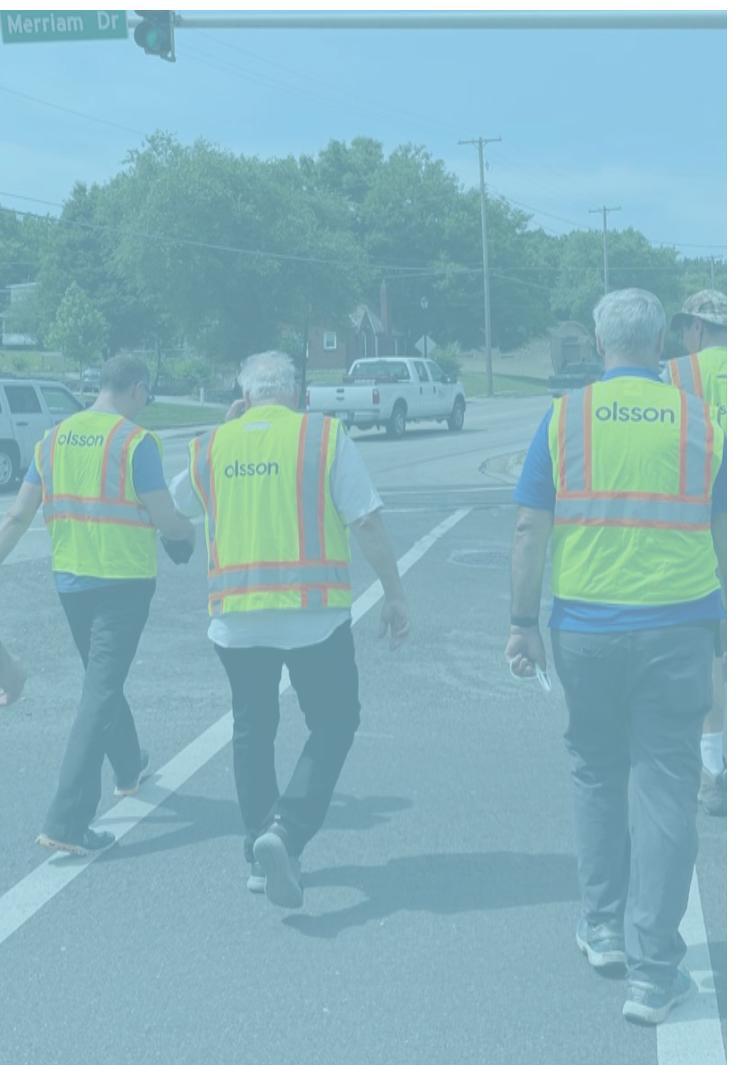
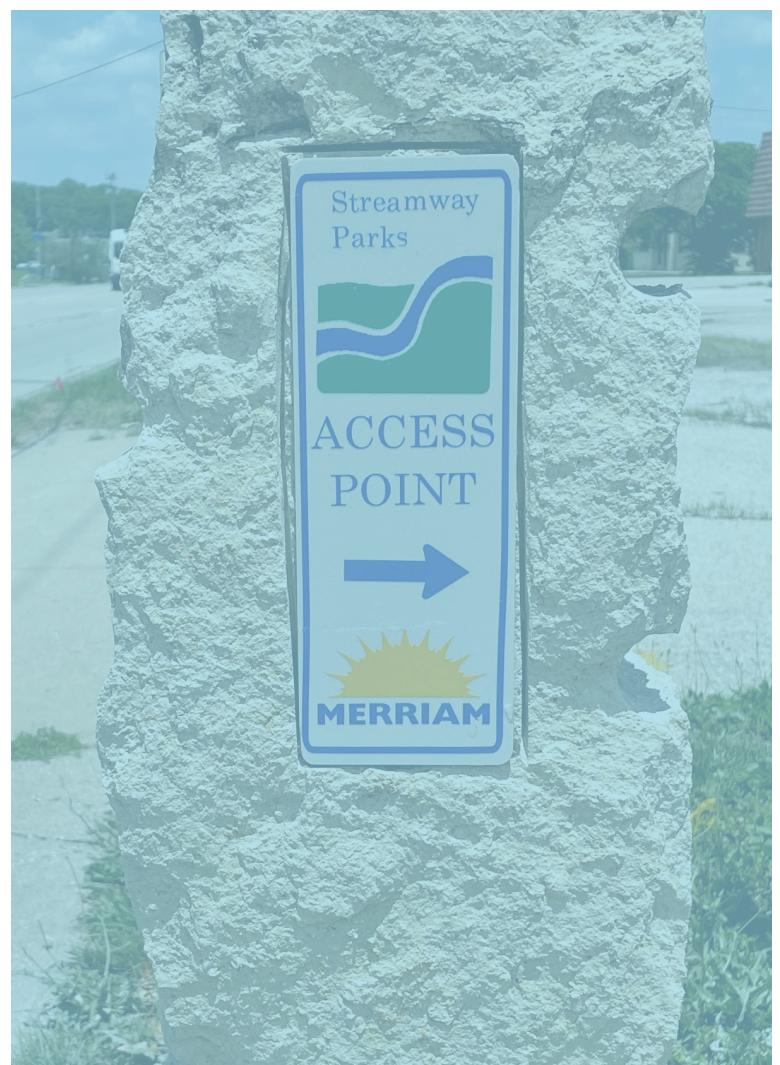




# MERRIAM CONNECTED CORRIDOR PLAN

DRAFT FOR CLIENT TEAM REVIEW - MARCH 18, 2022



# ACKNOWLEDGMENTS

*Thank you to all participants in the planning process. Your time, technical expertise, and guidance was critical to the development of the Merriam Connected Corridor Plan.*

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# 1



# SECTION ONE INTRODUCTION

The Merriam Corridor is a historic corridor that connects multiple cities and counties in the Kansas City metropolitan area. The Merriam Connected Corridor Plan (Plan) aims to improve transportation connectivity and overall functionality along the corridor through smart land use and well-integrated transportation infrastructure that will complement and support the health of the surrounding environment. Further, the Plan seeks to provide safe and effective transportation options in coordination with opportunities for the regeneration of the corridor through targeted and community-supported development. **Section 1 - Introduction** provides an overview of the background and purpose of the Plan, the planning process, and overall goals and vision for the future Merriam Corridor (corridor). **NOTE:** The primary roadway evaluated in this Plan is called “Merriam Drive” in Johnson County and “Merriam Lane” in Wyandotte County. In this Plan, the roadway will be referenced as “Merriam Corridor” or “corridor,” except for cases where the Johnson County or Wyandotte County portions of the roadway are specifically being referenced.

# BACKGROUND AND PURPOSE

In 2010, more than 60 regional partners, led by the Mid-America Regional Council (MARC), received a \$4.25 million planning grant from the U.S. Department of Housing and Urban Development to advance the implementation of the Regional Plan for Sustainable Development, Creating Sustainable Places. This plan led to the Planning Sustainable Places Program (PSP), which utilizes Surface Transportation Program (STP) grant funds to provide local governments with financial support to develop and advance plan recommendations. The Merriam Connected Corridor Plan is a Sustainable Places Plan that addresses priority areas for four (4) communities (The Unified Government; Mission, KS; Overland Park, KS; and Merriam, KS) in the Kansas City metropolitan area along a single corridor.

Paralleling Interstate 35 (I-35) and Turkey Creek, the corridor stretches through multiple cities and counties, which creates challenges in the formation of a unified vision. The historic corridor was once part of the inter-urban railroad route traveling between Kansas City, Missouri and Olathe, Kansas. Neighborhoods developed along the route in the early twentieth century as Merriam became a popular rail stop. Throughout the years, a variety of land uses developed along the corridor, including residential, commercial, entertainment, and industrial uses. Today, the corridor remains diverse in land uses and demographic makeup, and faces challenges related to traffic, access management, safety across vehicular and non-vehicular modes, and attracting development and redevelopment.

The purpose of the Plan is to analyze the relationship between land use, transportation, and the environment along the corridor and make recommendations regarding appropriate land uses, mobility enhancements, multimodal improvements, and other opportunities for complete streets and “green” infrastructure solutions. The Plan assesses all transportation modes along and around the corridor, including vehicular traffic, bicycle and pedestrian infrastructure, and public transit. The Plan also assesses the development and growth patterns along the corridor.

## PLAN OVERVIEW

### THIS PLAN STUDIES THE FOLLOWING:

- **Transportation and Connectivity.** Examination of all modes of transportation (cars, trucks, rail, transit, bicyclists, and pedestrians) and how these modes interact and work together. Considerations for the Turkey Creek Trail are also included.
- **Traffic and Crash Patterns.** Analysis of traffic volumes and an evaluation of current and historic crash patterns.
- **Land Use and Development.** Determination of preferred and appropriate land uses and development areas throughout the corridor.
- **Green Infrastructure and Trails.** High level evaluation of existing stormwater management and quality and what changes could be made to roadway infrastructure to accommodate green solutions.

Study of the Turkey Creek Trail is an important aspect of this Plan. Missing linkages are addressed to enhance the recreational and commuting potential of the trail, and flood management mechanisms are explored to make the trail more resilient in the event of severe weather.

This Plan is the first step toward improving safety, appropriately integrating all modes of transportation into the corridor, and making these transportation options available for street users of all ages and abilities. The recommendations of this Plan accommodate the existing land uses and support future development and redevelopment.

## PLAN ACHIEVEMENTS

### THROUGH A PARTNERSHIP OF FOUR MUNICIPALITIES (MERRIAM, OVERLAND PARK, MISSION, AND THE UNIFIED GOVERNMENT), THIS PLAN ACHIEVED THE FOLLOWING:

- Provides measurable action steps for both public and private property owners to further promote multimodal transportation options and encourage redevelopment of the corridor.
- Equitably engaged property owners and neighbors in meaningful and descriptive conversations about the future uses along the corridor.
- Develops an implementation strategy to close existing gaps in Turkey Creek Trail across all jurisdictions.
- Conceptualizes a multimodal and Complete Streets plan for the Merriam Corridor and its integration into adjacent multimodal transportation networks.
- Identifies and develops complimentary green infrastructure projects along the corridor that support stormwater management and stormwater quality, placemaking, urban heat island reduction, and buffers for multimodal connectivity.
- Creates a framework that best positions the corridor and surrounding neighborhoods to become a thriving and desirable place to work and play.

**FIGURE 1.1 PLANNING TIMELINE**



## PLANNING PROCESS AND TIMELINE

The planning process took place between 2021 and 2022 through a six-step process, detailed as follows:

- Step 1: Discover
- Step 2: Engage
- Step 3: Plan and Refine
- Step 4: Adopt
- Step 5: Implement
- Step 6: Sustain

The planning process established a baseline understanding of the corridor today, engaged the community on what they want the corridor to be, and made recommendations for how to achieve the shared vision of the corridor.

**Figure 1.1** details this planning process, though it is important to understand that the planning process is not necessarily linear. It is infused with flexibility to be able to react to new information and changing circumstances. In general, each step builds on the one prior.

Public and stakeholder engagement was a core element of the Plan's development. After the initial launch of the planning process, outreach events and tools were used throughout the planning process, including a project webpage, municipality social media accounts, stakeholder interviews, a public survey, a planning and visioning workshop, and two (2) public open houses. The public engagement process is detailed in **Appendix D - Public Engagement Summary**.

**APRIL 2021 - JULY 2021**



### DISCOVER

Collect and analyze existing geospatial, transportation, market, and economic data.

**JUNE 2021 - SEPTEMBER 2021**



### ENGAGE

Gather information and build consensus on needs, desires, and critical issues.

**AUGUST 2021 - JANUARY 2022**



### PLAN AND REFINE

Develop and narrow concepts for the plan document based on community engagement process findings.

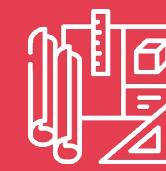
**JANUARY 2022 - FEBRUARY 2022**



### ADOPT

Gain adoption approval for the refined plan document.

**FEBRUARY 2022 AND BEYOND**



### IMPLEMENT

Set forth critical first steps to achieve plan recommendations.



### SUSTAIN

Continue working through short and long-term plan recommendations.

# CORRIDOR STUDY AREA

The corridor includes Merriam Drive/Lane and a buffer of approximately one-quarter mile, running from W. 55th Street to S. 10th Street and includes portions of the municipalities of Merriam, Overland Park, Mission, and the Unified Government. The corridor is approximately four miles long. This Plan presents a cohesive development strategy for the corridor, connecting the gateways of two communities, Downtown Merriam and Rosedale, via two other jurisdictions, Overland Park and Mission, Kansas.

The map in **Figure 1.1** shows the study area, which includes Merriam Drive/Lane (shown in yellow) and its surrounding corridor (shown in gray). For the purposes of this Plan, the “Merriam Corridor” or “corridor” refers to the corridor within this study area. The map also shows places of interest along the corridor as additional reference points.

It is important to note that this Plan’s recommendations will focus on the project limits; this study area is identified as an acknowledgement that recommendations cannot be made without the context of the adjacent area. It is critical that any multimodal infrastructure recommended along the corridor ties into, supports, and further connects the surrounding transportation network.



**FIGURE 1.1 CORRIDOR STUDY AREA**

0' 600' 1,200' 1,800' 2,400'  
1-inch



**Data Sources:** City of Overland Park, KS; The Unified Government of Wyandotte County and Kansas City, KS; City of Merriam, KS; Mid-America Regional Council; U.S. Census Bureau

- Merriam Corridor
- City Boundary
- Place of Interest



## VISION - “THE FUTURE CORRIDOR”

Fueled by the public engagement process, a vision narrative was crafted for the corridor. The vision was directly formed from stakeholder and public input on the identified issues, concerns, and opportunities along the corridor, coupled with their priorities and preferences for the area moving forward. The vision is an expression of future aspirations and paints a picture of what is hoped for along the corridor. Identifying the vision is critical to the planning process, as it can be referred to as a guide for recommendations to define the Plan. The vision narrative for the corridor is outlined to the right and summarized below in the five themes.

### MERRIAM CONNECTED CORRIDOR THEMES

-  **CONNECTED, SAFE, AND ACCESSIBLE**
-  **BALANCED**
-  **VIBRANT**
-  **AESTHETICALLY PLEASING**
-  **SUSTAINABLE**

As a well-positioned corridor that connects four cities within the Kansas City metropolitan area, the Merriam Corridor strives to...

Be a **CONNECTED, SAFE, and ACCESSIBLE** roadway that provides forward-thinking infrastructure for motor vehicle drivers, commercial truck drivers, pedestrians, bicyclists, and other emerging mode users;

Be a **BALANCED** corridor that properly manages access to highway systems, private properties, and public amenities to reduce conflict points between roadway users;

Be a **VIBRANT** corridor that offers a variety of land uses to best serve the needs and interests of the community;

Be an **AESTHETICALLY PLEASING** corridor that highlights the unique character of each city it passes through and represents the diversity of the communities within; and

Be a **SUSTAINABLE** corridor that incorporates principles of environmental regeneration into the roadway, landscape, and public space design.

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# 2

## SECTION TWO EXISTING CONDITIONS

Planning efforts must begin with an understanding of the present conditions. **Section 2 - Existing Conditions** presents a summary of the current state of the corridor through an analysis of existing conditions, including land use, the vehicular and non-vehicular transportation system, natural features, and demographics.



## CORRIDOR CHARACTER

While the corridor as a whole is characterized by varied industrial, commercial, office, and single-family residential uses, the exact mix of these uses provides a different feel at certain locations.

Character differences are also driven by the street section itself. The number of lanes and the presence and condition of sidewalks and streetscape elements varies as well.

The western end of the corridor at W. 55th Street in Merriam is just north of Downtown Merriam and the Merriam Marketplace. While visually distinct from downtown Merriam, it does include pedestrian light posts with banners as an element that ties the corridor to downtown. This section is characterized by commercial uses on Merriam Drive, with industrial uses immediately behind on the west, and Waterfall Park behind the commercial uses on the east.

Travelling north after W. 53rd Street, Waterfall Park becomes visible from the street and becomes the primary corridor feature and a focal point for the surrounding area, with commercial and industrial uses on the west side of the street.

North of W. 51st Street introduces residential uses, with several single-family houses fronting Merriam Drive and others visible behind. Continuing north, the Merriam Drive and Antioch intersection is characterized by different uses on all four corners: a church, a single-family home, a small restaurant, and a used car dealership.



MERRIAM DRIVE NEAR W. 55TH STREET IN MERRIAM



MERRIAM DRIVE AT MACKEY STREET IN OVERLAND PARK



MERRIAM DRIVE AT WATERFALL PARK IN MERRIAM

The section just east of Antioch Road is characterized by several used car dealerships and a variety of other small commercial and industrial uses, as the street narrows to two lanes. This section has the most recognizable access management issues, with parking lots encroaching into the public right-of-way and significant interruptions to the sidewalk network. This section also has the highest traffic volumes in the corridor.

The section between Hadley Street to Craig Lane is characterized by a transition to single-family residential uses on the north side of Merriam Drive and industrial uses to the south. At Craig Lane, the street opens up to a four-lane section to accommodate turning movements to and from the off and on-ramps to I-635, with two underpasses under I-635.

The two-lane section returns at Foster Street with used car and industrial uses to the south and commercial uses to the north but with single-family residential immediately behind.

At S. 35th Street, bicycle lanes are provided for the remainder of the corridor, with recently improved streets, curbs, and sidewalks. Uses are primarily industrial on both sides of the street with some small office and commercial uses mixed into the streetfront on the north. The environment is visibly more accommodating and accessible to non-motorized travel.

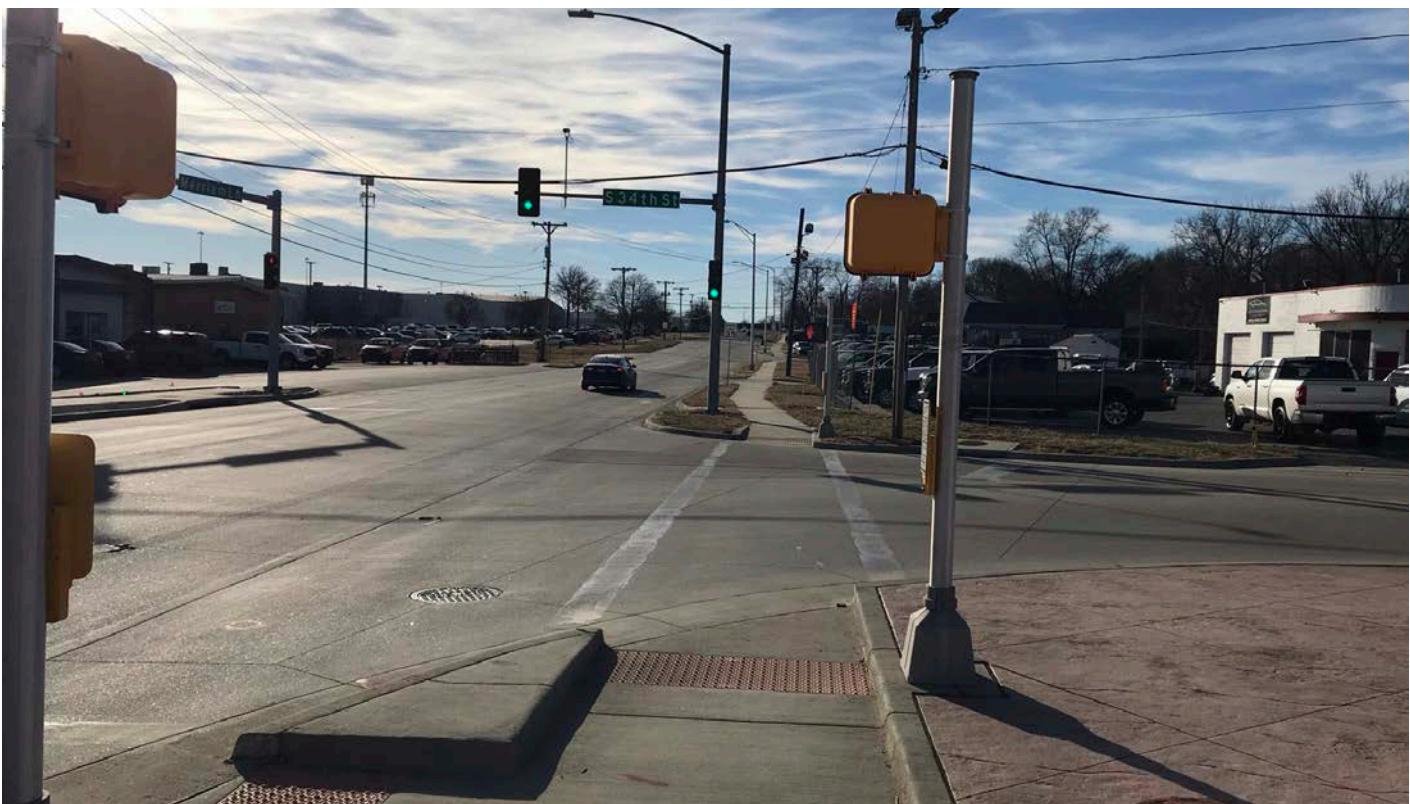
A short segment starting at 24th Street includes single-family homes on both sides of Merriam Lane, followed by a mix of industrial uses and House of Rocks at S. 18th Street.

At the U.S. 69 Highway underpass, Turkey Creek rejoins the corridor on the south side of Merriam Lane., though mostly not visible from the street. Continuing east, Boulevard Drive-In is the largest property in this portion of the corridor and visible behind several commercial businesses.

At the far east end, Merriam Lane gives way to Southwest Boulevard and the character changes to more smaller-scale commercial uses close to the street and small-lot single-family behind and ultimately fronting Southwest Boulevard to the east.

While these differences have been reviewed and documented, several elements are present along most of the corridor. These include:

- I-35 is present to the east or the south in nearly the entire stretch of the corridor, blocked in view only occasionally. It is a visual and audible reminder of the corridor's proximity and access to this regional artery and commuter function.
- Similarly, the BNSF railway is present alongside I-35 the entire length of the corridor as well, presenting a barrier and a reminder of the corridor's importance as a freight artery.
- The prioritization of automobile access and throughput is evident through the entire corridor. This includes businesses that are specifically automobile based—towing services, car battery suppliers, used car dealers, and gas stations—as well as auto-oriented design such ample parking and wide driveways that interrupt sidewalks and green space.
- While single-family residential uses are mostly not located on Merriam Drive/Lane (with some exceptions), these neighborhoods lie immediately to the west (in Merriam) or north (in Overland Park and Unified Government), behind uses fronting Merriam Drive/Lane.



**MERRIAM LANE AT S. 34TH STREET IN THE UNIFIED GOVERNMENT**



**MERRIAM LANE TRANSITIONING TO SOUTHWEST BOULEVARD**

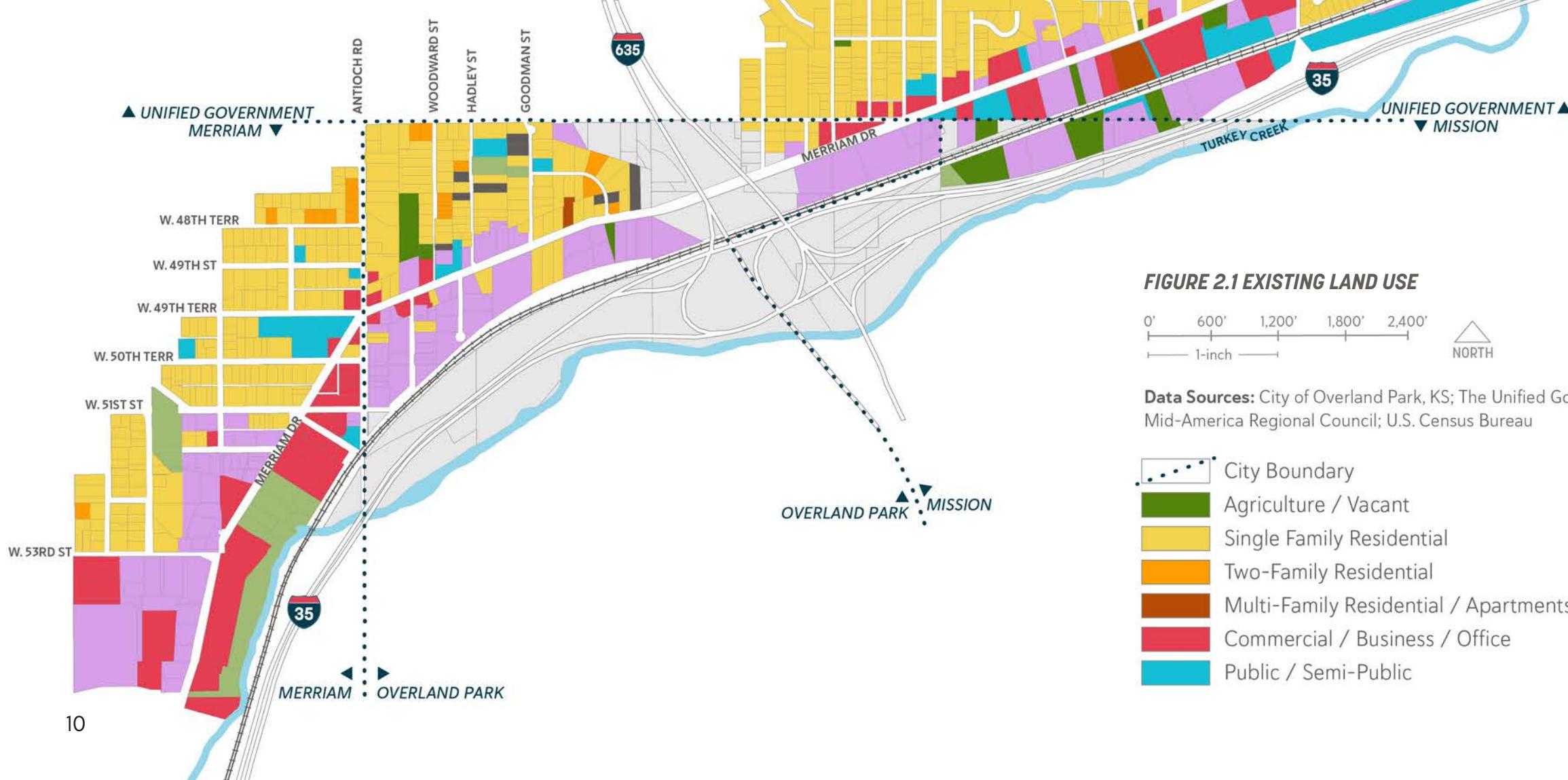
## EXISTING LAND USE

The corridor is primarily built out with a variety of land uses and features, the character of which changes as one moves along the corridor. Understanding the differences between these types of uses and features is an important aspect of analyzing a corridor.

**Figure 2.1** shows the existing land uses along the corridor. Note that for clarity purposes, land use categories shown in the legend were combined according to similar nature from each of the four (4) municipalities.

While land uses vary widely, there are some patterns to note regarding land use distribution along the corridor. Most industrial uses are adjacent to the Merriam Corridor or the railroad corridor. Almost all commercial/business/office uses are either along the Merriam Corridor or

another thoroughfare such as Antioch Road. The corridor contains a variety of housing types, but the most prevalent residential land use is single family residential. With some exceptions, the majority of residential land uses are located on the north side of the Merriam Corridor. There are many instances of land uses of varied intensity abutting each other, such as industrial uses next to single family residential.



**FIGURE 2.1 EXISTING LAND USE**

**Data Sources:** City of Overland Park, KS; The Unified Government of Wyandotte County and Kansas City, KS; City of Merriam, KS; Mid-America Regional Council; U.S. Census Bureau

- City Boundary
- Agriculture / Vacant
- Single Family Residential
- Two-Family Residential
- Multi-Family Residential / Apartments
- Commercial / Business / Office
- Public / Semi-Public

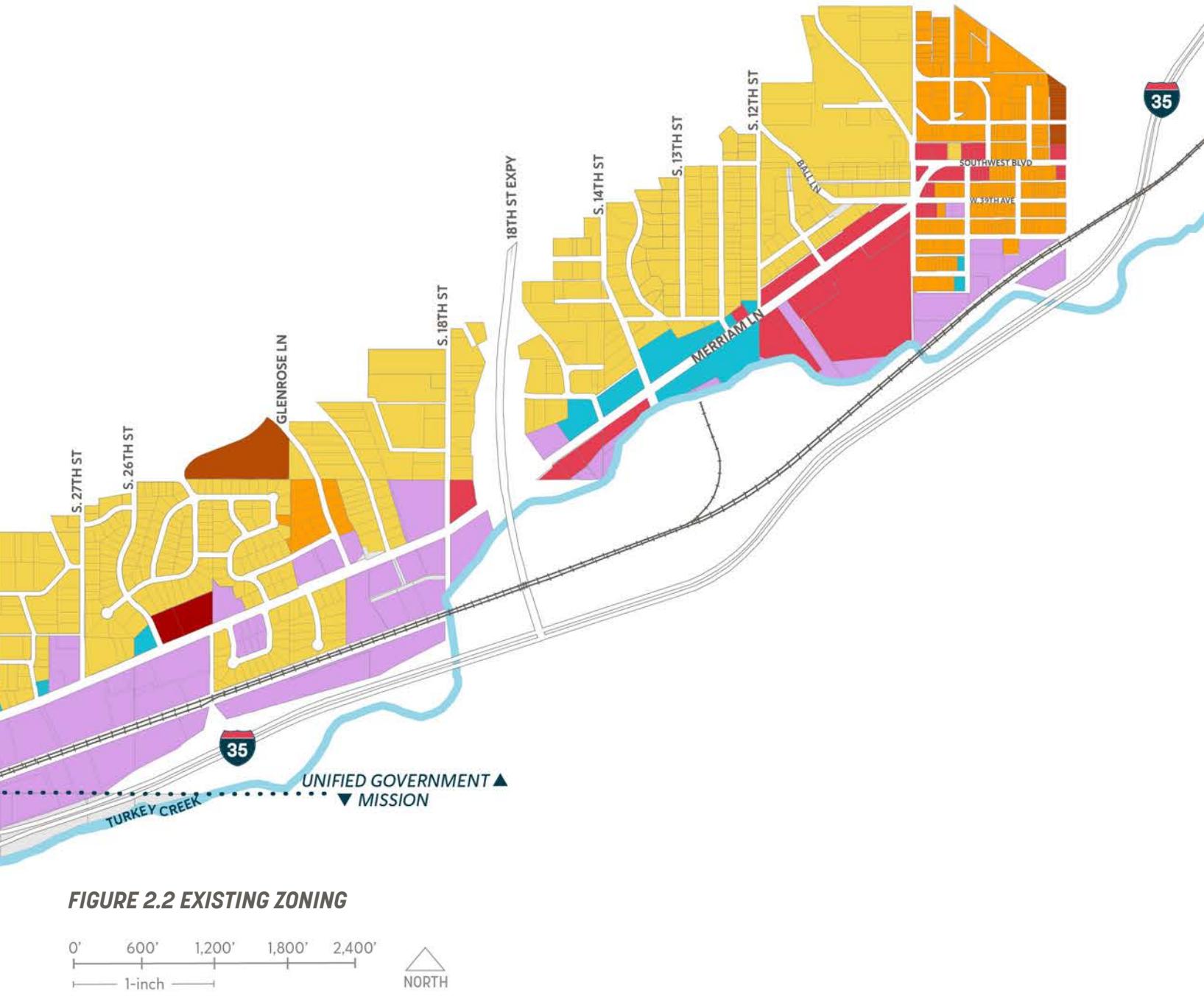
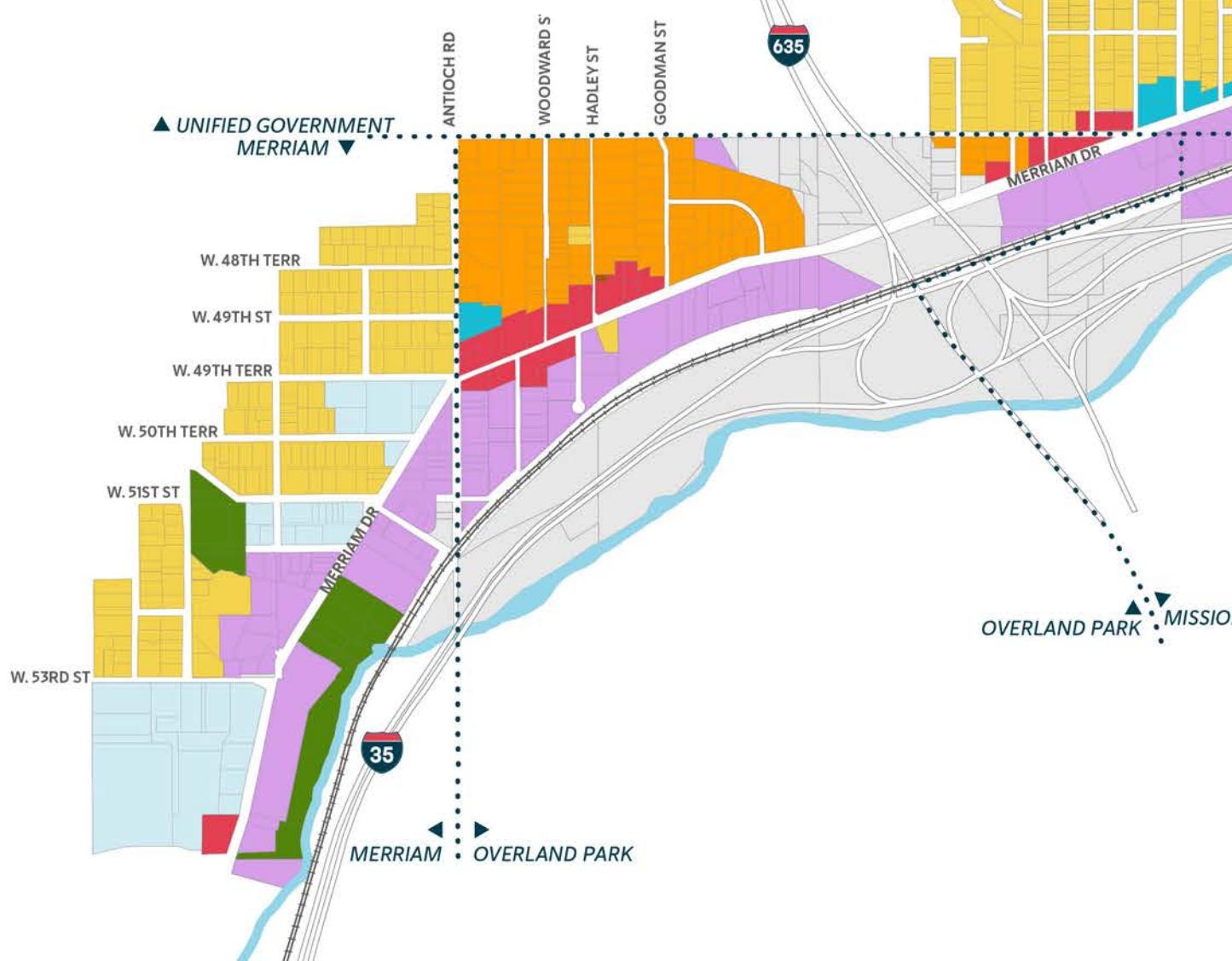
- Industrial
- Parks / Recreation / Open Space
- Vacant Residential

## EXISTING ZONING

Zoning generally follows a similar pattern as existing land uses found along the corridor. **Figure 2.2** shows zoning designations by category along the corridor. Please note that this figure does not reflect each specific zoning category by name for all four (4) municipalities. Rather, each zone was grouped under a more generalized category for visual consistency and understanding among the jurisdictions.

Areas zoned for industrial activities are either located along the corridor or adjacent to the rail corridor with few exceptions. Commercial zones are all located along the corridor and Southwest Boulevard. Zoning for business/office use is mostly found along the corridor and other thoroughfares such as Antioch Road. A limited number of

parcels south of the corridor are zoned for residential uses, and most are located and grouped by density north of the corridor. The most prevalent residential zone is single family residential and multi-family/apartment zones are only found in a few instances. Overall, the corridor is fully built-out and does not have much dedicated open space. However, there are many underutilized parcels along the corridor. These are further evaluated in the Redevelopment Opportunities section of the **Appendix A - Market and Economic Study**.



**FIGURE 2.2 EXISTING ZONING**

0' 600' 1,200' 1,800' 2,400'  
1-inch



**Data Sources:** City of Overland Park, KS; The Unified Government of Wyandotte County and Kansas City, KS; City of Merriam, KS; Mid-America Regional Council; U.S. Census Bureau

- • • City Boundary
- Agriculture / Parks / Open Space
- Single Family Residential
- Two-Family Residential
- Multi-Family Residential / Apartments
- Commercial
- Business / Office
- Industrial
- Planned Unit General

# EXISTING TRANSPORTATION SYSTEM OVERVIEW

MARC classifies the corridor as a minor arterial roadway as it serves a variety of needs throughout the multiple jurisdictions. As a minor arterial, the roadway offers favorable access conditions for the variety of commercial and industrial land uses surrounding the area. The corridor provides connectivity between the surrounding businesses and neighborhoods, with nearby interstate systems, including I-35, which parallels the corridor to the south and crosses the corridor at the eastern study limits. I-635 and U.S. Route 69 (US-69) cross the corridor within the study area, as well.

Given these characteristics, the corridor serves a diverse mixture of truck traffic and other heavy vehicles (approximately within a normal range of two to four percent of total vehicle traffic) and vehicles (approximately 97 percent of total vehicle traffic). Dedicated bicycle lanes are provided on the east end of the corridor and, as such, a number of bicyclists travel along the corridor. Sidewalks are present along the corridor, however, there are some discontinuous sidewalk segments, as seen in **Figure 2.3 Existing Active Transportation Network**. Furthermore, very few locations outside of signalized intersections exist where pedestrians encounter marked or signed crosswalks. Likewise, the corridor is lacking transit facilities, though there are facilities along adjacent corridors. This fact, coupled with the lack of pedestrian friendly accommodations, limit the number of pedestrians along the corridor.

The Merriam Corridor has a variety of cross sections, including the following shown on **Table 2.1** below:

**TABLE 2.1 ROADWAY SEGMENTATION**

SEGMENT (WEST TO EAST)		LANE CONFIGURATION	SPEED (MILES PER HOUR)
WEST	EAST		
W. 55th Street	W. 53rd Street	4-Lane	30
W. 53rd Street	Antioch Road	3-Lane	30
Antioch Road	Craig Lane	2-Lane	35
Craig Lane	Foster Street	4-Lane*	35
Foster Street	S. 35th Street	2-Lane	35
S. 35th Street	S. 10th Street/Ball Lane	2-Lane**	35
S. 10th Street/Ball Lane	Mill Street	2-Lane	30

\*Note: Craig Lane to Foster Street through I-635 is currently striped with bicycle lanes.

\*\*Note: S. 35th Street to S. 10th Street/Ball Lane is typically a two-lane section with bicycle lanes, with exception at 24th Street/Lamar Avenue where the roadway widens to three lanes and removes dedicated bicycle lanes. Other intersections within this segment, such as intersections with the 18th Street Expressway and 14th Street, include a dedicated left-turn lane as well as bicycle lanes.

# STREET TYPOLOGY

## ARTERIAL STREET

Arterials carry traffic between major activity and population centers. Traffic signals and roundabouts are often used to regulate the flow of traffic at major intersections. Access is managed, although movement to and from adjacent property is allowed at times.

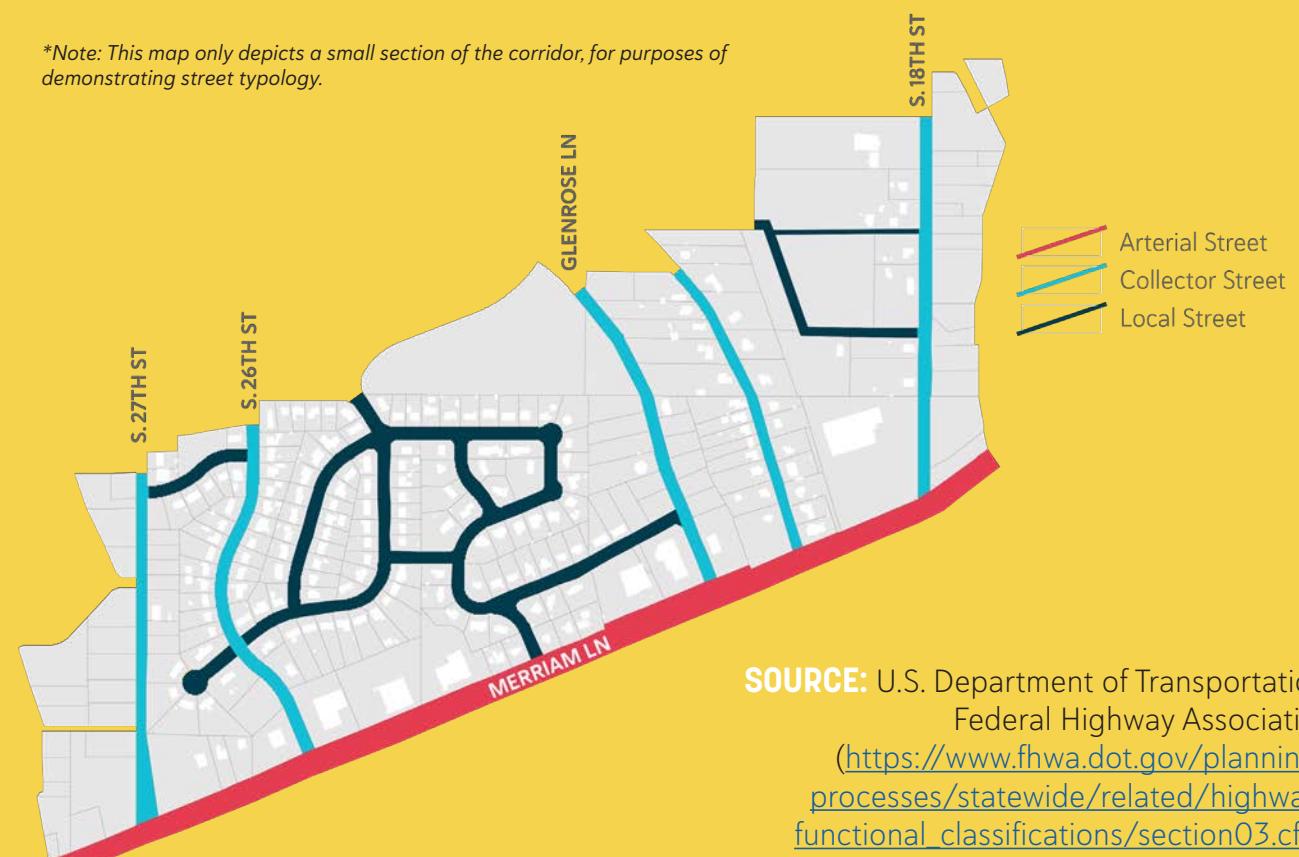
## COLLECTOR STREET

Collector streets provide a safe and convenient way to move from a neighborhood to the arterial street network. They are intended to “collect” traffic from residential or other destinations and move it to higher order streets. Direct access is more liberally granted compared to arterials.

## LOCAL STREET

Local streets provide the greatest level of access. These streets provide limited opportunities for through traffic. Their primary function is to provide access to adjacent properties.

*\*Note: This map only depicts a small section of the corridor, for purposes of demonstrating street typology.*



**SOURCE:** U.S. Department of Transportation,  
Federal Highway Association  
([https://www.fhwa.dot.gov/planning/processes/statewide/related/highway\\_functional\\_classifications/section03.cfm](https://www.fhwa.dot.gov/planning/processes/statewide/related/highway_functional_classifications/section03.cfm))

# EXISTING ACTIVE TRANSPORTATION NETWORK

Figure 2.3 illustrates the existing active transportation network along the corridor, including trails, bicycle routes, and sidewalks.

## EXISTING PEDESTRIAN TRANSPORTATION

Pedestrian infrastructure varies significantly along the corridor. 2017 improvements in the Unified Government include new sidewalks with appropriate Americans with Disabilities Act (ADA) ramps and other infrastructure. Except for a gap on the south side of Merriam Lane between S. 26th Street and S. 23rd Circle, the new sidewalks are continuous throughout the Kansas City portion of the corridor. Crosswalks with appropriate ramps and pedestrian timers are provided at signalized intersections: S. 34th Street and S. 14th Street/Roe Lane. However, a crosswalk is not provided at the signalized intersection at S. 24th Street, where no sidewalk exists on the south side of the street. Instead, an unsignalized crosswalk is provided near S. 26th Street.

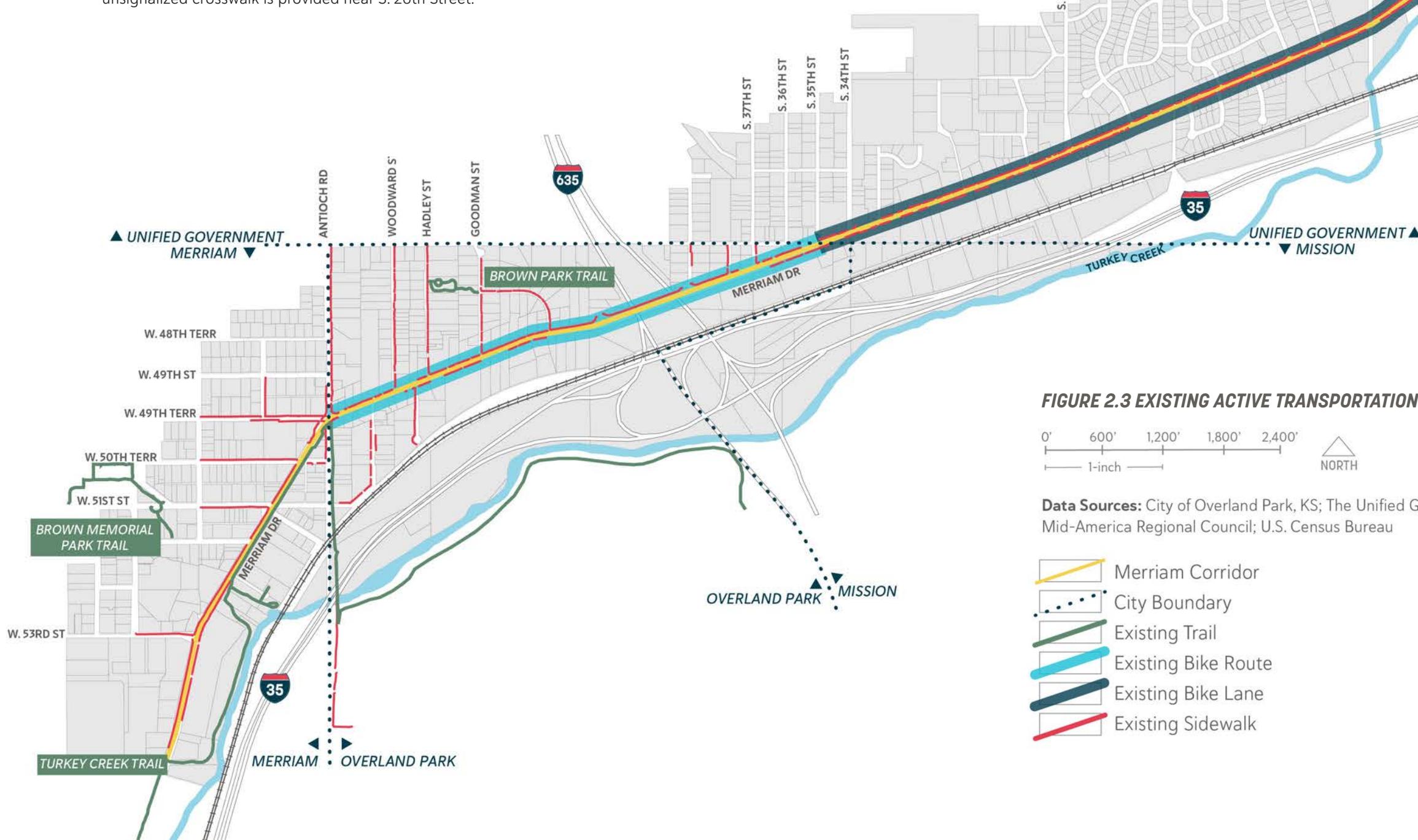
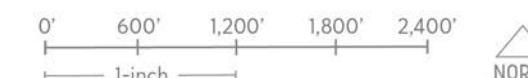


FIGURE 2.3 EXISTING ACTIVE TRANSPORTATION NETWORK



**Data Sources:** City of Overland Park, KS; The Unified Government of Wyandotte County and Kansas City, KS; City of Merriam, KS; Mid-America Regional Council; U.S. Census Bureau

- Merriam Corridor
- City Boundary
- Existing Trail
- Existing Bike Route
- Existing Bike Lane
- Existing Sidewalk

Sidewalk infrastructure on the Johnson County portion of the corridor is much more disjointed. Sidewalks are generally older and in poor condition. Several large gaps are without sidewalks, including the south side of Merriam Drive from approximately Riley Street to Craig Lane. Between Craig Lane and Antioch Road, sidewalks are intermittent and often interrupted by parking lots with no dedicated pedestrian facilities or markings. Sidewalks are generally present on the corridor south of Antioch Road. Crosswalks are provided at the Antioch Road signalized intersection.

Even in locations along the corridor with continuous sidewalks, the pedestrian experience is often interrupted by wide driveways that can create an uncomfortable walking environment. Additionally, cars have been observed parking on sidewalks at numerous locations on the corridor. Opportunities for pedestrians to safely cross the corridor are limited, often with large gaps between crosswalks.

Sidewalk infrastructure on cross streets within the corridor is limited. Within Merriam and Overland Park, sidewalks on streets connecting to Merriam Drive are generally provided on one side of the street, as is the standard in both cities. In the Unified Government, there are no sidewalks that connect Merriam Lane to surrounding neighborhoods except for the portion of the corridor east of S. 10th Street.

## EXISTING BICYCLE TRANSPORTATION

Existing bicycle infrastructure along the corridor varies by jurisdiction. Merriam Lane (starting at S. 35th Street) has bicycle lanes in each direction. These lanes are continuous in the Unified Government portion of the corridor, except for dropping at the intersection of S. 24th Street to accommodate a left turn lane in the westbound direction. While the bicycle lanes provide space for bicyclists, there are many conflict points due to a multitude of driveways and street intersections along the corridor.

The bicycle lanes on Merriam Lane connect to bicycle lanes on Southwest Boulevard and form a continuous bicycle route from the Wyandotte/Johnson County line to 25th Street in Kansas City, Missouri. This approximately five-mile-long route is a critical on-street link in the regional bicycle network, facilitating both commuter and local bicycle trips.

The southern portion of Merriam Drive (within Johnson County) does not have existing on-street bicycle infrastructure. Bicyclists are forced to either ride in the street or on sidewalks, which are not continuous. However, the southern portion of Merriam Drive within Merriam includes the Turkey Creek Trail, an off-street multi-use path. This trail extends south to 75th Street, with multiple access points to surrounding neighborhoods, forming an important off-street north/south bicycle route in northern Johnson County.

Opportunities for bicyclists to connect to and from the corridor utilizing dedicated infrastructure are limited, primarily due to major barriers such as I-35, I-635, and the rail corridor. For example, the Turkey Creek Trail is interrupted at Waterfall Park by the railroad, I-35, Antioch Road, and an on-ramp from Antioch Road to I-35. The trail continues south of I-35 between Antioch Road and Metcalf Avenue, but a bicyclist must navigate the section of Merriam Drive north of Waterfall Park and cross I-35 on Antioch Road, using a sidewalk that is not a standard width for bi-directional cycling. Additionally, the section of trail south of I-35 between Antioch Road and Metcalf Avenue is currently not passable as reported by city officials due to a rockslide that has damaged the trail and has been cost prohibitive to repair.

## ON-STREET BICYCLE INFRASTRUCTURE EXAMPLES



### SHARROW

Shared on-road lanes for vehicular and bicycle traffic are indicated with arrow markings, nicknamed "sharrows." Bicyclists ride in vehicular traffic and must obey the same traffic rules as other road users. Sharrows offer little protection for bicycle traffic.



### BIKE LANE

A bicycle lane is a marked on-road lane dedicated to bicycle traffic. The lane is indicated by road markings only and uses the space from the dedicated area to provide safety from vehicular traffic.



### BUFFERED BIKE LANE

Buffered bike lanes give bicyclists additional protection by dedicating space between vehicular and bicycle traffic.



### CYCLE TRACK: AT-GRADE WITH BOLLARD PROTECTION

Cycle tracks further separate bicycle traffic from vehicular traffic by adding physical barriers between the two modes of travel. In this case, the cycle track is at the same grade as the roadway with a series of bollards to prevent vehicles from drifting into the bicycle lane.

## TURKEY CREEK TRAIL

The Turkey Creek Trail runs adjacent to the corridor and is included in the study area. The trail begins at the southern edge of Merriam at W. 75th Street and travels 3.6 miles north into Merriam to its conclusion in Waterfall Park. There are three (3) designated trailheads at W. 75th Street, Shawnee Mission Parkway, and Waterfall Park. Access points from neighborhoods along the trail and from Merriam Marketplace exist. A section of the trail is directly adjacent to the corridor, where it narrows significantly and changes from asphalt to concrete. This narrowed section begins where Turkey Creek crosses underneath the corridor. The trail then crosses the street at a signalized pedestrian crossing at W. 55th Street, where it widens, changes back to asphalt, and moves off the street to rejoin the creek path. The trail continues on the south side of I-35, connected by a sidewalk on the Antioch Road bridge. The trail continues east to Metcalf Avenue, but is currently impassable due to a rock slide.

## EXISTING TRANSIT

The corridor does not currently have existing fixed-route bus service. A map of transit routes beyond the planning area is shown on the following page in **Figure 2.4**. The nearest RideKC bus stops to the corridor either offer limited service options or are difficult to access from the corridor. These locations include:

- Johnson Drive and Merriam Drive in Merriam, with service provided by Route 402 Johnson-Quivira.
- 48th Street and Roe Boulevard in Roeland Park, with service provided by routes 107 7th Street-Parallel, 118 18th Street, 402 Johnson-Quivira, and 403 Antioch-Downtown.
- Various bus stops along Ruby Avenue and at 40th Street and Lawrence Avenue in the Argentine neighborhood, with service provided by Route 104 Argentine.
- Southwest Boulevard and Rainbow Boulevard, with service provided by routes 11 Northeast-Westside and 107 7th Street-Parallel.
- 39th Street and Rainbow (University of Kansas Medical Center), the nearest access point to RideKC Frequent Service (15-minute headways or better) via Route 39 39th Street, as well as Routes 11 and 107.

While fixed-route service is limited, other transit options exist. The portion of the corridor within Johnson County is served by Johnson County's Micro Transit (RideKC Route 499). Micro Transit is a ride-hailing curb-to-curb service where users can schedule on-demand trips using a mobile application, by phone, or online. Micro Transit is intended to fill gaps in the regional transit system where frequent fixed-route service does not exist. Additionally, it can be an option for transit users to complete the first or last mile of their trip, such as to or from Mission Transit Center. Johnson County Micro Transit operates Monday through Saturday from 6 a.m. to 8 p.m.

The Unified Government also offers a Micro Transit service (RideKC Route 199). While the corridor is not within the service area, trips are provided outside of the area to Merriam Town Center, south of the corridor and across I-35. This is a new pilot service, and expansion of the service area or stops outside of the service area may be considered.

Demand-response paratransit service for older adults and persons with disabilities in the corridor is provided by RideKC Freedom. Program details vary by location, but involves an eligibility process and booking trips in advance by phone or mobile application. The Unified Government has received a grant to implement a point-to-point non-emergency healthcare paratransit service Countywide.

## RAIL TRANSPORTATION

A BNSF rail corridor travels through the length of the study area, to the south and generally running parallel to the corridor. This is a major regional freight connection and is double-tracked through the entire study area. According to prior studies, the corridor carries approximately 30 freight trains per day.

This corridor was part of a regional study of potential commuter rail corridors in 2002, as well as a more detailed I-35 Commuter Rail Study process. Implementation of commuter rail on the corridor was ultimately not determined to be feasible at that time and was not pursued further. While there are no current plans for commuter rail on the corridor (it is not included in SmartMoves 3.0), the fact that an existing rail corridor exists connecting Olathe to Downtown Kansas City, Missouri, via the corridor, may lead to future efforts to develop commuter rail service in the area.

## ACTIVE TRANSPORTATION OBSTACLES

The Merriam Corridor can be difficult for active transportation usage due to its proximity to active freight rail and major roadways and highways. The images below illustrate these obstacles from the vantage point of a pedestrian.



ANTIOCH ROAD AT W. 51ST STREET



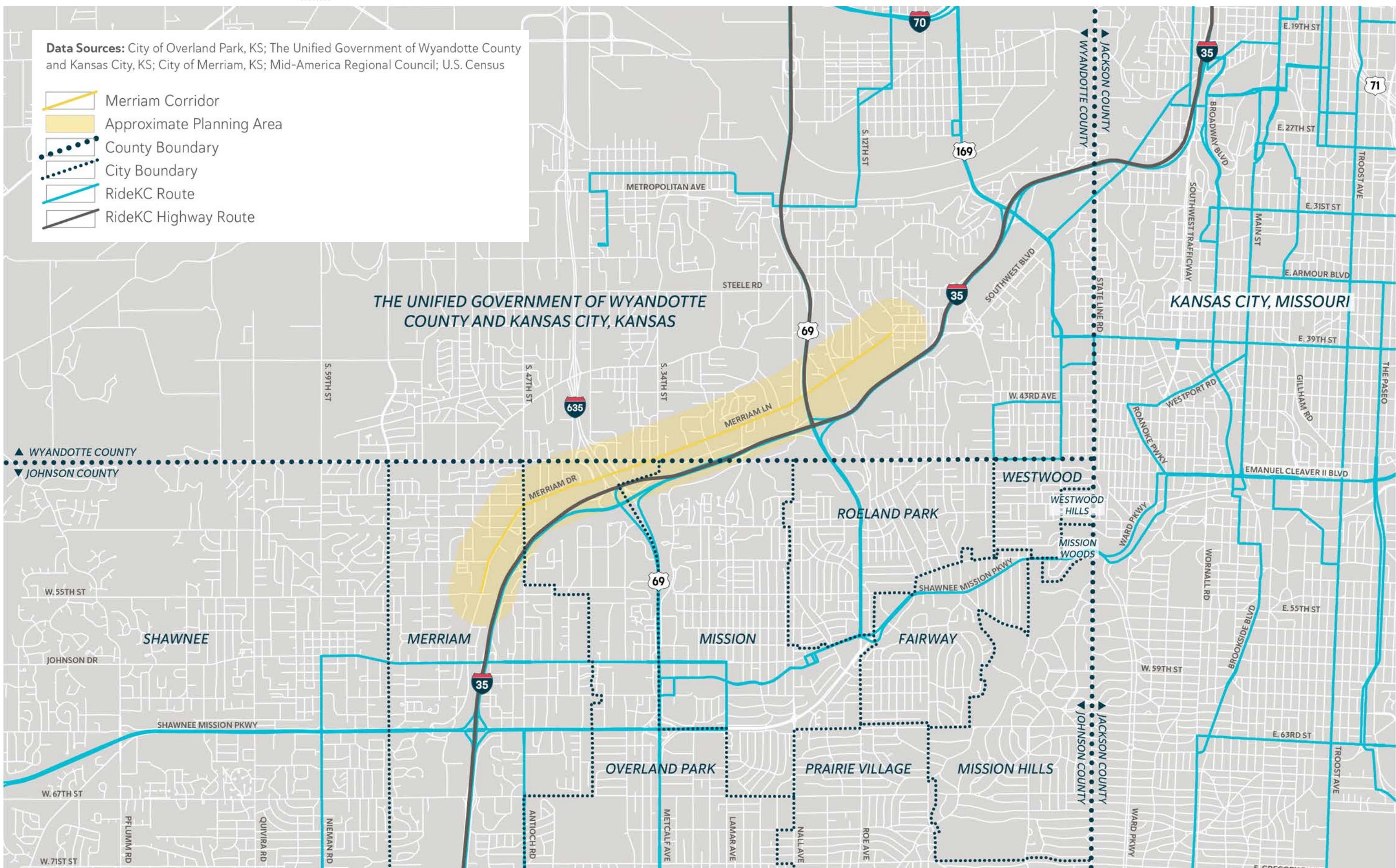
RAIL CROSSING AT S. 24TH STREET



RAILROAD CORRIDOR AND I-35

FIGURE 2.4 EXISTING FIXED ROUTE TRANSIT

NORTH



## EXISTING VEHICLE TRAFFIC OPERATIONS AND CRASHES

Existing traffic volume data was collected Thursday, April 1, 2021, and used to analyze operations along the corridor at key locations. In addition to traffic volume data, crash data was reviewed for the most recent five-year period where full data was available. The analyzed crash data was from 2015 to 2019.

The corridor supports between 12,000 vehicles per day near Antioch Road and reduces to 6,000 vehicles per day at the east end of the corridor. An operational analysis was conducted based on the traffic volume data collected using the Transportation Research Board's (TRB) Highway Capacity Manual. For simplicity, driver thresholds for acceptable and unacceptable delays are categorized into level of service letter grades. These are described in **Table 2.2**.

In general, corridor vehicle traffic operations are acceptable with all analyzed intersections operating at a Level-of-Service C or better, and individual movements operating at Level-of-Service D or better during the peak morning and afternoon periods.

Crash data was provided by MARC and analyzed for major intersections and segments along the corridor. The crash rates were calculated and compared to statewide averages to determine if locations along the corridor were contributing to a higher level of crashes compared to similar facilities within the State of Kansas. Statewide critical crash rates for intersections are ten crashes per ten million entering vehicles. The intersections of (1) Merriam Drive and Antioch Road and (2) Merriam Lane and S. 24th Street/Lamar Avenue were found to have higher than average crash rates when compared to statewide averages.\* A similar review was completed for segments along the corridor and found that the overall segment crash rate is also higher than statewide averages.

Based on these findings, alternative intersection configurations were reviewed to improve safety and maintain existing operational characteristics along the corridor. A detailed technical analysis memorandum is included in **Appendix B - Traffic Analysis**.

\*Note: (1) Merriam Drive intersection with Antioch Road experiences crash rates 23 percent higher than statewide average and (2) Merriam Lane with S. 24th Street/Lamar Avenue experiences crash patterns 84 percent higher than the statewide average. The overall corridor experiences crashes at a rate nearly three times greater than the statewide average for similar facility types.

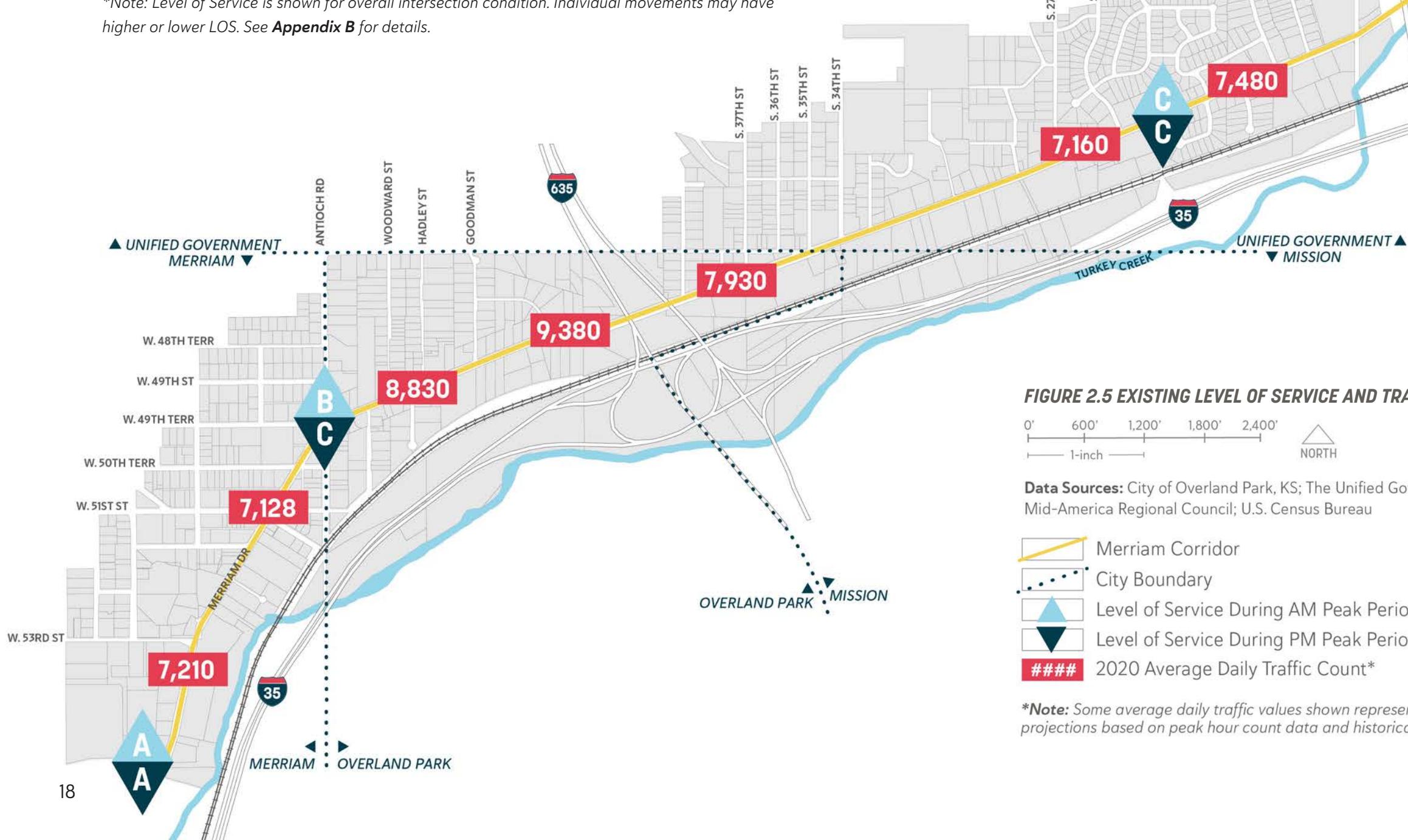


MERRIAM LANE IN THE UNIFIED GOVERNMENT

**TABLE 2.2 VEHICLE LEVEL-OF-SERVICE\***

LETTER GRADE LEVEL-OF-SERVICE	DESCRIPTION
A	Free-Flow Traffic Conditions
B	Reasonably Free Flow Conditions
C	Stable Flow Conditions
D	Approaching Unstable Flow Conditions
E	Unstable Flow Conditions
F	Forced or Breakdown Flow Conditions

\*Note: Level of Service is shown for overall intersection condition. Individual movements may have higher or lower LOS. See **Appendix B** for details.



**FIGURE 2.5 EXISTING LEVEL OF SERVICE AND TRAFFIC VOLUMES**



**Data Sources:** City of Overland Park, KS; The Unified Government of Wyandotte County and Kansas City, KS; City of Merriam, KS; Mid-America Regional Council; U.S. Census Bureau

- [Yellow Line] Merriam Corridor
- [Dotted Line] City Boundary
- [Blue Triangle] Level of Service During AM Peak Period
- [Dark Blue Triangle] Level of Service During PM Peak Period
- [Red Box] 2020 Average Daily Traffic Count\*

\*Note: Some average daily traffic values shown represent projections based on peak hour count data and historical data.

# EXISTING NATURAL FEATURES

Figure 2.6 illustrates natural features within and adjacent to the corridor.

## SPECIAL FLOOD HAZARD AREA

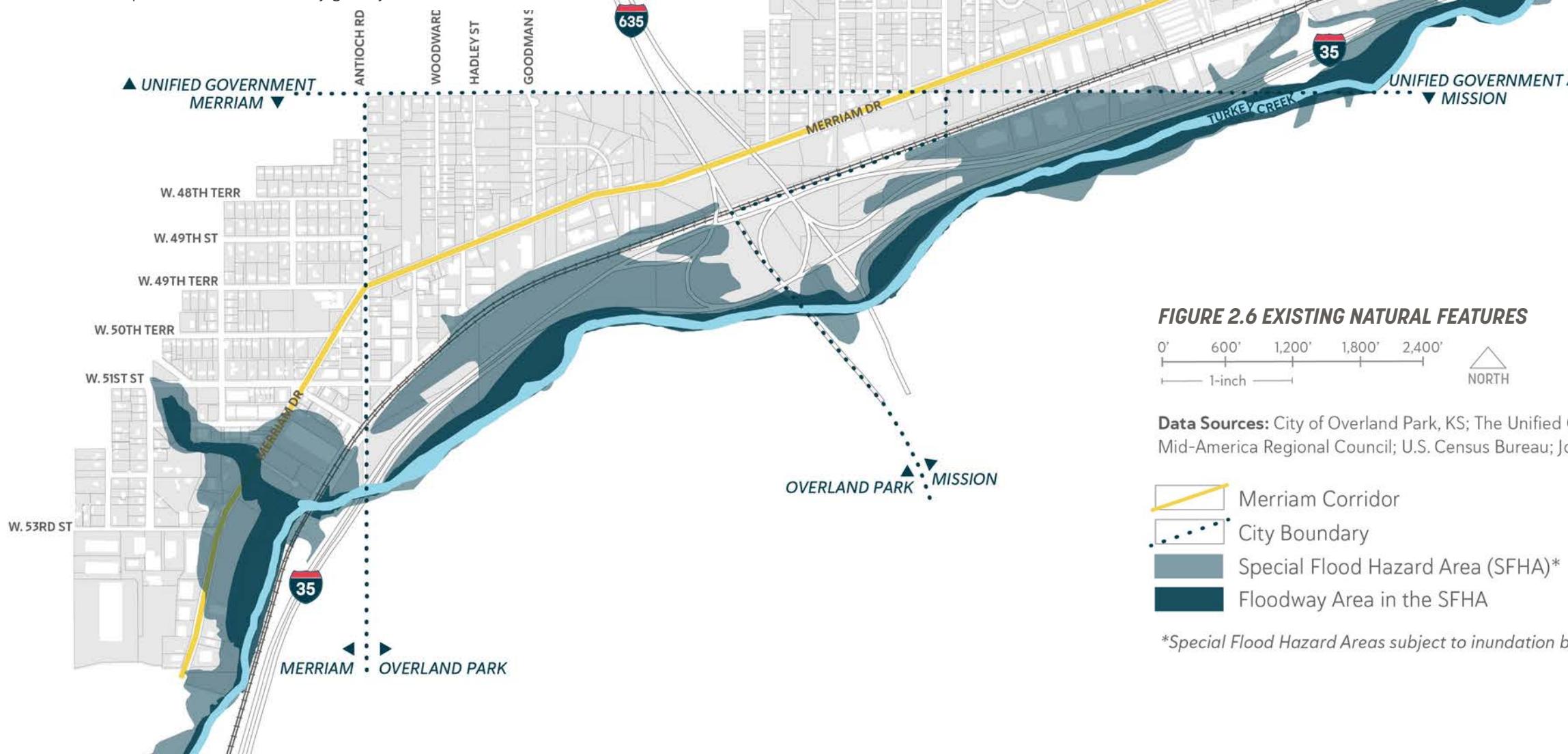
Flooding issues related to Turkey Creek are concerns for the corridor. Portions of the area have had flood risk mapped through the Federal Emergency Management Agency (FEMA) National Flood Insurance Program. FEMA typically indicates flood-prone areas through detailed hydrologic and hydraulic modeling and occasionally through approximate methods to assist with planning, management, and risk assessment within watersheds.

Special Flood Hazard Areas (SFHA), shown on **Figure 2.5** in medium blue, are defined as areas likely to be inundated by a flood event having a one percent chance of being equaled or exceeded in any given year.

## FLOODWAY AREA

Floodway areas are located within the SFHA and are indicated on the map in **Figure 2.5** in dark blue. Floodways carry the main flow of water during a flood event and constitute additional concern during times of inundation.

Due to the presence of the SFHA through much of the southern portion of the study area, it is important to consider stormwater management with future corridor improvements, including providing additional area for the natural filtration of water through green space and other best management practices such as bioswales or rain gardens.



## EXISTING PARKS AND OPEN SPACE

Several parks are located within the study area, all are located in the portion west of I-635. Only one, Waterfall Park in Merriam, is directly adjacent to the corridor. Brown Memorial Park is located in Merriam at Booker Street and W. 50th Terrace, just northwest of Waterfall Park. Brown Park is located in Overland Park at Hadley Street and 47th Street.

### WATERFALL PARK

Named for the most prominent natural feature within Turkey Creek, Waterfall Park is a 15.8-acre park with access to the Turkey Creek Streamway Trail. Other amenities include a playground, picnic areas, and soccer practice fields.

### BROWN MEMORIAL PARK

This 3.68-acre park in Merriam is named for Esther Brown, a local resident with ties to the 1954 Brown v. Board of Education lawsuit. The park has a playground, walking trails, picnic areas, a basketball court, and a pickleball court.

### BROWN PARK

Located in the North Overland Park Hills neighborhood, Brown Park is a 1.7-acre neighborhood park with a playground, walking trails, and a small shelter with picnic tables.



WATERFALL PARK



BROWN MEMORIAL PARK (COURTESY CITY OF MERRIAM)



BROWN PARK (COURTESY CITY OF OVERLAND PARK)

## EXISTING DESTINATIONS

The Merriam Corridor is home to several destinations, details of which follow:

- The **Merriam Marketplace** is just south of the corridor and hosts the **Merriam Farmers' Market** each Saturday from May through September.
- The **Boulevard Drive-In Theatre** has shown movies since it opened in 1950 and has also hosted a Swap and Shop since 1975.
- One block from the eastern planning boundary in the Unified Government is the historic **Vox Theatre and Event Space**.
- **Grandstand Burgers**, **Woodyard Bar-B-Que**, and **Tarahumara Mexican** are longtime favorite restaurants along the corridor, and in July 2021 **Meta Coffee Roasting Company** opened their first brick and mortar location on Southwest Boulevard.
- The corridor also has specialty businesses that attract customers from around the region, such as **Foxtrot Studio**, **Nigro's Western Stores**, and **House of Rocks**.



WATERFALL PARK



MERRIAM FARMERS' MARKET (COURTESY CITY OF MERRIAM)

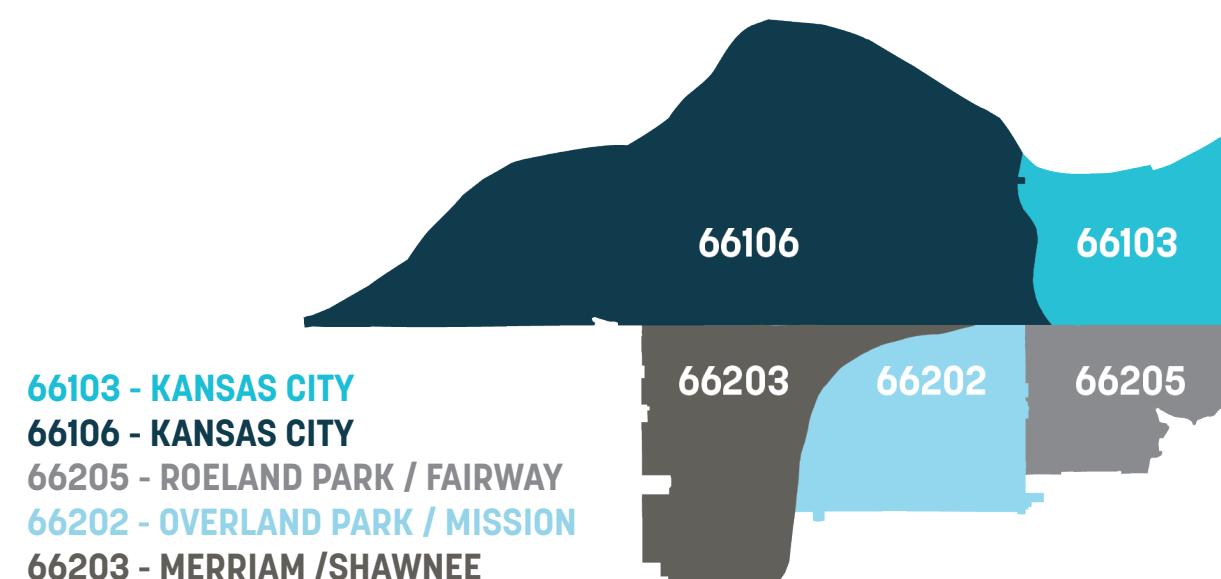


BOULEVARD DRIVE-IN (COURTESY FLATLAND KC)

## DEMOGRAPHIC TRENDS OF STUDY AREA ZIP CODES

A Market and Economic Study was created as part of this planning process. To attract new developments into the corridor that will serve as destination attractions, customers must be drawn from outside its boundaries. Therefore, demographic characteristics and trends of five zip codes in and surrounding the study area are included in the Market and Economic Study and referred to as the “market area.” The graphics in this section present an overview of the market area’s demographic composition. The complete demographic inventory conducted as part of the Market and Economic Study is provided in **Appendix A - Market and Economic Study.**

### MARKET AREA BY ZIP CODE

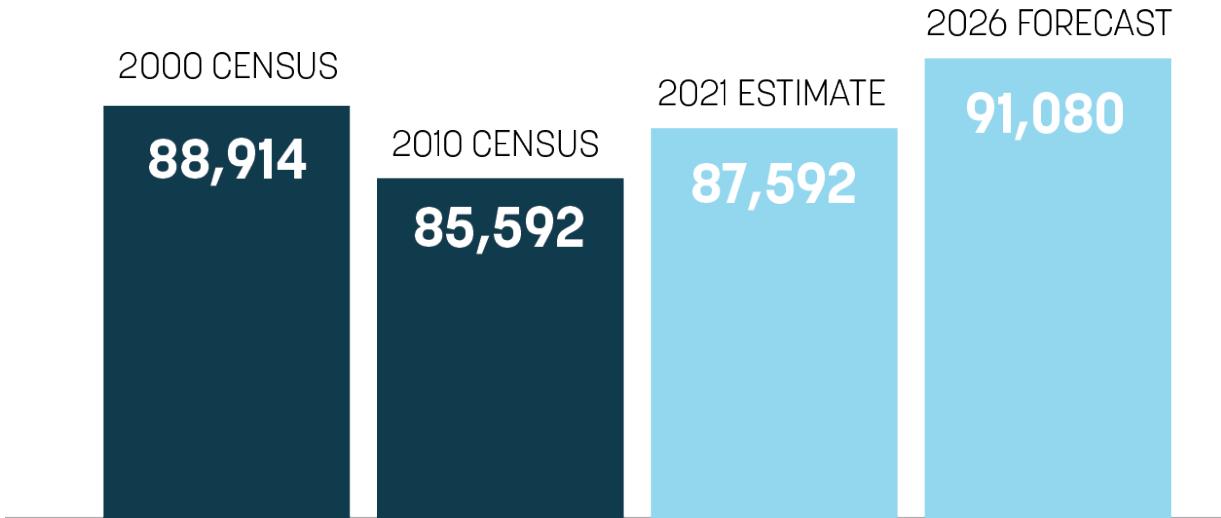


### MEDIAN HOUSEHOLD INCOME

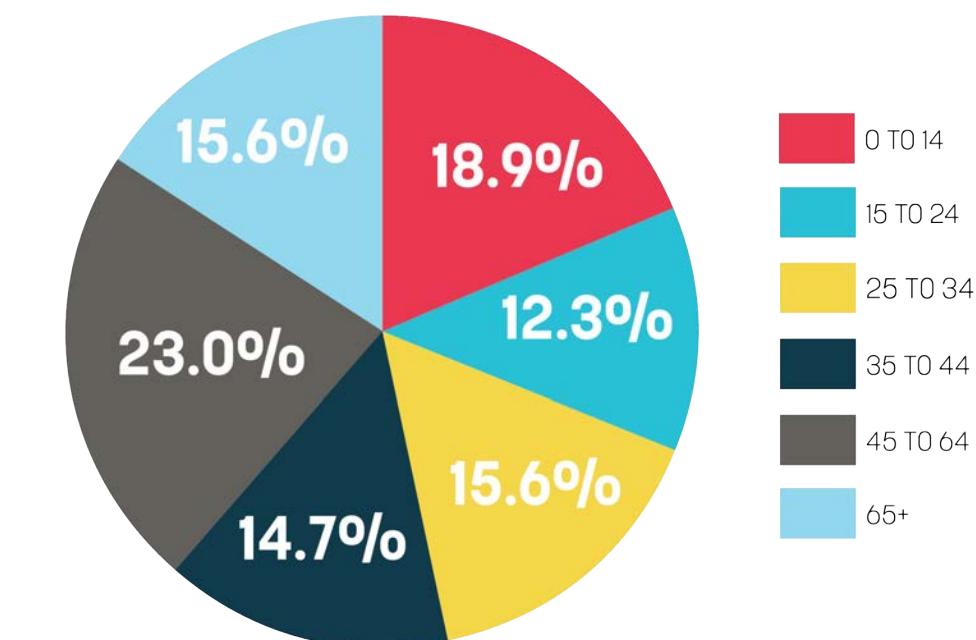


IN THE NEXT FIVE YEARS, THE MARKET AREA POPULATION IS PREDICTED TO **INCREASE BY 3,488 RESIDENTS.**

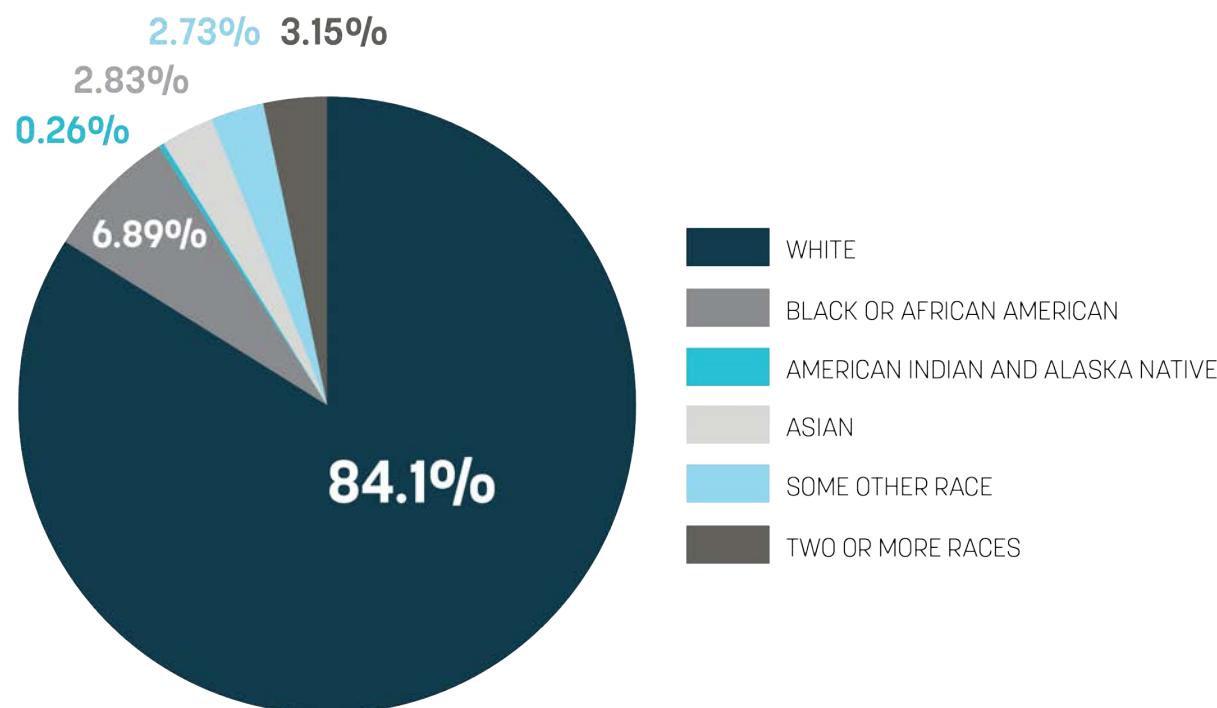
### MARKET AREA POPULATION TRENDS



### 2021 POPULATION AGE DISTRIBUTION



## 2021 RACIAL DISTRIBUTION



**16.6%**

OF THE CORRIDOR  
POPULATION IS OF  
HISPANIC OR  
LATINO ORIGIN

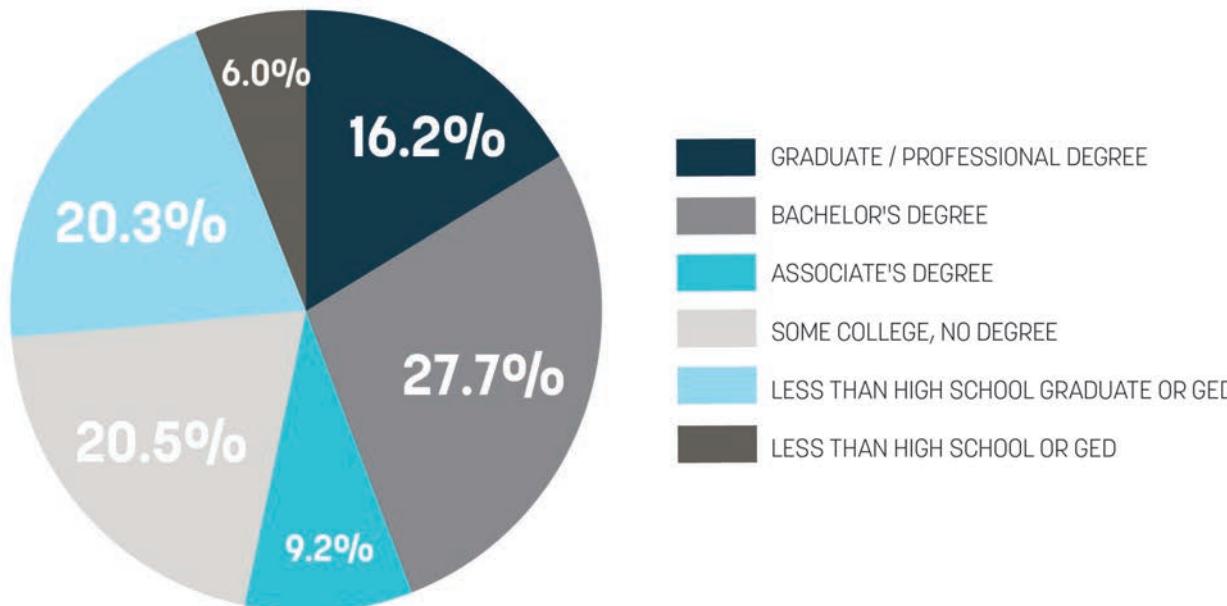
**58.7%**

OF THE CORRIDOR  
POPULATION IS  
WHITE ALONE  
(NOT HISPANIC OR  
LATINO)

**17.3%**

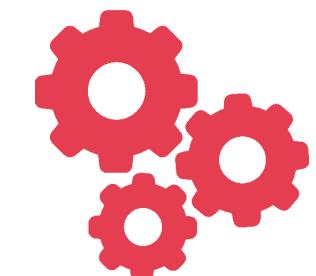
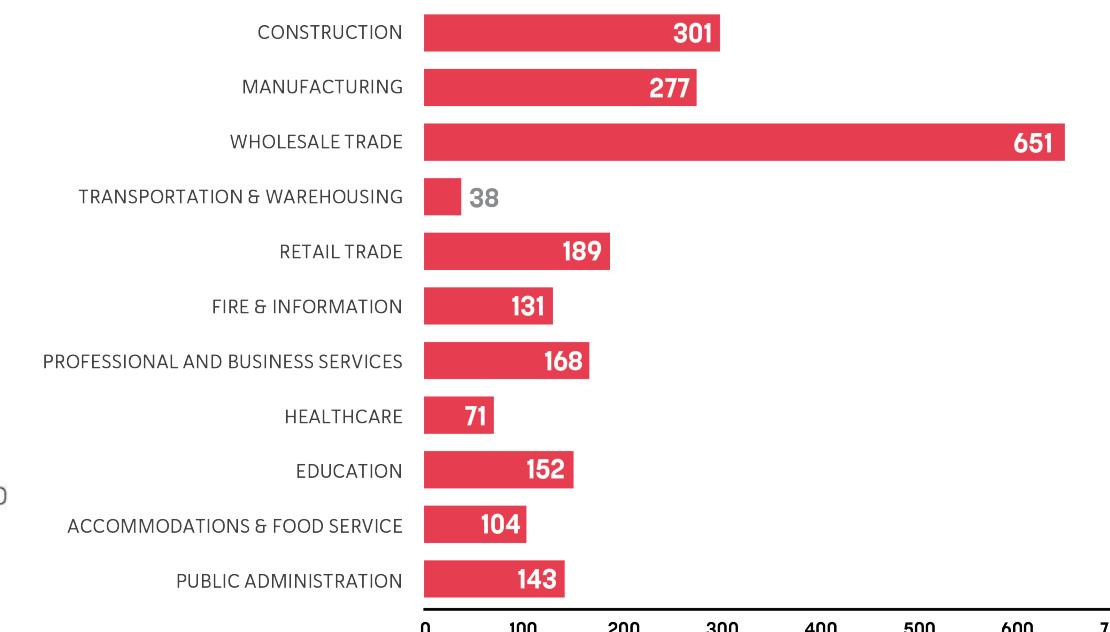
OF THE CORRIDOR  
POPULATION SPEAK  
A LANGUAGE OTHER  
THAN ENGLISH AT  
HOME

## 2021 POPULATION EDUCATIONAL ATTAINMENT



## MARKET AREA EMPLOYMENT BY SECTOR

THE MARKET AREA HOUSES 255 BUSINESSES  
SUPPORTING A TOTAL EMPLOYMENT OF 2,681 JOBS



INDUSTRIAL-RELATED  
EMPLOYMENT TOTALS

**966 JOBS OR  
36.0%**  
OF TOTAL EMPLOYMENT

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# 3

## SECTION THREE RECOMMENDATIONS

**Section 3 - Recommendations** incorporate the work completed in prior sections and provide an overview of the analysis conducted to arrive at a set of recommendations for local jurisdictions to implement the vision of the Plan. The recommendations will guide the corridor's future land use, development, aesthetics, and transportation connectivity improvements. Prior to arriving at specific recommendations, key corridor issues and functions are presented. These items set the stage for outlining a series of recommendations to improve the corridor and its primary functions.

In order to maintain consistency with the established purpose and need of the project, this section outlines the recommendations according to the vision for the future corridor established in Section 1. Specific methodologies address the overall corridor vision and primary themes for this study, including connectivity, safety, and accessibility; balanced; vibrant; visually appealing; and sustainable. Graphics are provided throughout each section for further illustration of the recommended strategies.

## KEY CORRIDOR ISSUES

- The corridor lacks appropriate access and safety considerations for all users. While this varies along the corridor, cohesive bicycle and pedestrian facilities connections are missing across the length of the corridor, or to adjacent neighborhoods.
- The corridor lacks a defined sense of place. Due to being split by multiple jurisdictions, the corridor lacks cohesive branding or a vision for improvements.
- There is a lack of public spaces along the corridor, limiting the ability of the surrounding community to gather and participate in recreational and social activities to build social capital.
- Housing format variety is limited. Nearly all housing within the corridor study area is mature single-family residential.
- Numerous major physical barriers, including I-35, I-635, US-69, and railroad tracks, exist along the corridor. These barriers are especially significant to those traveling within the corridor without a car.
- The corridor includes numerous low-lying areas adjacent to Turkey Creek that are prone to flooding.
- Aging public infrastructure exists along portions of the corridor, as well as in adjacent neighborhoods.
- The number of driveways and variety of roadway configurations along the corridor present a real safety threat to pedestrians and bicyclists traveling along the corridor.
- The corridor includes conflicting land uses, with industrial uses in close proximity to residential neighborhoods.
- The corridor is highly paved, with many large driveways and underutilized parking lots. This contributes to stormwater challenges, poor aesthetics, and environmental impacts.

## PRIMARY CORRIDOR FUNCTIONS

To provide a framework and vision of the land use and transportation future of the corridor, three primary functions of the corridor were considered: commuter corridor, regional destination, and neighborhood center. These are far from the only functions that the corridor serves, but are illustrative and are rooted in the existing conditions of the corridor as well as the market analysis and public and stakeholder feedback.

The Merriam Corridor is a diverse corridor used for a variety of purposes by a variety of people. Certain elements of the three functions are present both in the existing corridor and in the illustrative plan. Viewing the corridor from each unique perspective allows for the determination of the attributes that best match the stated public vision, and how these elements can work together to achieve project goals.

### COMMUTER CORRIDOR

This commuter corridor function represents the corridor primarily as a way of supporting the movement of cars through the area, as a parallel and redundant commuter route to I-35. Due to the proximity to I-35, the corridor can be impacted by traffic crashes along I-35. Crashes occur in the vicinity of the I-635 interchange with some frequency, particularly during the evening commute. During traffic incidents, vehicles can re-route along Merriam Drive/Lane between Antioch Road and US-69 Highway. Apart from its ability to facilitate incident related traffic, the proximity to I-35 facilitates land uses primarily auto-focused, along with industrial uses with easy access to the interstate. While sufficient street capacity and easy access to both Merriam Drive/Lane and to I-35 are important for many of the existing industrial uses of the corridor, minimal space is supplied for users who travel within and through the corridor by other means, such as by walking or bicycling. Safe and connected facilities for these users are often lacking, and the environment does not facilitate development at a pedestrian scale.

Incorporating appropriate facilities in the corridor does have the potential for increasing the functionality for other modes. This is especially true for bicycle travel, as bicycle facilities on the Merriam Corridor would connect to other regional facilities, creating a long bicycle route to facilitate nonmotorized commuter travel. The corridor also has future potential for transit investments to serve a commuter function. Currently, express bus services exist on I-35. Opportunities for future bus and rail investments are explored later in this section.



I-635 BRIDGE OVER MERRIAM DRIVE

## REGIONAL DESTINATION

The Merriam Corridor does have key components of an employment, entertainment, and recreational destination drawing from the broader Kansas City region. Strategies to amplify this corridor function could build on the presence of the Boulevard Drive-In Theatre, an existing regional entertainment destination. Added opportunities for attractions could be developed in the form of parks and outdoor recreation, using property along Turkey Creek for the development of parks and trail amenities. While this recreational function exists in Merriam with the trail and Waterfall Park, recreational opportunities are lacking in the Mission, Overland Park, and Unified Government portions of the corridor. Extending the Turkey Creek Trail and integrating parks and recreational amenities with new development along the new trail can provide a new regional amenity for existing residents and other users of the corridor, as well as attracting visitors from throughout the region.

Automobile access and roadway capacity will continue to be a key part to the corridor; however, placing a stronger emphasis on facilitating active transportation options and connecting to new destinations would enhance visitors' comfort while moving about the area and using amenities along the corridor. Land use strategies should maximize the corridor's potential for retail and other commercial uses, and make efforts to attract large retail centers or major employers. This strategy will be difficult to implement without causing significant displacement or disruption of existing properties and uses, as the corridor is lacking in large vacant parcels needed for regional-level uses and attractions.

## NEIGHBORHOOD CENTER

The third corridor function is a neighborhood center and serves as a primary gathering place for adjacent neighborhoods, while also supplying multimodal connectivity to surrounding areas, on a more limited scale. Redevelopment initiatives should target key locations for neighborhood-focused services and other uses, with the transportation system prioritizing lower-speed transportation such as walking and biking in target locations. To maximize the corridor's function as a neighborhood center, moving vehicles quickly through the corridor should not be a significant consideration.

The neighborhood center function is most visible in the Rosedale neighborhood at the far east end of the corridor. This area consists of small and pedestrian-scaled businesses fronting Merriam Lane and Southwest Boulevard, including the historic Vox Theatre event space. These businesses serve as a commercial center and gathering place for the surrounding neighborhood.

Plan elements to improve the safety and comfort for those walking or traveling by bicycle in corridor should facilitate development more pedestrian friendly and caters to all users. Businesses become more accessible and visible to all users. Enhancing the Neighborhood Center function of the corridor would focus on creating a suitable environment for new businesses such as small grocery stores, restaurants, and other similar uses.



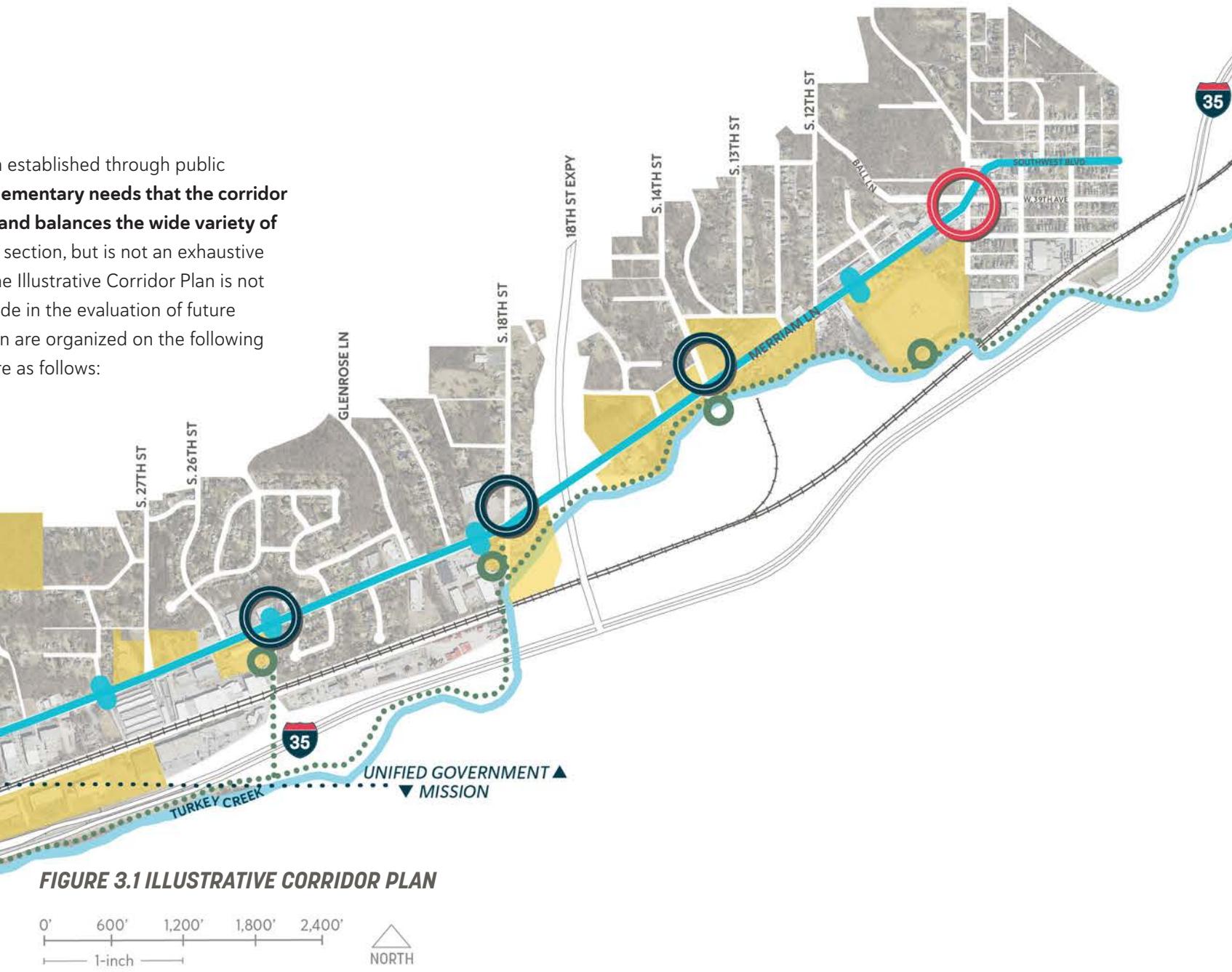
TURKEY CREEK TRAIL IN WATERFALL PARK

# ILLUSTRATIVE CORRIDOR PLAN

The recommendations in this section are a result of exploring methods from moving the Merriam Corridor closer to the vision established through public engagement at the beginning of the project. **Because of the diversity of the corridor, and the many competing and complementary needs that the corridor must serve, the recommended corridor scenario (the Illustrative Corridor Plan) combines elements of each alternative and balances the wide variety of functions and users on the corridor.** Figure 3.1 is a visual representation of the recommendations discussed in the following section, but is not an exhaustive list of the recommendations, as some recommendations cannot easily be captured in this visual. It is important to note that the Illustrative Corridor Plan is not a detailed development proposal or capital improvements plan. The illustrated recommendations should serve as a policy guide in the evaluation of future development proposals and capital improvement projects within the corridor. Plan recommendations presented in this section are organized on the following pages according to each of the five themes specified in the Vision for the future corridor in **Section 1 - Introduction**. These are as follows:

- Connected, Safe, and Accessible
- Balanced
- Vibrant
- Aesthetically Pleasing
- Sustainable

Specific methodologies are supplied in the form of strategies for each general recommendation and are noted at the beginning of each strategy section. Graphics are provided throughout each section for further illustration of the recommended strategies.



**Data Sources:** City of Overland Park, KS; The Unified Government of Wyandotte County and Kansas City, KS; City of Merriam, KS; Mid-America Regional Council; U.S. Census Bureau

- |  |   |
|--|---|
|  | City Boundary   |
|  | Key Development/Redevelopment Site                            |
|  | Existing and Proposed Two-Lane Roadway Section with Bike Lane |
|  | Proposed Three-Lane Roadway Section with Bike Lane            |
|  | Proposed Three-Lane Roadway Section with Shared Use Path      |
|  | Proposed Primary Monument                                     |
|  | Proposed Secondary / Tertiary Monument                        |
|  | Existing Trail  |
|  | Proposed Trail  |

# HOW TO MAKE THE MERRIAM CORRIDOR CONNECTED, SAFE, AND ACCESSIBLE



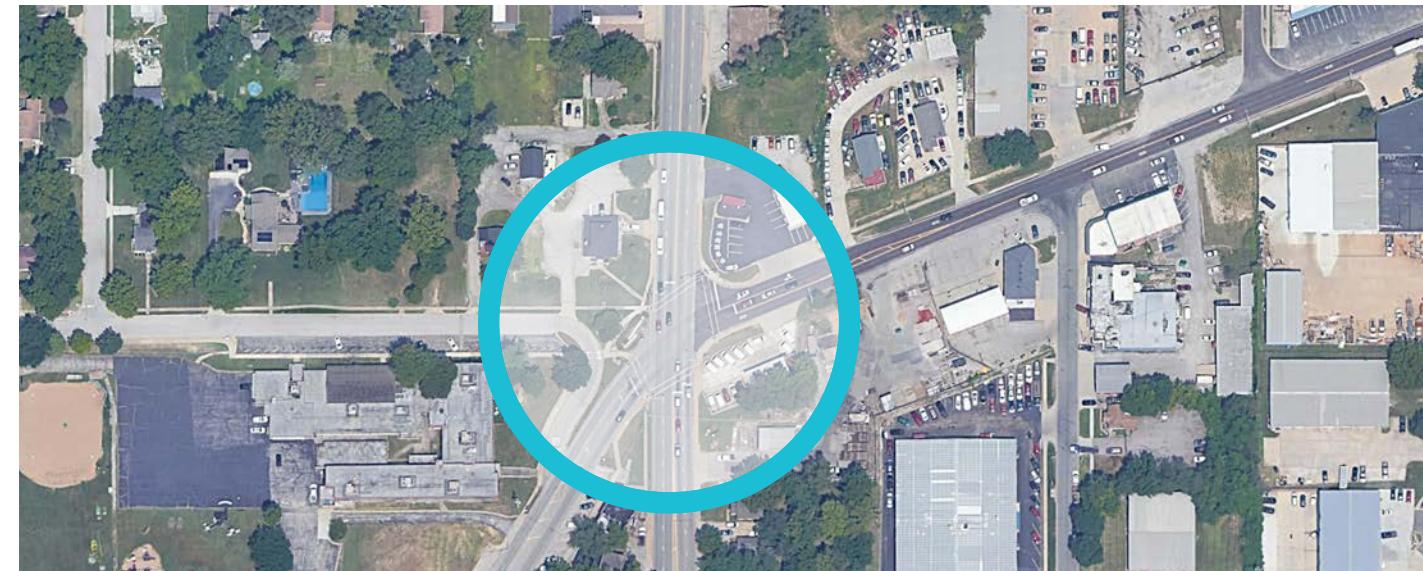
Improving transportation connectivity was a primary goal throughout the planning process, as expressed by residents and stakeholders who provided input in the survey and open house meetings. The Merriam Connected Corridor Plan recognizes the need for improved infrastructure for all modes by recommending new bicycle and pedestrian facilities on Merriam Drive and Merriam Lane, as well as sidewalk enhancements on connecting streets. The goal of these recommendations is to provide a safer environment for those walking or biking in the corridor, and maximizing access to existing and proposed facilities and developments in the project area.

Improving the safety and accessibility for all transportation modes in the corridor was a common theme expressed by the community during the public engagement process, and therefore is a key focus of the Plan's recommendations. As documented in the **Section 2 - Existing Conditions**, the corridor has several key attributes that offer building blocks to maximize the impact of future bicycle and pedestrian investments. Most notably, these include the presence of existing bicycle lanes and new sidewalks on Merriam Lane within the Unified Government portion of the corridor, and the presence of the Turkey Creek Trail in the western segment of the corridor within the City of Merriam. Therefore, improvements to bicycle safety and connectivity along the corridor can better facilitate inter-jurisdictional travel and have a regional impact. Additionally, recommendations have been developed to improve intersection geometry and overall traffic safety. The following sections describe specific improvements to enhance safety, accessibility, and operations for all modes along the corridor.



## INTERSECTION OF MERRIAM LANE AND S. 24TH STREET/LAMAR AVENUE

The intersection of Merriam Lane with S. 24th Street/Lamar Avenue is recommended to receive geometric improvements to provide improved radii at the intersection to accommodate heavy vehicles and the addition of an eastbound right-turn lane to allow more efficient travel to the freeway south of the corridor. As discussed further in recommendation for multimodal improvements, sidewalks are also recommended on the south side of Merriam Lane at this intersection, with appropriate crosswalks across both Merriam Lane and S. 24th Street.



## MERRIAM DRIVE AND ANTIOCH ROAD ROUNDABOUT

Rebuild the Merriam Drive and Antioch Road intersection as a roundabout, as shown in **Figures 3.2 and 3.3**. In this concept, 49th Terrace would no longer intersect with Merriam Drive, and access along 50th Terrace between Merriam Drive and Antioch Road would be modified. It is recommended that 50th Terrace become one-way eastbound or provide right-in/right-out access with Merriam Drive if preferred to remain two-way. Traffic analysis indicated that all the levels of service and queues in both peak hours would be improved at the intersection utilizing a roundabout versus the existing traffic signal. Safety would also be improved due to the lower speeds through the intersection. Additionally, the roundabout would facilitate the transition of the corridor from a three-lane section west of Antioch Road to a two-lane section east of Antioch Road. Street section details are provided on page 34.



FIGURE 3.2 MERRIAM DRIVE AND ANTIOCH ROAD ROUNABOUT CONCEPT



FIGURE 3.3 MERRIAM DRIVE AND ANTIOCH ROAD ROUNDABOUT CONCEPT

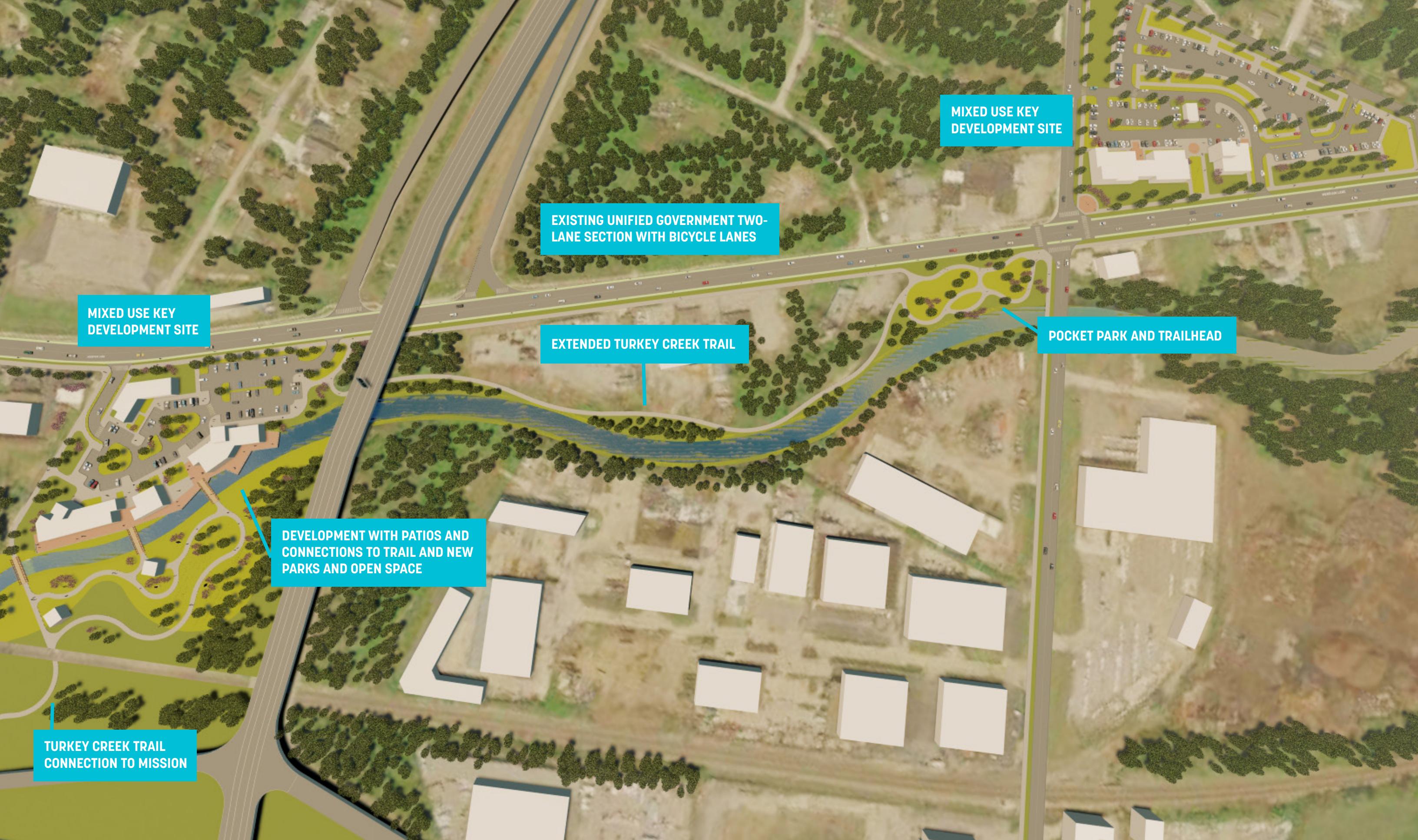


FIGURE 3.4 MERRIAM LANE AT 18TH STREET EXPRESSWAY CONCEPT

## ACCESS MANAGEMENT

Access management refers to the proactive management of vehicular access points to destinations adjacent to a roadway. When done properly, access management creates a safe and efficient transportation network by adherence to the following techniques:

- **Traffic Signal Spacing:** Increase the distance between traffic signals to improve the flow of traffic, reduce congestion, and improve air quality.
- **Driveway Spacing:** Fewer driveways spaced further apart allows for more orderly merging of traffic, presents fewer challenges to drivers, and reduces potential conflict points.
- **Safe Turning Movements:** Dedicated left- and right-turns, indirect left-turns, U-turns, and roundabouts keep through-traffic flowing will reducing conflict points. Roundabouts present a unique opportunity to reduce conflict points and reduce severe crashes (right-angle).
- **Median Treatments:** Two-way left-turn lanes (TWLTL) and non-traversable raised medians are examples of effective ways to regulate access and reduce crashes.
- **Right-of-Way Management:** Protecting right-of-way for probable future road widening, supplying adequate sight distance, access locations, and other related issues are key considerations along a corridor.

Along the corridor, principles of access management that are recommended include driveway spacing, safe turning movements, and median treatments. These specific techniques were chosen as the best ways to improve mobility and safety. Specific recommendations are discussed in detail below and illustrated specifically along the corridor in **Figures 3.5 through 3.7**. It is important to note that each jurisdiction will need to conduct a more rigorous access management study and process, which should include direct engagement with impacted property owners. Several access management locations along the corridor require a significant restructuring of parking lots, and potential loss of parking.

### DRIVEWAY CONSOLIDATION AND INTERSECTION REALIGNMENT

One of the primary reasons for review of driveway consolidation is to reduce the challenges drivers face traveling along the corridor. This is particularly clear in the area between Antioch Road and I-635 where the total number of driveways per mile segment exceeds 70. (20 to 30 driveways per mile is typically acceptable along facilities like the Merriam Corridor). Additionally, the number of driveways is a crucial factor when considering the addition of bicycle and pedestrian facilities along a roadway. Closing and/or consolidating driveways is not only a way to make the corridor function more efficiently, but also makes it safer for all users.

As redevelopment occurs along the corridor, access locations should be removed or consolidated to reduce conflict points, improve traffic flow, and enhance safety for all users. The consolidation and/or removal of driveways may require cross-access easements with adjacent properties. In addition, due to the predominantly industrial nature of the area, careful consideration should be made to delivery and heavy-vehicle access.

Another consideration to improve access management includes the alignment of intersections. Intersections in which two (2) legs of the intersection do not align can result in safety concerns as left-turn movements can often overlap. Aligning side streets and driveways can improve both the safety and ability of these locations by supplying clear direction to drivers. When considering access consolidation, it is recommended to look for opportunities to align driveways along the corridor.

### SAFE TURNING MOVEMENTS AND MEDIAN TREATMENTS

The recommended section along most of the corridor includes two primary driving lanes and buffered bicycle lanes with portions of the corridor receiving a dedicated left-turn lane separating the through lanes. This configuration will limit the number of conflict points, separate conflict points, and remove slower turning vehicles from through lanes. Additionally, recommendations to add roundabouts at Antioch Road and the I-635 interchange ramps aim to reduce overall conflict points and crash severity.

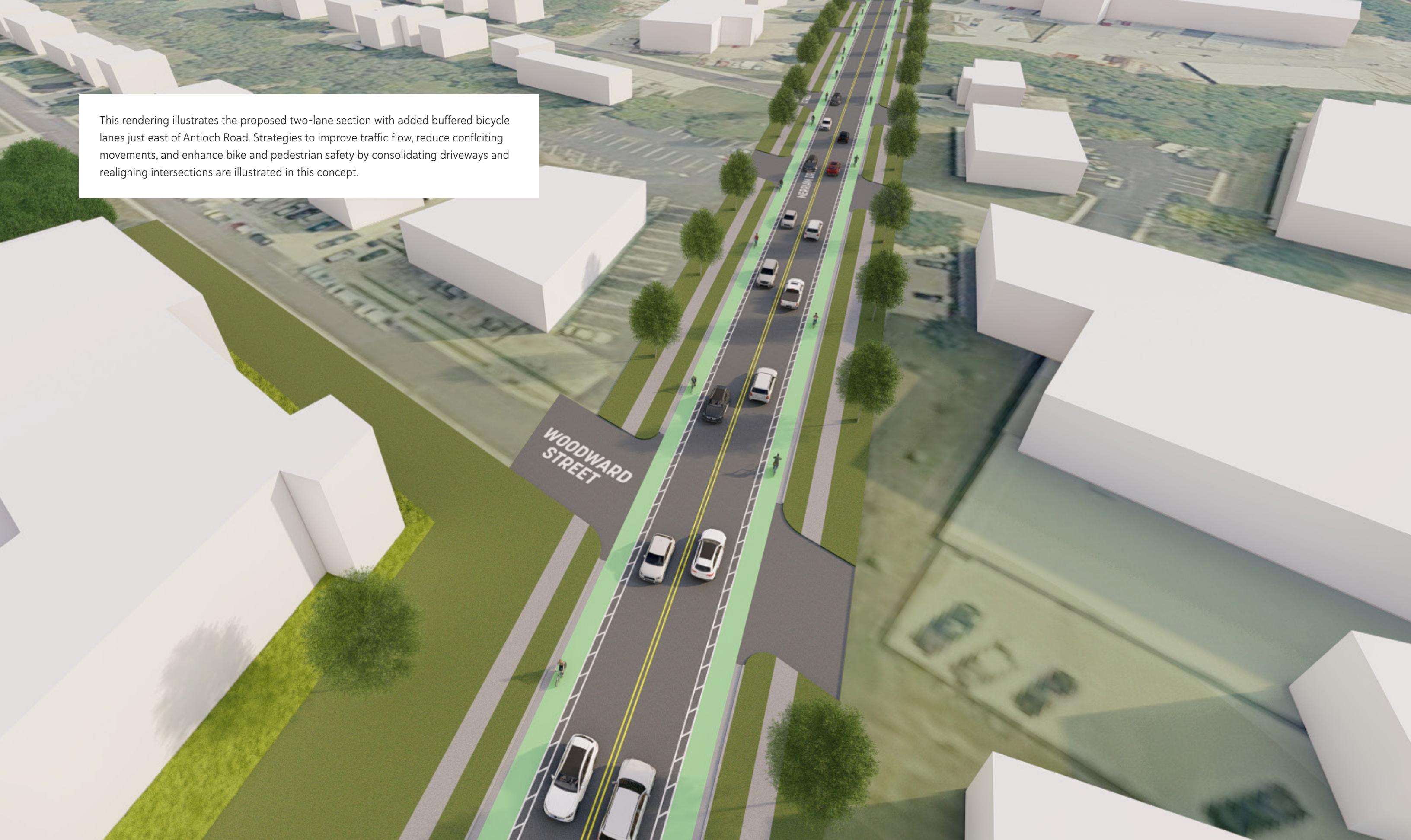
## SAFETY CONSIDERATIONS

One of the primary concerns on the corridor is safety. If all users of the transportation network do not feel comfortable, then the recommendations are ultimately useless. Consideration of bicycle lane widths, buffer width, and vehicle lane widths have been discussed from a safety perspective. Reducing vehicle lane widths is expected to reduce vehicle speeds along the corridor.

Improving the safety for all users is a critical factor in developing the final recommendations. The crash rates at several intersections and along specific segments of the corridor are higher than similar facilities within the State of Kansas. One of the primary factors contributing to these higher rates is the number of driveways and inconsistent access conditions (mixture of off-street parking, wide driveways, and offset driveways). A main recommendation to improve the crash rate is the consolidation of driveways, however these conditions are not likely to improve in the near-term. The addition of a two-way left-turn lane, which allows left-turning vehicles move out of the through lane, is recommended to reduce rear-end collisions along the corridor thus at once reducing the crash rate. Furthermore, reduction in lane widths along the corridor, improving geometrics at intersections along the corridor.

Improving geometrics at intersections along the corridor, including 50th Terrace, Antioch Road, and 24th Street/Lamar Avenue, will also contribute to improved safety where crash rates are highest. Solutions, including reducing the number of through lanes, roundabouts, and turn-lane improvements, can be expected to reduce speeds and crashes.

This rendering illustrates the proposed two-lane section with added buffered bicycle lanes just east of Antioch Road. Strategies to improve traffic flow, reduce conflicting movements, and enhance bike and pedestrian safety by consolidating driveways and realigning intersections are illustrated in this concept.



**FIGURE 3.5 MERRIAM DRIVE EAST OF ANTIOCH ROAD**

This rendering highlights key development site #5, with new mixed use development along Merriam Lane and serving as an activity center for surrounding neighborhoods and employment.



FIGURE 3.6 MERRIAM LANE LOOKING WEST TOWARD I-635

# HOW TO MAKE THE MERRIAM CORRIDOR BALANCED



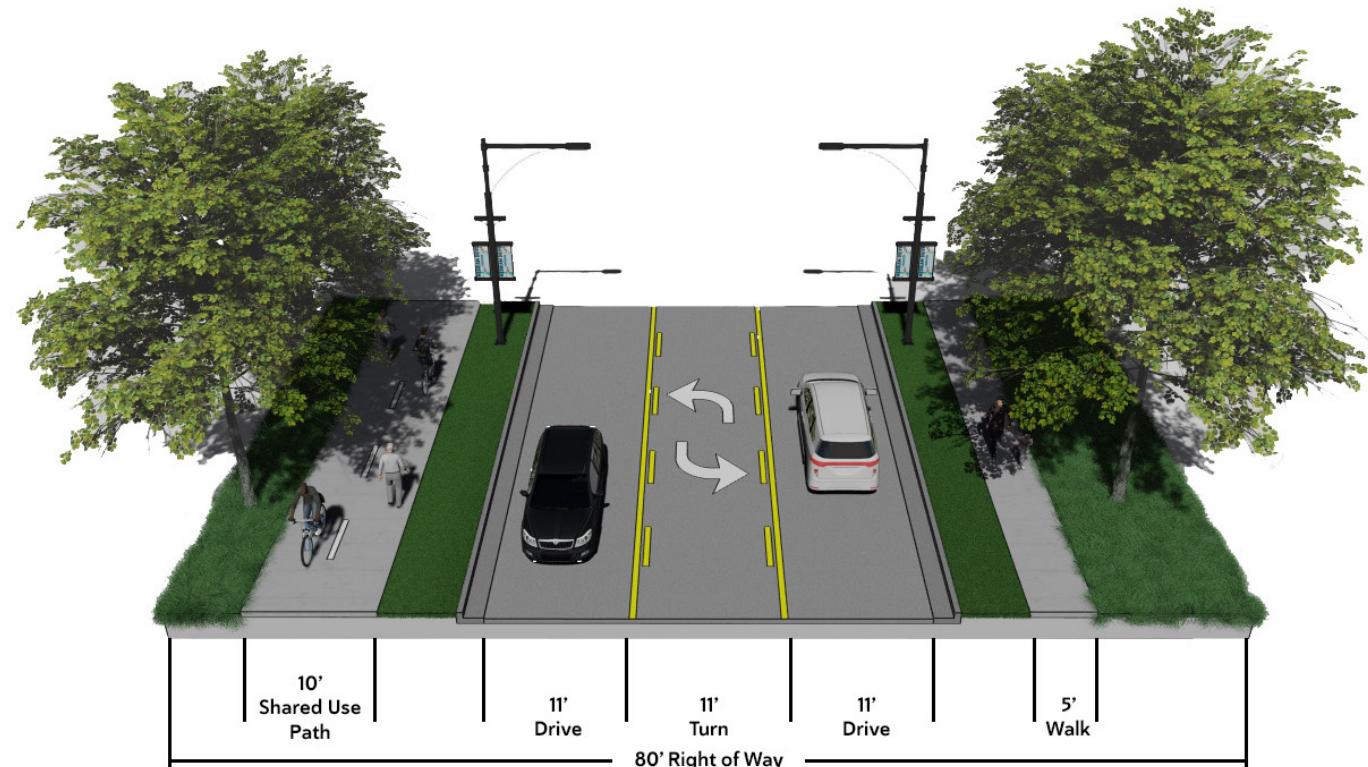
Corridor recommendations recognize the need to provide for multimodal transportation enhancements while also maintaining traffic flow and vehicular access through the corridor, to adjacent properties, and to the surrounding highway network. Street sections are recommended based on an analysis of traffic volumes, turning movements, crashes, and other safety issues or considerations. The recommended street sections vary by corridor segment, in order to best serve the needs of each unique area in the corridor and to tie into existing and planned street sections adjacent to the project area. Reducing conflict points between roadway users was a major consideration in developing recommendations for a new roundabout at the Merriam Drive and Antioch Road intersection, managing access from Merriam Drive/Lane to adjacent properties, and providing new bicycle facilities to reduce conflict points between modes.

## PROPOSED STREET SECTIONS

Improving the safety and accessibility for all transportation modes in the corridor was a common theme expressed by the community during the public engagement process, and therefore is a key focus of the Plan's recommendations. As documented in the **Section 2 - Existing Conditions**, the corridor has several key attributes that offer building blocks to maximize the impact of future bicycle and pedestrian investments. Most notably, these include the presence of existing bicycle lanes and new sidewalks on Merriam Lane within the Kansas City portion of the corridor, and the presence of the Turkey Creek Trail in the western segment of the corridor within the City of Merriam. Therefore, improvements to bicycle safety and connectivity along the corridor can better facilitate inter-jurisdictional travel and have a regional impact. Additionally, recommendations have been developed to improve intersection geometry and overall traffic safety. The following sections describe specific improvements to improve safety, accessibility, and operations for all modes along the corridor. Recommended street sections are shown in *Figures 3.8* through *3.10*.

### MERRIAM DRIVE, W. 55TH STREET TO ANTIOCH ROAD (MERRIAM)

The section of the Merriam Corridor within the City of Merriam is currently a mix of three-lane and four-lane sections with no bicycle facilities. This is proposed to be converted to a three-lane section for the entire segment, and adding a shared-use path on the west side of the street, as shown in *Figure 3.8*. This recommendation is proposed in coordination with the City of Merriam's Downtown Merriam Project, which is proposing the same street section for Merriam Drive from W. 55th Street to Johnson Drive. These improvements will create a cohesive corridor north of Johnson Drive and provides new bicycle facilities on the Merriam Corridor, with a connection to the existing Turkey Creek Trail to the east of the corridor.



**FIGURE 3.8 THREE-LANE STREET SECTION WITH SHARED USE PATH**

## MERRIAM DRIVE, ANTIOCH ROAD TO CRAIG LANE, AND FOSTER STREET TO S. 35TH STREET (OVERLAND PARK)

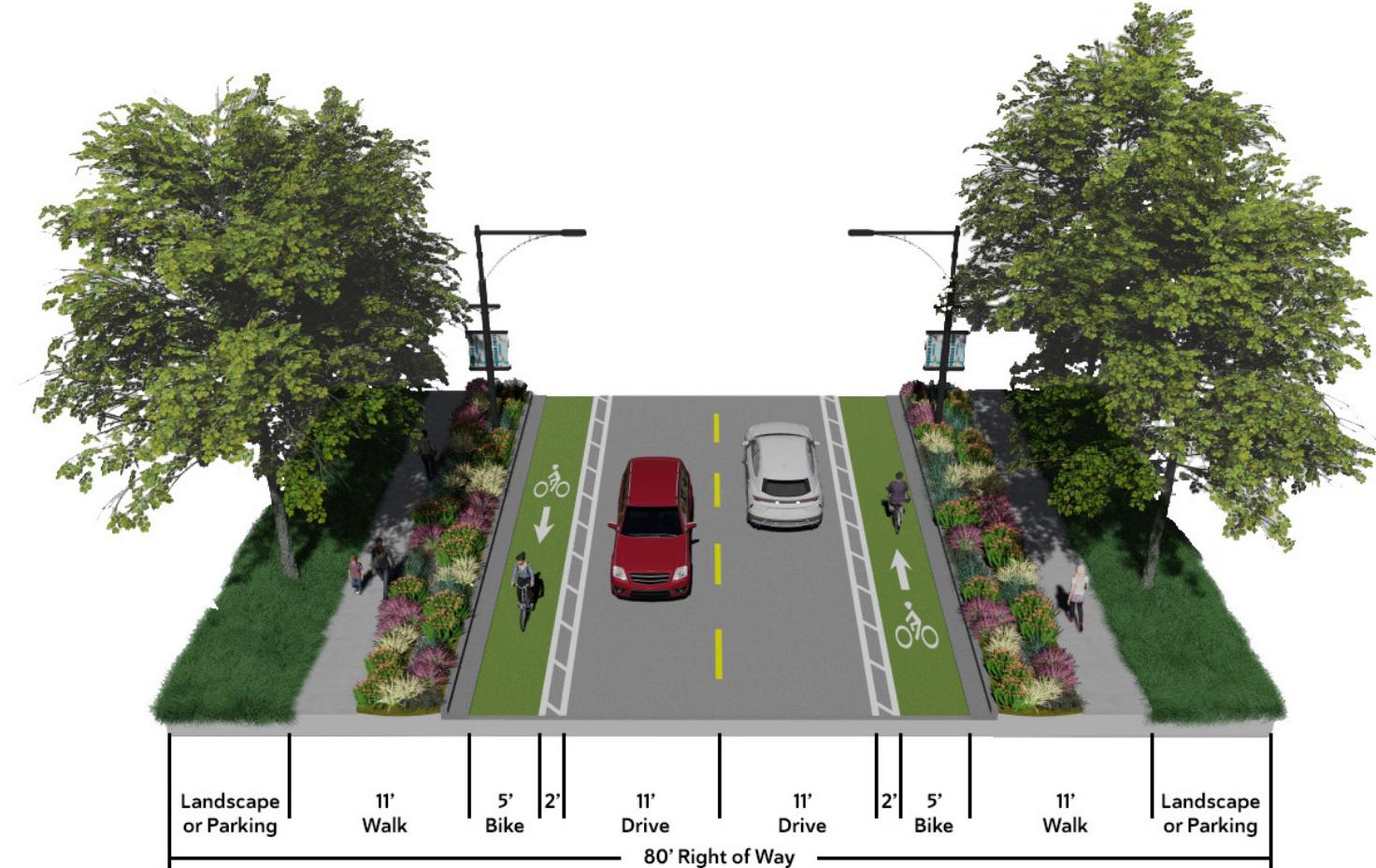
These sections of the corridor within Overland Park exist as a two-lane section with bicycle “sharrow” markings in each direction. Sidewalks are intermittent and unreliable for pedestrians. The proposed improvement would maintain the two-lane section for automobile traffic but provide new bicycle lanes in each direction that are buffered from adjacent traffic. To ensure proper and continued maintenance of these lanes, the buffer would be striped and not include vertical elements. New sidewalks are recommended on both sides of the street to fill existing gaps in the network. This is shown in [Figure 3.9](#).

## MERRIAM DRIVE, CRAIG LANE TO FOSTER STREET - I-635 RAMPS (OVERLAND PARK)

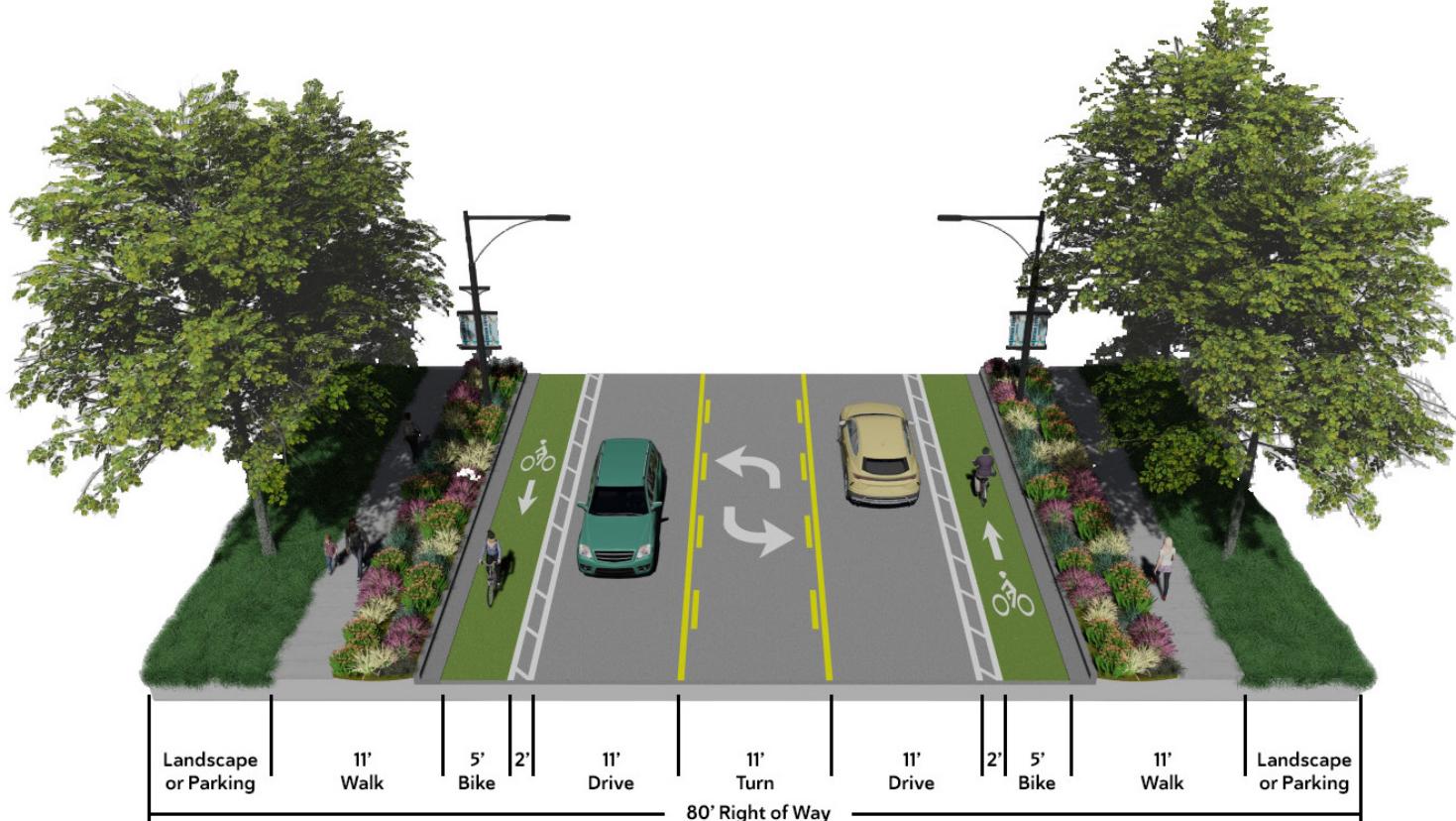
The section of Merriam Drive through the I-635 interchange area is currently a four-lane section and capable of accommodating the recommended three-lane section with buffered bicycle lane facilities, as shown in [Figure 3.10](#). These modifications may also reduce speeds through the wider section, better aligning with the rest of the corridor. This three-lane section will transition to two-lane sections on both the west and east ends of the interchange area, at approximately Craig Lane and Foster Street.

## MERRIAM LANE, FOSTER STREET TO S. 10TH STREET (UNIFIED GOVERNMENT)

The section of Merriam Lane within Unified Government has been recently improved as a two-lane section with bicycle lanes. Due to the quality of this recent construction and the facilities provided, there is no recommended near-term change to this section. However, any future project to improve this section of Merriam Lane in the longer term should aim to add buffers between the vehicular lanes and bicycle lanes, similar to the proposed Overland Park two-lane sections shown in [Figure 3.9](#). This would further enhance bicycle safety and would maintain consistency along the corridor.



**FIGURE 3.9 TWO-LANE STREET SECTION WITH BICYCLE LANES**



**FIGURE 3.10 THREE-LANE STREET SECTION WITH BICYCLE LANES**

### SAFE TURNING MOVEMENTS AND MEDIAN TREATMENTS

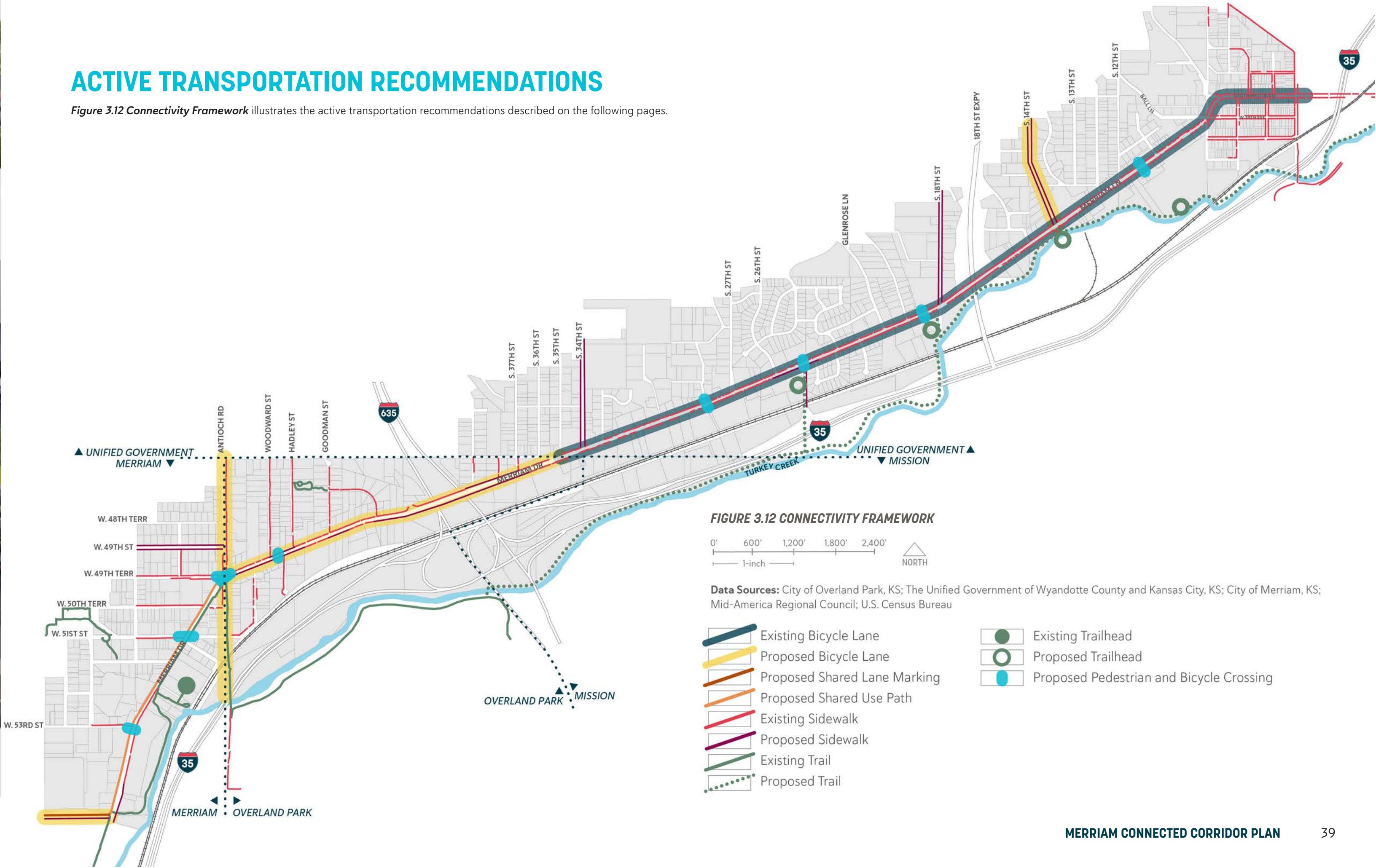
The recommended section along the portion of Merriam Drive west of Antioch includes two primary driving lanes, a continuous two-way-left-turn lane, and a dedicated multi-use trail on the north side of Merriam Drive, as shown in *Figure 3.11*. This configuration will limit the number of conflict points, separate conflict points, and remove slower turning vehicles from through lanes. Additionally, recommendation to add roundabouts at Antioch Road aims to reduce overall conflict points and crash severity.



**FIGURE 3.11 MERRIAM DRIVE WEST OF ANTIOCH ROAD**

# ACTIVE TRANSPORTATION RECOMMENDATIONS

Figure 3.12 Connectivity Framework illustrates the active transportation recommendations described on the following pages.



## COMPREHENSIVE BICYCLE NETWORK

The map in **Figure 3.13** shows existing and future bicycle routes in the surrounding area. Connections of focus for the Merriam Corridor include:

- **55th Street in Merriam:** The draft Merriam Bicycle and Pedestrian Plan recommends for a single-direction bicycle lane, with a shared lane marking on the other side of the street.
- **Antioch Road, shared between Merriam and Overland Park:** This is listed as Corridor D in Overland Park's "Safe Bicycle Use Outreach Project" with the action to narrow travel lanes to accommodate bike lanes when resurfaced.
- **The Unified Government of Wyandotte County and Kansas City, Kansas Countywide Mobility Plan:** The Unified Government is developing a Countywide Mobility Plan process that will address bicycle infrastructure. As part of this process, the Unified Government should give special consideration to options to connect to and expand the reach of existing bicycle infrastructure on Merriam Lane. This process will update Wyandotte County's Sidewalk and Trail Master Plan. This includes determining the best option for connecting the corridor to existing bicycle lanes on S. 12th Street (North of Ruby Avenue), such as along S. 14th Street.
- **S. 14th Street/Roe Lane, south of Merriam Lane:** Bicycle lanes are provided on S. 14th Street/Roe Lane south of 47th Street in Roeland Park. Extending this bicycle lane north to Merriam Lane would create an important north/south connection across I-35, a major barrier to active transportation throughout the corridor and serve to connect to a trailhead on the future Turkey Creek Trail extension.
- **Bikeshare Pilot Program Expansion:** RideKC e-bike hubs have recently been added in Unified Government, including in Rosedale just to the east of the Merriam Lane corridor. Further expansion to the west, especially along new and existing facilities on Merriam Lane and the Turkey Creek Trail, could further expand access and provide a convenient option for people to check out and ride a bike to their destination.

## BUFFERED BICYCLE LANES

As shown on the street sections on page \_\_\_, provide buffered bicycle lanes in each direction on Merriam Drive from S. 35th Street to Antioch Road. South and west of Antioch Road, bicycle facilities are recommended in the form of a shared-use path on the west side of the street. By connecting the existing on-street bicycle lanes on Merriam Lane in Kansas City to the Turkey Creek Trail in Merriam with these new facilities, a gap in the regional bikeway network will be filled and will form a continuous bicycle link from W. 75th Street to the outskirts of downtown Kansas City, Missouri. Existing planning documents for all three municipalities are supportive of providing this recommended bicycle infrastructure on Merriam Drive and Merriam Lane.

## TURKEY CREEK TRAIL CONNECTION AND EXTENSION

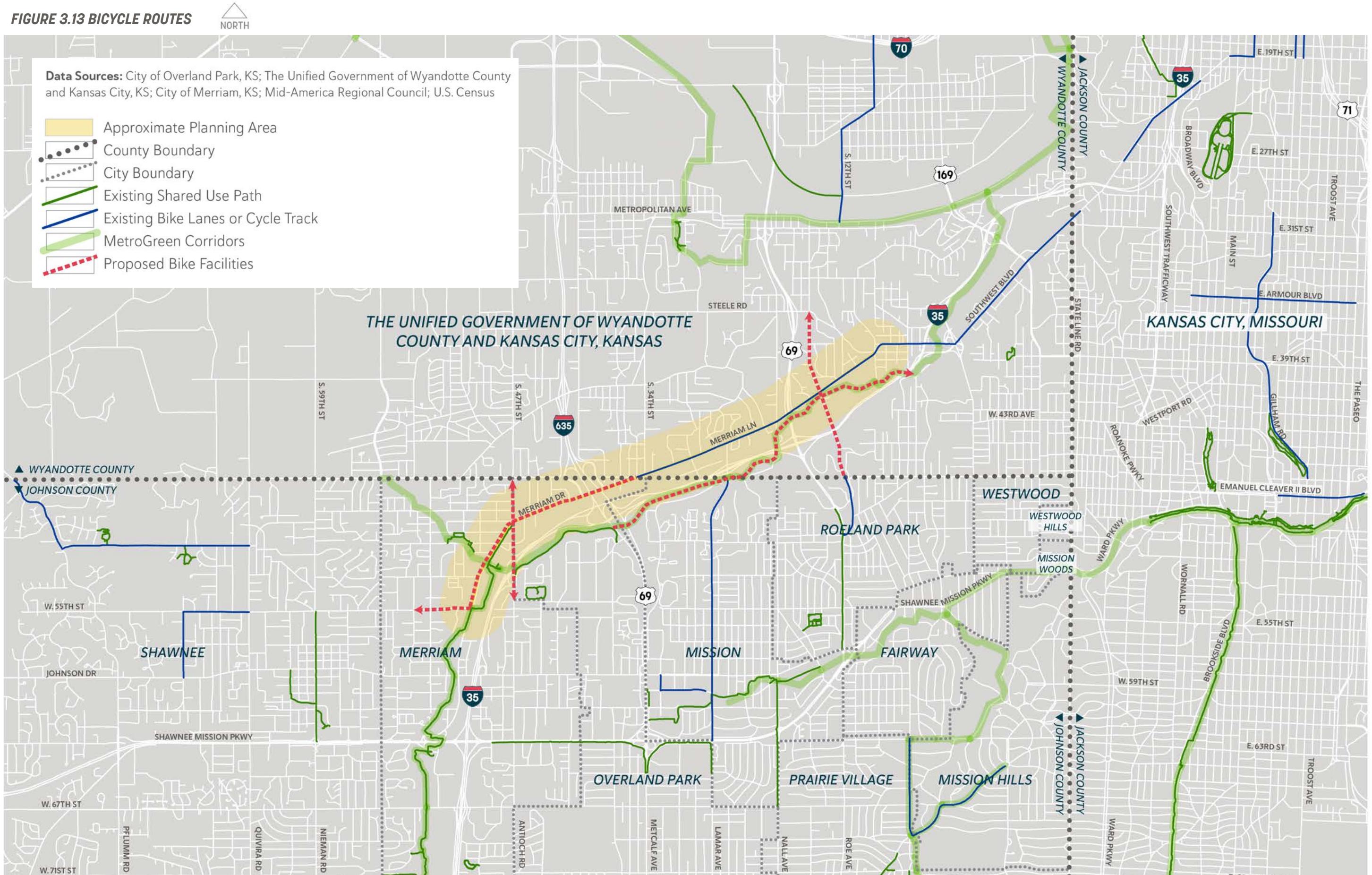
Connect and extend the Turkey Creek Trail through Overland Park, Mission, and the Unified Government along the corridor. The trail currently terminates at 52nd Street at the west side of Metcalf Avenue. This Plan recommends extending the trail across Metcalf Avenue to the City of Mission, either on 52nd Street or along Turkey Creek, pending further engineering analysis of these options. This would allow the trail to connect to Streamway Park. Additionally, the trail should be extended east along Turkey Creek, potentially using portions of Foxridge Drive if needed due to topography or right-of-way limitations. Then, the trail should follow Turkey Creek through the Unified Government to the eastern end of Merriam Lane and ultimately connect to the on-street bicycle facilities on Southwest Boulevard in Kansas City, Missouri. These new trail segments are an implementation item from MARC's MetroGreen Plan, specifically segments Wy05, Jo01, and Jo02.

Extending the trail through the Unified Government portion of the project area also serves the purpose of mitigating several major barriers to bicycle and pedestrian travel as documented in the Existing Conditions. While the trail will need to go through engineering and design to determine exact alignment, it could provide for a safe crossing of both the BNSF railroad and I-35 that is otherwise lacking.

Improvements are also needed to fill a gap in the Turkey Creek Trail at the boundary between Merriam and Overland Park. Future improvements to Antioch Road should include bicycle lanes, as recommended in the Overland Park Bicycle Master Plan. This would provide a connection between the section of the trail in Merriam and the section in Overland Park south of I-35. Funding opportunities should be pursued to repair the section of damaged trail to the north of Newton Street. In the meantime, with Antioch Road improvements in place, cyclists would be able to use marked bicycle routes on W. 54th Terrace and Foster Street to rejoin the trail near W. 52nd Street and Metcalf Avenue.

Options to relocate the Turkey Creek Trail north of I-35 within Overland Park are limited, and would likely need to occur within existing rail or highway right-of-way, which is not recommended at this time. A trail on the north side of I-35 also would not maintain connection to Turkey Creek itself, or to planned sections of the trail south of I-35 by the City of Mission.

### **FIGURE 3.13 BICYCLE ROUTES**



## NEW TRAILHEADS

Provide new trailheads at key locations along the Turkey Creek Trail. Opportunities for new trailheads should be considered with each of the redevelopment opportunities that are along Turkey Creek as specified in Development and Redevelopment Recommendations. Specific trailhead opportunities include but are not limited to:

- Southwest corner of Merriam Lane and S. 18th Street, integrated with future mixed use development and park amenities; and
- Southwest corner of Merriam Lane and S. 14th Street/Roe Lane.
- Boulevard Drive-In near Turkey Creek
- Merriam Lane at S. 24th Street, with connection south along S. 24th Street to new section of Turkey Creek Trail in Mission.

These new trailheads would provide a key point of connection between existing bicycle lanes on Merriam Lane and the extended Turkey Creek trail, extending the reach and impact of both facilities.

## COMPLETE SIDEWALK NETWORK

Due to recent improvements, sidewalks on Merriam Lane in Kansas City are generally present and in good condition. However, sidewalks in the Overland Park and Merriam portions of the Merriam Corridor have more numerous gaps and locations where sidewalks are in poor condition. The corridor should have a continuous sidewalk on both sides of the street to maximize pedestrian access and safety. Locations where new sidewalks are needed are as follows:

- South side of Merriam Lane between S. 26th Street and S. 23rd Circle (Kansas City);
- South side of Merriam Drive between Riley Street and Craig Lane (Overland Park);
- North side of Merriam Drive between Riley Street and Foster Street (Overland Park), which would require the reconstruction and reconfiguration of parking to allow for a sidewalk connection;
- South side of Merriam Drive at Goodman Street (Overland Park);
- South side of Merriam Drive between just east of Hadley Street to Antioch Road (Overland Park);
- North side of Merriam Drive between Hadley Street and Woodward Street, which would require the reconstruction and reconfiguration of parking to allow for a sidewalk connection (Overland Park); and
- East side of Merriam Drive just north of 55th Street. Sidewalks are present here, but are of a substandard width and should be replaced.

Pedestrian access to and from the corridor is often limited by the lack of a contiguous network on cross streets and in surrounding neighborhoods. Within the Unified Government portion of the corridor, sidewalks are generally lacking on all streets connecting to Merriam Lane, except for the eastern edge of the corridor (east of S. 10th Street). While sidewalks are desired on all streets to facilitate pedestrian safety and access, the highest priority needs are to fill the gaps on streets that maximize connectivity to surrounding neighborhoods, and to key destinations such as schools and parks. Accordingly, the highest priority sidewalk investments are recommended as follows:

- S. 14th Street/Roe Lane, north and south of Merriam Lane: The segment north of Merriam Lane is a particularly acute need due to the presence of Noble Prentis Elementary School. Providing safe facilities for children to walk to school is imperative. This segment is listed as a high priority project in the 2012 Sidewalk and Trail Master Plan. The segment of Roe Lane south of Merriam Lane links several large apartment complexes south of I-35 to the Merriam Lane corridor;
- S. 18th Street; listed as a medium priority project in the 2012 Sidewalk and Trail Master Plan;
- S. 34th Street, which provides access to Our Lady of Unity School as well as Matney Park on Shawnee Drive. This is also shown as a high priority project and a Regional Sidewalk Connection;
- S. 24th Street/Lamar Avenue;
- 55th Street, which lacks a sidewalk on the south side of the street west of Hayes Avenue (one block west of the corridor);
- W. 53rd Street, which lacks a sidewalk on the south side of the street; and
- W. 49th Street, which lacks sidewalks on both sides of the street.



MILL CREEK STREAMWAY PARK TRAILHEAD IN OLATHE, KANSAS

## ACCESS MANAGEMENT FOR ACTIVE MODE SAFETY

As properties along the corridor are improved or redeveloped, driveways should be limited to an appropriate width, and provide an ADA-compliant sidewalk and accessible path along the full frontage of the property. Existing conditions cause sidewalks to occasionally be interrupted by large access drives and parking lots that create more hazards for pedestrians and discourage walking. Pedestrians are vulnerable from more angles at these locations, and drivers are not often expecting to encounter pedestrians in these settings where a sidewalk is not visible.

## PEDESTRIAN AND BICYCLE CROSSINGS

Additional infrastructure improvements are recommended to enhance pedestrian and bicycle crossing locations along the corridor at key locations to guide users to these preferred enhanced areas. With more sidewalk, trail, and bicycle facilities comes additional demand for accessibility throughout the corridor. Where pedestrian crossings are desired, infrastructure enhancements such as signing, striping, median refuges, raised crosswalks, and/or higher visibility treatment options (e.g., Rectangular Rapid Flashing Beacon, Pedestrian Hybrid Beacon, etc.). Enhancement treatments should be considered at the following locations:

- **Merriam Drive at W. 53rd Street:** Provide accessible sidewalk ramp infrastructure, enhanced crosswalk markings (high-visibility ladder, zebra, and/or continental crosswalk markings preferred) as well as crosswalk signing to provide crossing of Merriam Drive at W. 53rd Street. It is recommended to re-align the eastern private driveway to align with W. 53rd Street to the west, providing the opportunity for all four approaches to the intersection to align.
- **Merriam Drive at W. 51st Street:** Consider the need for a crosswalk treatment along this segment of Merriam Drive as sidewalks from several streets converge with no safe crossing between Antioch and the planned crosswalk at W. 53rd Street. Treatment options include the addition of accessible sidewalk ramp infrastructure, enhanced crosswalk markings (high-visibility ladder, zebra, and/or continental crosswalk markings preferred) as well as crosswalk signing to provide crossing of Merriam Drive. This crosswalk can also serve a purpose as a traffic calming measure in addition to assisting with safe crossing of the street.
- **Merriam Drive at Antioch Road:** Provide facilities at the recommended roundabout to access sidewalks approaching from all directions. These are shown as part of the recommended roundabout design in Figure \_\_\_\_.
- **Merriam Drive between Woodward Street and Craig Lane:** Consider the need for mid-block crosswalk treatment along this segment of Merriam Drive with features consistent with those recommended at W. 51st Street.
- **Merriam Lane and S. 28th Street:** Provide accessible sidewalk ramp infrastructure, enhanced crosswalk markings (high-visibility ladder, zebra, and/or continental crosswalk markings preferred) as well as crosswalk signing to provide crossing of Merriam Lane at S. 28th Street.
- **Merriam Lane and S. 24th Street:** Provide accessible sidewalk ramp infrastructure with the proposed intersection improvements and sidewalk treatments along Merriam Lane.
- **Merriam Lane between Espenlaub Lane and S. 18th Street:** Consider the need for mid-block crosswalk treatment along this segment of Merriam Lane with features consistent with those recommended at W. 51st Street.
- **Merriam Lane between S. 12th Street and S. 11th Street:** Consider the need for mid-block crosswalk treatment along this segment of Merriam Lane with features consistent with those recommended at W. 51st Street.



# TRANSIT RECOMMENDATIONS

## MICRO TRANSIT COVERAGE EXPANSION

In the near-term, transit service improvements along the corridor should be focused on expanding existing micro transit service options currently available along or near the corridor. This service option allows for a larger geographic area to have access to RideKC transportation services, in a flexible service format that accommodates a wide variety of trip patterns. Based on coordination with local jurisdictions and service providers, the following micro transit improvements should be near-term considerations along the corridor:

- **Expand the Wyandotte County Micro Transit zone to cover the Merriam Corridor, or create a new micro transit zone covering the corridor.** The expanded service should consider providing for direct connections to key nodes in the fixed route system, such as 47th Street and State Avenue, or 39th Street and Rainbow Boulevard. Additional study and coordination with Unified Government Transit and KCATA will be needed to determine the optimal service strategy, considering existing resources.
- **Expand existing Johnson County Micro Transit service to operate on Sundays.** This would allow residents, employees, and visitors in the corridor to connect by transit throughout much of Johnson County on any day of the week. In addition to providing flexible service throughout much of Johnson County, this service provides a first or last-mile connection to Mission Transit Center, for transfers to fixed-route service.

## PERIODIC EVALUATION OF THE MARKET AND FEASIBILITY OF FIXED-ROUTE TRANSIT ALONG THE CORRIDOR

While micro transit service provides a meaningful level of access for a variety of trips, it is limited in capacity and cannot efficiently serve large numbers of people daily. Micro transit is suited for lower-density areas with limited demand for transit. As the corridor redevelops according to the direction outlined in this Plan, a more permanent service may be needed to better accommodate the transportation needs of the corridor. The targeted redevelopment and regeneration of the corridor as recommended in this plan will make the corridor more attractive to transit service in the future. Local jurisdictions should work with RideKC transit providers to add fixed-route service as density and demand increases over time. Specific considerations include:

- **East-west service along the corridor, such as by a realignment of RideKC routes 403 or 404 routes, or commuter express routes currently using I-35.** Realigning one or both routes to travel on Merriam Drive/Lane instead of I-35 could greatly expand access for existing riders and attract new users. These routes could continue into downtown Kansas City, Missouri, as they do now, or terminate at KU Medical Center or Mission Transit Center, where transfers can be made to other routes.
- **North-south service linking Johnson and Wyandotte counties.** This could be in the form of a realignment and addition of stops to routes 118 or 402, which cross the corridor on US-69 but do not exit the highway to stop at Merriam Lane, or in the form of a new route dedicated to serving southern Wyandotte County.



RIDEKC MICRO TRANSIT VEHICLE



RIDEKC JOHNSON COUNTY FIXED AND FLEX ROUTE VEHICLE

These fixed-route service opportunities would need to be studied in more detail with KCATA, Unified Government, and Johnson County. As of early 2022, both KCATA and Johnson County are in the process of restructuring their transit networks. An evaluation of the performance of these changes, after implemented, may lead to an opportunity to integrate the Merriam Corridor into one or more of these routes.

## LONG-TERM HIGH-CAPACITY TRANSIT OPTION CONSIDERATIONS

A study of commuter rail alternatives was conducted in 2002 and included the BNSF rail corridor that parallels the corridor and I-35. Commuter rail did not proceed at that time, but instead led to the development of bus-on-shoulder service and infrastructure on I-35, which is used by Johnson County-operated commuter express routes.

Commuter rail on this or any other corridor is not currently being planned by transit providers or partner organizations in the Kansas City region. The region's adopted transit vision, SmartMoves 3.0, does not specify commuter rail on this or any other corridor, as the document is not intended to recommend specific transit modes. However, the plan does acknowledge the need for an expanded network of express transit services to provide longer-distance connections throughout the Kansas City region. An Olathe-to-Downtown connection, passing through the Merriam Corridor, is among the future express services recommended in the plan. These services could be provided by commuter rail, enhanced bus, or over-the-road intercity coaches, depending on future study of each corridor.

Any long-term planning for commuter rail should be done concurrently with development activity along the corridor, particularly at key nodes and anticipated station locations. The redevelopment areas recommended in this Plan will provide for a greater population, employment, and activity base to increase the demand for regional high-capacity transit service.



**EXPANDED MICRO TRANSIT OR NEW FIXED ROUTE SERVICE IN THE MERRIAM CORRIDOR CAN PROVIDE A FIRST/LAST-MILE CONNECTION TO NEARBY TRANSIT HUBS WITH MULTIPLE ROUTES, SUCH AS AT 39TH & RAINBOW (KU MEDICAL CENTER)**

# HOW TO MAKE THE MERRIAM CORRIDOR VIBRANT



Based on the public engagement process, as well as outreach to stakeholders in the business community, the Plan contains recommendations for the redevelopment of key nodes along the corridor. These new developments are designed to provide a more vibrant mix of land uses that increases the number of people that can comfortably live in the corridor, work at or become customers of a wide range of businesses, and have space for recreation and gathering with neighbors.

The Plan outlines development opportunities along the corridor that are supported by the Market Analysis (Appendix A). These opportunities include new housing, commercial, and mixed use developments that would provide more activity and a larger variety of uses in the project area. Additionally, five key development nodes are highlighted with conceptual ideas for developments that best fit the context and market for that area.

## DEVELOPMENT AND REDEVELOPMENT RECOMMENDATIONS

A major goal of this planning process was to determine opportunities for strategic redevelopment of underutilized properties along the corridor. Such redevelopment can be an important contributor to improved quality-of-life within all four municipalities along the corridor. New development can provide housing for existing and future residents, provide needed amenities and jobs, as well as entertainment and recreational opportunities.

The corridor currently consists primarily of older industrial and commercial buildings and established single-family neighborhoods north of the corridor. Most of the future development activity along the corridor will likely take the form of redevelopment of older and under-utilized properties. Positive factors that will assist in supporting future redevelopment efforts include:

- Central location within the Kansas City MSA;
- Excellent regional accessibility;
- Freeway exposure;
- Diverse population demographics; and
- The presence of underutilized properties.

As part of this planning process, a market and economic study was conducted to determine the nature of opportunities for development activity. The full analysis is provided in [Appendix A - Market and Economic Study](#). This section will highlight the prime opportunities for redevelopment as well as offer potential concepts for several key sites. These concepts are not intended to dictate the future uses or design of a site, but rather to provide a guide for each jurisdiction as opportunities arise, and to provide a feasible example of what the site could look like in the future.

In this section, recommendations for redevelopment activities are presented, followed by a more detailed set of strategies specific to key locations identified on the corridor.

### HOUSING STOCK EXPANSION THROUGH NEW FOR-SALE AND RENTAL HOUSING

Other than a small number of duplex units in the western portion, the corridor lacks multi-family housing options. [Appendix A - Market and Economic Study](#) forecasts a need for an estimated 377 to 584 housing units in the planning area by 2040. Detailed as follows, suitable redevelopment sites for multi-family residential development exist along the corridor in the form of underutilized properties. There is also some opportunity for additional single-family residential units adjacent to established neighborhoods along the corridor.

### PUBLIC AND PRIVATE PARTNER COORDINATION TO INCREASE CORRIDOR BUSINESS DIVERSITY

Such desired corridor uses include a grocery store, smaller-scale mixed uses that integrate restaurants and housing, a bicycle shop or other bicycle/pedestrian-oriented businesses, and other small retail shops serving local residents. [Appendix A](#) notes that with the corridor's diverse demographics, potential retail uses include an ethnic grocery store and other ethnic restaurants and retail businesses. The desire and opportunity also exists for destination uses such as a brewery, winery, or distillery. An existing bicycle shop at Southwest Boulevard and Mill Street, just a few blocks east of the Merriam Corridor, shows the potential for neighborhood-scale businesses integrating into the neighborhood and connecting to the expanded non-motorized uses on the corridor.

## INCREASED PARK AND OPEN SPACE, IN COORDINATION WITH DEVELOPMENT AND REDEVELOPMENT ACTIVITIES

Other than Waterfall Park at Merriam Drive and W. 52nd Street, Brown Memorial Park in Merriam west of Merriam Drive, and Brown Park on Hadley Street north of Merriam Drive, the corridor lacks parks and related amenities. Several of the key development sites specified are designed to integrate park space as well as trailheads for an extended Turkey Creek Trail. These locations can also take advantage of new Turkey Creek Trail segments that extend through the Merriam Corridor and connect to other regional trail facilities. Providing new parks and open space can be an attractive amenity for residents and visitors and help drive business activity.

## SUPPORT EXISTING INDUSTRIAL AND MANUFACTURING BUSINESSES

It is critical to continue support for existing industrial and manufacturing businesses along the corridor and identify opportunities to improve these uses in a manner that allows for nearby commercial, residential, and mixed-use development to flourish. The cities should consider reviewing property maintenance standards that could lead to more consistency in industrial property maintenance on the corridor, and to enhance the use of each site in a way that does not detract from other nearby non-industrial uses.

## IDENTIFY OPPORTUNITIES FOR MIXED USE DEVELOPMENT AT KEY CORRIDOR NODES

Several underutilized properties along the corridor offer the size and physical characteristics to support mixed used development including professional office, industrial, retail, and multi-family residential uses. Several of these locations are profiled as part of the Key Development Sites on the following pages, and facilitating these developments can have a major positive impact on the growth and vibrancy of the corridor.

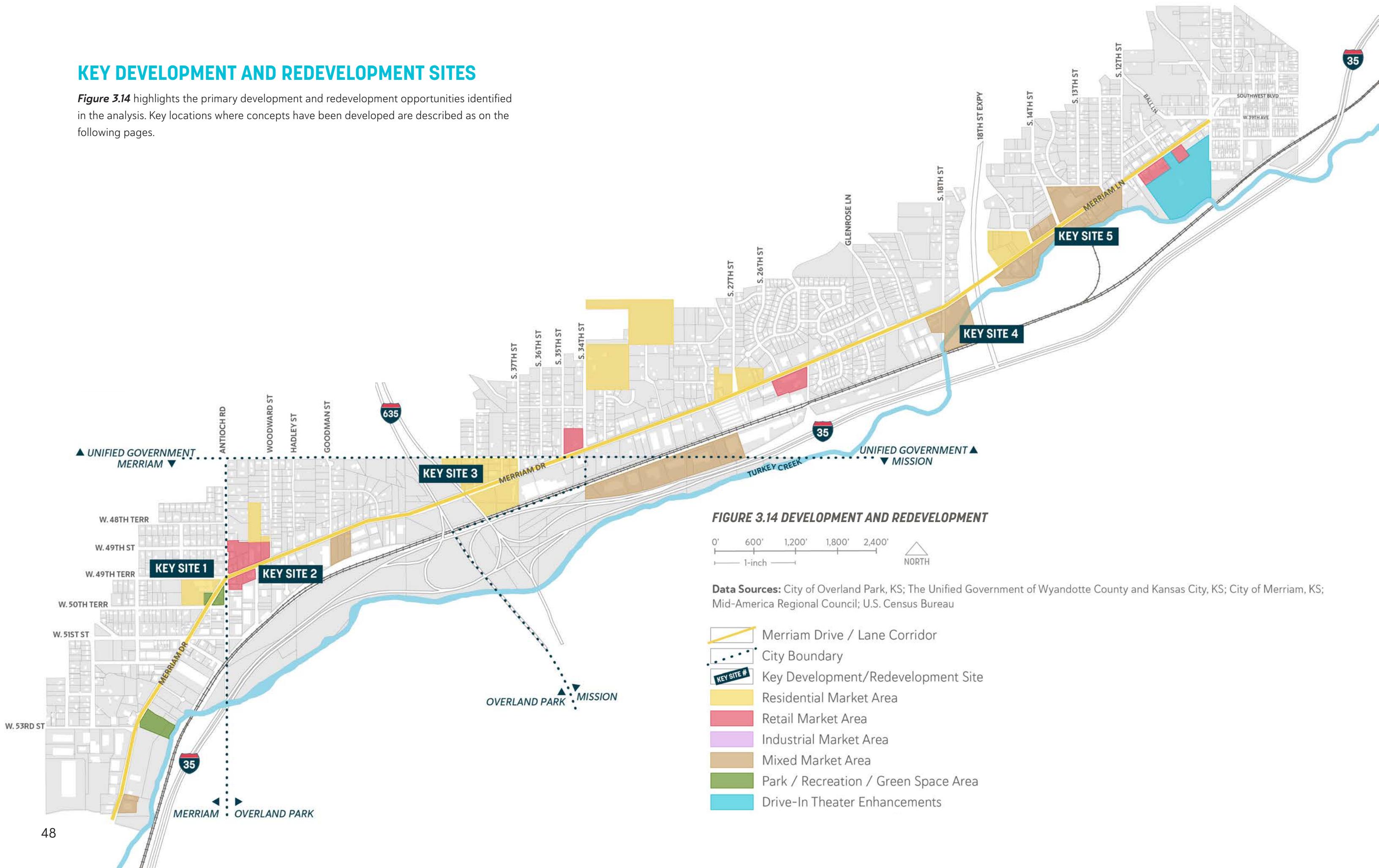
## BOULEVARD DRIVE-IN ENHANCEMENT CONCEPT

The Boulevard Drive-In is an entertainment destination along the corridor. During the Visioning and Planning Workshop (documented in Appendix D), a sketch concept was created illustrating an idea of how adding amenities to the drive-in theater could help to catalyze other development activity along the corridor. Additional amenities, as shown in *Figure 3.15* could include a stage for live performances, a new playground, patio seating with food and beverage service, and restaurants along the Merriam Lane frontage with rooftop decks that have a view of the screen and stage. While these uses and modifications are the discretion of the Boulevard Drive-In and adjacent property owners, in coordination with Unified Government and applicable zoning regulations, this concept is presented as an idea for future development consideration.



## KEY DEVELOPMENT AND REDEVELOPMENT SITES

**Figure 3.14** highlights the primary development and redevelopment opportunities identified in the analysis. Key locations where concepts have been developed are described as on the following pages.





#### KEY SITE #1: MERRIAM DRIVE AND ANTIOCH ROAD - SOUTH PARK (MIXED USE AND RESIDENTIAL)

The former South Park School property has been identified for redevelopment since its closing in 2007. That same year, the South Park Sub-Area Plan was completed that provided multiple options for redeveloping the property. These include multiple concepts for predominately residential development that incorporates a central green space for community gathering, as well as a civic user option that could incorporate a public, semi-public, institutional, and/or office use. Any redevelopment activity should preserve the original 1947 school building, due to its importance to the community and its historical significance in school desegregation. **Figure 3.15** illustrates a mixed-use concept that could incorporate civic or commercial uses along Merriam Drive and small-scale multi-family residential uses on the western portion of the property.

FIGURE 3.15 KEY SITE #1 CONCEPT

## KEY SITE #2: MERRIAM DRIVE AND ANTIOCH ROAD - NORTHEAST & SOUTHEAST (RETAIL, MIXED USE, AND SINGLE FAMILY RESIDENTIAL)

Development opportunities at this node will work in tandem with a reconfiguration of the Merriam Drive and Antioch Road intersection to a roundabout. The reconfiguration of the intersection will offer the potential to create desirable redevelopment sites on all four (4) corners that would be suitable for mixed use development. Key Site #2 focuses on development opportunities to the northeast and southeast of the future roundabout. Potential land uses include retail, office, apartments, and single-family housing. Green space and entry features could be incorporated within the roundabout and along the arterial streets, creating a visual gateway entry. See **Figure 3.16** for an illustration of the concept.



**FIGURE 3.16 KEY SITE #2 CONCEPT**



**KEY SITE #3: MERRIAM DRIVE AND I-635/RILEY STREET (MIXED USE)**

*Figure 3.17* displays a concept for this area with multi-family residential north of Merriam Drive, adjacent to existing single-family neighborhoods, and a larger mixed use development south of Merriam Drive. These sites have high visibility and easy access from both I-35 and I-635.

FIGURE 3.17 KEY SITE #3 CONCEPT

#### KEY SITE #4: MERRIAM LANE AND S. 18TH STREET (MIXED USE)

**Figure 3.18** shows a concept for a mixed use development at the southeast corner of Merriam Lane and S. 18th Street. This concept shows how a park with a trailhead to an extended Turkey Creek Trail could be integrated within a mixed use development. Dining options could include creekside patios with views of the creek and park. This development would be highly visible and easy to access from US-69.

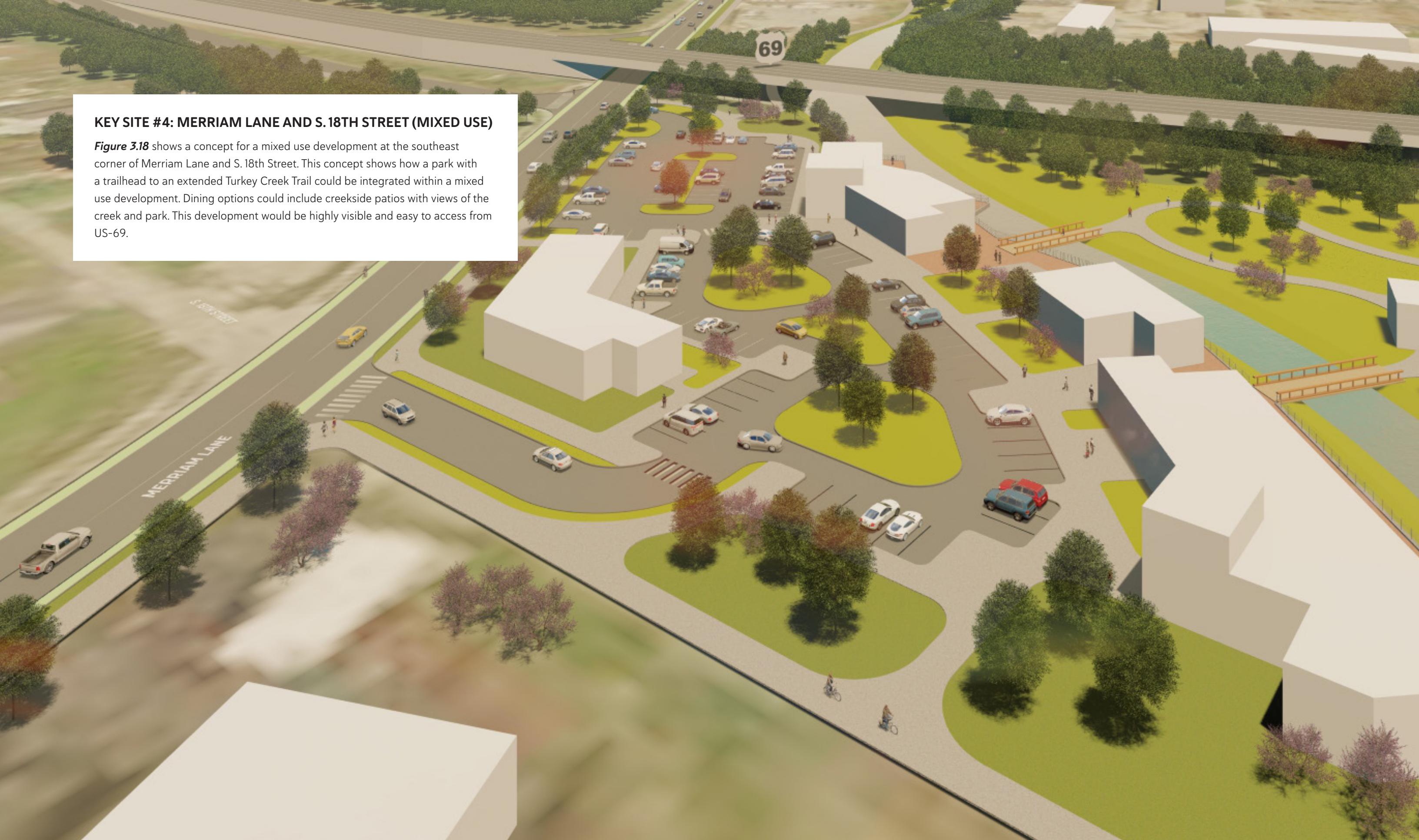


FIGURE 3.18 KEY SITE #4 CONCEPT

### KEY SITE #5: MERRIAM LANE AND S. 14TH STREET/ROE LANE (RETAIL AND MULTI-FAMILY RESIDENTIAL)

This site offers the opportunity for development of a neighborhood center anchored by grocery stores. This sort of development typically requires a five- to 15-acre parcel located at a signalized intersection, creating an opportunity for a neighborhood and junior anchor development site. The site's northeast and northwest corners could accommodate a larger-scale apartment development with a minimum of 100 dwelling units and community amenities. These properties benefit from access and visibility from the corridor and the extended Turkey Creek Trail south of Merriam Lane. See *Figure 3.19* for an illustration of the concept.



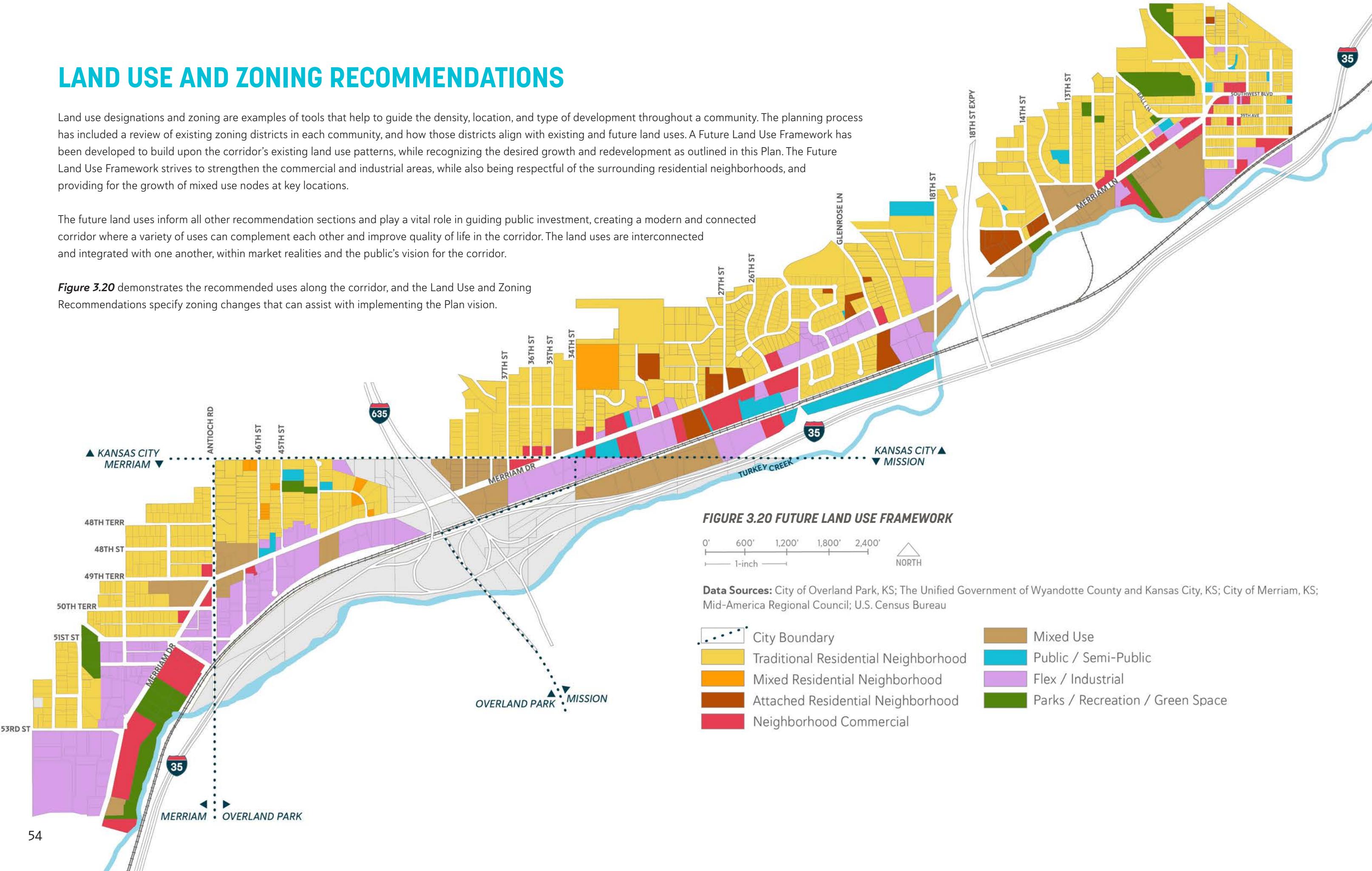
FIGURE 3.19 KEY SITE #5 CONCEPT

## LAND USE AND ZONING RECOMMENDATIONS

Land use designations and zoning are examples of tools that help to guide the density, location, and type of development throughout a community. The planning process has included a review of existing zoning districts in each community, and how those districts align with existing and future land uses. A Future Land Use Framework has been developed to build upon the corridor's existing land use patterns, while recognizing the desired growth and redevelopment as outlined in this Plan. The Future Land Use Framework strives to strengthen the commercial and industrial areas, while also being respectful of the surrounding residential neighborhoods, and providing for the growth of mixed use nodes at key locations.

The future land uses inform all other recommendation sections and play a vital role in guiding public investment, creating a modern and connected corridor where a variety of uses can complement each other and improve quality of life in the corridor. The land uses are interconnected and integrated with one another, within market realities and the public's vision for the corridor.

**Figure 3.20** demonstrates the recommended uses along the corridor, and the Land Use and Zoning Recommendations specify zoning changes that can assist with implementing the Plan vision.



## FUTURE LAND USE DESIGNATIONS



### TRADITIONAL RESIDENTIAL NEIGHBORHOOD

Uses within this designation refer to single family housing, with a wide range of densities. This designation is meant to serve the longstanding single family residences in the corridor, but also provide for slightly higher density single family residential development that exists on the eastern edge of the corridor and may be desired in other areas as well. It is critical that this land use be screened or buffered through transitional land uses, physical buffers, or natural buffers.



### PHOTOS TO BE REPLACED WITH EXAMPLES FROM PLANNING AREA IN FUTURE DELIVERABLE

### MIXED RESIDENTIAL NEIGHBORHOOD

Uses within this designation include higher density single family residences (townhomes and rowhomes), multi-family units (duplexes, condominiums, and apartments), small-scale mixed use buildings (residential on upper levels and retail/service on ground level), and recreational uses. This land use designation buffers traditional neighborhoods from higher intensity commercial uses. This designation exists to place residents in proximity to services, recreational opportunities, and employment centers. This residential designation is important, as it provides multiple housing formats, and can provide affordable options. Buildings should be limited to three stories.



### ATTACHED RESIDENTIAL NEIGHBORHOOD

Uses within this designation include medium to high density residential developments. A variety of multi-family housing types should be provided that aim to diversify the housing market, attracting a wide demographic range and providing rental and ownership opportunities. Examples of this housing format include apartment complexes with shared amenities, walk-up apartments, townhomes, senior housing, and condominiums. Of utmost importance is the construction of affordable housing units.



### NEIGHBORHOOD COMMERCIAL

Uses within this designation include retail, service, and office to serve corridor residents, visitors, and businesses. Uses could include casual and drive through restaurants, gas stations, multi-tenant shopping centers, and offices, but do not include truck stops. Emphasis should be placed on commercial uses at a more neighborhood and pedestrian-oriented scale. These uses should primarily be concentrated along the corridor where properties have direct access to and/or visibility from the primary arterial. As this land use abuts the principal roadway, it is important that building design, parking, lighting, and landscaping are representative of the desired aesthetic and character for the Merriam Corridor.



## MIXED USE

Uses within this designation are mixed, and may include a combination of retail, service, office, entertainment, flex space, and residential (on upper stories). Daily goods and services should be provided to surrounding neighborhoods primarily, and to the greater community within this designation. Buildings of different scales, stories (maximum of four), and densities should be encouraged, mixing uses within a single development. Due to changing retail trends, the bottom level of mixed use developments should not be limited to retail. Building design, parking, lighting, and landscaping must represent the desired aesthetic for the Merriam Corridor.



## PHOTOS TO BE REPLACED WITH EXAMPLES FROM PLANNING AREA IN FUTURE DELIVERABLE

## PUBLIC / SEMI-PUBLIC

Uses within this designation are limited to those properties owned and used by governmental entities, put to some form of public use, or semi-public uses such as religious organizations or educational facilities. It is important to note that religious organizations are allowed in each use designation. It is important that residentially-incompatible public uses are screened and buffered through decorative walls or fencing, public art installations, and/or dense landscaping.



## FLEX / INDUSTRIAL

Uses within this designation include light industrial uses such as warehouses and light manufacturing spaces, though also office, retail, service, and business/industrial parks. Uses such as these must be buffered from the surrounding residences. Heavy industrial uses are not suggested for this category, such as large factories producing high levels of noise, traffic, and pollution. It is important that building design, parking, lighting, and landscaping are compatible with adjacent uses. The cities should remain flexible in these areas to not discourage potential development that might be appropriate.



## PARKS/ RECREATION / GREEN SPACE

Uses within this designation include natural features, such as wooded areas, greenways, and water bodies. This land use exists to preserve existing environmental assets, provide green connections throughout the corridor, and ensure adequate flood storage. This designation is not meant to take away developable land, but to ensure environmental character and functionality is retained. This designation also includes parks to allow people to gather - formally or informally - and enjoy the scenic beauty, recreate, or relax. Specific park uses include pocket and neighborhood parks, athletic fields, playgrounds, community gardens, farmers' markets, walking trails, or small plazas.

## OVERLAY DISTRICT

Because the corridor includes four jurisdictions, an overlay district should be considered whereby consistent zoning and building design guidelines are administered. The overlay district, while providing consistent design and land use standards, should provide flexibility for each jurisdiction to incorporate elements unique to that city.

One example of an overlay that would complement existing uses of the corridor would be a custom or artisanal manufacturing overlay district that allows for limited manufacturing uses on smaller parcels with regulations and standards to limit negative impacts to surrounding uses.

## MIXED USE NODAL DEVELOPMENT

Encourage and prioritize mixed use development at nodes on the corridor, in line with but not limited to the redevelopment opportunities identified in this section. The Merriam Corridor has developed over time as an automobile-oriented low-density corridor, with a mixture of industrial, commercial, and residential uses. Targeting underutilized properties into multiple types of pedestrian-oriented, mixed use, higher density, walkable nodes can often generate private reinvestment in the surrounding areas that might not have otherwise occurred. Mixed-use developments should take advantage of multimodal transportation improvements and be of a design, scale, and character that is pedestrian-friendly and not predominately automobile-oriented.

## ZONING

Use zoning as a method to guide development type, location, and density and make possible the vision for the corridor by aligning the current zoning of corridor properties with the Future Land Use Framework. Rezone areas of the corridor to allow for targeted redevelopment activities. Zoning districts and their regulations must be regularly evaluated by a community to ensure that (1) their desired style of development is possible, and that (2) the community's needs are met through the current regulations. While rezoning may not be necessary throughout the entire corridor, some of the future land uses will be best served and implemented by certain zoning districts.

Specifically, areas highlighted for redevelopment opportunities will need to be reviewed in detail according to city policy and processes to determine the appropriate zoning changes. These include:

- **Merriam Drive and W. 55th Street (Merriam):** Proposed mixed use development on the northeast corner will need to be reviewed for potential rezoning to allow for a mixture of uses, such as utilizing the Planned Unit Development - General District.
- **Merriam Drive and Antioch Road (Overland Park):** Property on the northeast and southeast corners will need to be reviewed for potential rezoning to allow for a mixture of uses, such as utilizing the MXD - Planned Mixed Use District.
- **Merriam Drive and I-635:** Property on both sides of Merriam Drive between I-635 and approximately Riley Street will need to be reviewed for potential rezoning to allow for multi-family residential and mixed use developments, such as utilizing the MXD, RP-4, or RP-5 districts.
- **Merriam Lane and S. 18th Street (Kansas City):** Property on the southeast corner will need to be reviewed for potential rezoning to allow for a mixture of uses, such as utilizing the TND Traditional Neighborhood Design District.
- **Merriam Lane and S. 14th Street (Kansas City):** Property on the northeast corner will need to be reviewed for potential rezoning to allow for a mixture of uses, such as utilizing the TND Traditional Neighborhood Design District.

## PLANNED DISTRICTS

Utilize planned districts to facilitate desirable development site plans, particularly for mixed use projects where more flexibility and review may be needed. Each of the three cities have a zoning ordinance that includes the use of planned districts. While each development proposal or opportunity will be different and have unique needs, planned districts can be the best way to provide for larger scale developments while allowing flexibility in zoning regulations to encourage innovative design.

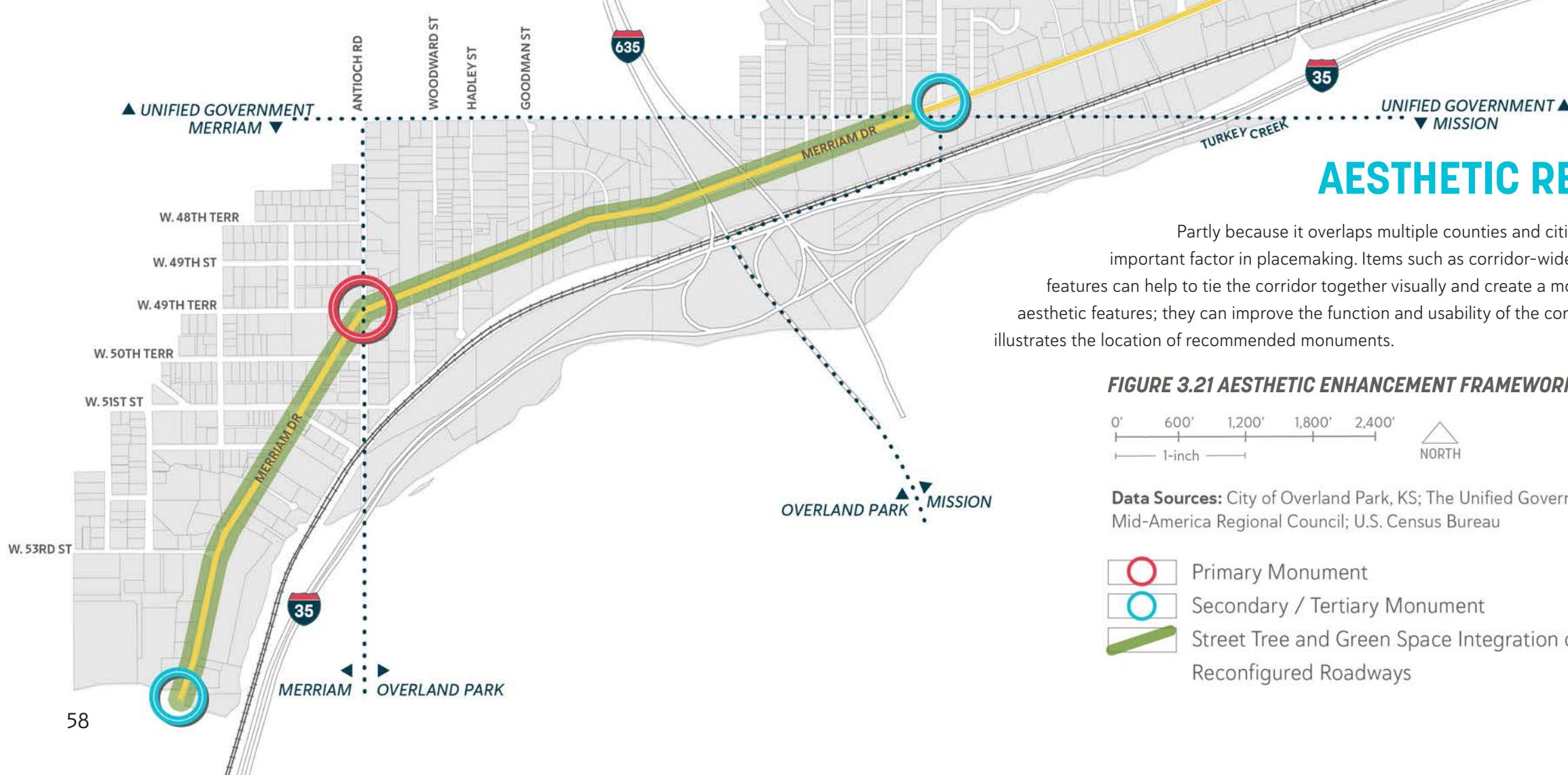
PHOTOS TO BE ADDED WITH EXAMPLES FROM MUNICIPALITIES IN FUTURE DELIVERABLE

# HOW TO MAKE THE MERRIAM CORRIDOR AESTHETICALLY PLEASING



The plan recognizes that the corridor should be visually attractive and provide elements for each community to identify with and be proud of. The recommendations include monuments of different sizes and elements and locations for these to be included along the corridor. These include large monuments to welcome visitors, as well as smaller monuments and sidewalk in-lays to enhance the public streetscape throughout the corridor.

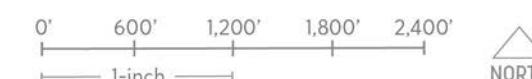
Additionally, future developments at key locations are recommended to integrate with parks and open space to include trails that provide access and visibility to natural features and amenities such as Turkey Creek. Access management recommendations can have a major positive visual impact on the corridor as well, by devoting more of the public right of way to green space and street trees, with less pavement devoted to large and redundant driveways.



## AESTHETIC RECOMMENDATIONS

Partly because it overlaps multiple counties and cities, the corridor is lacking in a cohesive look and feel, which can be an important factor in placemaking. Items such as corridor-wide branding, gateway monuments, and consistent applications of streetscape features can help to tie the corridor together visually and create a more welcoming environment. These improvements can be more than just aesthetic features; they can improve the function and usability of the corridor, such as street trees that provide shade for pedestrians. **Figure 3.21** illustrates the location of recommended monuments.

**FIGURE 3.21 AESTHETIC ENHANCEMENT FRAMEWORK**



**Data Sources:** City of Overland Park, KS; The Unified Government of Wyandotte County and Kansas City, KS; City of Merriam, KS; Mid-America Regional Council; U.S. Census Bureau

- Primary Monument
- Secondary / Tertiary Monument
- Street Tree and Green Space Integration on Reconfigured Roadways

## MONUMENTATION FAMILY

Add primary, secondary, and tertiary monuments as well as walk in-lays along the corridor. Examples are shown in **Figure 3.22**. Primary monuments would be appropriate for the future roundabout at Merriam Drive and Antioch Road on the west side of the corridor, and at Merriam Lane and S. 10th Street on the east end of the corridor. Secondary and tertiary monuments should be integrated at other key locations and intersections along the corridor, such as at S. 14th Street/Roe Lane, S. 18th Street, S. 24th Street, S. 34th Street, and W. 55th Street.

**FIGURE 3.22 MONUMENTATION FAMILY**



## CORRIDOR BRAND

Create and adopt a brand for the corridor to be used on each of the monument types as well as potentially on other signage or in other applications. This will help to give the corridor area a sense of place and build community among residents, businesses, and others in the corridor.

## STREET TREE STANDARDS

Adopt standards for providing street trees along the corridor, at locations where space between the curb and sidewalk allows. These standards should be consistent across each jurisdiction on the corridor. Street trees not only are a major aesthetic improvement, but also provide shade for pedestrians and other users and provide environmental benefits such as improving biodiversity and air quality.

## PUBLIC STREETSCAPE ENHANCEMENTS

Design and construct public streetscape improvements and intersection enhancements to enhance the aesthetic, user experience, and quality of life along the corridor, while establishing a unique identity that further distinguishes the corridor from the rest of the city. **Figure 3.23** shows a portion of a street section to highlight recommended streetscape enhancements.

## PRIVATE PROPERTY FAÇADE, SITE, AND SIGNAGE ENHANCEMENTS

Façade and site enhancements - rather than complete development or redevelopment - can have a dramatic effect on the aesthetic and economic value of a building. Repairs and replacements - routine or major - are necessary for many corridor structures. Examples of repairs and replacements needed for corridor properties include restoration of exterior finishes, addition of site and building landscaping, and ADA accessibility improvements.

While individual façade and site enhancements can be beneficial, they are most effective when a coordinated effort is undertaken to improve the condition of a larger area. A coordinated effort is more likely to increase and sustain property values, increase visitor traffic and sales, protect investments, and stabilize the affected area. Consideration should be given to the creation of incentive programs to spur property owners to reinvest in their properties through façade, site, and signage enhancements.



**FIGURE 3.23 STREETSCAPE ENHANCEMENTS**

# HOW TO MAKE THE MERRIAM CORRIDOR SUSTAINABLE



Many of the Plan's recommendations are designed to provide a more environmentally friendly corridor. This includes providing viable options for non-motorized transportation by dedicating more space and providing safety improvements to encourage more walking and biking, through both on-street and off-street options. This can lead to reduced automobile travel, fewer miles travelled, and fewer greenhouse gas emissions.

Providing more places for people to live, work, shop, or play in the Merriam Corridor maximizes the use of the existing, and recommended to be improved, infrastructure in the neighborhood. From an environmental sustainability perspective, facilitating development within the established urban footprint is preferable to greenfield development in the suburban fringe of the region that requires completely new and often inefficient infrastructure, and requires more vehicular travel and emissions.

The Plan also recommends converting some paved areas in the public right-of-way to green space, through combining driveways and consolidating access from the street to private property. This provides more opportunities for additional street trees and natural filtration of stormwater, in addition to aesthetic benefits. The images on this page show examples of how native plants can be integrated onto sites for both aesthetic and stormwater management purposes.



**NATURAL STORMWATER MANAGEMENT**

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# 4

## SECTION FOUR IMPLEMENTATION

**Section 4 - Implementation** sets forth the process for moving forward with the Plan recommendations. Now that the vision of the corridor has been illustrated, the responsible entities for implementation must work together to advance the Plan together. This coordination is especially critical due to the multi-jurisdictional nature of the corridor. With four cities (Kansas City, Overland Park, Merriam, and Mission) and two counties (Wyandotte and Johnson) within the corridor, policies, programs and physical improvements must be closely coordinated to maximize benefits for corridor residents, employees, businesses, visitors, and other stakeholders. The action items in this section are intended to serve as a guide and a means of prioritizing improvements, rather than as a detailed set of instructions for each item.

# IMPLEMENTATION CATEGORIES



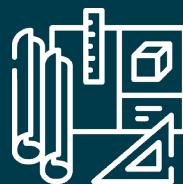
## POLICY, PROCESS, AND ADMINISTRATION

Develop and narrow concepts for the plan document based on community engagement process findings.



## ADDITIONAL PLANNING WORK

Gain adoption approval for the refined plan document.



## PRIORITY PROJECTS

Set forth critical first steps to achieve plan recommendations.



## CATALYZE AND ATTRACT DEVELOPMENT

Continue working through short and long-term plan recommendations.

## TIME FRAME

Generally, low-cost strategies with simple implementation steps are planned for the immediate future. The time frames are detailed as follows:

- **Immediately:** (0-1 year) Low cost, ease of implementation, directly advances other strategies, or addresses critical issues
- **Continuous:** (Ongoing over Plan lifetime) Varying costs, but necessary tasks to sustain the Plan
- **Short-Term:** (1-5 years) Fairly significant cost, but with planning can be implemented within this time frame
- **Long-Term:** (5+ years) Significant cost, requires implementation of other strategies first

## COST IMPACT

Cost impact designations only refer to implementation costs incurred by the city and/or county, and do not account for private investment costs:

- **Low:** Strategies that require policy changes or partnerships with limited outside funding requirements
- **Medium:** Strategies that require relatively affordable consulting services and/or infrastructure improvements
- **High:** Strategies that require high levels of planning, engineering, and/or design and infrastructure improvements

**TABLE 4.1 POLICY, PROCESS, AND ADMINISTRATION**

PROJECT DESCRIPTION	TIME FRAME	COST IMPACT
<b>Adopt the Merriam Connected Corridor Plan</b>  <i>The cities of Kansas City, Merriam, and Overland Park should adopt the Plan as the official policy for land use, development, and capital improvements along the corridor. It is essential that the Plan be used when reviewing and evaluating all proposals for improvement along the corridor.</i>	Immediately	Low
<b>Incorporate the Plan into Other Documents</b>  <i>Each city should amend relevant ordinances as well as their comprehensive plans in order to align community policies. For other plans and processes currently underway or upcoming, the Merriam Connected Corridor Plan should be thoroughly reviewed to ensure that plan recommendations are carried forward into other relevant documents and processes.</i>	Immediately	Low
<b>Communicate and Promote the Plan</b>  <i>As implementation of the Plan will rely heavily on private sector reinvestment, the Plan's recommendations must be communicated to those persons with a current (or future) stake in the corridor's vitality. To this end, city and staff members should meet with property owners and potential redevelopers, including major businesses capable of redevelopment or enhancement projects. Additionally, other public agencies, utility companies, and various neighborhood groups should be provided a copy of the Plan. The Plan should be posted on each of the cities' websites. Equally important is the education of newly elected officials. A full review and explanation of the Plan and its current stage of implementation should be provided to each newly elected official</i>	Immediately	Low
<b>Review and Update the Plan</b>  <i>This Plan contains recommendations based upon current conditions, market analysis, and public input at the time of its creation. While there are strong recommendations in the Plan for achieving the vision, the needs and desires of the corridor may shift over time. The Plan should be nimble, able to react to those shifts and be revised to fit the community's needs over time. However, significant changes should only be made after careful consideration. As issues arise, city and county staff members should maintain a list of future amendments or needs which may be added, revised, or removed from the Plan.</i>	Continuous	Low
<b>Promote and Target Home Improvement Programs to the Corridor</b>  <i>Several municipalities in the corridor have incentive, rebate, or grant programs that assist homeowners with repairs, renovations, or other improvements. These include the Unified Government's Neighborhood Revitalization Act (NRA) program and Merriam's Residential Sustainability and Exterior Home grant programs. These programs should be promoted within the Merriam Corridor and assistance provided to property owners who may be able to take advantage of these programs to improve their homes and neighborhoods</i>	Continuous	Low

**TABLE 4.2 ADDITIONAL PLANNING WORK**

PROJECT DESCRIPTION	TIME FRAME	COST IMPACT
<b>Integrate Recommended Projects into each City's Capital Improvements Program as Appropriate</b>	Immediately	Low
A strategy should be developed with the City Council for incorporating the Plan recommendations for transportation, utilities, and infrastructure improvements in the Capital Improvement Program. This support is critical to fueling early and long-term efforts for change along the corridor, as well as leveraging those available public dollars for private investment.		
<b>Develop and Implement a Corridor Brand and Promotional Campaign</b>	Short-Term	Medium
Branding assures consistency in quality of service, natural and built environment aesthetics, and overall appearance. Corridor branding and promotion must be a coordinated effort among existing tenants, property owners, and city leaders, combining physical improvements with promotional strategies, including those items listed in Section 3 - Recommendations. The promotional campaign and its associated marketing strategies should aim to attract both local and out-of-town visitors, but should also improve business and property owner confidence in the long-term viability of the corridor. Alongside this effort, the corridor must establish and commit to a dedicated brand used by all businesses to create a streamlined look that gains recognition within the cities, as well as the broader region.		
<b>Develop and Implement a Strategic Business Recruitment Plan</b>	Short-Term	Low
In order to effectively attract the desired mix of businesses along the corridor, it is critical to first develop a Strategic Business Recruitment Plan. The plan should identify the wants and needs of the corridor from a business market perspective, and then develop strategies for recruitment. Strategies should leverage promotional campaign efforts, as well as any financial incentives permitted by the cities.		
<b>Prepare Merriam Connected Corridor Design Guidelines and an Overlay District</b>	Short-Term	High
Design guidelines should guide the architectural character, site design, and signage for private properties along the Merriam Corridor. The design guidelines could be enforced through an overlay district, which would ensure that all future improvements required to go through the development review process would be reviewed through the lens of the guidelines. The overlay district should be defined at the parcel level and will require additional development review procedures focused on proper form, feel, connectivity, and aesthetic of the development, versus the land use category. It is thus important to set clear procedures for application and standards for review and approval for any development or redevelopment taking place within the overlay district.		
<b>Develop an Access Management Plan</b>	Short-Term	High
As discussed throughout the Plan, there is a need to modify driveways along the Merriam Corridor to reduce the overall number of access points, and to reduce the width of driveways that are too wide and are disruptive to bike and pedestrian travel. Prior to pursuing engineering and design for the modifications to the corridor, the cities should pursue an Access Management Plan that is based on close coordination with property owners and the overall community.		
<b>Conduct Engineering and Design of Recommended Corridor Projects</b>	Short-Term	Medium
<ul style="list-style-type: none"> <li>• Merriam Corridor street reconfiguration, including street sections where widening/reconstruction are needed to accommodate the recommended street section</li> <li>• Merriam Drive and Antioch Road Roundabout</li> <li>• Turkey Creek Trail extension, through portions of Overland Park, Mission, and Kansas City</li> <li>• Streetscape, monument, and aesthetic enhancements. These can be integrated with the design of the proposed Merriam Drive modifications, but should also include portions of Merriam Lane that will not undergo full reconstruction in the near term.</li> </ul>		



**MERRIAM DRIVE EAST OF ANTIOCH ROAD IN OVERLAND PARK**



**MERRIAM LANE AT 18TH STREET EXPRESSWAY IN UNIFIED GOVERNMENT**

**TABLE 4.3 COMPLETE PRIORITY PROJECTS**

PROJECT DESCRIPTION	TIME FRAME	COST IMPACT
<b>Construct roundabout at Merriam Drive and Antioch Road (Merriam &amp; Overland Park)</b>  This project would replace the existing intersection with a new roundabout as depicted in the project recommendations, with project extents of roughly W. 50th Terrace to the southwest and Mackey Street to the northeast. Additional traffic review will be needed on Antioch Road to determine the appropriate street section to the north and south of the roundabout.	Medium-Term	High
<b>Intersection improvements at Merriam Lane and S. 24th Street (Unified Government)</b>  This intersection is recommended to receive geometric improvements to provide improved radii at the intersection to accommodate heavy vehicles and the addition of an eastbound right-turn lane to allow more efficient travel to I-35 south of Merriam Lane.	Medium-Term	High
<b>Modify Merriam Drive between W. 55th Street and W. 50th Terrace (Merriam)</b>  Construct recommended improvements to convert this section of Merriam Drive to a three-lane section with a shared-use path on the west side of the street. This project should include recommended pedestrian crossings and access management components as included in plan recommendations. The northern boundary of this project would connect to the proposed Merriam Drive & Antioch roundabout.	Medium-Term	High
<b>Modify Merriam Drive between Mackey Street and Craig Lane (Overland Park)</b>  Construct recommended improvements to convert this section of Merriam Drive to a two-lane section with buffered bicycle lanes. This project should include recommended pedestrian crossings and access management components as included in plan recommendations. The western boundary of this project would connect to the proposed Merriam Drive & Antioch roundabout.	Medium-Term	High
<b>Modify Merriam Drive between Craig Lane and Foster Street (Overland Park)</b>  Construct recommended improvements to convert this section of Merriam Drive to a three-lane section with buffered bicycle lanes. This section includes intersections with on and off ramps to I-635.	Medium-Term	High
<b>Modify Merriam Drive between Foster Street and S. 35th Street (Overland Park)</b>  Construct recommended improvements to convert this section of Merriam Drive to a two-lane section with buffered bicycle lanes. This project should include recommended pedestrian crossings and access management components as included in plan recommendations.	Medium-Term	High
<b>Modify Merriam Lane between S. 35th Street and S. 10th Street (Unified Government)</b>  This is a longer-term project as this street segment has been recently improved. This project would modify the existing two-lane section to add a buffer between the vehicular lanes and the bicycle lanes, to match proposed street segments to the west.	Long-Term	High
<b>Comprehensive Bicycle Network - W. 55th Street Bicycle Facility (Merriam)</b>  As recommended by this plan and by the draft Merriam Bicycle and Pedestrian Plan, add a single-direction bicycle lane, with a shared lane marking on the other side of the street.	Short-Term	Low
<b>Comprehensive Bicycle Network - Antioch Road (Merriam &amp; Overland Park)</b>  Provide new bicycle lanes or shared use path along Antioch Road to the north and south of Merriam Drive, in accordance to plans developed by each city.	Medium-Term	Medium
<b>Comprehensive Bicycle Network - S. 14th Street/Roe Lane (Unified Government)</b>  Provide a new bicycle facility that connects Merriam Lane to existing bicycle lanes to the north at S. 12th Street & Ruby Ave., and south to existing bicycle lanes at Roe Lane near W. 47th Street in Roeland Park. In this plan, S. 14th Street/Roe Lane is shown as the preferred corridor for this connection, but the ultimate location of this facility is to be determined by the ongoing Countywide Mobility Plan process that will address bicycle infrastructure and update the Sidewalk and Trail Master Plan.	Medium-Term	Medium
<b>Bikeshare Pilot Expansion (Unified Government, Overland Park, &amp; Merriam)</b>  Work with RideKC Bike to expand hubs for pedal and e-bikes to include locations along Merriam Lane, Merriam Drive, and the extended Turkey Creek Trail.	Medium-Term	Low



**ROUNABOUT AT MERRIAM DRIVE AND ANTIOCH ROAD**



**MERRIAM DRIVE ROADWAY CONFIGURATION IN MERRIAM**

**TABLE 4.3 COMPLETE PRIORITY PROJECT CONTINUED**

PROJECT DESCRIPTION	TIME FRAME	COST IMPACT
<b>Turkey Creek Trail Reconstruction/Repairs (Overland Park)</b>  The City should pursue funding opportunities to repair or rebuild the section of damaged trail to the north of Newton Street.	Medium-Term	High
<b>Turkey Creek Trail Extension - W. 52nd Street &amp; Metcalf to Lamar Avenue (Mission)</b>  Extend the Turkey Creek Trail across Metcalf Avenue utilizing W. 52nd Street or along Turkey Creek, through Streamway Park, and east to Lamar Avenue. Pending future engineering analysis, the trail may utilize portions of Foxridge Drive if needed due to topography or right-of-way limitations along Turkey Creek.	Medium-Term	High
<b>Turkey Creek Trail Extension - Lamar Avenue to Boulevard Drive-In (Unified Government)</b>  Extend trail from the boundary with Mission to the east end of the study area, traveling along Turkey Creek to the extent feasible as determined by future analysis.	Medium-Term	High
<b>Turkey Creek Trailheads (Unified Government)</b>  Along the extended Turkey Creek Trail, provide new trailheads at S. 24th Street, S. 18th Street, S. 14th Street, and at the Boulevard Drive-In.	Medium-Term	High
<b>Complete Sidewalks on Merriam Drive (Overland Park)</b>  Fill multiple gaps in the sidewalk network along Merriam Drive. This project could be completed along with the recommended street reconstruction projects.	Medium-Term	Medium
<b>Complete Sidewalks on Merriam Drive (Unified Government)</b>  Complete sidewalk on the south side of Merriam Lane between S. 26th Street and S. 23rd Street. This project could be completed along with the recommended Merriam Lane and S. 24th Street intersection improvements.	Medium-Term	Medium
<b>Complete Sidewalk Network (Merriam)</b>  Provide new sidewalks connecting to Merriam Drive at W. 55th Street, W. 53rd Street, and W. 49th Street.	Medium-Term	Medium
<b>Complete Sidewalk Network (Unified Government)</b>  Provide new sidewalks connecting to Merriam Lane at S. 34th Street, S. 24th Street/Lamar Ave., S. 18th Street, and S. 14th Street/Roe Lane.	Medium-Term	Medium
<b>Expand Wyandotte County Micro Transit Service (Unified Government)</b>  Work with Unified Government Transit and KCATA to expand the 199 Wyandotte County Micro Transit zone to the county boundary, to include the Merriam Lane corridor. Additionally, add Saturday and Sunday service.	Continuous	Low
<b>Expand Johnson County Micro Transit Service (Merriam &amp; Overland Park)</b>  Work with Johnson County and KCATA to expand the 499 Johnson County Micro Transit service hours to include Sundays.	Continuous	Low
<b>New or Realigned Fixed-Route Service (Merriam, Overland Park &amp; Unified Government)</b>  After implementation and review of planned 2022 fixed-route changes, work with local transit providers to plan or modify fixed-route service to travel along the Merriam Drive/Lane corridor, and/or to add stops on the corridor for north/south service.	Medium-Term	Medium
<b>Future High-Capacity Transit (Merriam, Overland Park &amp; Unified Government)</b>  Work with local transit providers and funding partners to implement high-capacity fixed-guideway transit in the longer term. Additional study will be required to determine the preferred mode, route, and service alternative.	Long-Term	High
<b>Install Monuments along Merriam Corridor (Merriam, Overland Park &amp; Unified Government)</b>  Install primary and tertiary monuments and related elements along the corridor at locations defined in the Plan.	Medium-Term	Medium
<b>Green Infrastructure improvements (Merriam, Overland Park, &amp; Unified Government)</b>  Along with street and intersection improvements, provide green stormwater and landscaping solutions along the corridor where feasible and applicable. This can include bioswales, rain gardens, native plantings, and other practices to facilitate stormwater filtration in the corridor.	Medium-Term	Low



**PROPOSED TURKEY CREEK TRAIL EXTENSION**



**SIDEWALK IN MERRIAM**



**TURKEY CREEK TRAIL EXTENSION AT S. 14TH STREET TRAILHEAD**



**WATERFALL PARK**

**TABLE 4.4 CATALYZE AND ATTRACT DEVELOPMENT**

PROJECT DESCRIPTION	TIME FRAME	COST IMPACT
<b>Coordinate with Boulevard Drive-in on potential enhancements and additions</b>  <i>Continued improvement of this regional attraction has the potential to catalyze other adjacent development and other activities on the east end of the corridor.</i>	Short-Term	Low
<b>Coordinate redevelopment opportunities with the reconfiguration of the Merriam Drive and Antioch Road roundabout</b>  <i>This project will create developable properties north and south of Merriam Drive. These coordinated public infrastructure and private investment projects can help to catalyze other activity on the western part of the Merriam Corridor.</i>	Short-Term	Low
<b>Review funding options, grant opportunities, and incentive programs</b>  <i>Review for potential use in assisting with development projects or in making development on the corridor more attractive or more financially feasible.</i>	Continuous	Low
<b>Construct parks and open space improvements</b>  <i>In cooperation with private development, construct parks and open space improvements, such as at S. 14th Street and S. 18th Street, to provide a gathering space for the local community while also creating an amenity and point of interest that can assist to catalyze development activity.</i>	Continuous	Medium
<b>Develop and implement a strategic business recruitment plan</b>  <i>In order to effectively attract the desired mixture of businesses along the corridor, it is critical to first develop a Strategic Business Recruitment Plan. The plan should identify the wants and needs of the corridor from a business market perspective, and then develop strategies for recruitment. Strategies should leverage promotional campaign efforts, as well as any financial incentives permitted by the cities.</i>	Short-Term	Low
<b>Pursue zoning adjustments or implement no zoning overlay districts.</b>  <i>Study and implement changes to zoning regulations and pursue design guidelines to help facilitate quality development that complements the recommended multimodal and quality of life investments. Develop and implement a strategic business recruitment plan</i>	Short-Term	Medium

## POTENTIAL FUNDING

While there are many funding tools available for use to implement this Plan, they come in several different forms: regulatory, taxing, districts, bonds, and grants. Such tools are listed in Table 4.5 Potential Funding Mechanisms. It is important to note the objective of securing funding is to pay for improvements that otherwise would not have a source of funding, and to provide seed monies for the encouragement of private investment to occur. There will never be enough public funding to complete the recommendations in the Plan. The investment and leverage of private dollars is crucial to the success of the Plan. Each economic development tool has advantages and disadvantages, but real change can be realized when the tools are used in combination with each other.

The responsible entities should collaboratively analyze the appropriateness, cost benefits and best application of these tools as necessary to implement the Plan's recommendations.

*PENDING DISCUSSION WITH PROJECT TEAM*

## LEVERAGING PUBLIC DOLLARS

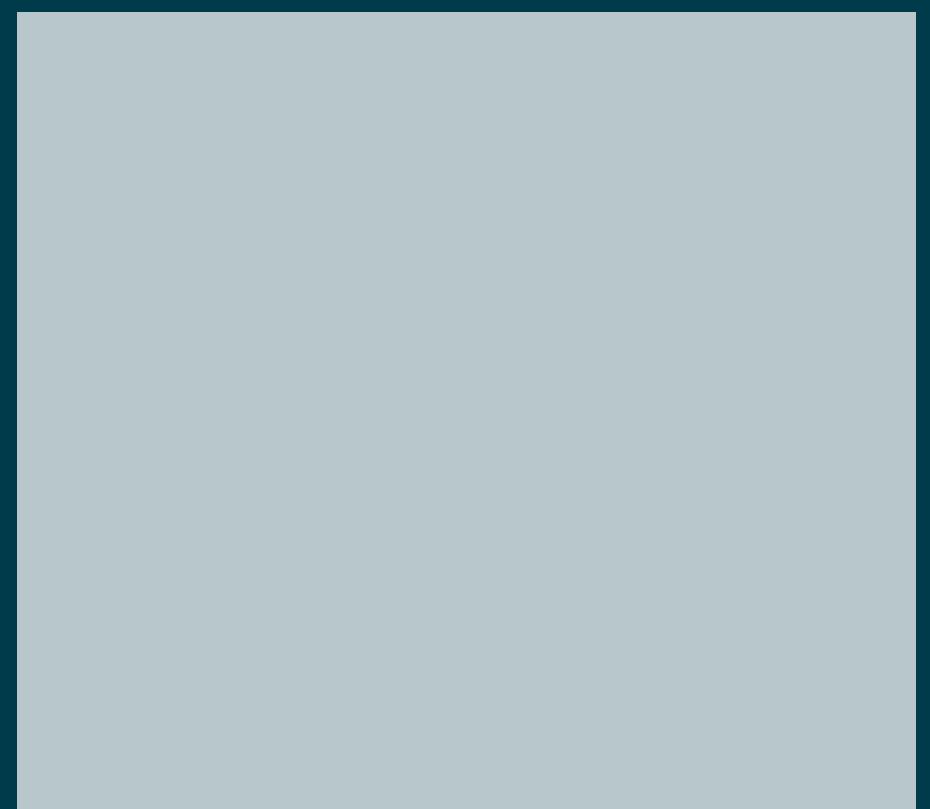
The role of the private sector in the development and revitalization of the Merriam Corridor is critical. The private sector must be invited into and engaged in the planning process, aware of the vision for the corridor (by reading this Plan), and attentive to available incentives and supportable redevelopment and development sites. Therefore, a high visibility public relations campaign announcing the Plan, advertising key redevelopment and development opportunities, and encouraging cooperation with the city and public agencies is necessary to receive active participation and interest by the private sector.

As evidenced by the listed priority projects, investment by the public sector in infrastructure, aesthetic enhancements, and incentives can guide private investment along the corridor. Such public investment can express to the private sector that investment in the area of interest is welcomed and supported. Given that there will never be enough public dollars to support all public needs, public dollars must be leveraged to encourage subsequent private investment, which will hopefully exceed the public dollar investment by several multiples.

Wise public investments in the infrastructure, services, and people living in an area can foster a more development-friendly atmosphere. Public, incentive, and grant dollars must be used on projects that turn the corridor into the place it is envisioned to be. With the proper guiding documents and regulations in place (e.g., Merriam Connected Corridor Plan and contextually appropriate design guidelines and standards), the community can rest assured that future development will improve the offerings and appeal of the corridor.



**IMAGE**



**IMAGE**



# APPENDIX A

# MARKET AND ECONOMIC STUDY

## SUMMARY OF MAJOR FINDINGS

Olsson was hired to prepare a transportation and land use plan for the Merriam Drive Corridor Planning Area that parallels Merriam Drive from 55<sup>th</sup> Street in Merriam, Kansas running northeast to about Southwest Boulevard/39<sup>th</sup> Avenue in Kansas City, Kansas. As a sub-consultant to Olsson, Canyon Research Southwest has prepared a *Highest and Best Use Analysis* that evaluates the corridor's long-term market potential for supporting commercial, industrial, and residential development.

Based on the findings of the *Highest and Best Use Analysis*, the topics addressed included: 1) long-term demand projections for retail, office, and industrial space as well as residential housing units and 2) identify prospective development and redevelopment sites and land use. The study findings and recommendations are summarized in the text to follow.

### Demographic and Economic Trends

A market area's demographic composition has a direct influence on real estate development patterns, the housing and retail markets, and demand for housing and commercial and industrial space. The Merriam Drive Corridor Market Area consists of five zip codes encompassing portions of the communities of Merriam, Overland Park, Mission, Kansas City, Roeland Park, and Fairway. These communities support varied population demographics in terms of household composition, age, educational attainment, and household income.

The Market Area consists of a mature urban area with little vacant land available for development. As a result, over the past twenty year while the population has fluctuated the net result has been a slight decline in population. From a current population of 87,876 residents, by 2040 the Market Area population is forecast to reach 94,207 residents. Future population growth will require development of vacant infill sites and the redevelopment of underutilized properties with a mix of single-family housing and higher-density, multi-family housing.

One person households account for 33.7 percent of all Market Area households, compared to 28.1 percent statewide. Married couple families account for 39.5 percent of all households with 17.4 percent having children, compares to the statewide rate of 50.6 percent married couple households of which 20.5 percent have children present. The Market Area's household composition suggests an above average need for rental housing and below average need for single-family housing.

Young adults (25 to 34 years) and family/working adults (34 to 44 years) which account for 30.3 percent of the Market Area population will have a growing impact on the workforce, retail goods and services, and housing market. These age groups are heavy consumers of electronics, apparel and accessories, entertainment, entry-level for-sale housing, and rental housing. Empty nesters ages 45 to 64 years comprise 23.0 percent of the Market Area population, generating the demand for for-sale housing, home furnishings, home improvements, clothing, dining, and entertainment. The senior population generates the need for healthcare, senior housing, and downsized housing.

Among the Market Area's five zip codes significant disparities in median household income levels exist, ranging from a low of \$51,483 and \$55,721 in the Kansas City zip codes 66103 and 66106 to a high of \$120,189 for zip code 66205 (Roeland Park and Fairway). The wide range of household income levels have a direct impact on housing affordability, property values, homeownership rates, and consumer spending patterns.

The Market Area population is well-educated with 36.3 percent of the population attaining a bachelor's degree or higher compared to 33.4 percent statewide. Conversely, 34.6 percent of Market Area residents attained a high school diploma or less which is comparable to the statewide average of 35.0 percent. The Market Area's educational attainment levels translate into the potential to support slightly above average

wages and spending on housing, personal services, apparel, household furnishings, entertainment, dining out, automobiles, travel, and healthcare.

The Market Area demographics are characterized by significant disparities among the individual cities relating to population size, age, educational attainment, and household income levels. The net effect on the future redevelopment of the Market Area is the ability to support a wide range of housing needs and consumer goods and services.

### Real Estate Market Trends

The study evaluated directly competitive retail, office, industrial, and housing markets. The text to follow summarizes the major study findings.

#### Retail Market Overview

The competitive market area parallels Merriam Drive from 55<sup>th</sup> Street to Southwest Boulevard/39<sup>th</sup> Avenue and Antioch Road north of Johnson Drive maintains 633,419 square feet of retail space operating at an overall healthy vacancy rate of 6.6 percent. Over the past decade, with one exception, the competitive market area retail space has operated at or below a market equilibrium vacancy rate ranging from 1.9 percent to 7.2 percent.

Merriam Drive is an older, mature urban corridor supporting just 205,062 square feet of space, consisting of freestanding retail buildings, storefront space, and strip centers. The retail properties are occupied primarily by independent retail businesses. No anchored shopping centers operate along Merriam Drive.

The Merriam Town Center accounts for the remainder of the competitive market area. While the shopping center is outside of the Merriam Drive Corridor, its size and presence of such major tenants as Home Depot, Dick's Sporting Goods, Marshalls, Cinemark, Petsmart, and Office Max has a significant impact on the local retail market. Merriam Village located south of Johnson Drive just outside of the competitive market area houses a 349,000 square foot IKEA and 55,000 square foot Hobby Lobby. Merriam Town Center is operating at a 9.1 percent vacancy rate.

Through the year 2040, the Planning Area is estimated to absorb about 37,500 square feet to 62,400 square feet of retail space. Several properties in the Planning Area offer the necessary site characteristics and trade area demographics to support retail development. Given the Market Area's diverse demographics potential retail uses include an ethnic grocery store and a variety of ethnic restaurants and retail businesses. Prospective redevelopment sites include currently underutilized or older commercial and industrial properties.

The Boulevard Drive-in Theatre could support such additional amenities such as a stage for live performances, a playground, patio seating with food and beverage service, and bricks and mortar restaurants along the Merriam Drive frontage with rooftop decks affording a view of the movie screen and stage. Such a redeveloped property could serve as an anchor for the Planning Area and help redefine its image.

Given directly competitive market conditions a grocery store, freestanding retailers, strip centers, and as a component of mixed use development are the most appropriate future retail development formats. Prospective redevelopment sites include currently underutilized or older commercial and industrial properties.

#### Office Market Overview

The Planning Area supports a modest inventory of office space totaling just 167,485 square feet of building area. No new office space was built over the past two decades. The absence of Class A office space places the Planning Area in at a competitive disadvantage when marketing to quality office tenants.

Over the past decade the Planning Area office market has operated at a healthy vacancy rate ranging from 0.0 percent to 7.4 percent. Since 2020, the vacancy rate has stood at just 4.7 percent.

From 2021 through 2040, office-related job growth in the Planning Area is projected to support the need for 12,800 to 24,400 square feet of owner-occupied and speculative office space.

#### Industrial Market Overview

The Planning Area supports a mature industrial market totaling 2.58 million square feet of space with warehouse space accounting for 69 percent of the inventory. Most industrial buildings in the Planning Area were built from the 1960's through 1980's. As of the second quarter 2021, just 75,625 square feet of industrial space was vacant.

Over the past decade, the overall industrial vacancy rate for the Planning Area has operated well below market equilibrium, ranging from a low of 1.6 percent in 2016 to a high of 4.4 percent in 2014. Since 2020, the net absorption of 32,749 square feet reduced the vacancy rate to a healthy 2.9 percent by the second quarter 2021.

The Planning Area industrial market consists primarily of warehouse space stemming from excellent freeway access. Little vacant land is available for development making it difficult for existing businesses to expand. Future additions to supply will originate from the expansion of existing buildings and redevelopment of underutilized properties.

Through 2040, the Planning Area is estimated to support the development of 243,000 to 415,000 square feet of new industrial space.

#### Residential Market Overview

The Interstate 35 Corridor from Johnson Drive to Southwest Boulevard has 16 large-scale apartment properties totaling 3,868 dwelling units. All existing apartment properties are located south of Interstate 35 with no properties within the Planning Area.

The competitive large-scale apartment stock is older with all, but one property built between 1962 and 1987. Two-thirds of the apartment properties were built from 1960 to 1979. No apartment development is proposed for the Interstate 35 Corridor.

Since 2011, existing apartment properties in the Interstate 35 Corridor have operated at a healthy vacancy rate at or below market equilibrium and rents have escalated at a rate exceeding the metro-wide average. Despite these favorable market conditions, no new large-scale apartments were in the Interstate 35 Corridor since 1995.

Through 2040, the Planning Area population growth and latent housing demand is forecast to create the need for an estimated 377 to 584 occupied housing units.

#### Study Conclusions

Based on the study findings, demand through 2040 in the Merriam Drive Planning Area was forecast for new retail, office, and industrial space as well as residential housing by product type. Land absorption was calculated based on the commercial space and residential housing demand projections. Future development activity within the Planning Area will include both the development of vacant land and the redevelopment of underutilized properties.

#### Forecast Commercial, Industrial and Residential Demand

Retail, office and industrial space and residential housing unit demand through the year 2040 was forecast for the Merriam Drive Planning Area. Market forces driving future demand for commercial space and housing include the growth in employment, population, and income along with trends in average space per employee, household size, and household composition.

By 2040, the Planning Area's increased population is forecast to generate additional retail sales capable of supporting 37,500 to 62,400 square feet of new retail space.

Through 2040, office-related job growth in the Planning Area will support the need for 12,800 to 24,400 square feet of owner-occupied and speculative office space. Given the lack of vacant land in the Planning Area available for office development, future office development will involve conversion of underutilized properties. This scenario will result in removing existing commercial or industrial space inventory. In addition, these space demand forecasts do not account for a major owner-user purchasing an industrial property fronting onto Interstate 35, razing the structure, and constructing a single-tenant building.

By 2040, industrial job growth in the Planning Area is will support the need for 243,000 to 415,000 square feet of owner-occupied and speculative industrial space. Given the limited availability of vacant industrial land in the Planning Area, future industrial development will take the form of existing building expansion and redevelopment of older, underutilized properties.

Through 2040, the Planning Area's population growth and latent housing demand will generate the need for 377 to 584 residential dwelling units. Vacant land does exist within the Planning Area suitable for both single-family and multi-family residential development. Suitable redevelopment sites for multi-family residential development also exist along Merriam Drive in the form of underutilized properties.

Forecast Retail, Office, Industrial and Residential Demand  
Merriam Drive Planning Area; 2021 to 2040

	Growth Population	2019-2040 Jobs	Net Conservative	Gain Optimistic
Retail	6,331		37,500 SF	62,400 SF
Office		40 - 84	12,800 SF	24,400 SF
Industrial		133 - 279	243,000 SF	415,000 SF
Housing Units	6,331		377 - 502 Units	438 - 584 Units

Assuming an average floor-area-ratio ("FAR") of 0.2 to 0.35 for the retail, office, and industrial space and an average density of 18 to 20 dwelling units per acre, through 2040 the Market Area will support the development and redevelopment of 40 to 69 acres of land.

Forecast Land Area Absorption in Acres  
Merriam Drive Planning Area; 2021 to 2040

Land Use	Conservative Scenario	Optimistic Scenario
Retail	3.7 - 4.3	6.2 - 7.2
Office	1.0 - 1.2	1.9 - 2.2
Industrial	15.9 - 18.6	27.2 - 31.8
Residential	18.9 - 20.9	25.1 - 27.9
Total Acres	39.5 - 45.0	60.9 - 69.1

### Redevelopment Opportunities

The Planning Area is a mature urban area consisting primarily of older industrial and commercial buildings along Merriam Drive and established single-family neighborhoods north of Merriam Drive. Given the wide mix of varying land uses, the Planning Area currently lacks a definable identity and is not a destination. The fact that the Planning Area encompasses four very distinctive jurisdictions places challenges on the planning and implementation process. Street and infrastructure improvements to the primary corridor of Merriam Drive can enhance the look and perception of the Planning Area and serve as the foundation and catalyst for future redevelopment efforts.

Bike and pedestrian lanes designed for improved safety could be incorporated into the street plan and along the banks of Turkey Creek. This added amenity would aid in establishing an identity for the Planning Area. The current Turkey Creek trail links to a trail that extends south to 75<sup>th</sup> Street. Future extension of the trail to downtown Kansas City, Kansas would provide a distance sufficient for both recreational use and commuting to place or work. Pocket parks and public green space along the trail would improve the esthetics and could support commercial endeavors.

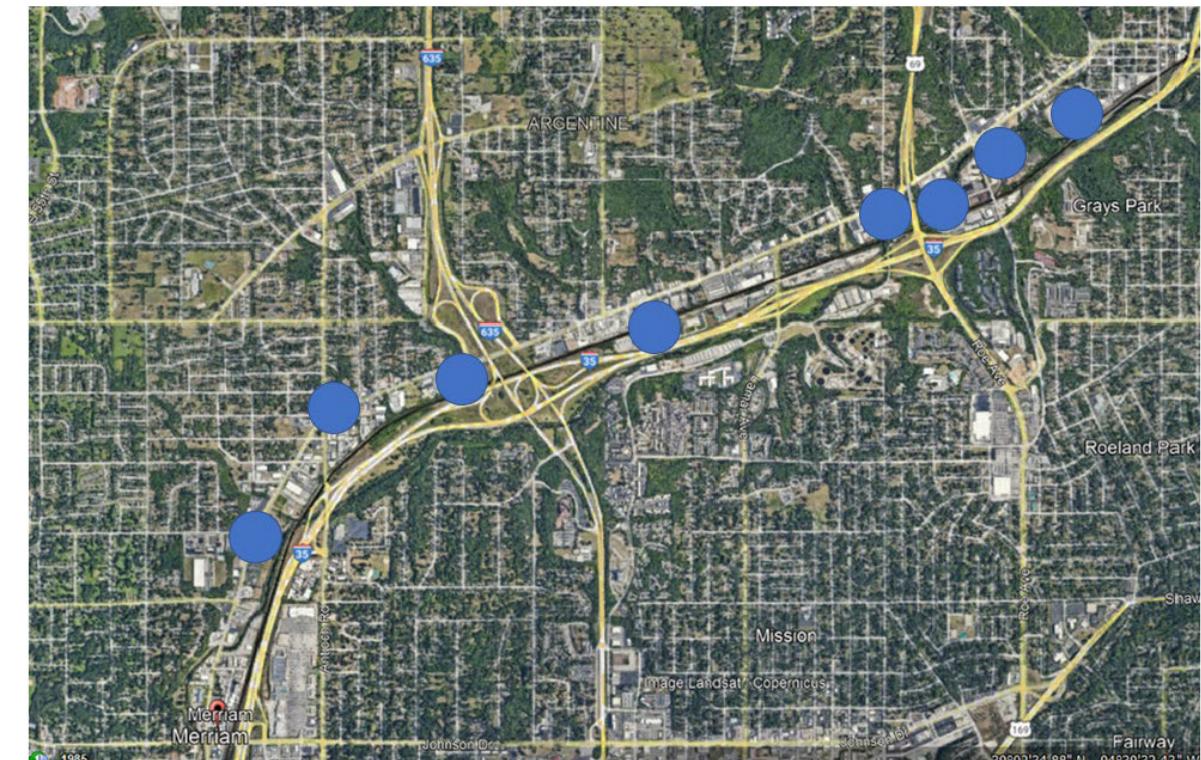
While a few vacant lots exist, most of the future development activity within the Planning Area will take the form of the redevelopment of older and under-utilized properties. Assets that will assist in supporting future redevelopment efforts within the Planning Area include its central location within the Kansas City MSA, excellent regional accessibility, freeway exposure, diverse population demographics, and the presence of underutilized properties. These assets could be leveraged to enhance the Planning Area's economic vitality through new commercial development and expand the housing stock through the introduction of new for-sale and rental housing targeting a wider demographic.

Several underutilized properties within the Planning Area offer the size and physical characteristics to support mixed used development including professional office, industrial, retail, and multi-family residential uses. The most suitable sites consist of properties located adjacent to Merriam Drive and near Interstate 35 interchanges. A unique location for mixed use development is the intersection of Merriam Drive and Antioch Road where the cities of Merriam, Overland Park, and Kansas City (a bit to the north) converge. This gateway location through reconfiguration of the intersection could serve as a gateway for all three communities and support public space and entry features. Prospective mixed use redevelopment sites designated as "mixed use" include.

- Northeast corner of 55<sup>th</sup> Street and Merriam Drive
- Intersection of Merriam Drive and Antioch Road
- Southeast corner of Merriam Drive and Interstate 635
- North side of Interstate 35 between the Interstate 635 and 24<sup>th</sup> Street interchanges
- Southwest corner of Merriam Drive and U.S. Highway 69
- Southeast corner of Merriam Drive and U.S. Highway 69

- Southeast corner of Merriam Drive and Roe Lane
- Boulevard Drive-in Theatre

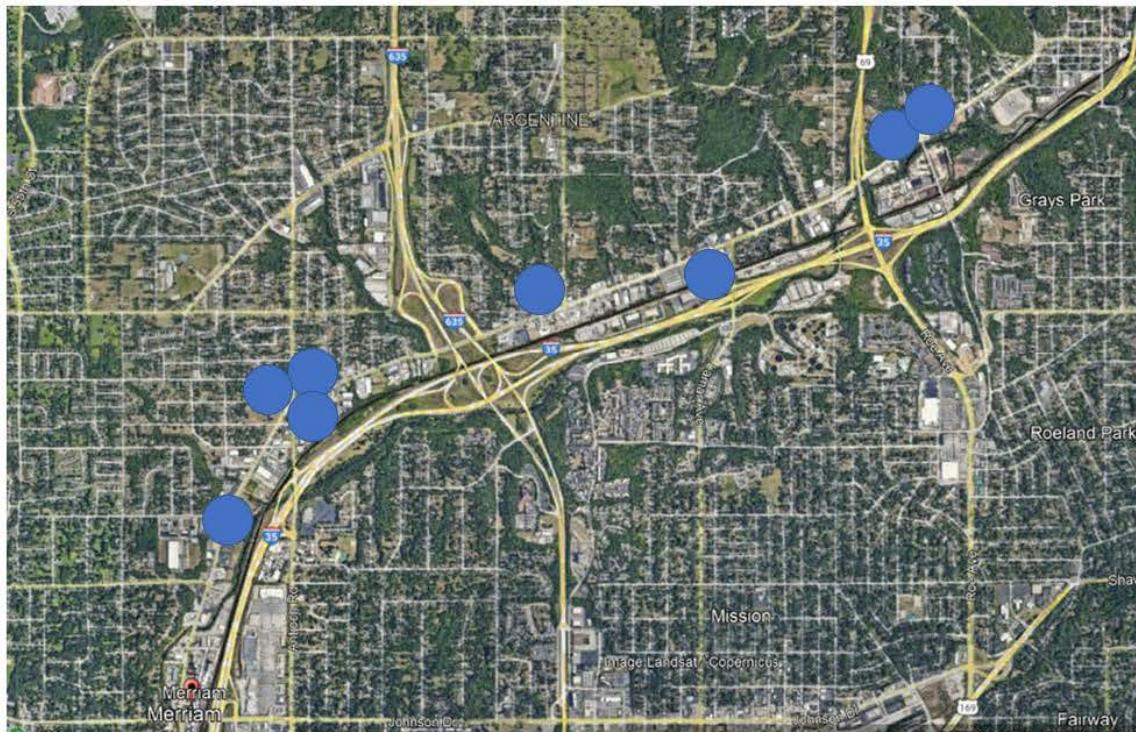
### Merriam Drive Corridor Potential Mixed Use Redevelopment Sites



The most suitable locations for future retail development within the Planning Area include the Merriam Drive interchanges identified below. Appropriate retail development formats include freestanding buildings, strip centers, and as part of mixed use development. Given the Market Area's diverse demographics potential retail uses include an ethnic grocery store and a variety of ethnic restaurants and retail businesses that would assist in redefining the Planning Area's identity.

- Northwest corner of 55<sup>th</sup> Street
- Northeast corner of Antioch Road
- Southeast corner of Antioch Road
- Northwest corner of Antioch Road
- Northwest corner of 34<sup>th</sup> Street
- Southwest corner of 24<sup>th</sup> Street
- Northeast corner of 14<sup>th</sup> Street
- Northwest corner of 14<sup>th</sup> Street

Merriam Drive Corridor Potential Retail Development Sites

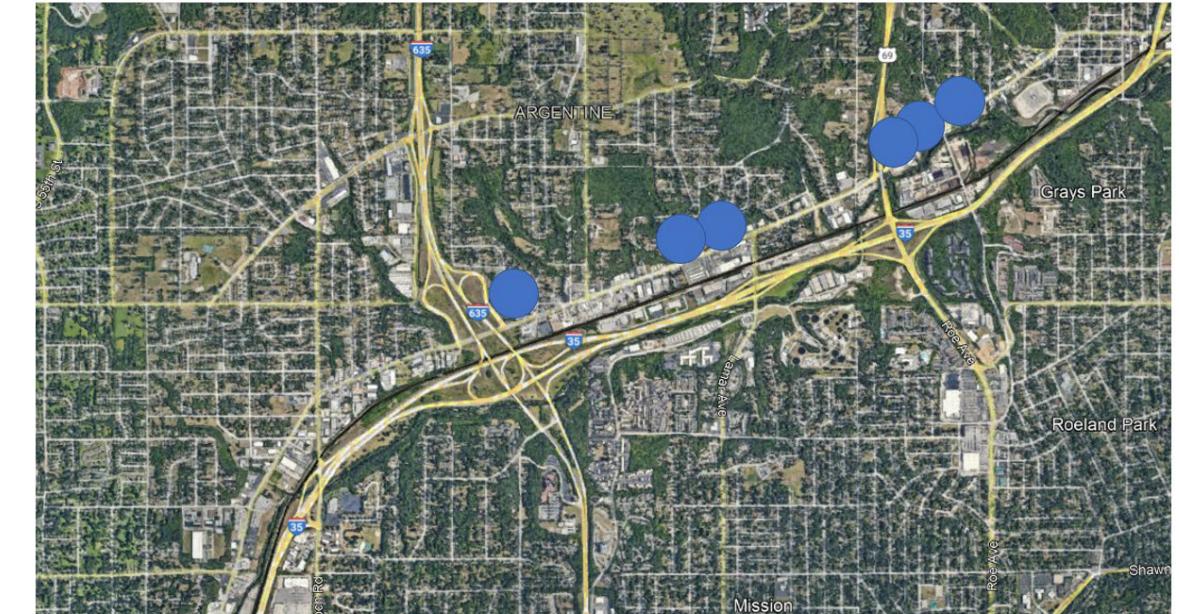


Future professional office development within the Planning Area will take the form of small single-tenant and multi-tenant buildings along Merriam Drive. The one exception would be the redevelopment of existing industrial properties along the north side of Interstate 35 between Interstate 635 and Lamar Avenue where sufficient freeway exposure and access affords the potential to support development of large office buildings ideal for both single-tenant and multi-tenant occupancy.

Prospective multi-family residential development sites are identified in the bullet points below. Potential development formats include duplexes, triplexes, fourplexes, small apartment properties, and as a component of mixed use development.

- Northeast corner of Merriam Drive and U.S. Highway 69
- Northeast corner of 14<sup>th</sup> Street and Merriam Drive
- Northwest corner of 14<sup>th</sup> Street and Merriam Drive
- Northeast corner of 27<sup>th</sup> Street and Merriam Drive
- Northwest corner of 27<sup>th</sup> Street and Merriam Drive
- Northeast corner of Merriam Drive and Interstate 635

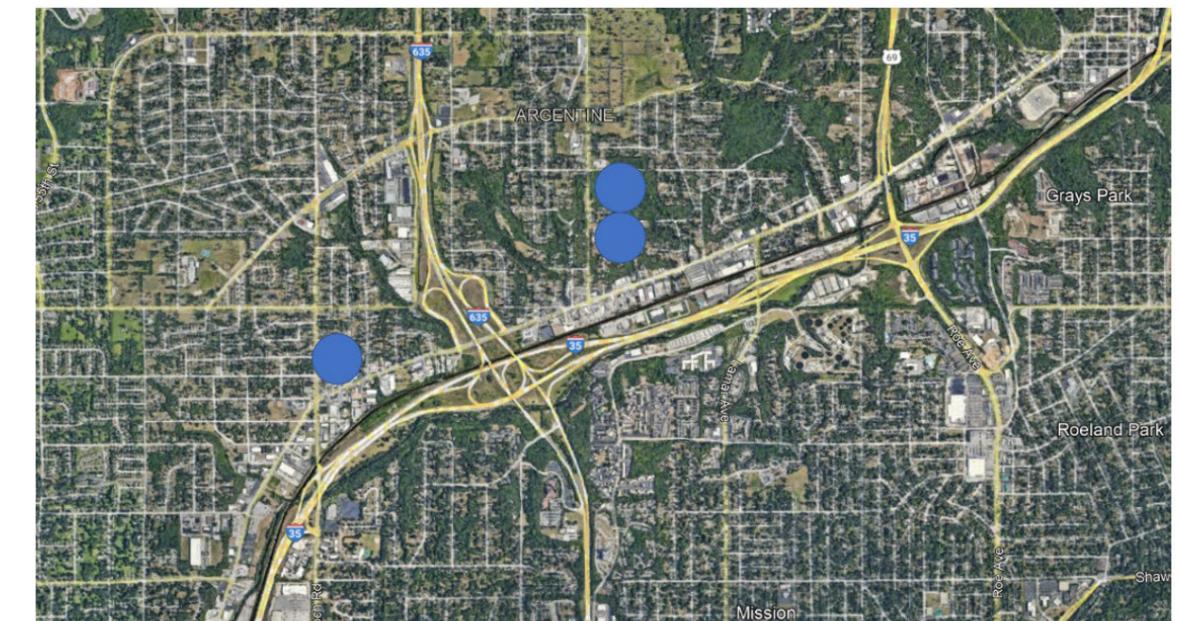
Merriam Drive Corridor Potential Multi-Family Residential Sites



Prospective single-family subdivision development sites include:

- North of the northeast corner of Merriam Drive and Antioch Road
- Southeast corner of 34<sup>th</sup> Street and Woodend Avenue
- City-owned 12-acre property on the east side of 34<sup>th</sup> Street south of Forest Avenue

Merriam Drive Corridor Potential Single-Family Residential Sites



Both single-family and multi-family development sites could assist in expanding the Planning Area's housing stock by providing for a mix of affordable and market-rate for-sale and rental housing catering to an expanded demographic.

Two catalyst redevelopment sites that would assist in redefining the identity and anchor each end of the Planning Area include the Boulevard Drive-in Theatre and the intersection of Merriam Drive and Antioch Road.

The Boulevard Drive-in Theatre is an ideal catalyst redevelopment site that would enhance the existing business by incorporating additional amenities such as a stage for live performances, a playground, patio seating with food and beverage service, and bricks and mortar restaurants along the Merriam Drive frontage with rooftop decks affording a view of the movie screen and stage. The Boulevard Drive-in Theatre property would be an ideal location to host concerts, festivals, live theatre, and community events.

Street improvements and reconfiguration of the intersection of Merriam Drive and Antioch Road offer the potential to create desirable redevelopment sites suitable for mixed use development. Reconfiguration of the intersection could free property for redevelopment on all four corners. Potential land uses include retail, office, apartments, and single-family housing. Green space and entry features could be incorporated within the roundabout and along the arterial streets, creating a visual gateway entry.

Infrastructure improvements to Merriam Drive in the form of traffic lanes, curb and gutter, lighting, sidewalk/multimodal path, and landscaping will assist in improving the aesthetics and image of the Planning Area. Because the Planning Area includes four jurisdictions an overlay district should be considered whereby consistent zoning and building design guidelines are administered. The overlay district while providing consistent design and land use standards should provide flexibility for each jurisdiction to incorporate elements unique to that city.

To prompt private sector investment in the Planning Area a variety of economic incentives could be available to property owners and businesses. Examples of incentives include façade improvement grants, tax abatement, waiving permit and utility connection fees, and public-private partnerships to assist on-site infrastructure improvements.

## INTRODUCTION

As a sub-consultant, Olsson has retained Canyon Research Southwest, Inc. to evaluate future redevelopment opportunities with the Merriam Drive Corridor Planning Area ("Planning Area"). The sub-consultant agreement calls for the following scope or work.

1. An economic and market analysis to evaluate Client's potential to support future development and redevelopment for a variety of land uses and housing types.
2. Key stakeholder interviews and attendance at a citywide charrette.
3. Potential redevelopment sites and land use mix recommendations resulting from the findings of economic and market analysis.

### Study Objective and Scope of Work

The Highest and Best Use Analysis evaluates the market viability of a variety of land uses along the Merriam Drive Corridor Planning Area stemming from proposed transportation improvements. The term Highest and Best Use is the use of land which would result in the highest monetary value that is legally, financially, and physically possible.

The primary objective of the study is to identify competitive market conditions impacting future development and redevelopment of the Planning Area. The study evaluates the historic, current, and future demographic, economic, and real estate market forces that influence the Planning Area's future urban growth patterns. In doing so the report consists of two sections, including: 1) Demographic and Economic Analysis and 2) Market Analysis.

The *Demographic and Economic Analysis* section of the study assists in quantifying future demand for commercial, office, and industrial space as well as residential housing units. Planning Area demographic characteristics and economic forces evaluated include population growth, household composition, age distribution, household income, educational attainment, and employment.

The *Market Analysis* portion of the report evaluates directly competitive retail, office, industrial, and residential market trends impacting the Planning Area. The market trends for each prospective land use were quantified based on such market forces as the current inventory of commercial and industrial space, construction activity, and development trends. The study also quantifies the Planning Area's long-term need for additional retail, office, and industrial space as well as residential housing units to determine the ability to support future real estate development. A site-specific evaluation was conducted to identify viable redevelopment sites.

Preparation of the Highest and Best Use Analysis included interviews with a variety of stakeholders including business owners, developers, planning staff, city administrators, economic development professionals, and others.

Based on the findings of the *Highest and Best Use Analysis*, potential development opportunities for the Planning Area were identified. Study recommendations include the following:

- Quantify the supportable long-term need for new commercial and industrial space and residential housing units within the Planning Area.
- Identify prospective urban development patterns that could take advantage of the Planning Area's location, physical characteristics, and market demand.
- Identify potential redevelopment sites within the Planning Area and recommended land use.

## Planning Area Defined

The Merriam Drive Corridor Planning Area (“Planning Area”) is located within southwest quadrant of the Kansas City metropolitan statistical area (“MSA”). The map on the following page depicts the Planning Area boundaries.

The Planning Area parallels Merriam Drive from 55<sup>th</sup> Street in Merriam, Kansas running northeast to about Southwest Boulevard/39<sup>th</sup> Avenue in Kansas City, Kansas. Turkey Creek serves as the eastern boundary with the western boundary extending one-quarter mile west of the Merriam Drive alignment. From west to east, the Planning Area traverses the communities of Merriam, Overland Park, Mission, and Kansas City.

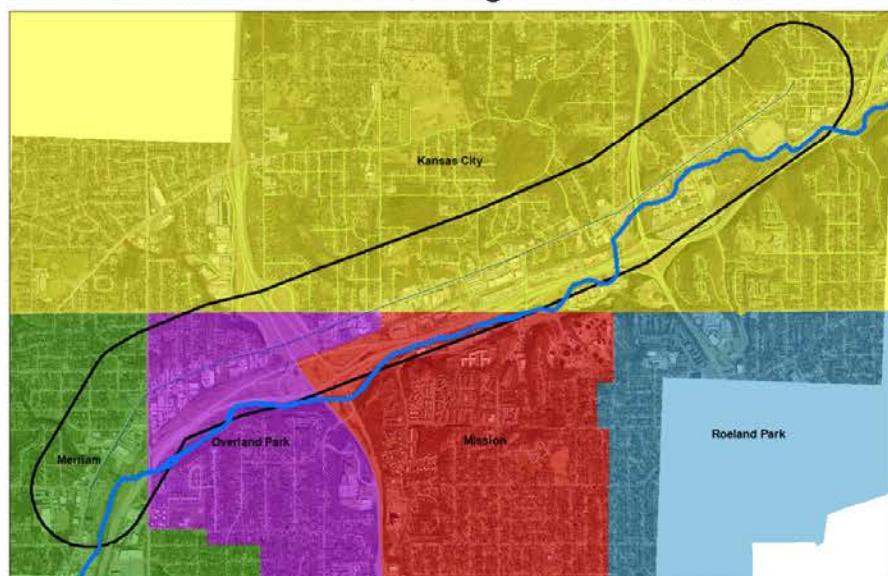
Transportation is a principal asset of the Planning Area featuring excellent freeway access from Interstates 35 and 635 and U.S. Highway 69. Interstate 35 interchanges are present at Antioch Road, Interstate 635, 24<sup>th</sup> Street, and U.S. Highway 69/Roe Boulevard. Signalized intersections along Merriam Drive include 55<sup>th</sup> Street, Antioch Road, 34<sup>th</sup> Street, 24<sup>th</sup> Street, and 14<sup>th</sup> Street/Roe Lane. Both Interstate 35 and U.S. Highway 69 provide access to Interstate 70.

Along the Merriam Drive alignment and fronting onto Interstate 35, industrial is the dominant land use capitalizing on the direct access to Interstates 35 and 635 and U.S. Highway 69. Industrial uses include automotive repair, warehouse, distribution, light manufacturing, and self-storage facilities. Commercial uses along Merriam Drive include strip centers freestanding retail buildings, storefront retail, and office buildings. Automotive uses are prevalent in the Planning Area taking the form of used car sales, repair shops, car washes, and towing services. Single-family housing is located along east Merriam Drive and north of Merriam Drive. No large-scale apartment properties are located within the Planning Area though several properties are along Foxridge Drive south of Interstate 35.

Notable businesses operating within the Planning Area include Buck Roofing, Burke Mobility Products, Titan Environment Services, Dimensional Innovations, Midway Wholesale Construction Materials, Interstate Batteries, and Enterprise Holdings (car rental company offices).

The Planning Area is a mature urban area consisting primarily of older industrial and commercial buildings along Merriam Drive and established single-family neighborhoods north of Merriam Drive. While a few vacant lots exist, future development will take the form of the redevelopment of older and under-utilized properties.

### Merriam Drive Corridor Planning Area Boundaries



Through stakeholder interviews and other primary research, opportunities and constraints for the future population growth, job creation, and urban development of the Merriam Drive Corridor Planning Area were identified and summarized in the text below.

#### Opportunities

- Convenient central location with excellent transportation access
- Potential to evolve into a major job center
- Create more green/public space
- Merriam Drive provides direct access to downtown Kansas City, Kansas
- Eclectic mix of buildings and businesses
- Corridor is ripe for redevelopment
- 30-minute drive to the entire metro area
- Diverse demographics and established population base
- Ethnic diversity could serve a key role in redevelopment
- Turkey Creek trail could become a biking destination and a catalyst for redevelopment
- Opportunity for the drive-in movie theater to become a greater entertainment attraction
- Excellent potential to support redevelopment and new land uses and businesses
- Good visibility and access from Interstate 35 which allows for more intensive land uses
- Merriam Drive Corridor is considered an urban infill location
- Low property values
- Opportunity to expand housing stock, including affordable housing
- Potential to support a cooperative corridor plan among the four municipalities, including funding infrastructure, land use, and marketing
- Streetscape improvements will enhance the look and perception of the Corridor

#### Constraints

- Small retail market
- Industrial and automotive are the dominant land uses
- Hodge podge of uses and businesses
- Low customer traffic volumes
- Railroad line poses a challenge to redevelopment
- Shady and bad reputation
- Merriam Drive Corridor lacks destination attractions
- Crime, more police presence is needed
- Poor infrastructure and street lighting
- Poor pedestrian environment with little foot traffic
- Lack of development sites
- Dangerous traffic intersections
- Some businesses outgrow their space and are unable to expand, forcing them to relocate
- A speedy pass through for commuters
- Old properties, tired look
- Presence of several jurisdictions within the corridor may make comprehensive planning and redevelopment more difficult

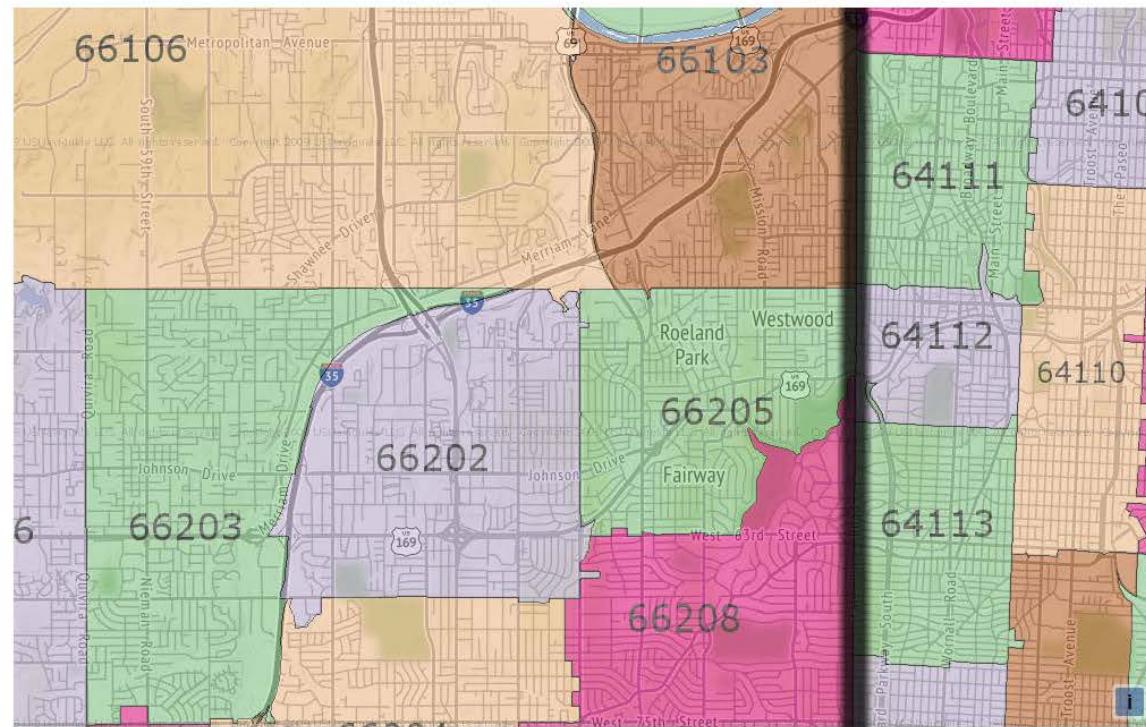
## ECONOMIC AND DEMOGRAPHIC ANALYSIS

This section of the report examines the economic and demographic factors impacting real estate development trends in the Planning Area. It includes an analysis of population growth trends and projections, household composition, age distribution, household income, educational attainment, and employment composition. Demographic trends were provided by Esri Business Analyst, a national demographic research firm. Quantifying these economic and demographic characteristics will assist in forecasting the Planning Area's future need for commercial space, industrial space, and residential housing units.

To attract retail, restaurant, and entertainment venues into the Merriam Drive Corridor Planning Area that will serve as destination attractions, customers must be drawn from outside its boundaries.

Therefore, demographic characteristics and trends of five zip codes in and surrounding the Planning Area are provided in the table on the following page and referred to as the "Market Area." The zip codes selected are depicted below and include 66103, 66106, 66202, 66203, and 66205. Zip codes 66103 and 66106 include Kansas City, zip code 66202 includes Overland Park and Mission, zip code 66203 includes parts of Merriam and Shawnee, and zip code 66205 includes Roeland Park and Fairway. These zip codes were selected as having the greatest influence on retail demand and real estate development patterns within the Planning Area. While not actually in the Planning Area, zip code 66205 was included due to its proximity and favorable demographics for driving retail, restaurant, and entertainment sales.

The table on the following page provides a summary of demographic characteristics for each zip code. As the text to follow illustrates, demographically the Market Area supports a diverse population in terms of household composition, age, educational attainment, and household income.



Merriam Drive Corridor Planning Area Population Demographics

Demographic Characteristic	Kansas City 66103	Kansas City 66106	Mission Overland Park 66202	Merriam Shawnee 66203	Roland Park Fairway 66205	Totals
<b>Population</b>						
2000 Census	14,481	24,239	17,295	19,491	13,408	88,914
2010 Census	13,920	23,364	16,367	18,803	13,138	85,592
2021 Estimate	13,871	23,582	17,235	19,358	13,830	87,876
2026 Forecast	13,966	23,872	18,011	20,504	14,727	91,080
<b>Households by Type (2021)</b>						
Total Households	6,071	8,588	8,140	8,102	6,050	36,951
Households with 1 Person	38.5%	24.4%	41.8%	32.0%	33.6%	33.7%
Family Households	48.8%	70.0%	48.4%	61.0%	57.1%	57.7%
Married Couple Family	27.5%	44.5%	34.8%	43.6%	45.5%	39.5%
With Own Children	13.7%	21.5%	12.9%	17.2%	19.0%	17.4%
Other Family (No Spouse Present)	21.3%	25.6%	13.6%	17.4%	11.7%	18.2%
With Own Children	14.5%	7.4%	8.4%	11.1%	7.0%	9.7%
Cohabitating Couple Households	10.1%	7.8%	6.3%	6.7%	6.3%	7.4%
All Households with Children	28.7%	39.7%	21.7%	28.8%	26.3%	29.3%
<b>Distribution of Population by Age (2021)</b>						
0-4 Years	8.1%	7.9%	5.3%	6.0%	5.6%	6.6%
5-14 Years	12.9%	14.8%	10.3%	11.7%	11.0%	12.3%
15-24 Years	15.3%	12.8%	11.5%	11.2%	10.7%	12.3%
25-34 Years	21.7%	14.6%	16.0%	13.0%	14.1%	15.6%
35-44 Years	14.1%	13.5%	16.8%	14.2%	15.6%	14.7%
45-64 Years	20.1%	22.7%	23.0%	24.3%	24.4%	23.0%
65+ Years	8.6%	13.8%	16.9%	19.7%	18.5%	15.6%
Median Age	31.0	35.0	38.5	40.5	39.9	37.0
<b>Distribution in Household Income (2021)</b>						
Less than \$15,000	16.3%	9.6%	5.9%	8.2%	5.4%	8.8%
\$15,000 - \$24,999	10.3%	10.5%	5.4%	7.4%	4.5%	7.6%
\$25,000 - \$34,999	15.7%	10.7%	10.6%	9.5%	4.3%	10.1%
\$35,000 - \$49,999	16.6%	17.3%	12.9%	10.3%	7.4%	13.0%
\$50,000 - \$74,999	18.0%	19.9%	21.8%	21.4%	16.9%	19.9%
\$75,000 - \$99,999	10.2%	15.7%	21.0%	20.2%	18.7%	17.5%
\$100,000 - \$149,999	7.4%	12.3%	13.5%	15.2%	21.6%	14.0%
\$150,000 - \$199,999	3.7%	2.3%	4.2%	4.8%	7.3%	4.3%
\$200,000+	1.8%	1.6%	4.8%	3.0%	13.9%	4.7%
Median Household Income	\$55,721	\$51,483	\$81,205	\$76,387	\$120,189	\$75,963

Source: U.S. Census and Esri Business Analyst.

## Population Growth Trends

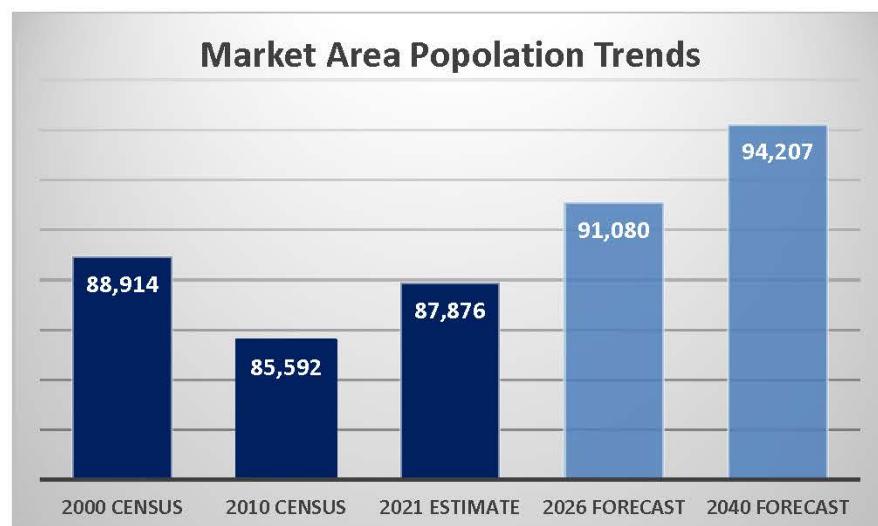
Population growth has a direct impact on retail expenditures and housing demand. The Market Area consists of a mature urban area with little vacant land available for development. Future population growth will originate from occupancy of vacant housing units and redevelopment of underutilized properties with single-family and multi-family housing.

Esri Business Analyst estimated the current Market Area population at 87,876 residents. Zip codes 66103 and 66106 encompassing Kansas City, Kansas support the largest population totaling 27,453 residents, followed by zip codes 66202 and 66203 comprised of portions of Mission, Overland Park, Merriam, and Shawnee. Over the next five years Esri Business Analyst forecasts the Market Area population to increase by 3,204 residents with zip codes 66203 and 66205 accounting for two-thirds of the population growth.

Over the past twenty years the Market Area population base has fluctuated with the net result being a slight decline in population. From 88,914 residents in the 2000 Census, the five zip codes experienced a decline in population to 85,592 residents by the 2010 Census. The population has since rebounded reaching an estimated 87,876 residents by 2021. Esri Business Analyst forecasts the Market Area population to increase to 91,080 residents by 2026.

Population growth projections through the year 2040 were based on the premise that the Market Area's infill urban location, excellent accessibility, and proximity to employment and services will stimulate infill single-family and multi-family residential development. Older commercial and industrial properties fronting onto Merriam Drive are prospective future redevelopment sites with the potential to facilitate multi-family residential housing. By 2040, the four zip codes are forecast to support a population of 94,200 residents.

The Market Area's continued population growth will generate the need for retail goods and services, additional commercial space, and new residential housing units. The bar chart below identifies U.S. Census Bureau population estimates in "dark blue" with future population projections highlighted in "light blue."



## Household Composition

Household formation and the mix of household types have a direct impact on the composition of retail sales and housing needs. Esri Business Analyst estimated that in 2021 a total of 36,951 households resided in the Market Area. When compared to that of the State of Kansas, the Market Area's household composition possesses well above average rates of one person and cohabitating couple households and below average rates of family and married couples with children.

The table below compares Market Area households by type with statewide averages. One person households account for 33.7 percent of all Market Area households, compared to 28.1 percent statewide. Married couple families account for 39.5 percent of all households with 17.4 percent having children, compares to the statewide rate of 50.6 percent married couple households of which 20.5 percent have children present.

Market Area Households by Type

Household Type	Market Area	State of Kansas
Total Households	36,951	1,129,227
Households with 1 Person	33.7%	28.1%
Family Households	57.7%	65.1%
All Households with Children	29.3%	29.2%
Cohabiting Couple Households	7.4%	5.8%
Married Couple Family	39.5%	50.6%
With Own Children	17.4%	20.5%
Other Family (No Spouse Present)	18.2%	43.6%
With Own Children	9.7%	6.2%
Average Household Size	2.18	2.51
Average Family Size	2.92	3.11

Source: American Community Survey, U.S. Census Bureau.

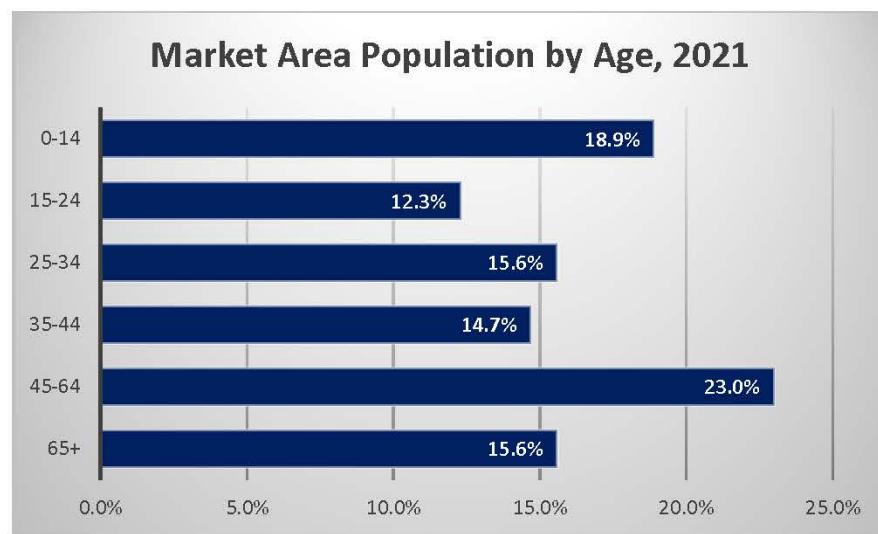
The Market Area's household composition varies widely by zip code and city. The portions of the Market Area in Kansas City (66103) and Mission/Overland Park (66202) support the highest rates of one person households and the lowest rates of family households, married couple families, and married couple families with children. The portions in Merriam/Shawnee (66203) and Roeland Park/Fairway (66205) possess much higher rates of families, married couple families, and households with children.

The Market Area's household composition suggests an above average need for rental housing and below average need for single-family housing.

## Population Age Distribution

Age is an important factor in consumer identity, since consumption patterns, housing needs, and financial situation change significantly throughout an individual's lifetime. Change in the relative proportions of age groups throughout the United States will have an important impact on the retailing and housing industries.

The bar chart below depicts the Market Area's population by six primary age groups, including children (0-14 years), adolescent (15-24 years), young adults (25 to 34 years), family/working adults (35-44 years); empty nesters (45-64 years) and elderly (65+ years). Each of the six age groups possesses distinctively different consumption and housing needs.



The median age of the Market Area population of 37.0 years compares to the state average of 37.2 years. Empty nesters ages 45 to 64 years comprise the Market Area's largest age group with 23.0 percent of the total population, followed by children ages 0 to 14 at 18.9 percent and elderly ages 65+ years at 15.6 percent. The large empty nester and elderly populations are consistent with the above average rate of persons living alone. The youngest population resides in the Kansas City zip codes of 66103 and 66106 while the oldest population is in the Merriam and Shawnee zip code of 66203 and Roland Park and Fairway zip code of 66205.

Children ages 0 to 14 years are not consumers per say, but their presence within a household generates retail expenditures on such items as apparel and accessories and groceries. This age group accounts for 18.9 percent of the Market Area population which is below the statewide average of 20.4 percent.

The adolescent population ages 15 to 24 is key for supporting the sales of apparel and accessories, groceries, sporting goods, music, consumer electronics, eating and drinking places, and general merchandise. Adolescents account for 12.3 percent of the Market Area population. By comparison, adolescents account for 14.3 percent of the Kansas population.

Young adults aged 25 to 34 years are new to the workforce. These tech savvy young adults are heavy consumers of electronics, apparel and accessories, entertainment, and rental housing. Young adults account for 15.6 percent of the Market Area population and will have a growing impact on the local workforce, retail goods and services, and housing market. Young adults account for 13.2 percent of the Kansas population.

The population ages 35 to 44 are in their child raising and principal consumer years, with expenditures favoring hardware, furniture and home furnishings, consumer electronics, department stores, and eating and drinking places. Family/working adults account for 14.7 percent of the Market Area population, compared to 12.1 percent of the statewide population.

The Market Area's population ages 45 to 64 years account for 23.0 percent of the total population, compared to 24.7 percent statewide. People aged 45+ years are less consumers of apparel, consumer

electronics, furniture, home furnishings, and entertainment than are younger consumers. This age group provides opportunities for move-up for-sale housing, home downsizing, restaurants, and travel and will also produce a growing need for healthcare services and continuum care housing facilities.

According to the U.S. Department of Labor, per capita retail expenditures by seniors 65+ years old is 18 percent lower than those under the age of 35 years and 41 percent lower than people ages 35 to 64 years. Residents 65+ years of age account for 15.6 percent of the Market Area population, compared to 15.4 percent of the statewide population. The large senior population generates the need for healthcare, senior housing, and downsized housing.

Among the six major age groups, those ages 35 to 64 possess the highest incomes and per capita consumer spending levels. According to the U.S. Department of Labor, people ages 35 to 64 possess an annual income 51 percent greater than those under the age of 35 years. Adults ages 35 to 64 years account for 37.7 percent of the Market Area population and are in their peak spending years for housing, home furnishings, home improvements, clothing, and entertainment.

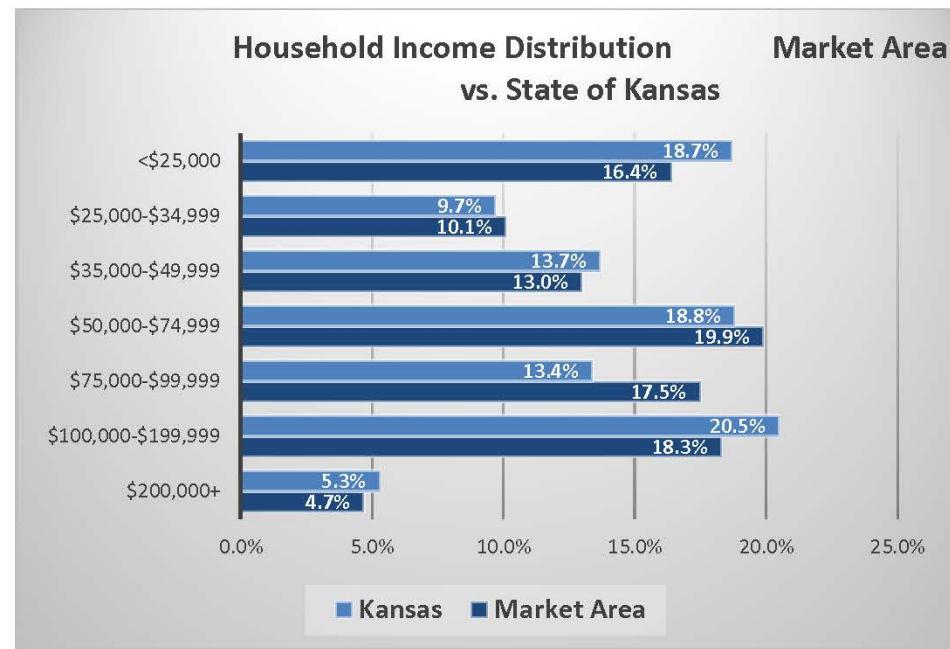
Among the Market Area's five zip codes significant disparities in the age composition of the population exist. The age variances result in differing housing needs and composition of retail expenditures.

The portion of the Market Area in Kansas City, Kansas (zip code 66103) supports the youngest population with a median age of 31.0 years. Children ages 0 to 14 years comprise 21.0 percent of the population, young adults aged 25 to 34 years account for 21.7 percent, and the elderly just 8.6 percent. This younger age composition favors rental housing and retail expenditures on such items as home furnishings, clothing, sporting goods, groceries, and entertainment.

The portion of the Market Area located in Merriam and Shawnee (zip code 66203) supports the oldest population with a median age of 40.5 years. Children ages 0 to 14 years comprise just 17.7 percent of the population, young adults aged 25 to 34 years account for 13.0 percent, empty nesters account for 24.3 percent, and the elderly at 19.7 percent. This older age composition favors single-family housing, home downsizing, senior housing, and retail expenditures on such items as dining out, groceries, entertainment, and medical supplies and services.

## Household Income Distribution

Household income levels have a direct impact on retail sales volumes, housing needs, for-sale housing values, and residential rents. The Market Area's median household income of \$75,963 well exceeds that for Kansas of \$62,087 with a lower rate of households earning less than \$35,000 and a greater rate of high-income households earning \$75,000 or more. The Market Area's household income levels would suggest the ability to support a wide range in average retail sales per capita, housing values, and residential rents. The bar chart below provides a comparison of household income distribution estimates for the Market Area and State of Kansas.



An estimated 18.7 percent of Kansas households earn less than \$25,000 annually, compared to 16.4 percent of all Market Area households. The largest concentrations of lower income households reside in the Kansas City zip codes of 66103 and 66106, suggesting a need for income-based housing.

An estimated 10.1 percent of Market Area households earn \$25,000 to \$34,999 annually compared to 9.7 percent for Kansas. These households tend to be perpetual renters with the lowest income households potentially qualifying for some form of housing assistance. The median rent in Johnson County of \$798 per month as reported by the U.S. Census requires annual household incomes within the mid to upper end of the \$25,000 to \$34,999 income range. Household income levels suggest the Market Area supports a slightly above average demand for affordable housing rents.

Entry-level housing valued between \$100,000 and \$199,999 accounts for 34.6 percent of Johnson County's total housing stock. Based on standard lending practices, households earning \$50,000 to \$74,999 represent the entry-level, for-sale housing. An estimated 19.9 percent of Market Area households earn \$50,000 to \$74,999, compared to 18.8 percent statewide, suggesting a strong need for entry-level, for-sale housing. Approximately 7.4 percent of Johnson County's rental housing supports monthly rents of \$1,500 to \$3,000 with 18.4 percent of for-sale housing valued at \$200,000 to \$299,999, both requiring a household income of \$50,000 to \$99,999 annually. An estimated 37.4 percent of Market Area households earn \$50,000 to \$99,999, suggesting the potential strong need for luxury rental housing and move-up for-sale housing.

High-income households with annual incomes of \$100,000 or more account for 23.0 percent of all Market Area households compared to 25.8 percent for Kansas. These households represent potential demand for for-sale housing priced over \$300,000 as well as luxury automobiles, retail goods and services, travel, and entertainment.

Among the Market Area's five zip codes significant disparities in median household income levels exist, ranging from a low of \$51,483 and \$55,721 in the Kansas City zip codes 66103 and 66106 to a high of \$120,189 for zip code 66205 (Roeland Park and Fairway). The wide range of household income levels within the Market Area have a direct impact on housing affordability, property values, homeownership rates, and consumer spending patterns.

The lower income neighborhoods within the Market Area support the need for income-based and affordable housing while the high-income neighborhoods support upscale and luxury housing. The diverse household income levels also suggest a wide range of retail goods and services are supportable throughout the Market Area.

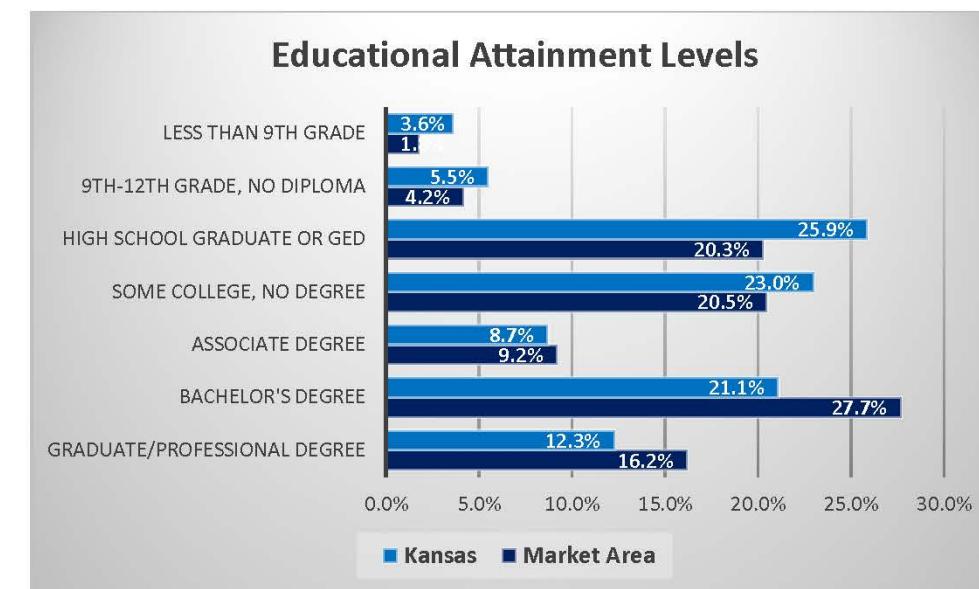
Market Area Median Household Income by Zip Code (2021)

	Kansas City	Kansas City	Overland Park	Shawnee	Fairway	Totals
	66103	66106	66202	66203	66205	
Less than \$15,000	16.3%	9.6%	5.9%	8.2%	5.4%	8.8%
\$15,000 - \$24,999	10.3%	10.5%	5.4%	7.4%	4.5%	7.6%
\$25,000 - \$34,999	15.7%	10.7%	10.6%	9.5%	4.3%	10.1%
\$35,000 - \$49,999	16.6%	17.3%	12.9%	10.3%	7.4%	13.0%
\$50,000 - \$74,999	18.0%	19.9%	21.8%	21.4%	16.9%	19.9%
\$75,000 - \$99,999	10.2%	15.7%	21.0%	20.2%	18.7%	17.5%
\$100,000 - \$149,999	7.4%	12.3%	13.5%	15.2%	21.6%	14.0%
\$150,000 - \$199,999	3.7%	2.3%	4.2%	4.8%	7.3%	4.3%
\$200,000+	1.8%	1.6%	4.8%	3.0%	13.9%	4.7%
Median Household Income	\$55,721	\$51,483	\$81,205	\$76,387	\$120,189	\$75,963

Source: U.S. Census and Esri Business Analyst.

## Educational Attainment

Educational attainment levels of a market area's labor pool are becoming increasingly important in the ability to attract and retain knowledge-based industries as well as the ability to support above average wages. The bar chart below provides a comparison of educational attainment levels between the Market Area and State of Kansas as provided by the U.S. Census Bureau.



Educational levels have a direct impact on achievable income levels, retail expenditure patterns, housing values and rents, and the demand for commercial space. The demand for retail space increases as household income and retail sales levels rise. The type of retail space is also impacted by high-income households that support demand for higher valued goods and services. The demand for office space improves at higher educational attainment levels as a larger percentage of residents are more likely to be employed in professional service and medical professions.

The Market Area population is well-educated with 36.3 percent of the population attaining a bachelor's degree or higher compared to 33.4 percent statewide. Conversely, 34.6 percent of Market Area residents attained a high school diploma or less which is comparable to the statewide average of 35.0 percent.

The Market Area's educational attainment levels translate into the potential to support slightly above average wages and spending on housing, personal services, apparel, household furnishings, entertainment, dining out, automobiles, travel, and healthcare. The educational attainment levels may also improve the Market Area's ability to meet the employment needs of the changing technology-based economy as well as increase the need for professional office space.

Among the Market Area's five zip codes significant disparities in educational attainment levels exist. The educational attainment variances may result in differing occupations and income levels. Zip code 66205 that includes the communities of Roeland Park and Fairway supports the highest rates of advanced degrees and lowest rates of high school graduates or less. This zip code also possesses the highest median household income at \$120,189. Conversely, zip code 66106 that includes a portion of Kansas City, supports the lowest educational attainment levels and lowest median household income of \$51,483.

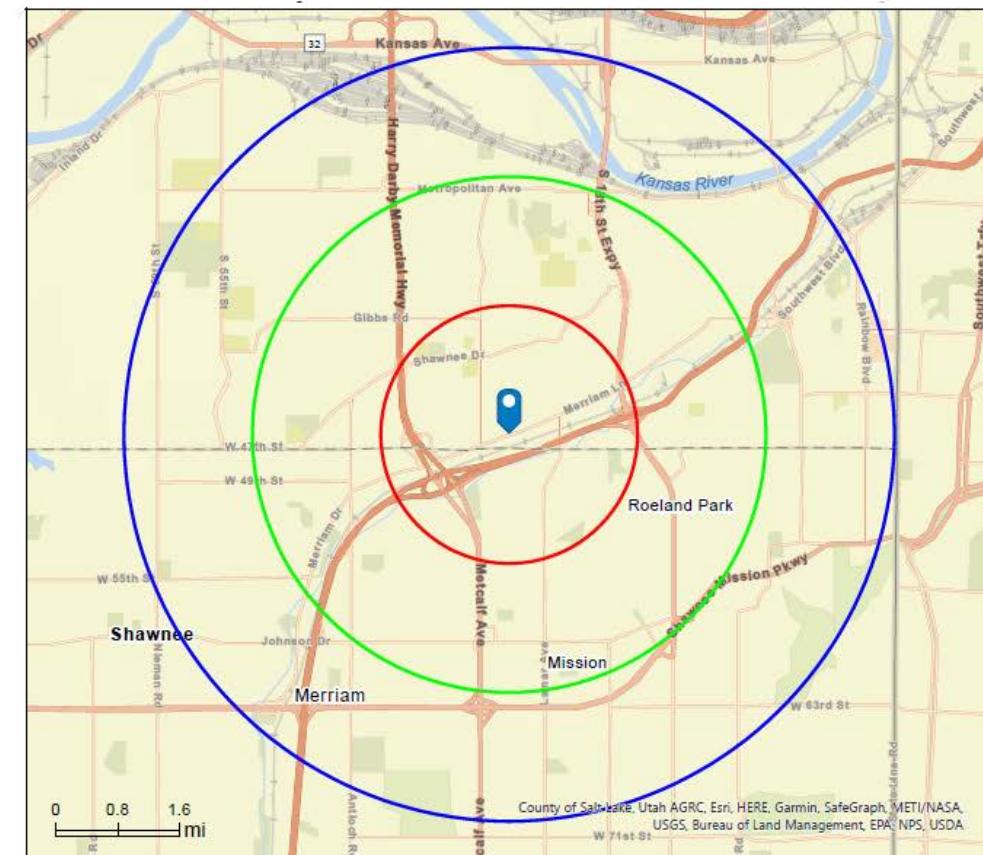
Market Area Educational Attainment by Zip Code (2021)

	Kansas City 66103	Kansas City 66106	Mission 66202	Merriam 66203	Roeland Park Fairway 66205	Totals
Less than 9th Grade	4.3%	7.4%	0.9%	2.1%	0.5%	3.2%
9th-12th Grade, No Diploma	9.0%	11.9%	3.5%	4.3%	0.9%	6.2%
High School Graduate or GED	24.7%	39.7%	18.7%	24.9%	12.0%	25.2%
Some College, No Degree	19.6%	21.4%	20.3%	24.0%	16.8%	20.7%
Associate Degree	7.7%	6.2%	9.7%	12.5%	5.6%	8.5%
Bachelor's Degree	23.0%	11.0%	29.9%	22.8%	35.8%	23.5%
Graduate/Professional Degree	11.7%	2.5%	17.1%	9.5%	28.4%	12.8%
<b>Totals</b>	<b>8,844</b>	<b>15,231</b>	<b>12,560</b>	<b>13,772</b>	<b>10,048</b>	<b>100.0%</b>

Source: Esri Business Analyst.

## Employment Composition

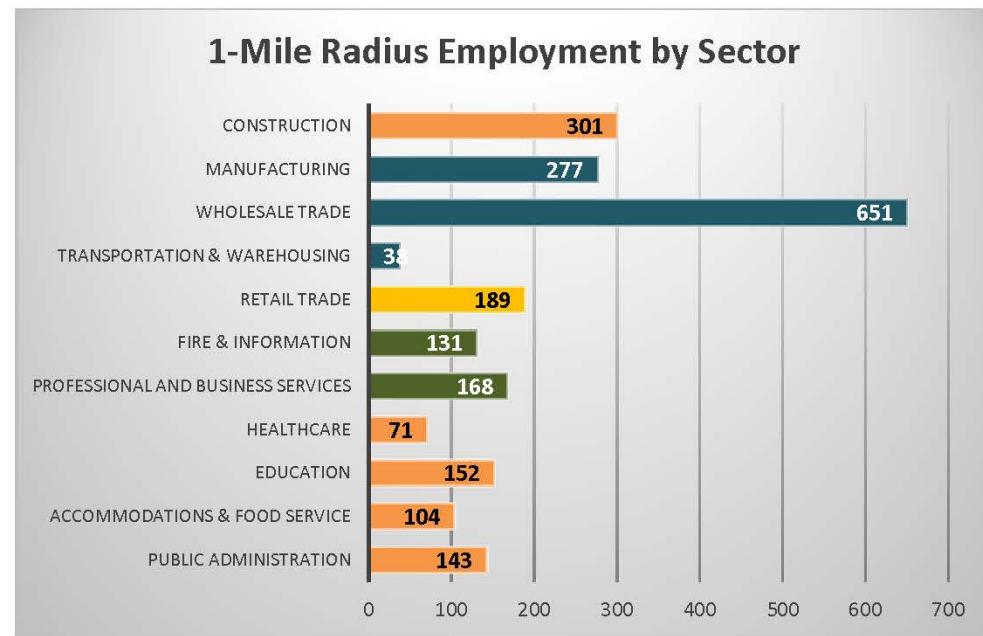
A market area's employment composition plays a principal role in determining the mix of supportable commercial and industrial space. A *Business Summary Report* provided by Esri Business Analysis identifies the number of businesses and employees by NAICS Code within a 1-, 2- and 3-mile radius from the midpoint of Merriam Drive (see graphic below).



The Market Area supports a business mix dominated by wholesale, manufacturing, automobile repair, and construction with retail trade and professional services supporting modest numbers of businesses. The 1-mile radius is a good indicator of the Market Area's business and employment mix as it encompasses much of the geographic area without including other neighboring commercial districts and employment centers. A reported 277 businesses operate in the 1-mile radius supporting total employment of 2,681 jobs.

The geographic area within a 2-mile radius includes the entire Market Area's geographic area and businesses along the Merriam Drive Corridor as well as commercial districts and residential neighborhoods well outside the Market Area. A reported 1,596 business operate in the 2-mile radius supporting total employment of 21,053 jobs.

Office-related employment includes the sector of FIRE, information, professional services, and business services while industrial-related employment includes the sectors of manufacturing and wholesale trade & transportation. The bar chart below identifies office-related sectors in "green" with industrial-related sectors in "blue" and the retail trade sector in "yellow."



The Market Area supports a modest inventory of professional office space. Office-related employment in the 1-mile radius consists of 131 jobs in the FIRE and information sectors and 168 jobs in the professional and business services sectors. Collectively, these 299 jobs account for just 11.0 percent of total employment. By comparison, office-related jobs account for 17.8 percent of employment in Kansas. Office-related employment in the 2-mile radius is much more substantial totaling 5,335 jobs and 25.3 percent of total employment.

Employment within a 1-mile radius consists primarily of the industrial sectors of wholesale trade, manufacturing, and transportation and warehousing that collectively support 966 jobs, or 36.0 percent of total employment. By comparison, industrial-related jobs account for 20.1 percent of employment in Kansas. Industrial-related employment within the 2-mile radius totals 5,994 jobs in the manufacturing and wholesale trade sectors, or 18.1 percent of total employment.

Retail trade totals just 189 jobs within the 1-mile radius, equating to just 7.0 percent of all jobs. The retail trade sector supports 10.7 percent of total employment in Kansas. Within the 2-mile radius retail trade employment balloons to 3,158 jobs, or 15.0 percent of total employment. The large gain in retail trade employment is due to the inclusion of large concentrations of retail space along Shawnee Mission Parkway and Antioch Road.

Compared to statewide averages, the 1-mile radius market area supports higher rates of employment for construction, wholesale trade, and public administration. Employment sectors where the 1-mile radius market area lags statewide averages include manufacturing; retail trade; transportation and warehousing; information; finance, insurance, and real estate; professional and business services; and healthcare and education.

Employment by Sector Comparison  
1-Mile Radius Market Area vs. State of Kansas

Industry	1-Mile # of Jobs	Radius % of Total	Kansas % of Total
Construction	301	11.2%	6.4%
Manufacturing	277	10.3%	12.4%
Wholesale Trade	651	24.3%	2.8%
Retail Trade	189	7.0%	10.7%
Transportation & Warehousing	38	1.8%	4.9%
Information	15	0.6%	2.0%
Finance, Insurance, and Real Estate	111	4.1%	6.2%
Professional and Business Services	168	6.3%	9.6%
Healthcare and Education	223	8.3%	24.7%
Arts, Entertainment, Accommodations & Food Service	104	3.8%	8.2%
Other Services	116	4.3%	4.5%
Public Administration	143	5.3%	4.5%

Source: U.S. Census Bureau.

## Conclusions

A market area's demographic composition has a direct influence on real estate development patterns, the housing and retail markets, and demand for housing and commercial and industrial space. The Merriam Drive Corridor Market Area consists of five zip codes encompassing portions of the communities of Merriam, Overland Park, Mission, Kansas City, Roeland Park, and Fairway. These communities support varied population demographics in terms of household composition, age, educational attainment, and household income.

The Market Area consists of a mature urban area with little vacant land available for development. As a result, over the past twenty year while the population has fluctuated the net result has been a slight decline in population. From a current population of 87,876 residents, by 2040 the Market Area population is forecast to reach 94,207 residents. Future population growth will require development of vacant infill sites and the redevelopment of underutilized properties with a mix of single-family housing and higher-density, multi-family housing.

One person households account for 33.7 percent of all Market Area households, compared to 28.1 percent statewide. Married couple families account for 39.5 percent of all households with 17.4 percent having children, compares to the statewide rate of 50.6 percent married couple households of which 20.5 percent have children present. The Market Area's household composition suggests an above average need for rental housing and below average need for single-family housing.

Young adults (25 to 34 years) and family/working adults (34 to 44 years) which account for 30.3 percent of the Market Area population will have a growing impact on the workforce, retail goods and services, and housing market. These age groups are heavy consumers of electronics, apparel and accessories, entertainment, entry-level for-sale housing, and rental housing. Empty nesters ages 45 to 64 years comprise 23.0 percent of the Market Area population population, generating the demand for for-sale housing, home furnishings, home improvements, clothing, dining, and entertainment. The senior population generates the need for healthcare, senior housing, and downsized housing.

Among the Market Area's five zip codes significant disparities in median household income levels exist, ranging from a low of \$51,483 and \$55,721 in the Kansas City zip codes 66103 and 66106 to a high of \$120,189 for zip code 66205 (Roeland Park and Fairway). The wide range of household income levels have a direct impact on housing affordability, property values, homeownership rates, and consumer spending patterns.

The Market Area population is well-educated with 36.3 percent of the population attaining a bachelor's degree or higher compared to 33.4 percent statewide. Conversely, 34.6 percent of Market Area residents attained a high school diploma or less which is comparable to the statewide average of 35.0 percent. The Market Area's educational attainment levels translate into the potential to support slightly above average wages and spending on housing, personal services, apparel, household furnishings, entertainment, dining out, automobiles, travel, and healthcare.

The Market Area supports a business mix dominated by wholesale, manufacturing, automobile repair, and construction with retail trade and professional services supporting modest numbers of businesses.

## MARKET ANALYSIS

The *Market Analysis* portion of the study evaluated directly competitive retail, professional office, industrial, and housing market trends impacting the Planning Area. The study evaluated the Planning Area market trends for each prospective land use and the long-term need for additional commercial space, industrial space, and housing units was forecast to quantify the level of future real estate development.

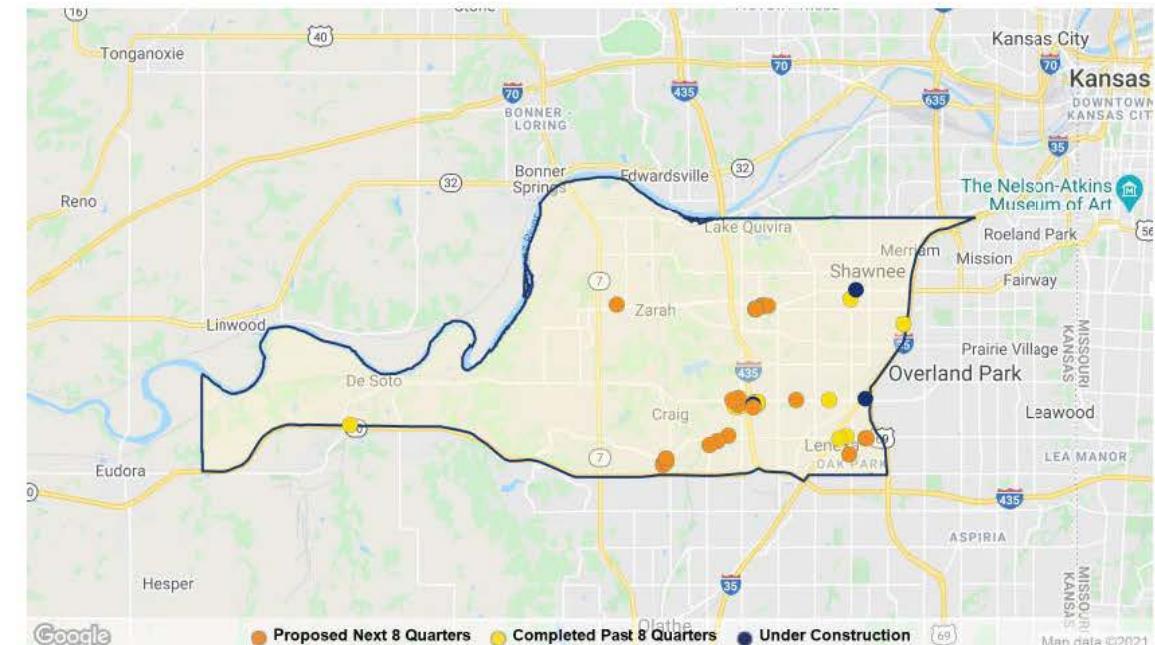
### Retail Market Analysis

The *Retail Market Analysis* portion of the report evaluates directly competitive retail market trends impacting the Planning Area and forecasts future demand for commercial space.

### Retail Market Overview

#### Northwest Johnson County Submarket

According to the *Kansas City Retail Submarket Report* published by CoStar, the Planning Area is located within the Northwest Johnson County submarket. This section of the study provides retail market trends for both the Northwest Johnson County submarket and the Planning Area.



By the second quarter 2021 the inventory of retail space in Northwest Johnson County totaled 10.06 million square feet, or 7.8 percent of the Kansas City MSA total. General retail and neighborhood shopping center space accounted for the bulk of the total inventory with 3.83 million square feet and 3.67 million square feet, respectively. Shawnee Mission Parkway serves as the submarket's principal retail destination, housing such retailers as Walmart, Target, Home Depot, and Lowe's.

At the close of the second quarter 2021, the Northwest Johnson County submarket was operating at a cumulative vacancy rate of 7.2 percent. The average asking rent of \$16.29 per square foot compares favorably to the metropolitan average of \$16.02 per square foot. During 2020, the Northwest Johnson County submarket absorbed negative 310,531 square feet of retail space, rebounding during the first half of 2021 with positive absorption of 43,127 square feet of space. As of the second quarter 2021, four retail projects totaling 26,962 square feet of space were under construction within the Northwest Johnson County submarket.

Northwest Johnson County Retail Market Conditions; 2021 Q2

Center Type	Building Sq. Ft.	Vacancy Rate	Avg Asking Rent	Absorption 2021 YTD	Space U/C
Malls	1,737,600	1.7%	\$15.75	24,325	0
Power Centers	425,442	0.3%	\$23.57	0	0
Neighborhood Center	3,673,083	10.1%	\$15.87	-17,562	0
Strip Center	381,988	12.7%	\$16.65	12,870	0
General Retail	3,839,103	7.0%	\$16.10	23,494	26,962
Totals	10,057,216	7.2%	\$16.29	43,127	26,962

Source: CoStar.

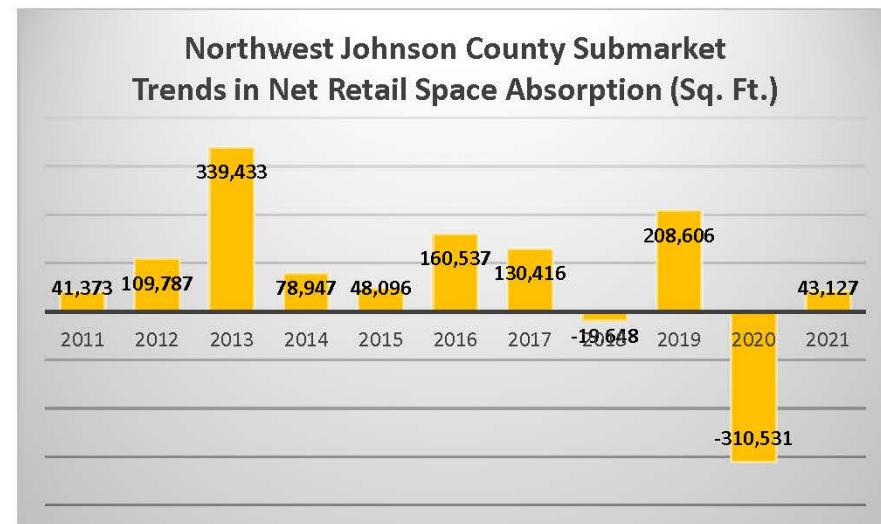
Since 2011, 647,168 square feet of retail space was built in the Northwest Johnson County submarket. Retail construction peaked in 2013 with the completion of 260,733 square feet of space. New retail construction has been modest since 2014.



Twenty-one retail projects are proposed for future development in the Northwest Johnson County submarket, totaling 464,529 square feet of building area. The largest planned retail development project is Bellmont Promenade, a 170,000 square foot power center by Legacy Development at the southwest corner of Shawnee Mission Parkway and Maurer Road in Shawnee.

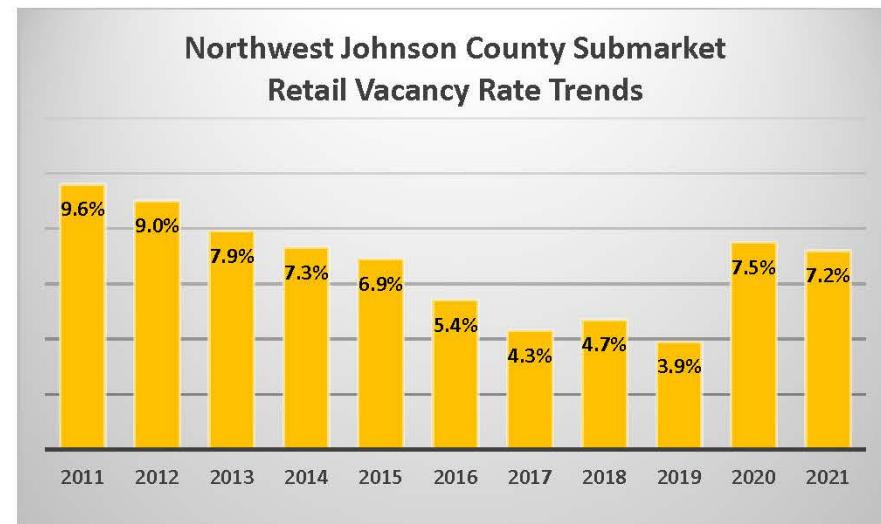
Since 2010, the Northwest Johnson County submarket absorbed 830,000 square feet of retail space. Retail space absorption peaked in 2013 with the net occupancy of 339,787 square feet of space. Johnson County experienced negative space absorption in 2018 of -19,648 square feet and again in 2020 at -310,531 due primarily to business interruptions resulting from the COVID-19 pandemic.

With vaccination rates climbing and pandemic restrictions reduced, through the first half of 2021 the Northwest Johnson County retail market rebounded with positive net absorption of 43,127 square feet of space. Net space absorption for the first half of 2021 was led by regional malls at 24,325 square feet and general retail at 23,494 square feet.



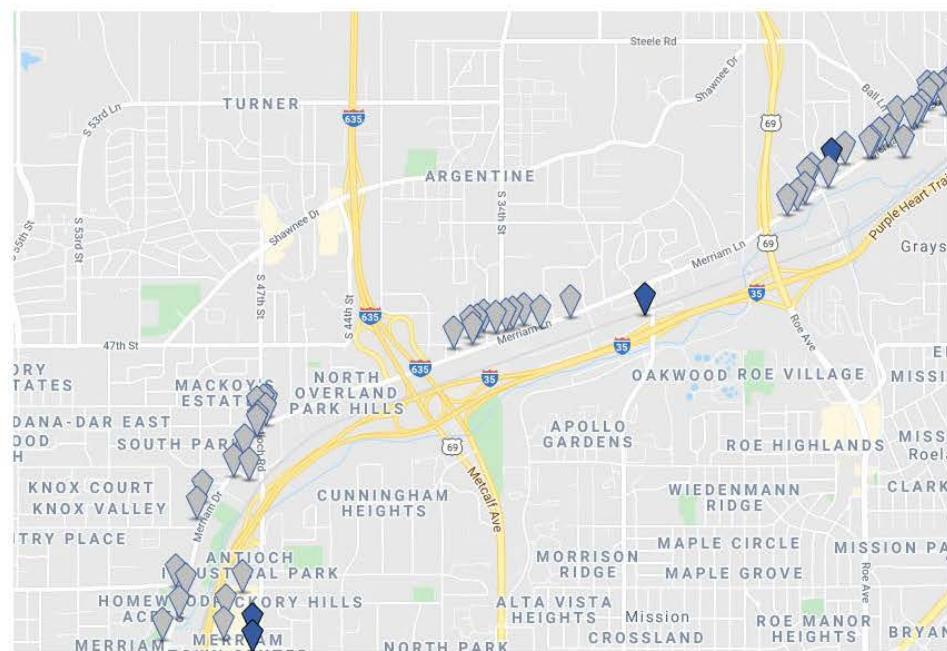
With net space absorption outpacing new construction since 2011, the overall retail vacancy rate for the Northwest Johnson County submarket declined steadily from a high of 9.6 percent in 2011 to a healthy 3.9 percent by year-end 2019. During 2020, the impact of the COVID-19 pandemic and ensuing business shutdown had an adverse impact on the Northwest Johnson County retail submarket with net absorption of -310,531 square feet pushing the vacancy rate up to 7.5 percent by year-end. With net absorption of 43,127 square feet and new supply of just 4,647 square feet through the first half of 2021, the overall vacancy rate improved slightly to 7.2 percent.

To conclude, the Northwest Johnson County retail market is healthy with net space absorption outpacing new supply over the past decade. The submarket benefits from strong population demographics and continued population growth. Most of the future retail development activity will occur in the western portion of Northwest Johnson County where new home construction is the most active. Infill development opportunities within more mature commercial corridors will also be feasible.



## Competitive Retail Market

To provide a more micro perspective of the competitive retail market the Costar database was researched for existing shopping centers and retail buildings along the Merriam Drive and Antioch Road corridors north of Johnson Drive (see map below). Excluded from the retail survey were bank branches, convenience stores, automotive, and fast food and sit-down restaurants. The search identified 55 retail properties totaling 633,416 square feet of building area operating at an overall vacancy rate of 6.6 percent.



Merriam Drive is an older, mature urban corridor supporting 50 retail buildings totaling 205,062 square feet of building area. The 24 freestanding retail buildings totaling 98,023 square feet are occupied. Storefront space totals 47,109 square feet of building area operating at a 5.9 percent vacancy rate. A total of 42,079 square feet of strip center space is fully occupied. Automotive repair and used dealerships support another 29,965 square feet of building area. Retail space along Merriam Drive is occupied predominantly by independent businesses. No anchored shopping centers operate along Merriam Drive.

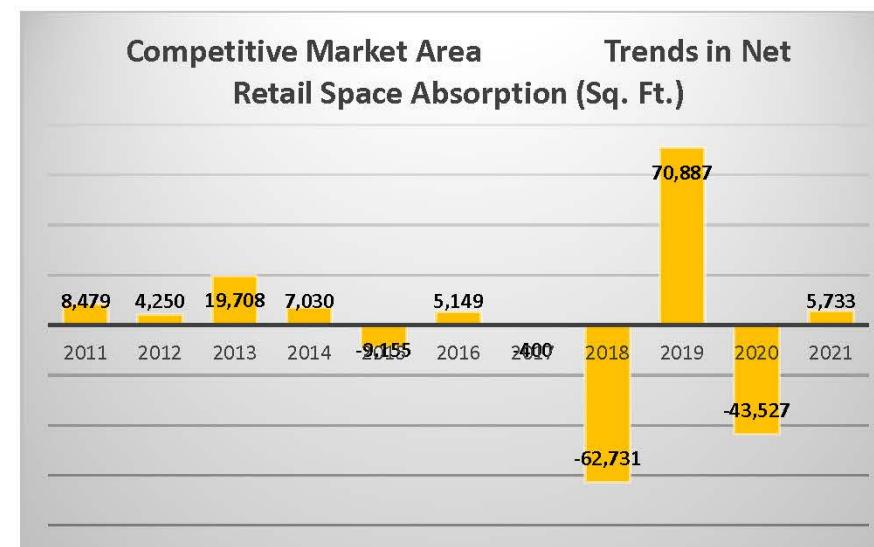
The 428,357 square foot Merriam Town Center accounts for the remainder of the competitive market area, operating at a 9.1 percent vacancy rate. While the shopping center is located outside of the Merriam Drive Corridor, its size and presence of such major tenants as Home Depot, Dick's Sporting Goods, Marshalls, Cinemark, PetSmart, and Office Max has a significant impact on the local retail market. Merriam Village located south of Johnson Drive just outside of the competitive market area is anchored by a 349,000 square foot IKEA and 55,000 square foot Hobby Lobby. Merriam Town Center is operating at a 9.1 percent vacancy rate.

## Competitive Retail Market Conditions; 2021 Q2

Center Type	# of Buildings	Building Sq. Ft.	Vacant Space	Vacancy Rate
Power	5	428,357	38,994	9.1%
Strip	3	42,079	0	0.0%
Storefront	13	47,109	2,800	5.9%
Freestanding	24	98,023	0	0.0%
Automotive	10	29,965	0	0.0%
Totals	55	633,419	41,794	6.6%

Source: Costar.

Since 2010, Costar reported retail space absorption within the competitive market area peaked in 2019 with the net occupancy of 70,887 square feet of space. Negative space absorption in 2020 of -43,529 was due primarily to business interruptions resulting from the COVID-19 pandemic. Through the first half of 2021 net absorption rebounded with 5,429 square feet.



With net space absorption outpacing new construction since 2011, the overall retail vacancy rate for the competitive market area declined steadily from a high of 5.9 percent in 2011 to a healthy 1.9 percent by year-end 2017. Negative absorption in 2018 drove the overall vacancy rate to 11.3 percent. After rebounding in 2019, the COVID-19 pandemic had an adverse impact on the retail market during 2020 with net absorption of -43,527 square feet pushing the vacancy rate up to 7.2 percent by year-end 2020. Through the first half of 2021, the overall vacancy rate improved to a healthy 6.4 percent.



Merriam Drive is an older, mature urban corridor supporting a modest inventory of retail space. While a few retail properties date back to the 1920's, most were constructed in the 1950's to 1970's with freestanding and storefront buildings the predominant product types. Automotive repair and sales facilities also have a notable presence in the corridor. No anchored neighborhood or community centers exist within the corridor and only two national retailers are present. Future retail development along Merriam Drive will take the form of redeveloping existing underutilized properties. Attracting future retail tenants to the Merriam Drive corridor will be challenging given the dominance of Shawnee Mission Parkway as a shopping and dining destination.

Merriam Town Center, though located outside of the corridor, was included in the competitive survey due to its significant influence in the area's retail landscape. Built in 1998, the power center houses national big-box stores and restaurant chains.

### Trade Area Capture

Information about a community's retail trade area can help assess the ability of local merchants to attract and capture the retail business of residents. The trade area capture ("TAC") is an estimate of the number of people who shop in the local area during a certain period. TAC assumes that residents will buy goods at the same rate as the state average, and that the only force that causes a variation in spending patterns is income. The formula for calculating TAC is:

$$\text{TAC} = \frac{\text{Community's Actual Retail Sales}}{\text{State Per Capita Sales} \times \text{Community's Per Capita Income} / \text{State Per Capita Income}}$$

If the TAC estimate is larger than the community's population it suggests: 1) the community is attracting customers outside its boundaries or 2) residents of the community are spending more than the state average. If the estimate is smaller than the community's population: 1) the community is losing its customers to other regions for retail purchases or 2) residents of the community are spending less than the state average.

According to Esri Business Analyst, the Market Area's 2021 population is estimated at 87,876 residents and per capita income of \$34,062. The Market Area's 2020 retail sales are estimated at \$1.63 billion.

The Kansas population totals 2,913,314 residents and per capita income of \$30,757. According to the Kansas Department of Revenue the state's taxable retail sales for 2019 totaled \$43.7 billion, equating to per capita retail sales of \$15,011.

$$\text{Trade Area Capture} = \frac{\$1,625,612,535}{\$15,011 \times (\$34,062 / \$30,757)} = 97,787 \text{ Residents}$$

The Market Area's resident population of 87,876 and estimated TAC of 97,787 residents illustrates an above average capture of shoppers from outside of the community.

### Retail Pull Factor

Pull factors ("PF") measure a community's ability to attract shoppers, residents, and non-residents alike, to make retail purchases within the community. A pull factor is a measure of the strength of a community's retail trade, based on a comparison of local spending in relation to that of a wider geographic area (e.g., the state), with a measure of 1.0 representing a perfect balance. A pull factor greater than 1.0 indicates that the community is pulling in retail sales from beyond its boundaries and the balance of trade is favorable. Alternatively, a pull factor less than 1.0 indicates that the community is not capturing local shoppers and is experiencing retail sales leakage. Pull factors are calculated by dividing the TAC by the community's population.

Dividing the Market Area's TAC of 97,787 residents by the actual population of 87,876 residents yields a pull factor of 1.11, indicating the city captures retail sales at a rate 11 percent higher than the statewide average.

The Market Area includes the cities of Merriam, Mission, Overland Park, and Kansas City. The Kansas Department of Revenue publishes an annual *City Trade Pull Factor Report* that calculates the retail pull factor for all cities in the state measured against the statewide average. According to the report, of the four cities Kansas City suffers from retail sales leakage. For FY 2020, pull factors were measured at 0.93 for Kansas City, 1.26 for Overland Park, 1.62 for Mission, and 4.49 for Merriam.

Merriam's well above average pull factor is attributed to its small population of 11,081 residents and the high volume of sales from outside of the community generated by IKEA and Merriam Town Center.

### Forecast Retail Space Demand

Supportable retail sales are a function of consumer population and income levels. A trade area's total income is calculated by multiplying the total trade area population by the per capita personal income. Purchasing power, or total sales potential of the trade area, is quantified by applying average retail expenditures as a percentage of total income.

According to Esri Business Analyst, the Market Area's 2021 population is estimated at 87,876 residents and the per capita income is estimated at \$34,062, yielding total personal income of \$2.99 billion. Based on the *U.S. Census Bureau Annual Retail Trade Survey* and the Market Area's per capita income and retail sales levels, retail goods and services sales equate to a spending rate equivalent to 40 percent of total personal income. The Market Area's current income adjusted retail pull factor is 1.11.

By 2040, the Market Area population is forecast to increase by 6,331 new residents. For this analysis per capita income and average retail sales per square foot remained constant. The variable is the Market Area's achievable retail pull factor.

Under the conservative scenario the Market Area's pull factor equals the statewide average of 1.0 throughout the projection period. By 2040, Market Area is forecast to capture new retail goods and services sales of \$86.3 million, supporting 375,000 square feet of occupied retail space.

The optimistic scenario assumes the Market Area's pull factor remains at 1.11 through 2040. By 2040, The Market Area is forecast to capture new retail goods and services sales of \$95.7 million, supporting 416,000 square feet of occupied retail space.

The Merriam Drive Planning Area houses 205,062 square feet of retail space. Through 2040, the Planning Area is estimated to capture 10 to 15 percent of the Market Area retail space demand, equating to 37,500 square feet to 62,400 square feet. At an FAR of 0.20 to 0.23, the forecast retail space demand would require 3.7 to 7.2 acres.

#### Retail Space Demand Projections Market Area; 2021 - 2040

Retail Sales Formula	Conservative Scenario	Optimistic Scenario
Residential Population Growth	6,331	6,331
Per Capita Income	\$34,062	\$34,062
Total Gross Personal Income	\$215,646,522	\$215,646,522
% Income Spent on Retail Goods and Services	0.40	0.40
Supportable Goods and Services by City Residents	\$86,258,609	\$86,258,609
Market Area Pull Factor	1.00	1.11
Total Supportable Retail Goods & Services Sales	\$86,258,609	\$95,747,056
Average Retail Sales Per Sq. Ft.	\$230	\$230
Supportable Retail Space (Sq. Ft.)	375,037	416,292

Source: Canyon Research Southwest, Inc., November 2021.

#### Site Evaluation

Retail developers and major retailers evaluate potential sites based on a series of site-specific criteria. Common selection criteria when evaluating prospective development sites include parcel size, visibility and exposure, accessibility, traffic counts, direct competition, and trade area demographics. Using these site selection criteria, the Merriam Drive Planning Area was evaluated for the potential to support retail development.

#### Parcel Size

The U.S. Shopping Center Classification and Characteristics published by the International Council of Shopping Centers quantifies the site characteristics for a wide range of shopping center types. Characteristics for those shopping center types evaluated for the Planning Area are summarized in the table on the following page. Given the mature character of the Planning Area prospective retail development sites will consist primarily of underutilized properties and older industrial and commercial properties offering site characteristics suitable for retail development.

Large-scale retail development like a power center requires a 25- to 80-acre parcel located at a freeway interchange. Major freeway interchanges within the Planning Area include the Interstate 35 interchanges at U.S. Highway 69/Roe Boulevard and Interstate 635/Metcalf Avenue. Given the proximity of Merriam Drive to Interstate 35, creating a suitable development site with Interstate 35 frontage is not achievable. The north side of Merriam Drive at both freeway interchanges is occupied by single-family housing and industrial facilities, making assembling a large enough development parcel difficult.

Neighborhood center anchored by grocery stores typically require a 5- to 15-acre parcel located at a signalized intersection. Freestanding major anchors require 15 to 25 acres while freestanding junior anchors development sites are typically 2 to 5 acres. Signalized intersections along Merriam Drive are present at 55<sup>th</sup> Street, Antioch Road, 34<sup>th</sup> Street, 24<sup>th</sup> Street/Lamar Avenue, and 14<sup>th</sup> Street/Roe Lane. Potential

neighborhood and junior anchor development sites along Merriam Drive include: 1) northwest corner of 55<sup>th</sup> Street; 2) intersection of Antioch Road; 3) northwest corner of 34<sup>th</sup> Street; 4) southwest corner of 24<sup>th</sup> Street; and 5) northeast and northwest corners of 14<sup>th</sup> Street.

Development of strip centers requires less than a 3.0-acre parcel featuring major arterial frontage. While strip centers typically do not require a signalized intersection location, the prospective neighborhood center and junior anchor sites listed above also are suitable for smaller scale strip center development.

#### Visibility

Visibility and exposure have a significant influence on a shopping center's achievable retail sales volumes. All shopping center types should possess major arterial frontage with lifestyle and power centers preferring a freeway or highway location. National and regional big-box retailer, restaurant, convenience store and bank chains also require major arterial frontage.

The Planning Area's signalized intersections along Merriam Drive offer sufficient visibility and exposure to accommodate neighborhood center, strip center, and junior anchor development.

#### Shopping Center Classifications and Characteristics

Shopping Center Type	Concept	GLA Range		Trade Area
		Sq. Ft.	Acres	
Power Center	Anchored by category-killers such as home improvement, discount department stores, and, warehouse clubs, with only a few small tenants	250,000 - 600,000	25 to 80	5 to 10 Miles
Community Center	Anchored by discount stores and supermarkets offering a wide range of apparel and other soft goods.	125,000 - 400,000	10 to 40	4 to 6 Miles
Neighborhood Center	Convenience oriented anchored by a grocery store.	30,000 - 125,000	5 to 15	3 Miles
Strip Center	Attached row of stores or service outlets with on-site parking. A strip center is the smallest center type whose tenants provide a narrow mix of goods and personal services to a limited trade area.	<30,000	<3	<1 Mile
Lifestyle Center	Upscale national-chain specialty stores with dining and entertainment.	150,000 - 500,000	10 to 40	8 to 12 Miles

Source: International Council of Shopping Centers.

### Accessibility

Neighborhood, and strip center development sites rely on an efficient local transportation network that typically includes a mix of major and minor arterial streets. Location at a signalized intersection improves a prospective site's access and exposure.

The Planning Area benefits from excellent regional and local access via Interstates 35 and 635, U.S. Highway 69, and a variety of major arterial streets such as Merriam Drive, Metcalf Avenue, Roe Avenue, Lamar Avenue, Roe Lane, and Southwest Boulevard.

The intersections along Merriam Drive identified as prospective future retail development sites are all controlled by a traffic signal offering sufficient on-site access.

### Traffic Counts

The vehicular traffic counts on arterial streets that flow past the site are important when evaluating a potential retail development site. Average daily traffic counts reported by the Kansas Department of Transportation for Interstate 35 past the Planning Area range from 85,600 vehicles at the eastern end at Mission Road to 148,000 vehicles at the southern end near the 55<sup>th</sup> Street alignment. Average daily traffic counts along Merriam Drive range from 5,160 vehicles on the eastern third to 8,640 vehicles on the western third of the roadway. By comparison, Shawnee Mission Parkway which is the area's principal retail corridor supports average daily traffic counts of 26,600 to 42,900 vehicles.

### Competition

The competitive market area maintains 633,419 square feet of retail space operating at an overall vacancy rate of 6.6 percent. The 428,357 square foot Merriam Town Center at Johnson and Antioch Drives is anchored by Home Depot, Dick's Sporting Goods, Marshalls, Cinemark, Petsmart, and Office Max. Merriam Village located south of Johnson Drive located just outside of the competitive market area houses IKEA, Hobby Lobby, and Walgreens. Fifty retail buildings are located along Merriam Drive totaling 205,062 square feet of space. Other major and junior anchors operating just outside of the competitive market area include Target, Walmart, Lowe's, Jo-Ann Fabric, Dollar General, Dollar Tree, Advance Auto Parts, and Planet Fitness.

No grocery anchored shopping center currently operates within the competitive market area. The closest grocery stores to the competitive market area are a HyVee at 6655 Martway Street, Aldi at 4801 Roe Boulevard, and Price Chopper at 4950 Roe Boulevard, all in Mission.

The current pull factor of 1.11 indicates that the Market Area is capturing retail sales at a rate 11 percent above the statewide average. The captured retail sales from nonresidents may be due to the presence of IKEA and Merriam Town Center.

### Trade Area Demographics

Population growth and household income levels have a direct impact on supportable retail expenditures.

The Market Area's current population is estimated at 87,876 residents. By 2040, the Market Area population is forecast to add another 6,331 new residents. The continued population growth will fuel additional demand for retail goods and services.

Ersi Business Analyst estimated the current median household income for the Market Area of \$75,963, offering the potential to support above average per capita retail expenditures.

Among the Market Area's five zip codes significant disparities in median household income levels exist, ranging from a low of \$51,483 for zip code 66106 (Kansas City) to a high of \$120,189 for zip code 66205

(Roeland Park and Fairway). The wide range of household income levels offers the opportunity to support a diverse market for retail goods and services.

### Conclusions

Through the year 2040, the Market Area is forecast to absorb 375,000 to 416,000 square feet of new retail space providing for considerable development opportunities. The Planning Area is estimated to capture 10 percent to 15 percent of the Market Area retail space demand, equating to 37,500 square feet to 62,400 square feet. Several properties in the Planning Area offer the necessary site characteristics and trade area demographics to support retail development. Given the Market Area's diverse demographics potential retail uses include an ethnic grocery store and a variety of ethnic restaurants and retail businesses.

The Boulevard Drive-in Theatre is an ideal catalyst redevelopment site that would enhance the existing business by incorporating additional amenities such as a stage for live performances, a playground, patio seating with food and beverage service, and bricks and mortar restaurants along the Merriam Drive frontage with rooftop decks affording a view of the movie screen and stage. Such a redeveloped property could serve as an anchor for the Planning Area and help redefine its image.

Given directly competitive market conditions a grocery store, freestanding retailers, strip centers, and as a component of mixed use development are the most appropriate future retail development formats. Prospective redevelopment sites include currently underutilized or older commercial and industrial properties.

## Office and Industrial Market Analysis

This section of the study evaluates office and industrial market conditions impacting the Planning Area. The goal is to identify future opportunities for the Planning Area to support employment-related development.

### Business Mix

A market area's employment composition plays a principal role in determining the mix of supportable commercial and industrial space. Industrial-related employment includes the sectors of manufacturing, wholesale trade, and transportation/warehousing while office-related employment includes the sectors of FIRE, information, professional services, and business services. The bar chart below identifies industrial-related sectors in "blue" with office-related sectors in "yellow."

Office-related employment within the 1-mile radius totals 299 jobs in the FIRE, information, and professional and business services sectors, accounting for 11.0 percent of total employment. By comparison, office-related jobs account for 17.8 percent of employment in Kansas. At an average space requirement of 200 to 225 square feet per employee, current employment levels can support 59,800 to 67,275 square feet of occupied professional office space.

Employment within a 1-mile radius is dominated by the industrial sectors of wholesale trade, manufacturing, and transportation and warehousing that collectively support 966 jobs, or 36.0 percent of total employment. By comparison, industrial-related jobs account for 20.1 percent of employment in Kansas. At an average space requirement of 1,000 to 1,250 square feet per employee, current employment levels can support 966,000 to 1.2 million square feet of occupied industrial space.



## Office Market Overview

According to the *Kansas City Office Submarket Report* published by CoStar, the Planning Area is located within the Northwest Johnson County submarket. This section of the study provides office market trends for both the Northwest Johnson County submarket and the Planning Area.

The *Kansas City Office Submarket Report* segments office buildings into three categories based on quality and amenities provided. These building categories include Class A, B, and C, each of which is defined below.

### Class A Buildings

Class A office properties represent the newest and highest quality buildings in the market. Class A buildings possess high-quality building infrastructure, a desirable location with good access, and are professionally managed. Class A buildings attract the highest quality tenants and command the highest rents.

### Class B Buildings

Class B buildings are a little older, but still have good quality management and tenants. Oftentimes, well-located Class B buildings can be returned to Class A status through renovations such as facade and common area improvements. Class B buildings are not functionally obsolete and are well-maintained.

### Class C Buildings

Class C is the lowest classification of office building. These are older buildings located in less desirable areas and are often in need of extensive renovation. Architecturally, these buildings are the least desirable, and building infrastructure and technology is outdated. As a result, Class C buildings have the lowest rental rates, take the longest time to lease, and are often targeted as re-development opportunities.

## Northwest Johnson County Submarket

According to CoStar, by the second quarter 2021 the inventory of office space in Northwest Johnson County totaled 5.1 million square feet, or 4.0 percent of the Kansas City MSA inventory. The I-35 corridor and Lenexa City Center at 87<sup>th</sup> Street and I-435 are the largest concentrations of office space in Northwest Johnson County. Lenexa City Center is a 200-acre mixed use district supporting shopping, restaurants, entertainment, offices, apartments, and hotels.

During the second quarter 2021, the Northwest Johnson County office market was operating at an overall vacancy rate of 8.3 percent, an average rent of \$22.50 per square foot, and 2021 YTD net absorption of 58,505 square feet of space. By comparison, by the second quarter 2021, the 127.6 million square feet of office space in the Kansas City MSA was operating at an overall vacancy rate of 9.5 percent and an average rent of \$20.72 per square foot.

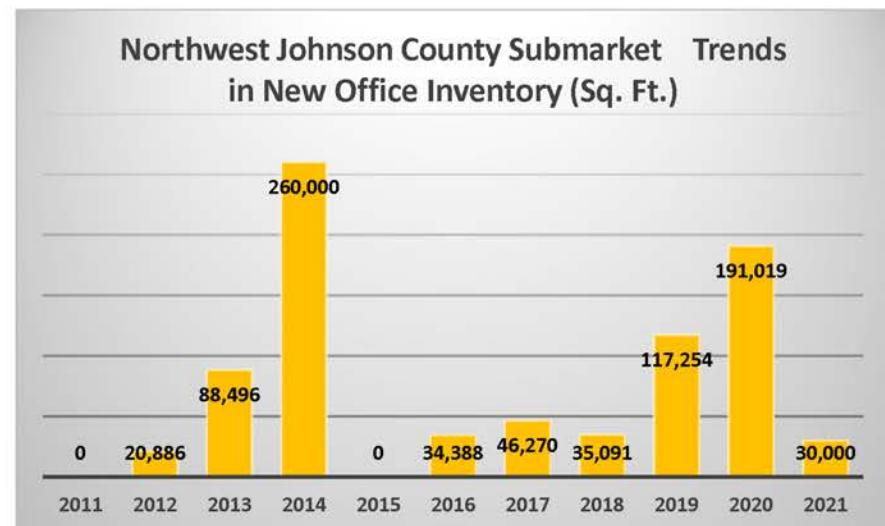
Class A properties account for the Northwest Johnson County's smallest inventory of space totaling 1.5 million square feet, or a 29.7 percent share. The modest inventory of Class A space places the submarket at a competitive disadvantage against more established office markets in attracting tenants. Most of the Class A office space is located within Lenexa City Center. Class A space is operating at the highest vacancy rate (10.6%) and highest average rent of \$29.20 per square foot. Class B office properties possess the largest inventory of space totaling 1.9 million square feet of space operating at a healthy vacancy rate of 4.4 percent and an average rental rate of \$21.70 per square foot. Class C office space totals 1.69 million square feet, operating at an average vacancy rate of 10.5 percent and an average rent of \$17.44 per square foot. No office space is under construction in the Northwest Johnson County submarket.

## Northwest Johnson County Office Market Conditions: 2021 Q2

Classification	Building Sq. Ft.	Vacancy Rate	Market Rent	Absorption 2021 YTD	Space U/C
Class A	1,498,907	10.6%	\$29.20	15,924	0
Class B	1,900,281	4.4%	\$21.70	95,916	0
Class C	1,686,020	10.5%	\$17.44	53,335	0
Totals	5,085,208	8.9%	\$22.50	58,505	0

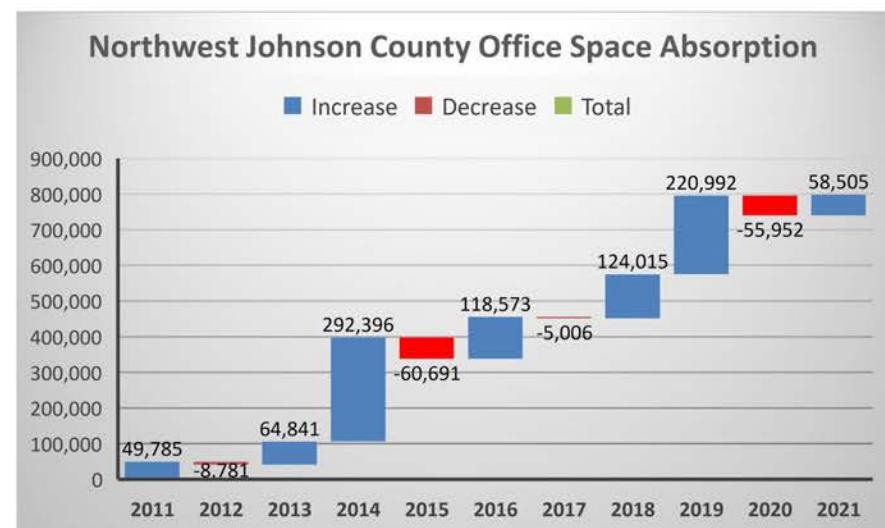
Source: CoStar.

Since 2011, 823,404 square feet of office space was built to the Northwest Johnson County submarket, accounting for 16.2 percent of the total inventory. New office construction peaked in 2014 with the completion of 260,000 square feet of space. Following four years of modest new office construction levels, during 2019 and 2020, construction activity accelerated with the addition of 308,723 square feet of space. Through the first half of 2021 a total of 30,000 square feet of new office space has entered the Northwest Johnson County submarket.

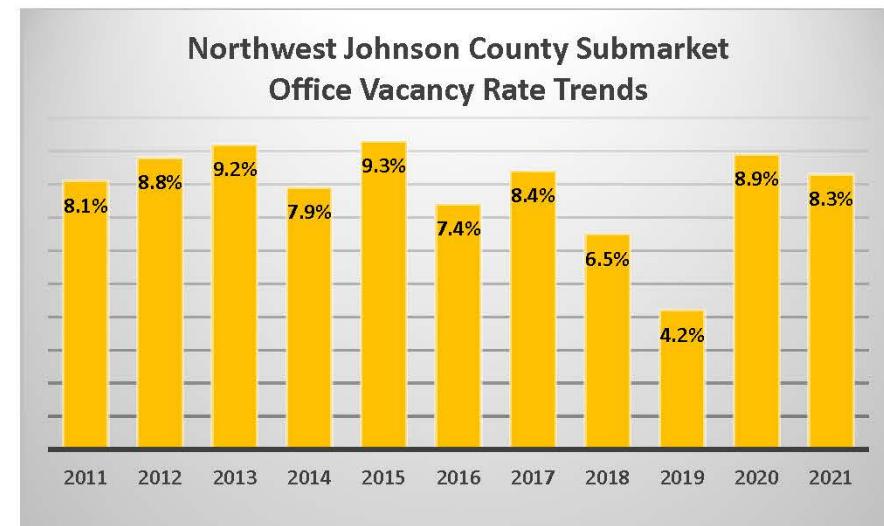


Costar reported that eight office projects totaling 572,700 square feet of building area are proposed for future development in the Northwest Johnson County submarket. Most of the proposed office development in Northwest Johnson County is concentrated at Lenexa City Center.

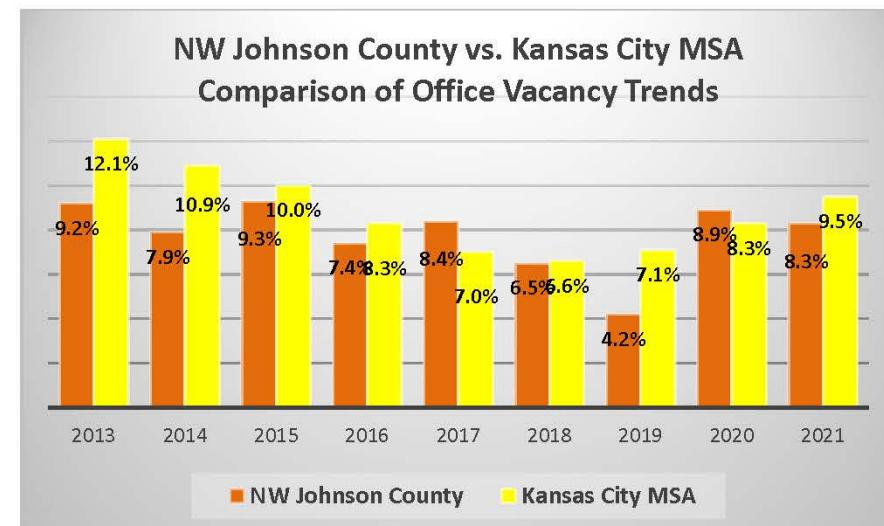
Since 2011, Costar reported 798,677 square feet of retail space was absorbed into the Northwest Johnson County submarket. Office space absorption peaked in 2014 with the net occupancy of 220,992 square feet of space and again in 2019 with 220,992 square feet of net absorption. During 2020, negative space absorption of 55,952 square feet was reported as business closures resulting from the COVID pandemic disrupted the office workforce environment. Through the first half of 2021 the office market rebounded posting net absorption of 58,505 square feet of space.



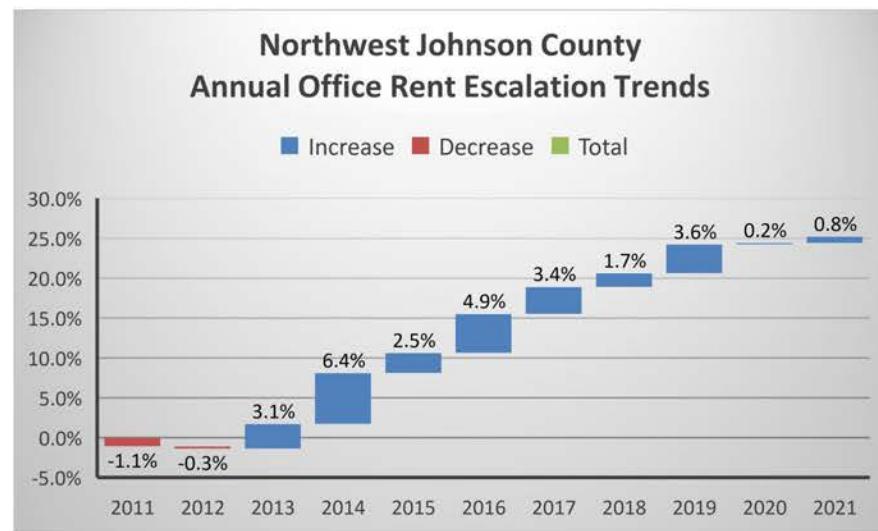
From 2011 through 2017, the overall office vacancy rate for the Northwest Johnson County submarket exceeded market equilibrium, ranging from a low of 7.4 percent in 2016 to a high of 9.3 percent in 2015. During 2018 and 2019, as net absorption outpaced new supply the overall vacancy rate moderated to a low of 4.2 percent. During 2020, the negative net absorption of 55,952 square feet pushed the vacancy rate up to 8.9 percent by year-end. Through the first half of 2021 the office market improved slightly to an overall vacancy rate of 8.3 percent.



Since 2013, the vacancy rate patterns have been comparable for both the Kansas City MSA and Northwest Johnson County office markets. Following four years of below average vacancies, by 2017 the Northwest Johnson County office market vacancy rate of 8.4 percent exceeded the metro-wide market's rate of 7.0 percent. The Northwest Johnson County office market outperformed the metropolitan market three out of the past four years.



From 2009 through 2012, the average office rent for the Northwest Johnson County submarket declined 7.4 percent as the national recession yielded a reduction in tenant demand. The market has since supported a steady upward trend in rents, increasing from an average of \$17.88 per square foot in 2013 to \$22.50 per square foot by the second quarter 2021. The Northwest Johnson County's current rent exceeds the Kansas City MSA rate of \$20.72 per square foot. Rent escalations peaked in 2014 and 2016 with annual growth of 6.4 percent and 4.9 percent, respectively. The COVID-19 pandemic softened the office market yielding modest gains in the average rental rate during 2020 and the first half of 2021.



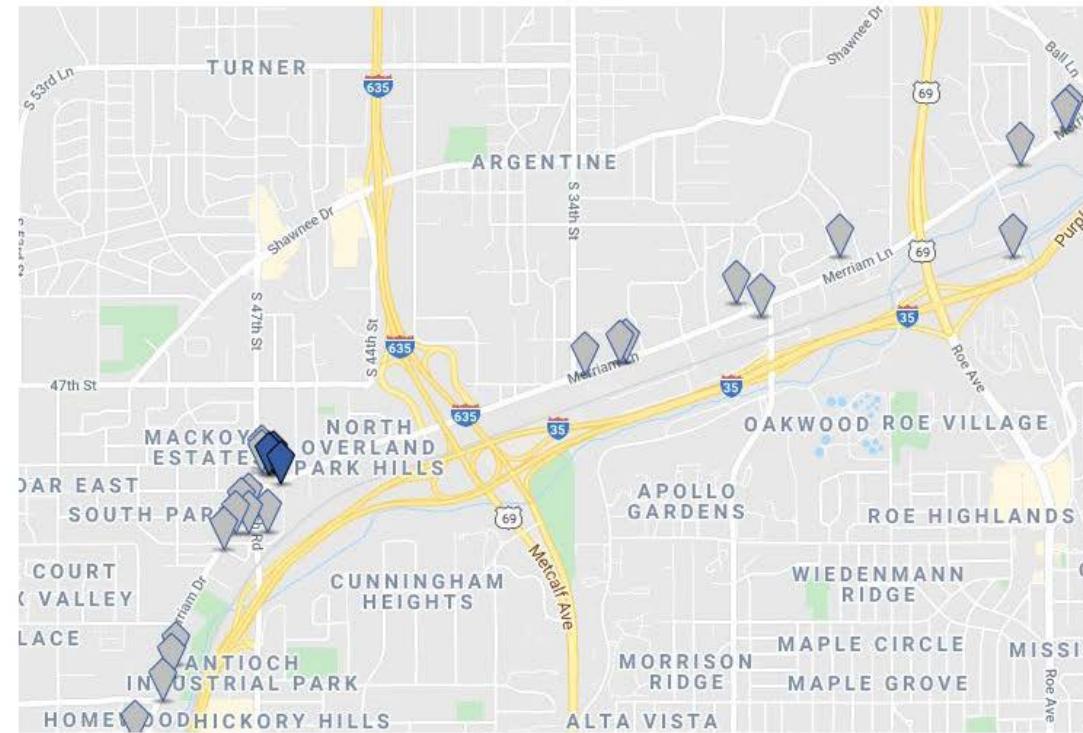
For much of the past decade Kansas City's strong job market and the economic incentives Kansas and Missouri have offered employers promoted healthy tenant demand for office space. During April 2020, the COVID-19 pandemic yielded the loss of 15,300 information, financial, and professional and business services sectors in the Kansas City MSA. By April 2021, the Kansas City MSA office-user employment sectors gained 15,500 jobs, exceeding pre-pandemic employment levels. The office-related sectors for the Kansas portion of the Kansas City MSA lost 6,900 jobs from February through April 2020 and have yet to fully recover adding just 2,300 new jobs through April 2021.

The COVID-19 pandemic has also adversely impacted employment in Johnson County resulting in the loss of nearly 31,000 jobs in April 2020. By April 2021, the Johnson County labor market had fully recovered adding 40,000 new jobs.

To conclude, during early 2020 the Kansas City MSA and Johnson County office markets were adversely affected by the COVID-19 pandemic as job losses and working from home resulted in the contraction of office space by many companies. With office-related employment now fully recovered, the market fundamentals suggest long-term job growth and demand for office space.

#### Competitive Office Market

Existing office buildings located within the Merriam Drive corridor were surveyed by consulting Costar.



As the table below illustrates, the Planning Area supports a modest inventory of office space with 28 properties totaling just 167,485 square feet of building area. No new office space was built over the past two decades. Enterprise Holdings is the largest office tenant occupying two buildings totaling 28,000 square feet.

The Planning Area's absence of Class A office space places it in at a competitive disadvantage when marketing to quality office tenants.

Class B office space totals 575,875 square feet, amounting to 33.5 percent of the total inventory. As of the second quarter 2021, the inventory of Class B space was fully occupied.

Class C office space accounts for two-thirds of the Planning Area's total inventory, or 111,420 square feet. As of the second quarter 2021, the inventory of Class C space was operating at a vacancy rate of 7.0 percent.

### Planning Area Office Market Conditions; 2021 Q2

Building Classification	# of Buildings	Building Sq. Ft.	Vacant Space	Vacancy Rate
Class A	0	0	0	0.0%
Class B	6	56,065	0	0.0%
Class C	22	111,420	7,806	7.0%
<b>Totals</b>	<b>28</b>	<b>167,485</b>	<b>7,806</b>	<b>4.7%</b>

Source: CoStar.

Over the past decade the Planning Area office market has absorbed a total of 5,344 square feet of office space and operated at a healthy vacancy rate ranging from 0.0 percent to 7.4 percent. Since 2020, the vacancy rate has stood at just 4.7 percent.



### Industrial Market Overview

Kansas City MSA continues to be a thriving industrial market due to its geographically centralized location in the United States, superior highway and rail infrastructure, and business-friendly foreign trade zone program. Home to the largest rail center in the United States by tonnage, Kansas City is ideally located at the crossroads of the east-to-west corridor and the route from Mexico to Canada. Transportation infrastructure and multiple intermodal facilities continue to spur development activity within the market. Four interstate systems converge upon Kansas City, resulting in more freeway-lane miles per capita than any other U.S. city, while allowing goods to be delivered to 85 percent of the nation's population within two days.

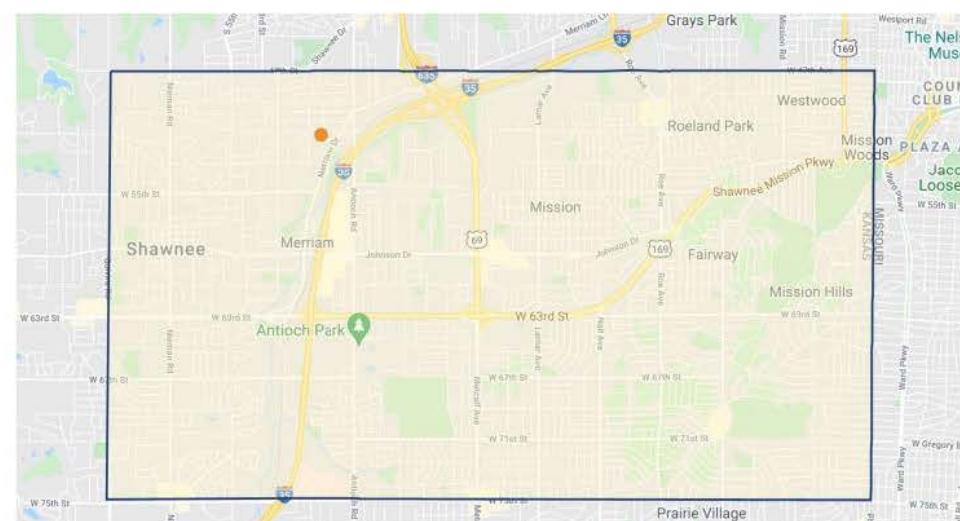
The Kansas City MSA industrial market has remained resilient throughout the COVID-19 pandemic, absorbing 7.48 million square feet of space in 2020, compared to 1.56 million square feet for all of 2019. New industrial construction also accelerated during 2020 with 6.0 million square feet of space added, compared to 2.85 million square feet during 2019. The net result of the supply and demand balance was a slight reduction in the overall vacancy rate to 5.0 percent by year-end 2020. The short-term projections for the Kansas City MSA industrial market call for continued growth in employment, new construction, and net space absorption.

By the second quarter 2021, the Kansas City MSA maintained 326 million square feet of industrial space with an additional 11 million square feet under construction. Warehouse and distribution space accounts for 72 percent of the total inventory of industrial space. The Kansas communities of Olathe and Lenexa collectively support over 71 million square feet of industrial space.

According to the *Kansas City Industrial Submarket Report* published by CoStar, the Planning Area is located within the Merriam/Mission submarket. This section of the study provides industrial market trends for both the Merriam/Mission submarket and the Planning Area.

### Merriam/Mission Submarket

The Merriam/Mission industrial submarket is bound by 47<sup>th</sup> Street to the north, 75<sup>th</sup> Street to the south, the Kansas/Missouri state line to the east, and Quivira Road to the west.



According to the *Industrial Market Report* published by CoStar, by the second quarter 2021 the Merriam/Mission submarket supported 2.7 million square feet of industrial space consisting of 1.9 million square feet of warehouse and logistics space, 742,680 square feet of specialized industrial space, and 72,130 square feet of flex space. The Merriam/Mission submarket consists of older industrial inventory concentrated along the Interstate 35 corridor. No industrial space is currently under construction.

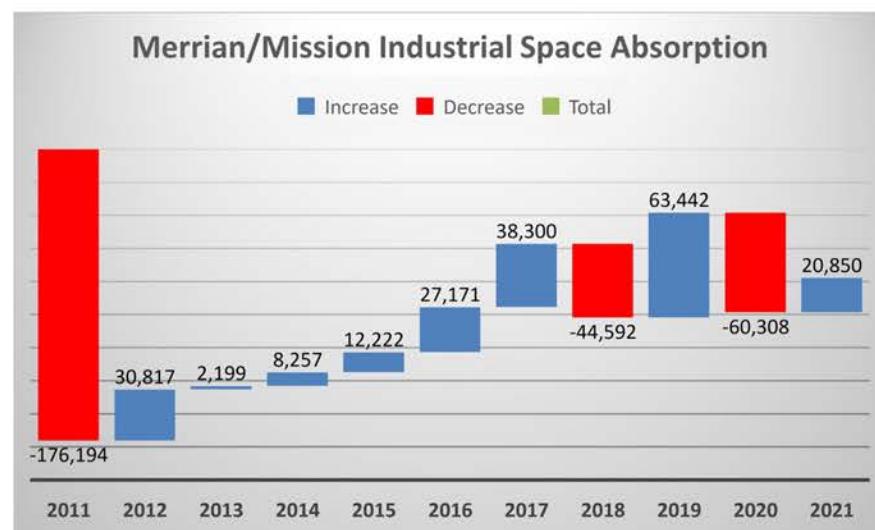
As of the second quarter 2021 the Merriam/Mission industrial submarket was operating at a healthy 1.9 percent vacancy rate which compares the Kansas City MSA average of 5.2 percent. Year-to-date 2021, net absorption of industrial space totaled 20,850 square feet of space.

### Merriam/Mission Industrial Market Conditions; 2021 Q2

Property Type	Building Sq. Ft.	Vacancy Rate	Market Rent	Absorption 2021 YTD	Space U/C
Warehouse & Logistics	1,897,369	1.5%	\$8.51	11,650	0
Specialized Industrial	742,680	3.1%	\$7.78	9,200	0
Flex	72,130	0.0%	\$10.87	0	0
<b>Totals</b>	<b>2,712,179</b>	<b>1.9%</b>	<b>\$8.37</b>	<b>20,850</b>	<b>0</b>

Source: CoStar.

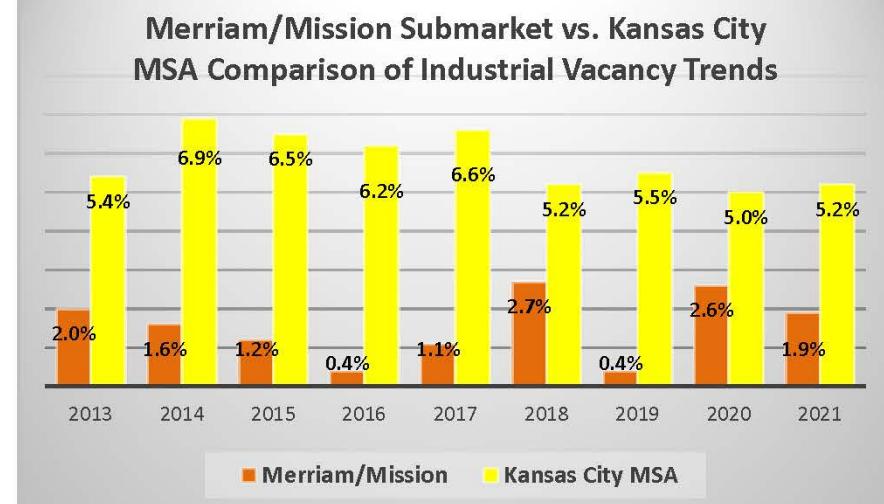
Costar reported just 64,110 square feet of new industrial space was built in the Merriam/Mission submarket since 2011, all of which was completed in 2016 and 2017. Since 2011, a reported 746,496 square feet of industrial space was absorbed into the Merriam/Mission submarket. Industrial space absorption peaked from 2015 through 2017 with the net occupancy of 77,693 square feet of space and again in 2019 with 63,442 square feet of net absorption. Due to the COVID pandemic business disruption, during 2020 net space absorption of -60,308 square feet was reported.



Since 2011, the overall industrial vacancy rate for the Merriam/Mission submarket has operated well below market equilibrium, ranging from a low of just 0.4 percent in 2016 and 2019 to a high of 4.5 percent in 2011. Since 2020, the negative absorption of 39,458 square feet pushed the vacancy rate to 1.9 percent by the second quarter 2021.



Since 2013, the average vacancy rate for industrial space in the Merriam/Mission submarket has significantly outperformed the Kansas City MSA average. By the second quarter 2021, the Merriam/Mission vacancy rate of 1.9 percent compared to the Kansas City MSA rate of 5.2 percent.



The Merriam/Mission submarket consists of older industrial inventory concentrated along the Interstate 35 corridor. Given the lack of vacant land, new industrial construction and net space absorption has been modest over the past decade. Given its infill location and excellent freeway access, over the past decade the Merriam/Mission submarket has sustained healthy vacancies well below market equilibrium.

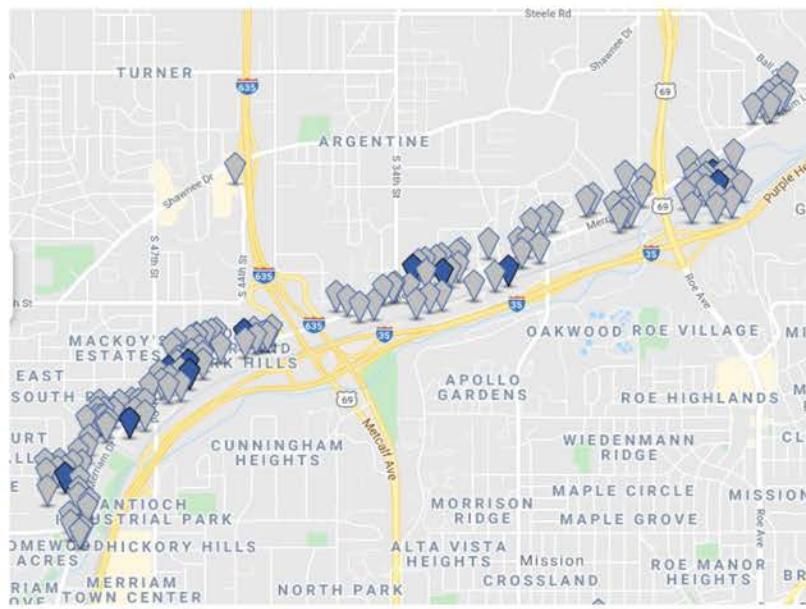
#### Competitive Industrial Market

Existing industrial and flex buildings located within the Planning Area from 55<sup>th</sup> Street in Merriam northeast to Southwest Boulevard/39<sup>th</sup> Avenue in Kansas City were surveyed by consulting Costar. The Planning Area supports a mature industrial market with most buildings constructed from the 1960's through 1980's. As of the second quarter 2021, the Planning Area maintained 147 industrial buildings totaling 2.58 million square feet of space with warehouse space accounting for 69 percent of the inventory. Just 75,625 square feet of industrial space is vacant and available for lease, equating to a healthy overall vacancy rate of 2.9 percent.

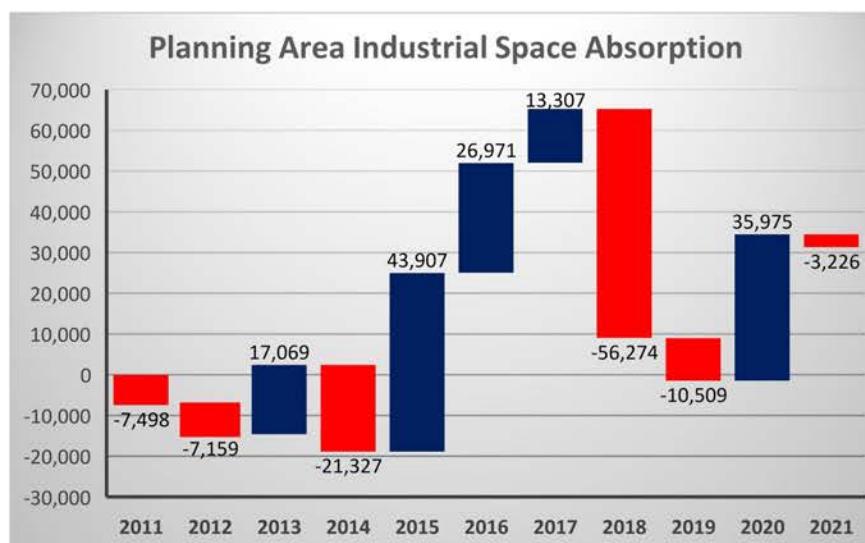
#### Planning Area Industrial Market Conditions; 2021 Q2

Property Type	# of Buildings	Building Sq. Ft.	Vacant Space	Vacancy Rate	Space U/C
Warehouse & Logistics	124	1,782,043	52,683	3.0%	0
Manufacturing	16	654,124	18,700	2.9%	0
Flex	7	145,938	3,242	2.2%	0
<b>Totals</b>	<b>147</b>	<b>2,582,105</b>	<b>74,625</b>	<b>2.9%</b>	<b>0</b>

Source: CoStar.



Just two industrial buildings totaling 11,400 square feet of new space was built in the Planning Area since 2011. Since 2011, a total of 31,236 square feet of industrial space was absorbed into the Planning Area. Industrial space absorption peaked from 2015 through 2017 with the net occupancy of 84,185 square feet of space. Despite the COVID pandemic business disruption, during 2020 net space absorption totaled 35,975 square feet. Through the first half of 2021 the Planning Area experienced negative absorption of -3,226 square feet of space.



Over the past decade, the overall industrial vacancy rate for the Planning Area has operated well below market equilibrium, ranging from a low of 1.6 percent in 2016 to a high of 4.4 percent in 2014. Since 2020, the net absorption of 32,749 square feet reduced the vacancy rate to a healthy 2.9 percent by the second quarter 2021.



The Planning Area industrial market consists primarily of warehouse space stemming from excellent freeway access. Little vacant land is available for development making it difficult for existing businesses to expand. Future additions to supply will originate from the expansion of existing buildings and redevelopment of underutilized properties.

### Forecast Space Demand

Professional office and industrial space demand projections for the Planning Area through the year 2040 provide an understanding of future market conditions directly impacting the feasibility of supporting new employment-related development. For this analysis, the Planning Area is defined as the geographic area within a 1-mile radius of the mid-point of Merriam Drive.

#### Professional Office Space

By the second quarter 2021, the Planning Area supported 167,485 square feet of office space. Over the past decade the Planning Area office market has absorbed a total of 5,344 square feet of office space. The demand for professional office space is closely correlated with expansion in office space using employment sectors. Future demand for professional office space was forecast utilizing an occupational employment-driven model. This model was designed using the variables of increased employment in categories of economic activity typically associated with demand for office space and average space requirements per employee. A share of regional demand is assigned to the submarket (and specific project) based on location, competition, access, and project scale.

According to the Bureau of Labor Statistics, office-related employment in the Kansas City MSA totals 282,600 jobs in the FIRE, information, and professional and business services sectors. Collectively, these sectors account for 26.4 percent of total employment. The portion of the Kansas City MSA in Kansas supports 49.2 percent of the total metropolitan employment including 138,900 jobs in the FIRE, information, and professional and business services sectors. Collectively, these sectors account for 29.5 percent of total employment.

Total employment in Johnson County rose from 257,983 jobs in January 2000 to 332,840 jobs by February 2020 (pre-pandemic), an increase of 74,857 jobs.

Office-related employment within the Planning Area totals 299 jobs in the FIRE, information, and professional and business services sectors, accounting for 11.2 percent of total employment.

The Planning Area's current employment totals 2,681 jobs. Through 2040, job growth in the Planning Area is forecast to increase at an average annual rate of 0.5 percent to 1.0 percent, yielding an estimated 266 to 558 new jobs. Office-related employment is forecast to account for 15 percent of total job growth, or 40 to 84 new jobs.

Office space demand created by the future growth in office-related employment was forecast by applying standard job creation ratios published by NAIOP of 1.0 job per 200 to 225 square feet of office space that accounts for both owner-occupied and speculative office space. From 2021 through 2040, office-related job growth in the Planning Area is projected to support the need for 8,000 to 18,800 square feet of owner-occupied and speculative office space.

Given the lack of vacant land in the Planning Area available for office development, future office development will involve conversion of underutilized properties. This scenario will result in removing existing commercial or industrial space inventory. In addition, these space demand forecasts do not account for a major owner-user purchasing an industrial property fronting onto Interstate 35, razing the structure, and constructing a single-tenant building.

#### Forecast Professional Office Space Demand Merriam Drive Planning Area; 2021 to 2040

	Conservative Scenario	Optimistic Scenario
Market Area		
Office-Related Employment Growth	40	84
Net Office Space Demand (Sq. Ft.)	8,000	18,800
Average Annual Office Space Demand (Sq. Ft.)	400	940

Accounting for the current inventory of vacant office space in the Planning Area and a market equilibrium vacancy rate of 7.0 percent, through 2040 the Planning Area is estimated to support the development of 12,800 to 24,400 square feet of new office space. Based on an average floor-area-ratio of 25 percent to 30 percent, the forecast office space need through 2040 would absorb an estimated 1.0 to 1.2 acres of commercial land under the conservative scenario and 1.9 acres to 2.2 acres under the optimistic scenario.

#### Supportable New Office Space Estimates Merriam Drive Planning Area; 2021 - 2040

	Conservative Scenario	Optimistic Scenario
Supportable New Office Space Need		
Market Area Inventory of Occupied Office Space 2021 Q2	159,679	159,679
Forecast Office Space Demand 2021-2040	8,000	18,800
Total Occupied Office Space Inventory 2040	167,679	178,479
Market Equilibrium Office Space Need	180,000	191,913
Less: Existing Inventory of Office Space 2021 Q2	167,485	167,485
Supportable New Office Space 2021-2040	12,815	24,428
Supportable Development Acres		
25% FAR	1.0	1.9
30% FAR	1.2	2.2

Source: Canyon Research Southwest, Inc.; November 2021.

#### Industrial Space

By the second quarter 2021, the Planning Area supported 2.58 million square feet of industrial space. Since 2011, the Planning Area absorbed a total of 31,236 square feet of industrial space.

The demand for industrial space is a function of employment, investment, and technology. The U.S. Department of Labor defines industrial employment as jobs in the manufacturing, wholesale trade, and transportation and warehousing industries.

According to the Bureau of Labor Statistics, industrial employment in the Kansas City MSA during April 2021 totaled 292,500 jobs in the manufacturing and trade, transportation, and utilities sectors. Collectively, these industrial sectors account for 27.3 percent of total employment. The portion of the Kansas City MSA in Kansas supports 138,900 jobs in the manufacturing and trade, transportation, and utilities sectors, accounting for 29.5 percent of total employment.

Industrial-related employment within the Project Area totals the industrial sectors of wholesale trade, manufacturing, transportation and warehousing, and automotive repair that collectively support 1,044 jobs, or 38.9 percent of total employment.

Through 2040, the Planning Area is forecast to add 266 to 558 jobs. Industrial employment is forecast to account for 50 percent of total job growth, adding an estimated 133 to 279 new jobs.

According to Costar, by year-end 2020 the Kansas City MSA supported 308 million square feet of occupied industrial space, equating to 1,053 square feet of occupied industrial space per employee. Given the net industrial job losses during 2020, a more conservative job to occupied space ratio of 1.0 job per 900 to 1,000 square feet of occupied industrial space was applied.

Space needs created by the future growth in industrial employment within the Market Area was forecast by applying standard job creation ratios of 1.0 job per 900 to 1,000 square feet of light manufacturing, warehouse, and flex industrial space. These job creation rates account for both owner-occupied and speculative industrial space.

Industrial Space Demand Forecasts  
Merriam Drive Planning Area; 2021 to 2040

	Moderate Scenario	Optimistic Scenario
Market Area		
Industrial-Based Employment Growth	133	279
Industrial Space Demand (Sq. Ft.)	120,000	280,000
Average Annual Industrial Space Demand (Sq. Ft.)	6,000	14,000

Through 2040, industrial job growth in the Planning Area is projected to support the need for 120,000 to 280,000 square feet of both owner-occupied and speculative industrial space.

Accounting for the current inventory of vacant industrial space in the Planning Area and a market equilibrium vacancy rate of 7.0 percent, through 2040 the Planning Area is estimated to support the development of 243,000 to 415,000 square feet of new industrial space. Based on an average floor-area-ratio of 30 percent to 35 percent, the forecast industrial space need through 2040 would absorb an estimated 15.9 to 18.6 acres of industrial land under the conservative scenario and 27.2 acres to 31.8 acres under the optimistic scenario.

Supportable New Industrial Space Estimates  
Merriam Drive Planning Area; 2021 - 2040

	Conservative Scenario	Optimistic Scenario
Supportable New Retail Space Need		
Planning Area Inventory of Occupied Industrial Space 2021 Q2	2,507,480	2,507,480
Forecast Industrial Space Demand 2021-2040	120,000	280,000
Total Occupied Industrial Space Inventory 2040	2,627,480	2,787,480
Market Equilibrium Industrial Space Need	2,825,247	2,997,290
Less: Existing Inventory of Industrial Space 2021 Q2	2,582,105	2,582,105
Supportable New Industrial Space 2021-2040	243,142	415,185
Supportable Development Acres		
30% FAR	15.9	27.2
35% FAR	18.6	31.8

Source: Canyon Research Southwest, Inc.; November 2021.

### Professional Office Site Evaluation

A feasible professional office building development site possesses the following characteristics: location within an established office market, excellent access and exposure; appropriate parcel size and shape; availability to a large and diverse labor pool; and compatibility with surrounding land uses. Suburban office development tends to gravitate to convenient freeway locations and/or mixed use environments that provide the needed support services (i.e., restaurants, retail goods, lodging and entertainment) and prestigious business image. Using these site selection criteria, the Planning Area was evaluated for the potential to support future professional office development.

#### Location

According to *Esri Business Analyst*, office-related employment within the 1-mile radius from the midpoint of Merriam Drive totals just 299 jobs in the FIRE, information, and professional and business services sectors, accounting for 11.2 percent of total employment. Through 2040, the need for new professional office space within the Planning Area is modest, forecast at 12,800 to 24,400 square feet of building area.

The Planning Area supports a modest inventory of office space with 28 properties totaling just 167,485 square feet of building area. No new office space was built over the past two decades. Enterprise Holdings is the largest office tenant occupying two buildings totaling 28,000 square feet. Support services such restaurants, retail goods, lodging and entertainment are available outside of the Planning Area.

Suburban office space tends to gravitate to freeway corridors. The Planning Area possesses excellent access and visibility from Interstate 35 with freeway interchanges at Antioch Road, Interstate 635, 24<sup>th</sup> Street, and U.S. Highway 69/Roe Boulevard.

#### Access and Exposure

Interstates 35 and 635 and U.S. Highway 69 run through the Planning Area, providing for sufficient access and exposure to accommodate professional office use.

#### Parcel Size and Shape

The Planning Area possess very little vacant land capable of supporting development of professional office space. Future professional office development will need to focus on the redevelopment of underutilized properties with the most suitable sites located along Merriam Drive and at or near Interstate 35 interchanges.

#### Access to Labor

Johnson County supports a population of 600,000 and a labor force of 349,000. According to the Bureau of Labor Statistics, office-related employment in the Kansas City MSA totals 282,600 jobs in the FIRE, information, and professional and business services sectors. These employment sectors provide for a large labor market from which employers to draw from.

#### Conclusions

Benefits of the Planning Area as a professional office location include excellent freeway visibility and exposure, adequate transportation network, access to labor and support goods and services, and availability of a nearby for-sale and rental housing.

Through the year 2040, the Market Area is forecasted to absorb 12,800 to 24,400 square feet of professional office space, providing for development opportunities.

Given the mature character of the Merriam Drive Planning Area, future professional office development will require manufacturing suitable sites. The most suitable sites include underutilized properties located adjacent to Merriam Drive and near Interstate 35 interchanges. Prospective redevelopment sites capable of accommodating professional office use include: 1) northeast corner of 55<sup>th</sup> Street and Merriam Drive; 2) southeast corner of Merriam Drive and Interstate 365; 3) north side of Interstate 35 between the Interstate 635 and 24<sup>th</sup> Street interchanges; 4) southwest corner of Merriam Drive and U.S. Highway 69; 5) southeast corner of Merriam Drive and U.S. Highway 69; and 4) Boulevard Drive-in Theatre.

## Industrial Site Evaluation

A feasible industrial and flex space development site possesses the following characteristics: excellent location and access; appropriate parcel size and shape; availability to a large and diverse labor pool; proximity to customers; and compatibility with surrounding land uses. Industrial development tends to concentrate along transportation infrastructure such as freeway corridors, rail lines, and airports. Available economic incentives offered by the municipality also plays an influential role in an industrial site selection process. Using these site selection criteria, the Planning Area was evaluated for the potential to support future development of warehouse, manufacturing, and flex space.

### Location

The Planning Area supports a large industrial market totaling 2.58 million square feet of space with warehouse space accounting for 69 percent of the inventory. Most buildings were built from the 1960's through 1980's. As an industrial location the Planning Area's principal asset is excellent access from Interstate 35 with freeway interchanges at Antioch Road, Interstate 635, 24<sup>th</sup> Street, and U.S. Highway 69/Roe Boulevard. The primary constraint is the limited inventory of vacant land.

### Transportation Infrastructure

The Planning Area benefits from direct access to Interstate 35 which links to Interstate 70, both important transportation corridors for logistics and warehouse operations. Rail access is also available in the Planning Area.

The Planning Area's convenient highway and rail access provides opportunities for warehouse and logistics operations.

### Parcel Size and Shape

The Planning Area possess very little vacant land capable of supporting development of industrial space. Future industrial development will include both the expansion of existing properties and the redevelopment of underutilized properties located along Merriam Drive and Interstate 35.

### Access to Labor

According to the Bureau of Labor Statistics, industrial employment in the Kansas City MSA during April 2021 totaled 292,500 jobs in the manufacturing and trade, transportation, and utilities sectors. These employment sectors provide for a large labor market from which employers to draw from.

### Proximity to Customers

The Planning Area's highway and rail access provides opportunities for transload and logistics operations capable of providing overnight delivery to such metropolitan markets as Denver, Wichita, Lincoln, Omaha, Des Moines, St. Louis, Tulsa, and Oklahoma City.

### Conclusions

Through 2040 the Planning Area is estimated to support 243,000 to 415,000 square feet of new industrial space, creating development opportunities.

Future industrial development within the Planning Area will include both the expansion of existing industrial properties and the redevelopment of underutilized properties located along Merriam Drive near Interstate 35 interchanges. Prospective redevelopment sites capable of accommodating industrial uses include: 1)

southeast corner of Merriam Drive and Interstate 365; 2) southwest corner of Merriam Drive and U.S. Highway 69; 3) southeast corner of Merriam Drive and U.S. Highway 69; 4) southeast corner of Merriam Drive and U.S. Highway 69; 5) southeast corner of Merriam Drive and Roe Lane; and 6) and Boulevard Drive-in Theatre.

## Residential Housing Market Analysis

This section of the report evaluates the Planning Area's competitive apartment markets with the goal to identify redevelopment opportunities to support new housing stock.

### Johnson County Apartment Market

Most of the Planning Area is located within Johnson County. The Johnson County housing market benefits from an affluent population, large and growing concentration of top employers, a high quality of life, and a reputation as a desirable place to live. Johnson County has been the primary beneficiary of job movement from Missouri to Kansas in recent years and has the largest inventory of professional office space of any submarket in the metropolitan area. This construction cycle Johnson County has faced increased competition from the revitalized city center comprising the CBD and Country Club Plaza submarkets. Still, Johnson County's fundamentals remain the envy of the Kansas City market.

According to the *Kansas City Multi-Family Market Report* published by Costar, by the second quarter 2020 Johnson County, Kansas supported an apartment stock of 57,200 rental units, or 36.3 percent of the Kansas City MSA inventory. Since 2015, Johnson County averaged 1,515 units delivered annually with eight properties totaling 1,328 dwelling units under construction during the second quarter 2021. Most of the apartment properties recently completed or under construction are Class A properties supporting extensive common area amenities, luxury unit features, and well above market rents.

Johnson County's occupancy rate has historically outperformed the metro average as new inventory was met with strong demand. Despite the addition of 9,846 new dwelling units since 2015 Johnson County's overall vacancy rate has remained well below market equilibrium with the ability to construct and absorb more rental product. The second quarter 2021 vacancy rate of 5.9 percent compared favorably to the metro-wide rate of 6.8 percent.

Johnson County rents exceed the Kansas City average. By the second quarter 2021 the average effective apartment rent in Johnson County amounted to \$1,046 per month, or \$1.18 per square foot. Rents in Johnson County have increased by an impressive 5.8 percent over the past year, which is the strongest annual performance recorded in more than ten years.

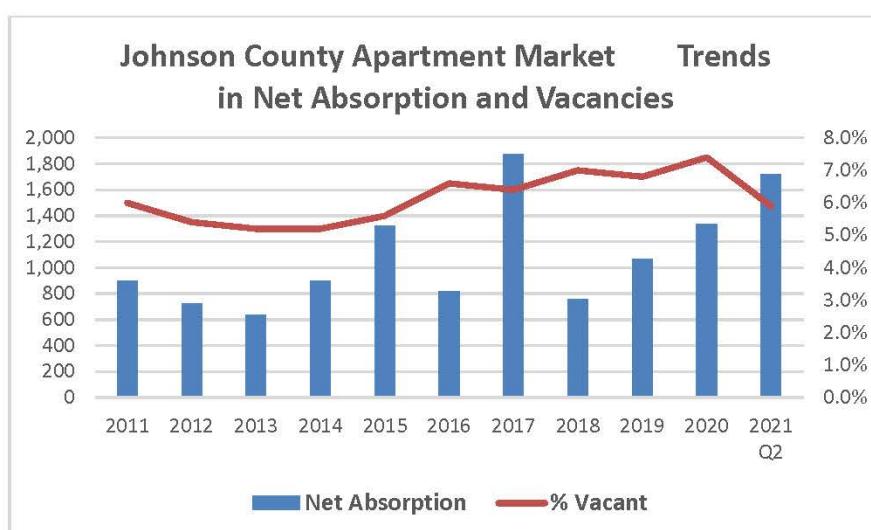
More recently constructed Class A properties command significant premiums. Asking rents for apartment units built in Johnson County since 2016 average \$1,550 per month compared to \$1,330 per month for units built from 2010 to 2015. By the second quarter 2021, the effective rent in Johnson County for all Class A properties averaged \$1,335 per month, or \$1.33 per square foot.

### Johnson County Apartment Market Trends

Year	Inventory # of Units	New Inventory	Net Absorption	Vacancy Rate	Effective Rent	Rent Sq. Ft.
2009	44,594	329	-275	7.8%	\$851	\$0.88
2010	44,870	276	624	7.0%	\$855	\$0.88
2011	45,369	499	901	6.0%	\$866	\$0.89
2012	45,831	462	722	5.4%	\$880	\$0.91
2013	46,394	563	639	5.2%	\$904	\$0.93
2014	47,354	960	900	5.2%	\$922	\$0.95
2015	48,965	1,611	1,326	5.6%	\$955	\$0.98
2016	50,371	1,406	818	6.6%	\$980	\$1.01
2017	52,254	1,883	1,873	6.4%	\$997	\$1.03
2018	53,420	1,166	759	7.0%	\$1,024	\$1.05
2019	54,430	1,010	1,071	6.8%	\$1,066	\$1.10
2020	56,228	1,798	1,338	7.4%	\$1,071	\$1.10
2020 Q2	57,200	972	1,734	5.9%	\$1,146	\$1.18

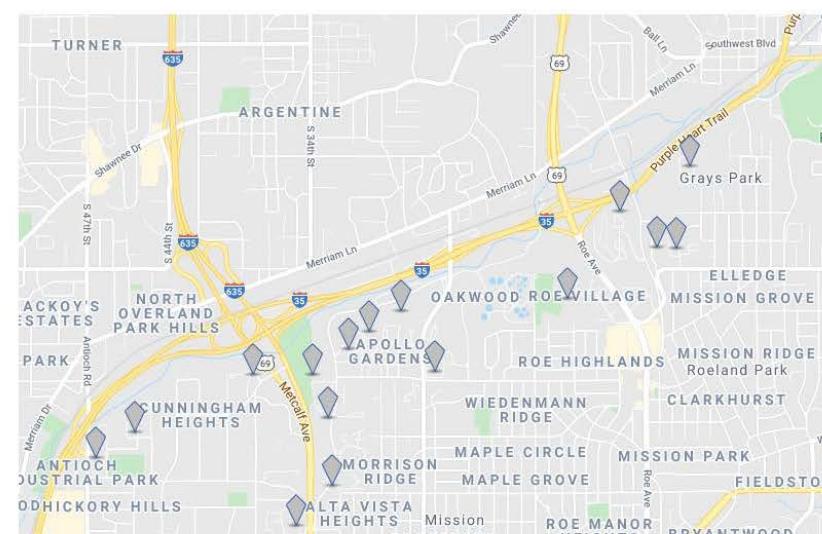
Source: CoStar.

Since 2011, new construction in Johnson County has added 12,330 apartment units, accounting for 40 percent of all new rental housing inventory in the Kansas City MSA. Net absorption over the decade amounted to 12,071 apartment units. In unison with the surge in new apartment construction, net absorption has accelerated since 2015 and a reported 1,734 apartment units were absorbed during the first half of 2021. Given the strong net absorption the overall vacancy rate has declined from a high of 7.8 percent in 2010 to 5.9 percent by the second quarter 2021. New additions to supply in 2021 are not expected to temper the market with the overall vacancy rate forecast to decline slightly to 5.1 percent by year-end.



### Competitive Apartment Market

Competitive rental housing market conditions impacting the Planning Area were identified by conducting a search on CoStar for large-scale apartment properties of 50 or more dwelling units located within the Interstate 35 Corridor from Johnson Drive to Southwest Boulevard. According to CoStar, the Interstate 35 corridor has 16 large-scale apartment properties totaling 3,868 dwelling units. All existing apartment properties are located south of Interstate 35 with no properties within the Planning Area. Fifteen apartment properties totaling 3,776 dwelling units are market-rate with one affordable property totaling 92 dwelling units.



The competitive large-scale apartment stock is older and is not competitive with the large stock of new Class A apartments in Johnson County. All but one property was built between 1962 and 1987 with the newest property completed in 1995. Two-thirds of the apartment inventory was built from 1960 to 1979. No apartment properties are planned for development in the Interstate 35 Corridor.



Since 2011, existing apartment properties in the Interstate 35 Corridor have operated at a health vacancy rate at or below market equilibrium and rents have escalated at a rate exceeding the metro-wide average.

Despite these favorable market conditions, no new large-scale apartments were built in the Interstate 35 Corridor since 1995.

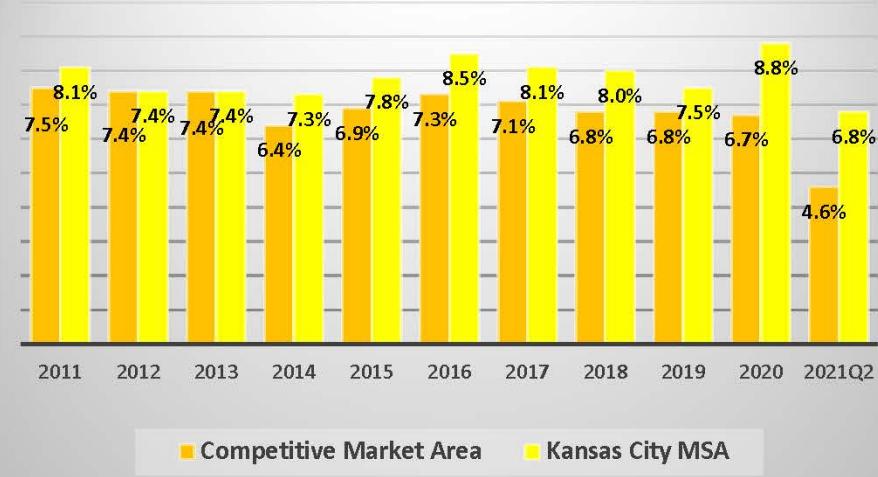
#### Competitive Apartment Market Trends

Year	Inventory Units	New Supply	Net Absorption	Vacancy Rate	Average Rent
2010	3,868	0	67	9.3%	\$662
2011	3,868	0	68	7.5%	\$673
2012	3,868	0	2	7.4%	\$678
2013	3,868	0	1	7.4%	\$694
2014	3,868	0	39	6.4%	\$710
2015	3,868	0	-18	6.9%	\$734
2016	3,868	0	-18	7.3%	\$753
2017	3,868	0	11	7.1%	\$784
2018	3,868	0	12	6.8%	\$793
2019	3,868	0	-3	6.8%	\$838
2020	3,868	0	5	6.7%	\$854
2021 Q2	3,868	0	82	4.6%	\$899

Source: Costar.

Throughout the past decade the competitive apartment market vacancy rate has outperformed the Kansas City MSA. From an average vacancy rate of 7.5 percent in 2011, the competitive apartment market steadily improved to a low of 4.6 percent by the second quarter 2021.

#### Apartment Market Vacancy Rate Comparison



The average monthly rent for apartments in the Interstate 35 Corridor rose from \$662 in 2011 to \$899 by the second quarter 2021. However, throughout the decade the average monthly rent for apartments in the Interstate 35 Corridor lagged the Kansas City MSA average. As the bar chart below illustrates, during 2011 the average rent of \$662 per month for the Interstate 35 Corridor was 19.3 percent below the metro norm of \$820 per month. By the second quarter 2021 the gap had narrowed slightly, with Interstate 35 Corridor's average rent of \$899 per month 16.0 percent below the metro average of \$1,070 per month. The lower rents

for the apartment properties operating in the Interstate 35 Corridor are attributed to their older age and lower level of community amenities and apartment unit features.

#### Apartment Average Monthly Rent Comparison



The unit mix for the competitive large-scale apartment properties consists primarily of 1- and 2-bedroom models with respective market shares of 38.7 percent and 47.1 percent of the total inventory. Three-bedroom models account for 6.7 percent of competitive inventory of apartment units with studios accounting for 7.5 percent.

#### Forecast Housing Demand

Residential housing demand estimates for the Planning Area through the year 2040 were forecast based on anticipated demographic and economic trends for the community. Key input to the model includes historical patterns in annual residential building permit activity and projected population and household growth, average household formation rates, households by income levels, and population by age.

Demographic characteristics, historic population growth trends, and housing unit inventory for the Market Area were provided by Esri Business Analyst. Population growth projections for the Market were generated by Canyon Research Southwest based on historic growth patterns, infill location within the Kansas City MSA, existing employment base, and economic development factors.

Supportable residential housing absorption over the next twenty years will be a function of resident population growth and latent demand while income levels and age composition will dictate the type and mix of housing product.

#### Housing Need from Population Growth

Net population and household growth are the largest single drivers of the need for new housing units. Through 2040, the Market Area population is forecast to increase by 6,331 new residents. At the Market Area's average household size of 2.17 persons and the Kansas City MSA average household size of 2.52 persons, the forecast population growth through 2040 is estimated to yield an estimated 2,512 to 2,918 new households and occupied housing unit.

### Latent Housing Demand

Another housing needs component considers the number of units a market requires to offer balanced market conditions. Vacant housing units are necessary to accommodate the turnover of the housing stock as people move for family, work-related, or financial reasons. Latent demand occurs when the inventory of available housing is severely constrained. Housing characteristics by zip code for the Market Area are identified in the table below.

Market Area Housing Characteristics, 2021

	Zip Code	66103	66106	66202	66203	66205	Totals
Total Housing Units		7,065	9,294	9,732	8,883	6,835	41,809
Owner-Occupied Housing Units		1,992	5,567	4,662	5,419	5,133	22,773
Renter Occupied Housing Units		5,073	3,021	5,070	3,464	1,702	18,330
Vacancy Housing Units		1,102	706	1,051	515	431	3,805
Vacancy Rate		15.6%	7.6%	10.8%	5.8%	6.3%	9.1%

Source: Esri Business Analyst.

A housing market operating at equilibrium supports a 92 percent to 95 percent occupancy rate. Healthy markets require 5 percent to 8 percent of the housing stock to be available to allow for inner-market mobility and encourage competitive housing prices and rental rates. Markets with vacancy rates below a healthy rate often suffer from escalating home values and rents, minimal tenant turnover, residents forced into housing situations that do not meet their housing needs, and the inability of nonresidents to enter the market.

According to the Esri Business Analyst, the 2021 vacancy rate for the Market Area is forecast at 9.1 percent, equating to 3,805 vacant housing units.

The Market Area's current residential housing stock totals 41,809 housing units, of which 38,004 housing units are occupied. Through 2040, population growth will result in the need for 2,512 to 2,918 additional housing units, bringing the total inventory of occupied housing to 40,516 to 40,922 dwelling units.

At market equilibrium occupancy rate of 93 to 95 percent, by 2040 the Market Area's housing stock would total 42,648 to 44,480 dwelling units, of which 2,132 to 3,558 dwelling units would be vacant and available for sale or rent. Subtracting out the current inventory of 3,805 vacant housing units yields no latent demand for housing units in the Market Area through 2040.

### Total Housing Demand

Through 2040, the Market Area population growth and latent housing demand is forecast to create the need for an estimated 2,512 to 2,918 occupied housing units. Given the large inventory and composition of existing vacant housing units and mature character of the Market Area, a portion of the new housing demand may be satisfied by the existing housing stock.

The Market Area's current mix of occupied housing units is 59.9 percent owner-occupied and 40.1 percent renter occupied. Given the Market Area's population age composition, household income levels, and limited inventory of vacant land available for development, from 2021 through 2040 the housing demand is estimated to be segmented 35 percent owner-occupied and 65 percent renter occupied. Therefore, by 2040 the mix of new housing inventory is estimated to include 879 to 1,021 homeownership units and 1,633 to 1,897 rental units.

Vacant land is available in the Planning Area suitable for the future development of both single-family and multi-family housing. Based on the presence of a large employment base and several potential underutilized properties along Merriam Drive, residential redevelopment is anticipated to capture 15 to 20 percent of the Market Area's forecast rental units through 2040, equating to 377 to 584 dwelling units.

### Site Evaluation

The Planning Area was evaluated for the ability to facilitate development of both single-family and multi-family residential housing based on the following site criteria: physical attributes of the site; visibility and exposure; access; and proximity to housing demand generators and support goods and services. Given the predominance of industrial uses within and adjacent to the Planning Area, single-family housing was omitted from the site evaluation.

#### Physical Attributes

Several potential redevelopment sites along Merriam Drive possess sufficient land area to accommodate large-scale apartment development with a minimum of 100 dwelling units and community amenities such as a clubhouse and swimming pool. A minimum 10-acre parcel is required to support development of a suburban-style apartment community. Potential apartment development sites include: 1) 12-acre parcel on the east side of 34<sup>th</sup> Street north of Merriam Drive; 2) northeast corner of Merriam Drive and U.S. Highway 69; and 3) northeast and northwest corners of 14<sup>th</sup> Street.

Merriam Drive frontage with existing single-family homes could be redeveloped with 2- to 4-unit buildings and smaller apartment properties. Potential locations for smaller apartment properties include the three single-family homes at the northeast corner of 27<sup>th</sup> Street and Merriam Drive and the equipment rental property at the northwest corner.

The vacant land at the southeast corner of 34<sup>th</sup> Street and Woodend Avenue possess the size and dimensions to accommodate single-family subdivision development.

#### Accessibility

Regional, local, and on-site vehicular access is important when assessing a prospective large-scale apartment site. The Planning Area benefits from excellent freeway and highway access.

#### Visibility and Exposure

Potential large-scale single-family and apartment sites should possess visibility via a major arterial to provide for an adequate marketing window. High traffic counts past the site also improve the site's market exposure. Merriam Drive serves as the Planning Area's principal arterial street, providing for excellent visibility and exposure. The vacant parcels of land on 34<sup>th</sup> Street also provide for adequate visibility and exposure.

#### Proximity to Housing Demand Generators

Proximity to such housing demand generators as employment centers, colleges, and urban cores is critical when evaluating a potential apartment development site. The Planning Area supports over 2,600 jobs. Therefore, ample jobs are in the Planning Area to support new housing construction.

#### Availability of Community Services

A prospective single-family subdivision or apartment site should afford convenient access to such community services as shopping, dining, entertainment, recreation, and schools. The Merriam Town Center and Shawnee Mission Parkway corridor offer shopping, dining, and entertainment. Public schools and municipal parks and athletic facilities operate in the Planning Area.

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# B



## APPENDIX B TRAFFIC ANALYSIS

## INTRODUCTION

The purpose of this report is to identify areas of concern and potential improvements to the Merriam Drive corridor in conjunction with the Mid-America Regional Council's (MARC) Planning Sustainable Places Program project "Merriam Drive Gateways Corridor Study". This report summarizes the results of the Synchro capacity analyses and crash data analysis for key intersections and segments along the Merriam Drive corridor. The analyses included modeling the intersections as they exist today, as well as improvement option scenarios at some of the intersections.

The following intersections were studied:

- Merriam Drive & W 55<sup>th</sup> Street
- Merriam Drive & W 50<sup>th</sup> Terrace
- Merriam Drive & Antioch Road
- Merriam Drive & SB I-635 Ramps
- Merriam Drive & NB I-635 Ramps
- Merriam Lane & S 24<sup>th</sup> Street / Lamar Avenue
- Merriam Lane & US-69 / S 18<sup>th</sup> Street Expressway SB Off-Ramp
- Merriam Lane & US-69 / S 18<sup>th</sup> Street Expressway NB On-Ramp
- Merriam Lane & Roe Lane

Key segments in the corridor with similar cross-sections and characteristics were also analyzed including the following:

- Merriam Drive from Antioch Road to I-635
- Merriam Drive between the I-635 Ramps
- Merriam Drive from I-635 to S 24<sup>th</sup> Street / Lamar Avenue

## DATA COLLECTION

### EXISTING TRAFFIC VOLUMES

Existing AM and PM peak-hour traffic volumes at the following intersections were recorded by Gewalt-Hamilton Associates (GHA) via video camera during the hours of 7:00-9:30 AM and 4:00-6:00 PM on Thursday, April 1, 2021. The counts were processed by Miovision Technologies, Inc. and can be found in the Appendix.

- Merriam Drive & W 55<sup>th</sup> Street
- Merriam Drive & Antioch Road

- Merriam Drive & SB I-635 Ramps
- Merriam Drive & NB I-635 Ramps
- Merriam Lane & S 24<sup>th</sup> Street / Lamar Avenue
- Merriam Lane & US-69 / S 18<sup>th</sup> Street Expressway SB Off-Ramp
- Merriam Lane & US-69 / S 18<sup>th</sup> Street Expressway NB On-Ramp
- Merriam Lane & Roe Lane

In addition to the intersections above, AM and PM peak-hour traffic volumes were recorded at the intersection of Merriam Drive & W 50<sup>th</sup> Terrace during the hours of 7:30-8:30 AM and 4:30-5:30 PM on Thursday, October 14, 2021. 24-hour daily traffic counts in the northbound and southbound travel lanes of Merriam Drive south of W 50<sup>th</sup> Terrace were also recorded on Thursday, October 14, 2021. The recorded average daily traffic (ADT) on Merriam Drive south of W 50<sup>th</sup> Terrace was 7,128 vehicles per day (vpd): 3,570 vehicles per day northbound and 3,558 vehicles per day southbound.

24-hour total entering volume counts at the study intersections were not recorded in conjunction with this project. The City of Overland Park's Traffic Volume Map did have 24-Hour ADT counts at some of the study intersections. For all other locations along the study corridor, ADT total entering volumes at the intersections were estimated by assuming the PM Peak-Hour volumes represent 10% of the ADT volumes. The table below summarizes the total intersection entering daily traffic volumes for the study intersections.

Total Intersection Entering Average Daily Traffic Volumes		
Intersection	OP Traffic Map ADT (vpd)	Estimated ADT (vpd)
Merriam Drive & W. 55 <sup>th</sup> Street	N/A	9,330
Merriam Drive & W. 50 <sup>th</sup> Terrace	N/A	9,510
Merriam Drive & Antioch Road	22,000 (Aug. 2018)	19,980
Merriam Drive & SB I-635 Ramps	11,100 (June 2010)	10,980
Merriam Drive & NB I-635 Ramps	11,100 (May 2010)	10,450
Merriam Lane & S 24 <sup>th</sup> Street/Lamar Ave.	N/A	10,320
Merriam Lane & SB US-69 Off-Ramp	N/A	7,690
Merriam Lane & NB US-69 On-Ramp	N/A	7,920
Merriam Lane & Roe Lane	N/A	9,020

The estimated ADT along Merriam Drive was also calculated assuming the current PM Peak Hour represents 10% of the ADT. The resulting segment ADTs are shown in the table below:

Merriam Drive/Merriam Lane Average Daily Traffic Volumes		
Intersection	OP Traffic Map ADT (vpd)	Estimated ADT (vpd)
Merriam Drive north of 55 <sup>th</sup> Street	N/A	7,210
Merriam Drive south of W 50 <sup>th</sup> Terrace*	N/A	7,128*
Merriam Drive west of Antioch Road	12,500 (Aug. 2018)	
Merriam Drive east of Antioch Road	10,500 (Aug. 2018)	8,830
Merriam Drive west of SB I-635 Ramps	8,900 (June 2010)	9,380
Merriam Drive between I-635 Ramps	9,400 (June 2010)	9,090
Merriam Drive east of NB I-635 Ramps	7,600 (June 2010)	7,930
Merriam Lane west of S 24 <sup>th</sup> St./Lamar Ave.	N/A	7,160
Merriam Lane east of S 24 <sup>th</sup> St./Lamar Ave.	N/A	7,480
Merriam Lane west of SB US-69 Off-Ramp	N/A	7,080
Merriam Lane between US-69 Ramps	N/A	7,000
Merriam Lane east of NB US-69 On-Ramp	N/A	7,000
Merriam Lane west of Roe Lane	N/A	6,900
Merriam Lane east of Roe Lane	N/A	5,590

\*Actual counts recorded as part of this project

## CRASH DATA

Crash data was provided by the Mid-America Regional Council (MARC) for the years 2015-2019 in a GIS-database format. The corresponding crash reports were not available through MARC, so a records request was made to The Kansas Department of Transportation (KDOT) which provided crash data and crash reports for the years 2015-2019. The data analysis in this report utilizes the KDOT crash data.

The estimated ADT along Merriam Drive was also calculated assuming the current PM Peak Hour represents 10% of the ADT. The resulting segment ADTs are shown in the table below:

Merriam Drive/Merriam Lane Average Daily Traffic Volumes		
Intersection	OP Traffic Map ADT (vpd)	Estimated ADT (vpd)
Merriam Drive north of 55 <sup>th</sup> Street	N/A	7,210
Merriam Drive south of W 50 <sup>th</sup> Terrace*	N/A	7,128*
Merriam Drive west of Antioch Road	12,500 (Aug. 2018)	
Merriam Drive east of Antioch Road	10,500 (Aug. 2018)	8,830
Merriam Drive west of SB I-635 Ramps	8,900 (June 2010)	9,380
Merriam Drive between I-635 Ramps	9,400 (June 2010)	9,090
Merriam Drive east of NB I-635 Ramps	7,600 (June 2010)	7,930
Merriam Lane west of S 24 <sup>th</sup> St./Lamar Ave.	N/A	7,160
Merriam Lane east of S 24 <sup>th</sup> St./Lamar Ave.	N/A	7,480
Merriam Lane west of SB US-69 Off-Ramp	N/A	7,080
Merriam Lane between US-69 Ramps	N/A	7,000
Merriam Lane east of NB US-69 On-Ramp	N/A	7,000
Merriam Lane west of Roe Lane	N/A	6,900
Merriam Lane east of Roe Lane	N/A	5,590

\*Actual counts recorded as part of this project

## CRASH DATA

Crash data was provided by the Mid-America Regional Council (MARC) for the years 2015-2019 in a GIS-database format. The corresponding crash reports were not available through MARC, so a records request was made to The Kansas Department of Transportation (KDOT) which provided crash data and crash reports for the years 2015-2019. The data analysis in this report utilizes the KDOT crash data.

Where:

R = Crash rate for the intersection expressed as crashes per million entering vehicles (MEV)

C = Total number of intersection crashes in the study period

N = Number of years of data

V = Traffic volumes entering the intersection daily

#### Segment Crashes

Crashes along the Merriam Drive/Merriam Lane corridor from W. 55<sup>th</sup> Street to Southwest Boulevard were analyzed as part of the segment crash rate. The average ADT was calculated along the segment from the table above and was found to be 7,390 vpd.

The FHWA formula for the road-segment crash rate is:

$$R = \frac{100,000,000 * C}{365 * N * V * L}$$

Where:

R = Crash rate for the road segment expressed as crashes per 100 million vehicle-miles of travel (VMT)

C = Total number of crashes in the study period

N = Number of years of data

V = Number of vehicles per day (both directions)

L = Length of the roadway segment in miles

Capacity and crash analysis for the study intersections and segments are summarized by location in the following pages.

## MERRIAM DRIVE & W 55<sup>TH</sup> STREET

**Figure 1** depicts the existing peak-hour volumes and the results of the capacity analysis for the intersection of Merriam Drive & W 55<sup>th</sup> Street. Existing signal timings were provided by the City of Merriam. The signal currently runs free all day. Protected/permissive left-turn phasing is currently provided with a 5-section head with green ball for the shared northbound through and left-turn lane movement. HCM 6 methodology does not support protected left-turn phasing in a shared lane, and therefore, HCM 2000 methodology was utilized for the report. The overall signal currently operates at LOS "A" during the AM and PM peak hours. All individual movements currently operate at LOS "C" or better with minimal queuing.

Analysis was completed to see how the intersection would operate if Merriam Drive was reduced to a three-lane section. LOS "C" or better would still be provided for all movements. The northbound queues would increase about 30' during the AM and PM peak hours, and the southbound queues would increase approximately 100'-130' during the AM and PM peak hours.

If Merriam Drive is reduced to a three-lane section, a separate northbound left-turn lane could be provided and the northbound signal head for the protected/permissive left-turn could be switched out to a flashing yellow arrow.

Crash analysis was completed for the four-year study period from 2015-2019 at the intersection of Merriam Drive & W 55<sup>th</sup> Street and is summarized below:

#### 12 crashes (0 Fatal, 4 Injury, 8 PDO)

4 – Angle-Side Impact

2 – Head-On

1 – Rear End

3 – Sideswipe: Same Direction

1 – Fixed Object

1 – Pedestrian

Patterns of note: Three of the crashes were related to vehicles failing to yield the right of way from the adjacent parking lot/driveways. There was one crash involving a pedestrian that the driver of the vehicle said he didn't see.

An intersection crash rate was determined for the 4-year study period based on the intersection ADT. The entering ADT for the intersection was calculated assuming the PM peak-hour volumes at the intersection were 10% of the entering ADT. The resulting entering ADT is 9,330 vpd. The calculated intersection crash rate for the intersection of W 55<sup>th</sup> Street & Merriam Drive is 0.88 crashes per million entering vehicles.

$$R = \frac{1,000,000 * 12}{365 * 4 * 9,330} = 0.88 \text{ crashes per MEV,}$$

or 8.80 crashes per 10 MEV

KDOT's statewide average for intersection crashes is 10 crashes per 10 MEV for urban intersections. Therefore, the intersection crash rate for the intersection of W 55<sup>th</sup> Street & Merriam Drive is below the statewide average rate.

#### MERRIAM DRIVE & W 50<sup>TH</sup> TERRACE

**Figure 2** depicts the existing peak-hour volumes and the results of the capacity analysis for the intersection of Merriam Drive & W 50<sup>th</sup> Terrace. Most movements currently operate at LOS "C" or better with minimal queuing during the AM and PM peak hours. The westbound approach currently operates at LOS "E" during the PM peak hour with a 110' queue.

Crash analysis was completed for the four-year study period from 2015-2019 at the intersection of Merriam Drive & W 50<sup>th</sup> Terrace and is summarized below:

##### 18 crashes (0 Fatal, 5 Injury, 13 PDO)

- 14 – Angle-Side Impact
- 1 – Head-On
- 1 – Rear End
- 1 – Sideswipe: Same Direction
- 1 – Swerve to Avoid Collision

Patterns of note: 13 of the crashes were related to westbound vehicles failing to yield the right of way most of them due to not seeing the oncoming vehicle. From reviewing the crash reports, a contributing factor for these crashes could be due to limited sight distance for the westbound approach. During the PM peak hour, the LOS for this approach is an "E" with a 110' queue. The crash reports also noted that the sun setting in the west can also "blind" the westbound driver.

An intersection crash rate was determined for the 4-year study period based on the intersection ADT. The entering ADT for the intersection was calculated assuming the PM peak-hour volumes at the intersection were 10% of the entering ADT. The resulting entering ADT is 9,510 vpd. The calculated intersection crash rate for the intersection of Merriam Drive & W 50<sup>th</sup> Terrace is 1.30 crashes per million entering vehicles.

$$R = \frac{1,000,000}{10} * 18$$

$$365 * 4 * 9,510 = 1.30 \text{ crashes per MEV,}$$

or 13.0 crashes per 10 MEV

KDOT's statewide average for intersection crashes is 10 crashes per 10 MEV for urban intersections. Therefore, the intersection crash rate for the intersection of Merriam Drive & W 50<sup>th</sup> Terrace is higher than the statewide average rate.

#### MERRIAM DRIVE & ANTIOCH ROAD

**Figure 3** depicts the existing peak-hour volumes and the results of the capacity analysis for the intersection of Merriam Drive & Antioch Road. Existing signal timings were provided by the City

of Overland Park. The signal currently runs free all day. Due to the skew in the angle of the intersection, eastbound right-turns and northbound left-turns are prohibited at the intersection. These movements are facilitated by the intersection of Antioch Road & 50<sup>th</sup> Terrace just to the south of the intersection which allows for the northbound left-turn and eastbound right-turn movements. The eastbound and westbound left-turn movements are protected only, and the southbound left-turn movement is permissive only. The overall signal currently operates at LOS "B" during the AM peak hour, and LOS "C" during the PM peak hour. Most of the individual movements currently operate at LOS "C" or better. The westbound left-turn movement currently operates at LOS "D" and exceeds the available storage of 85' during the AM and PM peak hours.

Roundabout analyses were completed to determine how the intersection may function under roundabout control. Due to the grades and skew of the intersection, the geometry of a roundabout should be evaluated to see if it could be constructed. Since Antioch Road is a 4-Lane section, dual-lane approaches on Antioch were assumed and single-lane approaches on Merriam Drive were analyzed. As shown on **Figure 2**, the analyses indicate that almost all the levels of service and queues would be improved at the intersection with roundabout control for both peak hours. The queue for the southbound approach on Antioch Road would be expected to increase slightly during the AM peak hour with roundabout control.

Crash analysis was completed for the four-year study period from 2015-2019 at the intersection of Merriam Drive & Antioch Road and is summarized below:

##### 36 crashes (0 Fatal, 11 Injury, 25 PDO)

- 12 – Angle-Side Impact
- 18 – Rear End
- 4 – Sideswipe: Same Direction
- 1 – Pedalcycle
- 1 – Vehicle Fire

Patterns of note: 15 of the 36 rear-end crashes were due to vehicles colliding with another waiting at the traffic signal. Two of the crashes occurred at a driveway into Grandstand Burgers, and two of the crashes occurred at the Hester Motors driveway. The pedalcycle crash was a child on a bike who darted into traffic.

An intersection crash rate was determined for the 4-year study period based on the intersection ADT. The entering ADT for the intersection was calculated assuming the PM peak-hour volumes at the intersection were 10% of the entering ADT. The resulting entering ADT is 19,980 vpd. The calculated intersection crash rate for the intersection of Merriam Drive & Antioch Road is 1.23 crashes per million entering vehicles.

$$R = \frac{1,000,000}{10} * 36$$

$$365 * 4 * 19,980 = 1.23 \text{ crashes per MEV,}$$

or 12.3 crashes per 10 MEV

KDOT's statewide average for intersection crashes is 10 crashes per 10 MEV for urban intersections. Therefore, the intersection crash rate for the intersection of Merriam Drive & Antioch Road is higher than the statewide average rate.

#### MERRIAM DRIVE & SB I-635 RAMPS

**Figures 4 & 5** depict the existing peak-hour volumes and the results of the capacity analysis for the intersection of Merriam Drive & the SB I-635 Ramps. The intersection is currently stop-controlled on the SB I-635 ramp approach. Merriam Drive currently widens to a 4-Lane section through the intersections with the I-635 ramps. Most movements currently operate at LOS "C" or better with minimal queuing during the AM and PM peak hours. The southbound left-turn movement currently operates at LOS "D" during the PM peak hour with a 35' queue.

The intersection was also analyzed with a 3-lane section along Merriam Drive. With this lane reduction, most movements and queues would not change or only slightly increase. The southbound left-turn movement would degrade a level of service during both peak hours, but still have minimal queueing.

Finally, the intersection was analyzed as a one-lane roundabout. With roundabout control, the SB I-635 ramp approach would be expected to operate at better levels of service and shorter queues over stop-control. The Merriam Drive approaches would still operate at LOS "A", but with some queueing as they would now be controlled in lieu of traveling free.

Crash analysis was completed for the four-year study period from 2015-2019 at the intersection of Merriam Drive & the SB I-635 Ramps and is summarized below:

4 crashes (0 Fatal, 2 Injury, 2 PDO)

- 2 – Angle-Side Impact
- 1 – Rear End
- 1 – Fixed Object

No patterns of note. An intersection crash rate was determined for the 4-year study period based on the intersection ADT. The entering ADT for the intersection was calculated assuming the PM peak-hour volumes at the intersection were 10% of the entering ADT. The resulting entering ADT is 10,980 vpd. The calculated intersection crash rate for the intersection of Merriam Drive & SB I-635 Ramps is 0.25 crashes per million entering vehicles.

$$R = \frac{1,000,000}{4}$$

$$365 * 4 * 10,980 = 0.25 \text{ crashes per MEV,}$$

or 2.50 crashes per 10 MEV

KDOT's statewide average for intersection crashes is 10 crashes per 10 MEV for urban intersections. Therefore, the intersection crash rate for the intersection of Merriam Drive & SB I-635 Ramps is below the statewide average rate.

#### MERRIAM DRIVE & NB I-635 RAMPS

**Figures 4 & 5** depict the existing peak-hour volumes and the results of the capacity analysis for the intersection of Merriam Drive & the NB I-635 Ramps. The intersection is currently stop-controlled on the NB I-635 ramp approach. Merriam Drive currently widens to a 4-Lane section through the intersections with the I-635 ramps. All movements currently operate at LOS "C" or better with minimal queuing during the AM and PM peak hours.

The intersection was also analyzed with a 3-lane section along Merriam Drive. With this lane reduction, similar levels of service and queuing would be provided at the intersection.

Finally, the intersection was analyzed as a one-lane roundabout. With roundabout control, the NB I-635 ramp approach would be expected to operate at better levels of service and shorter queues over stop-control. The Merriam Drive approaches would still operate at LOS "A", but with some queuing as they would now be controlled in lieu of traveling free.

Crash analysis was completed for the four-year study period from 2015-2019 at the intersection of Merriam Drive & the NB I-635 Ramps and is summarized below:

5 crashes (0 Fatal, 2 Injury, 3 PDO)

- 2 – Angle-Side Impact
- 3 – Fixed Object

No patterns of note. An intersection crash rate was determined for the 4-year study period based on the intersection ADT. The entering ADT for the intersection was calculated assuming the PM peak-hour volumes at the intersection were 10% of the entering ADT. The resulting entering ADT is 10,450 vpd. The calculated intersection crash rate for the intersection of Merriam Drive & NB I-635 Ramps is 0.33 crashes per million entering vehicles.

$$R = \frac{1,000,000}{5}$$

$$365 * 4 * 10,450 = 0.33 \text{ crashes per MEV,}$$

or 3.30 crashes per 10 MEV

KDOT's statewide average for intersection crashes is 10 crashes per 10 MEV for urban intersections. Therefore, the intersection crash rate for the intersection of Merriam Drive & NB I-635 Ramps is below the statewide average rate.

#### MERRIAM LANE & S 24<sup>TH</sup> STREET / LAMAR AVENUE

**Figure 6** depicts the existing peak-hour volumes and the results of the capacity analysis for the intersection of Merriam Lane & S 24<sup>th</sup> Street / Lamar Avenue. Existing signal timings were provided by Operation Green Light (OGL) who manages the signals for Kansas City, Kansas. The signal currently runs free all day with no detection. Protected/permissive left-turn phasing is currently provided with a 5-section head with green ball for the westbound left-turn movement. The overall signal currently operates at LOS "C" during the AM and PM peak hours. Most individual movements currently operate at LOS "C" or better. The northbound approach currently operates at LOS "D" during the PM peak hour.

Peak hour warrant analyses were completed to see if the intersection currently meets the peak-hour warrant. The peak-hour warrant is not met for the AM or PM peak hour. This intersection sometimes experiences higher traffic volumes as it can be used as a relief route when I-35 is extremely congested. At these times, a traffic signal can be beneficial to facilitate traffic. All-way stop control was analyzed at the intersection to determine if better operations could be provided. With all-way stop control, better levels of service and shorter queues would be expected. Analysis was also done to determine if the westbound left-turn lane was needed. Eliminating the westbound left-turn lane would result in longer delays and queues for the westbound approach.

Due to crash patterns of eastbound right-turn vehicles clipping northbound vehicles as described in the crash analysis below, analysis was also completed for the addition of a separate eastbound right-turn lane and separate northbound right-turn lane. The addition of these separate turn lanes improves the level of service and queues for all movements at the intersection.

Two-way stop-control and roundabout-control methods were not analyzed due to grade challenges at the intersection, making sight distance requirements for two-way stop-control unfeasible and grading for a larger roundabout intersection cost-prohibitive. The westbound signal head for the protected/permissive left-turn could be switched out to a flashing yellow arrow.

Crash analysis was completed for the four-year study period from 2015-2019 at the intersection of Merriam Lane & S 24<sup>th</sup> Street / Lamar Avenue and is summarized below:

28 crashes (0 Fatal, 1 Injury, 27 PDO)

- 8 – Angle-Side Impact
- 4 – Head-On
- 9 – Rear End
- 2 – Sideswipe: Same Direction
- 1 – Sideswipe: Opposite Direction
- 1 – Backed Into
- 3 – Fixed Object

Patterns of note: Six crashes occurred from a westbound left-turn vehicle clipping the northbound vehicle. Two occurred from an eastbound right-turn vehicle clipping the northbound vehicle. Seven occurred from a vehicle being rear-ended while waiting at the signal.

An intersection crash rate was determined for the 4-year study period based on the intersection ADT. The entering ADT for the intersection was calculated assuming the PM peak-hour volumes at the intersection were 10% of the entering ADT. The resulting entering ADT is 10,320 vpd. The calculated intersection crash rate for the intersection of Merriam Lane & S 24<sup>th</sup> Street is 1.85 crashes per million entering vehicles.

$$R = \frac{1,000,000}{10,320} * 28$$

$$365 * 4 * 10,320 = 1.85 \text{ crashes per MEV,} \\ \text{or } 18.5 \text{ crashes per 10 MEV}$$

KDOT's statewide average for intersection crashes is 10 crashes per 10 MEV for urban intersections. Therefore, the intersection crash rate for the intersection of Merriam Lane & S 24<sup>th</sup> Street is higher than, almost double, the statewide average rate.

#### MERRIAM LANE & SB US-69 RAMP / S 18<sup>TH</sup> STREET EXPRESSWAY

**Figure 7** depicts the existing peak-hour volumes and the results of the capacity analysis for the intersection of Merriam Lane & the SB US-69 Ramp / S 18<sup>th</sup> Street Expressway. The intersection is currently stop-controlled on the SB ramp approach. All movements currently operate at LOS "B" or better with minimal queuing during the AM and PM peak hours.

Crash analysis was completed for the four-year study period from 2015-2019 at the intersection of Merriam Lane & the SB US-69 Ramp / S 18<sup>th</sup> Street Expressway and is summarized below:

9 crashes (0 Fatal, 5 Injury, 4 PDO)

- 5 – Angle-Side Impact
- 3 – Rear End
- 1 – Head On

No patterns of note. An intersection crash rate was determined for the 4-year study period based on the intersection ADT. The entering ADT for the intersection was calculated assuming the PM peak-hour volumes at the intersection were 10% of the entering ADT. The resulting entering ADT is 7,690 vpd. The calculated intersection crash rate for the intersection of Merriam Drive & SB US-69 Off-Ramp is 0.80 crashes per million entering vehicles.

$$R = \frac{1,000,000}{7,690} * 9$$

$$365 * 4 * 7,690 = 0.80 \text{ crashes per MEV,} \\ \text{or } 8.0 \text{ crashes per 10 MEV}$$

KDOT's statewide average for intersection crashes is 10 crashes per 10 MEV for urban intersections. Therefore, the intersection crash rate for the intersection of Merriam Drive & SB US-69 Off-Ramp is below the statewide average rate.

#### MERRIAM LANE & NB US-69 RAMP / S 18<sup>TH</sup> STREET EXPRESSWAY

**Figure 7** depicts the existing peak-hour volumes and the results of the capacity analysis for the intersection of Merriam Lane & the NB US-69 Ramp / S 18<sup>th</sup> Street Expressway. The intersection is currently uncontrolled, as the minor road is an on-ramp only. All movements currently operate at LOS "A" or better with minimal queuing during the AM and PM peak hours.

Crash analysis was completed for the four-year study period from 2015-2019 at the intersection of Merriam Lane & the NB US-69 Ramp / S 18<sup>th</sup> Street Expressway and is summarized below:

#### 3 crashes (0 Fatal, 2 Injury, 1 PDO)

- 1 – Rear End
- 1 – Fixed Object
- 1 – Lost Control

No patterns of note. An intersection crash rate was determined for the 4-year study period based on the intersection ADT. The entering ADT for the intersection was calculated assuming the PM peak-hour volumes at the intersection were 10% of the entering ADT. The resulting entering ADT is 7,920 vpd. The calculated intersection crash rate for the intersection of Merriam Drive & NB US-69 On-Ramp is 0.26 crashes per million entering vehicles.

$$R = \frac{1,000,000}{3}$$

$$365 * 4 * 7,920 = 0.26 \text{ crashes per MEV,}$$

or 2.6 crashes per 10 MEV

KDOT's statewide average for intersection crashes is 10 crashes per 10 MEV for urban intersections. Therefore, the intersection crash rate for the intersection of Merriam Drive & NB US-69 On-Ramp is below the statewide average rate.

#### MERRIAM LANE & ROE LANE

**Figure 8** depicts the existing peak-hour volumes and the results of the capacity analysis for the intersection of Merriam Lane & Roe Lane. Existing signal timings were provided by the OGL. The signal currently runs free all day. Protected/permissive left-turn phasing is currently provided with 5-section heads with green balls for the eastbound and westbound left-turn movements. Permissive only turns are allowed for the northbound and southbound approaches. The overall signal currently operates at LOS "B" during the AM and PM peak hours. All individual movements currently operate at LOS "B" or better. The signal heads for the protected/permissive and permissive only left turns could be switched out to a flashing yellow arrow.

Crash analysis was completed for the four-year study period from 2015-2019 at the intersection of Merriam Lane & Roe Lane and is summarized below:

#### 6 crashes (0 Fatal, 2 Injury, 4 PDO)

- 3 – Angle-Side Impact
- 1 – Rear End
- 1 – Fixed Object
- 1 - Pedalcycle

No patterns of note. The pedalcycle crash occurred from an eastbound right-turn vehicle turning in front of an eastbound bicyclist.

An intersection crash rate was determined for the 4-year study period based on the intersection ADT. The entering ADT for the intersection was calculated assuming the PM peak-hour volumes at the intersection were 10% of the entering ADT. The resulting entering ADT is 9,020 vpd. The calculated intersection crash rate for the intersection of Merriam Lane & Roe Lane is 0.46 crashes per million entering vehicles.

$$R = \frac{1,000,000}{6}$$

$$365 * 4 * 9,020 = 0.46 \text{ crashes per MEV,}$$

or 4.6 crashes per 10 MEV

KDOT's statewide average for intersection crashes is 10 crashes per 10 MEV for urban intersections. Therefore, the intersection crash rate for the intersection of Merriam Lane & Roe Lane is lower than the statewide average rate.

#### W. 47<sup>TH</sup> STREET & ANTIOCH ROAD

During the public open house held on July 28, 2021, a resident in Overland Park brought up concerns about traffic running the all-way stop at the intersection of W. 47<sup>th</sup> Street & Antioch. City staff provided crash data from 2014-2018 for the intersection. Six total crashes were reported at the intersection during that time. Five of the six were non-injury, and one was a disabling injury. Crash data was also requested from KDOT from 2015-2019 for the intersection due to multiple municipalities at the intersection. In addition to the six Overland Park crashes, three additional crashes occurred at the intersection for a total of nine crashes over the 2014-2018 study period. The additional three crashes were all fixed-object, non-injury crashes. No correctable crash patterns were noted.

#### SEGMENT CRASH RATES

##### Merriam Drive / Merriam Lane (W. 55<sup>th</sup> Street to Southwest Boulevard – 3.34 miles)

During the 4-year study period, 199 crashes occurred along the study corridor. Of those crashes, zero (0) were classified as fatal, 60 were classified as injury, and 139 were classified as property-damage-only crashes (PDO). Crashes along the Merriam Drive/Merriam Lane corridor from W. 55<sup>th</sup> Street to Southwest Boulevard were analyzed as part of a total corridor segment crash rate as is summarized below:

##### 199 crashes (0 Fatal, 60 Injury, 139 PDO)

- 66 – Angle-Side Impact
- 13 – Head-On
- 55 – Rear End
- 11 – Sideswipe: Same Direction
- 7 – Sideswipe: Opposite Direction
- 2 – Backed Into

- 2 – Pedalcycle
- 2 - Pedestrian
- 33 – Fixed Object
- 2 – Overturned
- 1 - Parked
- 5 – Non-Collision (Out of Control & Vehicle Fire)

Patterns of note: 18 crashes occurred at the intersection of W. 50<sup>th</sup> Street & Merriam Drive. 14 of the 18 crashes were angle-side impact crashes mostly due to eastbound and westbound drivers not yielding the right of way. Local stakeholders have expressed that sight-distance is limited for westbound vehicles entering Merriam Drive.

There were 15 crashes at parking lot or driveway accesses, mostly from drivers failing to yield the right of way.

The segment crash rate was determined along the entire corridor segment above:

$$R = \frac{100,000,000 * 199}{365 * 4 * 7,390 * 3.34} = 552.22 \text{ crashes per 100 million VMT}$$

or 5.52 crashes per million VMT

KDOT's statewide average for segment crashes on a 2-lane undivided urban roadway with no access control from 2015-2019 is 1.770 crashes per million VMT. Therefore, the segment crash rate for Merriam Drive along the study corridor is about three times higher than the statewide average.

The crash rate for total injury crashes was also calculated:

$$R = \frac{100,000,000 * 60}{365 * 4 * 7,390 * 3.34} = 166 \text{ crashes per 100 million VMT}$$

or 1.66 crashes per million VMT

KDOT's statewide average for injury crashes on a 2-lane undivided urban roadway with no access control from 2015-2019 is 0.371 crashes per million VMT. Therefore, the injury crash rate for Merriam Drive along the study corridor is about four and a half times higher than the statewide average.

In addition to the segment crash rate for the entire study corridor, segment crash rates were also calculated for segments with similar cross sections including Merriam Drive from Antioch Road to I-635 (2-Lane Section), Merriam Drive between the I-635 Ramps (4-Lane Section), and Merriam Lane from I-635 to Lamar (2-Lane Section).

#### Merriam Drive (Antioch Road to I-635) – 0.51 miles

##### 54 crashes (0 Fatal, 14 Injury, 40 PDO)

The segment crash rate was determined along the segment above:

$$R = \frac{100,000,000 * 54}{365 * 4 * 8,830 * 0.51} = 821.32 \text{ crashes per 100 million VMT}$$

or 8.21 crashes per million VMT

KDOT's statewide average for segment crashes on a 2-lane undivided urban roadway with no access control from 2015-2019 is 1.770 crashes per million VMT. Therefore, the segment crash rate for Merriam Drive from Antioch Road to I-635 is almost five times higher than the statewide average.

The crash rate for total injury crashes was also calculated:

$$R = \frac{100,000,000 * 14}{365 * 4 * 8,830 * 0.51} = 212.93 \text{ crashes per 100 million VMT}$$

or 2.13 crashes per million VMT

KDOT's statewide average for injury crashes on a 2-lane undivided urban roadway with no access control from 2015-2019 is 0.371 crashes per million VMT. Therefore, the injury crash rate for Merriam Drive from Antioch Road to I-635 is almost six times higher than the statewide average.

#### Merriam Drive (I-635 SB Ramp to I-635 NB Ramp) – 0.30 miles

##### 9 crashes (0 Fatal, 4 Injury, 5 PDO)

The segment crash rate was determined along the segment above:

$$R = \frac{100,000,000 * 9}{365 * 4 * 9,090 * 0.30} = 226.05 \text{ crashes per 100 million VMT}$$

or 2.26 crashes per million VMT

KDOT's statewide average for segment crashes on a 4-lane undivided urban roadway with no access control from 2015-2019 is 2.287 crashes per million VMT. Therefore, the segment crash rate for Merriam Drive from I-635 Southbound to I-635 Northbound is just slightly lower than the statewide average.

The crash rate for total injury crashes was also calculated:

$$R = \frac{100,000,000 * 4}{365 * 4 * 9,090 * 0.30} = 100.47 \text{ crashes per 100 million VMT}$$

or 1.00 crashes per million VMT

KDOT's statewide average for injury crashes on 4-lane undivided urban roadway with no access control from 2015-2019 is 0.515 crashes per million VMT. Therefore, the injury crash rate for Merriam Drive from I-635 Southbound to I-635 Northbound almost two times higher than the statewide average.

Merriam Drive (I-635 NB Ramp to S 24<sup>th</sup> Street / Lamar Ave) – 0.93 miles

57 crashes (0 Fatal, 14 Injury, 43 PDO)

The segment crash rate was determined along the segment above:

$$R = \frac{100,000,000 * 57}{365 * 4 * 7,160 * 0.93}$$

$$= 586.31 \text{ crashes per 100 million VMT}$$

or 5.86 crashes per million VMT

KDOT's statewide average for segment crashes on a 2-lane undivided urban roadway with no access control from 2015-2019 is 1.770 crashes per million VMT. Therefore, the segment crash rate for Merriam Drive from I-635 to S 24<sup>th</sup> Street / Lamar Avenue is just over three times higher than the statewide average.

The crash rate for total injury crashes was also calculated:

$$R = \frac{100,000,000 * 14}{365 * 4 * 7,160 * 0.93}$$

$$= 144.01 \text{ crashes per 100 million VMT}$$

or 1.44 crashes per million VMT

KDOT's statewide average for injury crashes on a 2-lane undivided urban roadway with no access control from 2015-2019 is 0.371 crashes per million VMT. Therefore, the injury crash rate for Merriam Drive from I-635 to S 24<sup>th</sup> Street / Lamar Avenue is almost four times higher than the statewide average.

## MERRIAM DRIVE & ANTIOCH ROAD INTERSECTION ALTERNATE CONFIGURATIONS

During the Visioning Workshop held in July 2021, the project team and stakeholders brainstormed different configurations for the intersection of Merriam Drive & Antioch Road. Following is a summary of the configurations that were analyzed:

### Offset T-Intersections

This configuration assumes the west leg of the intersection of Merriam Drive & Antioch Road is removed as well as the segment of Merriam Drive between Antioch Road and W 50<sup>th</sup> Terrace. This would create three T-type intersections at Merriam Drive & W 50<sup>th</sup> Terrace, Antioch Road & W 50<sup>th</sup> Terrace, and Antioch Road & Merriam Drive. **Figures 9-10** depict the resulting volumes and levels of service for this configuration. With this geometric configuration, the intersections of Antioch Road with Merriam Drive and W 50<sup>th</sup> Terrace would be signalized. The signals should be connected and operated in coordination along Antioch Road. The westbound approach at the intersection of Antioch Road & Merriam Drive would be expected to operate at LOS "E" with a 320' queue during the PM peak hour if only one lane is provided for the approach. Providing dual left-turn lanes (one separate left-turn and one shared left-turn and right-turn) would improve the movement to LOS "C" with a 110' queue during the PM peak hour.

The eastbound approach at the intersection of Antioch Road & W 50<sup>th</sup> Terrace would be expected to operate at LOS "D" during the AM peak hour with a 285' queue that would extend to the intersection of Merriam Drive & W 55<sup>th</sup> Terrace if only one eastbound lane is provided. Providing dual left-turn lanes (one separate left-turn and one shared left-turn and right-turn) would improve the movement to LOS "C" with a 90' queue during the PM peak hour.

### Roundabout Configuration with Reconfiguration of W 50<sup>th</sup> Terrace from Merriam to Antioch

This configuration would provide a roundabout at the intersection of Merriam Drive & Antioch Road and reconfigure the section of W 50<sup>th</sup> Terrace between Antioch Road and Merriam Drive to either be limited access with Merriam Drive or provide one-way eastbound travel along 50<sup>th</sup> Terrace. All turning movements would be allowed at the new roundabout, including the movements previously serviced at W 50<sup>th</sup> Terrace. The AM and PM peak hour traffic volumes for this configuration are shown on **Figure 11** and the levels of service are shown on **Figure 12**.

As shown on **Figure 12**, a dual-lane roundabout will be required for adequate levels of service and queuing.

## OTHER SAFETY CONSIDERATIONS

In addition to the capacity and crash analysis, other considerations and improvements were considered, including a "road-diet" where sections with more than one lane in each section, lane width reductions, and adding a two-way left-turn lane in sections with multiple driveways with turning movements. Crash Modification Factors that would be applicable for these options are listed below:

Adding Two-Way Left-Turn Lane (Hovey and Chowdhury)

CMF = 0.92 (All Crash Types & All Roadway Types)

CMF = 0.80 (Fatal and Injury Crashes & All Roadway Types)

Reducing Lane Width From 12' to 11' (Wood et al.)

CMF =  $\exp(-0.314+0.00008 * \text{AADT}) = \exp(-0.314+0.00008*7,390) = 1.32$  (All Crash Types & All Roadway Types)

CMF =  $\exp(-0.425+0.00009 * \text{AADT}) = \exp(-0.425+0.00009*7,390) = 1.27$  (Fatal and Injury Crashes & All Roadway Types)

Installing Center Two-Way Left-Turn Lanes on Two-Lane Roads (Lyon et. Al)

CMF = Ranges from 0.469-1.05 depending on crash type and severity

CMF = 0.797 (All Crash Types & Roadway Type not Specified)

CMF = 0.739 (Fatal and Injury Crashes & Roadway Type not Specified)

We appreciate the opportunity to serve you on this very important project. Please feel free to contact us if you should have any questions.

Respectfully submitted,

Merge Midwest Engineering, LLC



Janelle M. Clayton, P.E., PTOE

Manager / Co-Owner

## LEGEND

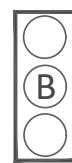
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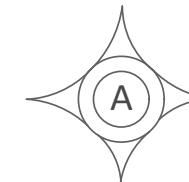
Stop Control



(\*) Indicates Capacity Per Demand



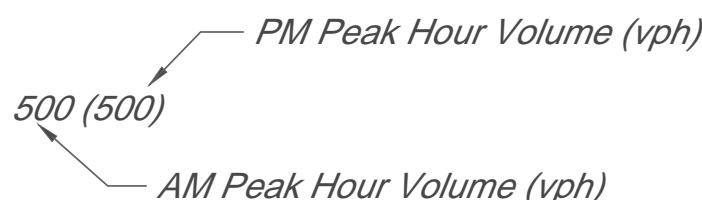
Overall Signalized Intersection  
Level of Service



Overall Roundabout  
Level of Service

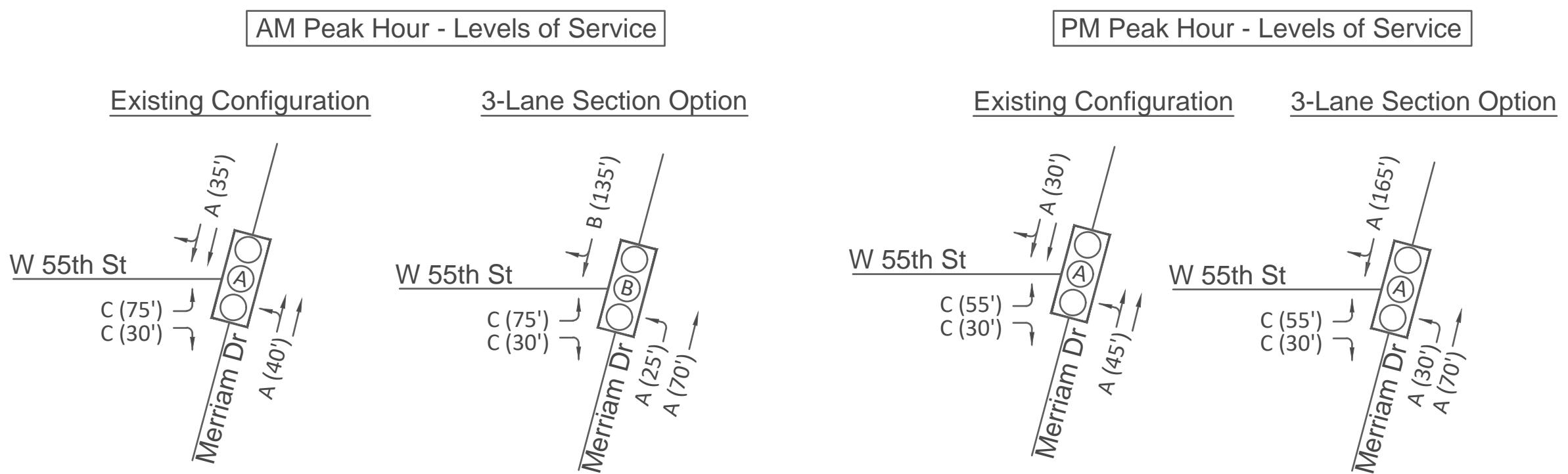
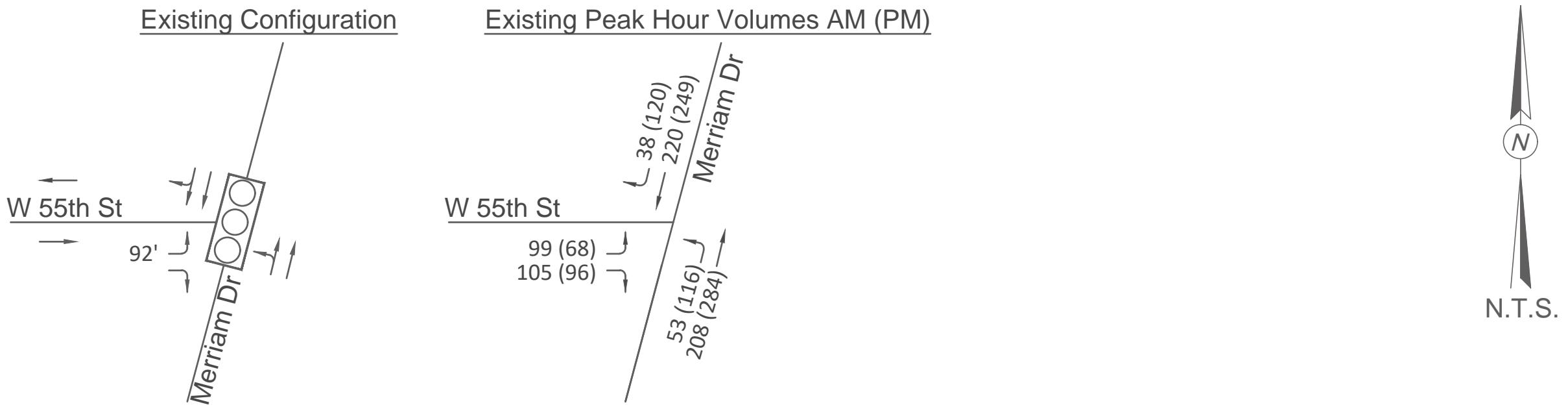
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LEGEND

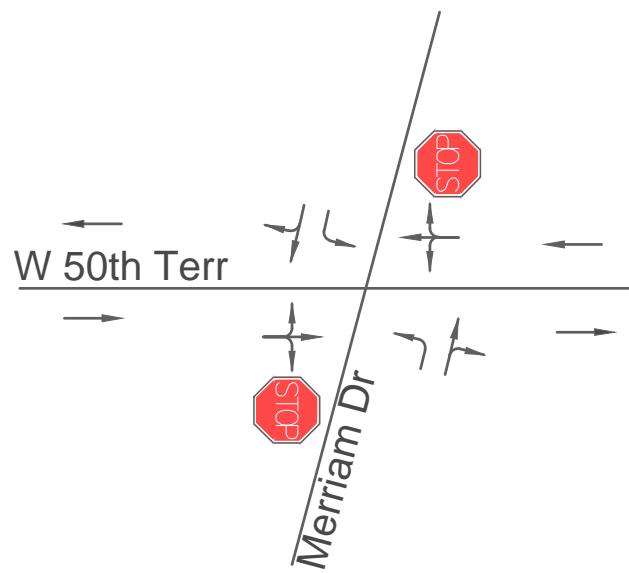


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DATE  
NOVEMBER 2021

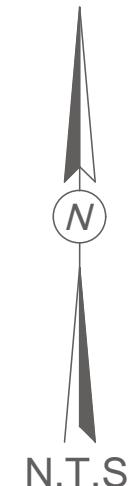
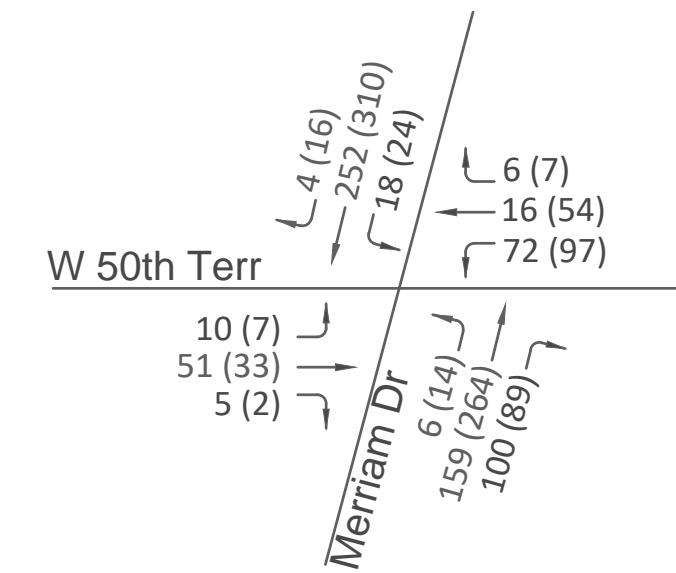
FIGURE 1

W 55TH STREET &  
MERRIAM DRIVE

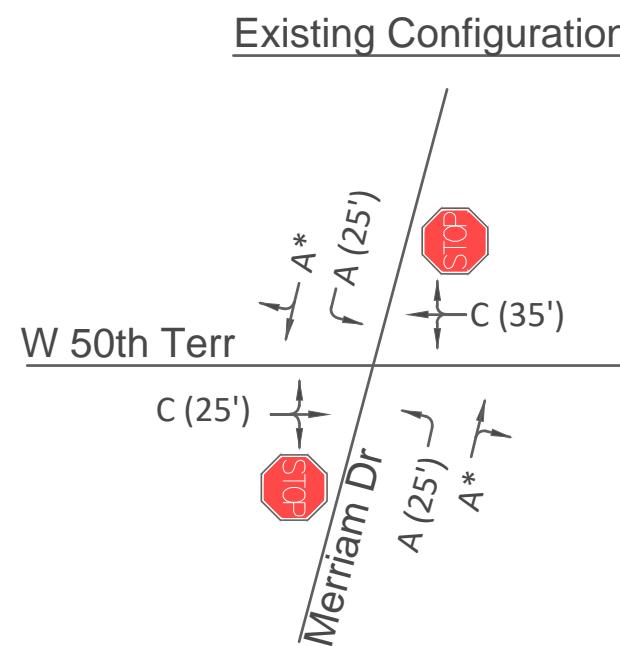
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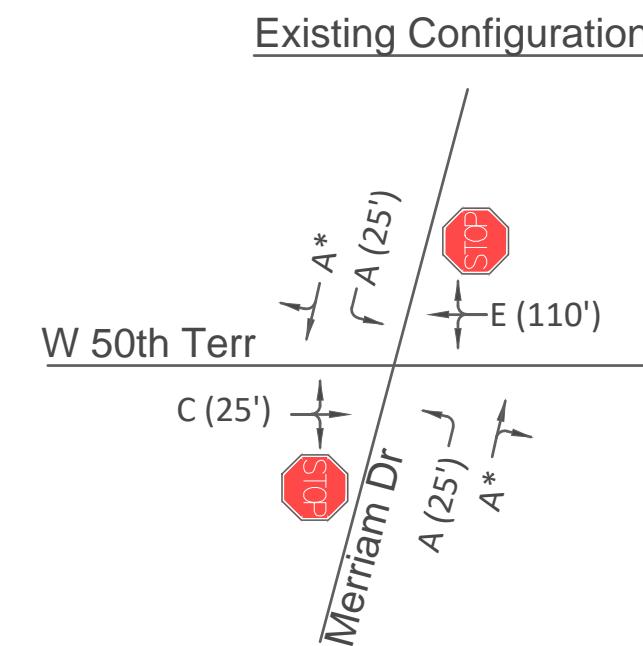
Existing Peak Hour Volumes AM (PM)



AM Peak Hour - Levels of Service



PM Peak Hour - Levels of Service

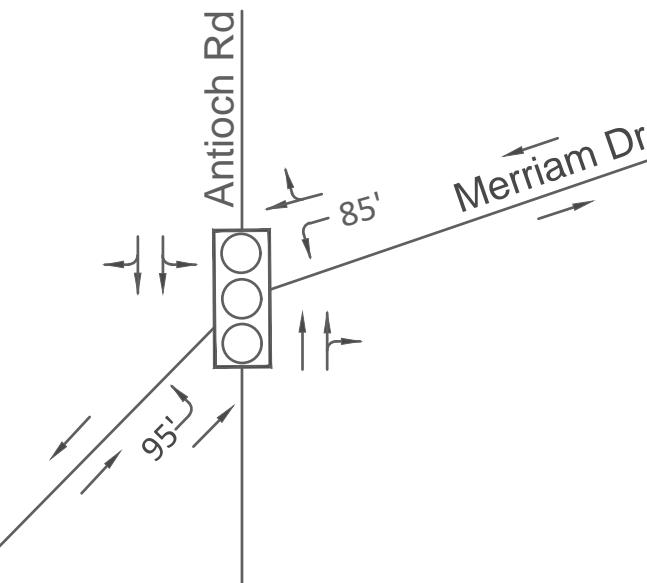


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FIGURE 2

W 50TH TERRACE &  
MERRIAM DRIVE

Existing Configuration

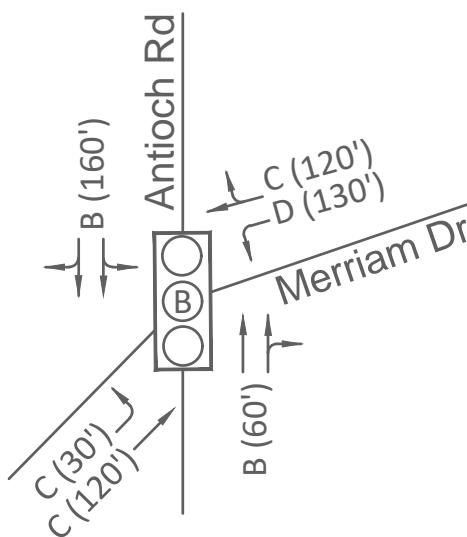


Existing Peak Hour Volumes AM (PM)

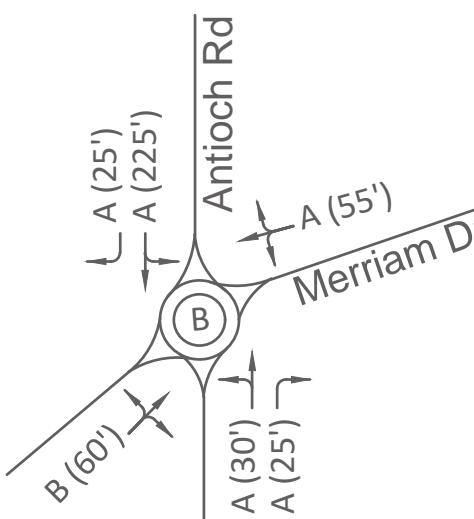


AM Peak Hour - Levels of Service

Existing Configuration

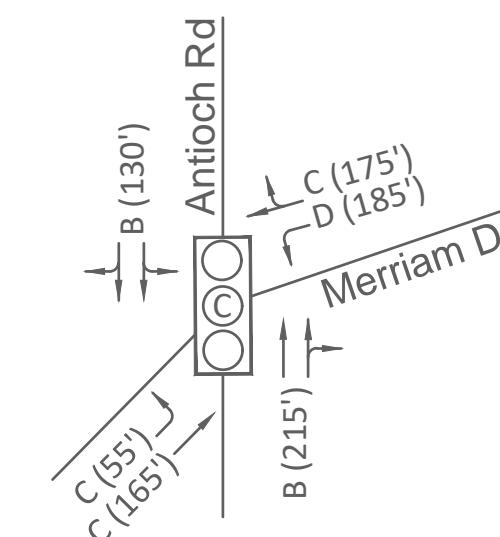


Roundabout Option\*

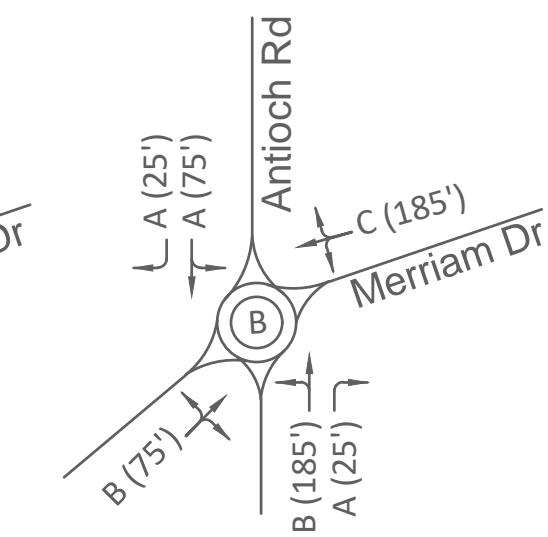


PM Peak Hour - Levels of Service

Existing Configuration



Roundabout Option\*



\*Note: Roundabout level of service is based on full-access movements & does not include volume shifts from W 50th Terrace.



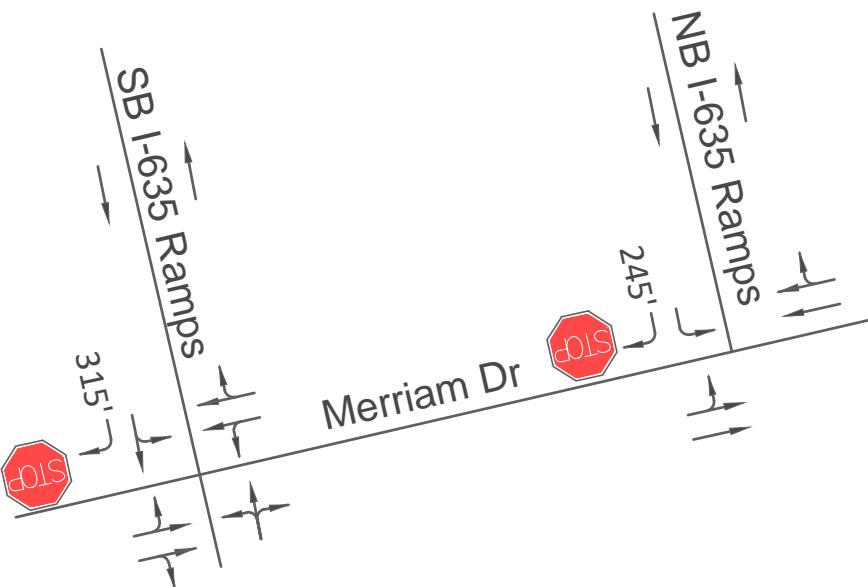
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21004

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NOVEMBER 2021

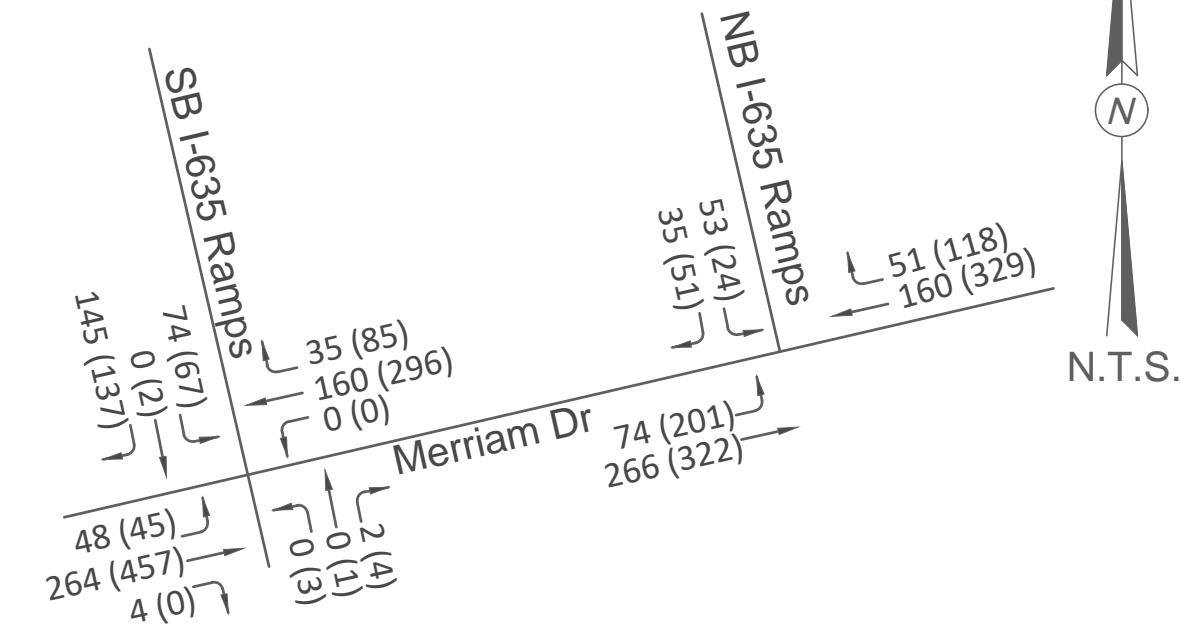
FIGURE 3

ANTIOCH ROAD &  
MERRIAM DRIVE

Existing Configuration

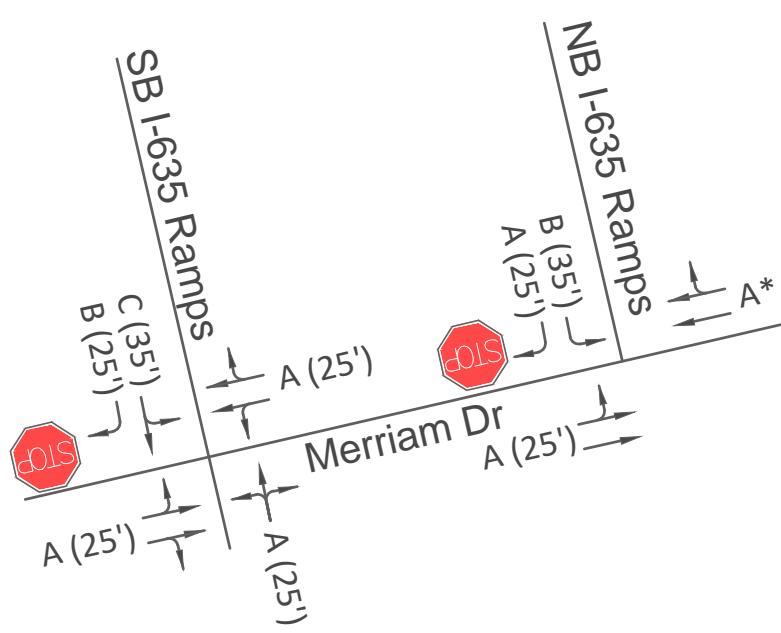


Existing Peak Hour Volumes AM (PM)

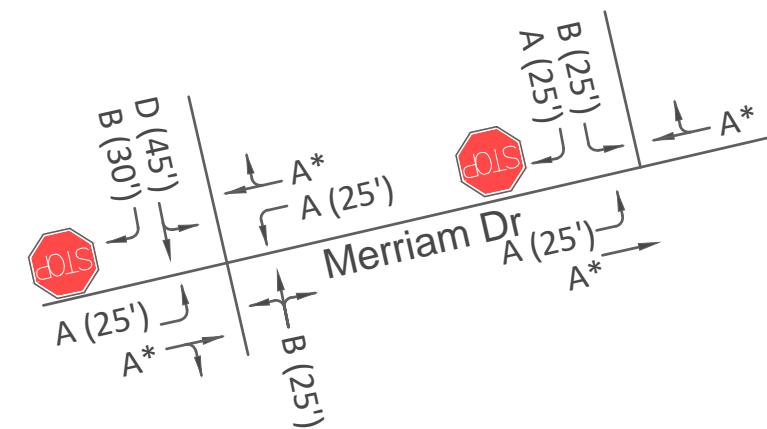


AM Peak Hour - Levels of Service

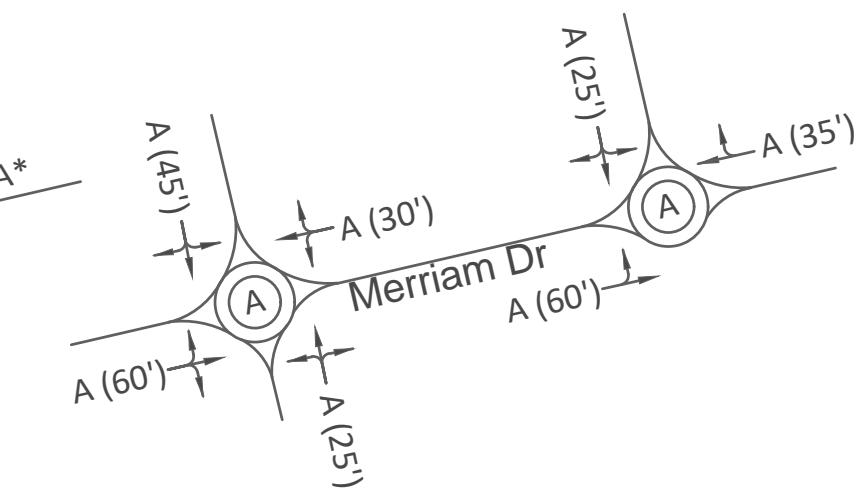
Existing Configuration



3-Lane Configuration



Roundabout Option



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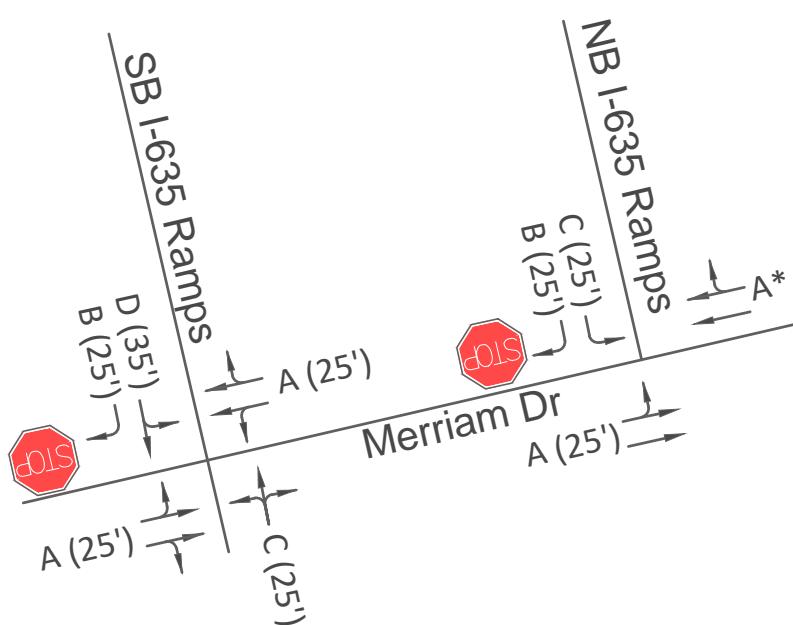
FIGURE 4

I-635 RAMPS &  
MERRIAM DRIVE - SHEET 1 OF 2

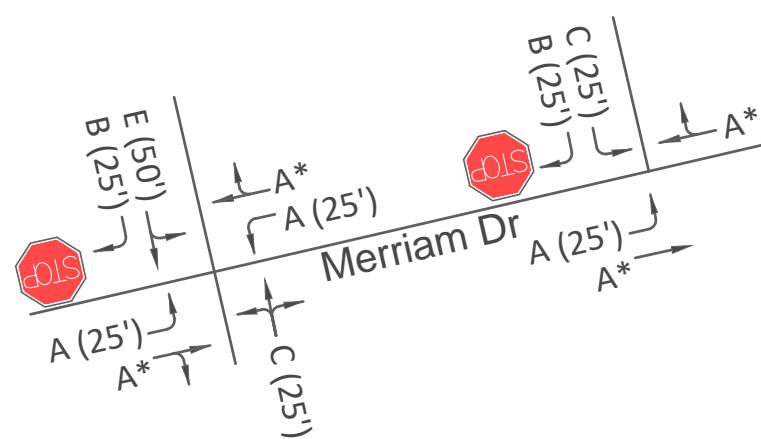
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N.T.S.

**PM Peak Hour - Levels of Service**

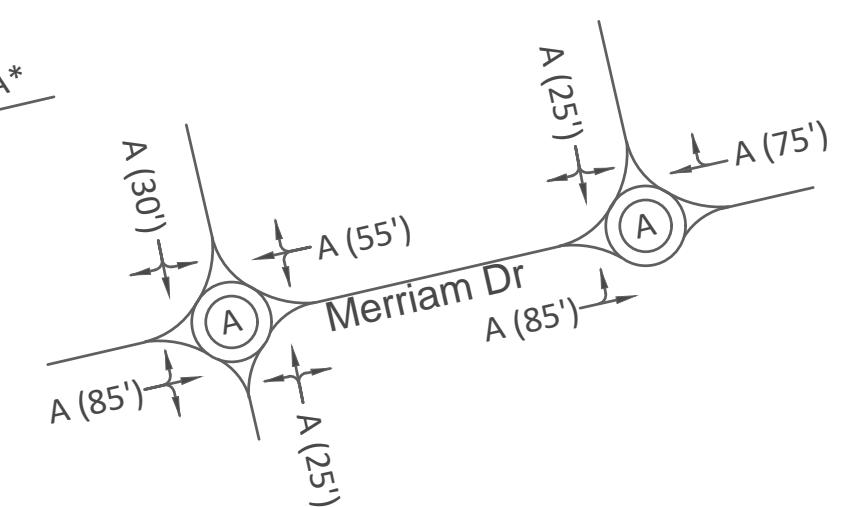
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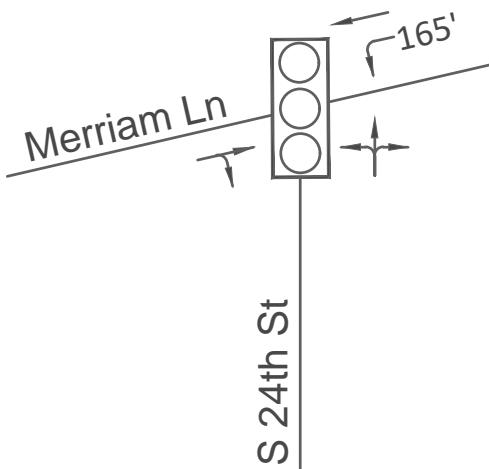
3-Lane Section Option



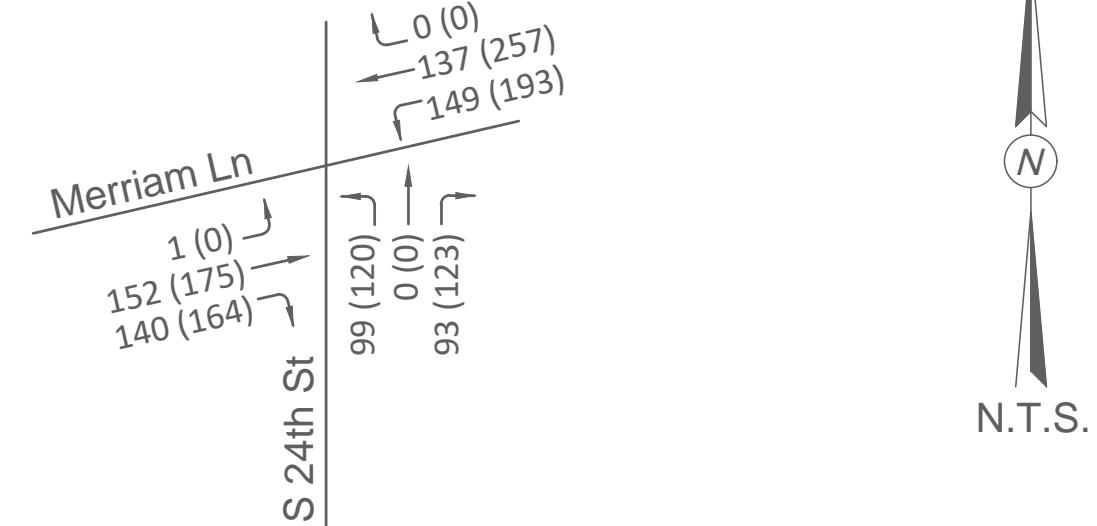
Roundabout Option



Existing Configuration

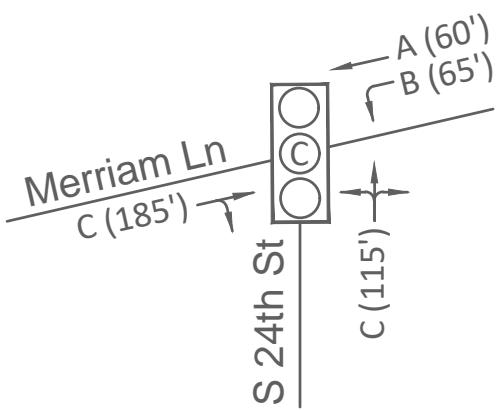


Existing Peak Hour Volumes AM (PM)

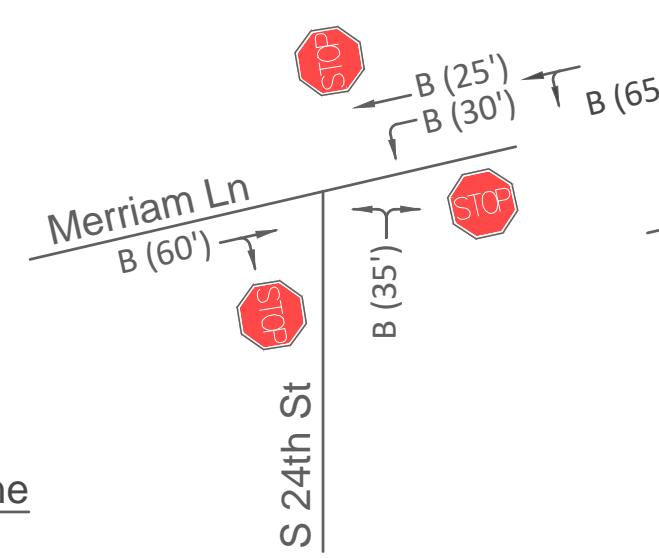


AM Peak Hour - Levels of Service

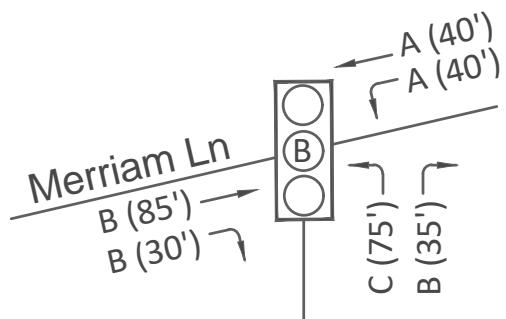
Existing Configuration



All-Way Stop Option

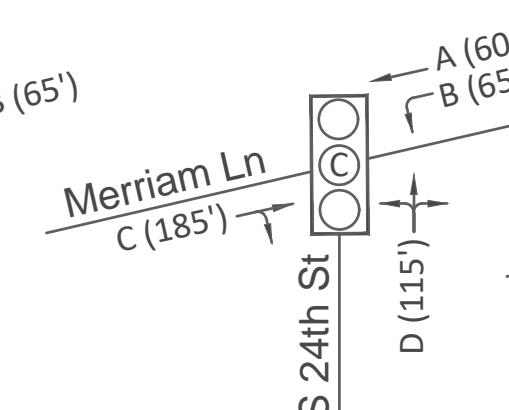


With EB RT & NB RT Lane

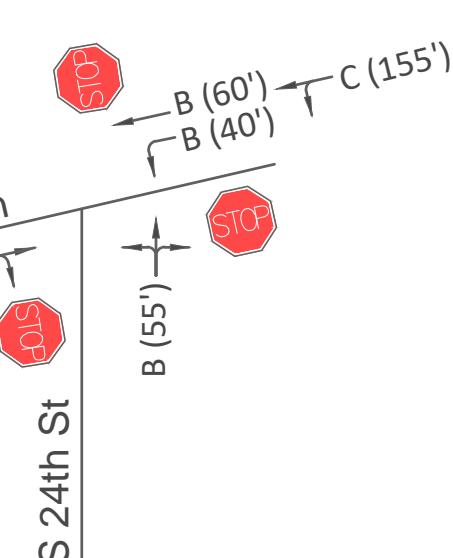


PM Peak Hour - Levels of Service

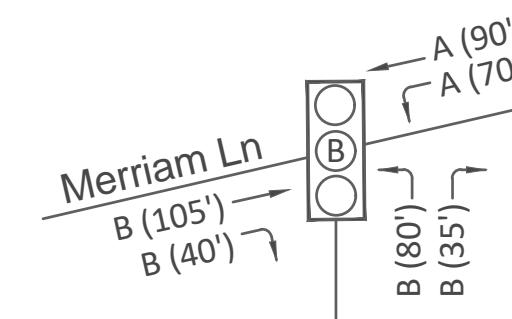
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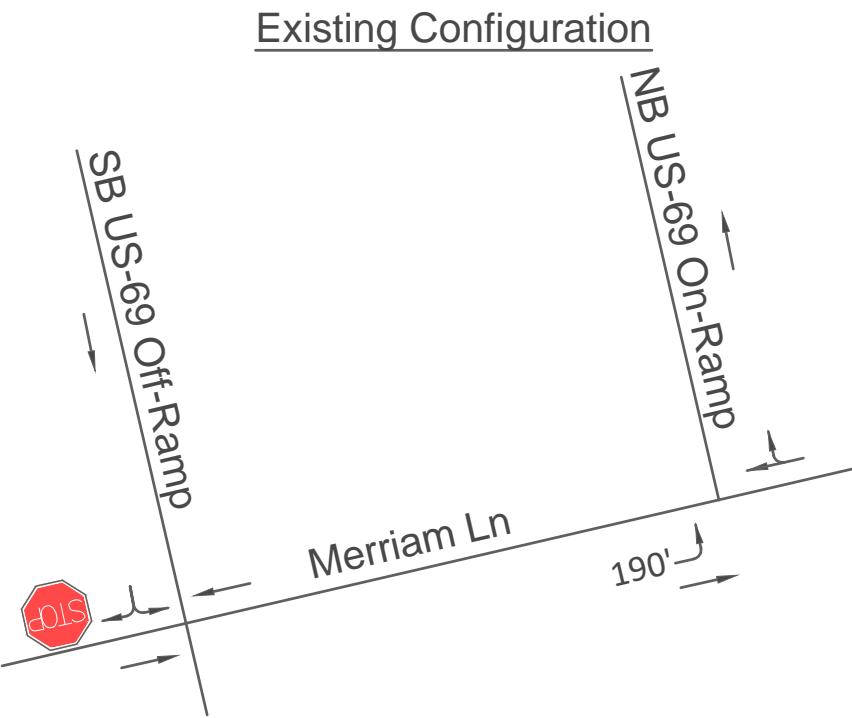


All-Way Stop Option

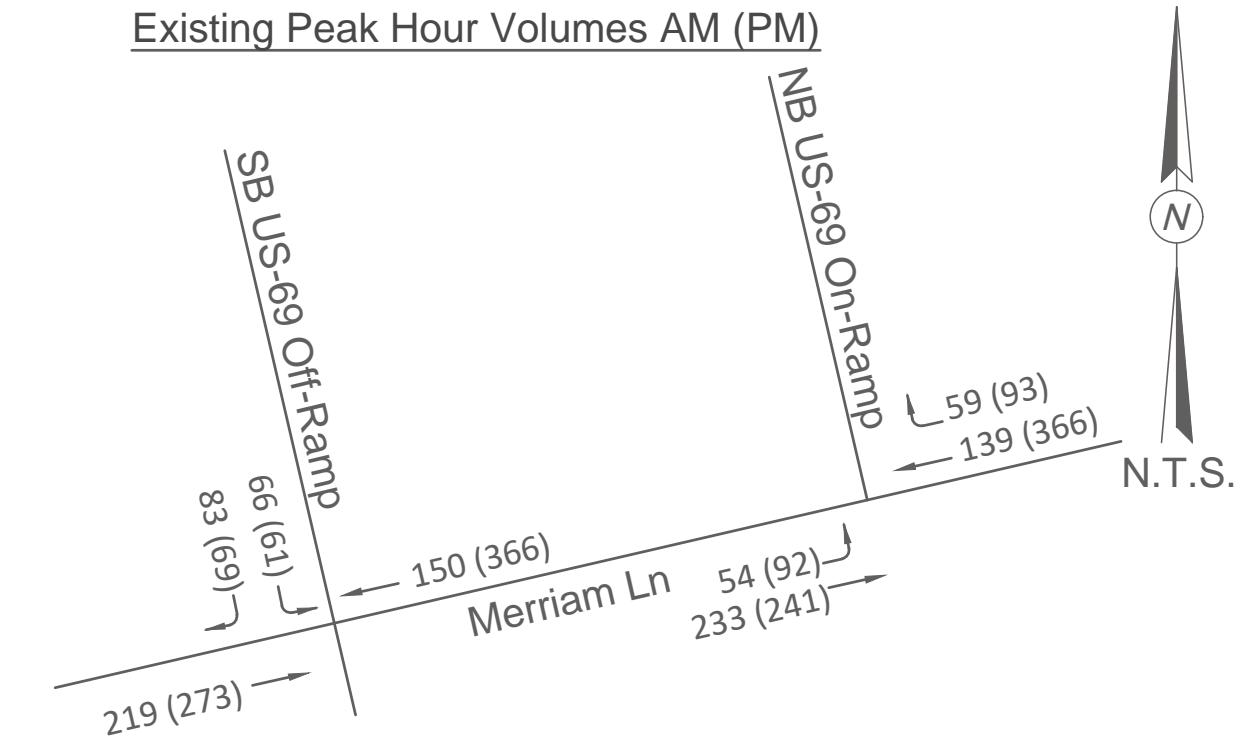


With EB RT & NB RT Lane

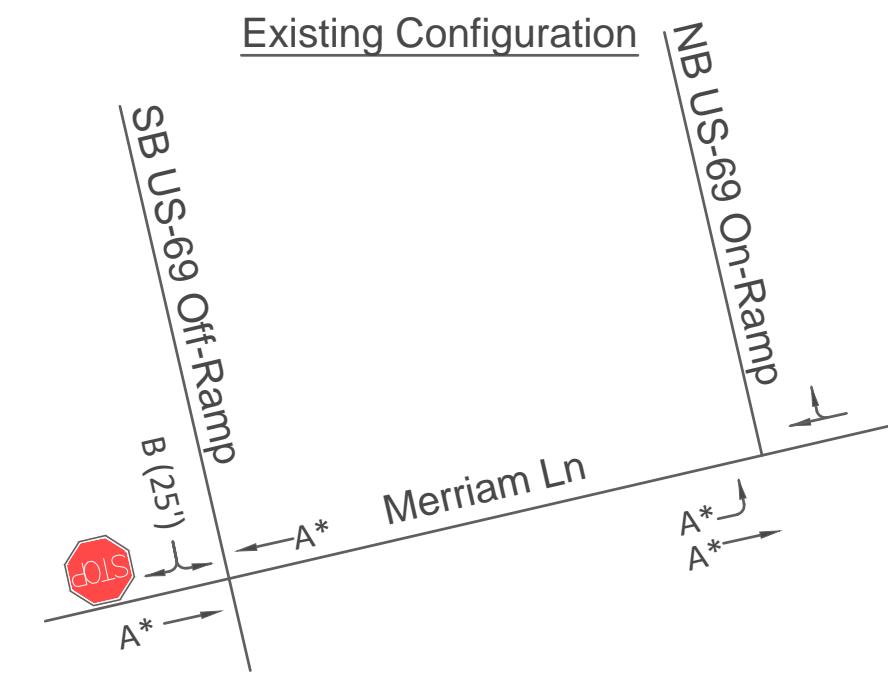
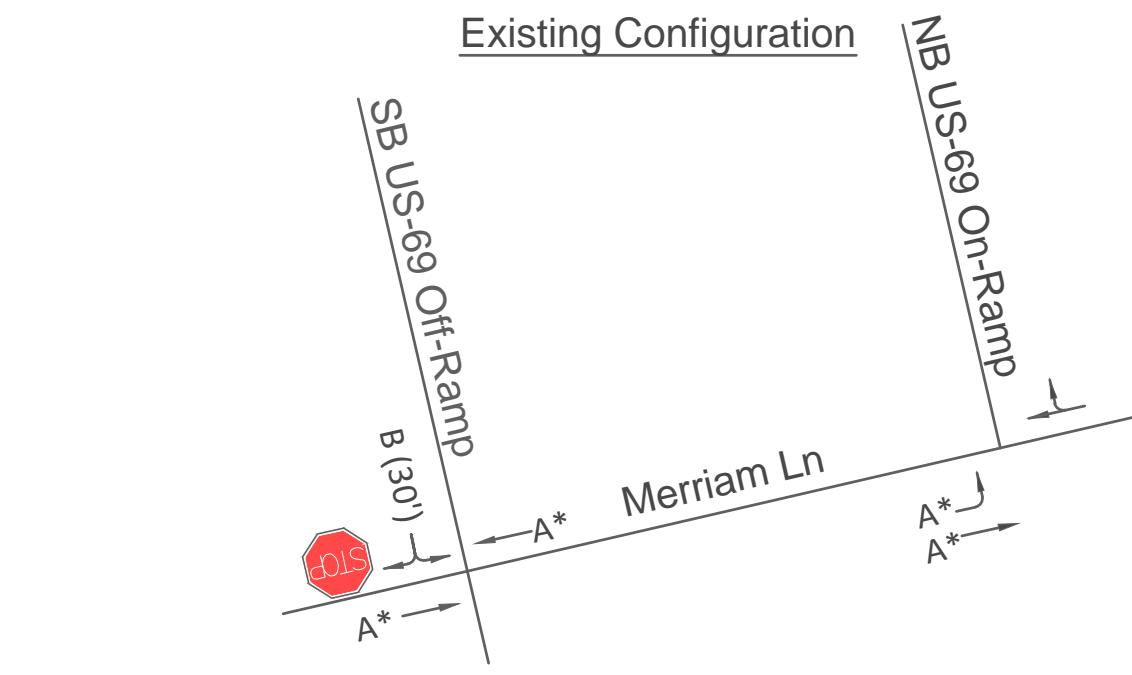




AM Peak Hour - Levels of Service



PM Peak Hour - Levels of Service



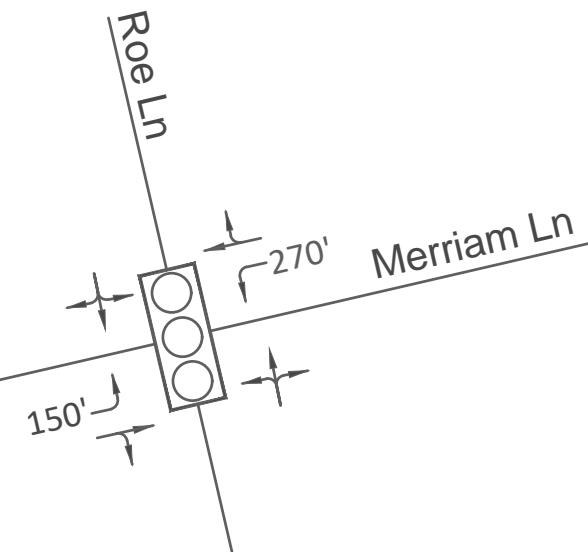
**MERGE**  
**MIDWEST**  
ENGINEERING

PROJECT NUMBER  
21004  
DATE  
NOVEMBER 2021

FIGURE 7

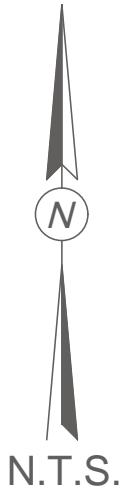
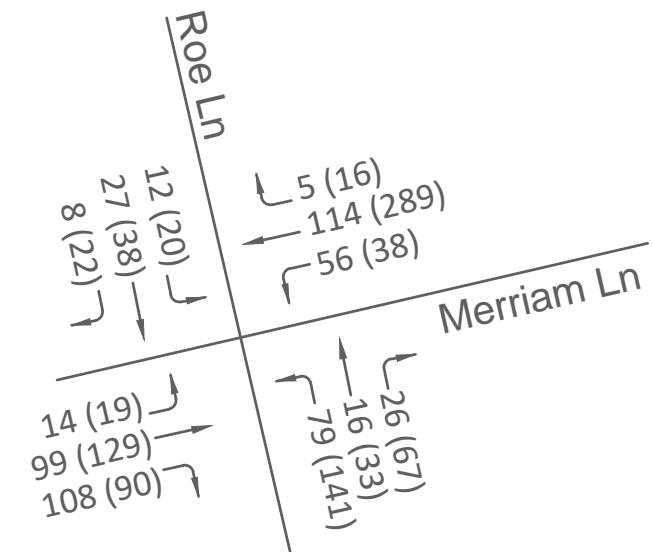
US-69 RAMPS &  
MERRIAM LANE

Existing Configuration

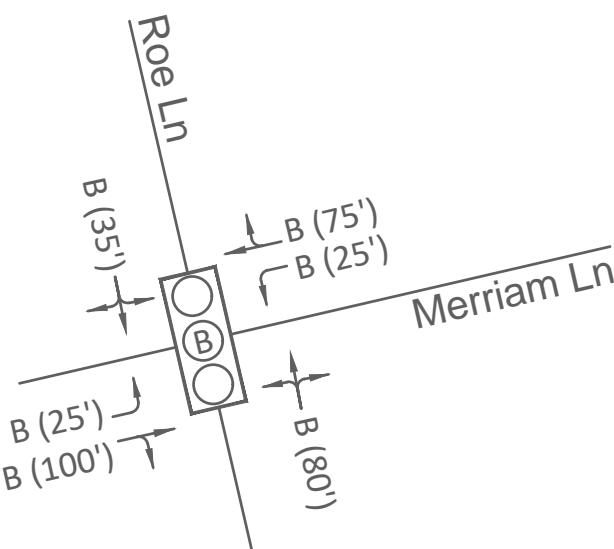


AM Peak Hour - Levels of Service

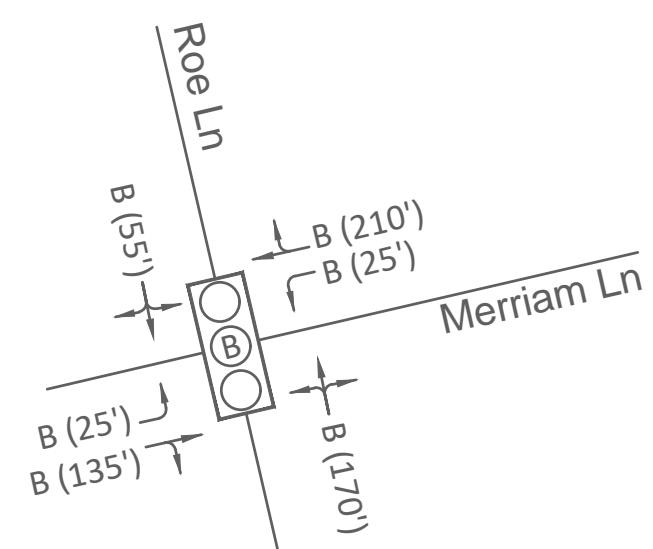
Existing Peak Hour Volumes AM (PM)



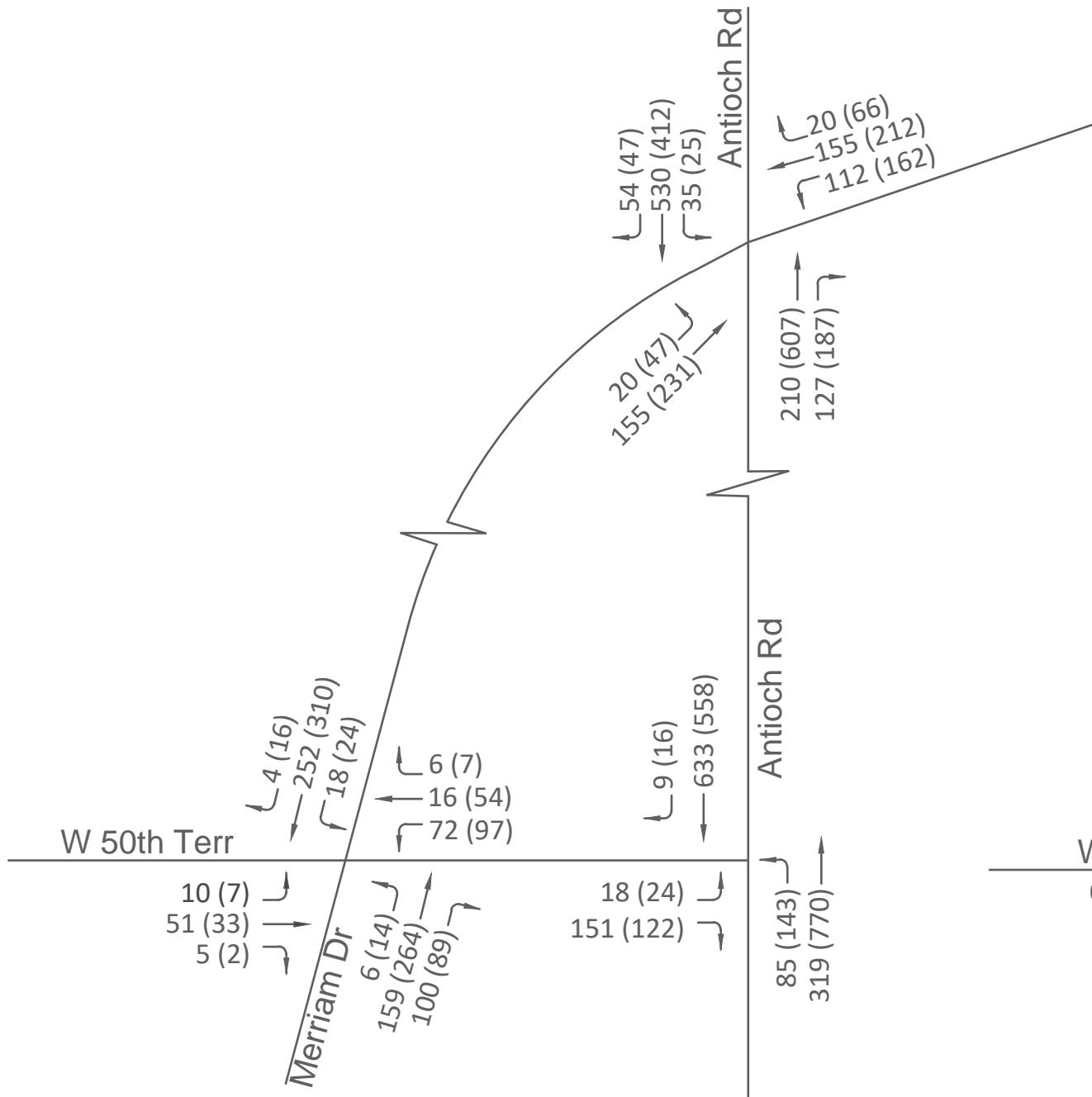
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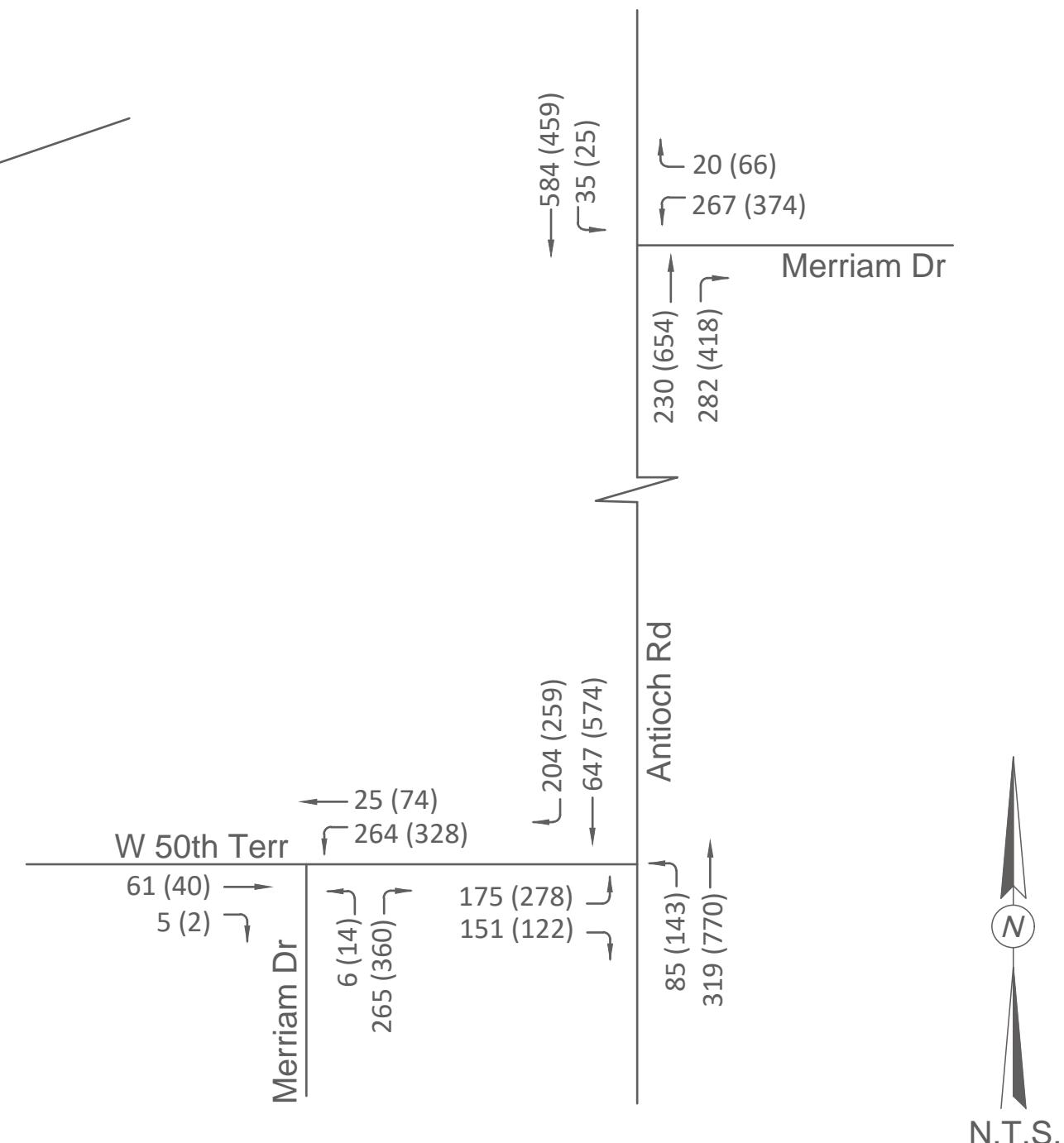
Existing Configuration



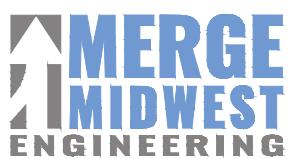
Existing Configuration AM (PM)\*



Offset T-Intersections Configuration AM (PM)\*



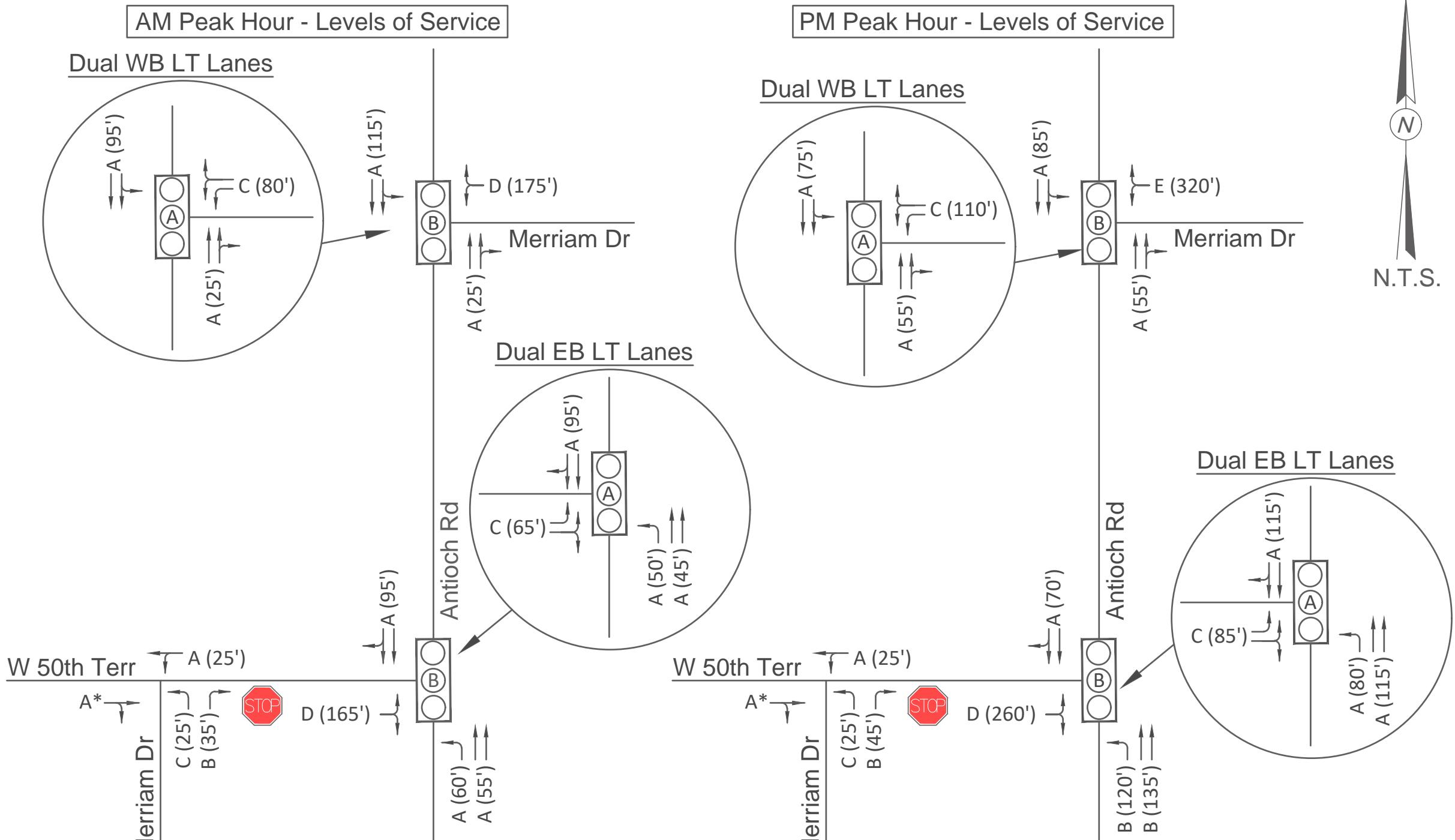
\*Note: Traffic volumes shown at Antioch Rd & W 50th Terr were estimated based on adjacent intersections.



PROJECT NUMBER 21004
DATE NOVEMBER 2021

FIGURE 9

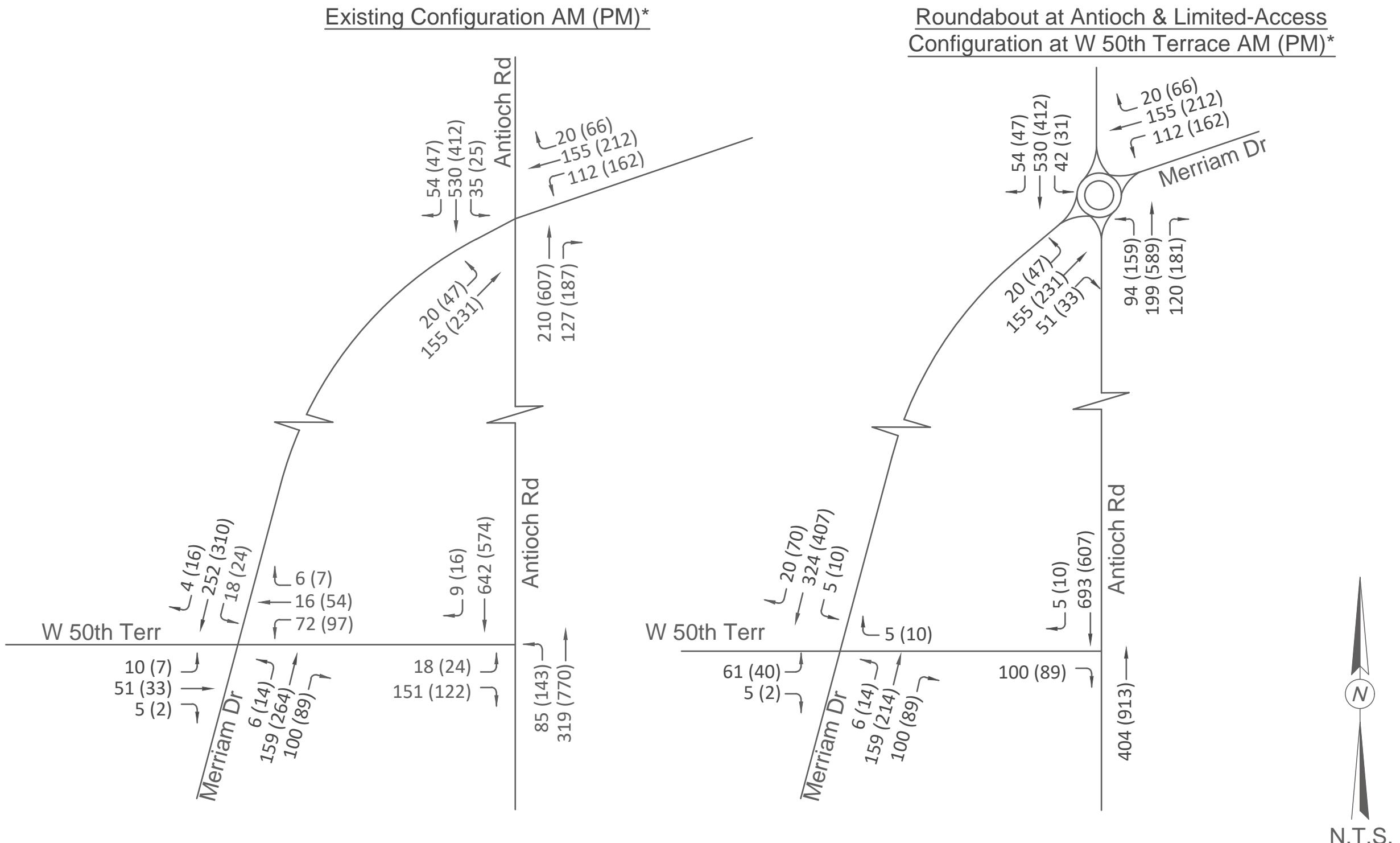
MERRIAM DRIVE &  
ANTIOCH ROAD  
OFFSET T-INTERSECTIONS



PROJECT NUMBER  
21004  
DATE  
NOVEMBER 2021

FIGURE 10

MERRIAM DRIVE &  
ANTIOCH ROAD  
OFFSET T-INTERSECTIONS



\*Note: Traffic volumes shown at Antioch Rd & W 50th Terr were estimated based on adjacent intersections.

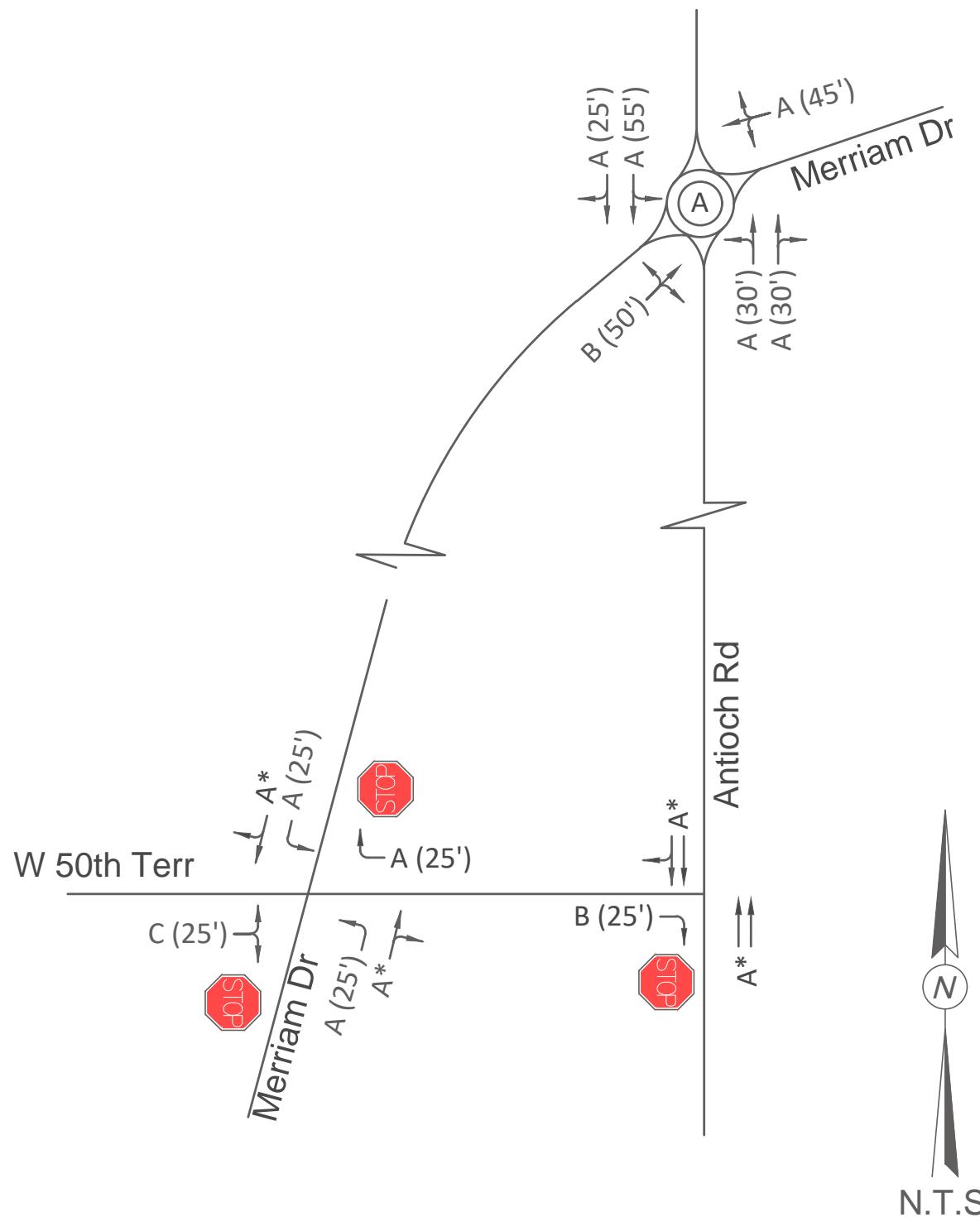


PROJECT NUMBER  
21004  
DATE  
NOVEMBER 2021

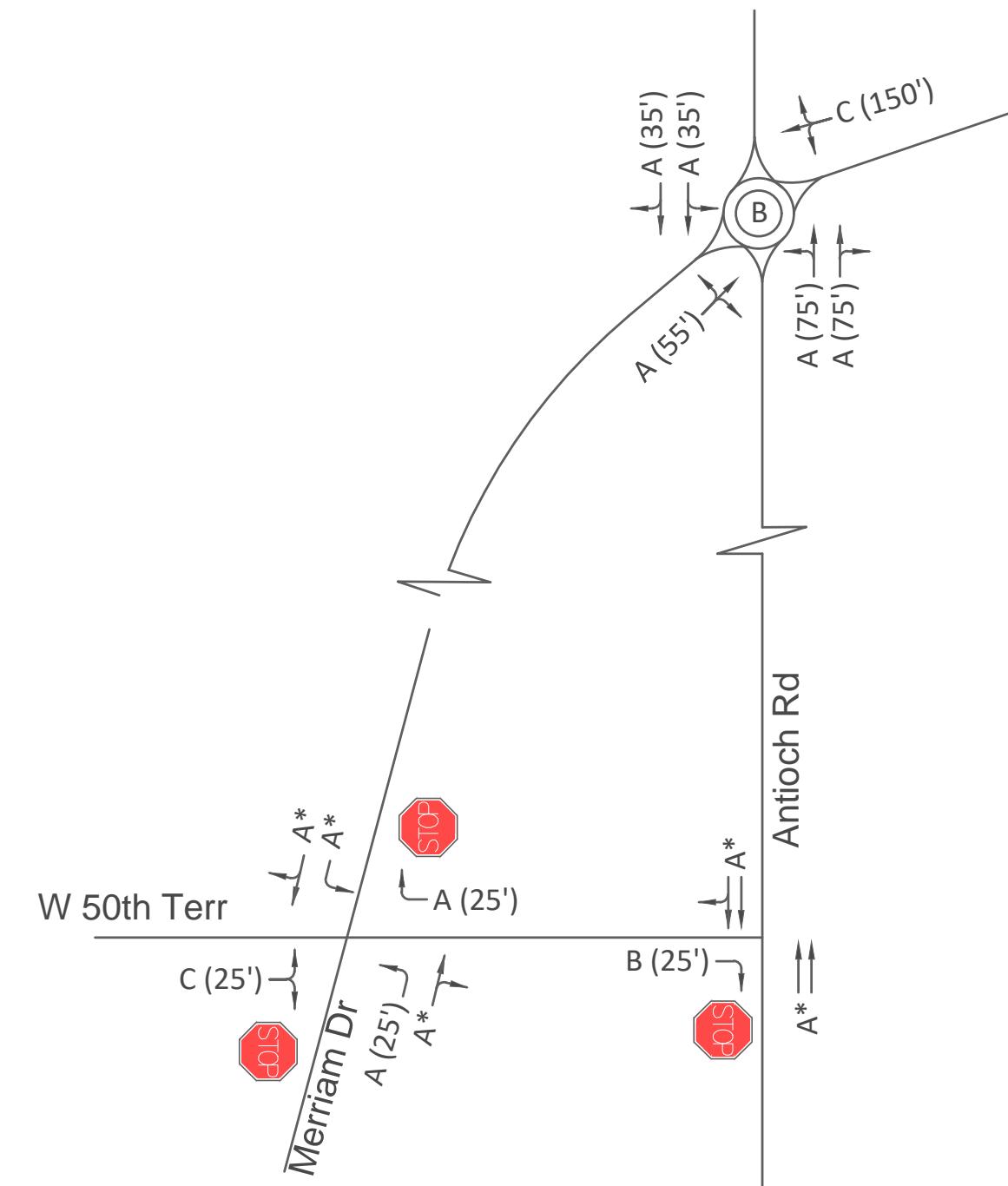
FIGURE 11

MERRIAM DRIVE &  
ANTIOCH ROAD  
ROUNABOUT

AM Peak Hour - Levels of Service



PM Peak Hour - Levels of Service





## APPENDIX C

# SUMMARY OF RELEVANT PLANS AND STUDIES

## MERRIAM COMPREHENSIVE PLAN 2040 (2021)

### OVERVIEW

The Merriam Comprehensive Plan 2040 is a guide to future growth and development for the city through the year 2040. The document was recently completed and adopted at the time of drafting this Plan. The document presents an analysis of existing conditions and proposes recommendations in seven areas, including subarea plans. The approximately two-year planning process included an intensive public engagement component.

### RELATIONSHIP TO THIS PLAN

Several action items under the plan recommendation areas of the Merriam Comprehensive Plan 2040 directly align with recommendations in this Plan:

- **Community Character and Identity.** The Merriam Corridor is designated as a major arterial roadway that should be prioritized for streetscape improvements, entry and directional signage, and safe pedestrian and bicycle crossings.
- **Amenities and Service Enhancements.** Park and trail improvements are a significant consideration under this goal. The Turkey Creek Trail connects many of Merriam's parks. The plan proposes to connect the portions of Turkey Creek Trail north and south of I-35 with a new trail connection along Merriam Drive and Antioch Road. The plan also proposes a connection from Waterfall Park to Brown Memorial Park.
- **Transportation and Mobility.** Three of the four roadways listed as high crash segments are within the corridor: Merriam Drive, Antioch Road, and W. 67th Street. The plan recommends a reconfiguration of these thoroughfares to reduce the number of lanes. For Merriam Drive, this would mean reducing the number of lanes from three to two and adding additional amenity space for pedestrians and

bicyclists. The intersection at Merriam Drive and Antioch Road is a high priority area for intersection improvements, including pedestrian and bicycle crossings. Merriam Drive is indicated as an area of high priority for trail improvements and its intersections with W. 53rd Street and W. 51st Terrace are indicated as high priority areas for safe pedestrian and bicycle crossings. This section also recommends raising awareness of transit options along the corridor, which in the case of Merriam Drive is an on-demand service offered through Johnson County.

- **Sustainable Development.** One of the key recommendations under this goal is to plan for a future-oriented mobility and transportation system. This includes a well-connected trail and park system, public transit options, and micromobility, which refers to e-bikes, electric scooters, and bike share programs.
- **Creating Place.** This section emphasizes the importance of pedestrian infrastructure, diverse land uses, varied housing stock, and connectivity for placemaking. Recommendations for the corridor include following building and landscape design standards, improving sidewalks, and the indication of a major community gateway at the intersection of Merriam Drive and Antioch Road.

## OVERLAND PARK GREENWAY LINKAGES PLAN (2019)

### OVERVIEW

The Greenway Linkages Plan shows the ultimate system of greenway connectivity proposed in Overland Park. A greenway linkage provides a connection between two or more locations, following natural areas (running adjacent to a stream or bluff) or those that were developed (running adjacent to a street or fence line). These linkages can be used for trails, buffers between differing land uses, for conservation, or as an enhancement to parks or roadways.

### RELATIONSHIP TO THIS PLAN

Merriam Drive is indicated as a key on-street bike route for providing linkages with a parallel sidewalk for pedestrian access. The plan does not propose any changes for the current configuration of Merriam Drive within the boundaries of Overland Park.

## FORWARDOP VISION PLAN (2018) OVERVIEW

The ForwardOP Vision Plan is a communitywide vision based on public input and outlines a path for continued success for the next 20 to 25 years. It follows the vision statement that Overland Park will lead in the region as a forward-thinking, innovative, and welcoming community. Action items under eight initiative areas create an agenda for the entire community to achieve the vision.

### RELATIONSHIP TO THIS PLAN

The following action items under the eight plan initiative areas are directly related to this Plan:

- **Gathering.** Develop attraction and recreation options along the trail system.
- **Living.** Create more diverse housing options.
- **Connecting.**
  - Develop a state-of-the-art mobility system to expand current transit options.
  - Conduct an audit to define and cultivate walkability.
  - Implement the Overland Park Bicycle Master Plan.
  - Explore new transportation funding opportunities.
- **Placemaking.** Enhance community beautification efforts.

## ROSEDALE MASTER PLAN AND TRAFFIC STUDY (2016)

### OVERVIEW

The Rosedale Master Plan and Traffic Study presents a vision for the future of Rosedale with framework plans for future land use, housing, transportation, and public facilities. The planning process included an extensive community engagement process to capture as much of the diverse community as possible, including walking tours, meetings with neighborhood associations, tabling at community events, and other public meetings. The plan also included a traffic study and a market and opportunity assessment.

### RELATIONSHIP TO THIS PLAN

The study area for this Plan borders Rosedale. With regard to the focus of the Merriam Corridor, the Rosedale Master Plan highlights the creation of the Rosedale Regional Nature Trail as a major move, which would utilize the Turkey Creek flood control area and connect the existing Ozarks nature trail, Rosedale Park, and Fisher Park along a multiuse trail. A trail connection underneath I-35 to the Turkey Creek Trail is possible here, along with an on-road connection to Southwest Boulevard, which turns into Merriam Lane.

## CITY OF OVERLAND PARK COMPREHENSIVE PARK SYSTEM MASTER PLAN (2013)

### OVERVIEW

Overland Park's Comprehensive Park System Master Plan is a document to guide investments in the park system over the next 20 years. The document contains an assessment of the current parks and recreation system throughout Overland Park, identifies needs, and presents recommendations based on the needs inventory and park system vision.

### RELATIONSHIP TO THIS PLAN

Several key needs were identified during the planning process that set the direction of the systemwide vision and goals and align with this Plan:

- Increase smaller neighborhood and community parks.
- Increase trails and trail-related access.
- Include a greater variety of parks and amenities.
- Maintain existing resources.

The plan recognizes that the area of Overland Park within this study area has limited access to trails and greenways, but does not include specific recommendations for the corridor.

## SIDEWALK AND TRAIL MASTER PLAN FOR UNIFIED GOVERNMENT/KANSAS CITY, KANSAS (2012)

### OVERVIEW

The Sidewalk and Trail Master Plan analyzed existing conditions, pedestrian demand models, and feedback gathered during public outreach to create a future, planned network and recommended priorities for sidewalks and trails within Kansas City, Kansas.

### RELATIONSHIP TO THIS PLAN

A trail following Turkey Creek directly south of Merriam Lane and continuing along Southwest Boulevard is identified on the Future Trail Network map. Merriam Lane is identified as a bicycle route and as having regional sidewalk connections. The Future Sidewalk Network map calls out Merriam Lane as already having sidewalks in "excellent to fair condition," with sidewalk improvements connecting to existing neighborhoods north marked as High Priority projects and along S. 14th Street/Roe Lane and S. 34th Street as medium priority projects.

## SOUTHWEST BOULEVARD AND MERRIAM LANE MASTER PLAN (2011)

### OVERVIEW

The Southwest Boulevard and Merriam Lane Master Plan establishes long-range goals and objectives for the corridor and half-mile buffer area surrounding the corridor in Kansas City, Kansas, from the eastern boundary at State Line Road to the western boundary at I-635. The corridor contains a variety of land uses and extends through the Turner and Rosedale neighborhoods. Development along the roadway was shaped by limitations imposed by the railway, terrain, and Turkey Creek. The planning process undertaken by the Unified Government involved several partners, including MARC, the University of Kansas Medical Center, and the University of Kansas School of Architecture, Design, and Planning.

### RELATIONSHIP TO THIS PLAN

The plan recommends several transportation-focused initiatives for the corridor. A transit-oriented development centered around a bus stop at S. 7th Street Trafficway and Southwest Boulevard is proposed as a hub with higher density commercial development and a variety of housing options. The stop would incorporate a bus route along the Merriam Lane and Southwest Boulevard corridor. The Turkey Creek Trail could also connect to the transit stop, providing the choice of transportation modes that characterizes transit-oriented development sites. Additionally, the intersection at Merriam Lane and S. 34th Street is indicated as a gateway point into Kansas City, Kansas, and the plan recommends the consideration of a roundabout in place of the existing intersection. Marked on-street bicycle lanes are also recommended along the entire corridor. The portion of Merriam Lane from S. 24th Street to where it joins Southwest Boulevard has since been installed.

## UNIFIED GOVERNMENT OF WYANDOTTE COUNTY/KANSAS CITY, KANSAS CITY-WIDE MASTER PLAN (2008)

### OVERVIEW

The City-Wide Master Plan identifies policies and strategies that would improve the quality of life for all residents within Kansas City, Kansas. The plan is broken down into policy, land use, urban design, transportation, and parks, open space, and trails elements with recommendations and priorities for the future development of the city.

### RELATIONSHIP TO THIS PLAN

In the urban design element, Merriam Lane is identified as a secondary image street. Secondary image streets are used to connect neighborhoods to parks, schools, and businesses and reinforce perceptions of the individual neighborhoods within a district. The plan recommends that these streets should incorporate sidewalks at least eight-feet wide with a minimum of five feet of landscaping between the sidewalk and curb. Design elements should include neighborhood gateways, street lights with banners, and basic site furnishings such as benches and bike racks. In the transportation element, Merriam Lane is identified as a Class C thoroughfare, which should have an 80-foot right-of-way and four lanes of travel.

## CITY OF MISSION, KANSAS COMPREHENSIVE PLAN (2007)

### OVERVIEW

The Mission Comprehensive Plan helps define how a community vision for revitalization can be extended citywide by presenting action plans and recommendations for future growth and development. The plan uses an analysis of conditions, including economic trends, to present goals, objectives, and action plans

### RELATIONSHIP TO THIS PLAN

Action plan items related to this Plan include planning for public transportation through encouraging transit-oriented development and supporting regional transit system plans. A citywide bicycle and pedestrian traffic system to allow for safe, efficient, and convenient connectivity would encourage a balance between vehicular and non-vehicular traffic. A trail along the Turkey Creek flood control area is proposed as a future pedestrian linkage.

## KANSAS CITY REGION COMMUTER RAIL STUDY (2002)

### OVERVIEW

The Kansas City Region Commuter Rail Study was completed by MARC to investigate existing rail lines radiating from downtown Kansas City and evaluate their potential as commuter rails over a 20-year planning horizon.

### RELATIONSHIP TO THIS PLAN

The BNSF rail corridor running adjacent to I-35 was selected for initial screening as a potential commuter rail line to De Soto, Kansas, but was eventually dismissed in the final study that focused on three (3) routes, two of which are adjacent to I-70 to the east and west.

## OVERLAND PARK COMPREHENSIVE PLAN

### OVERVIEW

The City of Overland Park's Comprehensive Plan serves as the guide for the future development of the city. The document outlines the community's vision, policy direction, and goals and strategies based on public and stakeholder support. The city will be updating the Comprehensive Plan in 2022.

### RELATIONSHIP TO THIS PLAN

The plan's Future Development Map shows the Merriam Corridor within the City of Overland Park as being predominately industrial on the south side of Merriam Drive and commercial on the north side of Merriam Drive, with a pocket of low density residential and supporting public and semi-public and parks uses in between the corridor and the city boundary to the north. These land uses provide the baseline guidance for the future development of the corridor.



## APPENDIX D PUBLIC ENGAGEMENT SUMMARY

# ENGAGEMENT PHILOSOPHY

Effective plans must be uniquely formed and provide detailed guidance on how to achieve future goals. In order to do this, a consensus-based planning process is crucial, providing a foundation to build on and eventually arrive at a unified vision. Public engagement brings people together by uncovering shared wishes through iterative activities, surveys, and events that allow everyone – the community, staff members, and the planning team – to arrive at and understand the key issues and opportunities.

Each engagement opportunity allowed participants to share their ideas for the future of the corridor. After each engagement opportunity, the planning team analyzed the comments and graphics and documented the formal and informal conversations that took place. This information then shaped and reshaped the Plan's priorities and recommendations.

## OUTREACH

Multiple media outlets were used to ensure community members were aware of the opportunities to be involved in the planning process, detailed as follows.

### WEBSITE

The project website ([www.MerriamConnectedCorridor.com](http://www.MerriamConnectedCorridor.com)) was the electronic hub for project news and information. The site provided detailed and regularly updated information on the project including goals, schedule, relevant documents, graphics, and maps. Email list sign-ups and the public survey were also hosted on the website. The website also provided direct contact with the city staff project manager for anyone with comments or questions about the project.

### SOCIAL MEDIA

Social media outlets helped spread the word on project status and events. The planning team designed graphics to match project branding and provided captions for the posts, which were then posted by the municipalities. Community businesses and residents were able to share the posts on their personal accounts to generate awareness of the project and ways to get involved.

### EMAIL BLASTS

An email list was generated to quickly spread project information throughout the planning process. Anyone interested was able to join the list by submitting their email address through the project website. Periodic emails were sent sharing news such as current project status, public open house information, and website updates.

### LOCAL MEDIA

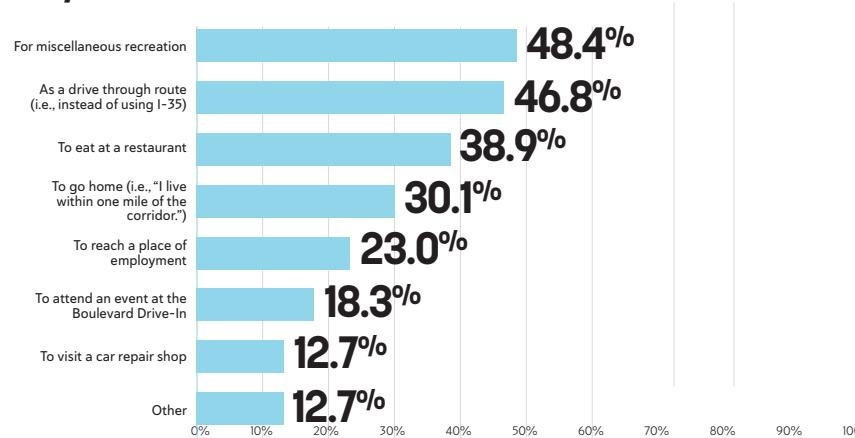
The project was publicized through local media outlets. Fox 4 included a segment during the news in July 2021 to give information about the project and promote the first public open house. The Shawnee Post published an article about the project after the first public open house and included details on how to stay engaged in the process.



## PUBLIC SURVEY

The public survey was open from June 14 to July 18, 2021 and received nearly 130 responses. The survey was available online at the project website ([www.MerriamConnectedCorridor.com](http://www.MerriamConnectedCorridor.com)) and advertised by the municipalities' websites, media releases, social media, and email blasts. The following pages illustrate a summary of the findings through graphics.

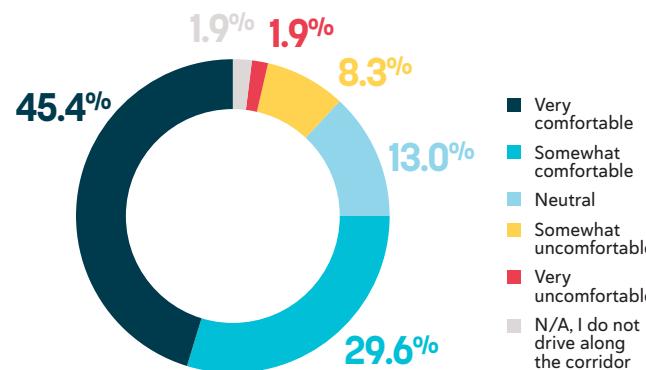
### Thinking about a typical weekday or weekend, why do you visit or use the corridor?



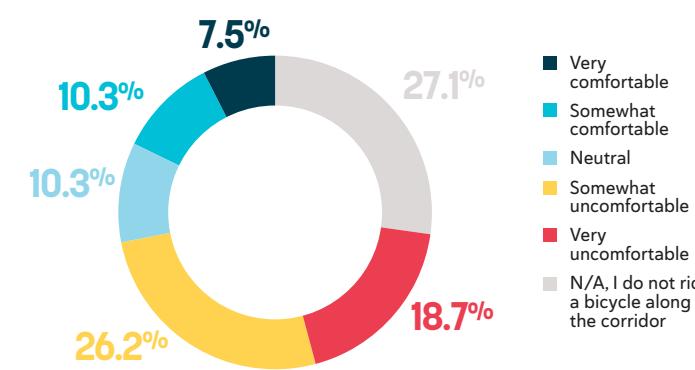
### What are the top three most popular trailheads/access points?



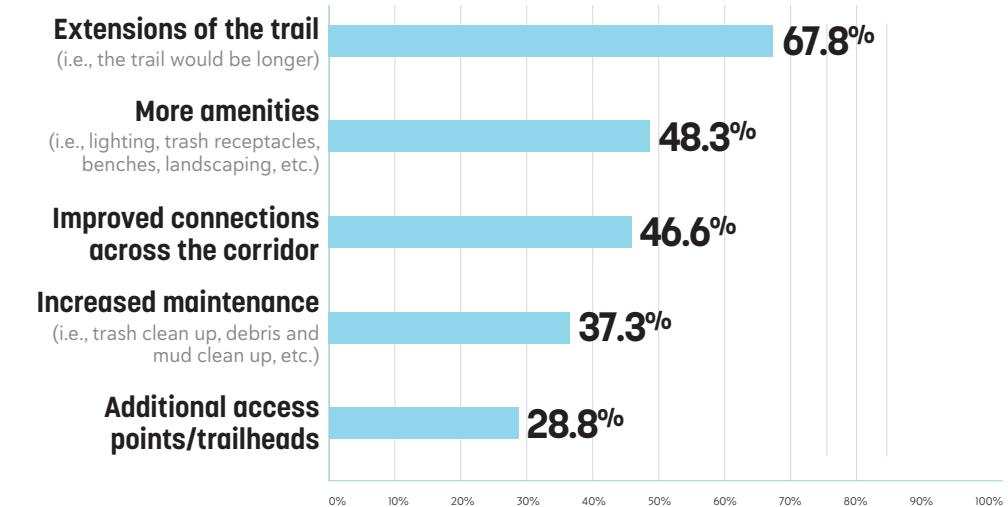
### How comfortable do you feel driving along the corridor?



### How comfortable do you feel riding a bicycle along the corridor?



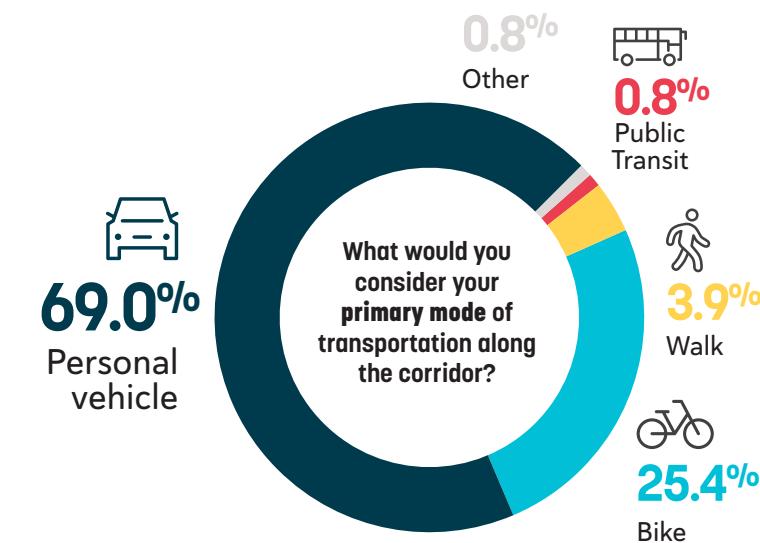
### What would you like to see in the future for the Turkey Creek Trail?



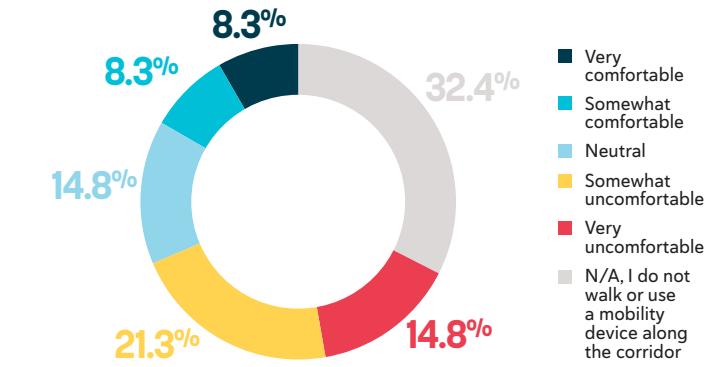
### How often do you use the Turkey Creek Trail?



### What would you consider your primary mode of transportation along the corridor?



### How comfortable do you feel walking or using a mobility device along the corridor?



## CORRIDOR TOURS

The planning team hosted two corridor tours for the project. The first was on June 10, 2021 for the Staff and Technical Committees, and the second was on June 17, 2021 for elected officials.

Nine locations along the corridor were selected as tour stops, as shown in **Figure D.1**. These locations were chosen for being destination points, access points, or to illustrate how the corridor changes from one end to another considering roadway widths, sidewalk conditions, pedestrian crossings, bicycle facilities, and overall look and feel. Both tours were conducted on a bus but had brief walking portions to allow participants to experience the corridor from a pedestrian perspective.

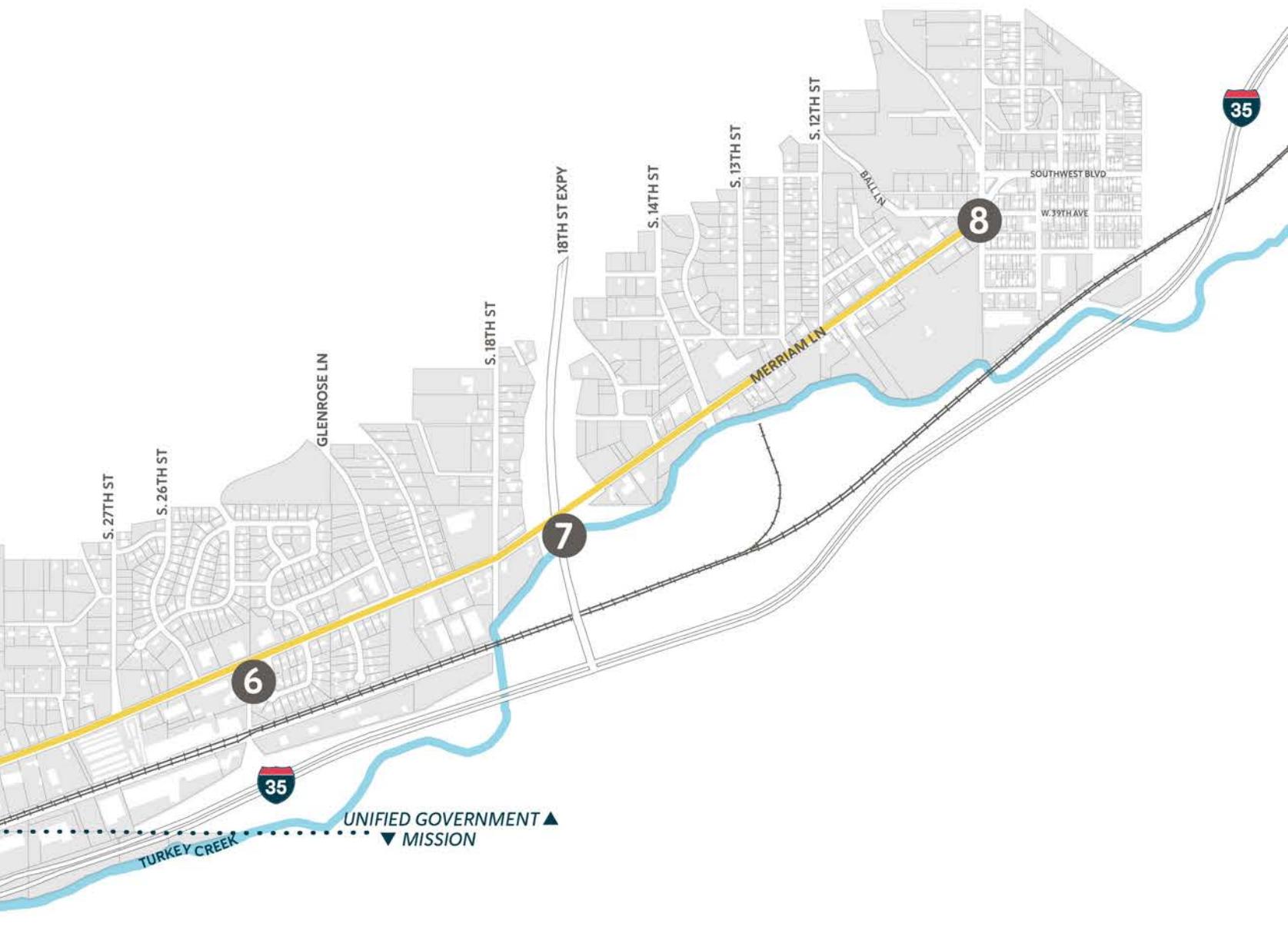
Tour participants were encouraged to share their thoughts and observations during the tours. Both events were important parts of the planning process for the purpose of gaining additional onsite knowledge and as a gathering and conversing opportunity for staff and elected officials among the four municipalities.

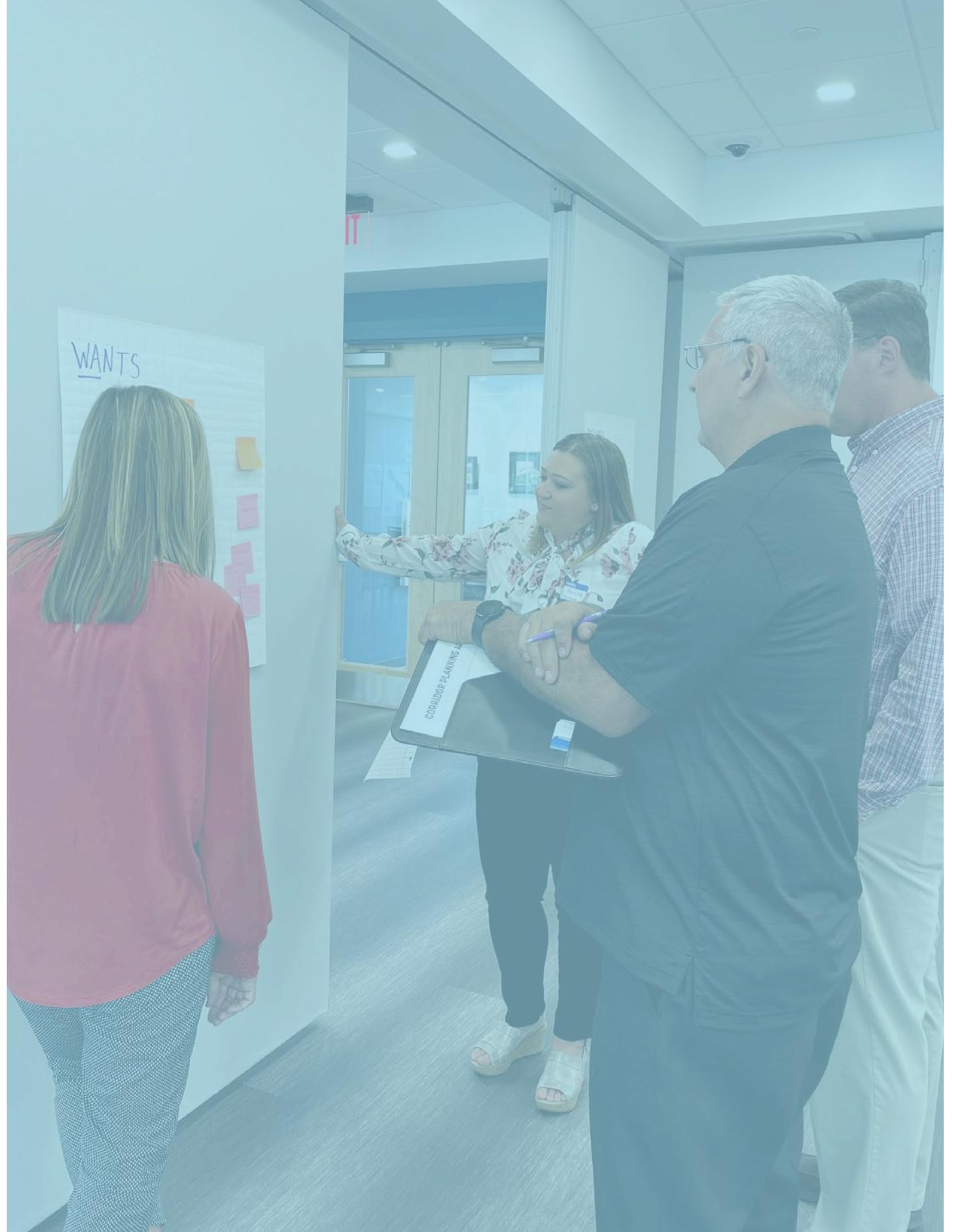
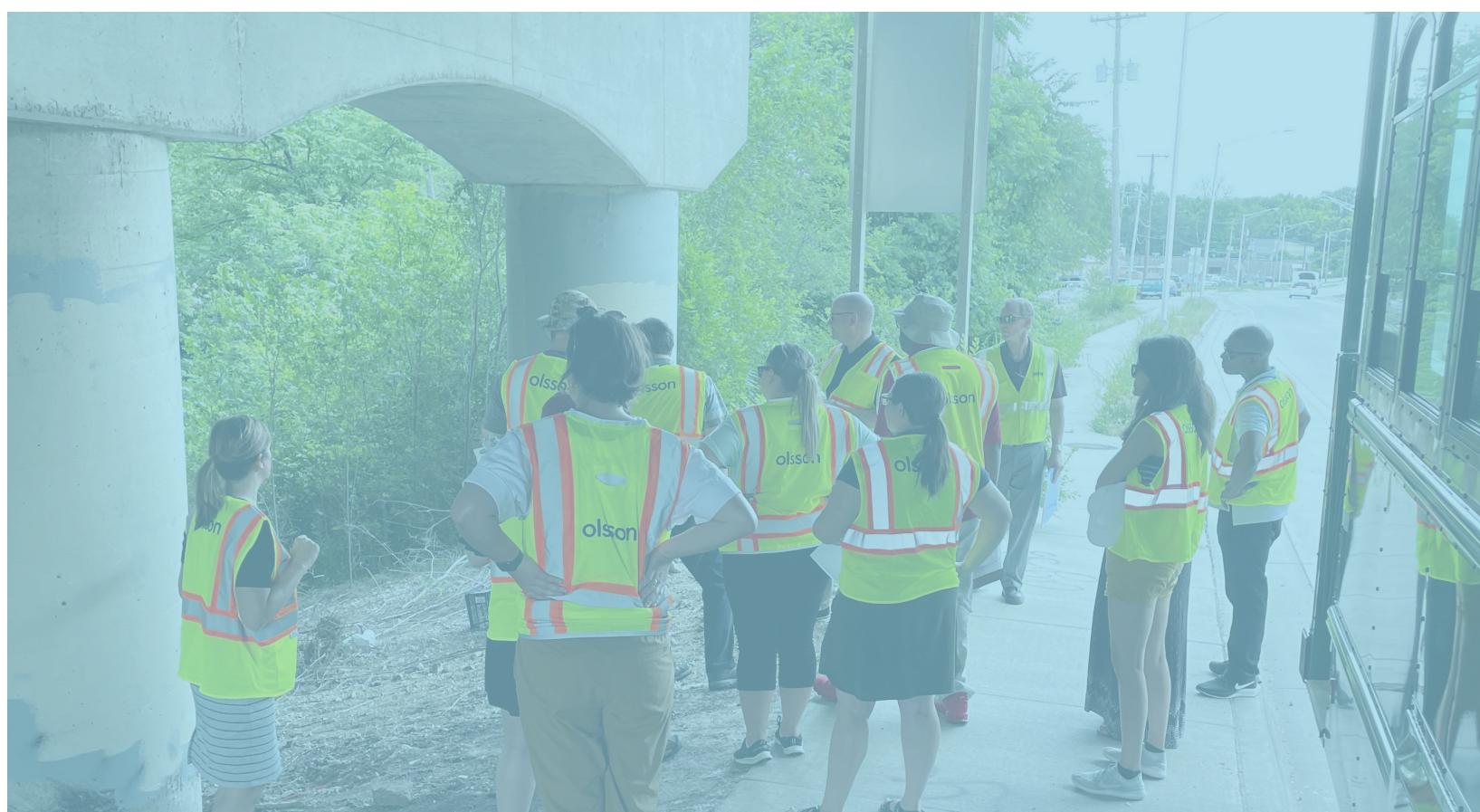


**FIGURE D.1 CORRIDOR TOUR ROUTE**

### Tour Stops

- 1 W 55th Street and Merriam Drive
- 2 Waterfall Park
- 3 Goodman Street and Merriam Drive
- 4 I-635 Interchange
- 5 S 34th Street and Merriam Lane
- 6 S 24th Street and Merriam Lane
- 7 18th Street Expressway Bridge
- 8 Southwest Boulevard and Merriam Lane
- 9 Antioch Road and Merriam Drive





## STAKEHOLDER INTERVIEWS

As part of the Market and Economic Study, interviews with individual business and property owners were conducted at the beginning of the planning process to help give context to the project. Patterns began to emerge in the responses of stakeholders when asked about the overall perception, business and economic conditions, and redevelopment opportunities along the corridor.

Interviewees described the Merriam Corridor as industrial, run down, and unsafe. These factors, along with low customer traffic volume, dangerous traffic intersections, and limited lot sizes, were listed as limitations for business and redevelopment. The corridor's central location, good access, and visibility from I-35 are important assets for current businesses.

Respondents agreed that there is opportunity for redevelopment and that the most appropriate types of development would be entry/moderate priced housing; apartments/multifamily housing; offices increasing in scale from the corridor towards the I-35 frontage; conversion/redevelopment of auto-oriented businesses; and utilization of the floodplain as recreational areas. Interviewees also agreed that roadway and infrastructure improvements would be crucial to assisting redevelopment.

The entire Market and Economic Study is available in [Appendix A](#).

## VISIONING AND PLANNING WORKSHOP

### WHY VISIONING?

Visioning serves as a critical milestone in any planning process. Visioning exercises provide an opportunity for Staff Committee and Technical Committee members to meet and set the collective tone for the process. The goal of visioning is to guide the development of the Plan, ensuring it is reflective of overarching community goals.

While it is imperative to be realistic about what can be implemented, visioning is a time when participants are encouraged to ignore price tag and timing concerns. The visioning process is meant to uncover needs, wants, and desires without being clouded by the constraints, at least initially. Visioning intentionally strips away what often holds people back from being truly honest about what they want to see. This is a time to be playful and let go of the "ifs," "buts," and "hows," – it is a time to dream.

Once the needs, wants, and desires have been fully explored, the constraints and roadblocks can be discussed. With the dream in mind and the openness that comes from sharing with one another about what is desired, a more informed conversation can be had about barriers, obstacles, and annoyances.

### OVERVIEW

While the visioning component lays a sturdy foundation for what the Plan should consider and include in the final product, the planning portion of the workshop takes a deeper dive into specific topics of the plan. Planning workshop exercises help to develop conceptual plans and ideas to address issues and opportunities through open discussion, commenting, and mapping exercises to assist in developing a community-focused plan.

The visioning and planning workshop advanced the creation of the Plan through conversations and responses to the questions and data presented. Local insight, combined with the planning team's expertise, focused the plan on transportation and connection opportunities, appropriate land use and revitalization, and overall look and feel of the corridor.

The visioning and planning workshop took place over three days, July 27-29, 2021, at the Merriam Community Center (6040 Slater Street, Merriam, Kansas, 66202). Workshop participants included the Staff Committee, Technical Committee, and planning team. Public Open House #1 was held during the workshop on the evening of July 28 and was open to all.

### DAY ONE (JULY 27, 2021)

The first day of the workshop began with a work session for the Staff and Technical Committees. The session started with a brief introduction from the planning team, followed by an overview of the workshop structure and schedule. Next, the planning team briefly presented the analysis of existing conditions to date, results of the public survey, findings from the Market and Economic Study (included in [Appendix A](#)), and findings from the traffic analysis (included in [Appendix B](#)).

### VISIONING EXERCISES

After taking time to answer questions, the planning team briefed attendees on a set of visioning exercises.

**Word Cloud.** The first two exercises asked the attendees - in three, single-word answers - what three opportunities exist for the corridor and what three issues face the corridor. The planning team compiled the responses into word clouds (see [Figures D.2](#) and [D.3](#)). The larger the word size in a word cloud, the more times it was repeated as a response to the question. Word clouds are helpful in finding similar trains of thought between respondents

Items that several of the Staff and Technical Committee members found as opportunities for the corridor include redevelopment, increased and improved accessibility, improved bicycle infrastructure, and housing options. Issues that several members thought face the corridor include lack of pedestrian infrastructure/walkability, areas within a floodplain, the industrial nature of the corridor, and overall safety.

**The One Thing.** Next, the attendees were asked what "one thing" would make them feel the Plan was successful. A similar theme across the board was the need for improved safety across all modes of transportation, including consistent roadway and sidewalk conditions and access points.

**Needs, Wants, Desires, Barriers, Obstacles, and Annoyances.** The next exercise asked attendees to record their needs, wants, and desires, barriers, obstacles, and annoyances for the corridor, defined as follows:

- Needs: We need to address this critical issue.
- Wants: If we had the choice, would choose to have this...
- Desires: Wouldn't it be nice if..., but if we don't get it, that's okay.
- Barriers: Immovable objects or obstructions that we must go around. (We cannot simply eliminate them; we must define a path that minimizes them or mitigates them.)
- Obstacles: Things that can be surmounted or changed (hopefully in our best interest); get in the way of what we want to accomplish (but not just a nuisance). (We can go over, though, or around them, but we must engage directly with them.)
- Annoyances: Things we just do not like; tend to be nuisances and personal; do not prevent you from achieving your goals.

After the planning team split attendees into small groups, the next 30 minutes were dedicated to the small groups rotating through the six category stations to record their individual and group thoughts. Each participant was given sticky notes to write and record thoughts onto a poster at each of the six stations. All comments are recorded in *Full Documentation of Responses: Visioning and Planning Workshop*.

Once the groups cycled through each station, the planning team allotted an additional 45 minutes to select their top choice for each of the six categories. Each of the three groups then reported their choices to the larger group, which are recorded to the right in **Table D.1**. Responses to all visioning exercises are recorded at the end of this section in **Table D.2**.

**TABLE D.1**  
**VISIONING PRIORITIZATION**

<b>NEEDS</b>	<ul style="list-style-type: none"> <li>• Bicycle/pedestrian safety measures</li> <li>• Public safety/overall safety</li> <li>• Driver and walking safety</li> </ul>
<b>WANTS</b>	<ul style="list-style-type: none"> <li>• Unique redevelopment</li> <li>• Consistent design standards</li> <li>• Attract developers with attention to detail and creating an atmosphere</li> <li>• Complete street improvements</li> </ul>
<b>DESIRSES</b>	<ul style="list-style-type: none"> <li>• Ten-minute neighborhoods (all you need within a 10-minute walk)</li> <li>• Visually appealing or interesting building design</li> <li>• Complete neighborhoods</li> <li>• Festivals/happenings along the corridor as “the place”</li> </ul>
<b>BARRIERS</b>	<ul style="list-style-type: none"> <li>• Interstates</li> <li>• Limited road width/right-of-way</li> <li>• Highways and railroad</li> </ul>
<b>OBSTACLES</b>	<ul style="list-style-type: none"> <li>• Coordination with other cities</li> <li>• Working with other agencies/funding</li> <li>• Multiple jurisdictions</li> </ul>
<b>ANNOYANCES</b>	<ul style="list-style-type: none"> <li>• Tow lots with no motivation to keep properties nice along the corridor</li> <li>• Conflicting land uses - residential and industrial</li> <li>• Disinvestment by existing property owners</li> </ul>



**FIGURE D.2 CORRIDOR OPPORTUNITIES WORD CLOUD**



**FIGURE D.3 CORRIDOR ISSUES WORD CLOUD**

## PLANNING EXERCISES

After a quick break, the planning team briefed participants on the next activity, which built on the visioning exercises.

**Topic Stations.** Participants cycled through categorized stations with multiple questions for people to react and respond to. The topics included:

- Land Use and Revitalization
- Multimodal Connectivity
- Vehicular Connectivity
- Aesthetics and Natural Features
- Economic Development

These topics were arranged as stations around the room; individuals answered specific questions related to each topic. Their responses were recorded with sticky notes onto posters for everyone to see. This way, each person could visibly see the thought process: this is a critical element to a planning and visioning workshop. Attendees at the public open house taking place the following evening responded to the same prompts and could read what members of the Staff and Technical Committees had said. All comments are recorded in *Full Documentation of Responses: Visioning and Planning Workshop*.

## DAY TWO (JULY 28, 2021)

The morning of day two was open studio time. Open studio is intended for informal conversations between members of the public and the planning team. There are no structured activities. Instead, members of the public or committee members could stop by to discuss specific items, have one-on-one conversations, or just simply observe members of the planning team work. The planning team spent the afternoon preparing for Public Open House #1, which began at 5:00 p.m. At 4:00 p.m., committee members were invited back to preview the materials that would be presented to the public. The public open house was open until 7:00 p.m.

## DAY THREE (JULY 29, 2021)

The third day of the workshop started with open studio time in the morning. All comments from Public Open House #1 were reviewed and subsequently incorporated into preliminary concepts, where applicable. Based on additional feedback, some new concepts were generated. At 4:00 p.m., Stakeholder and Technical Committee members were invited back for a final session, allowing members a chance to review the work produced over the three days and provide additional comments and direction. Attendees provided written and verbal reactions to content as they reviewed conceptual plans. All comments are recorded in *Full Documentation of Responses: Visioning and Planning Workshop*.

## PUBLIC OPEN HOUSE #1

The first public open house took place on July 28, 2021 from 5:00 p.m. to 7:00 p.m. at the Merriam Community Center (6040 Slater Street, Merriam, Kansas, 66202). It was advertised to the public through city social media accounts, email, local news, and other various local publications.

The participants were greeted and given an introduction to the planning process and directions for the evening. There were several stations created for the public to provide feedback on and inspect. During the open house, the public had the opportunity to answer all the same questions that the Staff and Technical Committees had answered on the first day of the visioning and planning workshop. Their responses were captured in the same way as the committees' responses. For a list of all responses, see *Full Documentation of Responses: Public Open House*. As the event was informal and did not include a formal presentation, members of the planning team were stationed around the room to clarify information, answer questions, and gather additional input through written comments and one-on-one or group conversations.

## WHAT WE LEARNED

One of the main accomplishments of the Visioning and Planning Workshop was the draft illustrative corridor master plan. The Market and Economic Study highlights several areas within the corridor that are either primed for redevelopment or would benefit from enhancements. These sites were areas of focus during the Visioning and Planning Workshop. After refinement with feedback from the Staff Committee and public, initial ideas for the sites were developed and included on the draft illustrative corridor master plan. These ideas are reflected in future land use and development and redevelopment recommendations.

The current roadway itself changes throughout the study area, with lane configuration ranging from two-lane to four-lane and varied roadway and right-of-way width. Pedestrian and bicycle infrastructure varies as well. Portions of the road in Merriam have sidewalks but no dedicated bikeway, Overland Park has sidewalks and sharrows, and Kansas City, Kansas recently undertook roadway improvements on their portion of Merriam Lane to include dedicated bike lanes and buffered sidewalks. The workshop made it clear that there would be no "one size fits all" solution for the entire corridor. The updates in Kansas City, Kansas align with the goals of this Plan to increase accessibility for all modes of roadway users and the recommendations build on that momentum. By the end of the workshop, the planning team showed three different sections of roadway configurations that could be implemented along the corridor and would work with the existing improvements.

Another theme that emerged during the workshop was developing a unified identity for the entire corridor. Gateway concepts were developed and narrowed throughout the three days of the workshop until a consensus was reached for primary, secondary, and tertiary monumentation. Other aesthetic details were discussed as well, such as pavement inserts.

## PUBLIC OPEN HOUSE #1 STATIONS

The first public open house was set up in a circular fashion, allowing attendees to start at the beginning station and flow around the room to work their way through all the stations. Seven stations were included in the open house:

- 1. SIGN IN**
- 2. PLAN OVERVIEW**
- 3. EXISTING CONDITIONS**
- 4. SURVEY RESULTS**
- 5. ISSUES AND OPPORTUNITIES**
- 6. INITIAL IDEAS**
- 7. WHAT DID WE MISS?**



# PUBLIC OPEN HOUSE #2

*PUBLIC OPEN HOUSE #2 SUMMARY TO BE INCLUDED IN FUTURE DELIVERABLE*

## TABLE D.2 VISIONING EXERCISES

### THE ONE THING

- Better access via Lamar
- Remove the traffic signal at Merriam Drive/Antioch and replace with a roundabout
- Improved multimodal accessibility
- Improved safety for all users of the corridor
- A place that invites people of all ages to come, spend time, and enjoy the area, without the need for a vehicle.
- Should be a destination location or become a more walk/transportation corridor (bikeability/walkability/vehicle)
- One vision/expectation for all to see/use including industrial users and residential users.
- Realistic implementation steps to guide redevelopment
- Bike/walk lane consistency/safety
- Extended trails and recreational opportunities to the KCK side
- A consistent, versatile, scalable plan that all of the communities can/will implement to improve the corridor
- Safer conditions for vehicles, bicycles, and pedestrians
- Economic improvement

### NEEDS

- Better walkability (x1)
- Sidewalk connections
- Consistent sidewalk connectivity
- Safety
- Road diet
- Separated bike lane
- Pedestrian/bike (non-personal vehicle) features
- Lighting (x1)
- Signage
- Funds to improve
- Uniform street lanes
- Quality development and redevelopment with healthy mix for livability
- Reinvestment in aging public infrastructure
- Intersection improvements
- Fixing dangerous locations
- Fix critical/unsafe intersections
- Need trees every 28 feet along Merriam Drive - makes it more safe and inviting
- Turkey Creek Trail connection through Mission, KCK
- Need 1 tree for each apartment unit plus street trees
- Add bus route on Merriam Lane for connectivity, slow down traffic
- Expanded Turkey Creek. This is our City Beautiful moment? Connect to watershed context.
- Lack of sidewalks, curbs, streetlights, and stormwater runoff on 47th, east of Antioch
- Linked trail lanes enough for bikes and pedestrians

### WANTS

- Turkey Creek Trail connections through whole corridor
- Complete Trail system
- Protected bike lanes (x1)
- Bike Lanes
- Trail connectivity
- Walking trails
- Key bicycle/ped corridor to downtown KCMO
- Connections to regional facilities (biking)
- Consistent/increased lighting
- Street trees
- Increased vegetation
- Inclusive
- Restaurants
- Mixed use redevelopment
- Want to create density without disjointing the area (i.e., housing, livability, not drive somewhere else)
- More new and affordable housing (rental and owner occupied)
- Redevelop tow lots
- Improved Lamar Bridge
- Neighborhood connections
- Advertisement
- Marketing
- No overhead power lines
- Wayfinding to Sauer Castle; wayfinding that uses MARC common language, with subtle differentiations for each municipality
- Connect the Bikewalk Trail to circle back at Lamar

### DESIRSES

- Desire to limit frustration of parking...need a place to park easy and spend the day, not fight for on street and feed meter
- Key anchor business invests/expands/builds
- Gathering/housing/economic things along this route
- Multi-purpose
- Mixed use developments - residential and retail
- Walkable environment/pedestrian level amenities/welcoming
- Would be great if the Turkey Creek Trail could be fixed (or turned into a usable obstacle course)
- Public transit route
- Affordable housing
- Educational opportunities
- Focus on native plantings throughout corridor
- Desire a walking/biking park corridor with interactive water feature, trees for hammocks and reading, tables and chairs for outdoor eating

## TABLE D.2 VISIONING EXERCISES (CONT.)

### BARRIERS

- Access from highway is lacking
- Narrow right of way
- Floodplain issues
- Low lying areas prone to flooding (Blvd Drive In)
- Antioch intersection
- 24th Street intersection
- Grade changes (i.e., 24th St intersection)
- Interchange loops take up significant opportunity
- Funding for redevelopment of assets
- Railroad tracks
- I-35
- I-635

### OBSTACLES

- Highly industrial
- Industrial areas feel creepy
- The surrounding criminal element
- Public safety coverage
- Highly paved, limited open space
- Overpass (635)
- Difficult crossing for bike/ped
- Floodplain
- Turkey Creek flooding
- Intersection angles/geometry
- Intersection geometry, especially at Antioch and at 39th Ave/10th St.
- Resistance to change
- Lack of council support for extending Turkey Creek Trail in Mission
- Funding
- Overhead power lines
- Water quality of Turkey Creek? Safe?

### ANNOYANCES

- Lamar bridge is narrow with poor access
- Complaints about on-street parking related to specific businesses, even though it is allowed
- Traffic that diverts from I-35 don't make it so easy
- Traffic during accidents on I-35
- Turkey Creek Trail lacks connectivity
- Traffic
- Drivers that run red lights and stop signs
- Multi-family ownership...everyone always pushes apartments
- Security bars on windows and bollards in front of doors

## TABLE D.3 OPEN HOUSE #1 COMMENTS

### LAND USE AND REVITALIZATION

**Are there existing land uses that are misplaced? Use the red dots to show us where and your sticky notes to tell us why.**

- Higher use to encourage diversity in development
- Industrial uses west/north of Merriam
- 46th - home amongst industrial
- 28th - One of the only residential spots south of Merriam Dr
- 18th - motel behind used auto sales lot
- Ball Lane - used car lot crammed on tiny parcel

**What land uses are missing from or desired along the corridor? Where should these uses be located? Use the blue dots to show us where and your sticky notes to tell us why.**

- Very little retail, not much dining, especially in west end of corridor
- River access parks
- Create affordable housing, maybe a small houses village
- Small scale mixed uses (restaurant w/ housing above)
- Grocery store
- Green space/trail
- More usable green space
- More diverse options for shopping- very few restaurants and retail back to back
- Workforce housing / garden apartments
- More green space- less parking lots
- Connecting trail
- More green space
- Grocery store
- Grocery store
- Retail shops (planned)
- Trail extension
- Residential?
- Mixed-use gateway into downtown Rosedale?

**What types of land uses should be preserved and enhanced?**

- Green space
- Industrial uses necessary for region but consistent property maintenance standards and streetscape improvements would enhance that use
- High quality manufacturing
- Enhance small mixed developments like what's closer to SW Blvd.
  - There's a very good mom/pop pic place- keep that
- Preserve existing residential
- Current uses shouldn't be pushed out because they are valuable. Adding other uses like restaurants and affordable housing
- Ensure that property value doesn't spike for lower income demographic!

- What would a mixed-use industrial/commercial/residential look like? Standards?
- Enhanced thrift store on Merriam Drive w/ the bull face thing and the restore place

**What additional or new uses would encourage additional foot traffic and interactivity with the corridor?**

- Shopping, dining, brewer/winery/distillery
- Green spaces
- Live entertainment
- Consistent wide sidewalk
- Destination food, park, or entertainment space
- Bike/ped oriented businesses (bike shop, repair, brew pub)
- Interactive water feature for kids
- Food/beverage
- Apartments...need people that live nearby to activate the corridor
- Beer
- Turkey Creek trail-oriented development (TOD 2.0)
- Restaurants- EASIER navigation- away from industrial
- Retail, restaurants, parks
- Train tracks and highway entrances make walking difficult, need pedestrian friendly

### NON-VEHICULAR CONNECTIVITY

**What's not working on the corridor from a multimodal connectivity perspective? Follow the legend and answer the questions with your dots.**

- No bike lanes in Overland Park
- Sidewalk gaps
- Lamar/24th St bridge/highway exit is missing bike/ped connection from Lamar bike lane in Mission to Merriam Lane
- Uninviting under 635 (lighting/sidewalks/bike lanes)
- 18th Street under bridge is very unwelcoming to pedestrians
- Merriam and Antioch - grades and accessibility issues at the intersection
- Bike lanes do not exist in many areas
- OP Turkey Creek trail damage
- Need trail connection to Mission
- When trail crosses Merriam
- Most of the corridor feels auto-oriented, not bike/ped friendly
- Train tracks
- Highway entrances
- Breaks in trail
- Whole corridor needs more shade. More trees. Walking and biking is very hot in summer
- Just west of 635, very dangerous for eastbound biking. Lanes disappear, elevation change = bad sight lines and vehicles exiting highway expect high speeds
- Connection from neighborhood park to Merriam Drive
- Potential to move trail to north of 35 due to slope issues on south
-

## TABLE D.3 OPEN HOUSE #1 COMMENTS (CONT.)

*Would any part of the corridor be appropriate for on-street bicycle facilities? Should all future bicycle facilities be buffered in some way? Use the pink dots to show us where and your sticky notes to tell us why.*

- Buffered is preferred - truck traffic is intimidating (x2)
- West of 635 need buffered
- UG portion should be upgraded from bike lanes to protected bike lanes
- A complete and connected Turkey Creek Trail could resolve all bike facility issues on Merriam Lane and allow focus on walking
- All new bicycle facilities should include physical separation from motor vehicles. Anything less becomes an under-used token.

*What additional amenities are needed along the corridor to make to make walking or biking more enjoyable?*

- Shade trees
- Green infrastructure
- Pedestrian lighting
- Consistent, separated bike lanes
- Shade trees
- Sidewalks and crosswalk connections
- Places to stop and eat/drink
- Trees, landscaping, screening of parking lots and heavy industrial uses
- Screening, including landscaping
- Shade
- Benches
- Restaurants
- Bars
- Tree canopy
- Crime prevention through environmental design
- Consistent streetscape and sidewalks with green space between curb and sidewalk
- Benches
- Businesses that draw families or people for rec.
- Crossing signals
- Wide sidewalks
- Lighting
- Public art and murals
- Shade
- Trees and landscaping
- Yes! Trees!
- Shade trees!! Corridor is very very hot even in milder conditions.
- Garden for community

*What types of trips would you envision people using transit for? Work, education, medical appointments, shopping, entertainment, etc.?*

- See this as a pass-through to get to work without a destination
- Beyond scope, but would love to see a heavy-rail commuter line serving Gardner-Olathe-Lenexa-Merriam-KCK-KCMO
- Somewhere on corridor might be good for park-and-ride

*Where are the most critical destinations for transit along Merriam Drive to connect to?*

- Merriam Farmer's Market
- Downtown KCMO
- Microtransit with stops at Downtown Rosedale, job centers, intersection of other transit corridors at Downtown Merriam

*Which transit option better meets the needs of your community? A fixed bus route with established stops and schedules, running along and/or across Merriam Drive; A flexible service zone (microtransit) where curb-to-curb trips can be booked within the boundary*

- Only fixed routes encourage development along route

### VEHICULAR CONNECTIVITY

*Are there locations along the corridor which you find frustrating while driving? Use the red dots to show us where and your sticky notes to tell us why.*

- Merriam and Antioch - off intersection configuration
- Merriam Dr and Antioch - confusing intersection
- 24th Street train tracks are pretty active
- Merriam Dr and Antioch
- Lack of access to 18th Street Expressway South
- Merriam Drive and 24th Street
- Lane runs out
- Merriam Dr and Antioch - signal is old and non-ped friendly
- Turn lane onto I-635 N is difficult with the other lane ending there also
- Awkward angles at 35th Street
- Lamar/24th St Bridge/highway exist
- Poor signage for connecting streets at 24th and 18th
- At Ball Lane - a lot of streets and access points
- The way the east bound, center lane becomes the turn lane to enter the highway and the outside lane quickly merges back to become the main lane

*Are there intersections from surrounding areas to Merriam Drive/Lane that could be improved? Use the blue dots to show us where and your sticky notes to tell us why.*

- Antioch/47th is an all way stop... roundabout would be better
- Antioch intersection
- 24th St intersection
- Merriam Lane and SW Blvd.
- Lamar/24th St bridge/highway exit and needs bike/ped connection from mission's Lamar bike lane to Merriam drive/lane
- Existing 4 way stop at 47th and Antioch improvement due to: excessive traffic volume through the intersection; vehicles frequently run the intersection without slowing down; frequent motor vehicle accidents at the intersection

## TABLE D.3 OPEN HOUSE #1 COMMENTS (CONT.)

**Do the speed limits drivers maintain along the corridor feel comfortable?**

- Traffic speed can make it difficult to turn onto Merriam coming off 635 during peak hours
- Not bad speed when in a car
- Need to keep it a 2-lane street...adding a left turn lane will increase speeding
- Not for bikes. Needs a separated/buffered bike lane.
- When driving
- Yes, if in a car
- When in a vehicle, yes
- NO! Everyone drives too fast
- I35 should be for speed. Merriam Drive should be for Sunday driving. Slow down.

**Where might it be appropriate to reduce the number of lanes along the corridor? Use the yellow dots to show us where and your sticky notes to tell us why.**

- Merriam Dr 55th to Antioch
- Antioch from 47th to Merriam Dr
- No need for 4 lanes near 635
- West of Antioch
- UG Complete Streets Ordinance allows reductions, “right-sizing,” of roadways from 4 to 3 with certain ADT thresholds
- NOT in favor of fewer lanes
- The whole thing. More space for trees and people.

### AESTHETICS AND NATURAL FEATURES

**Should additional parks or open space be developed along the corridor? Use the yellow dots to show us where and your sticky notes to tell us why.**

- River access
- 50th St south of Merriam Dr
- 46th St south of the railroad tracks
- Need to connect Mission's existing trail to regional trail system. North extension of Rock Creek Trail would motivate Mission to construct Turkey Creek Trail connection between OP and KCK
  - I second that
- 34th ST south of railroad and east of 635 - Turkey Creek Trail to connect OP and WyCo/KCK
- 14th Street south of Merriam Dr
- Can Turkey Creek Trail be connected under railroad and I-35?
- A connected trail without going on street
- Use old 18th Street bridge as Turkey Creek trailhead
- Mill Street bridge to connect to Rosedale Park, another Turkey Creek trailhead connection

**Are there any places along the corridor that should have a gateway welcoming people to the corridor?**

- Maybe west of Merriam Dr towards their retail
- Antioch
- 18th
- 24th

- A roundabout at Antioch/Merriam Dr could offer art/landscape potential
- Most east, most west, most north, most south
- Where Merriam Lane turns into Southwest Boulevard
- Where Merriam Lane turns into Merriam Drive
- Something cool to see on 18th Street Expressway and Merriam Drive

**What sort of “place” should the corridor become?**

- Planned intersection of vehicles, bicycles, and pedestrians in a residential, commercial, and industrial area
- Should lean heavily into existing industrial identity, maybe a small industrial town feeling
- One of a kind
- Food, coffee, arts center, maker space
- Less industrial, more eating vibes
- It's a continuum between Downtown Rosedale to Downtown Merriam, What type of “mixed use” should be in between?

**Is there any one location along the corridor you would consider “the heart” of it? Use the blue dots to show us where and your sticky notes to tell us why.**

- Grandstand Burgers
- Woodyard BBQ and Tarahumara Mexican restaurants
- Industrial heart? Job center?
- Drive in theater / a nice gateway into Merriam Lane
- Develop retail around defunct shopping areas

**What is an eyesore along the corridor? What do you want to beautify along the corridor?**

- Tow lots
- General property maintenance
- Non-uniform development
- Standard street design - curbs, defined driveways, green space between curb and sidewalk
- Vacant buildings and parking lots. Redevelop or return to green spaces.
- So much unused space!
- Too many apparently abandoned or poorly maintained buildings
- Trash under bridge at Southwest Boulevard, Merriam Lane

## TABLE D.3 OPEN HOUSE #1 COMMENTS (CONT.)

### ECONOMIC DEVELOPMENT

#### **What places along the corridor do you consider underutilized resources?**

- Drive in is car only...make it good for peds/scooters/bikes... places to sit outside
- The land uses at the intersection of 14th St
- Excess vehicles lanes can be converted to separated bike lanes via road diet
- Floodplain could provide quality green space if trail was constructed
- House of rock area
- River (no access)
- Some ROW in OP opportunity to reduce driveways - add green space
- Tow lots
- Replace aging strip-development with higher density developments with sidewalk frontage

#### **What areas or properties along the corridor are ripe for redevelopment? Use the red dots to show us where and your sticky notes to tell us why.**

- Underutilized parcel NE and SE corner of 14th and Merriam
- Blvd Drive In could be better utilized
- West of Antioch down Merriam Dr
- City owns property at 55th and Merriam Drive
- Tow lots need to go
- Apartment complex near 24th street is rundown and could be rehabbed/redeveloped
- New bridge for bike/ped access after old one is torn down
- Motel redevelopment opportunity (x1)
- Used car lots crammed into tiny parcels around Ball Lane

#### **What areas of the corridor serve the...**

##### **Surrounding neighborhoods? (red dot)**

- Food at east end near Ball Lane/Dodson

##### **Local area? (blue dot)**

- Food at east end near Ball Lane/Dodson
- Woodyard BBQ
- Liquor store at 14th St

##### **Region? (green dot)**

- Whole corridor is a regional bikeway connector to connect multiple cities to downtown KCMO
- Tow lots serve the region (Hal!)
- Woodyard BBQ
- Connect Turkey Creek Trail, expanded to Southwest Boulevard and/or Kaw River Trail serves all 3

#### **What attractions, programs, and events would you like to see along the corridor that do not currently exist?**

- More restaurants
- Parks
- Dining
- Car shows!
- If key bike corridor, could have tailored bike businesses, brewpubs, etc.

- Small housing village
- Restaurants and bars
- Maybe some of those container structures with food?

#### **What would it take for the corridor to stand out among other local destinations?**

- Offer unique shops
- Need an identity - sense of place
- Turkey Creek
- Activity nodes that leverage existing structures from the corridor's long history as an inter-urban route, Rosedale, Old Merriam, etc.
- ID spur opportunities for better bike access to Turner and Shawnee

### EXISTING CONDITIONS

#### **Crashes from 2015 to 2019**

- Causes of crashes? Speed? Lights? Turn angles? # Lane changes?
- How many or which of these crashes included pedestrians / cyclists?

#### **Existing Natural Features**

- Did KCK not provide floodplain data?
- Protect the wetlands, create green buffers for public space
- What are these green lines?

#### **Existing Zoning**

- At what point Merriam Lane become Merriam Drive? Is this a marker for future land use and other amenities?

#### **Transportation and Connectivity**

- Missing existing Turkey Creek Trail
- This project should fit into the UG (Wyandotte County) Countywide Mobility Plan
- Need to show this corridor within a broader regional context and vision

## TABLE D.3 OPEN HOUSE #1 COMMENTS (CONT.)

### INITIAL IDEAS

#### ***Merriam Drive East - Existing Conditions (East of 35th Street)***

- Overhead power lines are a major impediment to street beautification

#### ***Merriam Drive West - Protected Bike Lanes (West of 35th Street)***

- Can you lose the center lane and add that space to widen separation for bikes (add landscaped buffer)

#### ***Proposed Roadway Modifications - Option #1***

- Why is there virtually NO proposed changes/enhancements in Wyandotte County?
- SW Boulevard / Merriam Lane gateway opportunity - traffic circle?

#### ***Big Map***

- Need more vehicle queuing at drive-in
- A focus needs to be made to redevelop this area (around Southwest)
- Can this be another entry / monument? (Southwest)
- Infill development on vacant parcels could be more dense than single-family homes
- Love this (Roe and Merriam Lane)
- Lets extend Turkey Creek trail to add more trailheads in WYCO
- Trees - and buried power lines- needed here (12th and Merriam Lane)
- Single family home opportunity for development (Glenrose and Merriam)
- Very poor vehicle access to this parcel (industrial park at S 28th Street, Sutton Lane); at grade railroad crossing is the only vehicle access
- The trail is outside of the study area, but would work best at creek level
- (Antioch) this proposed solution fixes traffic the best, but completely disconnects the continuity of the "corridor"
- (Antioch) disconnects the corridor, look at having Merriam Drive go into roundabout and remove 50th Terrace

#### ***Proposed Redevelopment Sites***

- How do you encourage mixed-use conversion of noxious uses (i.e, auto repair)? Focus on conversion for under-utilized areas
-

## TABLE D.4 OPEN HOUSE #2 COMMENTS

*PUBLIC OPEN HOUSE #2 COMMENTS TO BE INCLUDED IN FUTURE DELIVERABLE*





**MERRIAM  
CONNECTED** CORRIDOR  
PLAN