



# Lone Elm Vicinity Plan

August 21, 2007





**ORDINANCE NO. 07-80**

**AN ORDINANCE ADOPTING THE LONE ELM VICINITY PLAN INTO THE OLATHE COMPREHENSIVE PLAN**

**WHEREAS**, the Governing Body adopted the *Comprehensive Plan* for the City of Olathe on April 1, 1997, by Ordinance No. 97-48; and

**WHEREAS**, the *Comprehensive Plan* contains several elements; and

**WHEREAS**, the *Comprehensive Plan* states that several corridor studies would be completed; and

**WHEREAS**, a corridor study for an area south of Olathe bounded by 159<sup>th</sup> Street, the half-section line between Woodland Road and Ridgeview Road, the City's southern growth boundary, the City's western growth boundary, and I-35 was needed to ensure consistent and appropriate growth; and

**WHEREAS**, the City of Olathe expects that the land encompassed by the *Lone Elm Vicinity Plan* will one day be within the corporate limits of the city; and

**WHEREAS**, a corridor study was completed with the participation of the plan area property owners, local governing entities, and other interested parties; and

**WHEREAS**, on July 23, 2007, the Olathe Planning Commission, after giving the required notice, held a public hearing and, by PC Resolution No. 07-02, adopted *Lone Elm Vicinity Plan*.

**NOW, THEREFORE, BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF OLATHE, KANSAS:**

**SECTION ONE:** The *Lone Elm Vicinity Plan* and accompanying land use plan is adopted.

**SECTION TWO:** The *Lone Elm Vicinity Plan* shall be incorporated as part of the *Comprehensive Plan* for the City of Olathe.

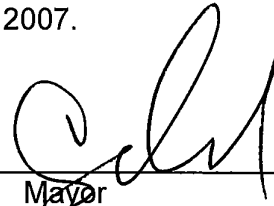
**SECTION THREE:** The *Lone Elm Vicinity Plan* shall be used as city policy guidelines.

**SECTION FOUR:** The *Lone Elm Vicinity Plan* shall be reviewed annually as part of the *Comprehensive Plan* update.

**SECTION FIVE:** That this Ordinance shall take effect and be in force from and after its passage and publication as provided by law.

PASSED by the Governing Body this 21<sup>st</sup> day of August 2007.

SIGNED by the Mayor this 21<sup>st</sup> day of August 2007.



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Mayor

ATTEST:



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City Clerk

(Seal)

APPROVED AS TO FORM:



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City Attorney

**PLANNING COMMISSION  
RESOLUTION NO. 07-02**

**A RESOLUTION ADOPTING THE LONE ELM VICINTY PLAN INTO THE OLATHE  
COMPREHENSIVE PLAN**

**WHEREAS**, the Governing Body adopted the *Comprehensive Plan* for the City of Olathe on April 1, 1997, by Ordinance No. 97-48; and

**WHEREAS**, the *Comprehensive Plan* contains several elements; and

**WHEREAS**, the *Comprehensive Plan* states that several corridor studies would be completed; and

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**WHEREAS**, the City of Olathe expects that the land encompassed by the *Lone Elm Vicinity Plan* will one day be within the corporate limits of the city; and

**WHEREAS**, a corridor study was completed with the participation of the plan area property owners, local governing entities, and other interested parties; and

**WHEREAS**, on July 23, 2007, the Olathe Planning Commission, after giving the required notice, held a public hearing on the *Lone Elm Vicinity Plan*; and


**NOW, THEREFORE, BE IT RESOLVED THAT:**

**SECTION ONE:** The *Lone Elm Vicinity Plan* and accompanying land use plan is adopted.

**SECTION TWO:** The *Lone Elm Vicinity Plan* shall be incorporated as part of the *Comprehensive Plan* for the City of Olathe.

**SECTION THREE:** The *Lone Elm Vicinity Plan* shall be used as city policy guidelines.

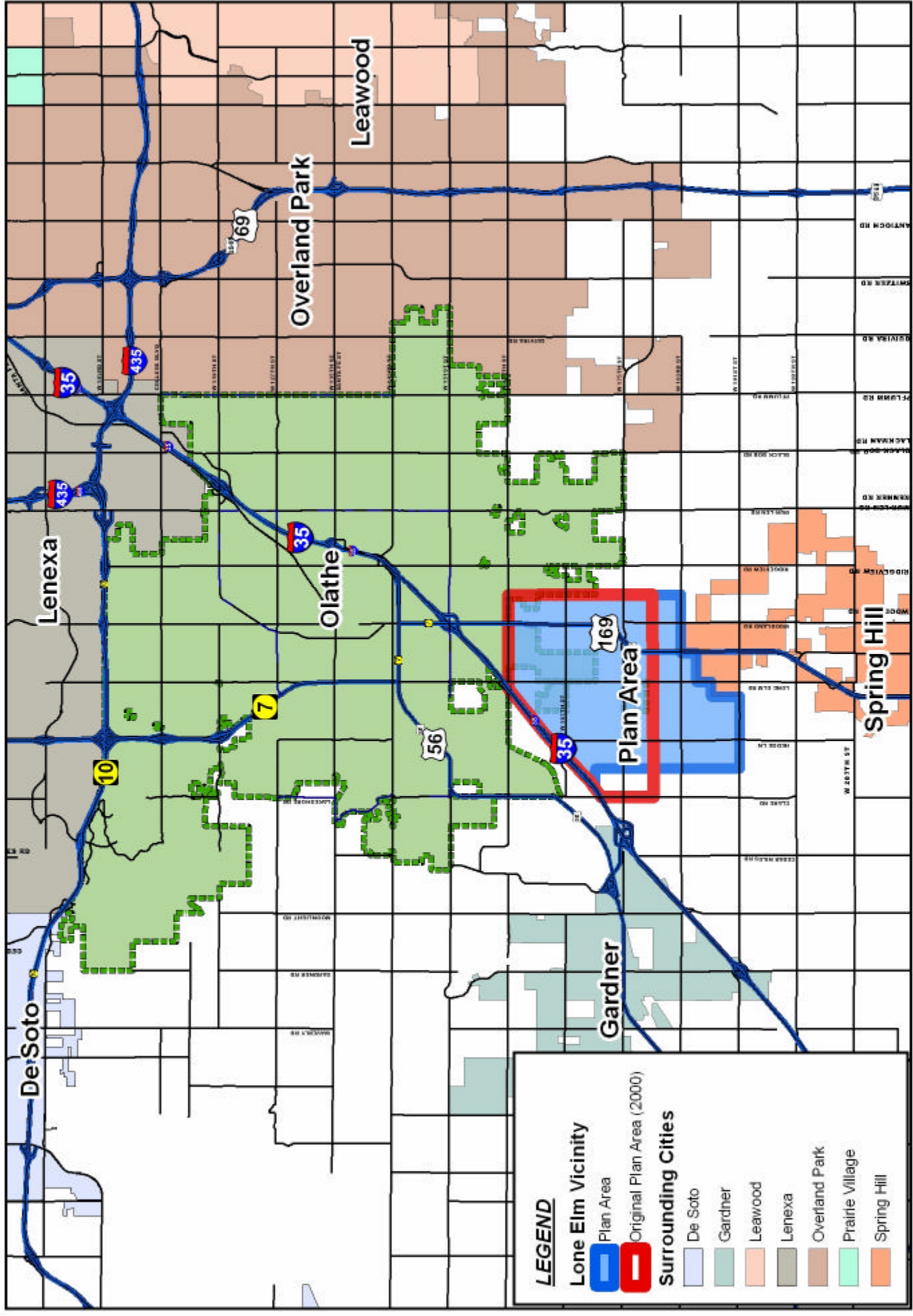
**SECTION FOUR:** The *Lone Elm Vicinity Plan* shall be reviewed annually as part of the *Comprehensive Plan* update.

  
\_\_\_\_\_  
Vice-Chairman, Jon Campbell

**ATTEST**

  
\_\_\_\_\_  
Secretary

**DISCLAIMER**  
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**LEGEND**

**Lone Elm Vicinity**

- Plan Area (Blue box)
- Original Plan Area (2000) (Red dashed line)

**Surrounding Cities**

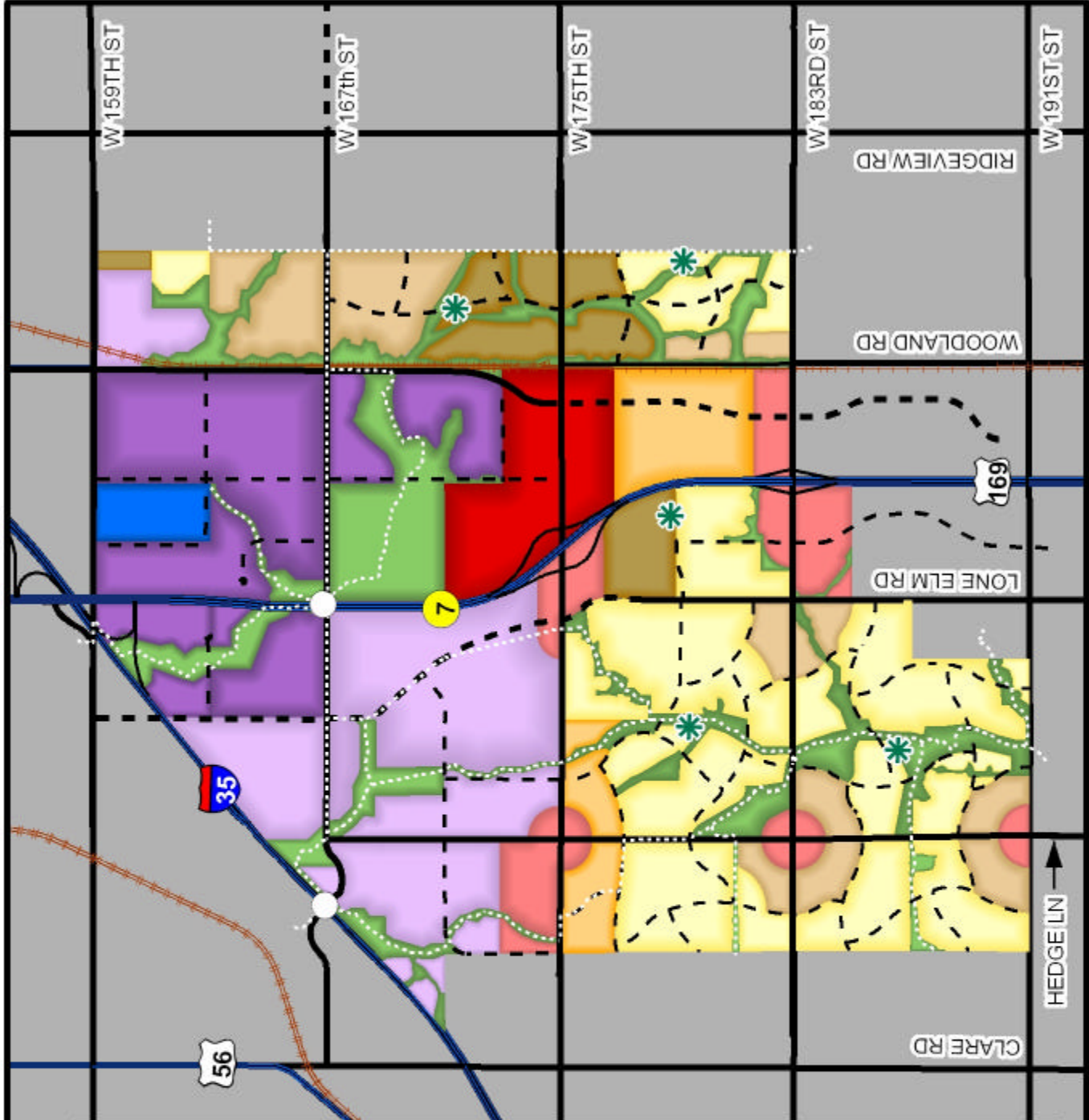
- De Soto (Light blue box)
- Gardner (Light green box)
- Leawood (Light orange box)
- Lenexa (Light grey box)
- Overland Park (Light brown box)
- Prairie Village (Light green box)
- Spring Hill (Light orange box)



# LONE ELM - PLAN AREA

**Legend**

	Future Land Use
	Business Park
	Commercial Center
	Employment
	Mixed-Use Residential
	Neighborhood Residential
	Parks and Open Space
	Public and Community
	Urban Residential
	Village Residential
	Mixed-Use Commercial
	Neighborhood Parks
	Railroads
<b>Future Streets</b>	
	Highway
	Existing Arterial
	Existing Collector
	Future Arterial
	Future Collector
	Trail Corridor
	Possible Future Interchanges



# LONE ELM - FUTURE LAND USE PLAN



<b>INTRODUCTION</b>	
Background.....	1
Revision Process.....	5
Plan Goals.....	6
 <b>EXISTING CONDITIONS</b>	
Natural Features.....	7
Historic and Cultural Resources.....	11
Land Use Patterns.....	13
Infrastructure.....	16
Jurisdictions.....	23
Land Use Plans.....	26
 <b>PLAN RECOMMENDATIONS</b>	
Land Use Definitions.....	29
Land Use Recommendations.....	34
Service Requirements.....	38
 <b>IMPLEMENTATION.....</b>	
<b>APPENDIX A – GROWTH ANALYSIS.....</b>	
<b>APPENDIX B – ULTIMATE BUILD-OUT ANALYSIS.....</b>	
<b>APPENDIX C – PUBLIC MEETING DATA.....</b>	
 <b>MAPS</b>	
Topography.....	9
Watersheds and Floodplains.....	10
Existing Land Uses.....	15
Existing Streets.....	18
Future Streets.....	19
Sewer Infrastructure.....	20
Sewer: Upper Cedar Creek South Expansion Area.....	21
Water Infrastructure.....	22
Surrounding Jurisdictions.....	25
Future Land Use.....	37
Growth Areas.....	46



**Background**

The Olathe City Council adopted the original Lone Elm Vicinity Plan on June 13, 2000, following approval by the Olathe Planning Commission, the Johnson County Planning Commission, and the Johnson County Board of County Commissioners. In addition to input and review by the elected and appointed bodies of the City of Olathe and Johnson County, the plan incorporated contributions from planning staff, an advisory committee, and the general public. The consulting firm Gould Evans Goodman Associates of Kansas City, Missouri prepared the plan.

Because plans for sewer, water, street, and other infrastructure improvements were preliminary or nonexistent within the original plan area at the time the plan was adopted, the plan emphasized residential development at rural and semi-rural densities. Since the adoption of the original plan, several significant changes have occurred that affect the future development of the plan area. The boundary of the plan area has also changed, reflecting interlocal boundary agreements with the cities of Gardner and Spring Hill.

**Transportation Improvements**

Since the adoption of the original Lone Elm Vicinity Plan in 2000, the City of Olathe has been cooperating with the Kansas Department of Transportation (KDOT) on plans to improve the K-7 highway. Ongoing studies are examining the possibility of upgrading K-7 to a limited access expressway. Where K-7 passes through the plan area, improvements would include a realignment along Lone Elm Road and a

connection to U.S. Highway 169 south of Lone Elm Park.

Additionally, the City of Olathe has committed to the construction of the I-35 / 159<sup>th</sup> Street interchange. The interchange would provide connections between I-35, Lone Elm Road, 159<sup>th</sup> Street, and any future K-7 realignment through the interchange.

While the I-35 / 159<sup>th</sup> Street interchange is not expected to be completed until 2009, and expansion of K-7 may be decades away, these transportation improvements are potential catalysts for significant economic development in the plan area that would provide jobs, retail opportunities, and funding of City services for local residents.

**Sewer Improvements**

The original Lone Elm Vicinity Plan did not foresee the extension of sewer service beyond its current limits in the northeast corner of the plan area. As a result, the plan recommended land uses of low density and intensity for a large part of the plan area.

Since the adoption of the original plan, Olathe Municipal Services (OMS) has undertaken two construction projects to extend sewer service in the Lone Elm Vicinity. One project consists of a main between Cedar Lake and Lone Elm Park.

The second project extends a main through Lone Elm Park, with the possibility of extending further east as development occurs. With the completion of these projects in August 2006, OMS is able to provide sewer service east of Lone Elm Road as far south as 175<sup>th</sup> Street, and west of Lone Elm Road as far south as 167<sup>th</sup> Street (see map, page 21). In addition to these ongoing projects, existing OMS plans anticipate the need to construct additional mains in the future to fully serve the Cedar Creek watershed within the plan area.

In conjunction with street improvements, this extension of sewer service allows for development patterns that were impossible at the time the original Lone Elm Plan was prepared.



Lone Elm Park

The original Lone Elm Vicinity Plan recognized the historical significance of the Lone Elm Campground, an important site along the Oregon and Santa Fe trails. At the time of the original plan's adoption this area, at the southeast corner of 167<sup>th</sup> Street and Lone Elm Road, was privately owned. In 2000, the City of Olathe purchased approximately 160 acres of land around the campground, and on June 9, 2005, Lone Elm Park was officially dedicated.

In addition to preserving the historically significant area, the City has constructed a number of recreation facilities including athletic fields and an interpretive shelter.



Industrial Development

Access to Interstate 35, U.S. Highway 169, and railroad transport makes the Lone Elm Vicinity attractive for industrial, office, and retail uses that can take advantage of these transportation connections. Since the adoption of the original Lone Elm Vicinity Plan, improvements to sewer, water, and street infrastructure have made possible more significant economic development of the Lone Elm Vicinity than the original plan anticipated.



The construction of the System Materials Handling facility in 2005, located at the northeast corner of 167<sup>th</sup>

Street and Lone Elm Road, is one example of these economic development projects. The original Lone Elm Vicinity Plan called for residential uses at this site, based on the predicted limitations of infrastructure at the time of its creation.

The development of this subdivision demonstrates how changes of the underlying existing conditions affect the types of development that occur within the plan area and highlights the need for revisions.

Residential Development

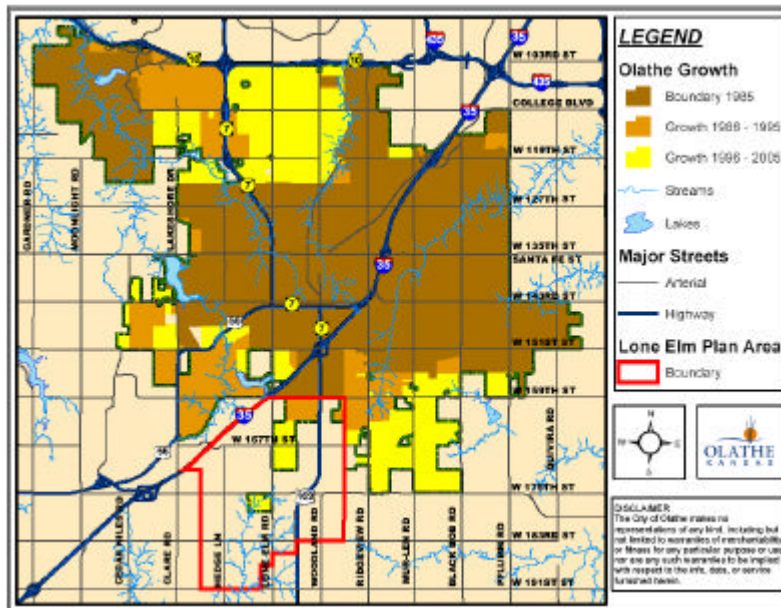
In 2004, Johnson County approved the Nottingham Creek residential subdivision at the southwest corner of 175<sup>th</sup> Street and Lone Elm Road. The subdivision was annexed into the City of Olathe in 2005, after submitting an annexation petition. Nottingham Creek is located in an area designated for "rural cluster" uses in the original Lone Elm Vicinity Plan. The original plan recommended very low densities (.1 units per acres) for rural cluster areas because these areas were not expected to have infrastructure improvements such as sewer service.

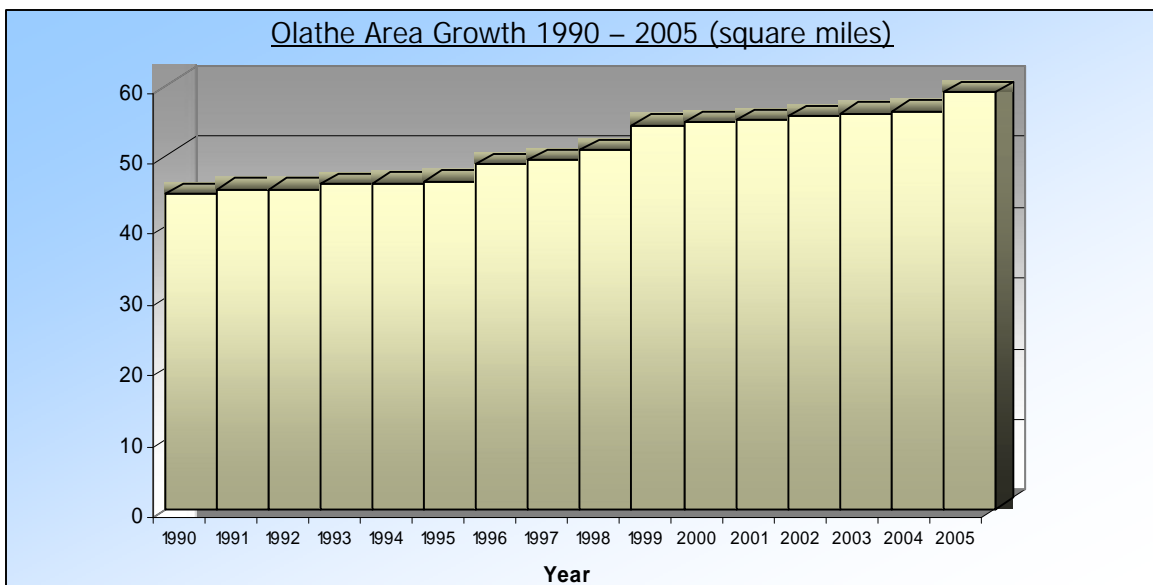
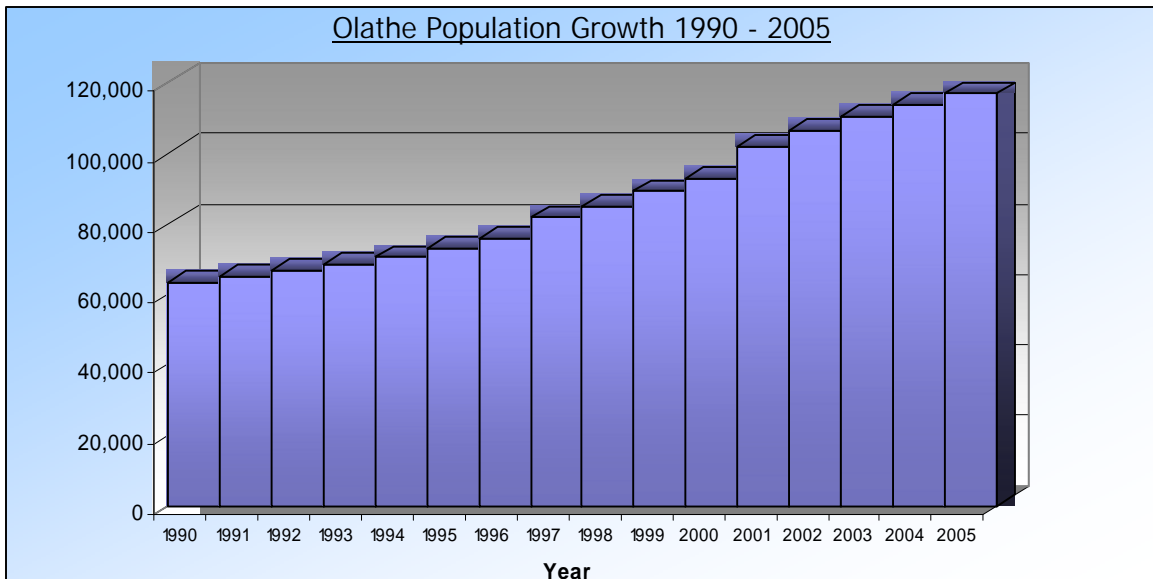
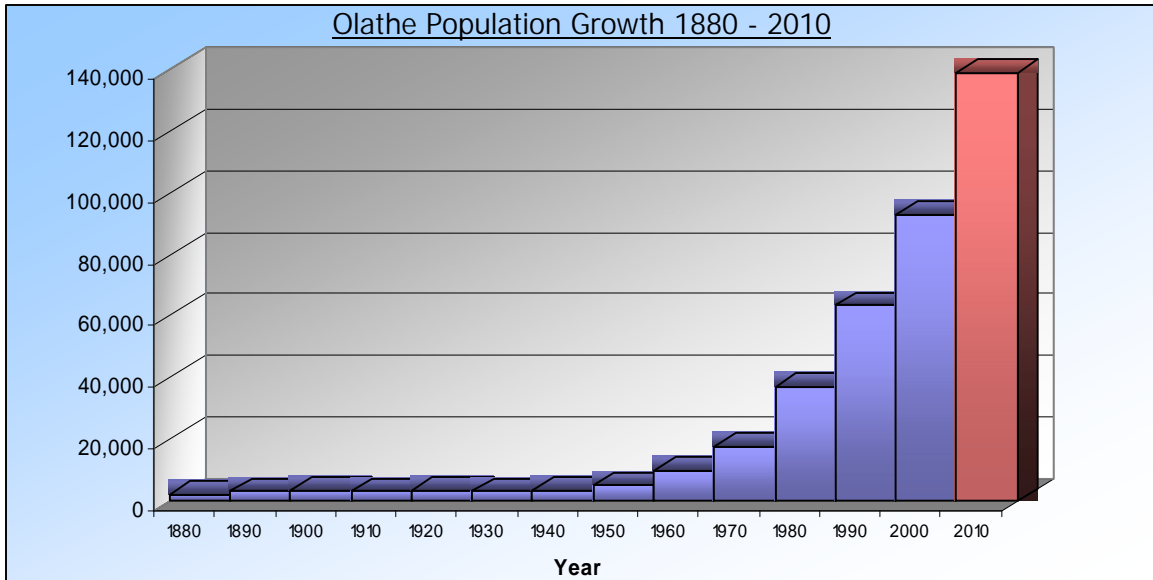


Growth in Olathe

The population of Olathe has increased by more than 50,000 people over the past 15 years, for a growth rate of more than 84%. Over the same period of time, City area has increased by roughly 32%. The City of Olathe continues to experience steady population and economic growth, and the Lone Elm Vicinity Plan is being revised in part to better accommodate this new growth.

Because Johnson County Wastewater was able to provide sanitary sewer service to the area, more intense development was possible. Nottingham Creek consists of 260 lots with densities that are suburban rather than rural.

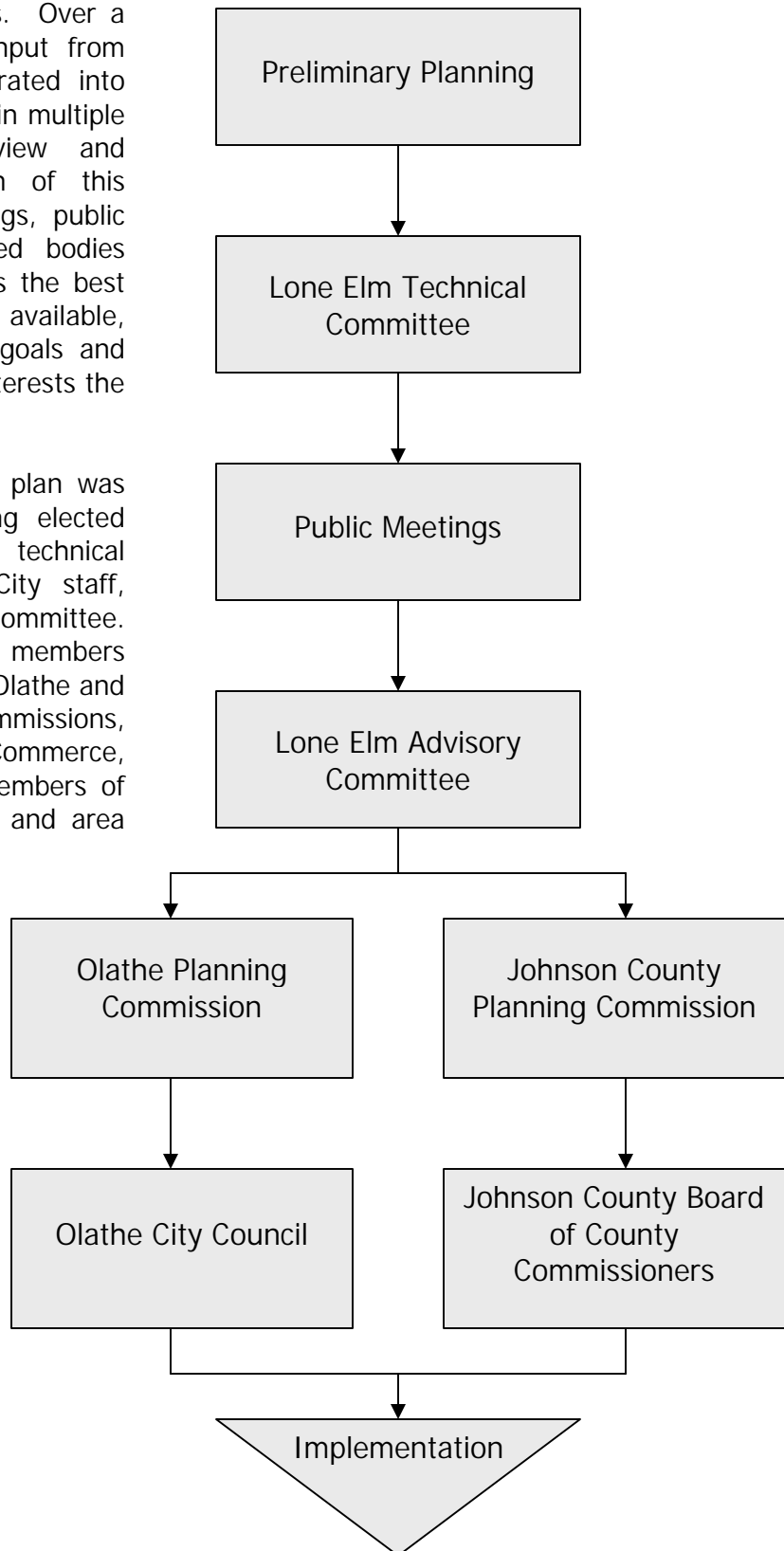




**Revision Process**

The revision of the Lone Elm Vicinity Plan was an iterative process. Over a period of several months, input from various sources was incorporated into the plan, and then presented in multiple formats for additional review and refinement. The repetition of this process in committee meetings, public meetings, and before elected bodies ensured that the plan reflects the best technical expertise and insight available, as well as the fundamental goals and values of the public, whose interests the plan is designed to serve.

Input for the revision of the plan was provided by sources including elected officials, the general public, technical experts, service providers, City staff, and the Lone Elm Advisory Committee. This committee consisted of members from the Olathe City Council, Olathe and Johnson County Planning Commissions, the Olathe Chamber of Commerce, Spring Hill School District, members of the development community, and area property owners.



## Plan Goals

The plan goals for the Lone Elm Vicinity Plan were articulated and refined based on input from committees, elected officials, professional staff, and the general public. The land use recommendations and implementation strategies of the plan were developed with the purpose of achieving these goals. At a series of public meetings held in May 2006, property owners within the Lone Elm Vicinity participated in an exercise to prioritize the goals of the plan. The results of this exercise can be found in Appendix C.

- Achieve a High Quality of Life for Residents
- Create Walkable Neighborhoods, With Pedestrian Access to Essential Services and Recreational Opportunities
- Encourage Economic Development
- Ensure that Growth Occurs in a Rational, Manageable, Sustainable Manner
- Meet the Future Service Needs of Residents
- Preserve Vital Natural and Historical Areas
- Promote Development that is Attractive, Enduring, and Well-Designed



**Natural Features**

Natural features comprise the most fundamental component of existing conditions within the plan area. The area's history, its current land uses, the placement of infrastructure, and jurisdictional boundaries are all dependent on these natural features. As a result, examining the topography, ground cover, hydrology, and environmental constraints in the area is the first step in developing a relevant and effective land use plan.

Topography and Ground Cover

The Lone Elm Vicinity Plan area is located along a topographical divide at the upper reaches of three drainage basins, but elevation changes in the plan area are gradual. The vast majority of the plan area is relatively flat and developable. Only the far southern portions of the plan area present potential topographical challenges. Intense industrial and commercial uses are unsuitable for areas of steep slope and the lower-density residential land uses designated for the southern portion of the plan area are consistent with the slope constraints in that location. Those few areas with slopes too steep for any type of development have been designated as open space.

Aerial data based on a photographic survey of Johnson County indicates that dense trees and groundcover primarily follow streams and other drainage corridors within the plan area. Vegetation is also commonly found along existing roads and boundaries between agricultural parcels. Because stream and drainage corridors include existing vegetation, and because issues of drainage and runoff create complication for development, these

areas are typically designated as open space throughout the plan area.

Watercourses and Floodplains

The Lone Elm Vicinity Plan area extends across three different watersheds (see Watersheds and Floodplains map, page 10). Northern portions of the plan area drain into the Cedar Creek watershed, which flows northwest to Cedar Lake and eventually to Lake Olathe. The Little Bull Creek watershed covers the southwest quadrant of the plan area and flows to the south. Bain Creek is the major feature of this watershed that extends into the plan area, running south from near 175<sup>th</sup> Street past 191<sup>st</sup> Street and beyond. The Blue River watershed extends across the southeast portion of the plan area, draining to the east. Wolf Creek flows through this watershed, with its source near the southeast corner of the plan boundary. In addition to streamways, the plan area includes a number of small lakes and ponds.



Johnson County has conducted a study to examine the impacts of full urbanization on floodplain areas within the county. While these floodplain areas have not been adopted by FEMA for floodplain determination, they do provide valuable information on

environmentally sensitive and undevelopable land in the plan area.

Within the Cedar Creek watershed, four separate floodplain corridors extend into the plan area, generally running southeast to northwest. Floodplain areas in the Little Bull Creek watershed follow Bain Creek and its tributaries. Within the Blue River watershed, floodplain areas follow the upper reaches of Wolf Creek.



### Environmental Concerns

Roughly half of the Lone Elm Vicinity Plan area falls within the Lake Olathe watershed, a subset of the Cedar Creek watershed. Because Lake Olathe is a source of drinking water for the City, it is especially important to manage drainage and stormwater runoff to

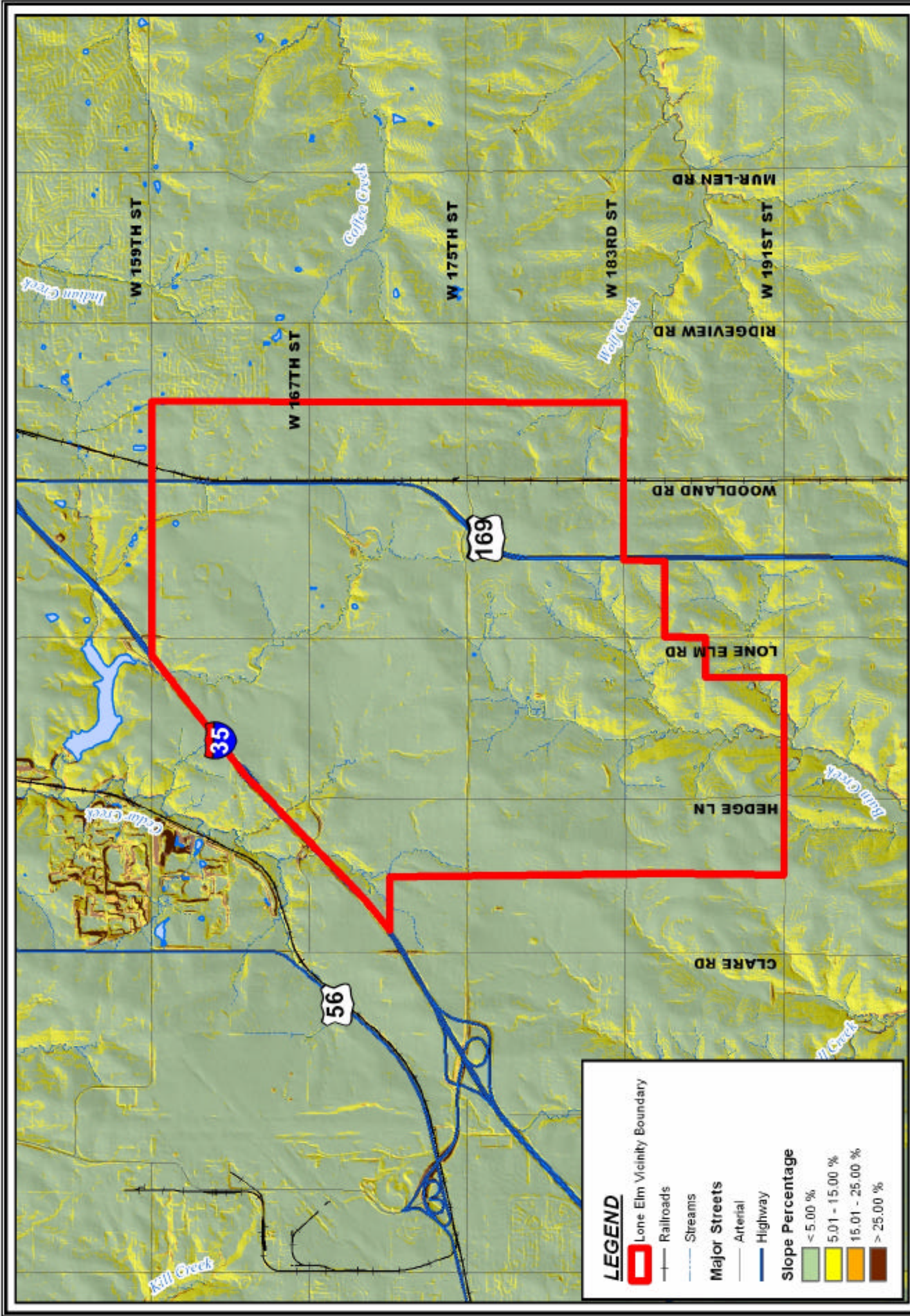
prevent the discharge of pollutants and protect water quality.

Towards this end, the City of Olathe requires a series of Best Management Practices (BMP) for development that occurs within the Lake Olathe watershed. Olathe's BMPs are based on guidelines developed specifically for the Kansas City metropolitan area by the Mid-America Regional Council and the American Public Works Association. BMPs may include engineering solutions, maintenance procedures, prohibition of certain activities, or other management practices.<sup>1</sup> Functionally, BMPs fall into three categories: preservation and promotion of natural hydrology (open space, native landscaping, filter strips), engineered storm water treatment and infiltration (bioretention filters, engineered swales, infiltration trenches), and on-site detention and treatment (pervious pavement, wet ponds).<sup>2</sup> Taken together, these various practices provide a comprehensive approach to stormwater management.

<sup>1</sup> *Manual of Best Management Practices For Stormwater Quality* (Mid-American Regional Council and American Public Works Association, September 2003) 5.

<sup>2</sup> *Manual of Best Management Practices For Stormwater Quality*, 15.





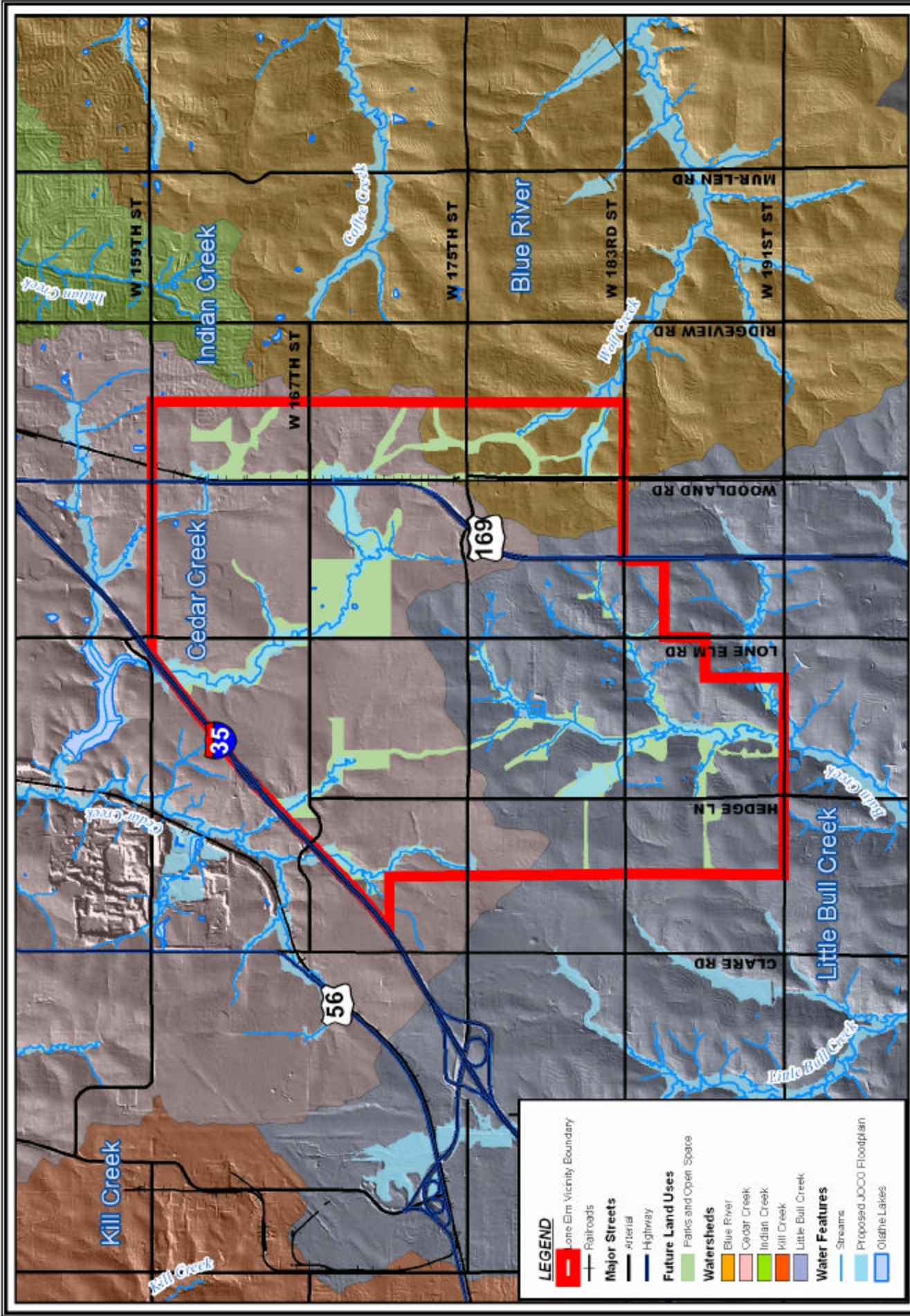
**LEGEND**

- Lone Elm Vicinity Boundary
- Railroads
- Streams
- Major Streets**
  - Arterial
  - Highway
- Slope Percentage**
  - < 5.00 %
  - 5.01 - 15.00 %
  - 15.01 - 25.00 %
  - > 25.00 %

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# LONE ELM - TOPOGRAPHY



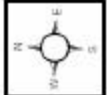


**LEGEND**

- Lone Elm Vicinity Boundary
- Railroads
- Major Streets**
- Arterial
- Highway
- Future Land Uses**
- Parks and Open Space
- Watersheds**
- Blue River
- Cedar Creek
- Indian Creek
- Kill Creek
- Little Bull Creek
- Water Features**
- Streams
- Proposed JOCO Floodplain
- Olathe Lakes

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# LONE ELM - WATERSHEDS & FLOODPLAINS



### Historic and Cultural Resources

Historic and cultural resources help create a distinct identity and sense of place for an area. They provide opportunities for residents to connect with the people, places, and events that have shaped the local community. These historic and cultural resources are a vital component of a land use plan that strives to achieve a high quality of life for residents and encourages the bonds of community that make neighborhoods more than collections of houses.

#### Lone Elm Park

Lone Elm Park is located at the southeast corner of the intersection of 167<sup>th</sup> Street and Lone Elm Road. The City of Olathe finalized the purchase of the 160 acre area in the year 2000, and officially dedicated it as Lone Elm Park on June 9, 2005.

The area is historically significant as the location of a major campground and rendezvous point along the Santa Fe, Oregon, and California Trails, and includes markers from the National Park Service and the Daughters of the American Revolution. The availability of a spring and good grazing for livestock made the location an attractive stop for travelers. Throughout the early and mid 1800's, tens of thousands of traders, emigrants, mountain men, missionaries, soldiers, and prospectors traveled through or camped at the site, including William Becknell, John Fremont, the Donner-Reed party, Kit Carson, and Francis Parkman.<sup>1</sup> Various travelers were buried at the site, including a number of soldiers who passed through the campground with the U.S. Army as part of the Mexican-American War. Ben

Wiley recounted one such burial in 1847,

This morning we buried John N. Collins, a private in Captain Turner's company. His grave is situated on the right hand side of the road about 150 yards east of the 'Lone Elm,' the only tree to be seen on the prairie for miles around and I could not but reflect that his lonely grave would in the course of a few years be traversed by the plough shear of civilization and the last resting place of the poor soldier who went out to fight for the rights of his country and to secure those very desecrators the rights which they value so highly, should be forgotten and the rank corn should rustle above and around this spot where a few moments ago were heard the muffled drum and discharge of firearms as his comrades fired their salute over the lone grave.<sup>2</sup>

Originally, the campsite was called Round Grove, after the grove of elm trees that stood near the spring, amidst the surrounding treeless prairie. Over time, travelers chopped down the trees for fuel until only one tree remained. The campground became known as Lone Elm, and the name persisted even after the tree disappeared.<sup>3</sup>

For many years, the Lone Elm campground was conflated with the Elm Grove campground. Recent research indicates, however, that Elm Grove was a distinct site located slightly more than two miles to the northwest of Lone Elm along the same stream, near the current intersection of 151<sup>st</sup> Street and Old Highway 56.<sup>4</sup>



Since the City's purchase of the Lone Elm site in 2000, several million dollars have been invested in recreational amenities such as softball and soccer fields, interpretive historical exhibits, and other improvements. Construction projects in the park have been coupled with archaeological efforts, resulting in the recovery of a number of historical artifacts.

#### Ensor Farm

Located on 183<sup>rd</sup> Street between Woodland and Ridgeview Roads, Ensor Farm lies along the extreme southeastern boundary of the plan area. This property is listed on the National Register of Historic Places for its association with Loretta Ensor (1904-1991), and her brother Marshall Hamilton Ensor (1899-1970), two of the most prominent early radio amateurs. Marshall Ensor received his radio operator license in 1917, and Loretta in 1923, and together they operated a radio station from the farm site for more than five decades. For his efforts in teaching thousands of other amateur operators during wartime, Marshall Ensor was honored by the president of CBS, William S. Paley, in 1941. Loretta Ensor was known for being the first female radio amateur to be heard across the Pacific Ocean. In 1926, the Kansas City Journal Post featured Loretta Ensor, writing that, "Kansas boasts the only

woman Amateur radio operator in the Middle West..."<sup>5</sup>

The Ensor Farm site includes a cabin constructed in 1875, a farmhouse and barn constructed in the 1890's, a number of other accessory buildings, and two radio towers used in the broadcast of the amateur radio station.



- <sup>1</sup> Ross Marshall, "Lone Elm Campground Preserved," Pathways Across America, Fall 2005, Partnership for the National Trails System, July 13, 2006, <[http://www.nationaltrailspartnership.org/view\\_story.asp?story\\_id=72&issue\\_id=11](http://www.nationaltrailspartnership.org/view_story.asp?story_id=72&issue_id=11)>.
- <sup>2</sup> "Overland Trails: Lone Elm Campground," Johnson County Museums, July 13, 2006, <[http://www.jocomuseum.org/overlandTrails/trail\\_main.htm](http://www.jocomuseum.org/overlandTrails/trail_main.htm)>.
- <sup>3</sup> Ross Marshall, "Lone Elm Campground Preserved," Pathways Across America, Fall 2005, Partnership for the National Trails System, July 13, 2006, <[http://www.nationaltrailspartnership.org/view\\_story.asp?story\\_id=72&issue\\_id=11](http://www.nationaltrailspartnership.org/view_story.asp?story_id=72&issue_id=11)>.
- <sup>4</sup> "Overland Trails: Elm Grove Campground," Johnson County Museums, July 13, 2006, <[http://www.jocomuseum.org/overlandTrails/trail\\_7.htm](http://www.jocomuseum.org/overlandTrails/trail_7.htm)>.
- <sup>5</sup> "Women's History Month: Olathe Kansas, Ensor Farm," National Park Service, July 13, 2006, <<http://www.cr.nps.gov/nr/feature/wom/2004/ensor.htm>>.

**Land Use Patterns**

Planning for future development should be responsive to existing uses. While perfect compatibility with existing uses is unrealistic, new development should account for and mitigate potential nuisances and negative impacts wherever possible. With this goal in mind, an examination of existing uses is essential in the creation of a future land use plan.

Existing Development

*Agricultural Uses:* A majority of the plan area is currently devoted to agricultural uses. The most intense of these agricultural uses is a large greenhouse and nursery complex at the intersection of 167<sup>th</sup> Street and U.S. Highway 169. The future land use map does not provide for agricultural uses, but the plan area will not fully develop all at once. Consequently, as farmland redevelops, care must be taken to balance the concerns of both new residents and remaining farmers. As long as agricultural uses remain in the plan area, efforts to reduce conflicts between agricultural uses and new development may ease the development process.



*Residential Uses:* Farmhouses and large lot residential uses are scattered

throughout the plan area. Several residential subdivisions have been constructed or are currently being constructed. A section of the Madison Place subdivision extends into the northeast corner of the plan area. Along 175<sup>th</sup> Street, west of Lone Elm Road, portions of the Nottingham Creek subdivision have been constructed, while other phases are currently under review. On both sides of Lone Elm Road, north of 183<sup>rd</sup> Street, residential subdivisions exist outside of Olathe's current city limits. Existing subdivisions are all designated as neighborhood residential areas on the future land use map (see Future Land Use map, page 37), which is consistent with their current use.



*Industrial Uses:* Industrial uses currently exist in the northern portion of the plan area, near the intersection of 159<sup>th</sup> Street and U.S. Highway 169. Some industrial development has also occurred along Lone Elm Road north of 167<sup>th</sup> Street. Both of these areas are designated for employment uses on the future land use map, which is consistent with their current use.



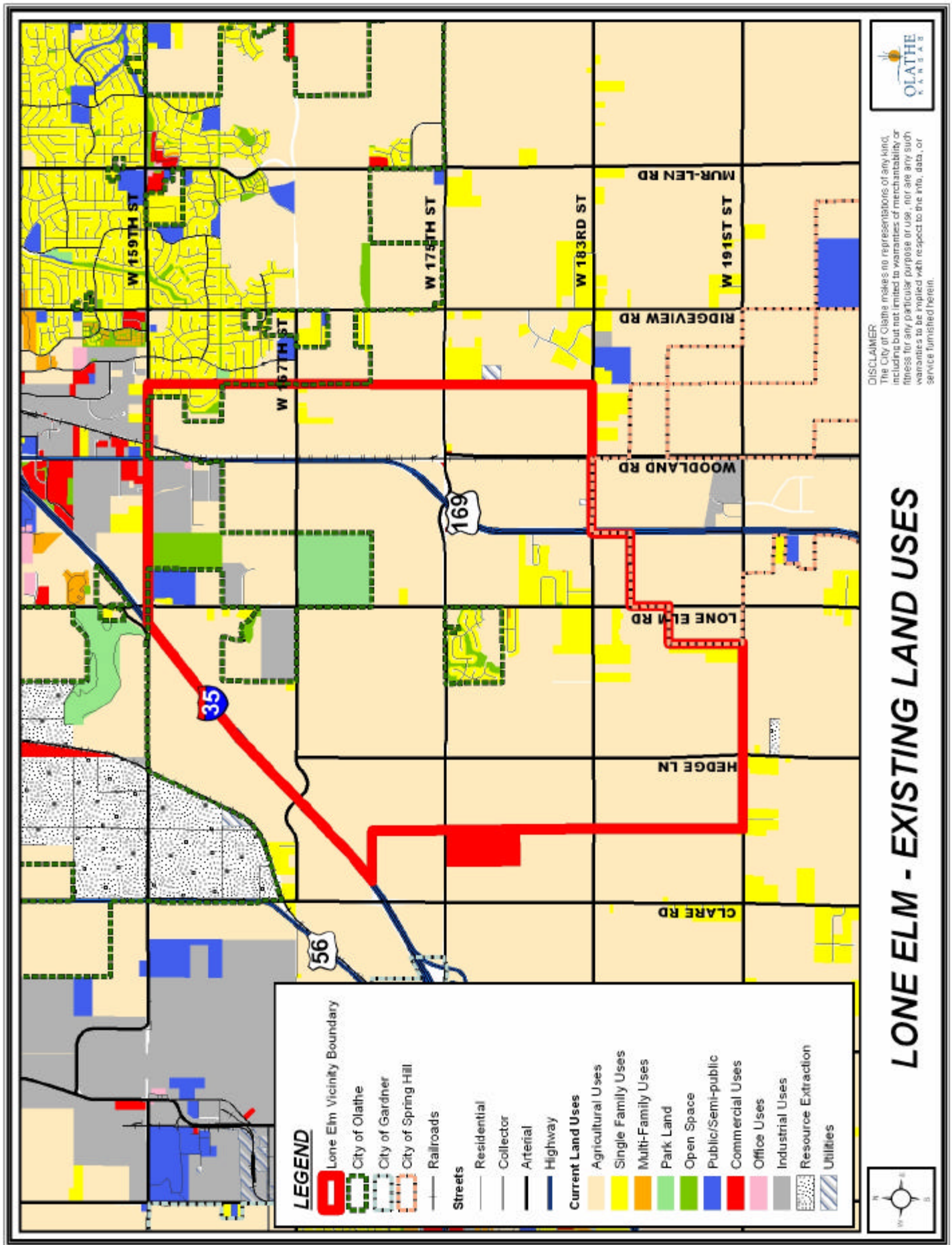
*Other Uses:* Both the Olathe District Athletic Center (ODAC), located on 159<sup>th</sup> Street between Lone Elm Road and U.S. Highway 169, and Lone Elm Park, at the intersection of 167<sup>th</sup> Street and Lone Elm Road, include recreational improvements in the form of athletic fields and accessory buildings. Additional land uses in the plan area include two churches near the intersection of Lone Elm Road and I-35. The location of these churches may conflict with plans for the expansion of K-7.

Existing Open Space

Lone Elm Park is located roughly in the center of the Lone Elm Plan area, and

comprises the largest amount of existing open space. Additionally, many drainage and streamway areas are untouched by development or agricultural uses and retain dense groundcover. The location of these streamways is important for developing a comprehensive, interconnected open space system for the plan area. Existing open space in adjacent areas such as Coffee Creek and Spring Hill, and existing plans for greenway corridors as part of Mid-America Regional Council's (MARC) MetroGreen program, are also important in the planning of an open space network for the Lone Elm Vicinity.





**Infrastructure**

Plans for major infrastructure improvements in the Lone Elm Vicinity, such as the proposed expansion and realignment of K-7, construction of the 159<sup>th</sup> Street / I-35 interchange, and new sanitary sewer lines, are the major impetus behind the revision of the Lone Elm Vicinity Plan. As the intensity of development and location of land uses are reconceived within the plan area, an examination of existing infrastructure is useful for guiding the location and timing of growth.

Highways, Streets, and Railroads

Interstate 35, which marks the northwest boundary of the plan area, and U.S. Highway 169, which runs north-south through the heart of the plan area, provide regional transportation connections. Currently, only 175<sup>th</sup> Street connects directly to Interstate 35, but plans and funding are in place for an interchange that connects 159<sup>th</sup> Street Interstate 35.



Streets following the one-mile section line grid provide local access. Within the plan area, 175<sup>th</sup> Street and portions of 159<sup>th</sup> Street, 167<sup>th</sup> Street, 183<sup>rd</sup> Street, and Lone Elm Road are paved two-lane streets. East of U.S. Highway 169, 159<sup>th</sup> Street is expanded to four

lanes. Other local streets remain unpaved. Major upgrades to the street network will be necessary as the plan area develops.

Burlington Northern Santa Fe Railroad operates a freight rail line that passes north-south through the plan area alongside both Woodland Road and U.S. Highway 169. The presence of this rail line, and its proximity to existing and proposed highways, is an important factor in locating industrial uses within the plan area.



Sewer

Sewer service in the Lone Elm Vicinity is divided between Olathe Municipal Services (OMS) in northern portions of the plan area and Johnson County Wastewater (JCW) in southern portions of the plan area (see Sewer Infrastructure map, page 20). OMS currently provides sanitary sewer service to development in two places: residential development in the northeast corner of the plan area, and industrial development along 159<sup>th</sup> Street and U.S. Highway 169. Within the plan area, existing sewer infrastructure allows OMS to serve new development between 159<sup>th</sup> Street and 167<sup>th</sup> Street from the eastern edge of the plan area to roughly one quarter mile west of U.S. Highway 169. Along 159<sup>th</sup> Street, current service



extends three quarter miles west of U.S. Highway 169.

OMS has recently completed two projects to extend service further into the plan area. One project consists of installing a main between Cedar Lake and Lone Elm Park. The second project extends a main through Lone Elm Park. With these projects, OMS will be able to provide sewer service east of Lone Elm Road as far south as 175<sup>th</sup> Street, and west of Lone Elm Road as far south as 167<sup>th</sup> Street. OMS proposes additional sewer lines to fully serve the Cedar Creek watershed within the plan area, but no specific plans currently exist with regard to the timing, funding, or construction of these additional lines.

JCW serves existing residential development at the southwest corner of 175<sup>th</sup> Street, and along Lone Elm Road. The wastewater collected from this area is pumped west along 175<sup>th</sup> Street toward a treatment plant near New Century Airport. While JCW will ultimately be responsible for providing

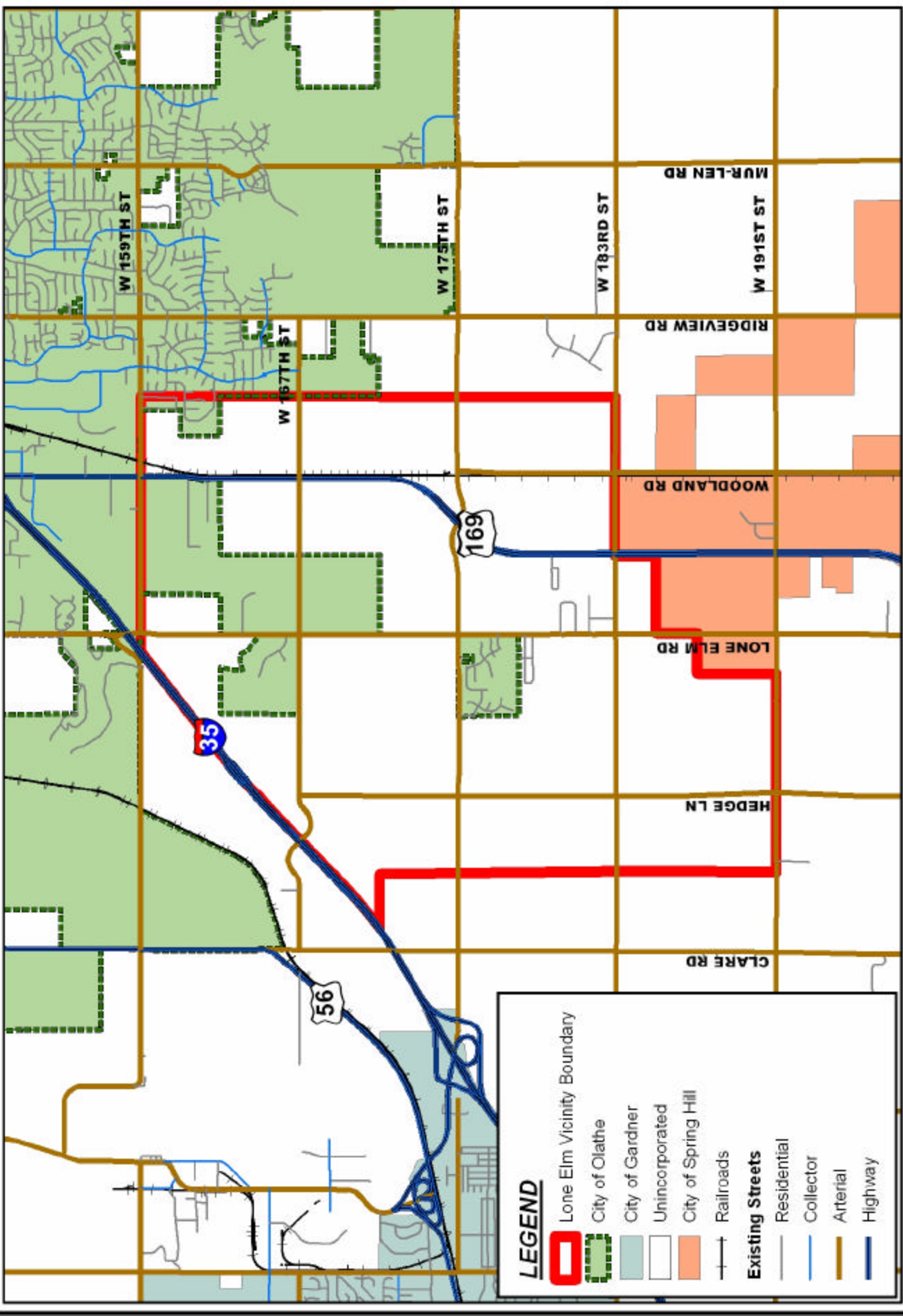
sanitary sewer service in the southern portions of the plan area, JCW is not actively expanding service in the plan area at this time.

#### Water

The vast majority of the Lone Elm Vicinity is serviced by Water District No. 1 of Johnson County (WaterOne) (see Water Infrastructure map, page 22). A small section of the plan area along I-35 falls within the boundaries of Rural Water District Seven. WaterOne currently provides water throughout the plan area via an assortment of water mains of varying sizes and capacities. Generally, the ability to meet required fire flow rates impacts the ability of a development to be approved for construction. Commercial and multi-family developments typically require higher fire flow rates than single family developments. Full urbanization of the plan area will require significant upgrades to the water infrastructure.

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# LONE ELM - EXISTING STREETS

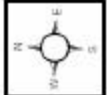


**LEGEND**

- Lone Elm Vicinity Boundary
- City of Olathe
- City of Gardner
- Unincorporated
- City of Spring Hill
- Railroads

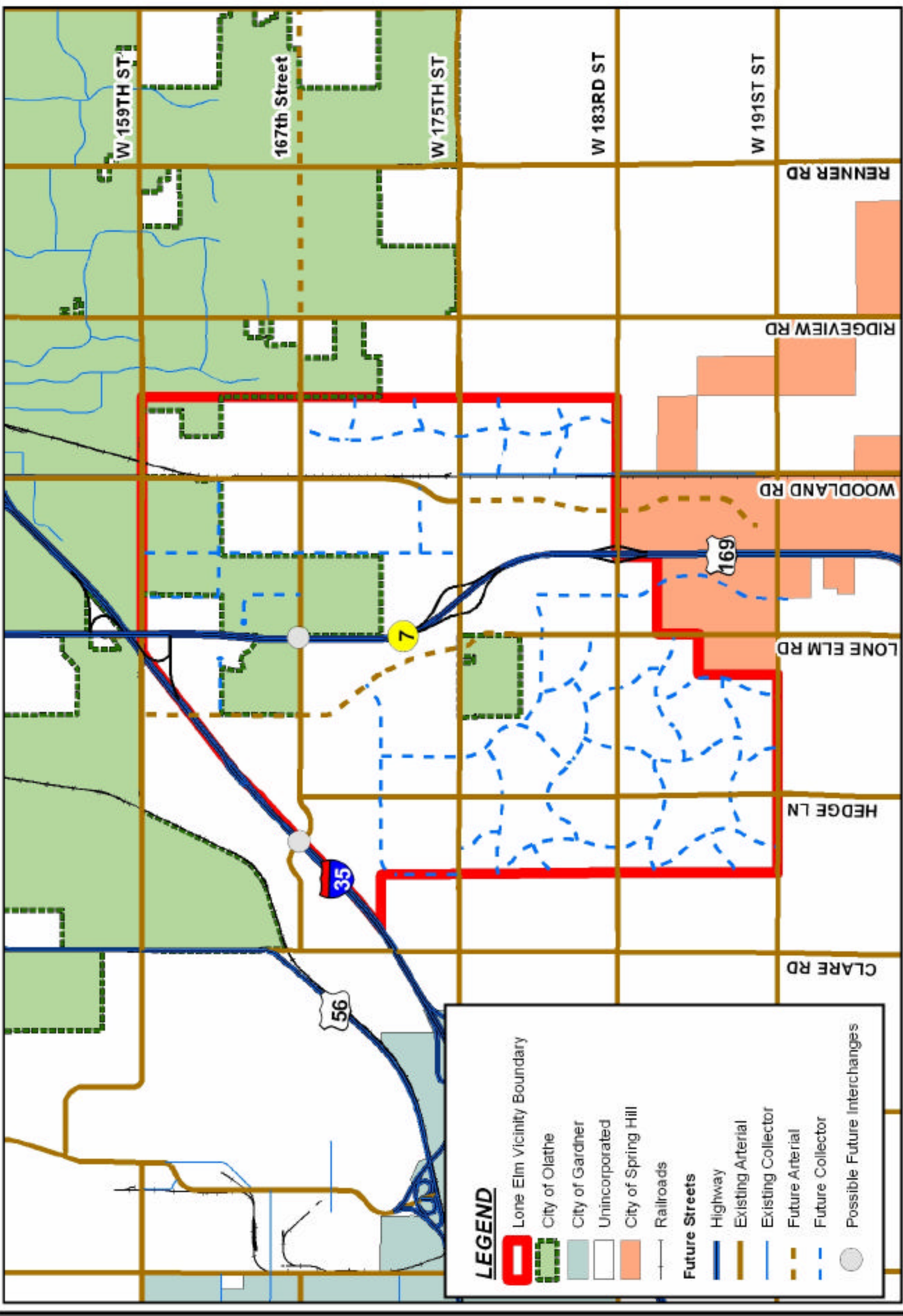
**Existing Streets**

- Residential
- Collector
- Arterial
- Highway



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# LONE ELM - FUTURE STREETS



**LEGEND**

- Lone Elm Vicinity Boundary
- City of Olathe
- City of Gardner
- Unincorporated
- City of Spring Hill
- Railroads

**Future Streets**

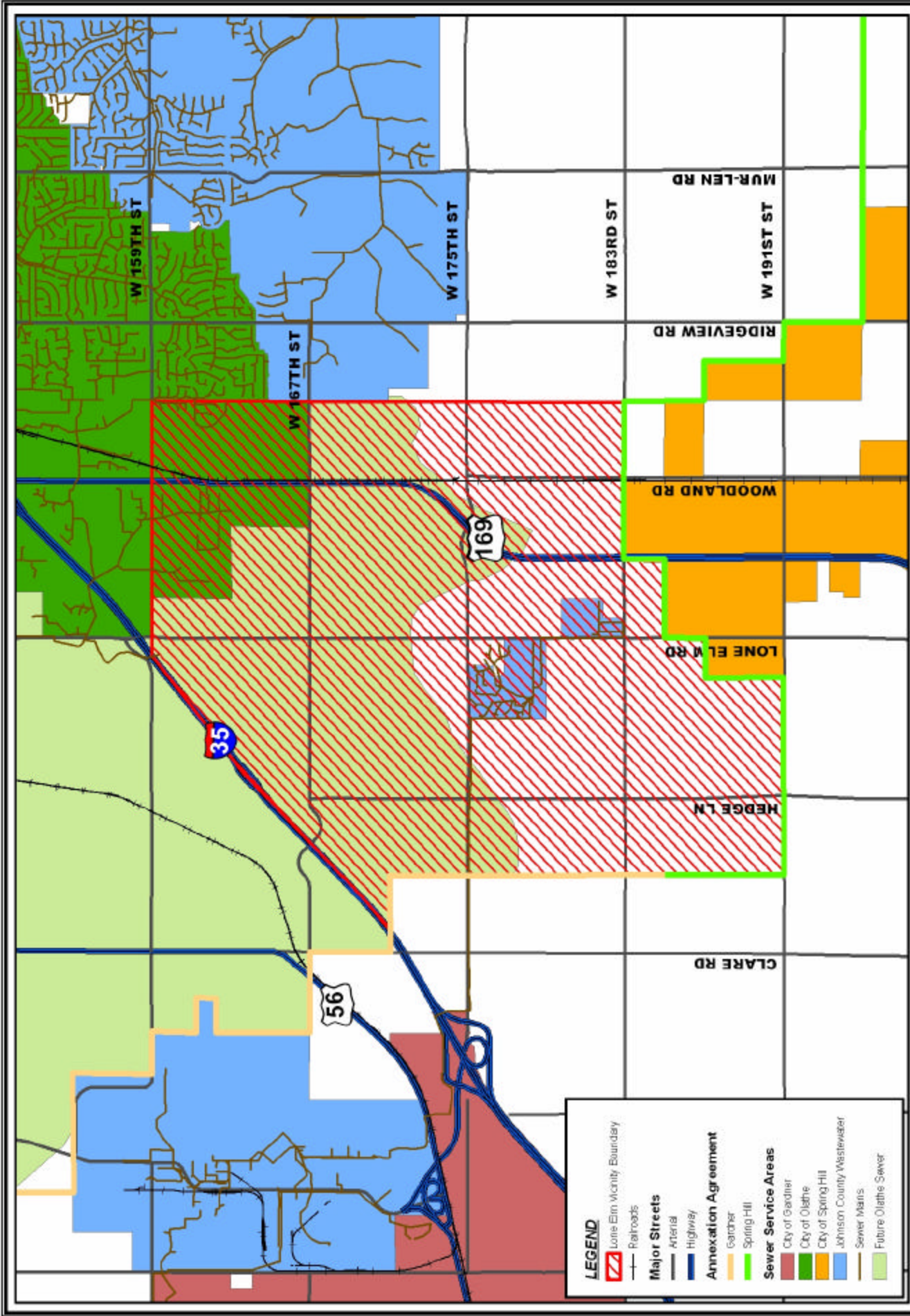
- Highway
- Existing Arterial
- Existing Collector
- Future Arterial
- Future Collector
- Possible Future Interchanges





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# LONE ELM - SEWER INFRASTRUCTURE



**LEGEND**

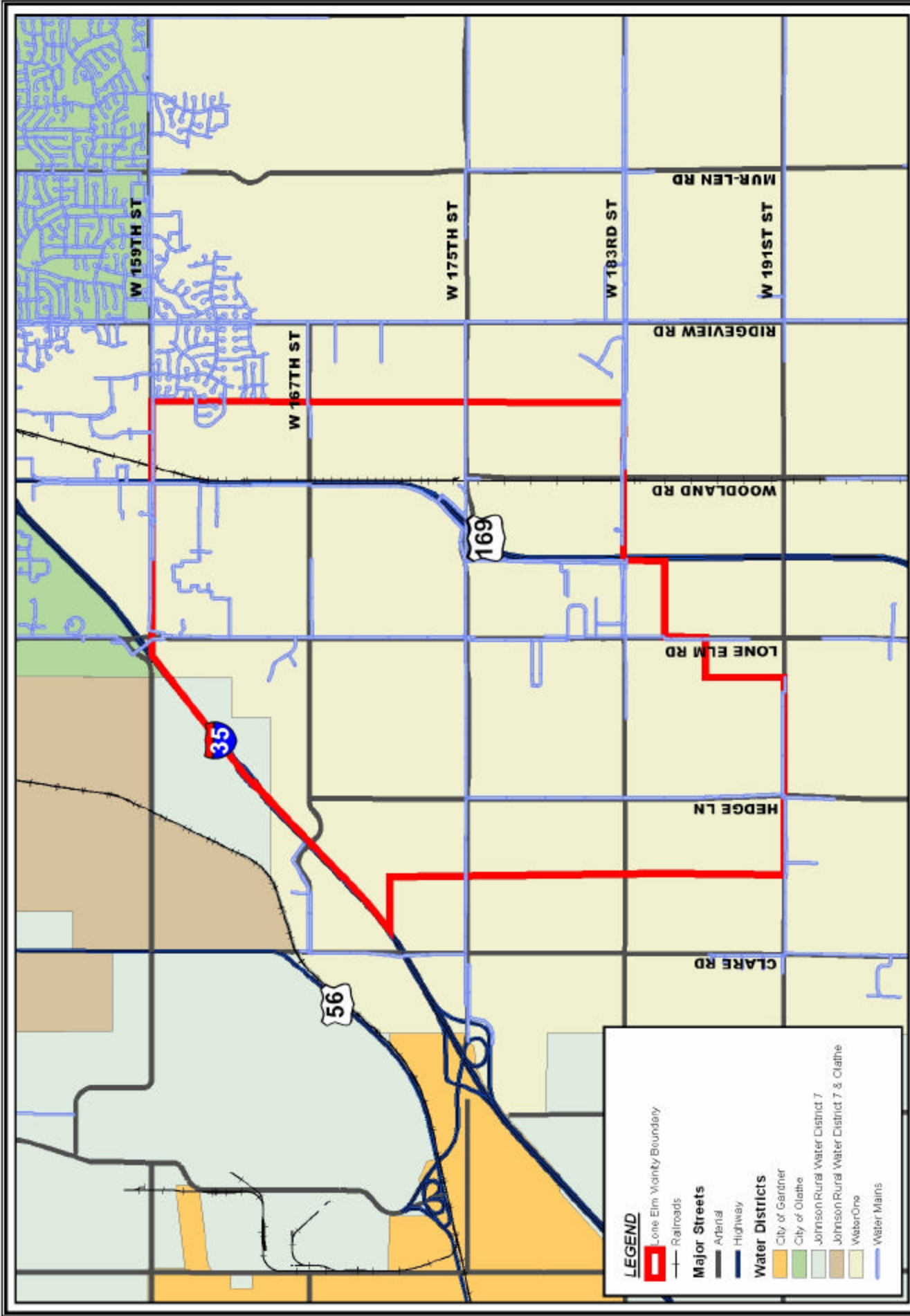
- Lone Elm Vicinity Boundary
- Railroads
- Major Streets**
  - Arterial
  - Highway
- Annexation Agreement**
  - Gardner
  - Spring Hill
- Sewer Service Areas**
  - City of Gardner
  - City of Olathe
  - City of Spring Hill
  - Johnson County Wastewater
  - Sewer Mains
  - Future Olathe Sewer





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# LONE ELM - WATER INFRASTRUCTURE



**LEGEND**

- Lone Elm Water District Boundary
- Railroads
- Major Streets**
- Arterial
- Highway
- Water Districts**
- City of Gardner
- City of Olathe
- Johnson Rural Water District 7
- Johnson Rural Water District 7 & Olathe
- WaterOne
- Water Mains



### Jurisdictions

Development in the Lone Elm Vicinity occurs within a context of various overlapping jurisdictions (see Surrounding Jurisdictions map, page 25). These jurisdictions all play a role in the timing and location of growth, as well as the type and intensity of development. For example, adjacent uses should be compatible where the plan area borders neighboring municipalities, and the ability to develop the plan area depends on the capabilities of the particular utility providers that serve a location.

### School Districts

Three different school districts overlap the boundaries of the plan area. The Olathe School District covers the far northern section of the plan area, and operates the Olathe District Athletic Center (ODAC) on 159<sup>th</sup> Street. Development in the plan area should have minimal impact on the Olathe School District because no new residential development is planned within the school district boundaries. The Gardner-Edgerton School District covers the northwest section of the plan area. This section of the plan area is devoted primarily to office and commercial uses, but some residential development will occur within the Gardner-Edgerton School District. The Spring Hill School District covers most of the plan area, including the vast majority of area devoted to new residential development.

### Utility Providers

*Water:* The Lone Elm Vicinity Plan area is serviced by Johnson County's Water One district.

*Sewer:* The boundaries of the Lone Elm Plan area extend across two different sewer service areas. Olathe Municipal Services (OMS) covers the northern section of the plan area, while Johnson County Wastewater (JCW) is responsible for the southern portions of the plan area. The OMS service area roughly corresponds to the area of the Cedar Creek watershed. For the purposes of locating and timing sewer infrastructure improvements, OMS classifies four basins and nine sub-basins within the Cedar Creek watershed. The Little Bull Creek and Blue River watersheds are serviced by JCW.

### Surrounding Municipalities

*Gardner:* The municipality of Gardner is located to the west of the Lone Elm Vicinity. Gardner's current municipal boundaries extend to within a mile of the plan area. The annexation agreement between Gardner and Olathe follows the border of the Lone Elm Vicinity at the half section line between Clare Road and Hedge Lane. This border runs from the half section line between 167<sup>th</sup> Street and 175<sup>th</sup> Street south to 183<sup>rd</sup> Street.

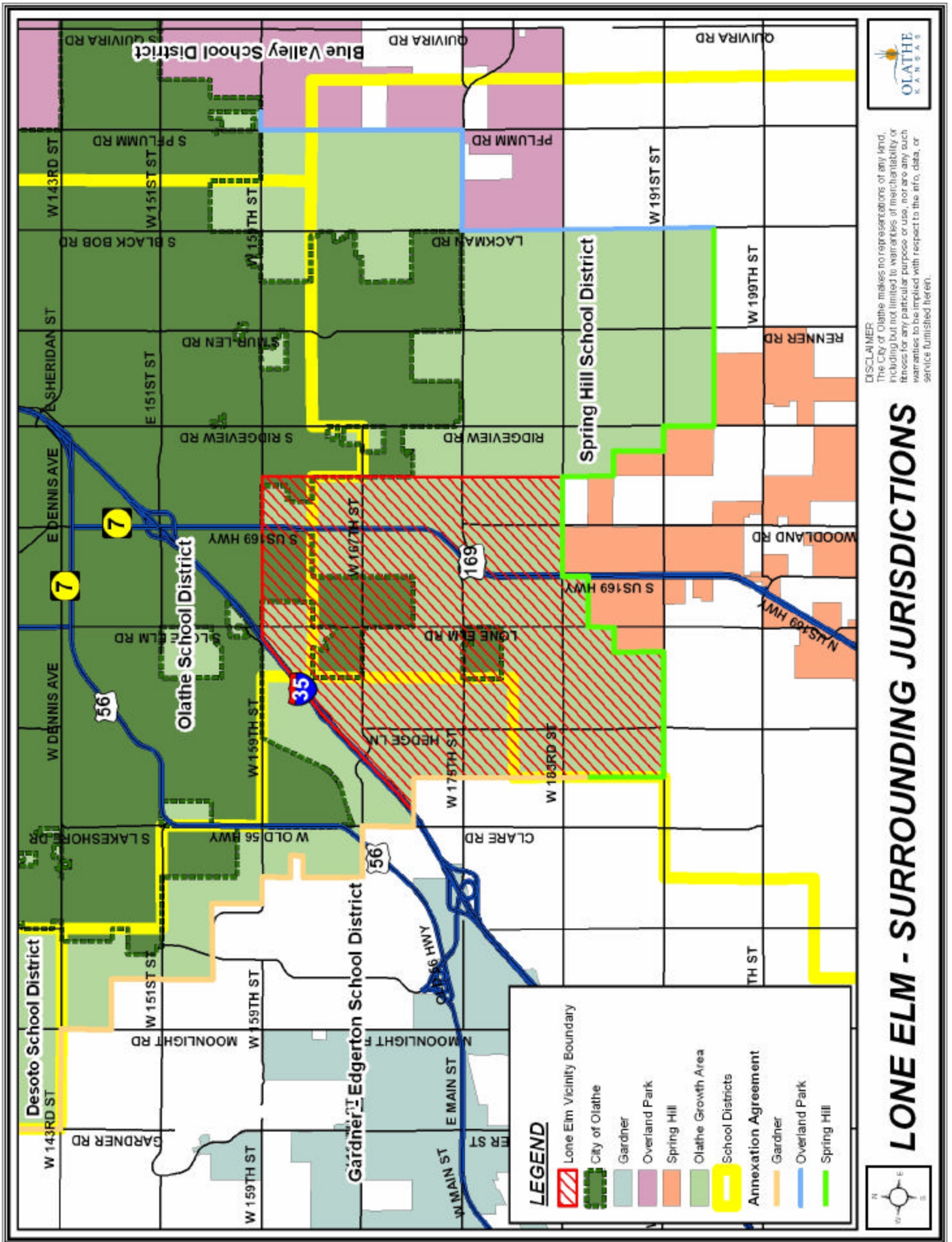
*Spring Hill:* The municipality of Spring Hill is located to the south of the Lone Elm Vicinity. The current municipal boundary of Spring Hill extends to the border of the Lone Elm Plan area, from west of Lone Elm Road to Woodland Road. An annexation agreement approved by Spring Hill in March 2006, and Olathe in April 2006, extends the future boundary of Spring Hill to 183<sup>rd</sup> Street along the half section east of Woodland Road.

### New Century Airport

The New Century Airport is located to the northwest of the Lone Elm Vicinity, in unincorporated Johnson County. Because of the unique impact of airports on surrounding uses, extra scrutiny is necessary for planning development in adjacent areas. This affects the Lone Elm Vicinity in two ways. First, roughly thirty acres of the plan area fall within

the boundaries of Johnson County's Airport Interest Area Future Land Use Plan. Second, per a statute by the State of Kansas, Johnson County has review authority over new development within a one mile buffer of airport property. This buffer covers a small portion of the Lone Elm Vicinity in the northwest.





**Land Use Plans**

While most land to the south, east, and west of the Lone Elm Vicinity is currently undeveloped, new development within the plan area will need to take future neighboring uses into account. There are a number of existing land use plans for the City of Olathe, neighboring municipalities, and the entire region that impact the Lone Elm Plan Vicinity.

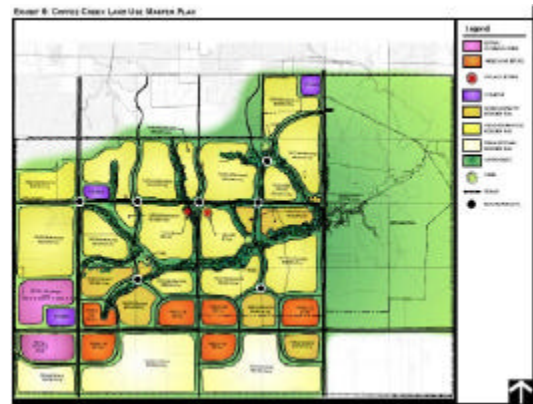
Coffee Creek Master Plan

The Coffee Creek Master Plan area is located directly to the east of the Lone Elm Vicinity. Along much of the shared boundary, the Coffee Creek Master Plan designates low density residential development. One half mile to the west of the shared boundary, the Lone Elm Vicinity includes existing and planned industrial uses, a railroad, and a highway. As a consequence, the area between the industrial uses in the Lone Elm Vicinity and the residential uses in Coffee Creek must achieve a compatibility of uses in both directions.

The Coffee Creek Master Plan designates 175<sup>th</sup> Street as a major arterial road with areas of intense commercial use. When planning for land uses along 175<sup>th</sup> Street in the Lone Elm Vicinity, it is important to account for the effects that development in Coffee Creek will have on the function, character, and traffic volume of 175<sup>th</sup> Street.

Coffee Creek is a central natural feature around which a series of greenways, trails, and other interconnected open spaces are planned. This series of trails and greenways will provide local residents access to recreation and services. The Lone Elm Vicinity similarly links parks and open space along

streamway and drainage areas. The interconnectivity of the open space system is desirable not only within the plan area, but throughout the City of Olathe. Interconnected open space in Olathe may become part of a comprehensive, region-wide open space network. Consequently, trails and greenway corridors within the Lone Elm Vicinity will link to open space within Coffee Creek wherever feasible.



Gardner Land Use Plan

Gardner’s growth area extends to the west boundary of the Lone Elm Vicinity, along the half section line between Clare Road and Hedge Lane. The shared boundary runs from the half section between 167<sup>th</sup> Street and 175<sup>th</sup> Street south to 183<sup>rd</sup> Street. Because of the proximity to Interstate 35, Gardner has designated business park and office uses for the area along the shared boundary. These uses are compatible with the adjacent uses designated in the Lone Elm Plan. There are also plans for an intermodal freight facility to the south of Gardner which may have an effect on the demand for growth in the Lone Elm Vicinity.

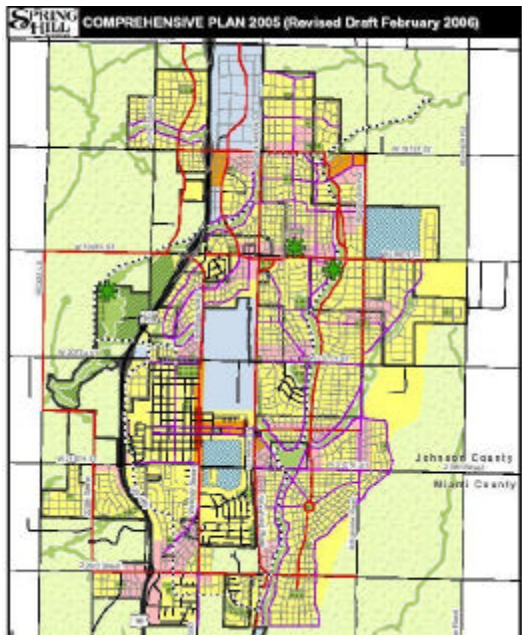
Spring Hill Land Use Plan

Spring Hill’s current municipal boundaries extend to the southern edge

of the Lone Elm Plan area. The 2006 update to Spring Hill's comprehensive plan designates industrial uses between U.S. Highway 169 and the railroad, with residential uses to both the east and west. The planned industrial uses are compatible with the Lone Elm Vicinity Plan, which designates commercial uses along 183<sup>rd</sup> Street to the east and west of the proposed K-7 interchange. For the remaining portions of the shared boundary, both plans recommend residential uses. The Lone Elm Vicinity Plan also designates open space connections along Bain Creek, linking with Spring Hill's open space corridors.

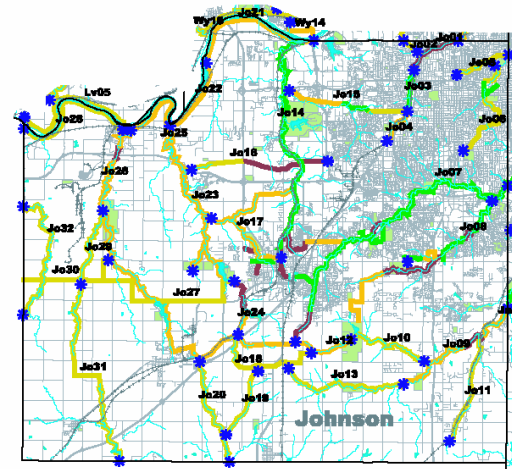
metropolitan area in an interconnected system of open space.

Near the Lone Elm Vicinity, segments linking Cedar Lake with Lake Olathe, and linking Indian Creek with Coffee Creek are designated as high priority connections. Medium priority greenway connections are designated within the Lone Elm Vicinity, linking Coffee Creek to Wolf Creek and Cedar Lake. Connections are also extended to Gardner and Spring Hill. These proposed connections generally follow stream and drainage areas, which is consistent with the open space designated in the Lone Elm Vicinity Plan.



**Johnson County**

MetroGreen Corridors



Park and Greenway Plans

Mid-America Regional Council (MARC), an association of city and county governments as well as a regional planning agency, designates two greenway corridors through the Lone Elm Vicinity Plan area as part of its MetroGreen program. The purpose of this program is to establish a system of parks, greenways, and trails that links seven counties in the Kansas City

Park and greenway plans prepared by both Johnson County and the City of Olathe generally reflect the recommendations of the MARC plan, providing for trail and greenway connections to link Cedar Creek, Bain Creek, Coffee Creek, and Wolf Creek.

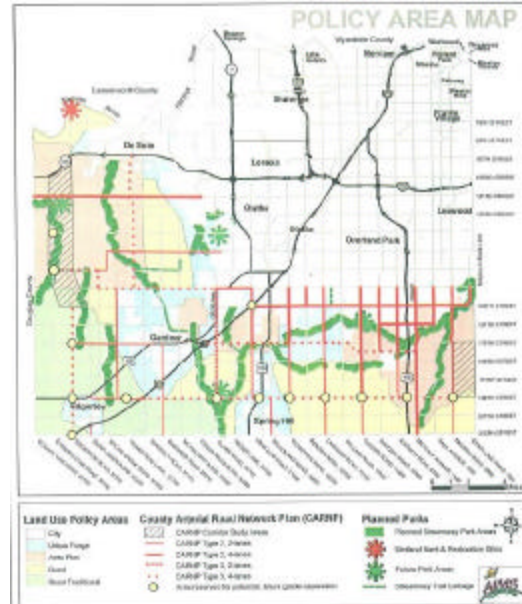
The Rural Comprehensive Plan

Because much of the plan area is currently in unincorporated Johnson County, it remains under the purview of Johnson County's Rural Comprehensive

Plan. This plan recognizes existing area plans for Olathe and other municipalities, including the 2000 Lone Elm Vicinity Plan. Policy statements of the Rural Comprehensive Plan include providing for orderly growth, preventing scattered development, providing public services efficiently, and coordinating development standards with municipalities in anticipation of subsequent annexation.<sup>1</sup> These policy statements are all consistent with the goals of the Lone Elm Vicinity Plan.

Some areas of the Rural Comprehensive Plan were not included in the original Lone Elm Vicinity Plan. In these areas, urban fringe uses are recommended along U.S. Highway 169, while southwest portions of the plan are recommended as rural uses for a twenty year time frame.<sup>2</sup> These land use recommendations are consistent with the recommendations and development timing predictions of the updated Lone Elm Vicinity Plan.

The Rural Comprehensive Plan is closely integrated with the 2000 Lone Elm Vicinity Plan and municipal planning efforts. For those portions of the Lone Elm Vicinity that are unincorporated, the Rural Comprehensive Plan remains the guiding document.



<sup>1</sup> *The Rural Comprehensive Plan: A Plan for the Unincorporated Area of Johnson County, Kansas* (Johnson County, June 3, 2004) 1-1, 1-2.

<sup>2</sup> *The Rural Comprehensive Plan: A Plan for the Unincorporated Area of Johnson County, Kansas* (Johnson County, June 3, 2004) 2-23, 2-36.

**Land Use Definitions**

Parks and Open Space

Parks and open space are designated to preserve natural areas and to provide recreational opportunities for residents. Natural areas consist of land that is environmentally sensitive or otherwise unsuitable for development, including waterways, areas vital to drainage and stormwater runoff, areas prone to flooding, areas of steep slope, and areas with key dramatic sightlines. Recreational areas include trails, sports fields, and other maintained green space. All scale and variety of parks and open space are covered by this category, ranging from high-intensity sports activity centers, to neighborhood parks, to undisturbed natural areas.



Parks and open space areas may be public or private land. Parks, trail corridors, and conservation areas are examples of public open space. Subdivision common ground, semi-public sports and recreation areas, and required development open space are examples of private open space.

A key concept in the designation of parks and open space is interconnectivity. Wherever possible, greenway and trail connections should link parks and open space into a comprehensive and coherent system.

This system should also connect community facilities, residential areas, and employment centers. Where appropriate, access points should be designated towards this end.

Public and Community

Public and community land uses include a variety of civic, cultural, educational, and recreational uses. Examples of public and community buildings include government offices, police and fire stations, community centers, religious centers, libraries, museums, schools, golf courses, and public pools.



The location of public and community uses depends on the particular use. Civic and cultural uses are vital in establishing a neighborhood identity and active community life. As focal points for the neighborhoods they serve, civic and cultural uses should be located at prominent, central locations where they are easily accessed by multiple modes of transportation. The location of educational and recreational uses depends primarily on the type and scale of services that they provide. Schools and public recreation facilities should be distributed evenly throughout neighborhoods to maximize pedestrian access within their service areas. Police, fire, and similar public services have

location requirements dependent on the specific services they provide.

Public and community uses may be interspersed throughout neighborhoods and activity centers, and are not restricted to areas designated for public use in the plan.

Neighborhood Residential

The predominant land use in neighborhood residential areas is detached single-family residential. Secondary uses may include duplexes, townhomes, and villas. Development in neighborhood residential areas is recommended at a density of up to three dwelling units per acre.



To promote a distinct neighborhood identity and provide a focal point for neighborhood community life, neighborhood residential areas should include public open space such as a park, square, plaza, green, or sites for civic buildings.

Village Residential

Land uses in village residential areas consist of a mixture of housing types at moderate densities, including fourplexes, duplexes, townhomes, patio homes, and other attached housing. Secondary uses may include villas and

detached single-family units. Development in village residential areas is recommended at densities between three and six dwelling units per acre.



To promote a distinct neighborhood identity and provide a focal point for neighborhood community life, village residential areas should include public open space such as a park, square, plaza, green, or sites for civic buildings.

Urban Residential

Urban residential areas are intended to serve the housing needs of a growing population through a mixture of quality housing including condominiums, apartments, fourplexes, duplexes, and townhomes. Secondary uses may include villas and single-family detached units. Development in urban residential areas is recommended at densities of six units per acre and above.



To promote a distinct neighborhood identity and provide a focal point for neighborhood community life, urban residential areas should include public open space such as a park, square, plaza, green, or sites for civic buildings.

Mixed-Use Residential

Mixed-use residential areas allow a mix of retail, professional office, and attached residential uses. These areas encourage a compact pattern of development through economical use of land, shared parking, density bonuses, design guidelines, and other tools. Mixed-use areas are desirable for a number of reasons. The compact development pattern of mixed-use areas allows for more efficient use of infrastructure. Residents are able to access essential neighborhood services more easily via multiple modes of transportation, including pedestrian access. Walkable neighborhoods and the diverse activity of street life can contribute to the quality of life for residents.



The composition of mixed-use areas depends on key considerations, including the compatibility of mix and scale of uses, proximity to adjacent activity centers and neighboring uses, availability of utilities and other public

services, and access from highways, transit systems, and pedestrians.

Mixed-use residential areas allow for a flexible balance of residential and commercial uses with a focus on residential development as the primary land use. This contrasts with the mixed-use commercial areas, which are intended primarily for commercial development, with the possibility of a carefully integrated residential component.

Mixed-Use Commercial

Mixed-use commercial areas consist primarily of modest-scale retail and service uses that serve the residents of the local neighborhood. Development in mixed-use commercial areas should maintain a scale and quality of design that provides an attractive, pedestrian friendly environment.



Primary uses in mixed-use commercial areas include drug and grocery stores, personal services, convenience retail, apparel stores, restaurants, small professional offices, banking, coffee shops, and other similar uses. Secondary uses include apartments, condominiums, townhomes, and other forms of attached housing, as well as appropriate public and community buildings.

Mixed-use development is encouraged with the goal of providing local access to services, promoting complementary uses, efficiently utilizing infrastructure investments, and improving the quality of life for local residents. The following are examples of appropriate relationships in mixed-use developments: retail (ground floor) with residential above, office (ground floor) with residential above, and retail (ground floor) with office or institutional above. Well-placed open space and civic amenities, connected to activity centers and residents through a system of sidewalks and trails, are an important part of the mix of uses in mixed-use commercial.

Mixed-use commercial areas are intended primarily for commercial development, with the possibility of a carefully integrated residential component. This contrasts with the mixed-use residential areas, which allow for a more flexible balance of residential and commercial uses, with a focus on residential development as the primary land use.

Commercial Center

Commercial center areas provide for development of general commercial uses of a scale and intensity appropriate for serving a broader community and regional population in addition to nearby residents.

A variety of uses are appropriate in commercial center areas, including department stores, large specialty retailers, discount stores, retail pad sites, hotels, grocery superstores, and automotive centers. Secondary uses include restaurants, offices, and other uses accessory to major commercial development.



Commercial centers are limited to areas adjacent to major arterials in order to best accommodate a wide base of service users, and to mitigate the negative impacts that intense commercial use may have on nearby residential areas. Appropriate buffers, setbacks, and landscape improvements are important where commercial centers are adjacent to less intense uses.

Business Park



Offices are the primary land use in business park areas. This includes free standing office buildings, office parks, doctor and dentist offices, and multi-tenant professional offices. Secondary uses in business park areas include limited service and retail uses, research, warehousing, and other light industrial uses that are compatible with or accessory to office use. Light assembly or manufacturing may be acceptable where high-quality planned



developments integrate a mix of office and light industrial uses. Office developments are encouraged to integrate open space, ample landscaping, and amenities in order to create an attractive campus environment.

Employment

Employment areas are designated for more intensive industrial uses, including manufacturing, assembly, and distribution. Research, warehousing, and other light industrial uses complementary to more intensive industrial uses are also appropriate for employment areas. Limited retail and service uses may be appropriate in employment areas where they are compatible with and accessory to primary employment uses. These accessory uses should be designed as part of an integrated development plan that consists primarily of employment uses.



Moderate intensity uses should provide a buffer between employment areas and residences, and ample buffers, setbacks, berms, and landscape improvements should be utilized where employment areas border other land uses. Because transportation access can be key to the success of employment areas, and because the intensity of use in these areas may have negative impacts on other uses, employment areas should be located along highways and major arterials.

**Land Use Recommendations**

Employment and Business Park Uses

Transportation connections such as highways and major arterial roads provide access to the goods, services, workers, and customers than enable employment and business park uses to be successful. Because transportation infrastructure is such a fundamental component in the viability of employment and business park uses, transportation access is a key consideration in the location of these uses within the plan area.

The area surrounding the I-35 / 159<sup>th</sup> Street Interchange, the area along the BNSF Railroad, and corridors between major highways (K-7 to I-35, and K-7 to U.S. Highway 169) are the locations where employment and business park uses are designated. Where existing or proposed residential development is located near areas appropriate for employment and business park use, special consideration has been made to provide transitional land uses and buffer areas.

Commercial Center Uses

Commercial Center uses are designated where two major highways, K-7 and U.S. Highway 169, intersect a major arterial at 175<sup>th</sup> Street. The commercial center area is located to take advantage of the high traffic flows that are anticipated for the location and provide commercial goods and services on a large scale to local and regional consumers.

Mixed-Use Commercial Uses

Mixed-use commercial areas include commercial uses at a modest,

pedestrian scale intended to serve the residents of the local community. Towards this end, mixed-use commercial areas have been designated within primarily residential areas along major arterials at intersections and highway interchanges.

Mixed-Use Residential Areas

Mixed-use residential areas have been designated along 175<sup>th</sup> Street. 175<sup>th</sup> Street is planned as a major arterial with considerable commercial development, but a continuous commercial strip through the entire plan area is inappropriate for a variety of reasons. These reasons include potential negative impacts on adjacent residential areas, impacts on the appearance and functional qualities of the streetscape, and oversupply of retail space to serve the surrounding community.

To balance the commercial functions of 175<sup>th</sup> Street with the need to address the character of the streetscape and impacts on surrounding uses, mixed-use residential uses have been designated to encourage well-planned development that integrates limited commercial uses appropriately.

Mixed-use residential uses have also been designated between the proposed realignment of K-7 and U.S. Highway 169, south of 175<sup>th</sup> Street. The proximity of intense uses and major transportation corridors presents development challenges for this area. Mixed-use residential uses allow for a flexibility of design in order to adequately buffer and mitigate potential nuisances in the surrounding area, while providing the opportunity for non-residential uses where appropriate.

Urban Residential Uses

Urban residential uses have been designated for those areas that are appropriate for residential use, but are near more intense uses such as employment and commercial center uses, or near high traffic areas along highways and major arterials. Urban residential areas serve as a transition between these intense uses and the low-density neighborhood residential areas.

There are two urban residential areas within the Lone Elm Vicinity. One of these areas is along 175<sup>th</sup> Street, between future employment and commercial uses along U.S. Highway 169 and K-7, and the single-family residential uses approved in Coffee Creek. The second urban residential area is along Lone Elm Road, between existing single-family residential areas, and the proposed realignment and interchange of K-7.

Village Residential Uses

Within the plan area, village residential uses have been designated to provide a buffer between lower intensity neighborhood residential areas and the potential nuisances of commercial uses at the intersections of arterial streets. Village residential areas also provide the flexibility of design necessary to create an attractive and pedestrian friendly streetscape.

In the northeast portion of the plan area, village residential areas serve as a transition between the neighborhood residential uses of the Coffee Creek area in the east, and the employment uses, railroad, and U.S. Highway 169 to the west.

Neighborhood Residential Uses

Wherever possible, neighborhood residential areas have been designated away from potential negative impacts from non-residential uses, and away from the noise and nuisance of highways and major arterial roads. Existing single-family residential uses were also a factor in locating neighborhood residential areas. Finally, because areas of moderate slope in the southwestern portion of the plan are less ideal for employment and business park developments than the flatter areas north of 175<sup>th</sup> Street, low-density neighborhood residential uses are designated for these areas.

Public and Community

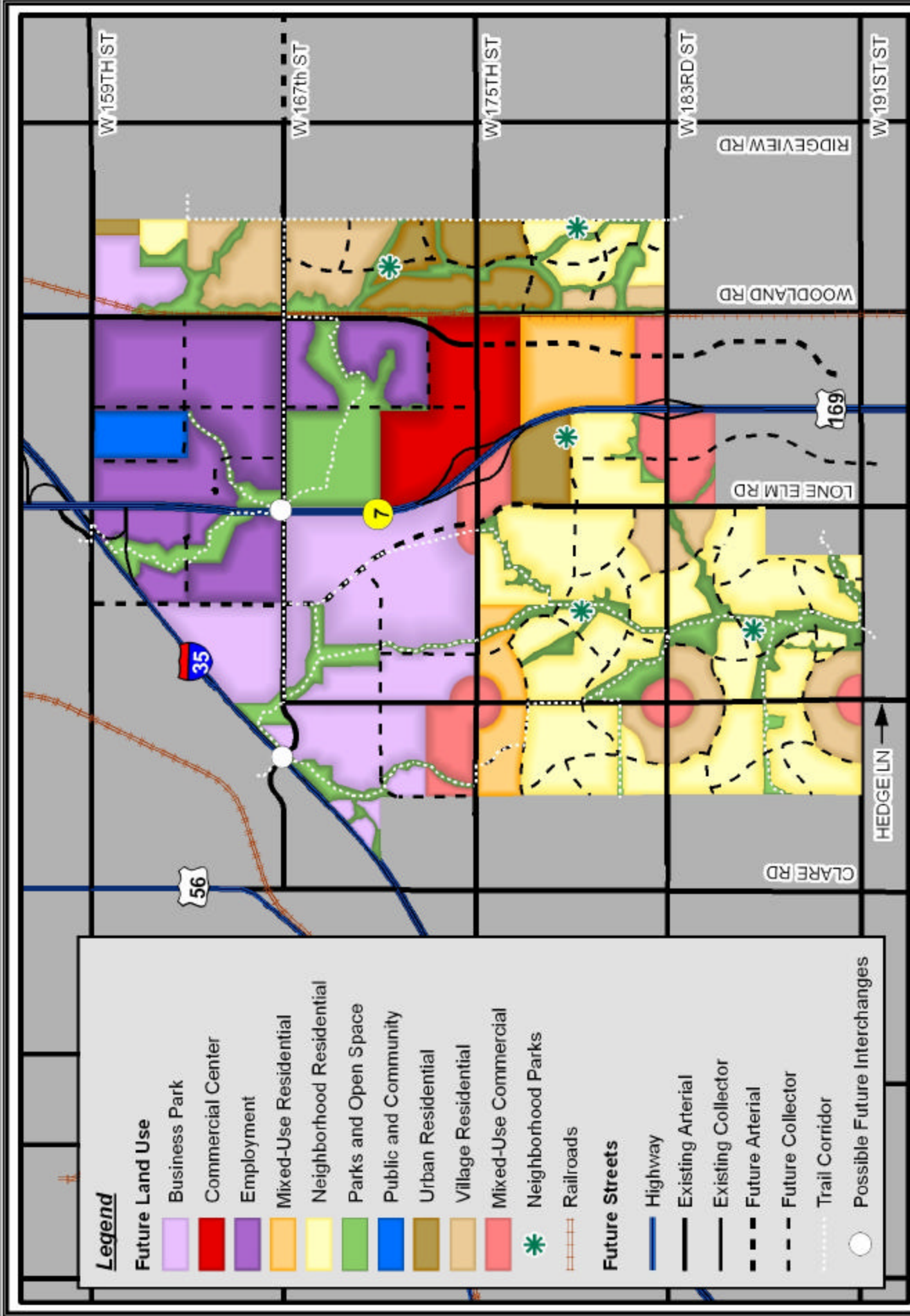
The Olathe District Athletic Center (ODAC) in the northern portion of the plan area has been designated as a public and community area. While it is premature to choose precise locations for schools, police stations, fire stations, and other public uses, these facilities are all essential to serving the residents of the plan area. General location requirements for these public facilities have been provided in the Service Requirements section of this plan (see page 38).

Parks and Open Space

Parks and open space have been designated primarily along streams, floodplains, and other land where development is inappropriate. Open space is also used within the plan area as a tool to buffer residential uses from potential negative impacts of non-residential uses and the railroad.

Interconnectivity is an important concept in the designation of open

space areas. Greenways and trail corridors have been located to link parks, community facilities, residents, and local services in a comprehensive system.



**Legend**

<b>Future Land Use</b>	Business Park	Commercial Center	Employment	Mixed-Use Residential	Neighborhood Residential	Parks and Open Space	Public and Community	Urban Residential	Village Residential	Mixed-Use Commercial	Neighborhood Parks	Railroads	<b>Future Streets</b>	Highway	Existing Arterial	Existing Collector	Future Arterial	Future Collector	Trail Corridor	Possible Future Interchanges
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# LONE ELM - FUTURE LAND USE PLAN

## Service Requirements

The following section outlines the range of infrastructure improvements and expansions of service that will be necessary to meet the needs of a fully developed plan area.

### Streets

As the Lone Elm Vicinity develops, improvements to street infrastructure will be necessary, including paving, adding lanes, constructing new streets, and realignment existing streets. Timing, funding, and location issues for the realignment of K-7 are dependent on the outcome of KDOT planning efforts for improvement of the highway. The Lone Elm Vicinity Plan incorporates the proposed realignment of K-7 as shown in KDOT's *K-7 Corridor Management Plan*, as well as the realignment of arterial and collector streets that is necessary as a result of improvements to K-7.

Construction of the I-35 / 159<sup>th</sup> Street Interchange, expected to be completed by 2009, will provide additional regional transportation access to the area. Plans for the realignment of K-7 foresee the future expansion of this interchange to provide uninterrupted system-to-system access between I-35 and the realignment of K-7. KDOT plans for K-7 also include interchanges at 175<sup>th</sup> Street and 183<sup>rd</sup> Street within the plan area.

The Lone Elm Vicinity Plan designates two sites along 167<sup>th</sup> Street as potential interchange locations, at I-35 and at K-7. Interchanges at these locations would improve access to the area and increase the value and desirability of the area as an economic development corridor. Construction of interchanges at these two sites would be dependent

on available funding, demonstrated traffic demand, site limitations, effect on nearby interchanges (such as the I-35 / 159<sup>th</sup> Street interchange), and the impact on economic development in the area. These potential interchanges are not part of any current KDOT plan, and would ultimately require KDOT approval. Additionally, the potential interchange at 167<sup>th</sup> and I-35 would require approval from the Federal Highway Administration (FHWA).

As the Lone Elm Vicinity develops and the volume of traffic on arterial streets grows, existing railroad lines that run north-south along Woodland Road and U.S. Highway 169 will become an increasing obstacle to east-west travel. Grade separations between rail lines and streets should be pursued for east-west arterials (167<sup>th</sup>, 175<sup>th</sup>, and 183<sup>rd</sup> Streets) where local street access will not be prohibitively impacted.

The Lone Elm Vicinity Plan designates a layout for collector streets within the plan area. This layout is conceptual and is not intended to show the exact location of the collector streets. While layout of these collector streets is conceptual in nature, the streets are located to preserve key principles of connectivity and access management. The collector street network functions as an interconnected web that disperses local traffic by providing multiple routes to arterial streets and highway systems. Limiting the number of access points improves traffic flow along arterial streets. The conceptual layout of collector streets in the Lone Elm Vicinity Plan is designed to limit traffic volumes on individual collector streets and minimize congestion on the arterial street network.

Sewer

While the service area boundary for Olathe Municipal Services (OMS) extends south to roughly 175<sup>th</sup> Street within the plan area, most of this area is not currently serviced by sanitary sewers. Along with existing service in the northeast portion of the plan area, construction of a new main, completed in August 2006 extends service south to 167<sup>th</sup> Street. This new sewer main will also enable development east of Lone Elm Road, and south to 175<sup>th</sup> Street, where developer-funded improvements can connect to the newly constructed main.

Providing sewer service south to 175<sup>th</sup> Street west of Lone Elm Road presents challenges. Topography directs the natural flow north through quarries outside of the plan area, where construction of sewers would be particularly difficult and cost-prohibitive. There is a possibility that service could be provided to this area on an interim basis with developer-funded mains that would pump east towards existing mains. This would require additional pumping stations and be dependent on the available capacity of existing sewers. An interim solution would also require planning for long-term sewer improvements. Sanitary sewer capacity within the plan area will increase with the completion of a main running between Cedar Lake and Lake Olathe. This main is expected to be constructed between 2013 and 2015.

Johnson County Wastewater (JCW) provides sanitary sewer service for the Little Bull Creek and Blue River watersheds, roughly south of 175<sup>th</sup> Street within the plan area. A pump station and force main that runs west toward the New Century Airport serve

existing residential development in the area. JCW anticipates that this pump station and force main will be adequate for five to ten years, serving a limited area in the vicinity of 175<sup>th</sup> Street and Lone Elm Road. The force main cannot provide service to other areas along 175<sup>th</sup> Street. Significant growth south of 175<sup>th</sup> Street will require additional infrastructure. Within the Little Bull Creek watershed, JCW plans to move the pump station further downstream to the south as growth occurs, in order to service a larger area. Long term plans anticipate gravity sewers running south toward a new treatment facility somewhere to the south of the plan area.

Sewer service of the plan area within the Blue River watershed will require construction of a main running east toward proposed sewer benefit districts several miles further downstream along Wolf Creek, a tributary of the Blue River.

Water

Johnson County's WaterOne district maintains water infrastructure throughout the plan area. While water service for new development can be evaluated on a site by site basis, full development of the plan area will require infrastructure improvements. In the short term, service can potentially be extended from east of the plan area, via water lines that follow 175<sup>th</sup>, 183<sup>rd</sup>, and 191<sup>st</sup> Streets. The feasibility of these extensions depends on the particular requirements of development proposals. Long term plans for WaterOne indicate the need for a large transmission main running from a treatment plant to be constructed in northern Wyandotte County to the Lone Elm Vicinity. This main would run south

through the plan area, potentially along the realignment of K-7.

Police

Olathe Police Department coverage is currently at capacity for those portions of the plan area within city limits. As the area develops, additional personnel and facilities will be necessary. The service requirements for police are based on the size of the plan area, anticipated traffic patterns, the transition of rural properties to more urban and suburban uses, as well as other characteristics particular to the area.

As the plan area develops, the Olathe Police Department anticipates that a number of facility improvements will be necessary, including a police/fire substation, radio tower, land for animal shelter replacement, and two WAN (wide area network) sites for computer networking. These facility improvements would be funded through the Capital Improvement Plan (CIP). The Olathe Police Department also anticipates a need for new personnel and vehicles, including the following:

- Patrol Shift Commander: 1 lieutenant, 1 vehicle
- Patrol District: 1 supervisor, 6 officers, 1 Community Service Officer (civilian), 2 vehicles
- Traffic Unit: 2 traffic officers, 1 commercial vehicle officer, 3 vehicles
- Animal Control: 1 officer, 1 veterinary technician, 1 vehicle
- Investigations: 2 detectives, 2 vehicles
- Crime Prevention/Community Outreach: 1 officer
- School Resource: 1 officer, 1 vehicle
- Services: 1 clerical support employee

These additional officers and other employees would be funded through the City of Olathe's general funds.

Fire

The Olathe Fire department anticipates that two fire stations will be necessary to serve the Lone Elm Vicinity. One station is already planned just to the north of the Lone Elm Vicinity, along either 159<sup>th</sup> Street or Old 56 Highway. As growth continues south, an additional fire station will be necessary to the south of 175<sup>th</sup> Street. While a specific location for the station is not designated in the plan, there are location criteria that determine the suitability of a site. Typically, fire stations are located on sites of three acres or more, along or near a major arterial street. Fire stations must be located to ensure a response time of no greater than four minutes within the station's service area. Facility improvements would be funded through the CIP.

In addition to facility improvements, the Olathe Fire Department anticipates a need for additional equipment and personnel to serve the area, including:

- One fire engine
- Equipment for new fire stations
- 15 additional firefighters per station
- 1 additional fire inspector and vehicle

Additional firefighters and vehicles would be funded through general City of Olathe funds.

Parks

Within the plan area, Lone Elm Park serves as a community park and focal point for open space, recreational facilities, and trails. In addition to Lone



Elm Park, Olathe's Parks and Recreation Department anticipates that a number of smaller neighborhood parks will be necessary to meet the needs of new residents in the area. Ideally, neighborhood parks would be located within residential areas, roughly one mile apart (1/2 mile radius), along trails or greenways, and potentially adjacent to schools. Typically, the City of Olathe purchases the land necessary for neighborhood parks.

The Lone Elm Vicinity Plan recommends the preservation of open space throughout the plan area. Some of this

open space, particularly in floodplain areas, may be purchased or donated to the City. Other open space will remain in private ownership, and be protected through development plan review, via dedication of easements, provision of open space required by zoning, as well as landscape and retention requirements. Some of the trails recommended as part of the Lone Elm Vicinity Plan may be constructed by developers as part of planned zoning districts that require active open space. Other trails would be funded by the City of Olathe.

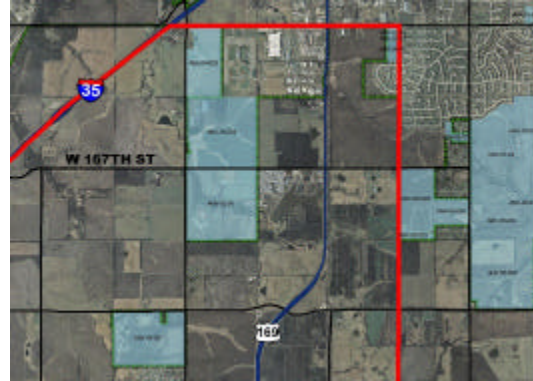
Designating appropriate land uses for the plan area serves no purpose without successful implementation of the plan. The value of a land use plan depends on how effectively it is utilized to guide actual development patterns within the area of study. There are a variety of planning, finance, and legal tools available to the City of Olathe for the purpose of progressing from plans on paper to a successful and desirable built environment.

While future land uses within the plan are designated according to ultimate build-out of the plan area, a key component of implementing the plan is ensuring that new growth occurs in a manner that is orderly and contiguous. Existing infrastructure can be utilized more efficiently and services can be provided more affordably with development patterns that avoid leap-frog or island development in favor of orderly, contiguous growth. Annexation, rezoning, timing of infrastructure improvements, and other implementation tools should be applied in a manner that promotes efficient, orderly growth.

**Annexation of the Plan Area**

As the plan area transitions from rural uses to more urban and suburban uses, annexation enables the City to provide a full range of services and amenities to the area, including police and fire protection, trash collection, street and infrastructure improvements, the establishment of park and recreation areas, and other services.

Typically, the City of Olathe grows through voluntary annexation as landowners request City services and infrastructure improvements.



**Rezoning**

The location and intensity of the land uses designated in the Lone Elm Vicinity Plan are regulated through zoning. As development occurs within the plan area, rezoning from County agricultural districts to appropriate City residential, commercial, and industrial districts enables a rational and coherent distribution of land uses according to the guidelines of the plan.



**Timing of Infrastructure Improvements**

Planning the timing of infrastructure improvements is crucial to ensuring that the extension of services throughout the plan area occurs in an orderly, efficient, and affordable manner, while continuing to meet the needs of new and existing development.

The timing for some infrastructure improvements within the plan area is already in place. Construction is planned to begin in 2007 for the I-35 / 159<sup>th</sup> Street Interchange, with completion expected in 2009. While no timetable for funding or construction has been established for the realignment of K-7, extensive planning and consultation between KDOT, the firm of HNTB, and the City of Olathe is ongoing.

Construction of sanitary sewer lines from Cedar Lake through Lone Elm Park was completed in August, 2006. A sewer main outside of the plan area, running from Cedar Lake to Lake Olathe, is expected to be constructed between 2013 and 2015. This main will create additional sanitary sewer capacity within the plan area.

**Financing of Infrastructure Improvements**

Infrastructure improvements for new development in the plan area are funded through multiple sources, including City excise taxes for new development, Capital Improvements Plan (CIP) allocations, and developer-created benefit districts.



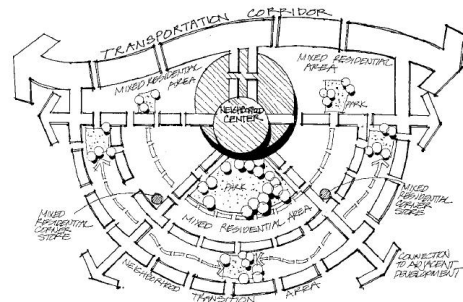
Benefit districts require the consent of property owners to share the costs of local infrastructure improvements for the purpose of funding and expediting

infrastructure construction. Benefit districts may be used for water, sewer, or road projects. As of the date this plan was approved, there are two existing benefit districts within the plan area. One is for the improvement of 159<sup>th</sup> Street between Lone Elm Road and U.S. Highway 169. The other is for the improvement of Lone Elm Road to the south of its intersection with 175<sup>th</sup> Street.

The Lone Elm Vicinity also includes a sewer buy-in district to assist with the funding of sanitary sewer construction from Cedar Lake through Lone Elm Park. The buy-in district requires developers to pay a share of infrastructure costs as properties are developed.

**Regulatory Tools**

Regulatory tools such as the Unified Development Ordinance (UDO), design guidelines, planned districts, density bonuses, and subdivision ordinances are useful in creating well-designed, high-quality development within the plan area.



**Ongoing Plan Review**

Plan review allows development projects to be evaluated on an individual basis to ensure that they meet city standards for

quality of material and design, and that new development is fundamentally consistent with the land use plan.



### **Transitional Lot Policy**

The City of Olathe's Residential Design Manual includes a transitional lot policy for the purpose of providing a transition between existing large-lot residential subdivisions and higher density development. Because the Lone Elm Vicinity Plan designates appropriate land

uses for a fully developed plan area, interim and transitional development patterns are not shown in the plan. Where existing residential development is anticipated to remain as part of a fully developed plan area, care has been taken to buffer these uses from potential negative impacts of higher intensity uses and increased traffic via landscape and open space buffers, as well as land uses of intermediate intensity. Because of these factors, the transitional lot policy will not be implemented in the Lone Elm Vicinity.

A similar approach was taken as part of the Coffee Creek Master Plan, to the east of the Lone Elm Vicinity. While the City agreed not to implement the transitional lot policy in Coffee Creek as part of the annexation agreement with property owners in the area, land uses and open space were designated to mitigate potential nuisances to existing residential development.

## Growth Analysis

Some areas of the Lone Elm Vicinity are likely to develop within the next several years, while others may remain undeveloped for decades. The timing of growth within the plan area is dependent on a number of factors that make prediction difficult. Growth in non-residential areas is affected by economic factors external to the City of Olathe and the Kansas City region. Industrial and employment uses are designated for much of the plan area, and growth in demand for these types of uses is historically more variable than for residential and commercial uses. Additionally, growth rates vary in different areas of the City. Development patterns in Coffee Creek, the K-7 Corridor, the Woodland Road Corridor, and west of K-7 all affect the timing of growth in the Lone Elm Vicinity.

While the specific timing of development within the plan area is difficult to predict, the presence of City services, sewer and water infrastructure, transportation improvements, adjacent development, and developer interest all contribute to growth pressure. An evaluation of these factors makes it possible to determine which portions of the plan area are likely to develop in the near term, and which portions of the plan area require long term improvements or demographic changes in order for development to occur.

For the purposes of this analysis, the Lone Elm Vicinity has been categorized into five growth areas:

*Existing Development and Ongoing Projects:* These areas are comprised of existing, non-rural development, along

with projects currently under review or construction.

*Current Growth Area:* These areas are contiguous to existing development within the city, and have access to the essential services and infrastructure necessary for development.

*Near Term Growth:* These areas have growth potential based on factors such as proximity to currently serviced areas and existing or planned transportation connections. However, a further build-out of the Lone Elm Vicinity and limited infrastructure improvements are necessary in order for these areas to develop.

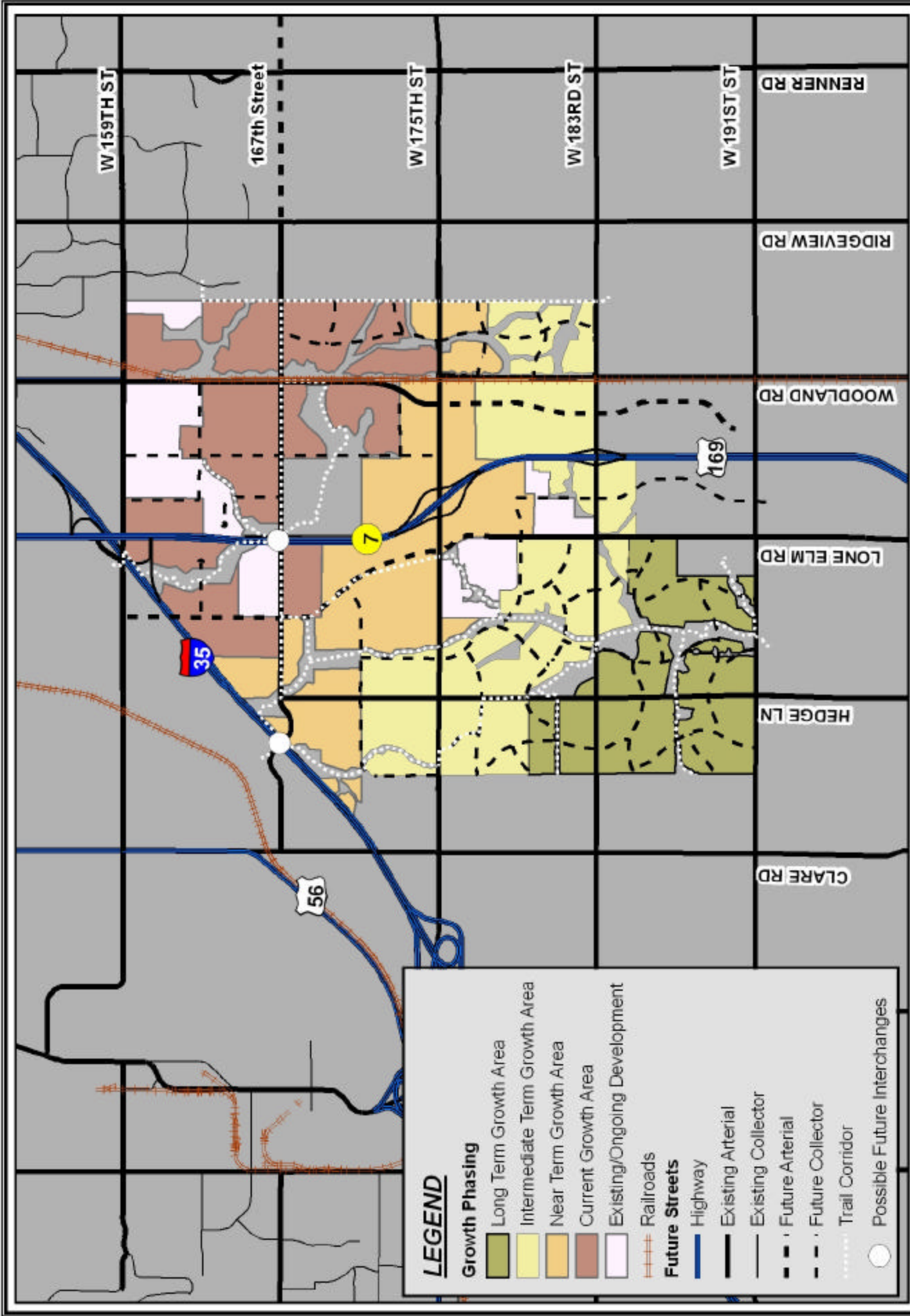
*Intermediate Term Growth:* These areas are somewhat distant from current growth and existing services, and would require expansion of services, transportation improvements, and demographic changes within the plan area in order to develop.

*Long Term Growth:* These areas are most remote from existing development, services, and major transportation connections, and would require considerable expansion of services and build-out elsewhere in the plan area in order to develop.



**DISCLAIMER**  
 The City of Olathe makes no representations of any kind, including but not limited to warranties of merchantability or fitness for any particular purpose or use, nor are any such warranties to be implied with respect to the info, data, or service furnished herein.

# LONE ELM - GROWTH AREAS



**LEGEND**

**Growth Phasing**

- Long Term Growth Area
- Intermediate Term Growth Area
- Near Term Growth Area
- Current Growth Area
- Existing/Ongoing Development

**Future Streets**

- Railroads
- Highway
- Existing Arterial
- Existing Collector
- Future Arterial
- Future Collector
- Trail Corridor
- Possible Future Interchanges



**Ultimate Build-out Analysis**

The ultimate number of residential units and the ultimate square footage for non-residential uses within the Lone Elm Vicinity can be estimated using information on acreage and existing development within the plan area, recent development projects throughout Olathe, and calculations of requirements for streets and right-of-way. Approximately 8,800 residential units, 24,000 residents, and 13,000,000 square feet of non-residential development are anticipated when the Lone Elm Vicinity is fully developed.

**Ultimate Build-out: Development Potential**

Land Use	Acres	% of Total Area	Developed Acres	Streets & R.O.W*	Developable Acres	Development Potential**
Employment	910	14.53%	276	177	457	2,310,711 Sq. Ft.
Business Park	1033	16.50%	2	288	743	6,753,344 Sq. Ft.
Commercial Center	337	5.38%	0	94	243	1,885,502 Sq. Ft.
Mixed-Use Commercial	374	5.97%	0	104	270	1,634,912 Sq. Ft.
Mixed-Use Residential***	329	5.25%	0	92	237	543,446 Sq. Ft.
Mixed-Use Residential						1,003 Units
Urban Residential	296	4.73%	14	79	203	2,440 Units
Village Residential	529	8.45%	0	148	381	2,288 Units
Neighborhood Residential	1391	22.21%	170	341	880	2,641 Units
Public and Community	80	1.28%	80	0	0	-
Parks and Open Space	983	15.70%	179	-	-	-
<b>Total</b>	<b>6262</b>	<b>100.00%</b>	<b>721</b>	<b>1322</b>	<b>3415</b>	

\*Estimated at 27.9% of developed area, based on calculations of existing streets and Rights-of-Way in developed areas  
 \*\*Non-residential square footage estimates based on calculations of floor area per acre for comparable recent development within the City; Residential unit estimates based on calculations of recommended densities per acre  
 \*\*\*Mixed-Use Residential areas include a combination of dwelling units and non-residential square footage; Limited data

**Ultimate Build-out: Population Estimate**

Existing Residential Units	412
Future Residential Units	8,373
<b>Total Residential Units</b>	<b>8,785</b>
Average Household Size*	2.83
Occupancy Rate*	0.97
<b>Estimated Population</b>	<b>24,115</b>

\*Based on 2000 Census

**Public Meeting Data**

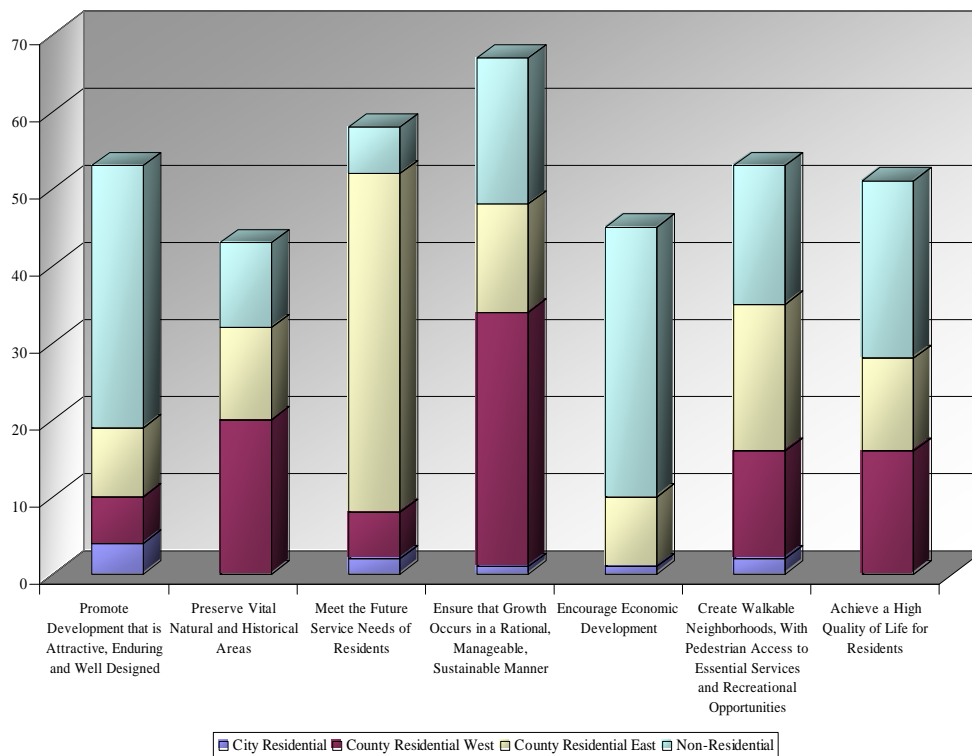
On May 22, 23, 24, and 31, 2006, City of Olathe planning staff invited property owners within the Lone Elm Vicinity Plan area to take part in public meetings for the purpose of sharing information and receiving feedback on land use proposals for the area. To encourage interaction between area property owners and planning staff, the size of meetings was reduced by splitting property owners into four groups. These groups consisted of small lot residential property owners within the City of Olathe, small lot residential property owners living in unincorporated Johnson County west of Lone Elm Road, small lot residential property owners living in unincorporated Johnson County east of Lone Elm Road, and non-residential property owners. The same content was presented at each of the meetings, and property owners could attend any of the meetings to accommodate their schedules.

As part of these meetings, there were several opportunities for public input, including a dot exercise evaluating the goals of the plan, a short questionnaire on key land use issues, and written comments highlighting individual concerns. All of this input helped to shape the recommendations of the plan.

**Dot Exercise**

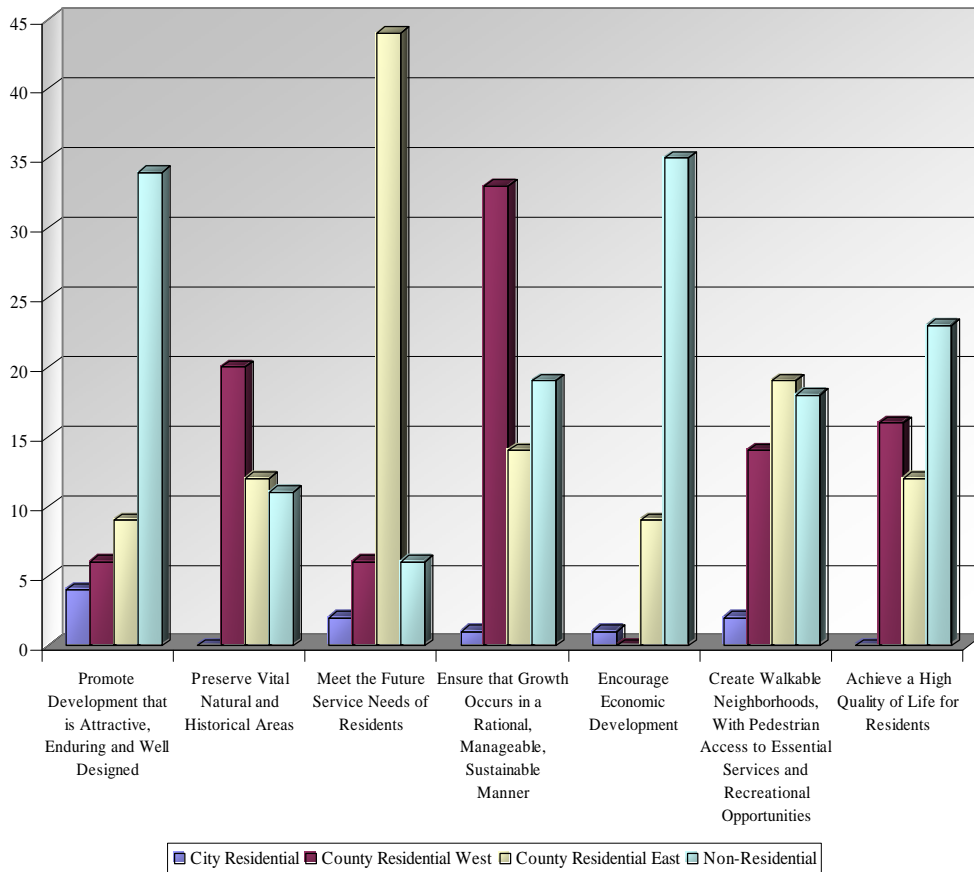
Public meeting participants had the opportunity to rank the proposed goals of the plan according to their opinion of the goals' importance. Each attendee received five dots to allot between seven goals in whatever way he or she saw fit. The following two graphs represent the raw counts for each of the goals. For these graphs, meetings with higher attendance represent a larger portion of total votes. Understandably, opinions on the importance of particular goals varied according to whether and where property owners lived in the plan area.

**Prioritizing Goals – Total Counts**



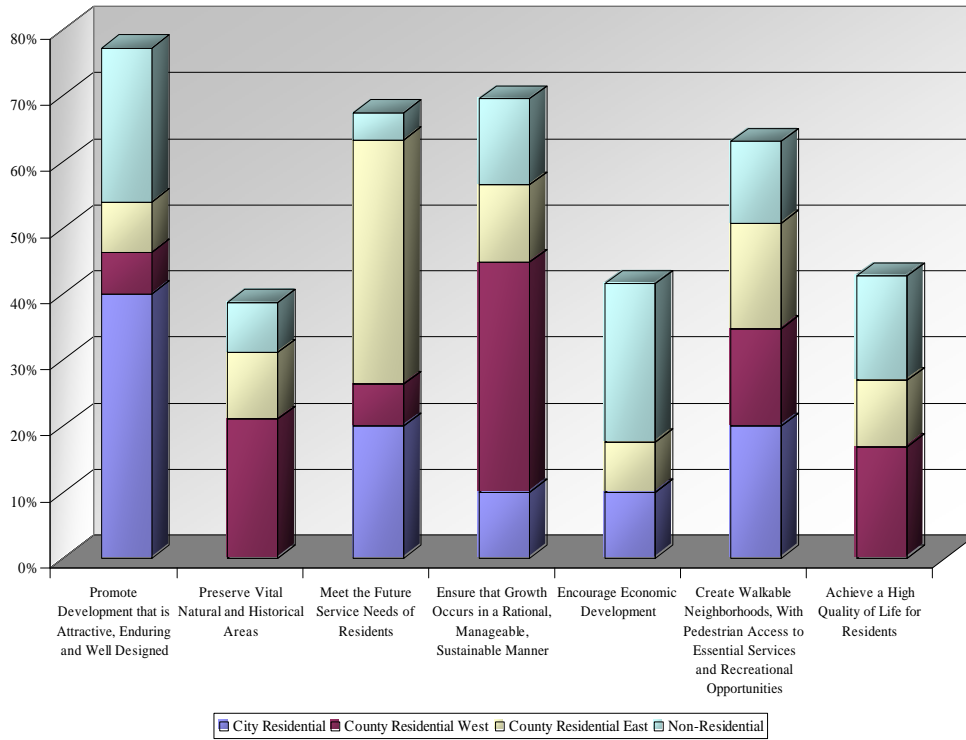


Prioritizing Goals – Individual Counts

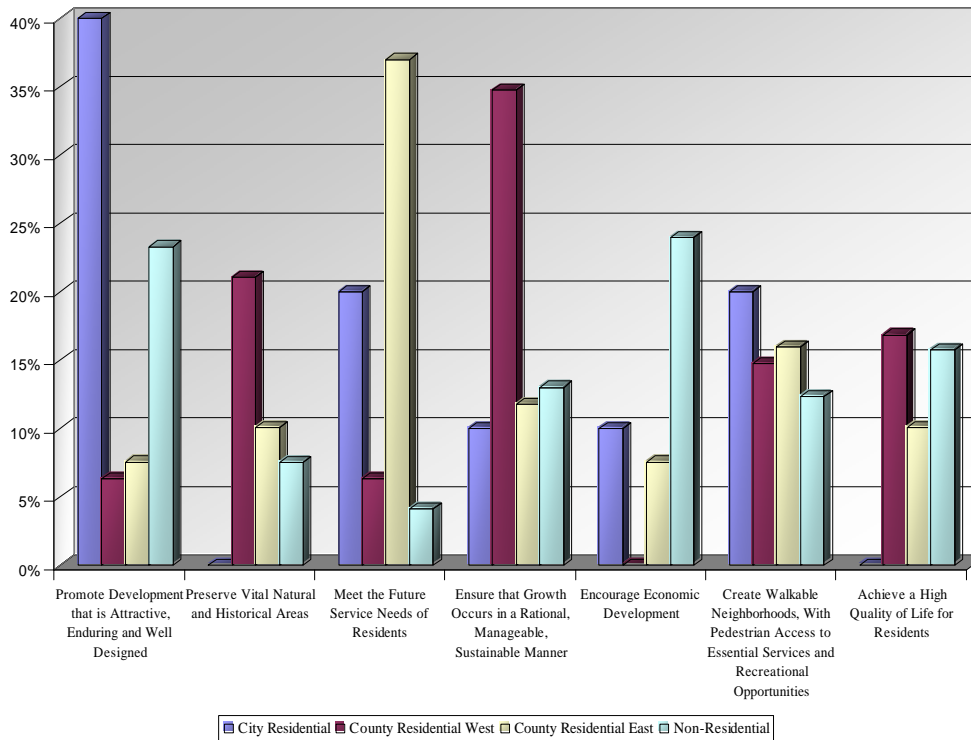


The following two graphs (on the next page) have been weighted to account for the varying attendance at the four public meetings. The vertical axis represents percentages for individual meetings, rather than a cumulative measure.

**Prioritizing Goals – Weighted Total Counts**



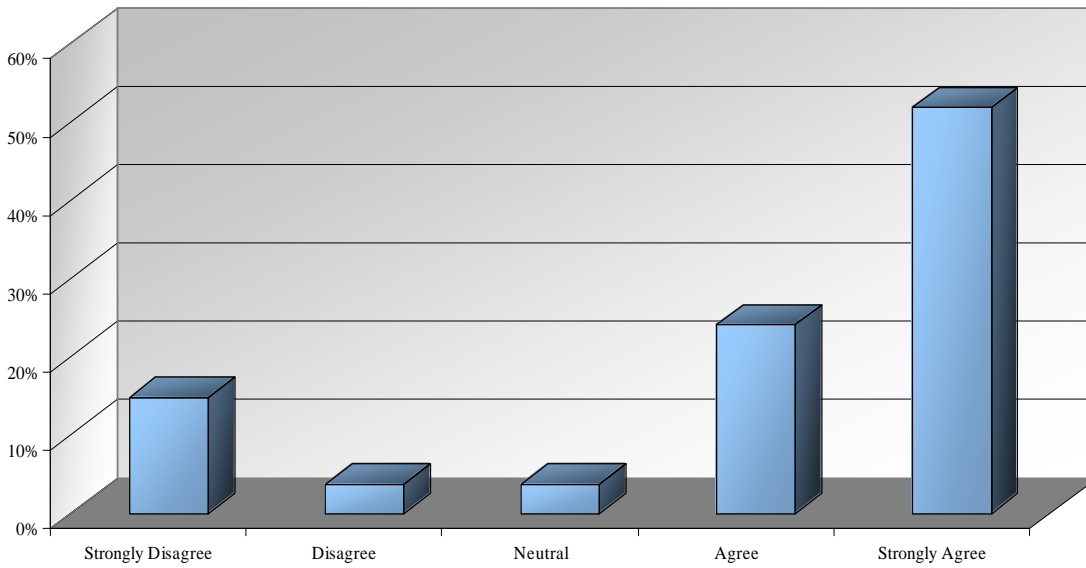
**Prioritizing Goals – Weighted Individual Counts**



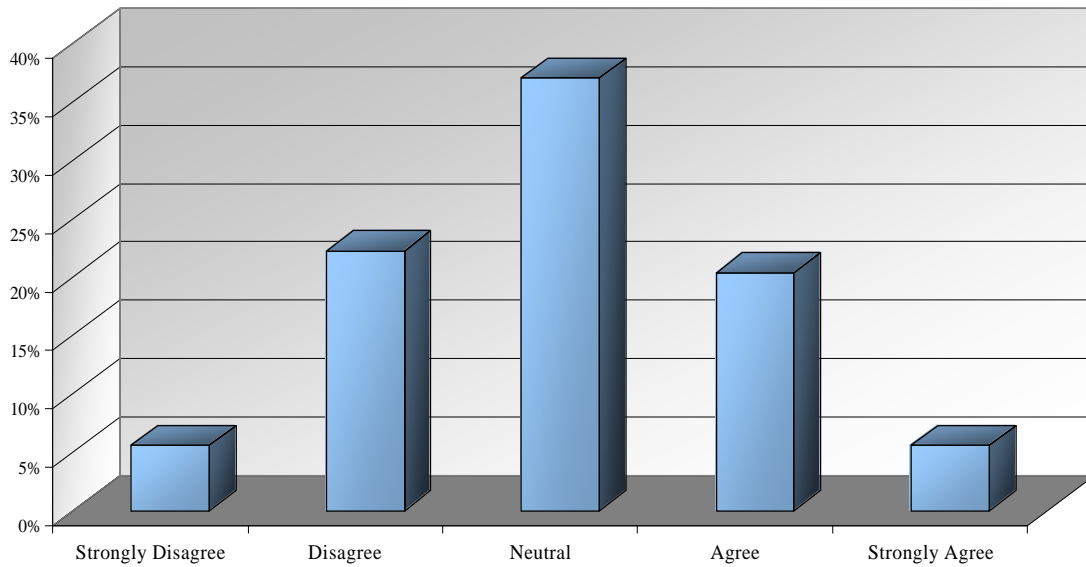
**Questionnaire**

Public meeting participants were asked to complete a short questionnaire as a means to offer input on some of the fundamental land use recommendations of the plan.

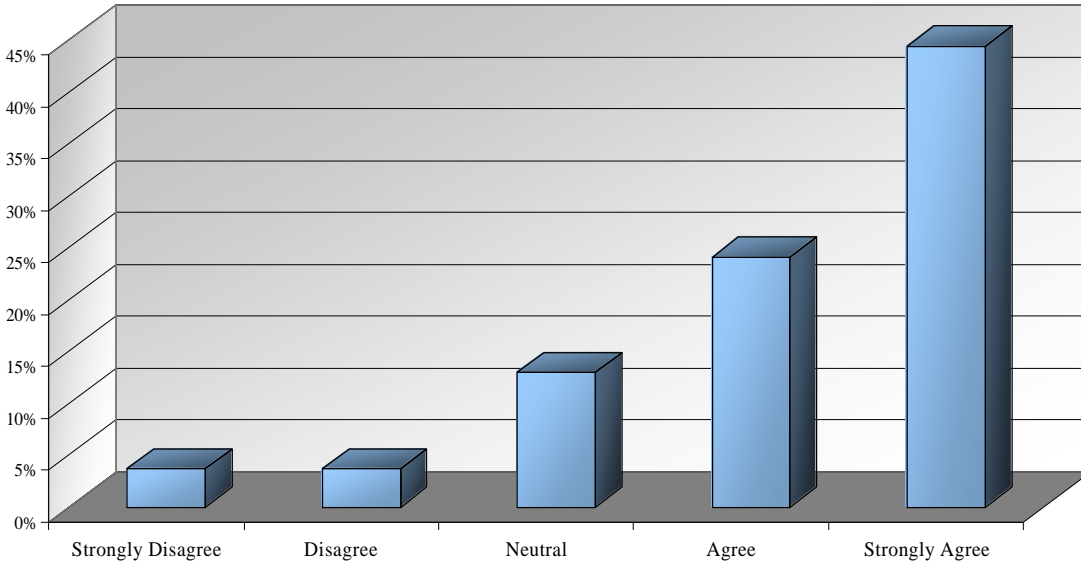
*Q1. Non-residential uses (office, retail, industrial) should be focused north of 175<sup>th</sup> St. while residential uses should be focused south of 175<sup>th</sup> St.*



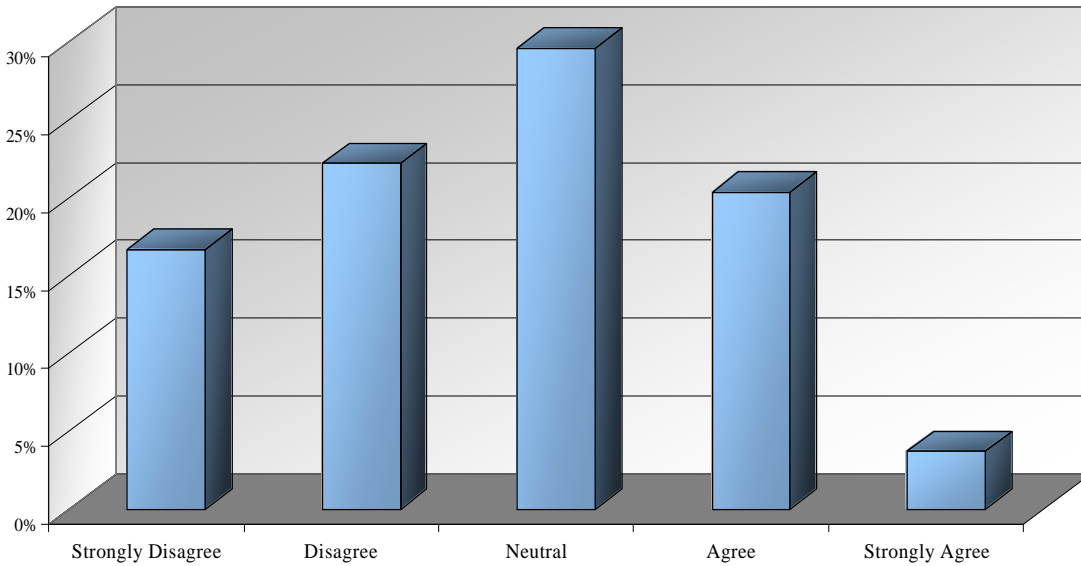
*Q2. Encouraging business park and other employment uses is an appropriate strategy to take advantage of transportation and other infrastructure improvements in the plan area.*



Q3. *Creating buffer and transition areas between residential and non-residential uses should be an important consideration of the plan.*



Q4. *The open space shown on the future land use map is sufficient to serve the plan area.*



Q5. The trail corridors shown on the future land use map are sufficient to serve the plan area.

