

K-10 & Farmer's Turnpike Plan

DRAFT

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Section 1: Introduction

1.1 Purpose

The purpose of the *K-10 & Farmer's Turnpike Plan* is to outline specific land use goals, policies and recommendations for the planning area shown on Map 1-1, while being consistent with the overall adopted comprehensive plan for the community. Portions of the planning area are adjacent to the city of Lawrence and because of its proximity to the city and interstate highways, it is likely to be an area of intense development pressure. The plan outlines future land uses for the planning area to be used as a guide for urban development within the city of Lawrence. The plan identifies appropriate land uses along a corridor and highway interchange that aid in meeting a recognized need for industrial/employment center opportunities that will support the general health and prosperity of the region.

The plan should fit like a puzzle piece into the larger context of the surrounding street, utility, and land use network of the entire community. Logical connections between the planning area and adjacent neighborhoods are a key factor in the development of the plan. The recommendations contained within this plan are intended to guide the area's growth patterns as the development of the K-10 Highway and Farmer's Turnpike area occurs within the city of Lawrence. It is anticipated that development in the planning area will occur within the span of decades as the market demands and as urban services are able to be provided. Because of the long timeframe of the plan, this should be reviewed on a regular basis.

1.2 Description of Planning Area

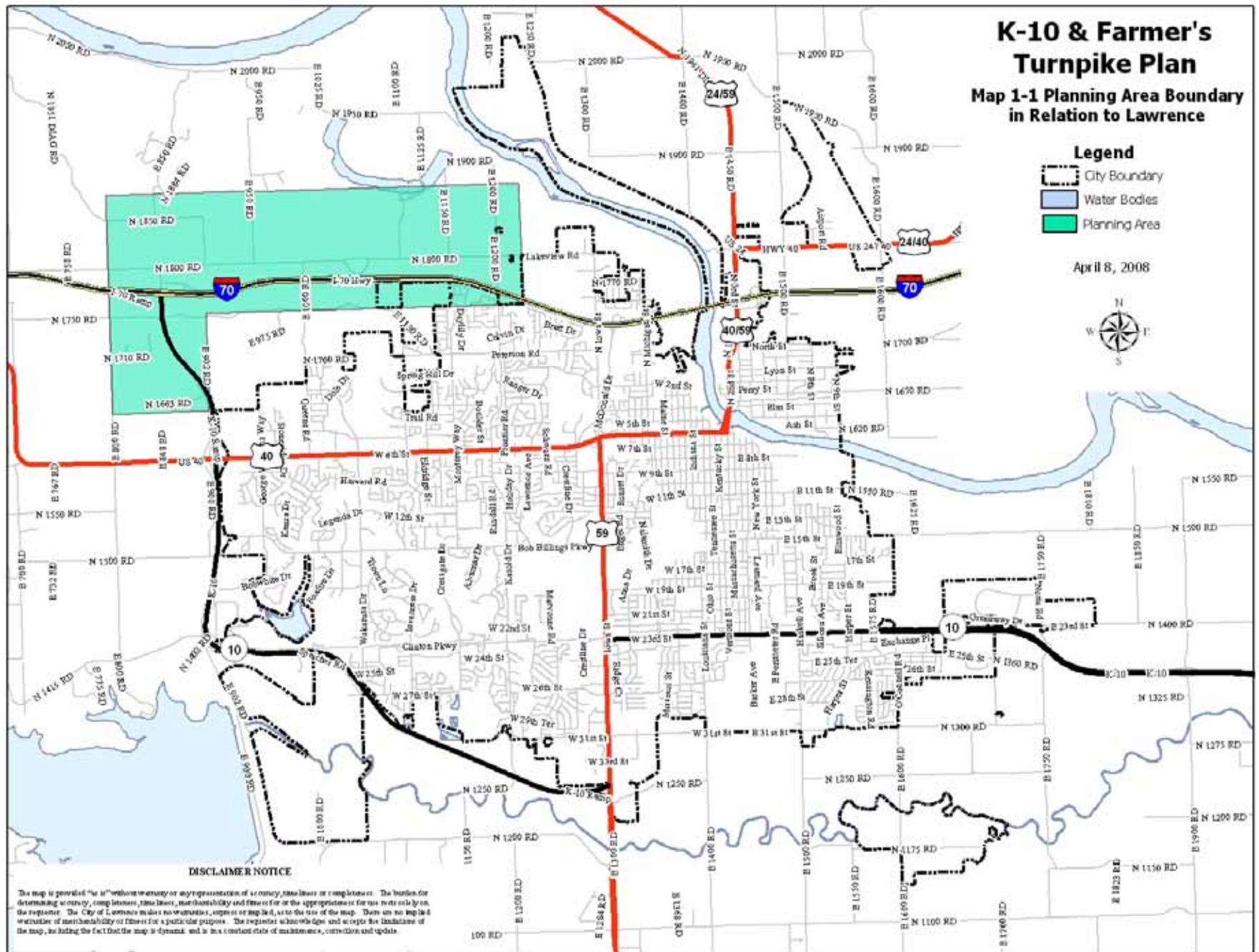
The *K-10 and Farmer's Turnpike Plan* planning area is located northwest of the city of Lawrence (see Map 1-1) and southeast of the city of Lecompton, in northern Douglas County, Kansas. The planning area contains approximately 4,075 acres and encompasses portions of Sections 17 and 18 of the Lecompton Township, portions of Sections 14, 15, 16, 21, 22, and 23 of the Wakarusa Township, and portions of Sections 19, 20, and 30 of the Kanwaka Township.

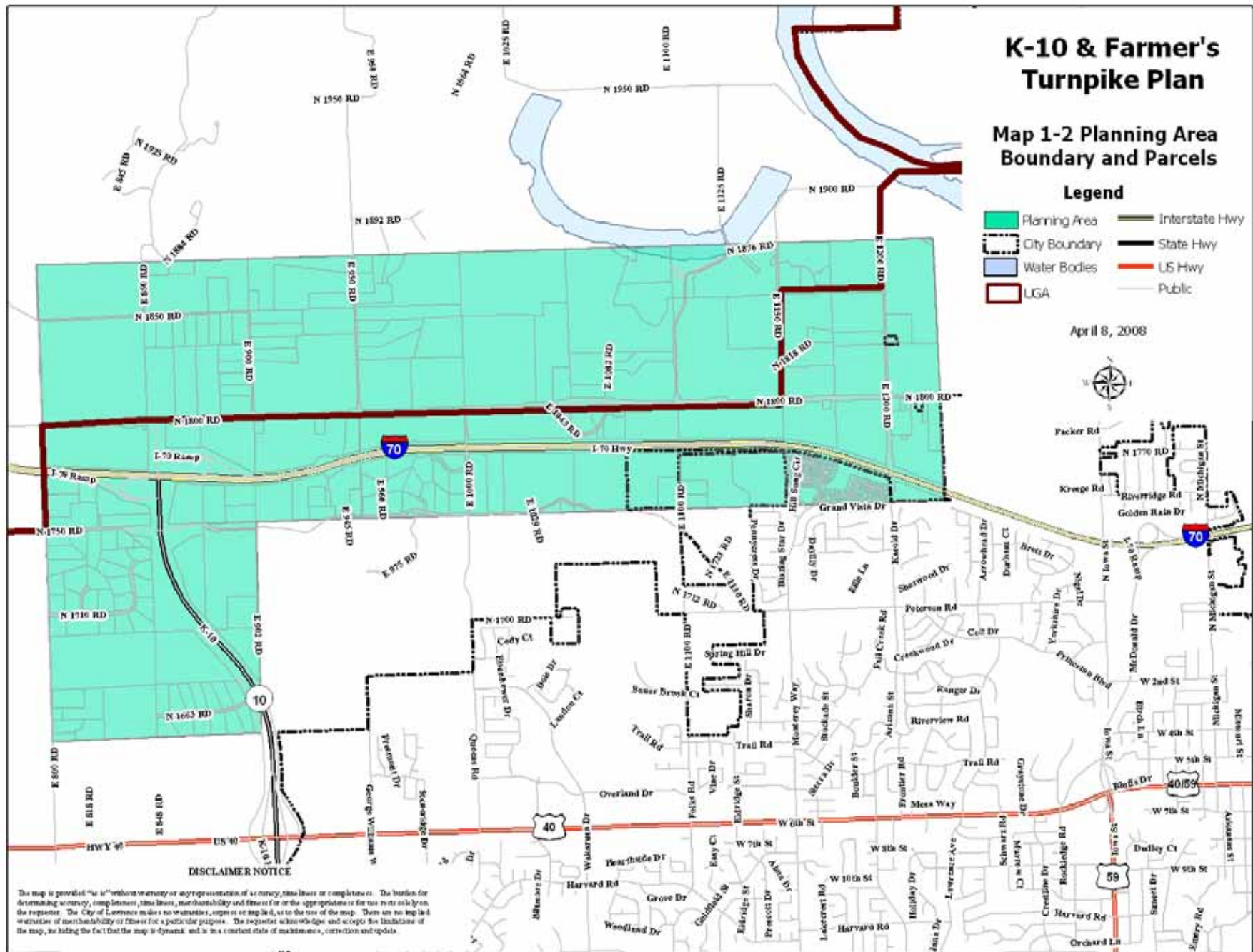
The planning area boundaries are: E 800 Road on the west, approximately $\frac{3}{4}$ of a mile north of the Farmer's Turnpike (N 1800 Road/County Hwy 438) on the north, approximately $\frac{1}{4}$ of a mile east of E 1200 Road from the north boundary to Grand Vista Drive extended on the east and E 902 Road from approximately N 1750 Road to approximately $\frac{1}{2}$ of a mile north of W. 6th Street (Hwy 40), and approximately N 1750 Road from E 902 Road to approximately $\frac{1}{4}$ of a mile east of E 1200 Road and approximately $\frac{1}{2}$ of a mile north of W. 6th Street (Hwy 40) from E 800 Road to E 900 Road on the south. See Map 1-1. Approximately half of the planning area is located outside the Lawrence Urban Growth Area (UGA), as currently identified in *Horizon 2020*. Those portions of the planning area that are located within the UGA, are located in service area 4 which is the outer most service area in *Horizon 2020*.



The dominant character of the planning area is rural in nature although a variety of uses surround the planning area. I-70 and a toll plaza are major elements in the area. North of the planning area is predominantly rural in nature with some rural residential uses and agriculture crop uses. East of the planning area is primarily industrial along with the Westar power plant. Urban density residential uses are south of the planning area, but mainly to the east. Rural uses are also south of the planning area, but the area is urbanizing from the south towards the planning area. West of the planning area is rural in nature. While the areas described are outside of the planning area boundaries, they can influence the land use development patterns within the K-10 Highway and Farmer's Turnpike area.

The planning area contains a wide range of ownership parcel sizes with the largest being approximately 186 acres to approximately 1,378 square feet. The planning area boundaries and parcel composition are illustrated in Map 1-2.





1.3 Background

The Kansas Turnpike travels through the planning area as it travels through Lawrence and Douglas County. The Kansas Turnpike is 50 years old and extends 236 miles from Kansas City, Kansas to the Oklahoma border south of Wichita. 32,755,932 vehicles traveled the Turnpike in 2006.¹ The Lecompton, Lawrence: K-10 interchange (Exit 197) opened in November of 1996 and is the western Kansas Turnpike interchange in Douglas County that serves the planning area. It connects the Kansas Turnpike to K-10 Highway which was also completed in November of 1996. K-10 Highway, also known as the South Lawrence Trafficway (SLT), takes traffic from the Kansas Turnpike and from US Hwy 40, south to US Hwy 59, south of Lawrence.

The city of Lecompton is a destination located approximately 3 miles northwest of the planning area. Lecompton has a long history beginning in 1854 when it was founded and originally called "Bald Eagle". Lecompton became the capital of the Kansas Territory in 1855. Its early history as the territorial capital revolved around gaining Kansas' entrance into the Union as a pro-slave state. That effort failed as the free-state supporters ultimately prevailed and lead to the political birth of the Civil War. The free-state leaders moved the capital to Topeka when Kansas became a state in 1861. Much of that early history is on display in Lecompton². Farmer's Turnpike (N 1800 Road) and the Lecompton interchange play an important role in directing tourists to Lecompton. The Farmer's Turnpike was the original highway between Lecompton and Lawrence before I-70 (Kansas Turnpike) was completed in 1956.

The Kansas Territory was opened to settlement in May of 1854. Soon after the territory was opened, abolitionists from New England rushed to the area in an effort to keep the territory from becoming pro-slavery. Lawrence is said to be one of the few cities founded purely for political reasons. The founding group named the town after the financier of the expedition, Amos Lawrence. Lawrence also acted as an important stop on the Underground Railroad, helping escaped slaves reach freedom safely. On August 21, 1863, William Quantrill assembled a group of men in Missouri and rode into Lawrence. The raiders entered the city "to burn every house and kill every man." Additionally, Lawrence is located between the two trails, the Oregon and the Santa Fe Trails. After the Civil War ended in 1865, railroads rapidly pushed across the Great Plains and wagon trails became obsolete³.

Most recently the city of Lawrence has been growing and developing to the south and west of the central city. Development proposals to the north and west of the city of Lawrence, within the UGA have become more frequent in recent years. The completion of Free State High School in 1997 also spurred development on the west side of Lawrence. *Horizon 2020* includes policies that encourage development to city standards within the UGA.

¹ Kansas Turnpike Authority, <http://ksturnpike.com/history.shtml>

² Lecompton Kansas Historical Society, <http://lecomptonkansas.com/>

³ Lawrence Convention and Visitor's Bureau, <http://www.visitlawrence.com/>

1.4 Industrial and Employment Related Development

Historically, industry has developed in clusters throughout the city. Some examples of existing industrial areas are the Santa Fe Industrial area, the Burroughs Creek Corridor, the Union Pacific Railroad Corridor and the East Hills Business Park. The East Hills Business Park specifically was developed in the 1980's by a partnership between the city of Lawrence, Douglas County and the Chamber of Commerce as a way to fulfill the need for industrial space. Presently, East Hills is almost fully built out, with only a few small lots available for development, along with one large tract, consisting of approximately 87 acres on the east side of the Park.

ECO² is an advisory board to the Lawrence City Commission and Board of County Commissioners of Douglas County created in order to develop a long-term plan for the identification, evaluation, and selection of land for both industrial/business parks and open space preservation. They presented their report in 2007 which outlines a long-term plan of public/private partnership that satisfies their goals of the advancement of industrial/business park and open space preservation. The ECO² report, in conjunction with *Horizon 2020* provides a methodology to weigh specific criteria to identify and recommend a number of new business and industrial development locations in the city of Lawrence and unincorporated Douglas County. Some of the criteria used to identify and recommend locations for industrial development include being generally located in close proximity to major transportation networks, contains land that has minimal average slope, be in an area that lies outside of the regulatory floodplain, and have the potential for large tract development.

There is a recognized need to foster job creation and industrial space in the community, with a particular deficiency of large tract industrial space (approximately 100 acres and greater). The I-70 and K-10 interchange area lends itself as an ideal location for industrial and employment center development because of the access to both a federal interstate and a state highway. Additionally, there is an opportunity to develop large parcels on land that contains minimal slopes.

1.5 Policy Framework

Horizon 2020 serves as the overall planning guide and policy document for this plan. In addition to *Horizon 2020*, guiding policy is also obtained in other adopted physical element plans. Together, these plans provide the general “umbrella” policies under which this plan is developed. Listed, these plans are:

- *Horizon 2020*, the Comprehensive Plan for Lawrence and Unincorporated Douglas County. Lawrence-Douglas County Metropolitan Planning Office. 1998 as amended.
- *Transportation 2030*, Lawrence/Douglas County Long Range Transportation Plan. Lawrence/ Douglas County Metropolitan Planning Office and Parsons Brinkerhoff. March 26, 2008.
- *Lawrence-Douglas County Bicycle Plan*, Lawrence/Douglas County Metropolitan Planning Office. May 2004.
- *Northwest Plan*, Lawrence/Douglas County Metropolitan Planning Office. January, 1997.
- *Lawrence Parks & Recreation Department A Comprehensive Master Plan*. Leon Younger & PROS. 2000.
- *City of Lawrence, Kansas Water Master Plan*. Black & Veatch. December 2003.
- *City of Lawrence, Kansas Wastewater Master Plan*. Black & Veatch. December 2003.
- *2008-2013 Capital Improvement Plan*. City of Lawrence. June 26, 2007.

Section 2 - Existing Conditions

The inventory and analysis of existing conditions in this plan are intended to serve as a resource and background for the recommendations included in Section 3 of this plan.

2.1 Land Uses

2.1.1 Existing Land Uses

There are currently a variety of land uses within the planning area. The planning area has approximately 3,609 acres of land dedicated to uses other than public rights-of-way. The source information for the existing land use summary and map are based on the County Appraisers' land use code and updated by planning staff. Agricultural uses, in the form of row crops, pasturelands, and farms are the prominent land uses and encompass approximately 2,569 acres of land. As the area urbanizes, these agricultural uses will be reused for more urban uses and this category is not carried forward to the future land use map. Remaining open spaces in an urbanized environment are referred to as park or open space.

The second largest land use category is single-family residential use with approximately 593 acres. The single-family residential use category is property with one dwelling unit located on it. The *Land Development Code* defines a dwelling unit as, "one room, or a suite of two or more rooms, designed for or used by one family or housekeeping unit for living and sleeping purposes and having only one kitchen or kitchenette". The single-family residential use is seen within the planning area in both the rural and urban form. There are three rural subdivisions and two urban subdivisions platted within the planning area. The urban subdivisions are a mix of single-family and duplex residential uses.

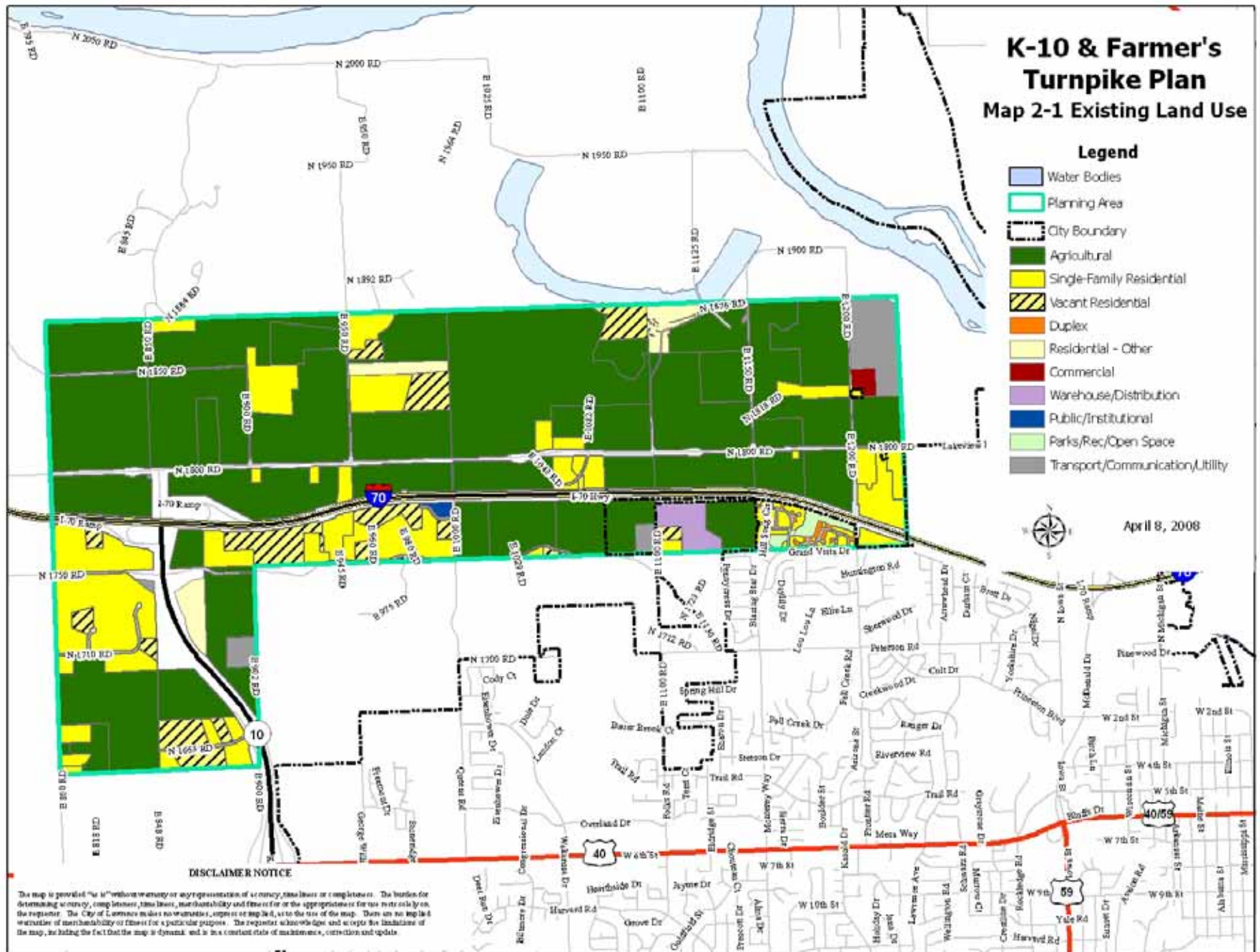
The remaining land is designated a variety of uses ranging from open space to public/institutional uses. The category identified as residential-other is mainly used to identify a situation near Lakeview Lake where the property is owned by a homeowners association but the individual homes are privately owned. The existing land uses are shown on Map 2-1 and the planning area breakdown is described in Table 2-1.

Table 2-1: Existing Land Use Summary

Land use	Acres
Agricultural	2,568.60
Single Family Residential	593.57
Vacant Residential	203.83
Duplex	6.00
Residential - Other	69.58
Commercial	9.980
Warehouse/Distribution	33.998
Public/Institutional	4.972
Parks/Rec/Open Space	22.69
Transport/Communication/Utility	95.72
TOTAL	3,608.94

2.1.1 Historic Resources

Currently, there are no sites or structures listed on the National, State or Local Register of Historic Places within the planning area. However some resources have been identified as having the potential to qualify for listing. At the time that these sites or structures are listed, those resources should be protected and preserved in accordance with local, state and national preservation law.



2.2 Zoning Patterns

The planning area encompasses approximately 4,075 acres of land including public rights-of-ways and most of which is located within the unincorporated area of Douglas County. The majority of the planning area that is located within unincorporated Douglas County is zoned A (Agriculture District). This is mainly used for row crops, pasture land and farm purposes. There are four areas zoned A-1 (Suburban Homes District) which are mainly large lot residential subdivisions. The remainder of the planning area within unincorporated Douglas County is zoned R-1 (Single-Family Residential), I-3 (Heavy Industrial) and VC (Valley Channel) Districts. See Map 2-2.

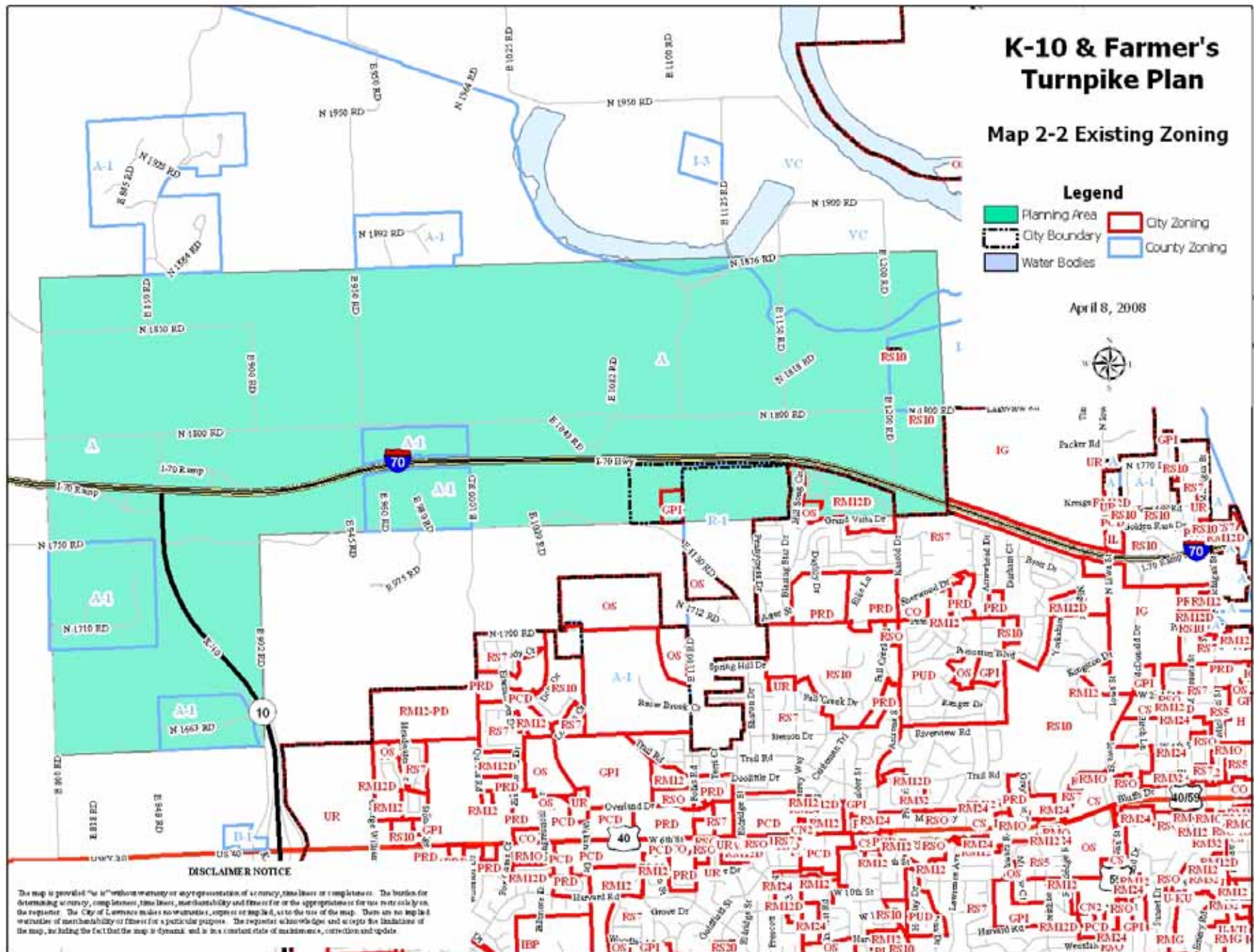
The planning area also includes small areas that are within the city of Lawrence. These areas are mainly residential in character and include single-family and multi-family zoning districts. The remainder of the area within the planning area and within the city of Lawrence is zoned GPI (General Public and Institutional) and OS (Open Space). These areas include park space and a sanitary sewer pump station.

Table 2-2 County Zoning Classifications

County Zoning	District Name	Comprehensive Plan Designation
A	Agricultural	Agriculture
A-1	Suburban Homes	Very Low-Density Residential
R-1	Single-Family Residential	Low-Density Residential
I-3	Heavy Industrial	Industrial
VC	Valley Channel	N/A

Table 2-3 City Zoning Classifications

City Zoning	District Name	Comprehensive Plan Designation
RS10	Single-Dwelling Residential (10,000 sq. feet per dwelling unit)	Low-Density Residential
RS7	Single-Dwelling Residential (7,000 sq. feet per dwelling unit)	Low-Density Residential
RM12D	Multi-Dwelling Residential Duplex (12 dwelling units per acre)	Medium-Density Residential
GPI	General Public and Institutional	N/A
OS	Open Space	N/A

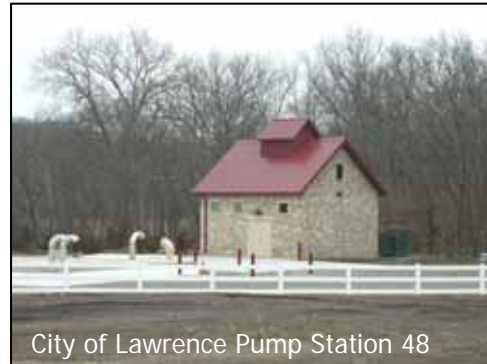


2.3 Infrastructure

2.3.1 Water and Wastewater Infrastructure

A summary of the existing water utilities is shown on Map 2-3 and wastewater utilities (sanitary sewer) is shown on Map 2-4. Municipal water and wastewater is provided to those properties that are within the current city limits. Properties that are within the planning area, but outside the city limits, are served by Douglas County Rural Water District #1, #6 or private wells, and private septic systems.

The city of Lawrence sanitary sewer infrastructure does not extend outside the current city limits. Pump Station 48 (PS 48) was recently completed to provide for growth in the northwest area of Lawrence and is located just south of E 1100 Road and I-70. The Department of Utilities is currently underway with a project to extend a gravity interceptor line west from PS 48 to the area within the city limits, north of W. 6th Street, between Queens Road and K-10 Highway. Based on the adopted sanitary sewer master plan, this interceptor line is being designed to allow for



future service to the I-70 corridor within the current urban growth area (UGA) as identified in *Horizon 2020*. The currently adopted 2003 Water and Wastewater Master Plans do not address areas outside of the UGA. As such, the majority of the area north of N 1800 Road within the planning area has not yet been evaluated for water and sanitary sewer service as a part of utilities master plan. An update to the sanitary sewer master plan is in the preliminary stages at this time. The plan update will address the areas within the planning area that have not previously been evaluated.

The majority of the planning area, which is located outside of the Lawrence city limits, is currently served by Douglas County Rural Water District's #1 and #6. The city of Lawrence water distribution mains currently extend to the intersection of E 1200 Road (Kasold Drive) and N 1800 Road (Lakeview Road); Wakarusa Drive and E 1000 Road (Queens Road) and US Hwy 40 (W. 6th Street) and K-10 Highway.

2.3.2 Stormwater Infrastructure

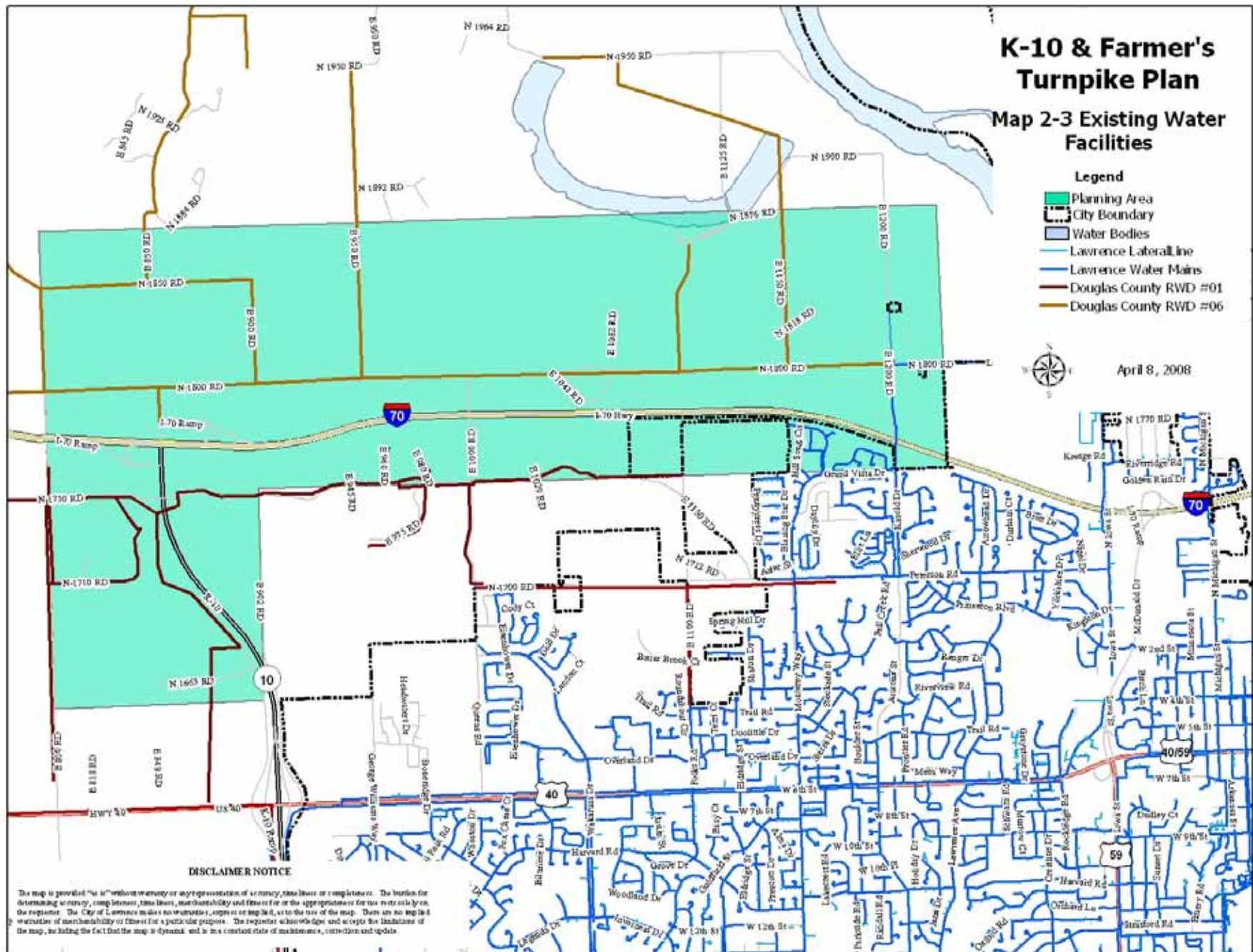
A summary of the existing stormwater utilities, channels, and natural streams are shown on Map 2-4. There is a small amount of stormwater collected by an enclosed stormwater pipe system within portions of the planning area that are within the city limits. The majority of the stormwater is handled by open channels and streams. The stormwater drains to the north, by way of the tributaries, to Lake View Lake and the Kansas River.

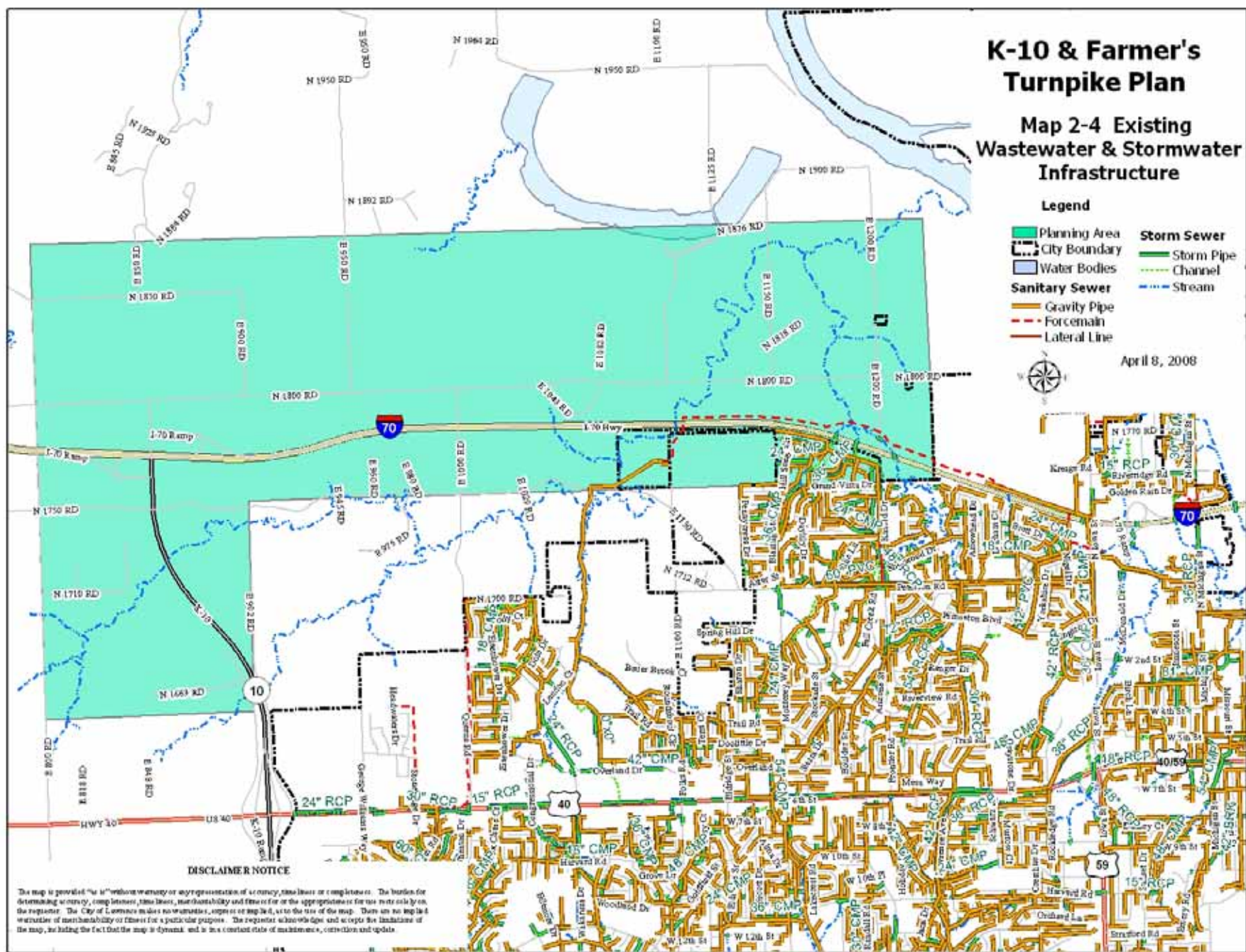
2.3.3 Gas Infrastructure

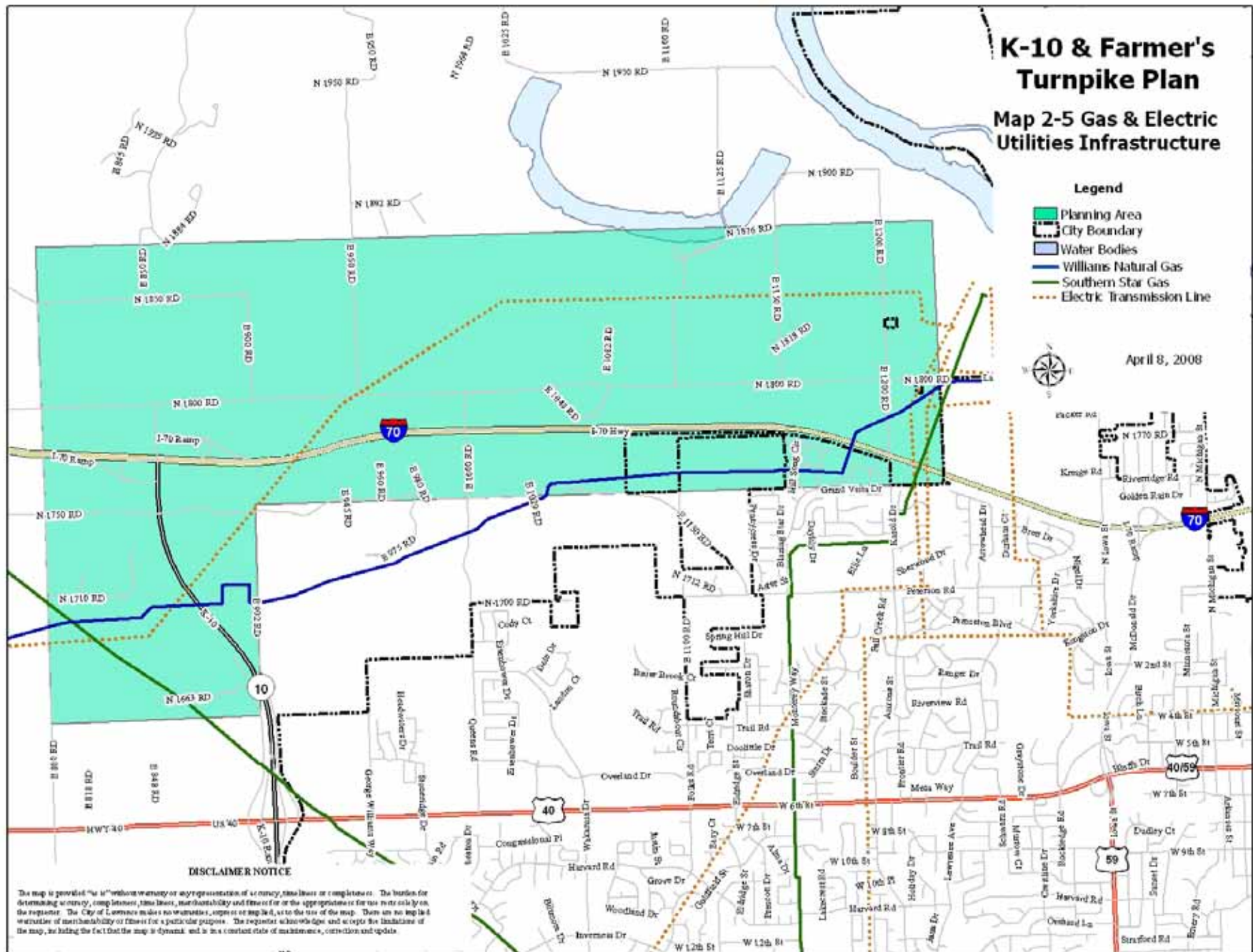
The planning area includes two natural gas lines. One is owned by Southern Star Gas and it crosses the southwestern portion of the planning area. The second is owned by Williams Natural Gas and it crosses the planning area on the southwest portion and crosses again on the eastern portion of the planning area. See Map 2-5.

2.3.4 Electric Infrastructure

There are currently two electric companies that service the planning area. Generally, Kaw Valley Electric services the western side of the planning area and Westar services the eastern side. Large electric transmission lines also travel through the planning area. See Map 2-5.



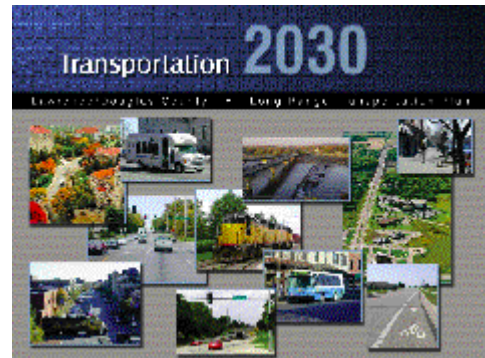




2.3.3 Transportation

2.3.3.1 Streets

Transportation 2030 (T2030) is the comprehensive, long-range transportation plan for the metropolitan area. T2030 designates streets according to their functional classification or their primary purpose. These functional classifications are shown on Map 2-6. The classification system can be described as a hierarchy from the lowest order, (local streets) that serve to provide direct access to adjacent property, to (collector streets) that carry traffic from local streets, to major thoroughfares (arterial streets) that carry traffic across the entire city. Freeways and expressways are the highest order of streets and are designed with limited access to provide the highest degree of mobility to serve large traffic volumes with long trip lengths.



T2030 does not identify collector streets for the entire planning area. T2030 is updated at least every 5 years. This area should be fully studied during the next update to address the future street network.

T2030 identifies gateways into the city and truck routes. Farmer's Turnpike (N 1800 Road/County Hwy 438) and Queen's Road are classified as minor gateways into Lawrence. K-10 Highway and I-70 are truck routes into and out of Lawrence.

2.3.3.2 Transit



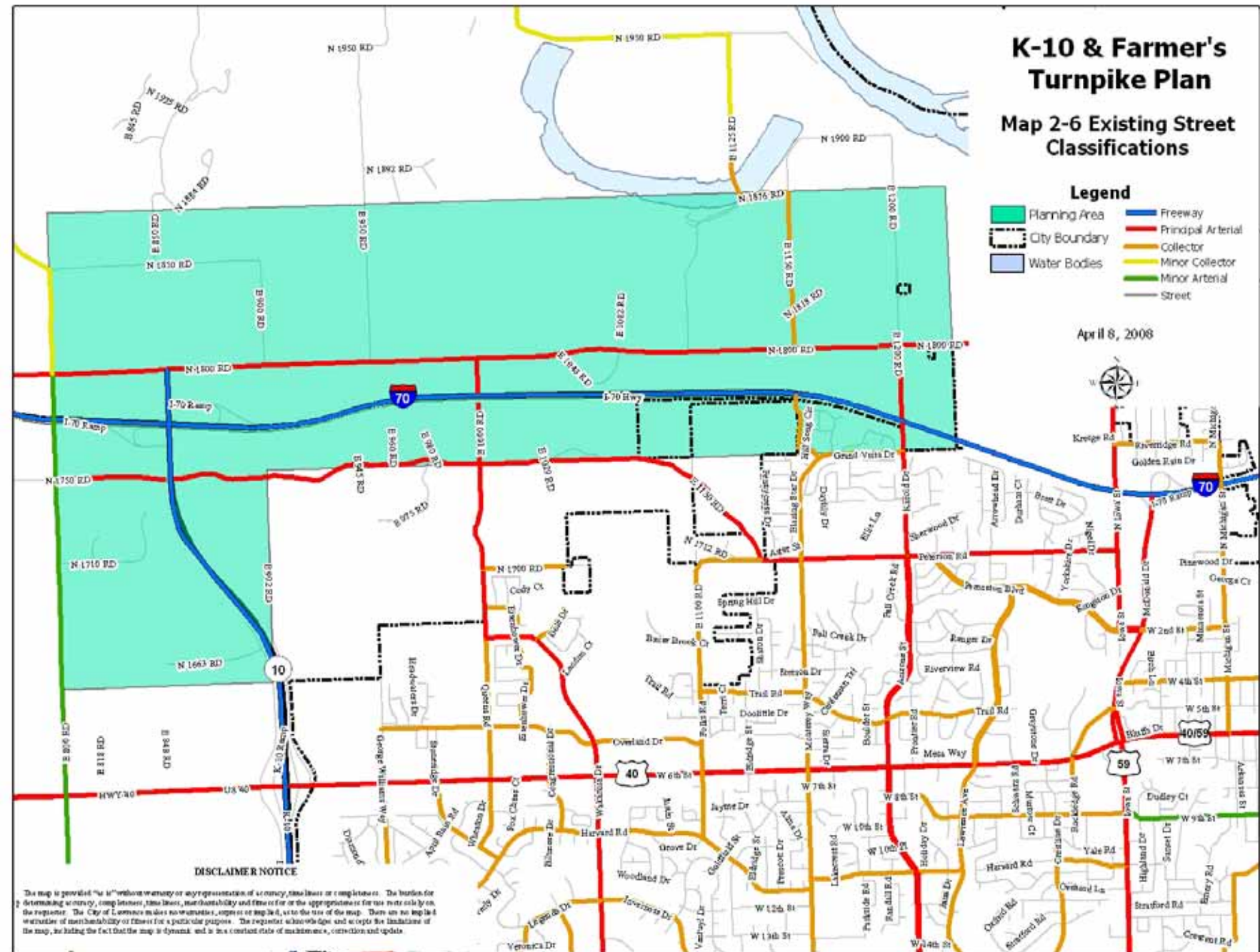
Lawrence has a public transportation system (The T) which operates throughout the city. This system allows people to travel to other areas of the city without relying on a personal automobile. There are currently no transit routes that travel into the planning area.

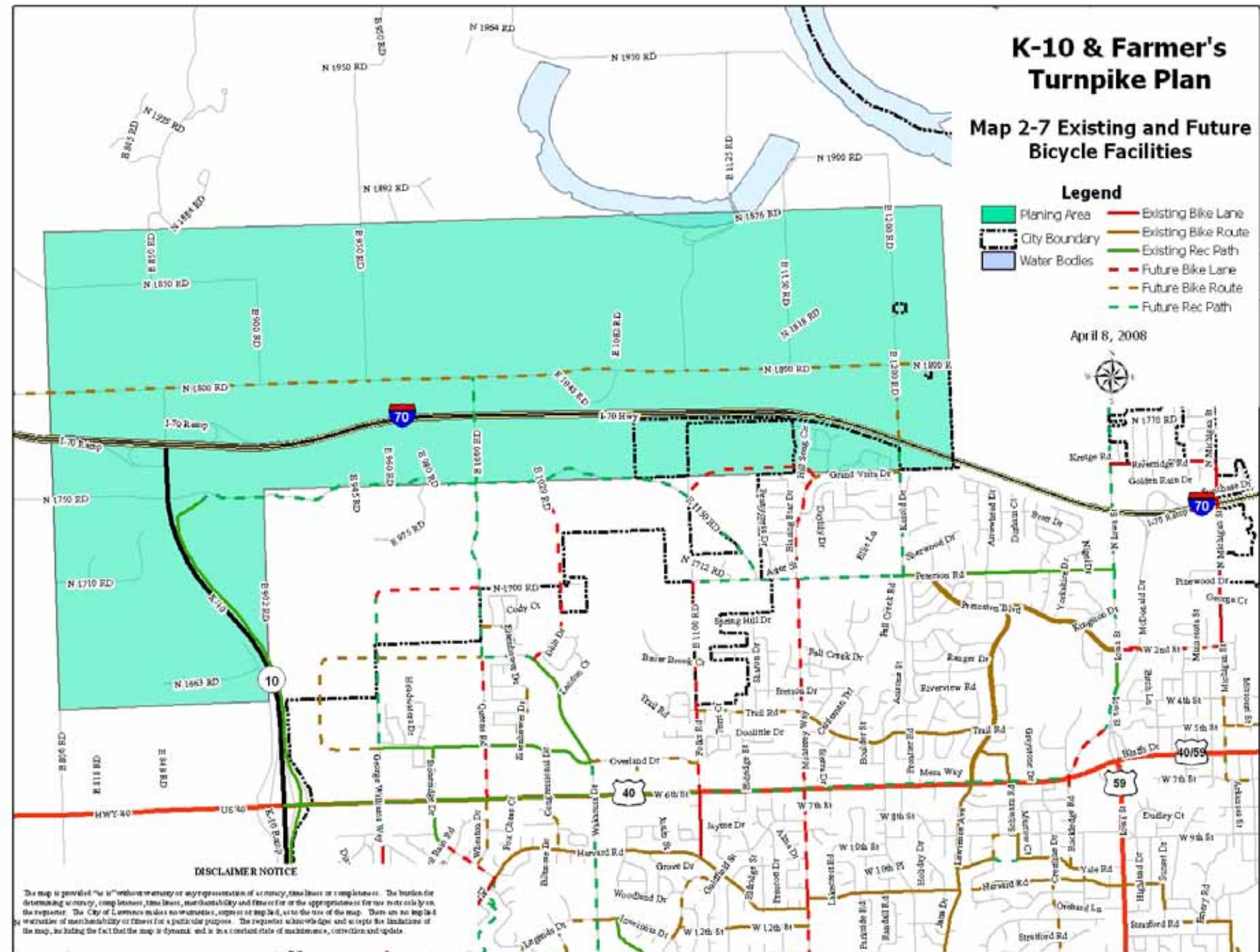
2.3.3.3 Bicycle Facilities

Lawrence and Douglas County have a joint bicycle plan for the community, the *Lawrence-Douglas County Bicycle Plan*. This plan identifies existing and future bicycle routes, lanes, and multi-use paths. A bicycle route is a network of streets to enable direct, convenient and safe access for bicyclists. A bicycle lane is a separate space designated with striping, signage or pavement markings for exclusive use by bicycles within a street. A multi-use path is a separate path adjacent to and independent of the street and is intended solely for non-motorized travel.



Currently, there is only one existing bicycle facility within the planning area. There is an existing multi-use path along the east side of K-10 Highway to E 1130 Road. There is a future bike lane identified to connect E 1100 Road (Folks Road) to Monterey Way by way of Hunters Hill Drive. Existing bike routes are identified along N 1800 Road (Farmer's Turnpike/County Hwy 438 and Lakeview Road) through the planning area and from N 1800 Road (Farmer's Turnpike and Lakeview Road) along E 1200 Road (Kasold Drive) to I-70. Future multi-use paths are identified along E 1130 Road, E 1000 Road (Queens Road) and Kasold Drive from I-70 to the south, out of the planning area. These facilities are shown on Map 2-7.





2.4 Environmental Conditions

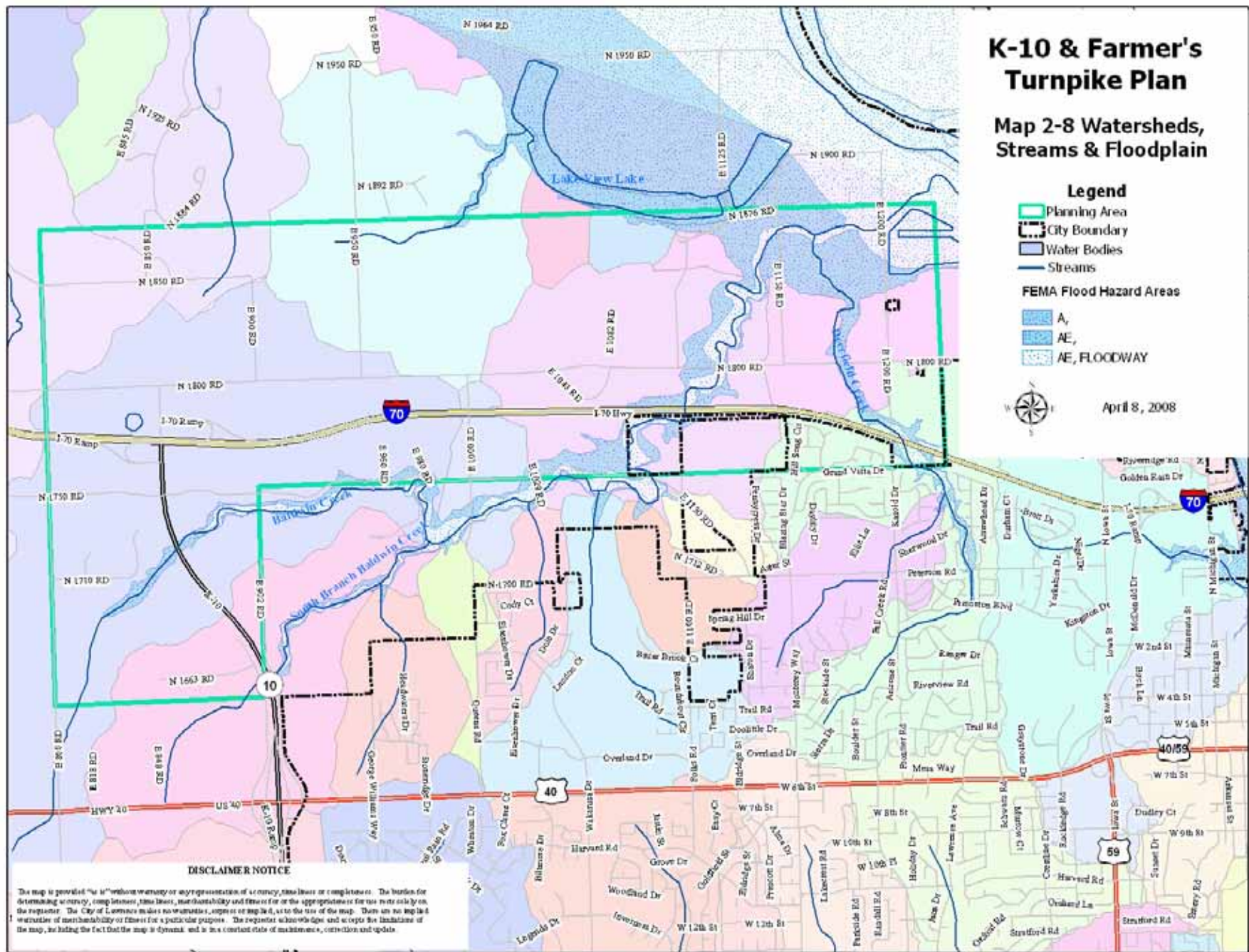
The planning area is made up of several drainage basins. The drainage basins drain directly to the Kansas River, or into one of two tributaries, Baldwin Creek which drains into the Kansas River, or Lake View Lake. There is Federal Emergency Management Agency (FEMA) designated floodplain and floodway located within the planning area. These are areas around Baldwin Creek, Deerfield Creek, Lake View Lake and the Kansas River. See Map 2-8. The floodplain is any land area susceptible to being inundated by flood waters from any source. The floodway is the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. Developing in the floodplain is allowed both in the city and in the county based on the corresponding regulations. No development is allowed in the floodway except for flood control structures, road improvements, easements and rights-of-way, or structures for bridging the floodway.

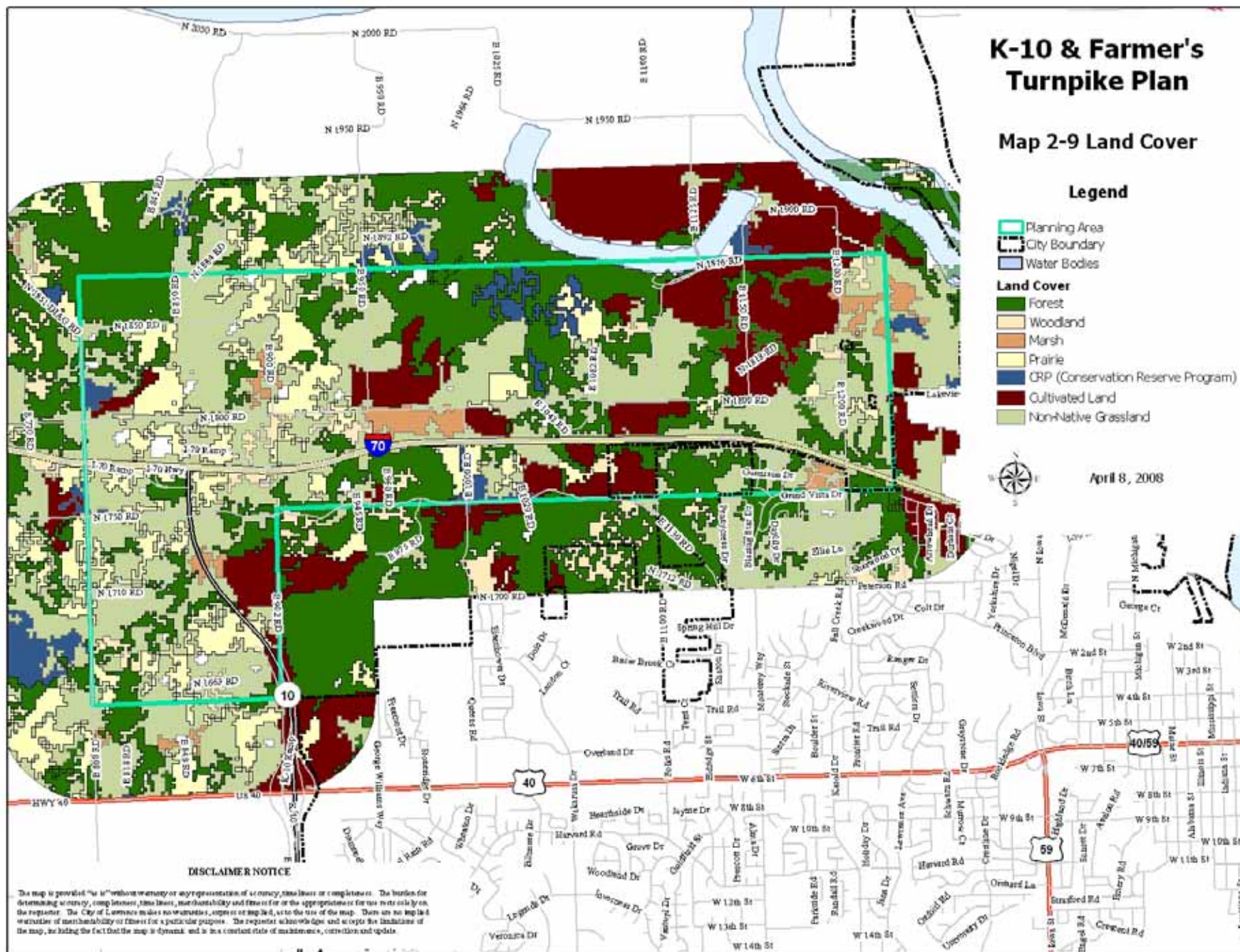
The majority of the undeveloped land within the planning area is either forest land or non-native grass land which is mainly used for cattle grazing. The planning area also contains areas of prairie, cultivated land and areas of land that are a part of the Conservation Reserve Program. See Map 2-9 for a summary and locations.



There is a wide range of topography within the planning area. The high points are along the western side of the planning area north of I-70 and in the southwestern portion around K-10 Highway. The low points are along the eastern side of the planning area where Baldwin Creek cuts through the planning area. The northeast corner of the planning area, which is also encumbered by floodplain, is relatively flat. The area in the middle contains the most abrupt grade change which continues with rolling hills to the west. A lack of steep slopes is

considered to be a beneficial factor for urban and industrial/employment center development. See Map 2-10 and Map 2-11. Detailed topographic surveys will be required as individual properties are developed.





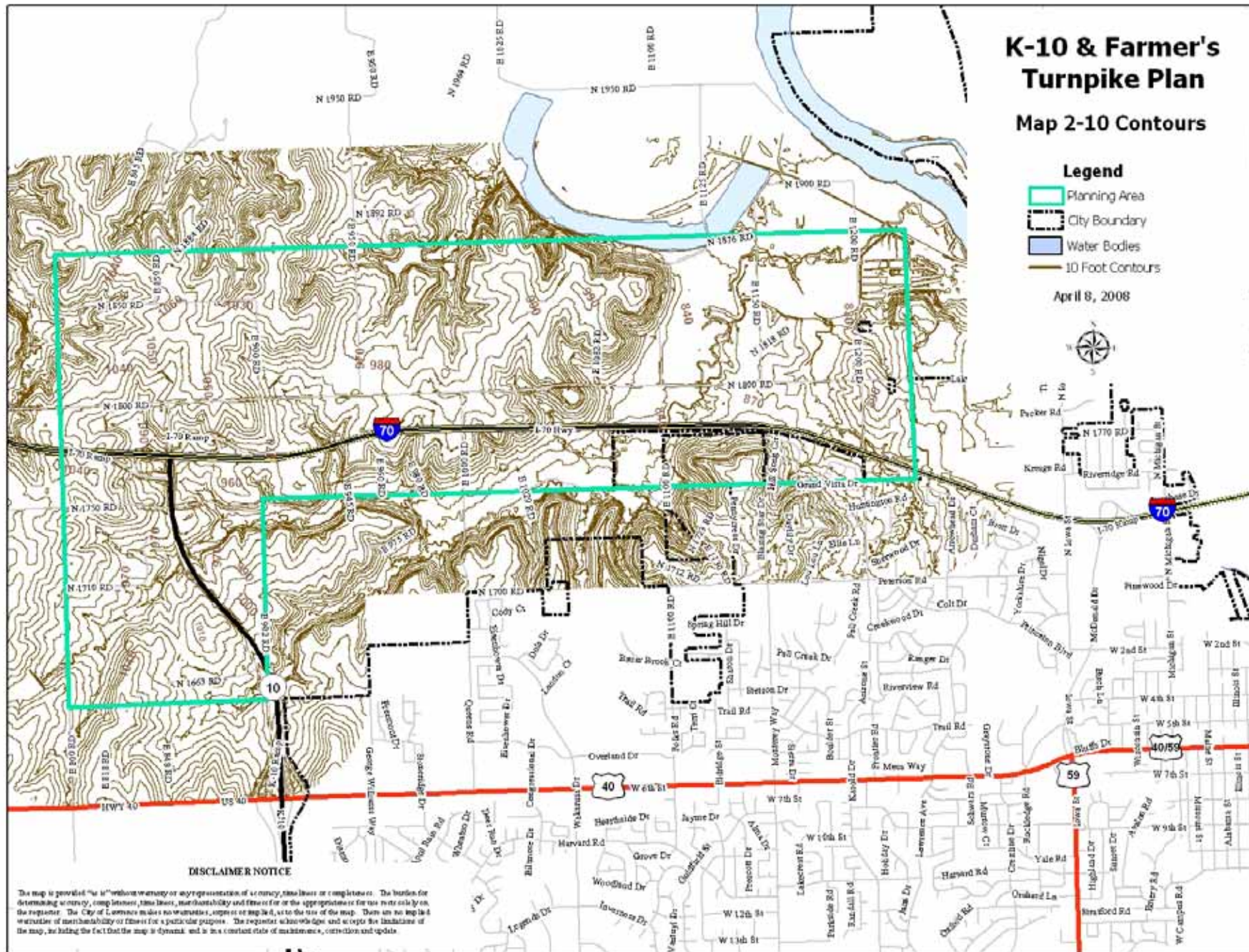
K-10 & Farmer's Turnpike Plan

Map 2-10 Contours

Legend

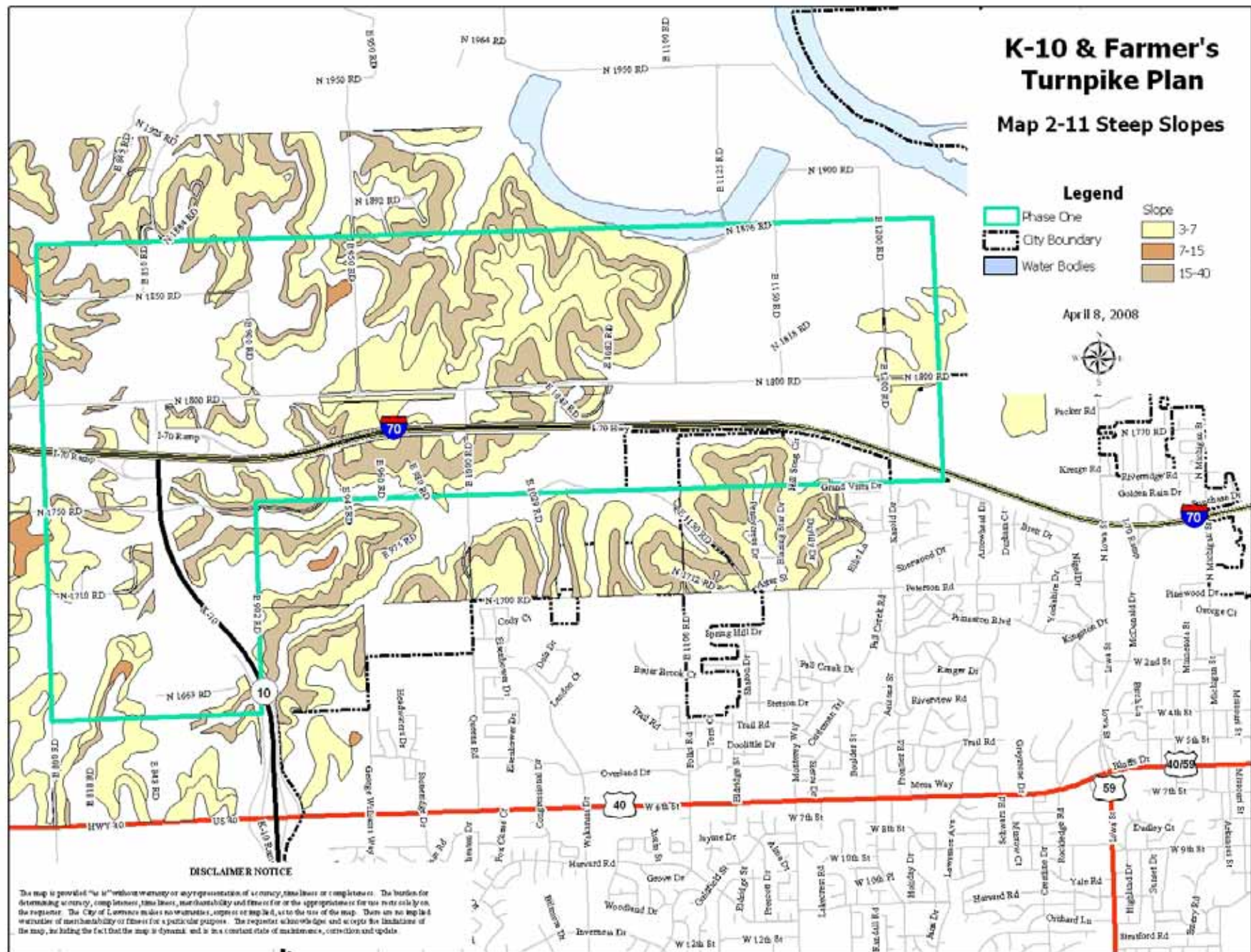
- Planning Area
- City Boundary
- Water Bodies
- 10 Foot Contours

April 8, 2008



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The map is generated "as is" without warranty or any representation of accuracy, timeliness or completeness. The burden for determining accuracy, completeness, timeliness, maintainability and fitness for or the appropriateness for use rests solely on the user. The City of Lawrence makes no warranties, express or implied, as to the use of the map. There are no implied warranties of maintainability or fitness for a particular purpose. The register acknowledges and accepts the limitations of the map, including the fact that the map is dynamic and is in a constant state of maintenance, correction and update.



2.5 Community Facilities

Community facilities are services provided either by government or non-government agencies for the benefit of, and use of, the community. Most of the community facilities including urban public services, schools, fire/medical, law enforcement, developed parks, etc., are located to the east and south of the planning area within the city of Lawrence. See Map 2-12.



Free State High School

The planning area is located within the Lawrence Public School District (USD 497) and the Perry-Lecompton School District (USD 343). The Lawrence School District covers the southwest portion and the northeast portion of the planning area. The students currently within the Lawrence School District attend either Langston

Hughes Elementary or Deerfield Elementary for elementary school; West Junior High or Central Junior High for junior high; and Free State High for high school. The students currently within the Perry-Lecompton school district attend Lecompton Elementary School, Perry-Lecompton Middle School and Perry-Lecompton High School.

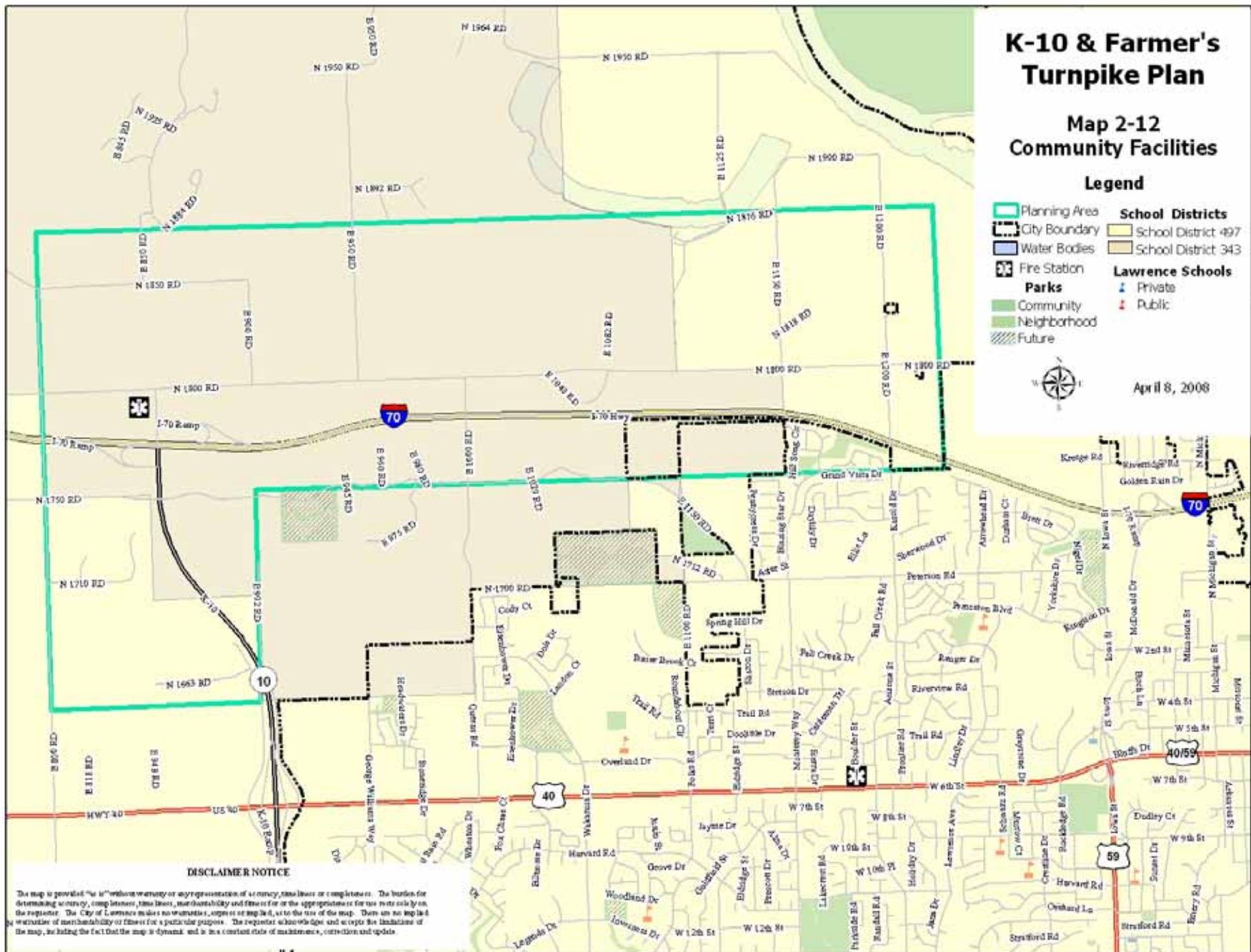
Currently, there are three public or institutional land uses within the planning area. These uses include Stonegate Park, Lecompton Township fire department and Morning Star Christian Church. It is anticipated that additional park areas will be developed within the planning area, as the area urbanizes. There is currently land adjacent to the planning area to the south, along N 1750 Road which is owned by the city. This land is undeveloped and identified as a future park. This park would serve the planning area once developed.

The planning area will be served partially by Lawrence-Douglas County Fire & Medical Station Number 3, an existing facility located on W. 6th Street between Kasold and Monterey Way and partially by township fire departments. The Lecompton Township Fire Department has a station on N 1800 Road, northwest of the I-70/K-10 Highway interchange. A future Fire & Medical station location west of the intersection of K-10 Highway and W. 6th Street is identified for 2009-2010 in the city of Lawrence *2008-2013 Capital Improvement Plan*. A more in depth study will need to be conducted to ultimately locate the facility and to address emergency response time issues as the city grows and develops to the west.



Fire Station 3

Law enforcement would be shared between the City of Lawrence Police Department and the Douglas County Sheriff's Department, depending on whether the property is within the city or in the county. Both are located in the Law Enforcement Center in downtown Lawrence.



Section 3 – Recommendations

The K-10 & Farmer's Turnpike planning area is anticipated to develop with a wide range of uses and intensities that extend from very low-density residential to industrial uses. The more intensive industrial and commercial use areas are recommended where they are in close proximity to K-10 Highway, I-70 and Farmer's Turnpike, and arterial and collector streets. Residential uses are generally located in the southern and northern portions of the planning area.

3.1 Goals and Policies

Goals are broad statements of ideal future conditions that are desired by the community. Policies are guiding principles that provide direction for decisions to be made regarding the planning area in order to meet the goals. These policies are in addition to the policies in *Horizon 2020* and are only applicable to the property within the *K-10 & Farmer's Turnpike Plan* planning area.

3.1.1 Goals

- Goal 1:** Create high quality development that will further the city's efforts to promote additional employment opportunities for economic development and tax base expansion and diversification.
- Goal 2:** Maintain the rural character in existing areas until the time that municipal services allow urban densities.
- Goal 3:** Create high quality, mixed-use areas that encourage pedestrian friendly, work-live neighborhoods where appropriate.
- Goal 4:** Develop to urban densities over time while taking care to respect and protect the natural systems currently in place.
- Goal 5:** Provide ongoing infrastructure and public facilities improvements as the area develops.
- Goal 6:** Create viable and unique urban residential neighborhoods; develop sound commercial nodes, develop strong park/trail systems that are sustainable and remain viable over the long-term.

3.1.2 Policies

3.1.2.1 General

1. Encourage maximum efficiency, low wattage, downward directional exterior lighting. The point source shall be screened from view off-site. Encourage limiting exterior lighting at night.
2. High quality, aesthetically pleasing building materials such as brick, stone and other high quality architectural elements should be used.
3. Pedestrian friendly connectivity between land uses and properties shall be incorporated.
4. Sensitive lands, as designated by the *Land Development Code* should be preserved and protected per those standards identified in the code.

3.1.2.2 Residential Land Uses

1. Residential uses shall maintain a “back-to-back” relationship to more intense uses. Buffering shall include use of green space as a primary transition tool.
2. Residential streets shall be extended to undeveloped property and shall use a grid or modified grid pattern.
3. The medium-density residential use is not intended to provide for large-scale apartment type development but instead take the form of small lot, detached, attached, cluster type housing, or small scale multi-dwelling structures, such as two-story, 4-6-plexes containing residential architectural elements.
4. Transitioning should be accomplished by buffer yards, landscaping, setbacks and progression of use intensities.
5. Cluster development is encouraged where environmentally sensitive areas are present.

3.1.2.3 Residential/Office Land Use

1. Development shall include a residential use.
2. The residential/office use is not intended to provide for large-scale apartment type development.
3. Traditional Neighborhood Development (TND)/mixed use is encouraged.

3.1.2.4 Commercial Land Use

1. The Community Commercial Center (CC200) shall be designed in accordance with policies and standards of *Horizon 2020*.
2. The Neighborhood Commercial Centers shall be designed in accordance with policies and standards of *Horizon 2020*.
3. Commercial development shall be designed to facilitate pedestrian and non-motorized access from abutting areas.
4. The auto-related commercial center is intended to serve the immediate employment center area and passenger vehicles from I-70. It is not intended to serve a significant amount of large truck traffic from the interstate as there are larger service facilities that exist along I-70.
5. Transitioning should be accomplished by buffer yards, landscaping, setbacks and progression of use intensities.

3.1.2.5 Industrial/Office/Research Land Uses

1. Structures should be aesthetically pleasing from all sides and should incorporate high quality building materials such as brick, stone and other high quality architectural elements.
2. Transitions between uses should be accomplished by buffer yards, landscaping, setbacks, scale and massing, and transition of uses to include low-intensity industrial uses along the perimeter of the areas identified as industrial or office/research.
3. Sites should incorporate a variety of landscaping treatments to alleviate the potential for monotonous perimeter buffering.
4. Structures along N 1800 Road (Farmer's Turnpike) should present a front face to N 1800 Road (Farmer's Turnpike) to add to the high quality aesthetics encouraged in the gateway.
5. Access to major roads from the industrial or office/research development lots shall be limited. However, industrial users on large lots that are significant generators of traffic may directly access arterial roads if the size of the site is such that it allows internal circulation without the necessity of constructing local roads to direct that circulation to the arterial road. Such access shall be based on sound traffic engineering principles and shall be properly controlled with appropriate signalization and turn lanes. Smaller lots shall take access from local roads. Additional local roads that serve the site should be arranged to minimize development lot access to the future major roads.

3.1.2.6 Public Facility/Open Space/ Floodplain Land Uses

1. Smaller parks should be located throughout the planning area as outlined in Chapter 9 of *Horizon 2020*.
2. Open space areas should be provided and/or acquired along major thoroughfares and along drainage ways for development of pedestrian and bicycle trails.
3. Regional detention should be utilized when possible within each corresponding watershed.
4. Streams should follow their natural paths and should not be rerouted or straightened.
5. Environmentally sensitive lands should be protected and maintained as natural areas per the *Land Development Code* standards.
6. Restrict uses within the regulatory floodplain that are dangerous to health, safety or property in times of flooding or that cause undue increases in flood heights or velocities.

3.1.2.7 Gateways

1. Development shall enhance the gateway at the intersection of I-70/K-10 Highway/N 1800 Road (Farmer's Turnpike) by creating an aesthetically pleasing corridor.
2. Gateway treatments shall be a priority in development and redevelopment of the area around the intersection of I-70/K-10 Highway/N 1800 Road (Farmer's Turnpike) and shall reflect the goals and policies stated in *Horizon 2020*.
3. Aesthetically pleasing landscaped entryways should be required. Both public and private property owners are responsible for achieving and maintaining this aesthetically pleasing landscaping.

3.1.2.8 Transportation Facilities and Corridors

1. Sufficient area, outside of the required street rights-of-way, should be required to provide and shall be restricted in use to provide for: utility, berming, and landscaping needs.
2. No additional access to K-10, except as identified in *Transportation 2030*, shall be permitted.
3. Street networks should be interconnected through and beyond the planning area where ever possible.
4. Truck routes shall not be designated through areas identified for residential land uses.
5. Adequate rights-of-way shall be obtained at the time of platting to ensure for adequate space for roads, utility and landscaping easement needs.
6. Topography should be taken into account when comparing different alignments for future roads.
7. Master planning areas identified as industrial and office/research is encouraged to provide an adequate street network that limits the number of access points to N 1800 Road (Farmer's Turnpike).

3.1.2.9 Transition Area

1. The transition area shown on Map 3-1 should incorporate extraordinary buffers between industrial and residential uses in the form of landscape buffer yards to a minimum of double that required in the *Land Development Code*.
2. All land uses within the identified transition area shall bare the burden providing the extra buffer.
3. Transitions shall be incorporated into developments regardless of whether the abutting property is located within the city of Lawrence or unincorporated Douglas County.

3.1.2.10 Utilities

1. The area north of N 1800 Road (Farmer's Turnpike) has not been evaluated in the currently adopted 2003 Water and Wastewater Master Plans. This area should be evaluated on a watershed basis with the upcoming plan update and an overall service plan developed with project costs for water and sanitary service prior to development requiring urban services.
2. Extension of water and sewer infrastructure should be coordinated with ultimate street right-of-way acquisition and construction to avoid reconstructing water and sewer lines as streets are improved to city standards.
3. Extension of water and sewer services to the area should follow adopted city policies for such.

3.1.2.11 Traditional Neighborhood Design (TND)

1. Development under the *Lawrence SmartCode* is encouraged throughout the planning area wherever industrial or office/research is not designated. TND development can be used upon annexation and through the process outlined in the *Lawrence SmartCode*.

3.2 Land Use

This section outlines the recommended land uses for the planning area. The future land use maps (Map 3-1) and land use descriptions are explained on the subsequent pages. The map is an illustration to help visually identify the recommended land uses in the K-10 & Farmer's Turnpike planning area. The land use descriptions are more detailed information regarding the different land use categories. The official definitions and the permitted uses within each zoning district are outlined in the use tables that are located in the *Land Development Code* for the City of Lawrence. The map and text descriptions must be used in conjunction with one another in order to obtain the complete recommendation for each particular area. The map is not intended to provide a scaleable map for determining specific land use/zoning boundaries within this area.

3.2.1 Land Use Descriptions

3.2.1.1 Very Low-Density Residential

The intent of the very low-density residential use is to allow for large lot, single-dwelling type uses.

Density: 1 or fewer dwelling units per acre

Intensity: Very low

Applicable Area:

- Pine-Ne-Wa Subdivision, southeast of the intersection of N1750 Road and E 800 Road.
- Ranch Estates Subdivision, northwest of the intersection of E 818 Road and E 900 Road.
- Oak Ridge Estates, northwest of N 1750 Road and E 1000 Road.

Zoning Districts: RS40 (Single-Dwelling Residential), PD (Planned Development Overlay)

Primary Uses: Detached dwellings, cluster dwellings, manufactured home residential-design, zero lot line dwellings, group home, public and civic uses

3.2.1.2 Low-Density Residential

The intent of the low-density residential use is to allow for single-dwelling, duplex, and attached dwellings but emphasis is placed on residential type uses.

Density: 6 or fewer dwelling units per acre

Intensity: Low

Applicable Areas:

- Area generally northeast of the intersection of E 818 Road and E 800 Road.
- Area generally located north of N 1750 Road and west of George Williams Way extended.
- Area generally southeast of the intersection of N 1850 Road and E 800 Road.
- Area generally north of N 1850 Road between N 1851 Diagonal Road and the FEMA designation floodplain just east of N 1864 Road.
- Area generally between N 1750 Road and I-70 and between E 1000 Road and the FEMA designated floodplain west of E 1100 Road.
- Area generally north of the intersection of N 1800 Road (Farmer's Turnpike) and E 1150 Road and the FEMA designated floodplain to the north of said intersection.
- Area generally between N 1750 Road and I-70 and between E 1100 Road and the east side of Hill Song Circle.
- Area generally south of I-70 and east of Kasold Drive.

Zoning Districts: RS10 (Single-Dwelling Residential), RS7 (Single-Dwelling Residential), RS5 (Single-Dwelling Residential), RM12D (Multi-Dwelling Duplex Residential), PD (Planned Development Overlay)

Primary Uses: Detached dwellings, attached dwellings, cluster dwellings, manufactured home residential-design, zero lot line dwellings, duplex, group home, public and civic uses

3.2.1.3 Medium-Density Residential

The intent of the medium-density residential use is to allow for a variety of types of residential options for the area.

Density: 7-15 dwelling units per acre

Intensity: Medium

Applicable Areas:

- Area bound by I-70, K-10 Highway, N 1750 Road, and E 800 Road.
- Area generally 1/8 mile north of N 1800 Road and east of E 1000 Road extended.
- Area generally south of the intersection of N 1800 Road and E 1150 Road, north of I-70, between the FEMA designated floodplain.
- Area generally northwest of the intersection of Grand Vista Drive and Kasold Drive.

Zoning Districts: RS5 (Single-Dwelling Residential), RS3 (Single-Dwelling Residential), RM12 (Multiple-Dwelling Residential), RM12D (Multi-Dwelling Duplex Residential), RM15 (Multi-Dwelling Residential), PD (Planned Development Overlay)

Primary Uses: Detached dwellings, attached dwellings, cluster dwellings, manufactured home residential-design, zero lot line dwellings, duplex, multi-dwelling structures, boarding houses, group home, civic and public uses

3.2.1.4 High-Density Residential

The intent of the high-density residential use is to allow for compact residential development.

Density: 16+ dwelling units per acre

Intensity: High

Applicable Areas:

- Area around the intersection of N 1800 Road (Farmer's Turnpike).

Zoning Districts: RM12 (Multiple-Dwelling Residential), RM12D (Multi-Dwelling Duplex Residential), RM15 (Multi-Dwelling Residential), RM24 (Multi-Dwelling Residential), RM32 (Multi-Dwelling Residential), PD (Planned Development Overlay)

Primary Uses: Attached dwellings, zero lot line dwellings, duplex, boarding houses, multi-dwelling structures, group home, civic and public uses

3.2.1.5 Residential/Office

The intent of the residential/office use is to accommodate mixed use development of administrative and professional offices with varying degrees of residential.

Density: 6-22 dwelling units per acre

Intensity: Medium-high

Applicable Areas:

- Area bordered by K-10 highway on the west, E 902 Road on the east, and N 1750 Road on the north.
- Area generally west of the intersection of N 1800 Road (Farmer's Turnpike) and N 1864 Road

Zoning Districts: RSO (Single-Dwelling Residential-Office), RMO (Multi-Dwelling Residential-Office), MU (Mixed Use), PD (Planned Development Overlay)

Primary Uses: Work/live units, non-ground floor dwellings, attached dwellings, multi-dwelling structures, civic and public uses, veterinary office, administrative and professional offices, financial, insurance and real estate services, personal improvement, health care office, health care clinic, health care center

3.2.1.6 Commercial

The intent of the commercial use is to allow for retail and service uses. An Auto-Related Commercial Center provides goods and services aimed toward auto-orientated uses. A Community Commercial Center provides goods and services to several different neighborhood areas. A Neighborhood Commercial Center provides for the sale of goods and services at the neighborhood level. *Horizon 2020*, Chapter 6 – Commercial Land Use offers more specific language regarding each.

Intensity: Medium-High

Applicable Areas:

- Area south of the intersection of N 1800 Road (Farmer's Turnpike) and E 850 Road. (Auto-Related Commercial Center)
- Intersection of N 1800 Road (Farmer's Turnpike) and E 1200 Road. (Community Commercial Center, CC200)
- Intersection of N 1750 Road and E 1000 Road. (Neighborhood Commercial Center)
- Intersection of N 170 Road extended and E 800 Road. (Neighborhood Commercial Center)

Zoning Districts: MU (Mixed Use), CN1 (Inner Neighborhood Commercial District), CN2 (Neighborhood Commercial Center District), CC200 (Community Commercial District), PD (Planned Development Overlay)

Primary Uses: non-ground floor dwellings, multi-dwelling structures, civic and public uses, medical facilities, eating and drinking establishments, general office, retail sales and services, hotels, motels, fuel sales, car wash

3.2.1.7 Office/Research

The office/research use is characterized by businesses involved in technology, research and scientific-related activities and/or office, office research activities that are designed in a campus like setting.

Intensity: Medium

Applicable Area:

- Area east of the intersection of N 1800 Road (Farmer's Turnpike) and E 950 Road approximately one mile.

Zoning Districts: IBP (Industrial and Business Park District), IL (Limited Industrial District), PD (Planned Development Overlay)

Primary Uses: Professional offices, research services, manufacturing and production limited and technology, light wholesale, storage and distribution

3.2.1.8 Industrial

The intent of the industrial use is to allow for moderate to high-impact uses including large scale or specialized industrial uses geared toward utilizing K-10 Highway and I-70 for materials transportation.

Intensity: Medium-High

Applicable Area:

- Area generally between N 1800 Road (Farmer's Turnpike) and N 1850 Road and E 800 Road and E 950 Road.
- Area between N 1800 Road (Farmer's Turnpike) and I-70 and E 900 Road extended and E 950 Road extended.

Zoning Districts: IBP (Industrial and Business Park District) IL (Limited Industrial District), IG (General Industrial District), PD (Planned Development Overlay)

Primary Uses: Utility facilities, building maintenance services, fleet storage, business support services, construction sales and service, industrial facilities, wholesale, distribution, and storage, research services, manufacturing and production limited and technology

3.2.1.9 Public/Institutional

The intent of the public/institutional use is to allow for public, civic, and utility uses.

Intensity: Variable

Applicable Area:

- Area northwest of N 1750 Road and E 1100 Road.

Zoning Districts: GPI (General Public and Institutional)

Primary Uses: Cultural center/library, school, utilities, recreational facilities, utility services

3.2.1.10 Open Space/Floodplain

The intent of the open space/floodplain use is to provide space for public recreational facilities and natural area preservation.

Intensity: Low

Applicable Areas:

- Regulatory floodplain and floodway.
- Tributaries along the northern area of the planning area.

Zoning Districts: GPI (General Public and Institutional District), OS (Open Space), UR (Urban Reserve),

Primary Uses: crop agricultural, cultural center, schools, active recreation, passive recreation, nature preserve, entertainment and spectator sports, participant sports and recreation outdoor, private recreation

3.2.1.11 Transitional Area

Due to the abrupt change in intensity in designated land uses in certain locations within the planning area, a transitional area is designated. The intent of the transitional area is to offer a buffer between land uses. This can be achieved through buffer yards, landscaping and a progression of intensities of land use.

Intensity: Various

Applicable Areas:

- Generally the area along N 1850 Road, where industrial or office/research land use abuts low and medium-density residential land uses.

3.3 Implementation

1. Amend *Horizon 2020* Chapter 6 - Commercial Land Use to add a Community Commercial Center (CC200) at the intersection of N 1800 Road (Farmer's Turnpike) and E 1200 Road.
2. Reevaluate and update the Urban Growth Area (UGA) in *Horizon 2020*.
3. Adopt industrial design guidelines for industrially zoned areas to provide high quality, aesthetically pleasing industrial development.
4. Include the planning area in the future wastewater and water master plan updates.
5. Amend plan identified future streets into the future thoroughfares map in *Transportation 2030*.
6. Include the planning area in future long-range transportation plan updates.