's city limits is undeveloped or used agriculturally. The majority of the vacant or agricultural land in Emporia can be found between I-35 and I-335, southeast of the intersection of I-35 and US-50, as well as in the southeast corner of the city.

## PLAN INFLUENCES

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### DEMOGRAPHIC TRENDS

Historical demographic and economic trends play a significant role in the development of a comprehensive plan. Careful examination of a given area's population, economy and related information provide the basis from which recommendations can be made regarding future land use and development. This section will provide data compilation, analysis and discussion as it pertains to the City of Emporia's population, housing and economic characteristics.

The population of the City of Emporia has grown every decade since 1940. During this time the population has more than doubled, with the largest 10-year rate of increase occurring between 1960 and 1970 when the city grew by 28.2%. Conversely, the smallest growth rate, less than 1%, occurred between 1980 and 1990 as can be seen in Table 3.

While Emporia's population growth has slowed somewhat from its rapid pace prior to 1970, continued population increases can be expected. Based on historical data and recent trends, the city can expect a 2010 population of roughly 27,800, a 2020 population around 28,800 and a 2025 population of just over 29,000.

**Table 3**  
**Population Trends and Projections**

	Emporia		*Lyon County	
	Pop.	% Change	Pop.	% Change
<b>1900</b>	8,223	---	16,851	---
<b>1910</b>	9,058	10.2	15,869	-5.8
<b>1920</b>	11,273	24.5	14,881	-6.2
<b>1930</b>	14,067	24.8	15,173	2.0
<b>1940</b>	13,188	-6.2	13,236	-12.8
<b>1950</b>	15,669	18.8	10,907	-17.6
<b>1960</b>	18,190	16.1	8,738	-19.9
<b>1970</b>	23,327	28.2	8,684	-0.6
<b>1980</b>	25,287	8.4	9,821	13.1
<b>1990</b>	25,512	0.9	9,220	-6.1
<b>2000</b>	26,702	4.7	9,233	0.1
<b>2010*</b>	27,794	4.1	8,477	-8.2
<b>2020*</b>	28,829	3.7	8,592	1.4
<b>2025*</b>	29,347	1.8	8,649	0.7

\*The Lyon County population in this table does not include Emporia

Emporia's strong history of growth has not been mirrored by Lyon County. Lyon County, excluding Emporia, has declined by 50 percent since 1900. In 1900, the City of Emporia accounted for roughly 33% of the county's entire population. By 2000 that amount had risen to almost 75%, pointing to Emporia's increasing significance in Lyon County as a dominant population center. Because Emporia's population makes up a large percentage of Lyon County, it can be expected that future county population growth will be directly related to that experienced by Emporia.

# PLAN INFLUENCES

**Figure 1  
Enumerated Population & Projections**



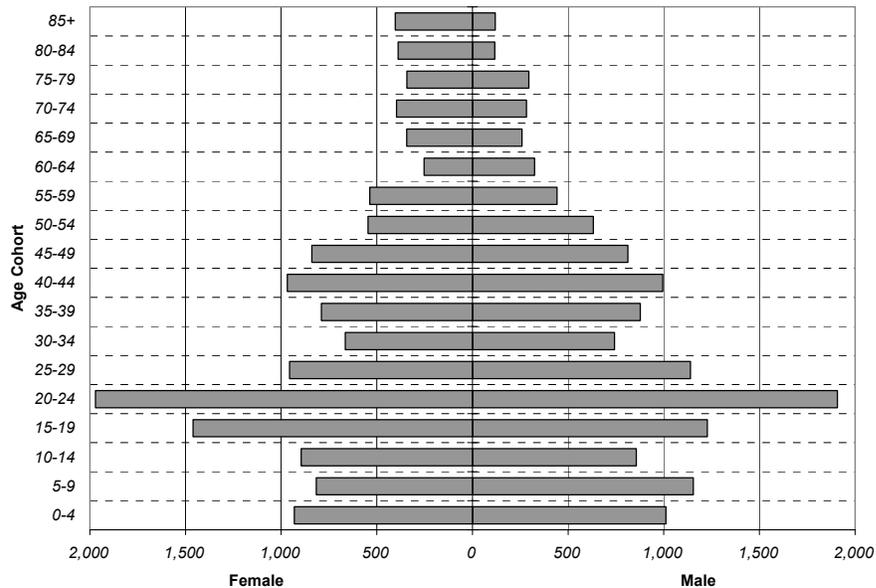
Figure 1 shows the enumerated populations for both the City of Emporia and Lyon County as well as projected populations through 2025. Although both populations appear to follow a similar pattern, it is expected that Emporia’s future population will increase at a slightly greater rate than that of Lyon County.

While projected populations play a large role in the general shaping of a given municipality’s future development, further study is necessary to determine, on a smaller scale, where said population resides. Examination of a city’s population by census tracts, for example, may indicate that particular areas of a city are experiencing extraordinarily rapid growth or decline, thus warranting additional study. Identification of the direction of a city’s expansion or contraction is crucial in planning for its future.

Figure 2 on the following page is what is known as a “population pyramid”. Theoretically, graphical representation of an area’s population by 5-year age cohorts should resemble a pyramid-like shape, with there being a greater number of middle-aged people than children or elderly. While there are exceptions to this rule, population pyramids are beneficial in that they can be used to determine median ages and whether a population is aging or getting younger.

# PLAN INFLUENCES

**Figure 2**  
**City of Emporia Population Pyramid, 2000**



Based on Emporia’s 2000 population, it is clear that the largest subset of the population for both males and females is that of those aged 15 to 24. With Emporia being home to Emporia State University, this comes as no surprise. There is obviously some population loss due to the graduation and relocation of the university’s students, although the relatively large population of children indicates that there is some desire by the adult population to remain in Emporia and start families. Also, it is clear that women tend to live longer than men in Emporia, as the above figure shows a near constant population across the female age cohorts 65 and older while the corresponding male cohorts show a decline.

## Housing

In 2000 Emporia had approximately 11,000 housing units, a 2.5% increase from the number of units it had in 1990. While this percent increase was less than half of that experienced by the city in the previous decade, it is comparable to the percent increase of housing units throughout the entire county.

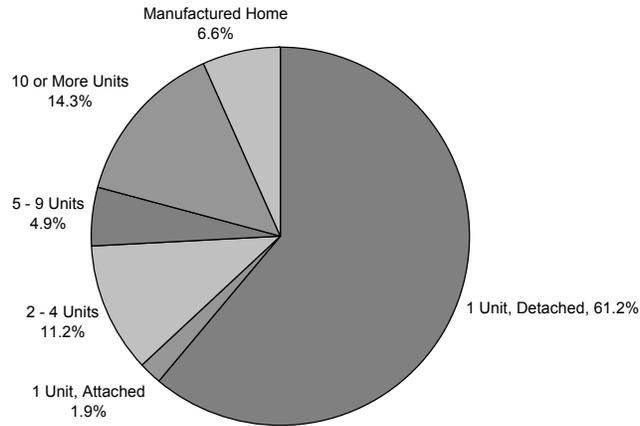
**Table 4**  
**Housing Units**

	Emporia		Lyon County	
	Count	% Change	Count	% Change
<b>1980</b>	10,171	---	13,980	---
<b>1990</b>	10,732	5.5%	14,346	2.6%
<b>2000</b>	11,002	2.5%	14,757	2.9%

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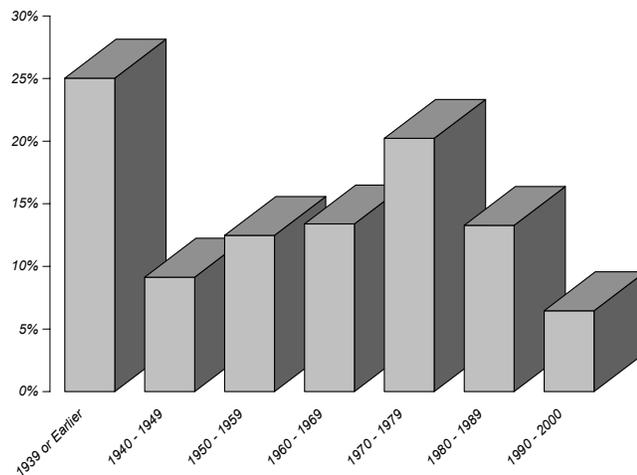
The City of Emporia offers a wide range of housing options. In 2000, the majority of the housing stock, approximately 61%, consisted of single-family detached units. Approximately 30% of the housing stock was comprised of multiple attached units such as duplexes, triplexes, town homes and apartment buildings, with manufactured homes making up 6.6% of the city's housing stock.

**Figure 3**  
**City of Emporia Dwelling Units by Type, 2000**



A large number of the residential structures within the city were built before the Second World War. As Figure 4 below indicates, 25% of the residential structures were built in 1939 or earlier, with the largest single decade for residential construction being 1970-1979, accounting for roughly 20% of all housing units in Emporia.

**Figure 4**  
**City of Emporia Residential Structures by Age**



Of Emporia's approximately 11,000 housing units in 2000, slightly more than 93% of them were occupied. This was quite similar to the occupancy rate in Lyon County, although Lyon County boasted a higher rate of owner-occupancy. This can be largely attributed to the student population in Emporia.

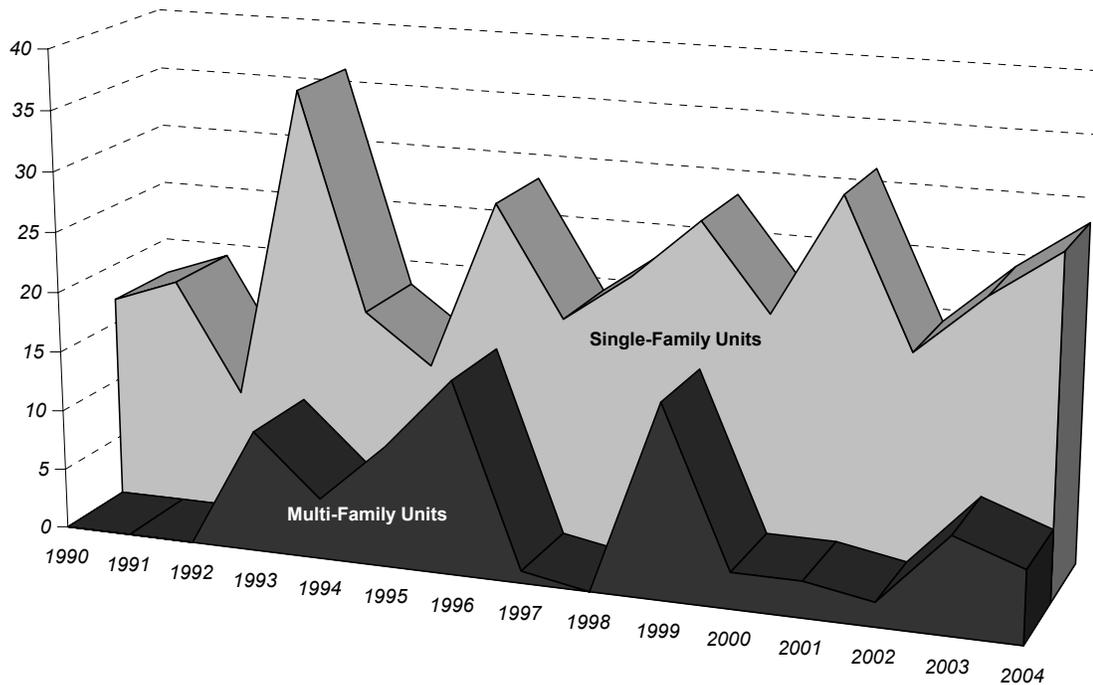
# PLAN INFLUENCES

**Table 5**  
**Housing Characteristics, 2000**

Units	Emporia	Lyon County
<b>Total</b>	11,002 (%)	14,757 (%)
<b>Occupied</b>	10,247 93.1	13,691 92.8
<b>Owner-Occupied</b>	5,481 53.5	8,340 60.9
<b>Renter-Occupied</b>	4,766 46.5	5,351 39.1
<b>Vacant</b>	755 6.9	1,066 7.2

To keep pace with an increasing population as well as an above average occupancy rate, new residential construction has been necessary in Emporia. While new housing construction occurs far less frequently in the city than it did in the 1970's and early 1980's, Figure 5 shows that construction of single-family housing units has increased, on average, over the past 14 years. Conversely, construction of new multi-family housing units has been sporadic in recent years, a far cry from the 1970's when the number of multi-family units being built often equaled or exceeded the number of new single-family units being built.

**Figure 5**  
**City of Emporia**  
**Building Permits Issued, New Construction, 1990 – 2004**



Despite continued residential construction, in 2000 6% of Emporia's housing stock was considered overcrowded, based on a standard of more than 1 person per room. Census data

# PLAN INFLUENCES

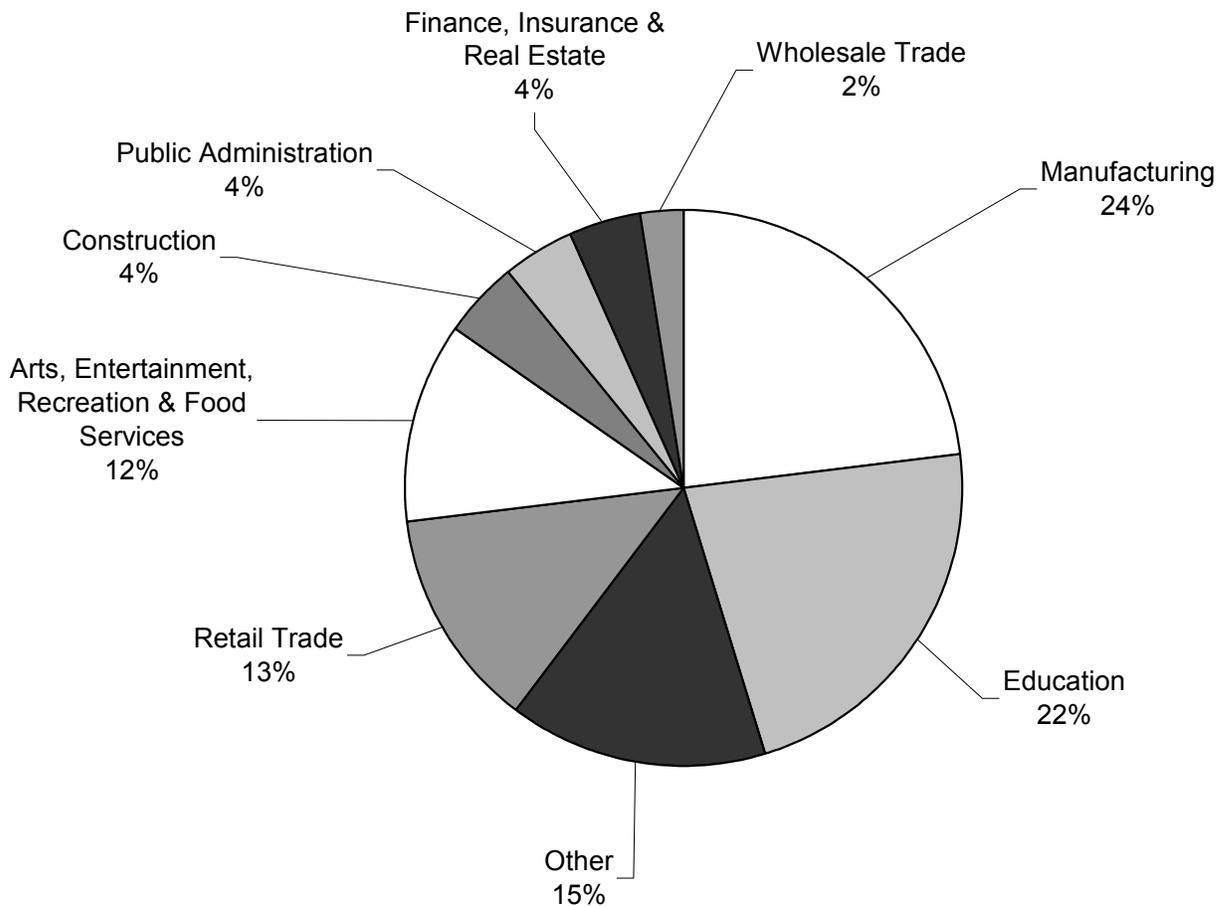
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also shows that in 2000, 4-bedroom homes had the highest occupancy rate, 96%, while 1-bedroom homes had the lowest at 88%.

## Employment

In 2000, nearly 50% of Emporia's employed residents worked in the education or manufacturing industries as shown in Figure 6. Major employers in these industries include Dolly Madison Baking, IBP and Emporia State University. Other industries supplying a large number of jobs to Emporia include retail trade and entertainment, recreation and food services.

**Figure 6**  
**City of Emporia Employment by Industry, 2000**



According to the Kansas Department of Labor (DLA) statistics, the 2007 Emporia Micro-Area unemployment rate, which includes Lyon County, is 4.7%. This compares favorably to the 2007 statewide employment rate of 4.9 percent. However, despite most of the existing jobs within

## PLAN INFLUENCES

these areas have significantly lower wages than the statewide average. According to the DLA 2006 Annual Employment and Wages Report, the average annual wage in Lyon County was \$27,062. This compares to \$35,699 for the State of Kansas. Based on this data, there is a need to attract higher paying jobs to close this gap and to diversify the workforce.

**Table 6**  
**Annual Average Wages**

Industry	Lyon County	Kansas
Total	\$27,062	\$35,699
Private	\$25,857	\$36,208
Agriculture, Forestry, Fishing and Hunting	\$27,531	\$29,690
Mining	\$39,168	\$47,486
Utilities	*	\$66,709
Construction	\$31,118	\$39,216
Manufacturing	\$32,711	\$47,504
Wholesale Trade	\$42,324	\$50,969
Retail Trade	\$18,105	\$22,310
Transportation and Warehousing	\$33,802	\$35,900
Information	\$28,862	\$60,282
Finance and Insurance	\$30,444	\$50,345
Real Estate and Rental and Leasing	\$22,508	\$30,512
Professional and Teaching Services	\$28,486	\$50,029
Management of Companies and Enterprises	*	\$73,472
Administrative and Waste Services	\$16,992	\$28,984
Educational Services	\$13,063	\$28,219
Health Care and Social Assistance	\$23,967	\$33,745
Arts, Entertainment and Recreation	\$11,198	\$13,605
Accommodation and Food Services	\$8,872	\$12,230
Other Services, except Public Administration	\$19,461	\$23,856
Government	\$31,270	\$33,409
* Data not available		

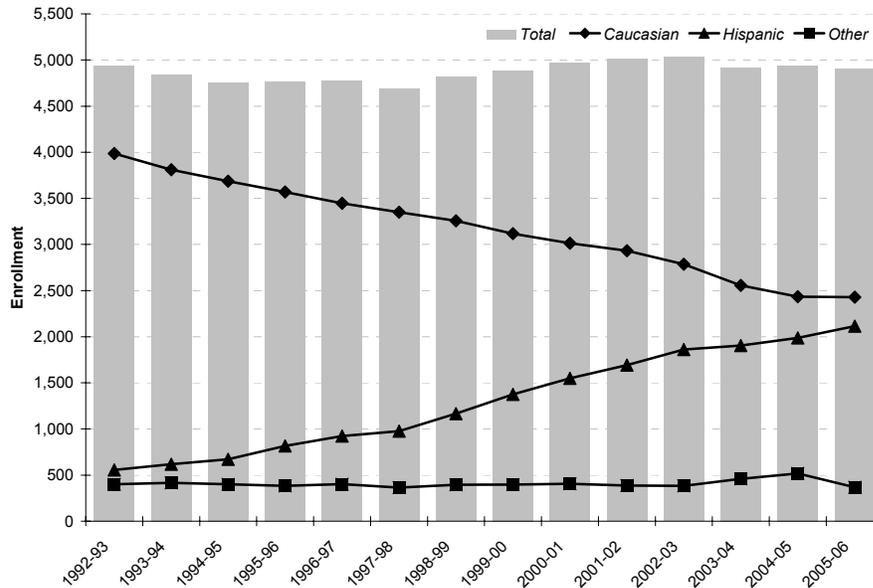
### Education

Over the past 14 school years, Emporia's USD 253 School District has experienced almost no change in overall enrollment, although the racial composition of the district's students has

# PLAN INFLUENCES

changed dramatically. During the 1992-1993 school years, USD 253’s student body was comprised of predominantly Caucasian students, or 81%, with Hispanic students making up 11% of the student population and students from other racial backgrounds making up 8% of the student population. By the 2005-2006 school year, the number of Hispanic students had risen to almost equal the number of Caucasian students, which had decreased significantly, while the number of students from other racial backgrounds remained the same.

**Figure 7  
USD 253 School Enrollment, 1992-2006**



## ENVIRONMENTAL CONSIDERATIONS

Environmental conditions have played a significant role in the existing development pattern of Emporia and will continue to play an important role in directing the physical growth and configuration of new development on the fringe of the city. Natural conditions such as the rivers and floodplain have provided a major constraint to growth and have had a notable affect upon the location of transportation corridors, utilities, and subsequent land use and development patterns.

### **Drainage Basins**

Drainage basins, commonly referred to as watersheds, are the surface areas that drain to a common waterway, such as a stream, river, wetland or lake. Watersheds create natural boundaries bringing together individuals with a shared interest in the amount, rate, and quality of water passing through or heading their way. The principal drainage basin within the MPA is the Neosho River.

### **Floodplain**

In recognition of the risks and problems in floodplain areas, development should be carefully controlled and restricted. The City of Emporia and Lyon County participates in the Federal Emergency Management Agency (FEMA) National Flood Insurance Program. There are four

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aspects of floodplain areas to be considered when planning and administering floodplain area development controls and restrictions.

- **Floodway:** the area the drainage basin which must remain open to carry the runoff from the floodplain without causing the flood elevation to increase by 1-foot or more at any point along the basin. Development within floodways is extremely hazardous and should be restricted. City and County regulations within the metropolitan planning area must meet federal guidelines and prohibit floodway development which would cause any increase in flood elevations within these areas.
- **100-Year Floodplain:** the part of the drainage basin which is within the one-percent annual chance floodplain but which is not within a floodway. This area is also referred to as a Special Flood Hazard Area (SFHA). Development in the 100 year floodplain may be appropriate if adequate measures are taken to protect the development from the flood hazards. Development in the 100-year floodplain may be appropriate if adequate measures are taken to protect the development from the flood hazards including but not limited to raising the proposed structure at least 1-foot above the base flood elevation.
- **500-Year Floodplain:** the part of the drainage basin which is within the 0.2 percent annual chance floodplain. Development in the 500 year floodplain may be appropriate if adequate measures are taken to protect the development from the flood hazards.

A large portion of the major floodplain areas in the metropolitan planning area have been mapped. However, it must be noted that detailed flood elevations have not been determined for all mapped 100-year flood plain areas because the Flood Insurance Study prepared by the Federal Emergency Management Agency (FEMA) used FEMA's approximate methods to determine some floodplains. Also, it must be noted that the analysis methods used for preparation of the Flood Insurance Study has not caused all localized floodplains to be identified. For these reasons, it is important that the City and County floodplain regulations within the metropolitan planning area continue to require that persons subdividing or developing land cause the floodplain near their site to be studied to determine the floodplain elevations and boundaries on the property.

### Streamway Corridors

Streamway corridors make ideal parks, open spaces and parks trails since these areas are subject to flooding. They also serve as important components of the stormwater management and water quality system. Cities across the country have developed or are planning greenbelts along their stream valleys for both parks and stormwater. Stream corridors serve a number of important roles including but not limited to the following:

- Preserving water quality by filtering sediment from runoff before it enters rivers and streams;
- Protecting stream banks from erosion;
- Providing a storage area for flood waters;
- Providing food and habitat for fish and wildlife; and
- Preserving open space and aesthetic surroundings.

### Water Quality

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Water quality involves ensuring that waterways support aquatic life and human uses. The Clean Water Act's main goal is to make waterways "fishable and swimmable." Pollution of waterways is defined as point source and nonpoint source pollution. Point source pollution is from factories and sewage treatment plants that put waste directly into streams and rivers. Nonpoint source pollution involves the runoff from parking lots, roads, farms, rooftops, wildlife areas, failing septic systems, and also habitat degradation. The most common nonpoint source pollutants are sediments and nutrients washed into water bodies from farms, animal feeding operations, construction sites, and other areas where land has been disturbed. Other pollutants include pesticides, pathogens (bacteria and viruses), salts, oil, grease, toxic chemicals, and heavy metals.

### Soils

The metropolitan planning area is dominated by clay-type soils, which have poor percolation or absorption characteristics and are largely susceptible to high water tables and contain extensive areas of shallow bedrock layers. These geologic characteristics present difficulties for conventional on-site wastewater disposal systems. Alternative on-site disposal systems may be used but often these systems are more expensive than conventional disposal systems. These soils also pose limitations for excavation and construction. The high shrink-swell characteristics of some soils also affect building construction requirements.

Over time, numerous private on-site systems could have adverse impacts throughout Lyon County. For example, surface and subsurface waters can become polluted and untreated wastewater can come to the surface. Malfunctioning or overflowing septic systems can release bacteria and nutrients into the water cycle, contaminating nearby lakes, streams, estuaries, and groundwater. In many cases, problems can be minimized by careful design, installation and operation of the on-site systems. Properly maintained septic system should be inspected and emptied every 3 to 5 years.

While the existing wastewater disposal permit process may effectively address development on existing tracts already zoned and/or platted, additional analysis of potential problems for on-site wastewater disposal should occur to identify potential problems before they occur. The ability to recognize those areas that might need special attention will help assure safe and sanitary development in those areas not expected to be served by sanitary sewers in the foreseeable future. The conditions that cause problems for on-site septic systems include slow permeability in soils, seasonal water tables, and bedrock or impervious soils near the ground surface. As noted, the most prevalent of these problems in the metropolitan planning area is slow permeability rates in predominantly clay soils.

There are two dominate general soil associations that cover the Emporia MPA. The Kenoma-Ladysmith association sits under most of the developable land in Emporia. It is found primarily on broad ridge tops and gentle slopes. The soils are described as deep, nearly level and gently sloping, and moderately well drained. The Chase-Osage association is found to the north and the south of Emporia. This soil association is found in flood plains and on lower terraces adjacent to flood plains. Oxbow lakes and winding stream channels are often found here. The soils in the Chase-Osage association are described as deep, nearly level, moderately well drained and poorly drained.

### LAND AREA

# CHAPTER 3

## GOALS, OBJECTIVES AND POLICIES

### OVERVIEW

Through a series of public meetings, stakeholder meetings and a review of alternative plans, Emporia residents, property owners, business owners, citizens and public officials identified a number of issues, ideas and recommendations. As a result of these discussions, a set of goals, objectives and policies were identified and selected for inclusion within the Plan. Some goals, objectives and policies were retained from the previous plan while others were modified for the update. Together, these goals, objectives and policies provide the framework for the development of the Future Land Use Plan as well as recommendations for transportation and infrastructure.

### GOALS, OBJECTIVES AND POLICIES

#### **Goals: Broad aspirations to guide city achievements.**

Goals are the future of the plan; they are those things that the city wants to accomplish over the life of the plan. Plan goals:

- serve as the framework for future land use decisions;
- identify needed public improvements and services; and
- establish priorities for public investment.

#### **Objectives: Course of action required to achieve a stated goal.**

Objectives define specific actions steps intended to help meet the stated goal. Plan objectives:

- outline action steps; and
- are understood by both the decision-makers and the general public.

#### **Policies: Statements that provide a framework for decision making.**

Policies provide a framework for decision making based upon the goals and objectives. Plan policies:

- provide direction for decision-makers
- are specific to issues identified throughout the planning process; and
- are consistently applied and implemented.

### **LAND USE AND DEVELOPMENT**

#### **Goal 1: Balance the protection of individual property rights with the need to ensure the safety, health and welfare of Emporia residents.**

- ***Objective 1.1: Promote compatible development.***
  - \* Policy 1.1.1: New development should be compatible in terms of design, density, massing and scale to adjacent existing development.
  - \* Policy 1.1.2: New development should transition in increasing density away from adjacent lower intensity development.

## GOALS, OBJECTIVES AND POLICIES

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- \* Policy 1.1.3: Infill development and redevelopment should be well integrated with existing development.
- \* Policy 1.1.4: Multi-family development should be discouraged within established single-family detached neighborhoods.
- \* Policy 1.1.5: Multi-family dwellings (including duplexes and townhouses) should locate in areas where they can serve as buffers between more intensive uses, such as commercial/office uses, and less intensive uses, such as low-density single-family residential uses).
- \* Policy 1.1.6: Multi-family residential projects (other than duplexes) should meet minimum site design criteria:
  - Access to multi-family projects shall be from an Arterial, Parkway or Collector street and shall not cause increase in traffic levels through single-family areas;
  - At least 20 percent of the site shall be landscaped and preserved for open space or recreation areas; and
  - Sufficient off-street parking shall be provided to eliminate the need for residents to park along public streets.
- \* Policy 1.1.7: Commercial and/or office expansion into adjacent single-family neighborhoods should be discouraged.
- \* Policy 1.1.8: Non-industrial uses should be limited within areas currently zoned for industrial use.
- **Objective 1.2: Maximize new development opportunities west of the Kansas Turnpike:**
  - \* Policy 1.2.1: Consider annexation of key areas west of the Kansas Turnpike. Priority areas include the following:
    - a. US 50 from the Kansas Turnpike to Americus Road;
    - b. Americus Road from US 50 to 30<sup>th</sup> Avenue;
    - c. US 50 from Americus Road to County Road F; and
    - d. County Road F from US 50 to 18<sup>th</sup> Street.
  - \* Policy 1.2.2: Extend City sewer service west of the Kansas Turnpike in order to accommodate future residential, commercial and industrial development. Require property owners to sign annexation agreements in exchange for connections to new sewer.
  - \* Policy 1.2.3: Work with the KDOT and the County to develop access management guidelines along US Highway 50 and Americus Road.
  - \* Policy 1.2.4: Build a new water tower west of the Kansas Turnpike to pressurize water for the west-end of the City.

## GOALS, OBJECTIVES AND POLICIES

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- \* Policy 1.2.5: Plan for a future Fire Station #3 to be located west of the Kansas Turnpike with proximity to Americus Road and US Highway 50. Acquire property for the fire station as well as training grounds and conference space.
- \* Policy 1.2.6: Zone newly annexed areas to conform to the Future Land Use Plan.
- \* Policy 1.2.7: Require new residential subdivisions to provide a shadow plat to delineate future lots, roads and utilities.
- \* Policy 1.2.8: Work with Lyon County and the Emporia-Lyon County Metropolitan Area Planning Commission to ensure conformance with the Comprehensive Plan.
- **Objective 1.3: Minimize the impact of development within environmentally sensitive areas.**
  - \* Policy 1.3.1: Limit new development within Neosho and Cottonwood River flood plain. Preferred land uses include agriculture, parks, trails and open space. If more intensive development does occur, such as permanent structures, require the developer to provide documentation demonstrating that the proposed development/structure will not result in any increase of more than one foot in flood levels during occurrence of a one hundred year flood discharge.
  - \* Policy 1.3.2: Encourage development in areas with good soils, particularly when septic systems are used.
- **Objective 1.4: Identify prime industrial, commercial and office areas for new development.**
  - \* Policy 1.4.1: Zone for an adequate supply of industrial, commercial and office areas based on the adopted Future Land Use Plan map to promote job growth.
  - \* Policy 1.4.2: Identify suitable industrial, commercial and office sites using the following criteria:
    - visibility and access from arterials, parkways and/or highways;
    - access to rail lines;
    - compatibility with developments;
    - lack of environmental constraints; and
    - proximity to existing or planned public utilities capable of serving industrial and commercial uses.
- **Objective 1.5: Provide a wide-range of housing options throughout the City and MPA.**
  - \* Policy 1.5.1: Allow for the creation of residential communities that encompass a wide-range of housing types, styles and densities with multiple price points to meet the needs and lifestyles of present and future residents.
  - \* Policy 1.5.2: Provide flexible infrastructure standards within new growth areas to encourage a variety of lot sizes and products.

## GOALS, OBJECTIVES AND POLICIES

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- \* Policy 1.5.3: Develop new incentives for redevelopment and infill of blighted neighborhoods. A majority of the <sup>1</sup>blighted neighborhoods within Emporia are near Downtown and south of the railroad tracks. A majority of these structures have absentee ownership and are primarily renter-occupied. The City has condemned some of these structures. However, the City does not have policies, strategies and programs designed to replace these structures with new infill housing. The City should take advantage of state and federal programs including Community Development Block Grants (CDBG) to improve these areas. Consider delineation of additional blighted areas in the southeast portion of the City.

***Objective 1.6: Update the Future Land Use Plan as appropriate.***

- \* Policy 1.6.1: The Planning Commission should review the Land Use Plan every five years or when substantial infrastructure improvements occur to ensure that the map still reflects the long-term goals and policies of the Plan.

### **Goal 2: Promote Economic Development, Investment and Reinvestment in Emporia.**

- ***Objective 2.1: Continue to assess opportunities for use of rail access for industrial development.***

- \* Policy 2.1.1: Study the opportunities for rail service to industries, both exiting facilities and future sites, relative to the following:
  - market demand of local industries;
  - costs to develop rail spurs from existing lines;
  - viability of rail lines within the City and the market area; and
  - rate of structures, now and projected, to serve rail demand.
- \* Policy 2.1.2: Interview railroads to identify potential costs, best available rates and to understand their interest in serving certain locations. Assess physical constraints:
  - analyze any functional obsolescence of the regional and local system which may negate future rail infrastructure investments; and
  - assess opportunities and constraints to extending rail to selected and potential industrial sites.

### **Goal 3: Promote Downtown Investment and Redevelopment.**

- ***Objective 3.1: Support the private sector improving downtown.***

- \* Policy 3.1.1: Investigate potential incentives to facilitate the redevelopment of vacant upper floors of buildings for office and residential use.
- \* Policy 3.1.2: Undertake a comprehensive parking study to determine existing and projected parking needs.
- \* Policy 3.1.3: Encourage entertainment uses, such as the Civic Auditorium, theaters, and restaurants and innovate uses to locate Downtown to attract visitors to the area during the evening.

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<sup>1</sup> The designation of a blighted area will follow the Housing and Urban Development (HUD) CBDG requirements.

## GOALS, OBJECTIVES AND POLICIES

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- \* Policy 3.1.4: Strengthen the central library and museum as a key land use in the Downtown by encouraging the development of additional cultural amenities and resources.
- \* Policy 3.1.5: Inventory land and structures on the fringe of Downtown to assess market opportunities for business incubators.
- \* Policy 3.1.6: Assess the adequacy of the existing water main along Commercial Street to serve existing and future fire flow needs.

### ***Objective 3.2: Improve the visual image of Downtown.***

- \* Policy 3.2.1: Continue to restore and preserve the original facades and features of the buildings. Restore the upper facades of buildings by removing boarded up windows.
- \* Policy 3.2.2: Provide better signage to Downtown along I-35 and the Kansas Turnpike.
- \* Policy 3.2.3: Develop a “Challenge Grant” in established areas to match private improvements with public improvements.

### \* ***Objective 3.3: Ensure adequate parking within Downtown.***

- \* Policy 3.3.1: Consider revising the “C-4” Zoning District to require new office and residential uses to provide a parking plan for new owners and/or tenants.
- \* Policy 3.3.2: Continue to work with Downtown property owners, merchants, residents and other stakeholders to evaluate existing and future parking needs.

## **Goal 4: Improve the Area Work Force by Training Employees for the Type of Jobs that Will Enhance Emporia’s Ability to Attract New Industry.**

- ***Objective 4.1: Train for economic development needs of the area to complement the long standing industrial base of Emporia.***
  - \* Policy 4.1.1: Coordinate with Flint Hills Technical College and high schools to train for more high-tech and service oriented businesses.
  - \* Policy 4.1.2: Strategically plan training to respond to the labor needs of local employers so that local labor talent can rise to meet the specialized labor demands.
  - \* Policy 4.1.3: Expand the Chamber of Commerce Manufacturer’s Council model linking employers with representatives of the school district to “fine tune” educational curriculum with local employment needs.
  - \* Policy 4.1.4: Strengthen basic educational skills with expansion of curricula: technical; occupational; or college preparatory.

## **Goal 5: Maximize Future Development Opportunities within and adjacent to the Emporia Airport.**

- ***Objective 5.1: Establish an Airport Influence Area and associated policies and regulations to prevent incompatible land uses from encroaching upon airport operations.***

## GOALS, OBJECTIVES AND POLICIES

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- \* Policy 5.1.1: In areas affected by airport-related noise levels of 65Ldn or higher, consider efforts to mitigate land use conflicts, such as acquisition of land, dedication of aviation easements and negotiation of noise agreements.
- \* Policy 5.1.2: Prohibit residential development and other noise sensitive land uses in areas that are effected by noise levels of 70Ldn or higher.
- \* Policy 5.1.3: Work with the Emporia-Lyon County Metropolitan Area Planning Commission and Lyon County Planning Board on restricting incompatible development near the airport.
- \* Policy 5.1.4: Pursue the establishment of the Airport Influence Area as a part of the Emporia-Lyon County Metropolitan Area Planning Commission jurisdiction and/or adopt the County Planning Area with approval of the City.

### TRANSPORTATION AND INFRASTRUCTURE

#### **Goal 6: Leverage City Investments Made in the Existing infrastructure including Roads, Water, Stormwater, Sanitary Sewer Systems, Parks and Public Facilities.**

- ***Objective 6.1: Maximize Infrastructure Investments.***
  - \* Policy 6.1.1: Encourage redevelopment and infill development within areas already served by existing City infrastructure.
  - \* Policy 6.1.2: The capital improvements programming process should focus on the maintenance and upgrade of existing city services and facilities, including streets, sewer, water and stormwater.
  - \* Policy 6.1.3: The City should undertake a comprehensive study of all existing water and sewer mains to evaluate existing conditions and identify repair and on-going maintenance needs.
  - \* Policy 6.1.4: The City should consider using a Geographic Information System (GIS) to document and track service calls, repairs and other improvements to streets, sewer, water and stormwater infrastructure.
- ***Objective 6.2: Ensure that new developments are supported by adequate infrastructure.***
  - \* Policy 6.2.1: Encourage new development within areas planned for future infrastructure expansion.
  - \* Policy 6.2.2: Examine ways in which new development can pay its fair share of the costs of infrastructure improvements and facilities that are necessary to serve that development.
  - \* Policy 6.2.3: Leverage the ability to provide services (such as sewer and water) to accomplish Plan goals and objectives.

#### **Goal 7: Promote a Safe, Effective and Aesthetically Pleasing Transportation System.**

## GOALS, OBJECTIVES AND POLICIES

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- **Objective 7.1: Promote the Design of Roads to Optimize Safe and Efficient Traffic Flow.**
  - \* Policy 7.1.1: Use the Major Street Plan to provide adequate right-of-way, property line setbacks and infrastructure improvements for future transportation development.
  - \* Policy 7.1.2: Develop an access management program for arterials and parkways. This program should include provisions for consolidating and/or eliminating driveways, minimum spacing between access points and adding access roads (where appropriate).
  - \* Policy 7.1.3: Encourage commercial and office development that is designed with coordinated access points, internal circulation and parking.
  - \* Policy 7.1.4: Design pedestrian-friendly parkways with 8-foot sidewalks and landscape enhancements to connect neighborhoods with major destinations and amenities. Identified parkways include South Avenue, 6<sup>th</sup> Avenue, 12<sup>th</sup> Avenue, Commercial Street, Prairie Street and Americus Road.
- **Objective 7.2: Encourage Coordination Between the City, the Kansas Turnpike Authority (KTA) and the Kansas Department of Transportation (KDOT) on Transportation Improvements within the MPA.**
  - \* Policy 7.2.1: Work with the KTA to maximize development opportunities adjacent to the Turnpike Interchange.
  - \* Policy 7.2.2: Work with the KTA and KDOT to integrate quality “gateway” elements at the major intersections of existing and Highway junctions leading into Emporia.

### QUALITY OF LIFE

#### Goal 8: Improve Pedestrian and Bicycle Connections throughout Emporia.

- **Objective 8.1: Provide pedestrian and bicycle connections across or under I-35 and the Kansas Turnpike.**
  - \* Policy 8.1.1: Work with KDOT and KTA to provide pedestrian/bicycle connections along, across or under I-35 and the Kansas Turnpike and within the public right-of-way.
  - \* Policy 8.1.2: Work with property owners adjacent to I-35 and the Kansas Turnpike outside of the public right-of-way to acquire necessary easements for trail/sidewalk improvements.
- **Objective 8.2: Improve pedestrian and bicycle connections south of the rail tracks.**
  - \* Policy 8.2.1: Install signage to alert drivers to bicycle traffic.

#### Goal 9: Continue to Upgrade and Enhance the David Traylor Zoo of Emporia (Zoo).

- **Objective 9.1: Maintain accreditation through improvements to the Zoo.**

## GOALS, OBJECTIVES AND POLICIES

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- \* Policy 9.1.1: Improve pedestrian circulation within the Zoo by improving existing paths and construction of a circular path and fence around the zoo.
- \* Policy 9.1.2: Consider the addition of a new entrance and joint use of the Soden's Gove ballpark parking lot.
- \* Policy 9.1.3: Expand the new Veterinary Building to meet future needs.
- \* Policy 8.1.4: Continue to add and market new exhibits. Potential exhibits may include, but are not limited to, the following:
  - Reptile house;
  - Outdoor aviary;
  - New lemur exhibit;
  - King vulture exhibit; and
  - Otter exhibit.

### **Goal 10: Continue to Serve Emporia's Park and Recreation Needs while Maintaining and/or Upgrading Existing Facilities**

- ***Objective 10.1: Develop additional facilities to maintain National Recreation and Parks Association (NRPA) standards as the City grows.***
  - \* Policy 10.1.1: Amend the subdivision regulations to require dedication of park land or payment of a fee in lieu of land dedication for future parks.
- ***Objective 10.2: Identify opportunities for a park to serve Downtown and surrounding neighborhoods.***
  - \* Policy 10.2.1: Work with Downtown property owners, merchants and other stakeholders to identify a preferred park location.
  - \* Policy 10.2.2: Acquire a site large enough to serve as a central gathering place for special events.
- ***Objective 10.3: Identify opportunities for a regional park west of the Kansas Turnpike.***
  - \* Policy 10.3.1: Conduct a location study to determine the most appropriate site options.
  - \* Policy 10.3.2: Acquire a site prior to extensive land development in order to minimize the effects of land cost escalation.
  - \* Policy 10.3.2: Monitor residential development trends west of the Kansas Turnpike in order to plan for site development accordingly.
  - \* Policy 10.3.4: Acquire land of sufficient size to help address recreation facilities deficiencies and provide large open spaces for multiplex recreational uses.
- ***Objective 10.4: Consider development of a linear park and trail system along riparian corridors for recreational use including hiking and biking.***

## GOALS, OBJECTIVES AND POLICIES

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- \* Policy 10.4.1: Design a linear park along the Cottonwood and Neosho Rivers to link neighborhoods, retail areas, parks, recreation amenities as well Emporia State University and area schools.
- \* Policy 10.4.2: Consider as a first priority a linear park link between Soden Park and Peter Pan Park along the Cottonwood River to accomplish the following:
  - Link the two community parks which offer regional attractions;
  - Test the popularity of a linear park system over a relatively short distance requiring less public investment; and
  - Take advantage of the K-99 bridge which was designed to allow access underneath the structure.
- **Objective 10.5: Where feasible, work with Emporia State University, public schools and other institutions to develop joint-use facilities.**

### **Goal 11: Encourage Fee Supported Recreation Facilities.**

- **Objective 11.1: Increase net revenue generation from pool operations.**
- **Objective 11.2: Host regional and national sports tournaments that pay 100% of costs and benefit the local economy.**
- **Objective 11.3: Study adaptive use of the flood plain for more intense recreation use and facility development.**

### **Goal 12: Develop a Positive "Vision" of Emporia that Presents A Quality Image of the City to Persons Residing Inside and Outside the City.**

- **Objective 12.1: Incorporate "Gateways" to the city that provide positive first impression of the community to visitors at interchanges and other major entry points to the City.**
  - \* Policy 12.1.1: Consolidate signage into a high-quality gateway monument or feature. New free standing billboards should be discouraged.
  - \* Policy 12.1.2: Private developments adjacent to these areas should incorporate high-quality architectural materials. Outdoor storage, trash dumpsters, loading areas and surface parking within these should be screened with appropriate landscaping and/or fencing.

### **Goal 13: Work with the Business Community, University and Technical College to Provide a Well Trained Work Force.**

- **Objective 13.1: Create community-wide awareness and use of educational resources.**
  - \* Policy 13.1.1: Promote the development/expansion of nighttime course offerings at Emporia State University and at the Flint Hills Technical College to benefit employee training.

## **GOALS, OBJECTIVES AND POLICIES**

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- \* Policy 13.1.2: Promote awareness of employee education needs to Emporia State University and Flint Hills Technical College.
- \* Policy 13.1.3: Develop partnerships with the private sector in order to create incentives for employee continuing education.

# CHAPTER 4

# FUTURE LAND USE PLAN

## OVERVIEW

The land use recommendations represent the community's desire for quality development that meets the City's fiscal needs. Throughout the plan process, both community leaders and citizens recognized the importance of economic development in providing amenities and jobs for residents as well as a solid tax base for services and infrastructure. This Plan provides a balance between the need to grow with the community's desire to improve and enhance established areas.

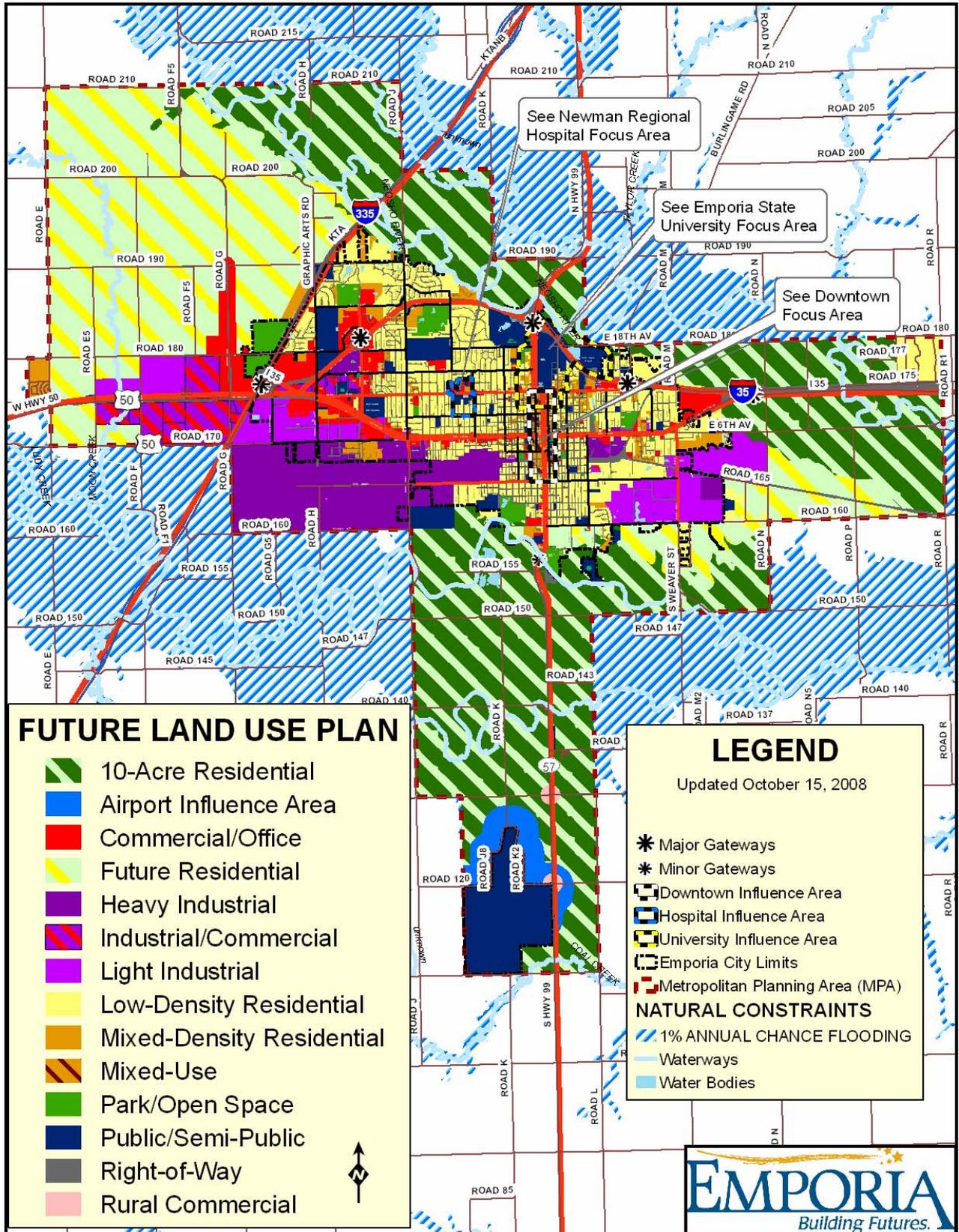
## FUTURE LAND USE PLAN

The Future Land Use Plan is intended to be used as a guide by the Planning Commission and City Commission. When considering development proposals, City staff and public officials will consider the following factors:

1. Identified land use designation;
2. The type, size and density of surrounding existing development patterns;
3. The adequacy of infrastructure to support the proposed development; especially roads, water and wastewater provisions; and
4. Environmental concerns such as excessive noise, odors and dust.

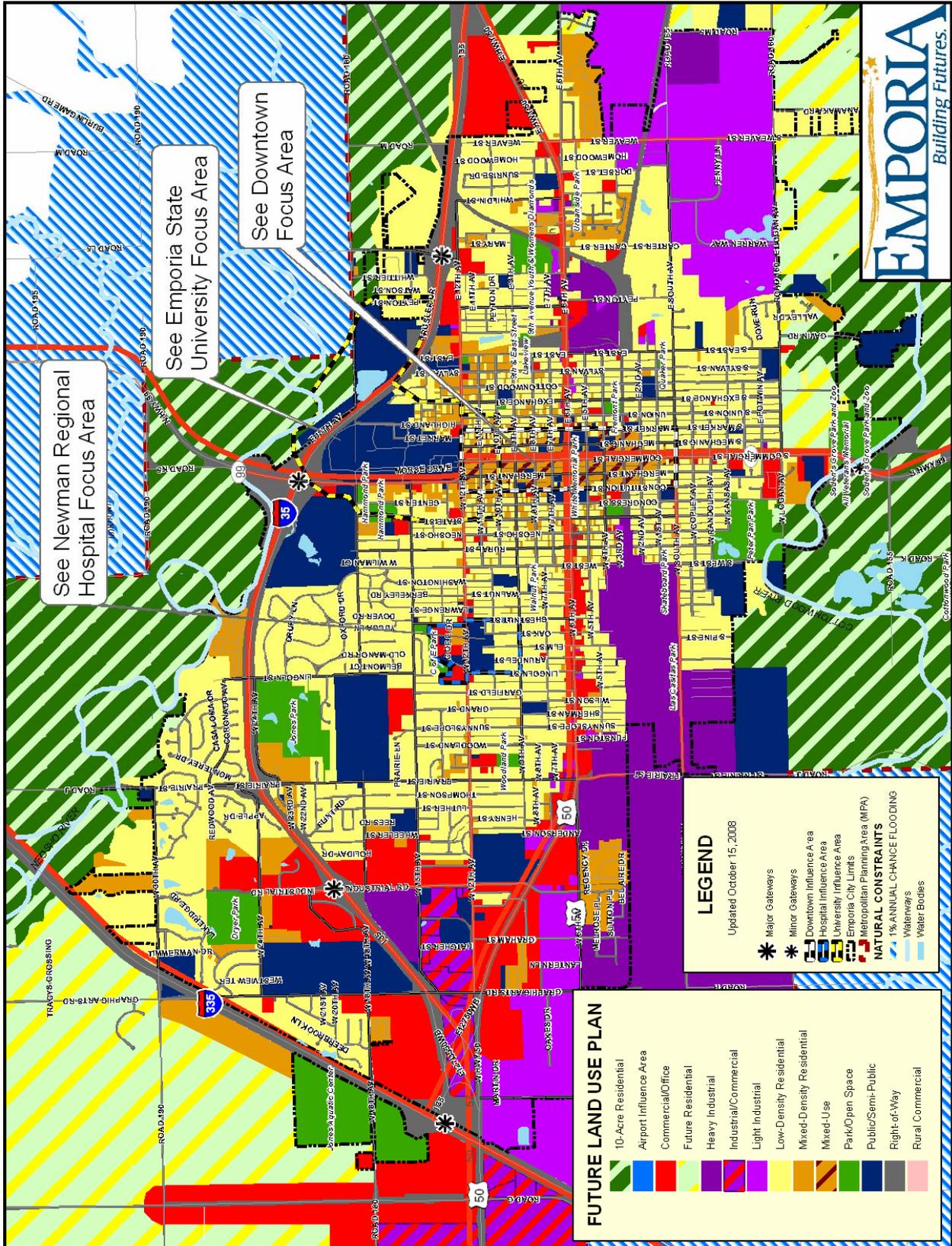
# LAND USE PLAN

Map 5: Future Land Use Plan (MPA)



# LAND USE PLAN

Map 6: Future Land Use Plan (City)



# LAND USE PLAN

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## LAND USE CATEGORIES

The following land use categories are intended for planning purposes. These designations generally follow the existing zoning districts but do not represent zoning or a change to existing zoning. The use designations identified within the Plan may be modified through the Comprehensive Plan amendment process. Existing zoning designations remain as presently recorded and show how the property may currently be used. Zoning may be changed only through the appropriate rezoning process, which includes a public hearing related to the specific property.

**Major Gateways:** These areas are located at primary points of entry into Emporia including interchanges along I-35, the Kansas Turnpike and US 50.

Recommendations:

- Signage should be consolidated and incorporated into a high-quality gateway monument or feature that is large enough to be seen from an on- and/or off-ramp. This signage should promote major destinations within the community such as Downtown and Emporia State University.
- Free standing commercial billboards should be discouraged within these areas.

**Minor Gateways:** These areas are located at secondary points of entry into Emporia including US Highway 50 to the east and west and K-99 to the north and south.

Recommendations:

- Signage should be consolidated and incorporated into a high-quality gateway monument or feature. Signage may promote important local destinations such as the Jones Aquatic Center, Lyon County Fairgrounds and the David Traylor Zoo of Emporia.
- Private developments adjacent to minor gateways areas should incorporate high-quality architectural materials.
- Outdoor storage, trash dumpsters, loading areas and surface parking should be screened within these areas with appropriate landscaping/and or fencing.
- Free standing commercial billboards should be discouraged within these areas.

**Flood Plain:** These areas are within the 100-year flood plain of the Neosho and Cottonwood Rivers. Land use policies within the areas are geared toward mitigating potential flood hazards and protecting the natural character of the river corridors. All encroachments, including fill, new construction, substantial improvements and other developments will be prohibited unless certified plans are provided by a registered engineer or architect demonstrating the encroachments will not result in any increase in flood levels during occurrence of a one hundred year flood discharge.

(Flood Plain) Allowed Uses:

- Agriculture and ranches;
- Golf course, parks, recreation and open space; and
- Residential side yards and common grounds;
- Limited large-lot development with structures elevated at least 1-foot above base flood elevation.

## LAND USE PLAN

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**10-Acre Policy Area:** These areas represent the last expansion and growth areas for the City within the MPA. It is unlikely that these areas will be served by City sewer or improved roads within the next 10 to 15 years. Some of these areas, due to flooding and other physical constraints, may remain rural indefinitely. This land use classification corresponds with the “A-L” Agriculture District within the Zoning Regulations.

Allowed Uses:

- Agriculture; and
- Single-family detached residential development on lots with a minimum of 1 dwelling unit per 10-acres.

Required Infrastructure:

- On-site septic systems (where appropriate) allowed.
- City water preferred - wells (where appropriate) allowed.
- Chip and seal roads preferred - gravel roads allowed.

**Future Residential:** These areas are intended to serve future housing needs on the municipal fringe and are likely to be served by City sewer and improved arterial roads within the next 5 to 10 years. Residential densities within these areas will transition from rural density (1 dwelling unit per 10-acres) to low density residential with the extension of city sewer. This land use classification corresponds with the “R-1” Low Density Residential District within the Zoning Regulations.

Allowed Uses:

- Single-family detached residential development on a wide range of lot sizes; and
- Large-lot developments on septic systems are required to submit a shadow plat delineating future lots, road right-of-ways and utility easements.

Required Infrastructure:

- Community package plants preferred for rural subdivisions - septic systems allowed where appropriate.
- City water required.
- Paved roads are preferred - chip and seal roads allowed.

**Low-Density Residential:** These areas are intended for single-family detached development with densities ranging from 2 to 3 dwelling units per acre and represent a majority of Emporia’s neighborhoods. This land use classification corresponds with the “R-1” Low Density Residential District within the Zoning Regulations.

Allowed Uses:

- Single-family detached residential on lots ranging in size from 6,500 to 9,000 square feet.

Required Infrastructure:

- City sewer required.
- City water required.
- Paved roads required with curbs, gutters and a 5-foot sidewalk on at least one side of the street.

**Mixed-Density Residential:** These areas are intended to provide a wide-range of housing choices through construction of attached and detached residences with a variety of densities.

## LAND USE PLAN

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This land use classification corresponds with the “R-1” Low Density Residential District, “R-2” Medium Residential District and “R-3” High Density Residential District within the Zoning Regulations.

Allowed Uses:

- Duplexes;
- Triplexes;
- Fourplexes;
- Apartments;
- Manufactured Homes; (allowed in areas zoned “MHS”)
- Mobile Home Parks; (allowed in areas zoned “MP”) and
- Elderly Housing (allowed in areas zoned “EH-O.”)

Required Infrastructure

- City sewer required.
- City water required.
- Paved roads required with curbs, gutters and a 5-foot sidewalk on at least one side of the street.

**Rural Commercial:** Allows limited commercial development to serve the needs of the rural population. This land use classification corresponds with the “C-2” Restricted Commercial District within the Zoning Regulations.

Allowed Uses:

- Agri-businesses;
- General merchandise stores;
- Convenience Stores; and
- Service stations.

(Rural Commercial) Required Infrastructure:

- Commercial septic system required.
- City water preferred - commercial well allowed.
- Paved county roads required with turn bays and access improvements

**Commercial/Office:** Allows a wide-range of commercial and office development. This land use classification corresponds with the “C-1” Office and Service Business District, “C-2” Restricted Commercial District and “C-3” General Commercial District within the Zoning Regulations.

Allowed Uses:

- Commercial-retail;
- Professional office;
- Service uses;
- Hotels and motels; and
- Golf courses, churches and other quasi-public uses.

## LAND USE PLAN

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(Commercial/Office) Required Infrastructure:

- City sewer required.
- City water required.
- Paved roads required with turn lanes and/or access improvements along designated arterial and/or collector roads.

**Downtown Mixed-Use:** These areas are intended to accommodate a mix of commercial-retail, office and residential uses within the Central Business District. This land use classification corresponds with the “C-4” Central Business District within the Zoning Regulations.

Allowed Uses:

- Commercial retail (first story preferred);
- Services (first story preferred);
- Professional office (upper stories preferred);
- Apartments and for-sale condominiums (upper floors only); and
- Townhouses (In R-3, High Residential Districts on Mechanic and Merchant Streets)

Required Infrastructure:

- The “C-4” Zoning District should be revised to require new office and residential uses to provide a parking plan for new owners and/or tenants.

**Industrial/Commercial:** These areas are intended to serve small-scale and non-polluting industries as well as industrial-related commercial-retail uses. This land use classification will correspond with the “I-1” Light Industrial District and “C-3” General Commercial District within the Zoning Regulations.

Allowed Uses:

- Warehouse and distribution;
- Office parks; and
- Industrial-related commercial-retail uses upon review and approval of the Planning Commission and City Commission.

Required Infrastructure:

- City sewer required.
- City water required.
- Designated turn lanes and access improvements along arterial roads and/or highways.

**Light Industrial:** These areas are intended to serve small-scale and non-polluting industries. This land use classification will correspond with the “I-1” Light Industrial District within the Zoning Regulations.

Allowed Uses:

- Warehouse and distribution; and
- Large-scale office parks.

Required Infrastructure:

- City sewer required.
- City water required.
- Designated turn lanes and access improvements along arterial roads and/or highways.

## LAND USE PLAN

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**Heavy Industrial:** These areas are intended to accommodate existing and emerging industrial uses and limit the encroachment of unplanned non-industrial development into industrial areas. This land use classification will correspond with the “I-2” Heavy Industrial District within the Zoning Regulations.

Allowed Uses:

- Manufacturing and processing;
- Warehouse and distribution; and
- Industrial-related office.

Required Infrastructure:

- City sewer preferred - commercial septic system allowed where appropriate.
- City water required.
- Access to I-35, the Kansas Turnpike and US 50 is preferred.
- Wide turn bays and access improvements for trucks and heavy machinery.

**Airport Influence Area:** Areas adjacent to the airport identified for future airport expansion and/or compatible businesses and uses. Prospective property owners, developers and residents within this area should be informed of potential airport expansion.

Allowed Uses:

- Future Airport expansion;
- Airport-related commercial/retail;
- Light industries; and
- Warehouse and distribution uses with related office.

**Public:** These areas include public buildings, schools, and civic organizations. Notable uses include Emporia State University, the Civic Auditorium and the County Fairgrounds. When government and institutional uses are sold, the City and County Commissions should carefully consider alternative uses for redevelopment. This land use classification corresponds with the “P” Public Use District within the Zoning Regulations.

**Parks/Open Space:** These uses are intended to provide both passive and active recreational opportunities throughout the city. See the *Emporia Parks and Recreation Master Plan*, BWR Corporation, 2004.

### **FOCUS AREAS**

The following Focus Areas were selected to develop more specific recommendations.

- Downtown
- Emporia State University
- Newman Regional Health

#### **DOWNTOWN FOCUS AREA**

Downtown Emporia is the civic and cultural heart of the City and Lyon County. Downtown is where people gather to shop, meet friends, and eat a good meal. Downtown also serves as a gathering place for parades, sporting activities, celebrations and events that bring people in the community together. The Downtown Focus Area boundaries are defined by the present boundaries of *Emporia Main Street, Inc.*, a non-profit community agency committed to increasing consumer (Main Street) business, strengthening retail and professional institutions,

## LAND USE PLAN

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assisting in the preservation and maintenance of the community's heritage and promoting pride in the community's institutions and achievements through design, promotion, business enhancement and organization committees.

### Downtown District Boundaries

- Black & Gold Zone: 8<sup>th</sup> to 12<sup>th</sup> Avenues, Mechanic to Merchant Streets
- Civic Center: 4<sup>th</sup> to 8<sup>th</sup> Avenues, Mechanic to Merchant Streets
- Marketplace: South to 4<sup>th</sup> Avenues, Mechanic to Merchant Streets

### Downtown District Guidelines:

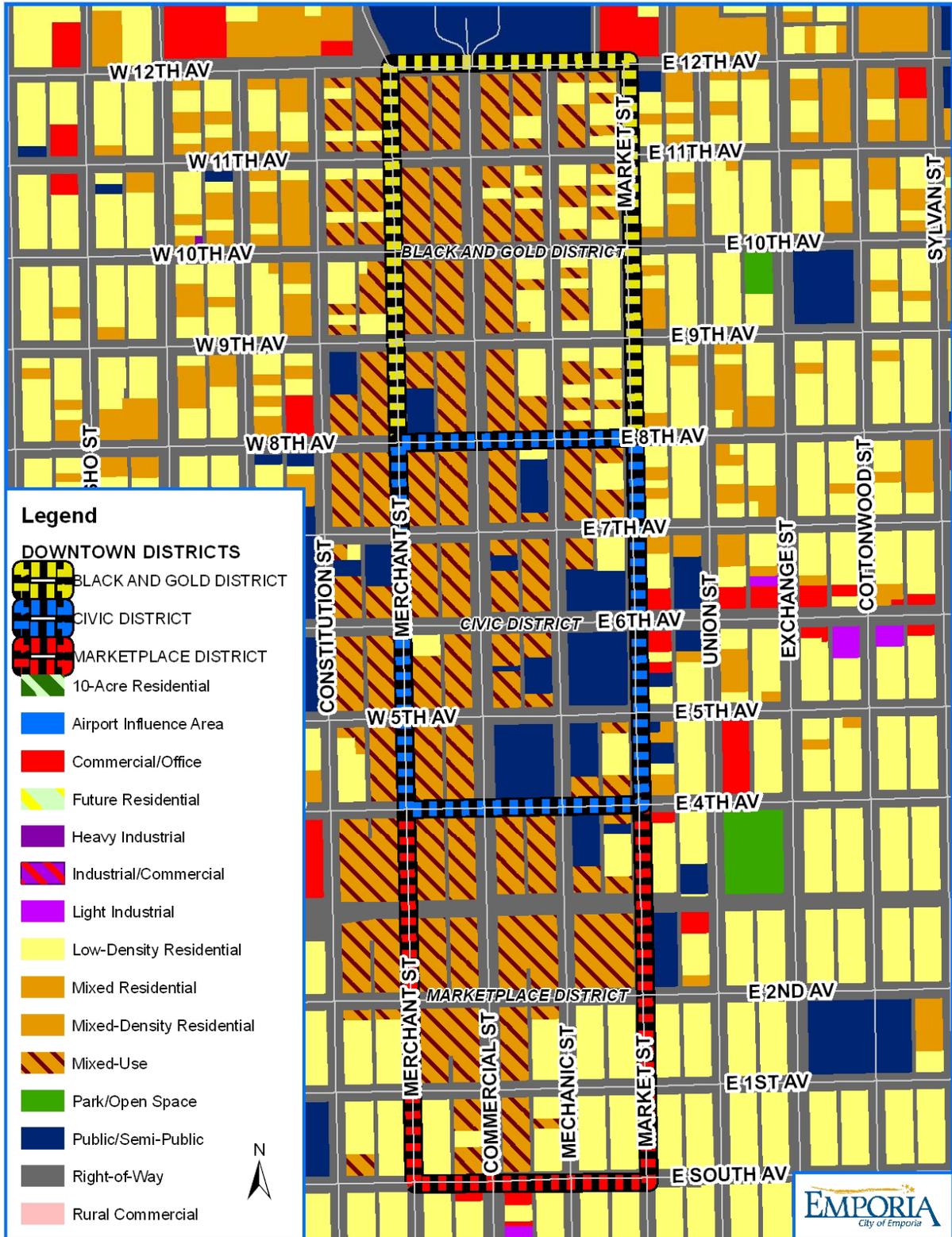
- Reference the Emporia Main Street Downtown Designs Guidelines, September 2008

### Downtown District Recommendations:

- Reference the Emporia Main Street Downtown Designs Guidelines, September 2008

# LAND USE PLAN

Map 7: Downtown Focus Area



## LAND USE PLAN

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### UNIVERSITY FOCUS AREA

The Emporia State University campus has grown from its original twenty acres to over 200. Emporia State University is a comprehensive Regents University primarily serving residents of Kansas by providing leadership in quality instruction, related scholarship and service. The University provides undergraduate educational opportunities designed to meet the broad goals of basic skill development and general education, as well as the more specific goals of a variety of programs in art and sciences, business, education, and library and information management. Graduate programs serve needs and provide leadership within the region, the state and the Great Plains area. The University offers programs of national distinction in Education and in Library and Information Management.

A stakeholder meeting was held with the University. In terms of facilities, the University indicated they do not intend to expand their facilities east of Highland Street. However, a key opportunity for the City is to keep University students in Emporia on the weekends and tying the University into Downtown. Both the University and Downtown stakeholders were excited about the opportunity to develop a “Black and Gold” District. In addition to Main Street, University-related uses such as off-campus student housing, retail and services is likely to occur within a generalized influence area. This area is shown on Map 8.

#### Potential University Expansion

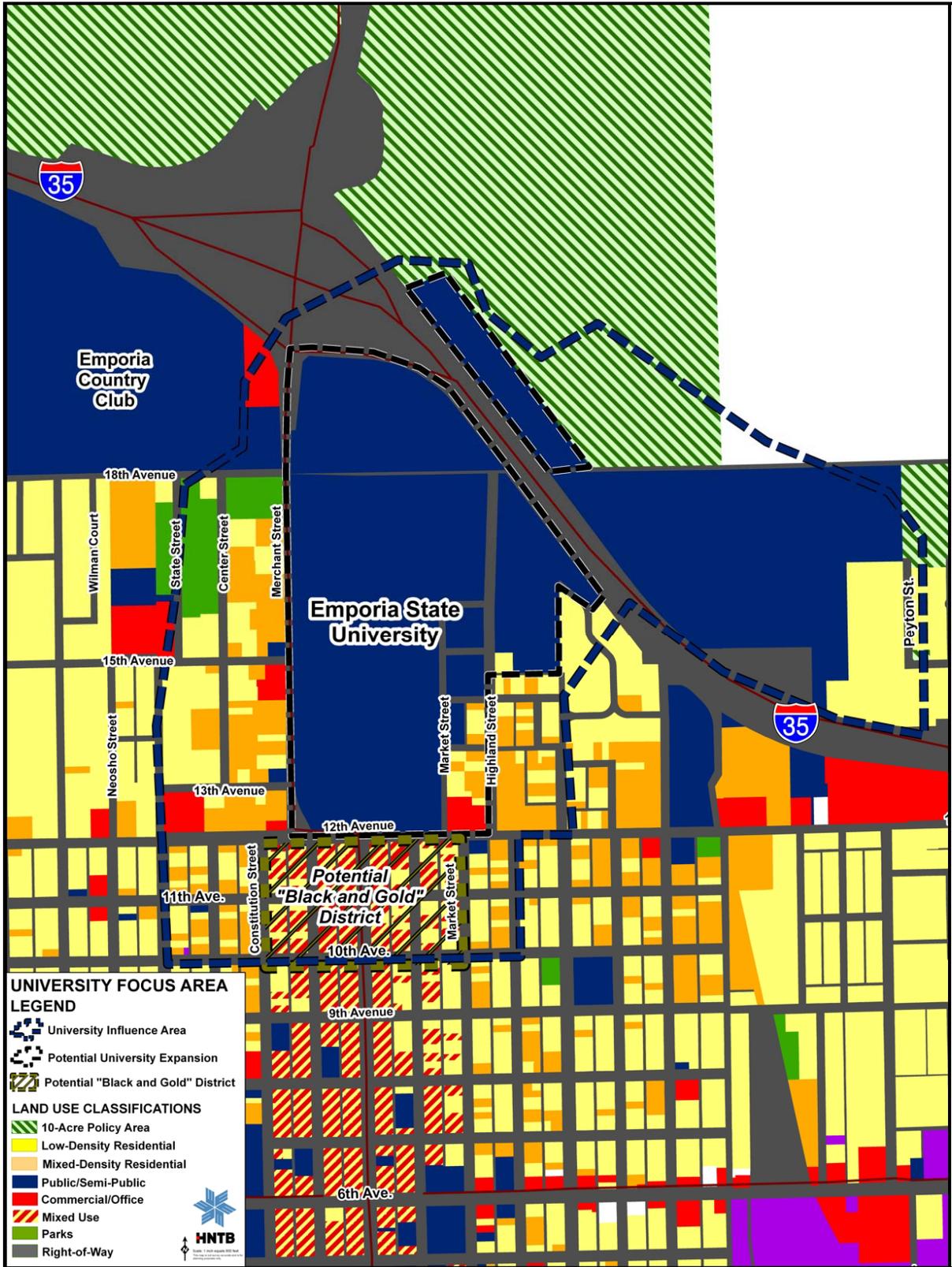
- North - I-35;
- South - 12th Avenue;
- East - Highland Street/Exchange Street; and
- West - Merchant Street.

#### Recommendations:

- Expansion of University facilities should occur within the identified University Influence Area.
- The University should work with the City, Main Street and other Downtown stakeholders to develop a “Black and Gold” District.
- University-related uses such as off-campus housing, retail and services are likely to occur within the identified generalized influence area.

CHAPTER 4  
**LAND USE PLAN**

Map 8: University Focus Area



## LAND USE PLAN

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### HOSPITAL FOCUS AREA

Newman Regional Health is a 190 bed hospital operated on a not-for-profit basis and is accredited by the Healthcare Facilities Accreditation Program. Newman Regional Health is owned by Lyon County and governed by a Board of Trustees. The hospital employs 500 people, 300 volunteers and over 130 physicians. The hospital provides a wide range of medical and surgical services, critical care, level II nursery, 24 hour emergency services, outpatient services, chemical dependency treatment programs, home health care, and hospice services.

A stakeholder meeting was held with the Hospital and residents within the neighborhood surrounding the Hospital. The Hospital indicated they do not intend to expand east of Chestnut Street. The preference would be to expand south. However, expansion of facilities would not occur south of Grove Avenue. Property purchased by the Hospital south of Grove Avenue would be used for parking. The Hospital also indicated that in the next 15 to 20 years they would likely outgrow the present site and would likely relocate to a larger site.

There were no objections from the neighborhood about expansion south of Grove Avenue as long as the properties were acquired through opportunity purchase by the hospital and that the property be used for parking and not expansion of facilities including buildings, storage, etc.

#### Potential Future Growth Area

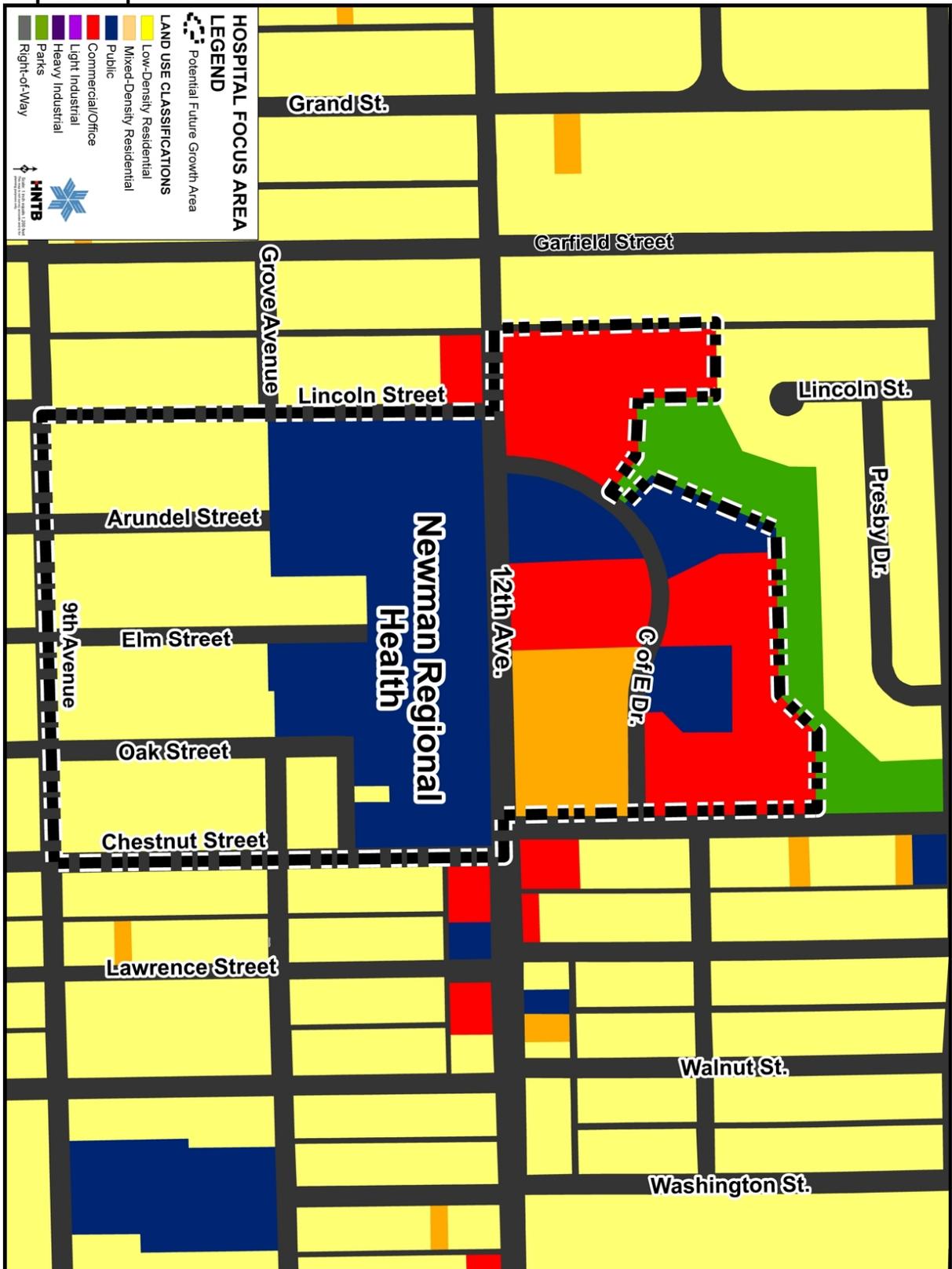
- North - C of E Linear Park;
- South - 9th Avenue;
- East - Chestnut Street; and
- West - Lincoln Street.

#### Recommendations:

- Expansion of Hospital facilities should occur within the identified Hospital Influence Area north of Grove Avenue. The Hospital may purchase property south of Grove Avenue for expansion of parking. This parking would serve the Hospital and provide an additional buffer between the Hospital and adjacent neighborhood.
- The City should work with the Hospital to maximize the current site to meet its present and mid-term needs. When and if the need arises to relocate the Hospital, the City should work together with Newman Regional to identify a suitable area to relocate and find an appropriate adaptive re-use of the vacated site that is compatible with the surrounding neighborhood.

# LAND USE PLAN

Map 9: Hospital Focus Area



## LAND USE PLAN

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### HOSPITAL FOCUS AREA

Newman Regional Health is a 190 bed hospital operated on a not-for-profit basis and is accredited by the Healthcare Facilities Accreditation Program. Newman Regional Health is owned by Lyon County and governed by a Board of Trustees. The hospital employs 500 people, 300 volunteers and over 130 physicians. The hospital provides a wide range of medical and surgical services, critical care, level II nursery, 24 hour emergency services, outpatient services, chemical dependency treatment programs, home health care, and hospice services.

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#### Potential Future Growth Area

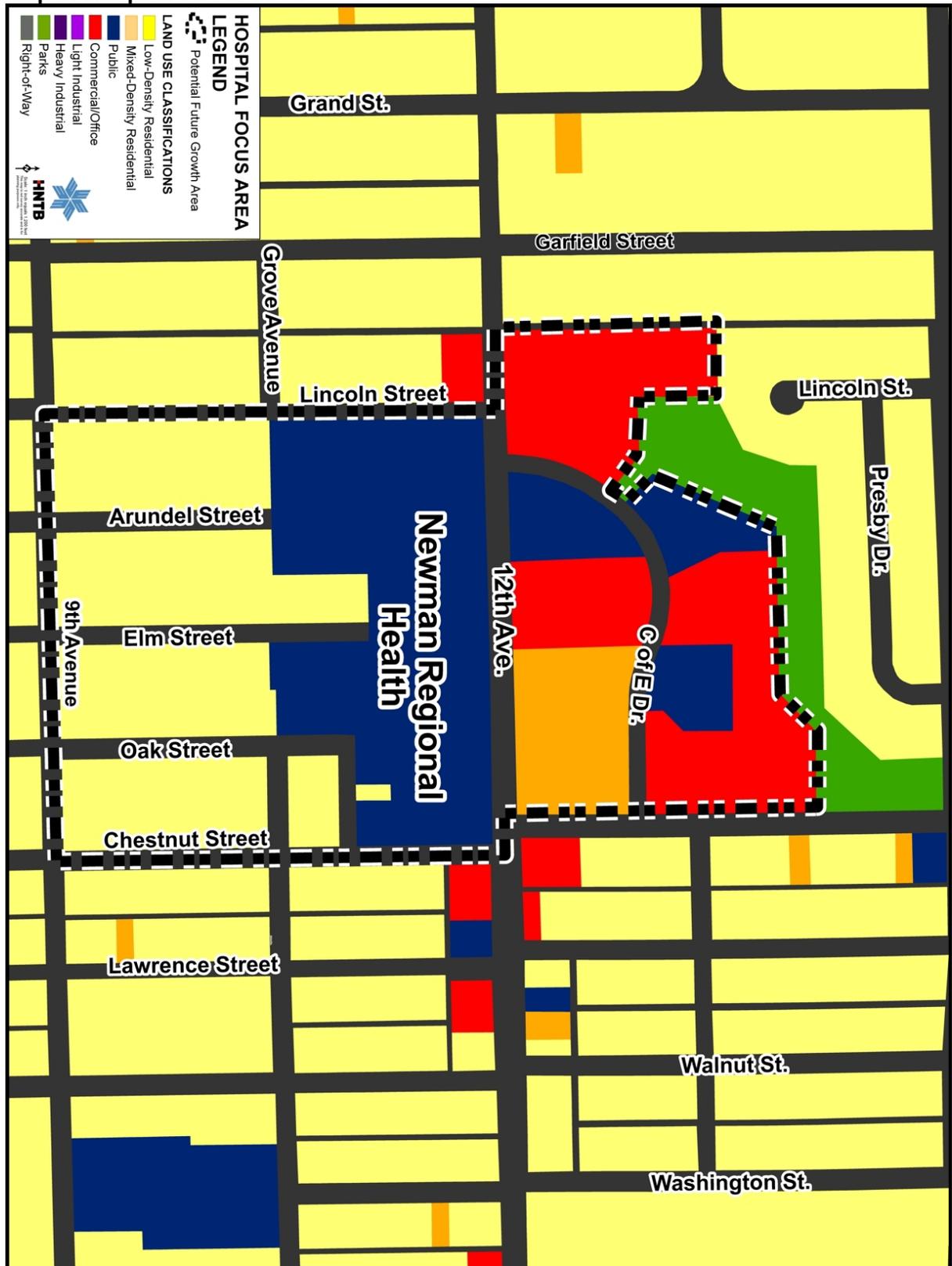
- North - C of E Linear Park;
- South - 9th Avenue;
- East - Chestnut Street; and
- West - Lincoln Street.

#### Recommendations:

- Expansion of Hospital facilities should occur within the identified Hospital Influence Area north of Grove Avenue. The Hospital may purchase property south of Grove Avenue for expansion of parking. This parking would serve the Hospital and provide an additional buffer between the Hospital and adjacent neighborhood.
- The City should work with the Hospital to maximize the current site to meet its present and mid-term needs. When and if the need arises to relocate the Hospital, the City should work together with Newman Regional to identify a suitable area to relocate and find an appropriate adaptive re-use of the vacated site that is compatible with the surrounding neighborhood.

# LAND USE PLAN

Map 9: Hospital Focus Area



# CHAPTER 5

# TRANSPORTATION

## OVERVIEW

Improving and enhancing safety conditions along Emporia roads is a major goal of the Plan. Proper care must be taken to ensure that the roadway, driveways and intersections are properly designed to ensure safe and functional roadways that serve the needs of the community.

## FUNCTIONAL CLASSIFICATION

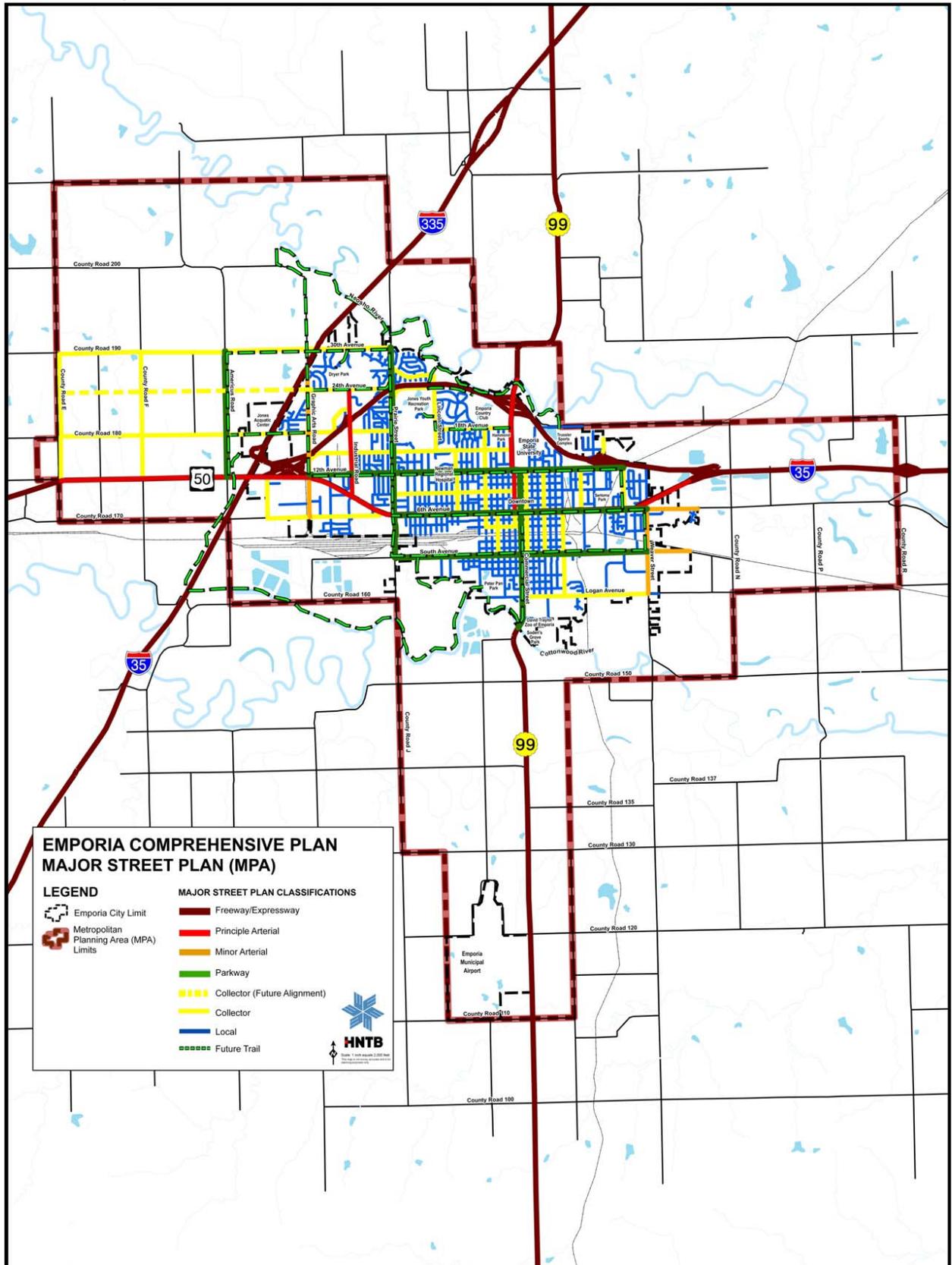
All of the streets shown on **Map 10 and 11** are delineated by functional classification. A functional classification system includes a broad range of street types that are intended to serve the metropolitan planning area. These street types range from local streets that provide access to abutting property to major highways, such as US 50, I-35 and the Turnpike that serve longer trips. The goal of assigning functional classification is to establish a system of streets that will allow the movement of goods and people safely and efficiently throughout the MPA.

Traditionally, functional classifications form a hierarchy of streets ranging from those that are primarily for travel mobility (freeways and arterials) to those that are primarily for access to property (local streets). The functional classification system is developed with the recognition that individual streets do not act independent of each other but form a network of streets that work together to serve travel needs on a local, citywide and regional level.

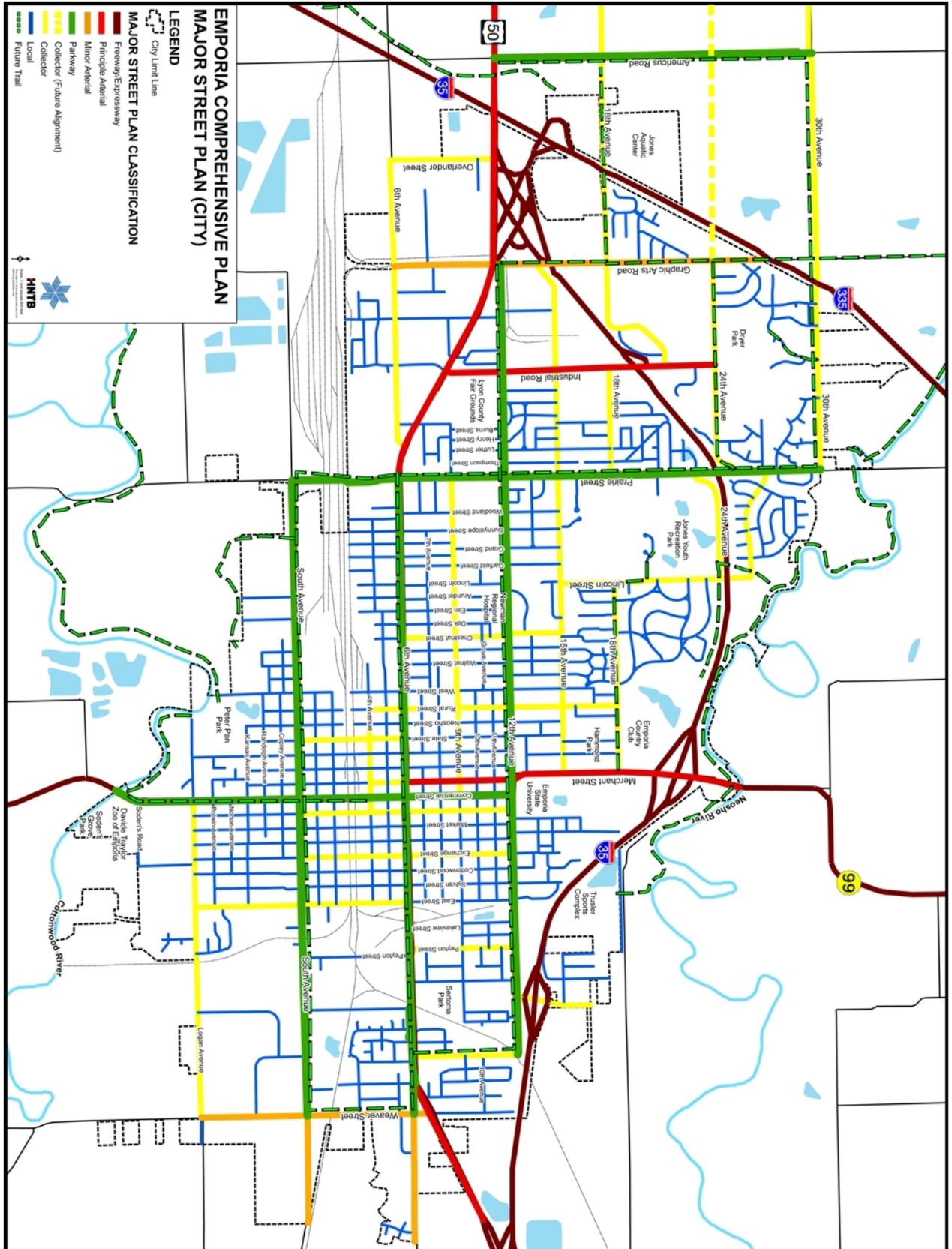
The federal government, state and local agencies, and national organizations such as the American Association of State Highway and Transportation Officials (AASHTO) and the Institute of Transportation Engineers (ITE) all recognize the traditional functional street classification system comprised of freeways, arterials, collectors and local streets. These classifications guide design standards, levels of access, traffic control, law enforcement, and the provision for federal, state, and regional transportation funding.

The street system consists of a hierarchy where each category of road places a different emphasis on traffic mobility and property access. There are many advantages in providing specialized facilities for similar types of traffic. Each classification of roadway serves a specific function. Taken together, they provide a balance of mobility and land access.

Map 10: Major Street Plan Classification (MPA)



Map 11: Major Street Plan Classification (City)



## TRANSPORTATION

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### Freeways and Expressways

A freeway is a multi-lane controlled access facility designed to carry high volumes of through traffic. Access to and from a freeway is limited to grade separated interchanges. Access to an expressway is through a controlled at grade intersection. These facilities are designed to permit high-speed merging and diverging maneuvers with minimum disruption to the mainline traffic. Freeways and expressways generally serve regional, inter-regional as well as local trips. They are ordinarily designed, constructed and maintained by the Kansas Department of Transportation (KDOT) and the Kansas Turnpike Authority (KTA). Examples of freeways include I-35 and the Turnpike.

### Principle Arterial Streets

Principle arterial streets connect residential neighborhoods to major retail, office, service and industrial uses. Access along primary arterial streets should be limited to preserve through movement.

#### Recommendations:

- Right-of-Way: 100-Feet.
- Access Spacing: Quarter-mile.
- Sidewalks: 6 to 8-foot sidewalk on both sides of the street.
- Signage: Billboards discouraged. Free standing pole signs should be limited to one sign per property.
- Landscape: A combination of shrubs and ground cover should be placed between the back of curb and the sidewalk to provide a buffer to separate vehicular traffic from pedestrians.

### Minor Arterial Streets

Minor arterial streets connect neighborhoods to small-scale shopping centers, schools, parks and recreational uses. Access along minor arterial streets should be limited to preserve through movement.

#### Recommendations:

- Right-of-Way: 80 to 100-Feet
- Access Spacing: Quarter-mile.
- Sidewalks: 6 to 8-foot sidewalk on both sides of the street.
- Signage: Billboards discouraged. Free standing pole signs should be limited to one sign per property.
- Landscape: A combination of shrubs and ground cover should be placed between the back of curb and the sidewalk to provide a buffer to separate vehicular traffic from pedestrians.

### Parkways

Parkways serve to connect Emporia's most important activity centers and destinations including large-scale retail centers, major employers and important institutional uses such as Newman Regional Hospital and Emporia State University. As such, parkways serve as the key image streets within Emporia. Therefore, aesthetic enhancements should be a priority along these corridors.

#### (Parkways) Recommendations:

## TRANSPORTATION

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- Right-of-Way: 100-Feet.
- Access Spacing: Quarter-mile.
- Sidewalk/Trail: 8-foot minimum sidewalk/trail on both sides of the street.
- Signage: Billboards prohibited. Free standing pole signs discouraged. Monument-style signs preferred.
- Landscape: A combination of shrubs, ground cover and street trees should be placed between the back of curb and the sidewalk to provide a buffer to separate vehicular traffic from pedestrians as well as provide an aesthetic amenity and soften the street edge.

### Collector Streets

The function of collector streets is to “collect” traffic from local streets or other collectors at a slower speed than freeways, expressways, arterials or parkways. Collector streets provide some direct access to adjacent properties.

#### Recommendations:

- Right-of-Way: 80-Feet.
- Access Spacing: One driveway per property.
- Sidewalks: 5 to 8-foot sidewalk on one side of the street.

### Local Streets

Local streets serve traffic within neighborhoods and provide direct access to adjacent properties.

#### Recommendations:

- Right-of-Way: 60 to 80-Feet.
- Access Spacing: One driveway per property.
- Sidewalks: 5-foot sidewalk on one side of the street.

#### General Roadway Recommendations

- Identify a cyclical road maintenance program to address existing maintenance needs. This program should include an 8-year loop for mill and overlay of asphalt streets; a 4-year loop for slurry seal of asphalt streets; and a 5-year loop for reseal of concrete streets. This program should also include an on-going evaluation of existing road conditions which will be maintained in a geospatial database.
- Seek innovative financing strategies such as Benefit Districts for construction and maintenance of new arterial streets and parkways within identified future growth areas.

### Trail Connections

Many Emporia residents are interested in walking and bicycling as means of transportation and recreation. Walking and bicycling make up about 6.4 percent of work-related trips in 2000<sup>2</sup>, making them the 2nd most popular form of travel after driving. Walking and bicycling are healthy, efficient, low cost, and available to nearly everyone.

Future trail connections provide an opportunity for Emporia to enhance quality of life, connect neighborhoods and amenities as well as reduce dependence on the automobile. There is also growing interest in encouraging walking and bicycling as a way to improve public health.

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<sup>2</sup> Means of Transportation to Work for Workers 16 Years of Age and Over. Census 2000.

## TRANSPORTATION

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### Trail Recommendations:

- Off-road and parkway trails should be at least 8-feet wide.
- Trails along arterials and collectors may range from 6 to 8-feet in width.
- New trails/sidewalks should be prioritized within established areas along designated parkways, arterials and collectors.
- Regional/recreational trails are a long-term priority.
- Trails along parkways should include a 5-foot minimum landscape buffer between the trail and back of curb.
- Trails will meet the requirements of the Americans with Disabilities Act Accessibility Guidelines (ADAAG).

### **ACCESS MANAGEMENT**

Access management is a proactive approach to transportation planning that promotes safe and efficient access to adjacent land uses while preserving through traffic movements. Access management methods consider how traffic moves in and out of an area. These methods become a set of proactive guidelines to help improve the efficiency of entrances to, exits from, and movement along the study area.

#### **ACCESS MANAGEMENT PRINCIPLES:**

- Regulate the location and spacing of driveways;
- Locate driveways away from intersections;
- Provide safe and functional turning movements; and
- Provide cross access or joint access wherever possible.

The main benefits of an effective access management program are fewer accidents, increased vehicular capacity and shorter travel times. All of these outcomes are important to providing a safe and efficient roadway.

#### **ACCESS MANAGEMENT STRATEGIES:**

The following strategies are intended to serve as a guide and resource for the Planning Commission and City Commission in considering future development proposals along all arterials and parkways.

Access roads, cross access easements and/or joint use driveways shall be incorporated in the design of properties along all arterials and parkways. Property owners shall dedicate an easement allowing for cross access to and from other properties served by joint use driveways. Upon approval by the City, the easement shall be dedicated on a plat of the property or by separate legal instrument. Whenever possible, rear access roads and cross access points should be utilized.

### **Regulation of Driveways**

The location and quantity of new driveways shall be strictly regulated along City arterials and parkways. Existing driveways will be treated as a nonconforming use. New developments will

be required to improve and share existing driveways and/or provide alternate ingress/egress from intersecting roads controlled by a traffic signal.

**Access Roads**

Integrating access roads along arterials and parkways will help ensure a safe and efficient flow of traffic along arterials and parkways. However, when the physical constraints of the property do not allow for incorporating an access road, especially within developed areas, the property owner should consider alternate access strategies including shared parking, cross access and joint access.

**Shared Parking**

Shared parking between adjacent properties shall be encouraged to the greatest extent possible. Parking requirements may be reduced if adjacent property owners agree to share parking. The number of parking spaces shall be dependent upon the types of uses and size of development.

**Cross Access**

Property owners are encouraged to provide cross access and/or shared parking areas between adjacent developments. This should ensure a safe and efficient flow of traffic throughout the study area and allow local traffic to access adjacent developments without having to enter onto arterials or parkways. Whenever possible, adjacent property owners shall be required to enter into cross access agreements and/or provide cross access easements between properties.

**Joint Access**

Joint access is a single point of access to one or more properties. Property owners within developed areas are encouraged to provide joint access between adjacent developments and relocate and remove unnecessary or redundant driveways to improve safety and mobility along arterials and parkways. At a minimum, property owners are encouraged to provide joint access between adjacent developments. This should provide vehicles the opportunity to access adjacent developments without having to enter onto the arterial or parkway.

# CHAPTER 6

# INFRASTRUCTURE

## OVERVIEW

Availability of adequate infrastructure and services is critical to ensuring the health, safety and welfare of Emporia residents. The City has limited resources and cannot accommodate development in every portion of the MPA. City and County officials should coordinate with local utility and service providers to ensure that all new developments and development plans will not exceed the ability of these departments to provide service to growing areas. Ideally, necessary infrastructure improvements and services will occur prior to or concurrent with development.

This chapter provides a brief introduction to each service and a set of short-term (1-5 years), mid-term (5-10 years) and long-term (10+ years) recommendations.

## CITY SERVICES

### **FIRE/EMERGENCY MEDICAL SERVICES**

*Mission Statement: The primary mission of the Fire Department is to provide efficient fire prevention and suppression services to the citizens of Emporia and Lyon County Fire District #4, and to provide quick and efficient pre-hospital Emergency Medical Service to the Citizens of Lyon County. This service also includes code enforcement, public education, fire prevention services and other public service relating to fire.*

The Emporia Fire Department provides fire protection and emergency service to Emporia and Lyon County Fire District #4 through a contract that is renewed annually. The district consists of all of Emporia, Fremont, and Pike Townships and a portion of Jackson Township. The 210 square mile district is taxed by the governing body and provides its own equipment to the Emporia Fire Department. The department also has ability to utilize district owned equipment inside the City, which tends to strengthen overall available resources.

The Department provides training, training materials and medical supplies to these groups. In return, they provide manpower and quick response in their areas of jurisdiction. First responders are currently in place in the communities of Americus, Hartford, Neosho Rapids, Olpe and Reading. The Department also responds to emergencies that originate outside of Lyon County on the Kansas Turnpike and to emergencies as far southwest into Chase County as Milepost 98, the Matfield Green Service Area.

The Department is currently housed in two stations. Station 1 is located in the south portion of the Civic Auditorium. Station 1, also known as Headquarters, houses the administrative offices of the department, as well as the apparatus and living quarters of the line personnel. An apparatus bay was added on the east side of the station in the early 1970's to house the Ladder Truck. The rest of the station underwent a major renovation in the mid 1980's. Recent alterations include making a Training Officers office and a Shift Commanders office. Both of these offices are utilizing space within the existing structure. Station 2, located at 15th and Industrial was constructed in 1978. This facility houses the apparatus and line personnel for the west side of the city. It also is home to the drill field and the helipad. This facility has conference and classroom space in addition to the living quarters.

## INFRASTRUCTURE

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The location of these two stations allows the city to be divided roughly in half for emergency responses. Currently the dividing line for districts follows Lincoln Street from the tracks to 12th Avenue, 12th Avenue to Chestnut, Chestnut to 15th, 15th to Rural, Rural to 18th Avenue, then around the west side of the Country Club to the Interstate. The line and everything west of the line is in Station 2's first in district, and everything east of the line and south of the tracks is in Station 1's district.

In addition to fire related duties, the department also provides emergency medical serve to all of Lyon County. The service, known as City of Emporia/Lyon County Ambulance Service is provided to county residents by contract with the Lyon County Commission. This service responds extends to Chase County to provide coverage to approximately 21 miles of the Kansas Turnpike, increasing the total turnpike coverage to 57 miles.

First Responder organizations provide an important first-link in a tiered response for patient care throughout Lyon County. There are currently First Responder groups in Allen, Admire, Miller, Reading, Americus, Olpe, Hartford, and Neosho Rapids. The service provides ALS equipment to these groups and they provide patient care according to established Medical Protocols to the level they are certified by the Kansas Board of Emergency Medical Services. In addition, most of these First Responder organizations have purchased Automated External Defibrillators (AED's) on their own, therefore increasing their effectiveness and improving the chances of survival for a patient who's heart has stopped beating.

### Fire and Emergency Service Recommendations

#### Short -Term

- Identify and purchase a suitable site for a future Fire Station #3 and training grounds along or near the Americus Road Corridor.

#### Mid-Term

- Remodel Fire Station #1 and expand Fire Station #2 in its current location or study for a new location. The expanded Fire Station #2 will serve as the future headquarters.

#### Long-Term

- When warranted, construct new Fire Station #3.

#### On-Going

- Continue to modernize the fleet and upgrade equipment to fully comply with national standards.
- Continue to expand fire prevention activities.
- Continue to be involved in long-term planning.

### DOMESTIC WATER

The Emporia Water Department provides water for the City of Emporia and six rural water districts. The City has several water rights and contracts from the Neosho River, Cottonwood River and Council Grove Reservoir. Raw water is taken from these sources and preceded through the Water Treatment Plant. The process includes presedimentation, clarification, flocculation, softening, disinfection and filtration. The Water Production Plant runs seven days a week, 24 hours a day.

## INFRASTRUCTURE

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The water system's capacity is determined by its general service capacity, treatment facility capacity and storage capacity. The general service capacity indicates how much water is processed by the facility and storage capacity indicates the amount a system can place in reserve. All three components work together to determine how much water is available to a user. This amount is usually measured in "million-gallons per day" or MGD.

Not only do some users require large quantities of water, some users require a large amount of water in a very short amount of time. The ability of a system to supply amounts of water very quickly is measured by its minimum flow rate (usually measured in "gallons per minute" or "GPM") and its percentage of undersized water mains (defined to be mains which are less than 6-inches in diameter).

The Water Plant was originally constructed in the mid-1920s. In 1992, the Neosho raw water pump station was result. New line sludge lagoons were constructed south of the Cottonwood River. In 1994, construction started on Phase I of the Water Treatment Plan reconstruction. This phase will include a new filtration building and filters, new clearwell with a capacity of 110,000 gallons, rehabilitation of presedimentation basins, and the inclusion of ozone into the disinfection process.

Phase II included an operation center, an additional 5 MGD treatment train and the rehabilitation of the chemical feed building. Phase III included a new 5 MGD softening unit, additional presedimentation basin and a new pump for increased capacity. The goal is to provide a 15 MGD plant that meets or exceeds state and federal standards.

After the water has been treated, it is distributed through approximately 120 miles of water main. The City's Water Distribution Department is charged with the duties to repair and maintain the city's water distribution system. The City's distribution system is primarily comprised of cast iron and ductile iron water mains of various sizes. In 1994, the city began installing C-900 PVC water mains.

Future plans for the department includes continuing the use of PVC for water mains. Most of the exiting mains are located in the center of paved streets. As streets get rebuilt, older water lines should be replaced and located behind the curb and gutter.

### ***Domestic Water Recommendations***

#### Short -Term

- Conduct a comprehensive study of the water main and sewer main systems to determine the basic condition of mains (including leaks and breaks) throughout the City. This assessment will allow the City to prioritize improvements and develop a proactive replacement and maintenance program.
- Check and replace valves throughout the City as needed.

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### Mid-Term

- Conduct a flow study throughout the City to determine if mains are providing adequate pressure to serve fire flow needs. Consider replacing the 8-inch water line along Commercial Street Downtown with a 12-inch line as well as other undersized water mains throughout the City.
- Construct an additional 20-inch off-system water line from the Water Plant to the Water Tower.
- Consider construction of additional storage tanks to serve the City's industrial parks.

### Long-Term

- Construct a new Water Tower west of the Kansas Turnpike to pressurize the water system and provide adequate water service to the west-side of City.

## WASTE WATER

The Sewer Division maintains 126 miles of sewer lines and 15 lift stations. The Kansas Department of Health and Environment regulates and monitors the operation of the Wastewater Treatment Plant. In 2000, the Plant fully treated 1.14 billion gallons of wastewater. Construction is nearly completed on a new Effluent Disinfection Facility which uses 400 submerged ultraviolet lights to provide disinfection of treated wastewater. In August of 2000, a passive effluent re-aeration structure went into service to add oxygen to the water during discharge. Recently, the Plant added a new sanitary wastewater pumping station and replaced six power transformers, power line switchgear and several power distribution panels. These kinds of repairs are necessary to meet the stringent permit and discharge requirements of the KDHE.

The Emporia Wastewater Treatment Plant treats over 1.5 billion gallons of wastewater each year, averaging about 4 million gallons per day. Over 95 percent of the solid and dissolved organic pollutants are removed from the wastewater, and the level of ammonia in the wastewater is reduced to almost zero, before the water is discharged to the Cottonwood River. In early 2001 the plant will start disinfecting its discharge to reduce the level of possibly harmful bacteria entering the river.

Two large controlled biological systems convert pollutants into masses of microbes which are destroyed by other masses of microbes. At the end of these processes a damp soil-like material is produced which is applied to agricultural land as a fertilizer and soil conditioner. The plant produces over 9 million pounds of this material each year.

A population of 26,000 people, with all of their industrial, commercial, and residential wastewater discharges, gives the plant a solids and organic pollutant loading equal to just the residential discharge of 48,000 people.

Per capita wastewater discharge to the plant is 150 gallons per person per day. Per capita residual solids production is about 1 pound of land-applied solids per person per day. Treatment cost in 1999 was about 45 cents per thousand gallons.

A much smaller and simpler treatment plant was built on the plant site in 1922, with upgrades in 1940, 1957, 1958, 1963, 1976, 1977, 1983, and 1990. In 1999 work began and was completed on a new plant discharge disinfection facility which uses hundreds of submerged ultraviolet light bulbs to kill germs, an aeration structure at the river to maintain needed levels of dissolved oxygen in the discharge, and several other upgrades of equipment throughout the plant. This

## INFRASTRUCTURE

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project was designed by the consulting engineering firm of Black and Veatch, which designed the original plant and all of the previous upgrades except those in 1940 and 1990. Another major upgrade of the plant will begin in 2002 with the solids processing facilities expanded to more effectively process present amounts of solids as well as from expected gradual increases in population and industrial discharges.

The future of waste water treatment will include working with local industries to implement local programs into the City's pre-treatment program. There is also a good chance that the water plant will have to disinfect its discharge into the Cottonwood River. This may include the introduction of chlorine, ozone or ultraviolet light.

During periods of heavy rain, old sanitary sewers receive excess water through loose joints, crocks and main breaks. The City's Sewer Department has been very aggressive in finding the problems that allow these flows into the sanitary system and repairing those problems. The City has approximately 130-miles of sanitary sewer. Continue effort needs to be placed on preventing infiltration into the sanitary sewer.

The waste water collection system for Emporia is divided by a ridgeline between the Cottonwood and Neosho River valleys. The Neosho river watershed flows generally to the north to several pump stations near the Neosho River which then pump flows back to the Cottonwood River basin. The other major interceptor includes a parallel 36-inch and 24-inch line running along the south side of the City westward from the treatment plant to near the intersection of South Avenue and Prairie Street.

A pump station located near the intersection of 6<sup>th</sup> Avenue and Overlander Street in conjunction with an 18-inch line running north from this location provides service to areas on the east side of the Kansas Turnpike are areas west of Graphic Arts Road.

### ***Waste Water Recommendations***

#### Short -Term

- Conduct a comprehensive study of the City's sewer lines in conjunction with the water main study.
- Work with the County to monitor health and safety issues associated with aging or failing septic systems within the MPA. Work with property owners to connect to the City's sewer system when available.
- Upgrade the force main from Lift Station #8.

#### Mid-Term

- Extend sanitary sewer service west of the Kansas Turnpike through construction of a new sanitary sewer line and pump station at the terminus of this line.

### **STORMWATER**

Older areas of the City have deteriorating storm sewers, culverts, and curb inlets that need to be improved or replaced. The City has been proactive in identifying problem areas and providing the necessary improvements including replacement of undersized culverts, construction of parallel storm sewer lines to relieve older and inadequate lines, construction of additional curb inlets and replacement of deteriorating curbs and gutters.

### ***Stormwater Recommendations***

## INFRASTRUCTURE

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### On-Going

- Continue to proactively identify problem areas throughout the City and provide the necessary stormwater improvements.
- Work with the development community to integrate new and innovative stormwater management techniques including pervious pavement, infiltration basins and bioretention areas.
- Educate residents on the use of rain gardens, rain barrels and cisterns.
- Consider flexible infrastructure standards within areas outside of the existing City limits within the MPA. These standards would allow the use of non-curbed road sections with engineered ditches. An ideal roadside ditch is wide and relatively shallow with mild side-slopes to facilitate frequent mowing and maintenance. Deep ditches with vertical sidewalls are difficult to maintain, tend to erode and are hazardous to vehicles that stray from the road.

### Long-Term

- Establish a dedicated city-wide stormwater utility.

## SOLID WASTE

The Solid Waste Division provides pick-up and disposal of the City's solid waste according to guidelines established by the Kansas Department of Health and Environment (KDHE). The Solid Waste Division is comprised of two departments: Transfer Station and Sanitation.

The Sanitation Department provides curbside pick-up for recycled materials. The City's recycling efforts began in 1989 and over 2000 tons of recyclable materials are accepted and processed annually. Revenue generated from sales is returned to the program. Much of the equipment and the building itself was purchased in part by grant money provided by the Kansas Department of Health & Environment.

Materials accepted include cardboard, paperboard, newspaper, magazines, slick paper, office paper/discarded mail, aluminum cans/other aluminum, tin cans, container glass, #1 PETE plastic (pop bottles), #2 HDPE clear (milk containers), #2 HDPE color (detergent bottles).

## DAVID TRAYLOR ZOO OF EMPORIA (ZOO)

*Mission Statement: The purpose of the David Traylor Zoo is the creation of an environment which provides an opportunity of cultural enrichment for the community and surrounding area while fulfilling the Zoo's obligations to conservation, education and recreation.*

### **Zoo Recommendations**

To maintain accreditation, the City will need to continually maintain and upgrade the zoo facilities and exhibits.

## INFRASTRUCTURE

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### Short -Term

- Construct a new veterinary building.
- Construct a 12-foot circular path and fence around the perimeter of the zoo. Repair existing pedestrian paths within the complex.

### Mid-Term

- Connect the Zoo to Soden's Grove Park to create a secondary entrance.

### On-going: Addition of exhibits including but not limited to the following:

- Revamped lemur exhibit
- Reptile house
- Outdoor aviary
- King vultures
- Otters
- Other