

1.0 PURPOSE AND NEED FOR ACTION

A Purpose and Need Statement describes the transportation problems that a proposed project is to address. This statement provides a description of the purpose of the U.S. 69 Modernization and Expansion Project (also known as the U.S. 69 Express Project), and a demonstration of the need for improvements the proposed project is to address within the study area.

1.1 Project Overview and Background

The Kansas Department of Transportation (KDOT) and the Federal Highway Administration (FHWA) are proposing to modernize and expand a section of the U.S. 69 Corridor, located within the southern limits of the City of Overland Park, in Johnson County, Kansas. The City of Overland Park and the Kansas Turnpike Authority (KTA) are serving as transportation partners for the project.

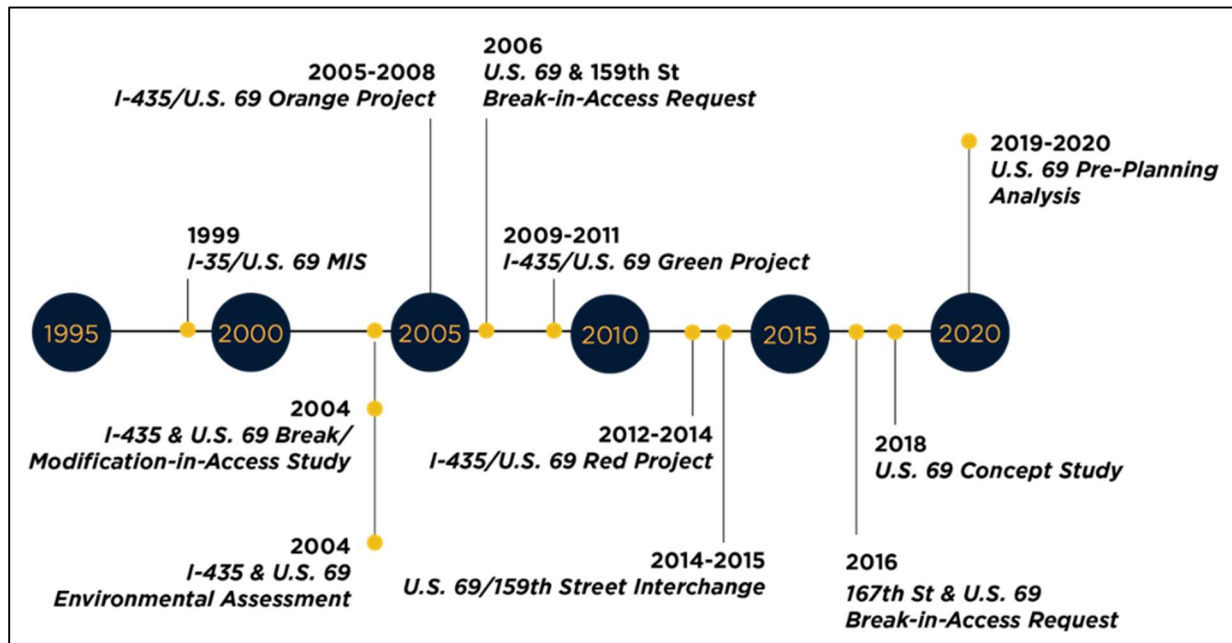
1.1.1 Project Limits and Termini

Figure 1-1 (at the end of the chapter) shows the study area for the project. The study area boundaries represent the logical limits for the infrastructure improvements and environmental review. The overall study limits begin just south of 179th Street and extend to just north of 103rd Street. The overall length is approximately 10 miles. Major cross streets with service interchange access to U.S. 69 included within the study area are 103rd Street, College Boulevard, 119th Street, Blue Valley Parkway (partial access), 135th Street, 151st Street, 159th Street, 167th Street (partial access), and 179th Street. Additionally, the system interchange of U.S. 69 and I-435 is included in the study area.

1.1.2 Project Background

The U.S. 69 Corridor has been evaluated for improvement within a range of previous studies and projects, initiated with the I-35/U.S. 69 Major Investment Study (MIS) prepared in 1999. The MIS developed a long-term vision for improving the corridor, which has led to a series of smaller improvement projects over the past 10-15 years, as shown on **Figure 1-2**.

Figure 1-2: U.S. 69 Corridor Previous Studies and Projects



Of direct relevance to the U.S. 69 study area, a previous I-435 & U.S. 69 Environmental Assessment (EA) with a Finding of No Significant Impact (FONSI) was prepared in 2004 for the northern portion of the U.S. 69 Corridor study area from just north of 95th Street to the south to just east of the Antioch Road overpass. The proposed action from the I-435 & U.S. 69 EA included adding additional lane capacity, reconfiguring interchanges and constructing a new interchange at I-435 and Antioch Road. The purpose and need as it pertains to U.S. 69 was to relieve congestion and improve traffic levels of service, improve roadway deficiencies, improve safety and provide enhanced access to major employment centers. As an outcome of the approved 2004 EA/FONSI, U.S. 69 was widened and reconstructed from I-435 north; the U.S. 69 interchanges with 95th Street, 103rd Street, College Boulevard, 119th Street and I-435 were modified and reconfigured; and a collector-distributor road network was constructed along southbound U.S. 69 between I-435 and 119th Street.

The 2018 U.S. 69 Concept Study, prepared by the City of Overland Park and coordinated with KDOT, investigated the current and future safety and operational needs in the U.S. 69 Corridor from 179th Street to 103rd Street. This study considered alternatives for the future widening and upgrade of the corridor. In 2020, a U.S. 69 Pre-Planning Analysis was conducted by KDOT, the City of Overland Park and the KTA to evaluate the potential for tolling new capacity in the corridor using an express toll lanes concept. This sketch-level planning study concluded that an express toll lane concept is technically feasible, and that toll revenue collected could

be used to offset a portion of the cost to design, construct and maintain the new lanes on U.S. 69. However, the study did not authorize toll lanes or their construction and more extensive analysis on the feasibility of the proposed express toll lanes and their environmental clearance is required prior to moving forward into design and construction. Preparation of this EA builds upon the previous work performed for the I-435 & U.S. 69 EA/FONSI, the U.S. 69 Concept Study and the U.S. 69 Pre-Planning Analysis, as applicable.

1.1.3 Proposed Action

The National Environmental Policy Act (NEPA) requires the FHWA to assess the environmental effects of projects that include federal funding or require a federal action. The NEPA process allows transportation officials to make project decisions that balance engineering and transportation needs with social, economic, and natural environmental factors. At the direction of FHWA, an EA was prepared for the U.S. 69 project to determine whether or not the proposed action has the potential to cause significant environmental effects to the natural or man-made environment. Within the EA, FHWA and KDOT are evaluating a 'No Action' or 'No-Build' alternative and an express toll lane alternative for the U.S. 69 study area as the proposed action to satisfy the purpose and need for the project. Roadway and interchange configurations are also evaluated throughout the corridor.

1.2 Purpose and Need

1.2.1 Need for Proposed Project

The proposed project is needed to modernize and expand U.S. 69 between 103rd Street and 179th Street in Overland Park, Kansas. The corridor has become insufficient to meet current and future mobility needs, resulting in worsening safety, reliability, and congestion. There is also a need to address the corridor's issues with transportation improvements that offer long-term sustainability and flexibility for all users.

The proposed project is needed to:

- **Improve safety** to address crash frequency and congestion related crashes within the corridor;
- **Reduce congestion** and improve traffic operations to meet existing and future travel demands;
- **Promote sustainability** by addressing infrastructure condition and ongoing operations and maintenance needs, supporting environmental stewardship, as well as improving long-term traveler reliability;
- **Provide flexible choices** by promoting a transportation system that accommodates the needs for all users and modes; and

- *Accommodate local and regional growth* through coordinated transportation improvements consistent with planned and proposed community land use.

1.2.2 Purpose of the Proposed Project

The purpose of the U.S. 69 Modernization and Expansion project is to provide the traveling public with an efficient and cost-effective transportation facility for users of U.S. 69 and the connected state highway system in the Kansas City metropolitan area that improves safety, reduces congestion, promotes sustainability, provides flexible choices, and supports local and regional growth.

The proposed project is consistent with the identified needs and goals of KDOT's Kansas Long-Range Transportation Plan (LRTP) and the Mid-America Regional Council's (MARC) metropolitan transportation plan, *Connected KC 2050*. MARC's goals for the region include the following:

- Access to opportunity — Support a connected system that enables access to all activities, allowing people to succeed by removing transportation barriers.
- Public health and safety — Foster healthy communities and individuals by providing safe and secure places to live, walk, bike, ride the bus and drive with clean air to breathe.
- Healthy environment — Prioritize and support investments that reduce pollution and greenhouse gas emissions and preserve and restore ecosystem health.
- Transportation choices — Provide a range of transportation choices for communities across the region to allow for ease of travel as well as public health and environmental benefits.
- Economic vitality — Maintain a multimodal transportation system that supports the efficient movement of people and goods and promotes economic development.

The following sections summarize the project need for each project purpose. Additional details on the project need can be found in the Purpose and Need Technical Memorandum found in **Appendix A**.

1.2.3 Improve Safety

A detailed study of traffic safety was conducted for the U.S. 69 Corridor using the most recent available crash data from KDOT for 2015 through 2019. In total, 1,712 crashes occurred on U.S. 69 between 103rd Street and 179th Street resulting in four fatalities. Additionally, 343 involved some form of injury and 1,365 involved property damage only. Three predominant crash types occurred within the corridor, including rear end, single vehicle and sideswipe in the same direction. These three crash types

accounted for approximately 94 percent of all crashes within the corridor, with rear end collisions accounting for over 50 percent of all crashes. The existing safety analysis shows crashes occurring along the U.S. 69 Corridor are predominantly low severity congestion related incidents. Areas of concern are primarily between I-435 and 135th Street.

When compared to other 4-lane divided urban highway facilities in Kansas, six of ten roadway segments along the U.S. 69 Corridor exceed the Statewide Average Crash Rate for either total crashes or fatal crashes. These segments encompass 103rd Street to 151st Street, with that entire portion exceeding the statewide average for total crashes, and 135th Street to 151st Street also exceeding the statewide average for fatal crashes.

A future crash analysis was completed utilizing the Interactive Highway Safety Design Model (IHSDM), developed by the FHWA. This analysis projected the change in crashes between the existing 2019 conditions and the future 2050 No-Build conditions. By 2050, if no improvements were made to the corridor, crashes are predicted to increase by 65 percent.

1.2.4 Reduce Congestion

U.S. 69 is currently a fully access controlled 4-lane divided highway with access at grade separated interchanges. The corridor experiences extensive congestion north of 151st Street with the highest congested areas southbound from I-435 to 135th Street, northbound from 119th Street to College Boulevard, and 151st Street to Blue Valley Parkway. Bottlenecks are experienced southbound at 119th Street and 135th Street and northbound at I-435 and Blue Valley Parkway.

Under existing conditions in 2019, the corridor served 45,600 vehicles per day south of 151st Street and over 91,000 vehicles per day north of 151st Street. Daily traffic volumes are anticipated to grow from 41 to 69 percent by the project design year of 2050 depending on location within the corridor. This projected increase in daily volume will add an additional 25,000 to 37,000 vehicles per day to U.S. 69. The largest increase in daily traffic is over 37,000 vehicles per day between Blue Valley Parkway and 135th Street, an area currently experiencing high rates of congestion and traffic bottlenecks. This additional traffic volume is projected to degrade operations in this area further over time, leading to more congestion and worsening bottlenecks if no improvements are made.

When traveling northbound during the AM peak period, travel times through the corridor (179th Street to 103rd Street) are expected to increase from a current travel time of 15 minutes to 81 minutes by 2050 if no improvements to U.S. 69 are completed. When traveling southbound during the PM peak period, the travel time is

expected to increase from 13 minutes currently to 74 minutes by 2050 if no improvements to U.S. 69 are completed.

1.2.5 Promote Sustainability

The U.S. 69 Corridor is located in a densely populated and heavily traveled area of the Kansas City region with limited right-of-way (ROW) and limited funding available for continued expansion. As a result, safety, capacity, and reliability improvements need to meet the needs of the corridor in ways that offer long-term corridor sustainability. Additionally, infrastructure condition and ongoing operations and maintenance needs throughout the corridor need to be addressed in an environmentally sustainable way.

The underlying pavement and base of U.S. 69 within the project study area is the original pavement constructed in the 1960's and 1970's. It has seen a series of overlay actions throughout the years to keep it in a serviceable condition. The pavement will require consistent and frequent rehabilitation to continue its serviceability and will need to be reconstructed in the future.

There are 27 mainline bridge structures within the study area, of these 22 were built between 1965 and 1973, two were built in 2008, two were built in 2012, and one in 2017. Structural evaluations completed in 2018 categorize seven bridges in satisfactory condition, 15 in good condition and five in very good condition. Utilizing the KDOT Bridge Health Index (BHI), four bridges are currently classified as “very poor” (NB U.S. 69 over 179th St, SB U.S. 69 over 167th St, NB U.S. 69 over 167th St, and SB U.S. 69 over 151st St), with an additional eight classified as “fair”. Additionally, the U.S. 69 bridges over I-435 have had multiple heavy maintenance actions in the last 8-10 years. Given their age and structure type, these bridges are anticipated to require frequent maintenance to remain in service.

There is a wide range of variability today in travel speeds and stop-and-go conditions along U.S. 69 during the AM and PM peak hours due to recurring and non-recurring congestion. In the AM peak hour, the segment from 151st through Blue Valley Parkway has the most variability in travel speed from average travel conditions. In the PM peak hour, the greatest travel speed variability occurs between I-435 and 151st Street. This variability leads to unexpected congestion and unreliable trips. This congestion leads to environmental impacts in the form of increased greenhouse gas emissions. Providing a more reliable trip in the future could lead to a more sustainable corridor with lower greenhouse gas emissions.

1.2.6 Provide Flexible Choices

A flexible transportation system is one that accommodates the needs of all users and modes. Typically, this includes walking, cycling, public transit and commercial trucks in addition to passenger automobiles. The Preferred Alternative for the U.S. 69 project should be consistent with planned and proposed multimodal uses within the study area. These planned and proposed multimodal uses are outlined in local and regional planning documents, including;

- City of Overland Park Comprehensive Plan - This plan recognizes the importance of a flexible transportation system and using mass transit as a tool to support mixed-use development.
- South Overland Park Transportation Plan - Identifies the desire to make a change in the area's transportation system, focusing on a system that encompasses the needs of all modes in addition to single occupancy passenger vehicles.
- MARC (Mid America Regional Council) Long Range Transportation Plan - *Connected KC 2050* - Calls for providing a range of transportation choices for communities. These choices should allow for ease of travel for all as well as provide public health and environmental benefits.

The U.S. 69 Corridor serves two public transit agencies, the Kansas City Area Transportation Authority (KCATA) and Johnson County Transit. These agencies jointly operate RideKC transit services across the metro. Seven routes operated by each agency cross or utilize U.S. 69 directly. Currently, the South OP Express is the only route that utilizes U.S. 69 directly between 103rd Street and 135th Street.

A review of the existing bikeway and shared use path maps *The City of Overland Park Safe Bicycle Use Outreach Project* and the MARC adopted *Kansas City Regional Bikeway Plan*, aerial photography, and a survey of the study area indicate that bicycle and pedestrian facilities exist at several locations along the study area and are separated into the categories of Shared Use Path or Bike Lane. Although none of these bicycle facilities are shared use with the U.S. 69 travel lanes, they do run parallel to and cross the freeway's ROW and serve an integral purpose as part of the region's transportation facilities.

Commercial trucks are a component of the traffic stream within the study area. The U.S. 69 Corridor has regional significance in goods movement, connecting southern Johnson County to the Kansas City metro area. According to KDOT's 2017 to 2019 traffic flow maps, a range of three to nine percent of the daily vehicles in the U.S. 69 Corridor are trucks. Higher proportions are concentrated in the southern portion of the study area south of 151st Street, where percentages range from 5.6 percent to 9.1

percent. The percentages along the rest of the study area are between 3.4 percent and 5.6 percent.

1.2.7 Accommodate Local and Regional Growth

A key purpose of the U.S. 69 project is to accommodate local and regional growth through coordinated transportation improvements consistent with planned and proposed community land use. Regional land use and development patterns provide insight into a community's potential transportation needs. MARC growth trends project between now and 2050 population will grow by 39 percent and employment by 49 percent within Johnson County. As the region grows and future land development occurs in harmony with local and regional land use plans, it is anticipated that traffic volumes will increase across the U.S. 69 Corridor.

The MARC Long Range Transportation Plan, *Connected KC 2050* is the Kansas City metropolitan area transportation plan developed by MARC. The U.S. 69 study area falls within the boundaries of MARC's transportation management area for the region. The plan calls for focused investments in transportation that accommodates growth along major regional transportation corridors. The plans desired outcomes include: access to opportunity by removing transportation barriers; addressing public health and safety through safe and secure places to live, walk, bike, ride the bus, and drive with clean air to breathe; prioritize a healthy environment by supporting investments that reduce pollution and greenhouse gas emissions; provide a range of transportation choices; and supports economic vitality by maintaining a multimodal transportation system that efficiently moves people and goods while supporting economic development.

The *City of Overland Park Comprehensive Plan*, adopted December 2019, is the long-range plan for the City of Overland Park. The plan identifies a regional land use strategy for the corridor. It shows concentrations of commercial, industrial, and office uses at interchanges along U.S. 69 surrounded by lower density residential. Much of the area adjacent to U.S. 69 between 103rd Street and 135th Street are fully developed while opportunities for continued growth primarily exist south of 135th Street. These growth areas are expected to contribute to future increases in travel demand along U.S. 69.

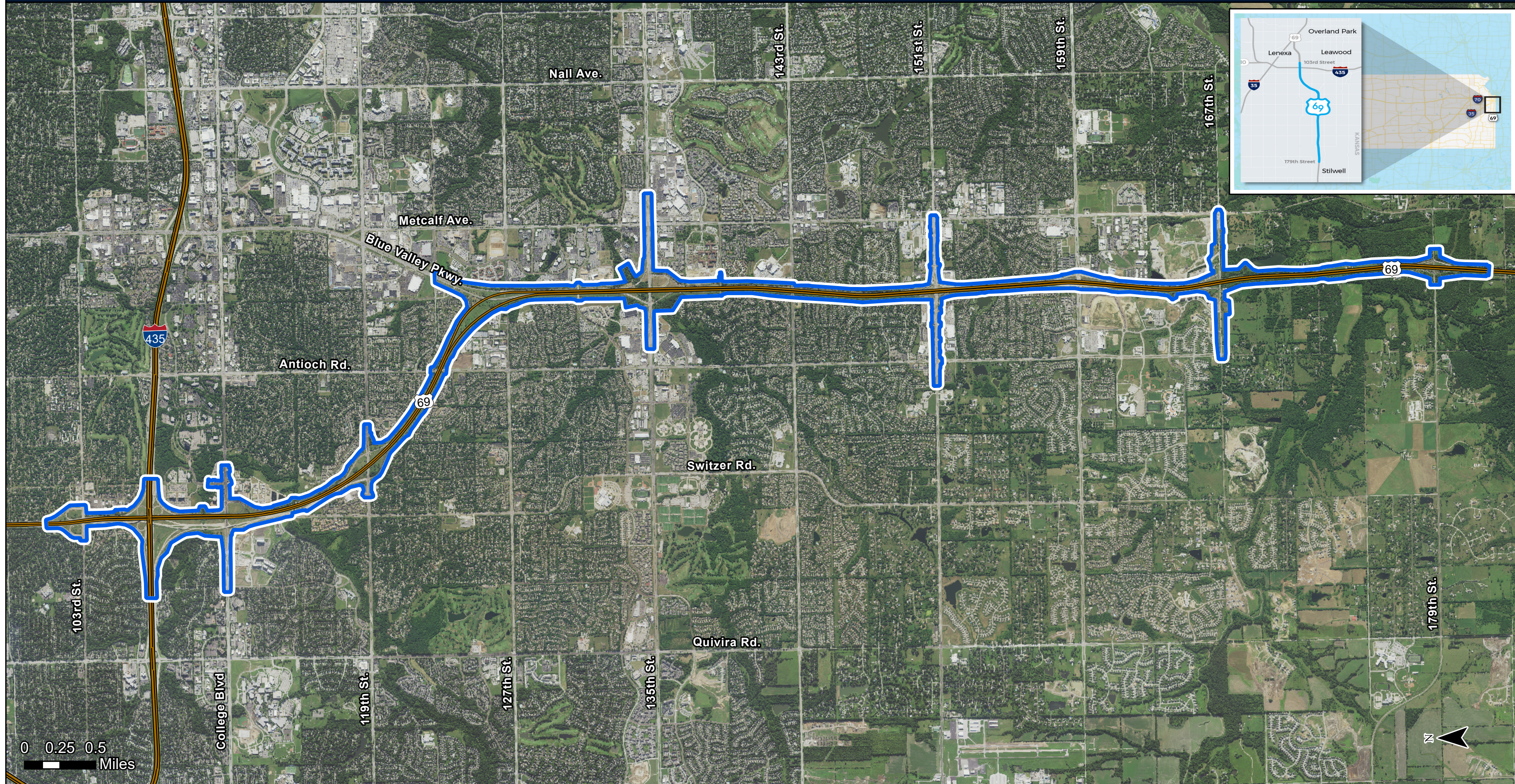
The *South Overland Park Transportation Plan* details the planned transportation improvements in the southern portion of the study area from 159th Street to 179th Street and was adopted in 2015. The plan covers an area centered on U.S. 69 between Lackman Road and State Line Road and 159th Street and the Johnson County/ Miami County line. The plan identifies the existing U.S. 69 study area as primarily agricultural in nature with pockets of low density residential and industrial/business park uses. It projects a transition in the future to primarily low or

very-low density single family residential throughout the corridor with mixed use and office uses between 159th Street and 179th Street. This transition from agricultural to low density residential and mixed use or office use is expected to impact U.S. 69 as the primary transportation corridor in this portion of Overland Park.

1.3 Planned and Committed System Improvements

Several other projects are planned for the City of Overland Park and the Johnson County area that need to be taken into consideration as the proposed improvements for the U.S. 69 Corridor are developed. These projects include:

- U.S. 69 NB Bridge at 179th Street – Replacement; Programmed for 2022.
- U.S. 69 Johnson County – Guardrail End Terminal Updates; Programmed for 2022.
- 119th Street from Pflumm Road to U.S. 69 – Corridor widening and improvements; Programmed during the 2030 decade.
- 151st Street from Antioch Road to Metcalf Avenue - Corridor widening and improvements; Programmed during the 2030 decade.
- 179th Street from Lackman Road to Metcalf Avenue – Corridor widening and improvements; Programmed during the 2030 decade.
- Antioch Road from 119th Street to 135th Street – Corridor widening and improvements; Programmed during the 2030 decade.
- Antioch Road from 135th Street to 179th Street - Corridor widening and improvements; Programmed during the 2040 decade.
- Metcalf Avenue from 119th Street to 159th Street (two separate projects) - Corridor widening and improvements; Programmed during the 2030 decade.
- Metcalf Avenue from 167th Street to 179th Street - Corridor widening and improvements; Programmed by 2026.



Legend
Study Area

U.S. 69 Modernization and Expansion Project
Environmental Assessment
KDOT# 69-46 KA-5700-02

