



K-32 Tri-City Multi-modal Redevelopment Plan

Wyandotte County, Kansas | December 2016



ORDINANCE NO. 2433

An Ordinance to Adopt the K-32 Tri-City Multimodal Redevelopment Plan as an Addendum to the Comprehensive Plan "Vision 2025" for the City of Bonner Springs, Kansas.

BE IT ORDAINED BY the Governing Body of the City of Bonner Springs, Kansas:

Section I: Code of Ordinances of the City of Bonner Springs, Chapter XVII – Zoning and Planning, Article 1, Comprehensive Plan is hereby amended.

Section II: There is hereby incorporated by reference the "K-32 Tri-City Multimodal Redevelopment Plan prepared by Vireo with assistance from Olsson Associates and Gould Evans, such incorporation authorized by K.S.A. 12-3009, 12-3010 and 12-3301, as amended.

Section III: That the City Clerk is hereby directed to maintain one (1) copy of said K-32 Tri-City Multimodal Redevelopment Plan stamped, "Official Copy as incorporated by Ordinance No. 2433" with all sections or portions thereof intended to be omitted clearly marked to show such omissions, or showing the sections, articles, chapters, parts, or portions that are incorporated as the case may be and to which shall be attached a copy of the incorporating ordinance. Such copies shall be open to inspection and available to the public at all reasonable business hours.

Section IV: Code of Ordinances of the City of Bonner Springs, Chapter XVII – Zoning and Planning, Article 1, Comprehensive Plan is hereby amended.


Section V: This ordinance shall be in full force and effect after passage and publication in the official city newspaper.

Approved by the Governing Body and signed by the Mayor on September 26, 2016.



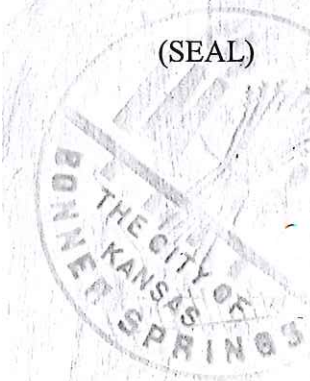
Jeff Harrington, Mayor

ATTEST:



Amber McCullough, City Clerk

(SEAL)



(Published 12-8-16)

ORDINANCE NO. 0-71-16

AN ORDINANCE affirming the approval of the 2016 K-32 Tri-City Multimodal Redevelopment Plan.

WHEREAS, on October 10, 2016, the Planning Commission for the Unified Government of Wyandotte County/Kansas City, Kansas ("Unified Government") recommended approval of the 2016 K-32 Tri-City Multimodal Redevelopment Plan ("K-32 Redevelopment Plan"), a copy of which is on file with the Unified Government Clerk.

WHEREAS, public hearings on the K-32 Redevelopment Plan were held on October 10, 2016 and October 27, 2016.

WHEREAS, the Unified Government Board of Commissioners voted to approve the Planning Commission's recommendation and voted to approve the K-32 Redevelopment Plan on October 27, 2016.

WHEREAS, pursuant to K.S.A. 12-747(b) an ordinance affirming the approval of any master plan shall be adopted by the governing body.

**BE IT ORDAINED BY THE BOARD OF COMMISSIONERS OF
THE UNIFIED GOVERNMENT OF WYANDOTTE/COUNTY/
KANSAS CITY, KANSAS:**

Section 1. The Board of Commissioners hereby approves the recommendation of the Planning Commission and approves the K-32 Redevelopment Plan as previously adopted and approved on October 27, 2016.

Section 2. This Ordinance shall take effect and be in full force after its passage, approval, and publication.

PASSED BY THE BOARD OF COMMISSIONERS OF THE UNIFIED GOVERNMENT OF WYANDOTTE COUNTY/KANSAS CITY, KANSAS, THIS 1st DAY OF DECEMBER, 2016.



Mark Holland, Mayor/CEO

Attest:

Deputy Carol Dodson
Unified Government Clerk

Approved as to form:

Legal Department



CITY COUNCIL MEETING MINUTES

September 26, 2016

7:00 pm

The following councilmembers were present with Mayor John McTaggart presiding:

Garrett Mellott Jason Gillam
Margaret Shriver Chuck Adams
Chuck Stites

The following staff members were present:

- Michael Webb, City Manager
- David Duckers, City Attorney
- Sid Mitchell, Police Captain
- Tim Whitham, Fire Chief
- Michelle Bounds, City Treasurer
- Zack Daniel, Assistant to the City Manager/City Clerk

APPROVE MINUTES OF SEPTEMBER 12, 2016

Councilmember Mellott made the motion to approve the minutes of September 12, 2016. Councilmember Adams seconded. Mayor McTaggart requested a roll call vote, which passed 4-0-1 with Councilmember Stites abstaining.

STATEMENT OF BILLS PAID \$158,196.97

Councilmember Mellott made the motion to approve the statements of bills paid. Councilmember Adams seconded the motion. Mayor McTaggart requested a roll call vote, which passed unanimously.

REQUESTS OR COMMENTS FROM THE PUBLIC

No comments from the public

CITY COUNCIL TO CONDUCT A PUBLIC HEARING REGARDING THE PROPOSED REDEVELOPMENT PROJECT PLAN FOR THE VILLAGE SOUTH AT EDWARDSVILLE REDEVELOPMENT TIF PROJECT AREA 1 AND CONSIDER ADOPTION OF ORDINANCE NO. 969 APPROVING THE SAME

Councilmember Gillam made the motion to open the public hearing, which was seconded by Councilmember Adams. Mayor McTaggart requested a roll call vote which passed unanimously. City Manager Michael Webb introduced representatives from Kutak Rock, the City's legal team in this matter as well as the independent financial firm Springstead. Mr. Webb also introduced representatives of the developer. Mr. Webb provided some background on the development project to this point. He reviewed the actions of the Planning Commission, who found that the project plan was compliant with the City's Comprehensive Plan. Mr. Webb summarized the makeup of the project at this point and the current version of the draft Development Agreement. Mr. Webb noted that it is staff's recommendation that City Council postpone adoption of Ordinance No. 969 until a future meeting where the Development Agreement and CID can also be voted on.

Korb Maxwell, representing the applicants, reviewed a previous presentation on the project. Mayor McTaggart made a call for public comments, which saw no member of the public wishing



CITY COUNCIL MEETING MINUTES

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7:00 pm

to speak. There was some discussion on the naming of the development, which Mr. Maxwell noted that all parties are open to suggestions at this point. Mr. Webb noted that the naming rights are an important aspect of the development agreement and site process. Councilmember Adams made the motion to close the public hearing, which was seconded by Councilmember Mellott. Mayor McTaggart requested a roll call vote, which passed unanimously.

There was no official action taken at this time. Adoption of the ordinance will take place concurrently with the finalization of the development agreement.

CONSIDER BIDS FOR JANITORIAL SERVICES IN CITY FACILITIES

Assistant to the City Manager/City Clerk Zack Daniel reviewed this item, noting that the new office space opening up in City Hall necessitated the need to solicit bids for a new janitorial contract. Mr. Daniel summarized the bid sheets, noting the lowest and best bid came from Jani-King. Councilmember Gillam had questions related to the weighting of the bids, which he reviewed himself and confirmed that Jani-King was the lowest bid when you remove the incomplete bid packages. After additional discussion related to the formula used to award the bid, Councilmember Adams made the motion to authorize the City to enter into a contract with Jani-King to provide janitorial services in City Hall, the Police Department and the Community Center. Councilmember Gillam seconded. Mayor McTaggart requested a roll call vote, which passed unanimously.

At this point, Mt. Daniel also noted that tonight's meeting would not be recorded for internet streaming due to a technical issue with the camera.

CONSIDER REPORT REGARDING THE TRI-CITY K-32 MULTIMODAL REDEVELOPMENT PLAN

Mr. Webb reviewed the K-32 Redevelopment Plan process and how the corridor impacts Edwardsville specifically. He reviewed the primary recommendations of the plan, which includes proposals related to the 4th and K-32 intersection. Mr. Webb noted that the Planning Commission heard the plan and recommend acceptance in fulfillment with the scope of the study. Mr. Webb noted that accepting the plan at this point will not officially incorporate it into the Comprehensive Plan, as that will require future action. Councilmember Adams asked if there was any governing body associated with this plan that would supersede City authority, which Mr. Webb confirmed that there was no body created to oversee redevelopment of K-32.

Councilmember Gillam made the motion to accept the Tri-City Multimodal Redevelopment Plan in fulfillment of the scope of the project and contract obligations. Councilmember Shriver seconded the motion. Mayor McTaggart requested a roll call vote, which passed unanimously.

CONSIDER RESOLUTION NO. 2016-15 DETERMINING THE FINDINGS OF CODE VIOLATIONS AT 9775 SWARTZ RD. AND SETTING A TIMELINE FOR MITIGATION

Mr. Webb reviewed the Code Enforcement Hearing held at the last City Council meeting, wherein Mayor McTaggart requested that a timeline for mitigation be developed by City staff.



CITY COUNCIL MEETING MINUTES

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7:00 pm

He presented the proposed resolution, which included a timeline for remediation along with benchmarks to be reported on at City Council sessions. There was an additional clarification regarding permitting processes now in place. Mr. Webb noted that the resolution confirms the address is in violation of the code of ordinances and there is a date set for compliance.

Councilmember Adams made the motion to adopt Resolution 2016-15 with the additions that a property mitigation plan for the soil be developed by October 24, and that Mr. Gates appear before City Council on November 14 with photographic proof of compliance. The recourse is that if compliance is not met, the City can correct the issues and assess the costs to Mr. Gates. Councilmember Adams amended his motion to include removal or proper storage of any containers containing hazardous materials. Councilmember Mellott seconded. Mayor McTaggart requested a roll call vote, which passed unanimously.

ADVISORY REPORTS

CITY MANAGER

Mr. Webb reviewed public works items, noting that work on Kansas Ave. is progressing. He also noted conversations about extending the work to Richland Ave. He provided an update on the LTC sewer project, noting some concerns regarding the property line of the Hammontree property that are being addressed. Finally, he noted that a sink hole along Steele Rd. is currently scheduled for repair.

Mr. Daniel noted culvert repair that is underway for the City of Bonner Springs that will affect Edwardsville residents north of Riverview. Mr. Webb commented there may be additional discussion regarding the northwest section of the City. Mr. Daniel also noted that the Phyllis J. Freeman 5K has been postponed until Edwardsville Days in 2017, but that the Fall Family Picnic is still scheduled for Saturday, October 7.

CHIEFS (POLICE & FIRE)

Police Cpt. Mitchell noted that Officers Yazbec and Boyce will graduate from the Police Academy as of Friday afternoon.

Fire Chief Whitham noted that the EFD/EMS crews will be conducting hands-only CPR training at the Fall Family Picnic.

COUNCIL AND MAYOR COMMENTS

Councilmember Adams commended the EPD and EFD for their teamwork. He also congratulated staff on where the budget is at this point in the year.

Councilmember Stites asked about follow-up for lighting of the futsal court, noting that there might be a possibility for funding at the County level. Councilmember Stites also noted some have asked that the speed limit at the curve near 110th & Kansas Ave. be reduced, which Mr. Webb noted a speed study would need to be conducted.



CITY COUNCIL MEETING MINUTES

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7:00 pm

Mayor McTaggart asked that everyone show up Saturday for the Fall Family Picnic.

ADJOURNMENT

The meeting was adjourned at 8:43 p.m.

Zachary Daniel

City Clerk

K-32 Tri-City Multi-modal Redevelopment Plan

Wyandotte County, Kansas | Final Draft

Creating a Regional Destination

Acknowledgements

Stakeholder Advisory Committee

Lindsey Douglas.....	Union Pacific Railroad
Tom Stephens.....	Bonner Springs City Council
Craig Stephan	Bonner Springs Planning Commission
Ralph Easton.....	Edwardsville Planning Commission
Dave Streit.....	Edwardsville Resident
Garrett Mellott.....	Edwardsville Resident
Chuck Stiles.....	Edwardsville City Council
Jim Walters.....	Unified Government of Wyandotte County-Kansas City, Kansas Commissioner
Zach Owen.....	Metal Panels, Inc.
David Staker	Plastic Packaging
Chris Herre.....	Rose Design Build
Greg Kindle	Wyandotte County Economic Development Council

Technical Advisory Committee

Leroy Koehn.....	Area Engineer, Kansas Department of Transportation
Darryl Fields.....	Sr. Transportation Planner, Mid-America Regional Council
Sean Pederson.....	City Manager, City of Bonner Springs
Don Slone.....	Planning Director, City of Bonner Springs
Marcia Harrington	Economic Development Director, City of Bonner Springs
Michael Webb.....	City Manager, City of Edwardsville
Zach Daniel.....	Asst. to the City Manager, City of Edwardsville
Dave Knopick.....	City Planner, City of Edwardsville
Rob Richardson	Planning Department Director Unified Government of Wyandotte County-Kansas City, Kansas
Byron Toy.....	Principal Planner, Unified Government of Wyandotte County-Kansas City, Kansas
Jamie Farris.....	Planner, Unified Government of Wyandotte County-Kansas City, Kansas
Brent Thompson.....	Public Works Engineer, Unified Government of Wyandotte County-Kansas City, Kansas

Prepared for:

Mid-America Regional Council
Kansas Department of Transportation
Unified Government of Wyandotte County - KCK
City of Edwardsville
City of Bonner Springs

Prepared by:

Vireo

With assistance from:

Olsson Associates and Gould Evans



gould evans



Elected Officials

City of Bonner Springs

Jeff Harrington	Mayor
George Cooper	Ward 1 City Council Representative
Mike Thompson	Ward 1 City Council Representative
Dani Gurley	Ward 2 City Council Representative
Tom Stephens	Ward 2 City Council Representative and Council President
Bob Reeves	Ward 3 City Council Representative
Rodger Shannon	Ward 3 City Council Representative
Mark Kipp	Ward 4 City Council Representative
Joe Peterson	Ward 4 City Council Representative

City of Edwardsville

John "Tiny" McTaggart	Mayor
Chuck Adams	City Council President
Garrett Mellot	City Council Representative
Jason Gillam	City Council Representative
Margaret Shriver	City Council Representative
Chuck Stites	City Council Representative

Unified Government of Wyandotte County-Kansas City, Kansas

Mark Holland	Mayor/CEO
Melissa Bynum	At-Large District 1 Commissioner
Hal T. Walker	At-Large District 2 Commissioner
Gayle Townsend	District 1 Commissioner
Brian McKiernan	District 2 Commissioner
Ann Brandau-Murguia	District 3 Commissioner
Harold L. Johnson, Jr.	District 4 Commissioner
Mike Kane	District 5 Commissioner
Angela Markley	District 6 Commissioner
Jim F. Walters	District 7 Commissioner
Jane Winkler Philbrook	District 8 Commissioner

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Executive Summary

Vision

The vision for the K-32 corridor is:

“To create a regional destination characterized by green industries and business parks, attractive development, strong downtowns, and recreational areas set within a scenic and friendly environment that is accessible to residents and visitors by walking, biking, riding transit, and driving.”

Community Engagement

Twenty-five stakeholder and community meetings were coordinated during the planning process. The meetings and a series of opinion polls helped community members identify key corridor challenges, opportunities, and potential focus areas. They also discussed converting K-32 into a parkway. In community members' opinions:

- Park and recreational amenities are top opportunities.
- Transportation options for transit riders, cyclists, and/or pedestrians are the biggest challenge.
- Downtowns should be the highest priority focus areas for redevelopment activities.
- Landscaping and lighting are the most important features to include if K-32 were to become a parkway.
- K-32 could be renamed “Kaw Valley Parkway” or something similar.



Recommendations

Community ideas plus additional research and analysis framed the types of recommendations that are included in the **K-32 Tri-City Multimodal Redevelopment Plan**, including those for:

- Redevelopment
- Parks and greenways
- Transportation
- Infrastructure
- Place-making
- Environmental considerations
- Financing improvements

Top priority recommendations involve:

- Encouraging the continued development of the K-32 corridor as an employment center that draws workers from beyond the planning area to train for and obtain jobs at K-32's green industries and business parks.
- Targeting redevelopment activities to top priority activity centers, including K-32 in Historic Downtown Bonner Springs, near K-7, 4th Street, 78th Street, and the 65th Street/Turner Diagonal areas.
- Conducting a traffic study to forecast future traffic demand (vehicle, bicycle, pedestrian, and transit) and the corresponding number of travel lanes, bike/pedestrian facility types, ideal widths, and speed limits needed to safely accommodate all travelers along K-32; and then coordinate study results with the State's access management policies.
- Preserving and increasing parks/open spaces to expand the idea of “green” in the K-32 corridor; so it not only means jobs, but also recreation, and thereby draws new people to the area.
- Allowing the roadway width and amenities along K-32 to respond to the character of the land use and development adjacent to the route.
- Improving K-32 by giving it the feel of a “parkway”, including curbs and gutters, landscaped medians, turn lanes, tree-lined street edges, lighting throughout, and a new name.
- Partnering as “Tri-Cities” to pursue state and federal transportation funding for corridor-wide improvement projects.

Anticipated Outcomes

The *K-32 Tri-City Multimodal Redevelopment Plan* recommends the implementation of a series of land use, development, and transportation action steps over the next decade or more. If the recommendations are implemented:

- Industry would be the predominant development type in the corridor and help the area reach the transit densities needed to support on-demand bus service by 2025 or thereafter.
- Industrial jobs, including those from green industry, would make up over half of the employment opportunities in the K-32 corridor by 2025 or after.
- Recommended future land uses would increase tax revenue in the K-32 corridor; assuming full build out and an assessed valuation equal to the current rate, non-residential development would be a large contributor to the revenue generated.
- Most of the housing in the K-32 corridor would be low density or large-lot residential after 2026 if the recommended housing density is developed. As a result, most of the density needed to support bus service would come from industry, not housing.
- Conservation development (residential and non-residential) parcels would have greater access to alternative modes of transportation than standard residential and employment parcels after 2026.
- More conservation parcels (residential and non-residential) would have access to parks, open space, and trails in the future than typical residential and employment parcels after 2026.
- Fewer residential and employment parcels would be within the floodplain or stream buffer; conservation developments (residential and non-residential) would help protect natural features after 2026.



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INTRODUCTION

*The Unified Government of Wyandotte County – Kansas City, Kansas (UG) and the Cities of Bonner Springs and Edwardsville, Kansas, hereafter referred to as the “Tri-Cities”, in coordination with the Kansas Department of Transportation (KDOT) and Mid-America Regional Council (MARC), initiated the **K-32 Tri-City Multimodal Redevelopment Plan** in Wyandotte County during the fall of 2015. The Plan outlines the long-term transportation and redevelopment vision for the 8-mile K-32 corridor, spanning K-32 from N. 57th Street on the east to the westernmost limits of Bonner Springs on the west. The project is one of 13 across the region chosen for funding through MARC’s Planning Sustainable Places Program (PSP). The PSP Program provides local governments with financial support to advance detailed local planning and project development activities in support of Creating Sustainable Places, Transportation Outlook 2040’s Activity Centers and Corridors framework, and MARC’s adopted policy statement on regional land use direction.*



Introduction

K-32 is an important vehicular route, connecting Wyandotte County to Greater Kansas City. However, its potential as an economic generator, a multimodal corridor, and an environmental asset is yet unrealized. How K-32's opportunities and challenges are leveraged for overall corridor redevelopment began to be uncovered as the Tri-Cities' Technical Advisory Committee worked with community members, the Stakeholder Advisory Committee, and others through a community-based planning process that concluded during the summer of 2016.

The *K-32 Tri-City Multimodal Redevelopment Plan* provides the framework for the corridor vision. It recommends the action steps that the Tri-Cities should reference as they implement the vision, engaging and coordinating with residents, business and economic development representatives, property owners, transit providers, technical staff, elected and appointed officials, advocates, and many others throughout implementation efforts. Well over a decade is necessary to implement the vision outlined in this Plan. This planning document represents the first step in the process to improve K-32 in Wyandotte County.

Background

Today the K-32 corridor is Wyandotte County's southern employment center. Over 40% of the planning area from Bonner Springs to Kansas City consists of industrial development and there is countywide interest in pursuing additional industrial development, including green industries, as the corridor redevelops. However, during the 19th century, the corridor was home to traders and farmers, including Delaware Native American Henry Tiblow, Junius G. Groves, and Moses and Annie Grinter (of the Delaware Native American tribe).

Henry Tiblow operated the ferry used to cross the Kansas River for the Chouteau brothers' Four Horses Trading Post. The post was located in the area that would become Bonner Springs. The Bonner Springs Improvement Club promoted the high mineral content of the five springs in the area, along with its trees, parks, and proximity to Kansas City to draw investors to the community via train. The Grinter family operated a trading post a few miles east in Kansas City that sold an estimated 160 different types of goods to the relocated Delaware tribe. Since 1971, the Grinters' Kansas City home and land has been part of the Grinter Place Historic Site located at 78th Street and K-32. It is the oldest home in the county.

By the 1900s, Edwardsville was an agricultural and trading hub made famous by agricultural entrepreneur Junius G. Groves, who was one of the most successful African Americans in the early twentieth century. Groves was born into slavery, but as a freed man in 1902, he was producing more bushels of potatoes than any other farmer and become known as the “Potato King of the World”. He shipped potatoes, other vegetables, and fruit across the United States, Canada, and Mexico.

A railroad spur served the Groves family mansion and rail continues to play a definitive role in the character of the corridor. In fact, some of K-32 was built on the railroad bed for the former Kansas City, Kaw Valley, and Western Railway Interurban Line. The line ran from Lawrence, Kansas to Kansas City, Missouri and through the planning area until the 1960s. It provided both passenger and freight transportation. Union Pacific currently operates a rail line adjacent to the north side of the Kansas River; Burlington Northern Santa Fe (BNSF) runs a line on the south side of the river. A combined total of 58 freight trains and two AMTRAK passenger trains (Southwest Chief) travel through the corridor, including the town of Muncie (located on the south side of K-32 in Kansas City) on a daily basis.

The rail movements support the corridor's industrial character and likely contribute to the 1,000 trucks that the Kansas Department of Transportation estimates travel through the corridor daily. Trucks enter from the major north-south routes, including I-435 and K-7, and travel to shipping and distribution destinations along K-32. As a result, Bonner Springs has created a truck route that prevents trucks from traveling through the heart of the city's Historic Downtown. An initial Quiet Zone Study was conducted for the corridor as part of the Tri-Cities' planning process to identify potential improvement projects and costs. Such could reduce train noise and make it easier for adults and children to cross K-32 at key locations, such as 4th Street in Edwardsville. The Quiet Zone Study is available in the appendix of this planning document.

Planning Process

The *K-32 Tri-City Multimodal Redevelopment Plan* utilized a phased planning process that engaged community members and stakeholders in conversations about the corridor's existing needs and future improvements. The process began during the fall of 2015 and concluded during the summer of 2016.

Schedule for the Planning Process



Goals

The following goals defined the planning process:

- Creating a vision for the K-32 corridor that attracts new “green” industries and business parks with enhanced amenities, including trails, transit stops, and farmers markets.
- Increasing community access to healthy foods and a multimodal transportation network.
- Creating a realistic and sustainable land use plan that is tailored to each community as well as the designated Employment Revitalization areas south of I-70 in Wyandotte County.
- Creating walkable, transit-oriented development that includes affordable housing, green infrastructure and energy-efficient buildings.
- Identifying underutilized sites that could be linked to greenways and converted to recreational amenities.

Vision

In order to develop a community-inspired vision for the K-32 corridor, the planning team asked community members what single word or phrase they would most prefer to use to describe the K-32 corridor in Wyandotte County. The top three words that they selected were friendly, scenic, and industrial. The top three selected for what they wanted the plan to accomplish included development, look, and corridor. As a result, the vision for the corridor is:

“To create a regional destination characterized by green industries and business parks, attractive development, strong downtowns, and recreational areas set within a scenic and friendly environment that is accessible to residents and visitors by walking, biking, riding transit, and driving.”

The K-32 Vision in One Word or Phrase



Ideal K-32 Outcomes





EXISTING CONDITIONS

The following is a summary of existing conditions in the K-32 corridor. They involve: demographics, land use and zoning patterns, transit (bus and rail), and a review of existing adopted plans.

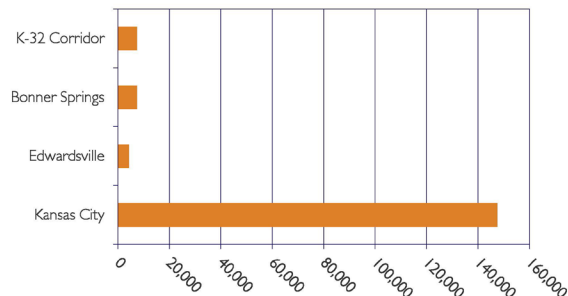
Existing Conditions

People

According to estimates from the 2010-2014 U.S. Census American Community Survey 5-Year Estimate:

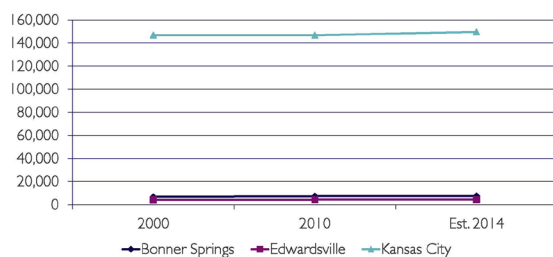
Population: An estimated 7,455 people live within the corridor:

2014 Population



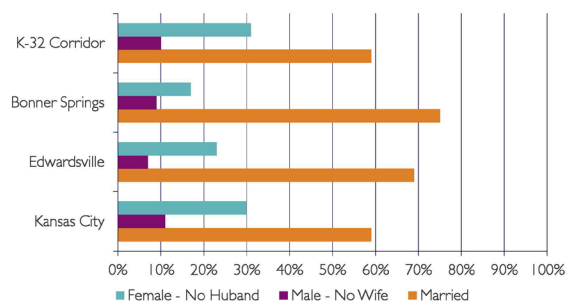
Trends: The Tri-Cities have maintained consistent populations over the last 14 years. Kansas City experienced a loss of less than 1% between 2000 and 2010 but gained an estimated 2.6% more residents in the four years that followed.

Population Trends (2000 - 2014 Estimate)



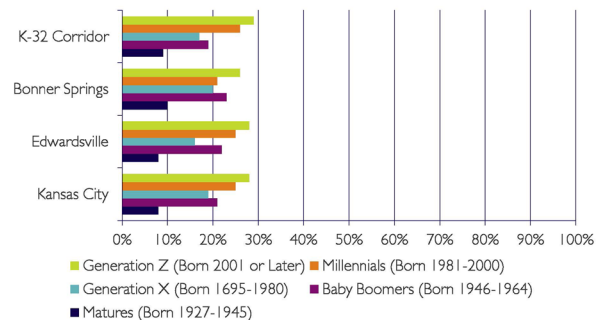
Family Status: Married families make up most of the households in the K-32 corridor and the Tri-Cities.

2014 Family Status



Generations: Younger generations (Generation Z and Millennials) make up over half of the population in the K-32 corridor. According to Dr. Jill Novak (University of Phoenix and Texas A&M University), each generation offers several characteristics:

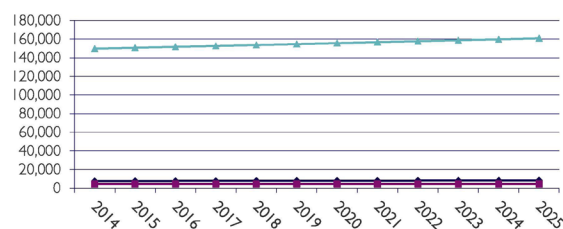
2014 Generations



- **Matures:** They are the richest, most free-spending retirees in history; and to them, "retirement" means sitting in a rocking chair and living your final days in peace.
- **Baby Boomers:** For them "retirement" means enjoying life after the children have left home and they are the first generation to have this belief. Their lives are longer because they have developed hobbies and exercise.
- **Generation X:** They change careers frequently, often seven changes in a lifespan, and are focused on their neighborhood rather than the world. Xers are survivors as individuals, want to be available for their children, and develop their marriages.
- **Millennials:** Also known as Generation Y, Millennials are unfamiliar with a world that lacks computers as they have never known such. They view the world as accessible 24 hours a day and seven days a week. They desire quick and instant access to information and processing. Millennials typically have strong views and prefer to work in teams.
- **Generation Z:** They are knowledgeable, savvy consumers who are inundated with brands and know how to get exactly what they want. They also have eco-fatigue, so they are tired of messaging that focuses on saving the environment.

Growth: Population estimates in the Tri-Cities were mostly flat from 2000 to 2014. A straight-line projection based on the less than 1% annual population growth that each city experienced in the last four years indicates similar flat growth. However, as the number of industrial jobs in the corridor grows, the daytime population is likely to increase. Greater housing and transportation options would encourage workers to live within the corridor and near their jobs. Major redevelopment initiatives, incentives, and marketing may also trigger population growth.

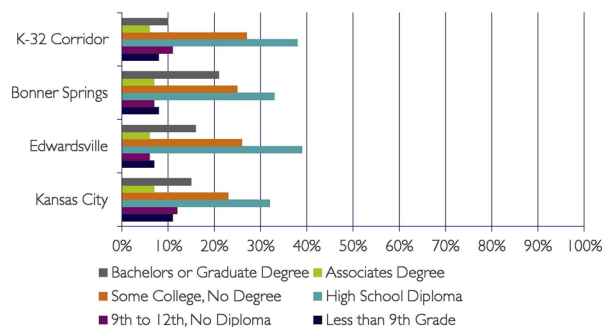
Population Growth
(Straight-line projection, 2014 - 2025)



Education

Attainment: The two most common levels of educational attainment in the K-32 corridor and Tri-Cities are a high school diploma and some college (no degree). According to the National Governor's Association's America Works: Education and Training for Tomorrow's Jobs report, "[a] postsecondary degree or relevant workforce certification is the 'new minimum' for the future workforce to meet the demands of the emerging job market and access a middle-class life or beyond... The emerging economy will provide few well-paying jobs for workers who merely have a high school education or less... researchers estimate that approximately half of all job openings over the next decade will require more than a high school diploma, although not necessarily a four-year degree". If green industry and other industrial sectors are emphasized within the K-32 corridor, job-training programs could help residents secure these new jobs.

2014 Educational Attainment

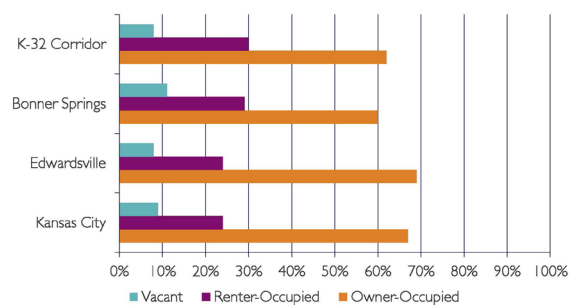


Housing

Estimates from the 2010-2014 U.S. Census American Community Survey 5-Year Estimate indicate:

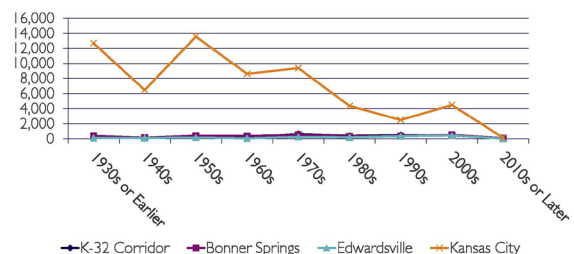
Occupancy: The proportions of housing occupancy in the K-32 corridor are comparable to those in the Tri-Cities. There are more owner- than renter-occupied or vacant housing units.

2014 Housing Occupancy



Construction: Housing units were built in greater numbers in Kansas City than within the K-32 corridor, Edwardsville, and Bonner Springs. Housing construction in the Tri-Cities and K-32 corridor has been decreasing since 2010. If the corridor hopes to retain Millennials, Baby Boomers, and Matures, the construction of additional housing that varies in type and/or design may be necessary.

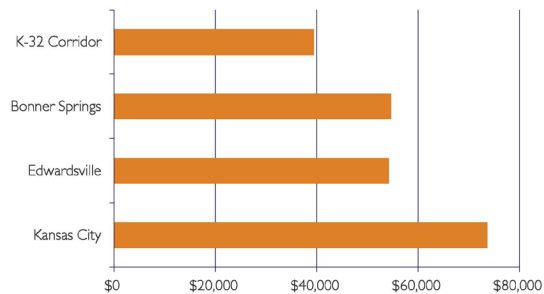
Housing Construction



Income

Median Income: The median household income in the K-32 corridor is \$39,404 which is similar to that in Wyandotte County overall (\$39,326). It is approximately 28% lower than the median incomes of Bonner Springs and Edwardsville and 54% lower than the Kansas City median. The Gini Index indicates that income inequality is greater in Kansas City than in either Edwardsville or Bonner Springs at .434, .362, and .355, respectively. Equality is achieved when the index is zero. New jobs in the K-32 corridor should help improve income equality outcomes of residents.

2014 Median Household Income

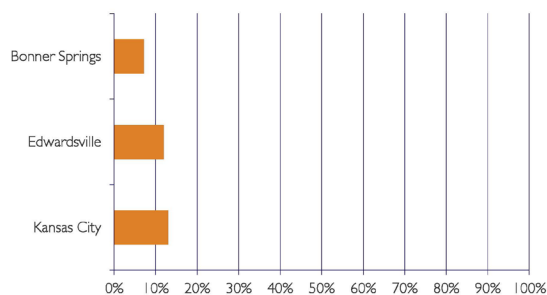


Employment

The 2010-2014 U.S. Census American Community Survey 5-Year Estimate indicates:

Concentrations: During 2014, approximately 61,700 people worked in Wyandotte County but lived outside of it while an estimated 22,200 both lived and worked within the county. Most large employment concentrations in the K-32 planning area are located in Edwardsville and Kansas City. Tiblow Transit currently services the Bonner Springs portion of the planning area. If transit were provided throughout the corridor, stops could correspond with employment areas and other activity centers, such as downtowns.

2014 Unemployment



Unemployment: The proportion of unemployed residents is higher in the Tri-Cities than the current national average (5%). It is 13% in Kansas City, 12% in Edwardsville, and 7.2% in Bonner Springs. Providing job training programs and on-the-job training for new employees may help decrease proportions of unemployment in the K-32 corridor.

Wages: The U.S. Census provides data on the wages workers earn. Those with low wages earn \$1,250/month, medium wage earners receive \$1,250-\$3,333/month, and high wage earners make over \$3,333 a month. Over 40% of workers in the K-32 corridor are medium wage earners, which is comparable to earners in Kansas City, Kansas (43%). Ideally, when additional jobs, including those in green industries, are added to the K-32 corridor, they will enable workers to earn higher wages.

2014 Worker Wages



Job Sectors: Education and Healthcare, Manufacturing, Scientific and Professional, and Retail Trade are among the top industries in the UG. The University of Kansas Hospital and Medical Center, General Motors, Kansas City, Kansas Public Schools (USD #500), and the UG are the largest employers. Fast Companies' 2015 article, "The Top Jobs in 10 Years Might Not Be What You Expect", predicts the following:

- 25% of today's full-time workers will be working on-demand as free lancers for short contracts – jobs that can done digitally from anywhere are top candidates
- Free-lance professional managers or directors who specialize in very specific projects
- Free-lance teachers responding to the increasing demand for on-line courses
- Urban/artisan farmers
- End-of life planners (by 2025, the World Health Organization predicts that 63% of the global population will live over the age of 65—some well past their centenary)
- Senior care-givers for the aging population
- Remote health care specialists who can manage some of the work of local or regional healthcare specialists who need to work on more critical patients and needs
- Neurological implant technicians
- Smart-home handy/repair people
- Virtual reality experience designers
- 3-D print design specialists

Further, the 2012 U.S. News: Money article, "Where Will the Jobs be in 2020", states:

“urban areas with high demand for educated workers are the best bets for finding work... The U.S. Bureau of Labor Statistics (BLS) projects that positions in healthcare and social assistance, professional and business services, and construction will represent more than half of the 20.5 million new jobs it expects to be created by 2020. More than 34 million additional job openings will be available to replace workers leaving the labor force. And of the five occupations expected to have the largest number of openings, only one of them, nursing, requires an associate's degree or higher. More to the point, those five occupations don't create economic growth but reflect growth that's being driven in other, higher-skilled sectors of a local economy. These “driver” careers increasingly demand college and advanced degrees. Educational attainment is thus a powerful predictor of where you should look for work.”

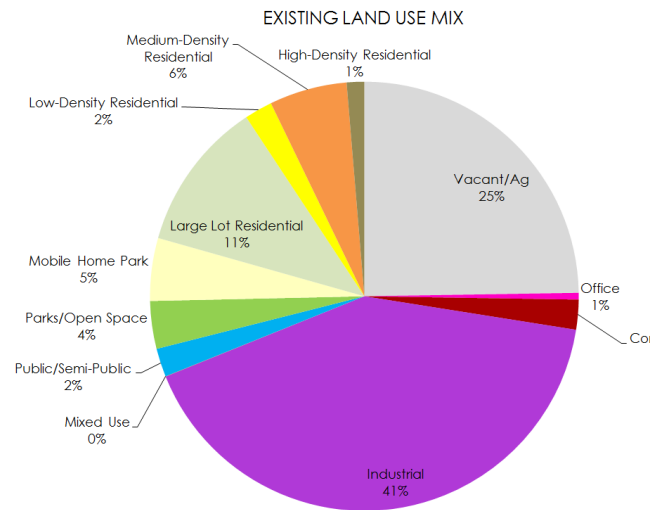
If the K-32 planning area is to continue developing as an employment center that focuses on the development of green industries that pollute less and help solve complicated environmental issues, job training locations should also be identified and created to help workers obtain higher-paying green jobs and those in other industries, from the entry-level position and beyond.



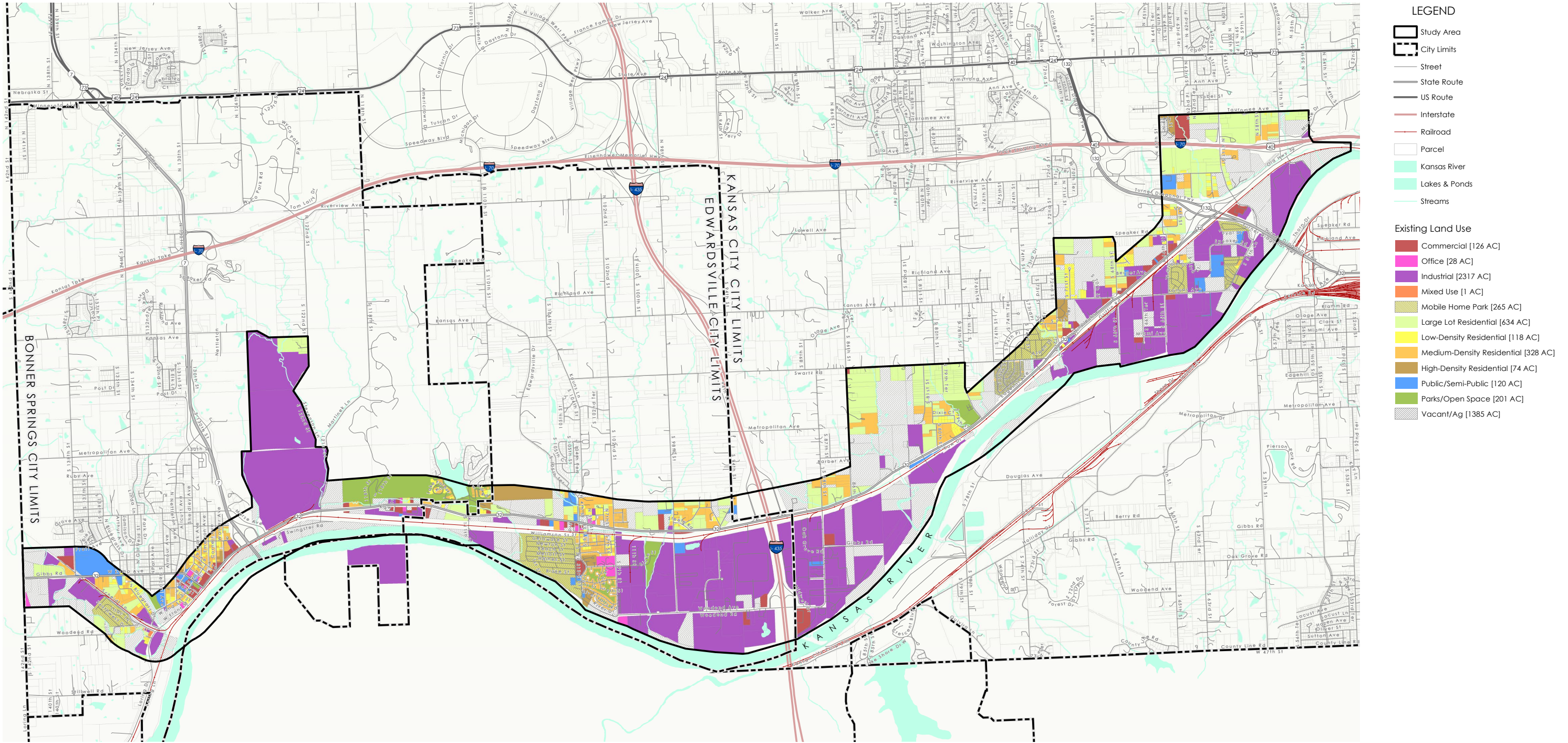


Existing Land Use

The K-32 corridor consists of 7,092 acres. Industrial, vacant/agricultural, and large lot residential land uses make up over 75% of the existing land uses in the area.



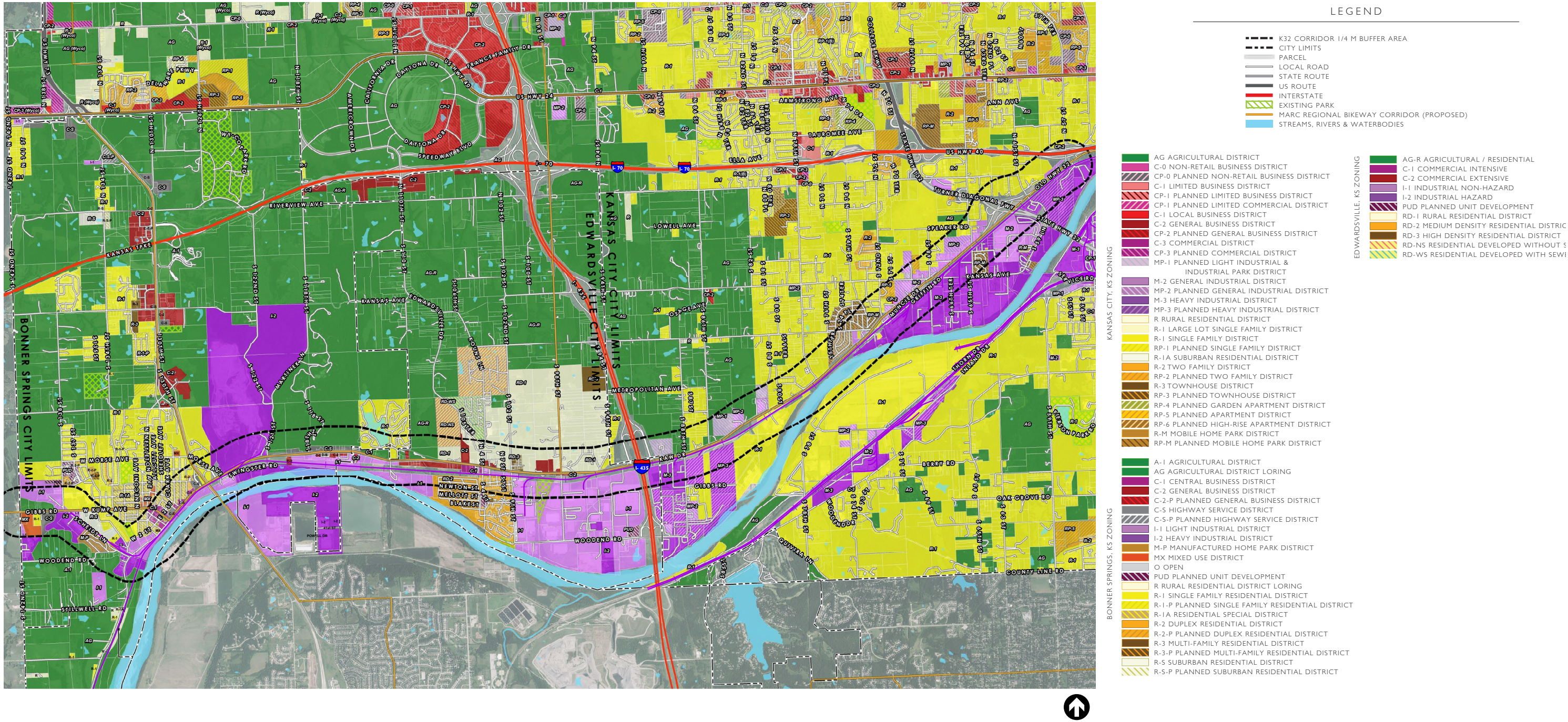
K-32 Tri-City Multimodal Redevelopment Plan
EXISTING LAND USE



K-32 Tri-City Multimodal Redevelopment Plan

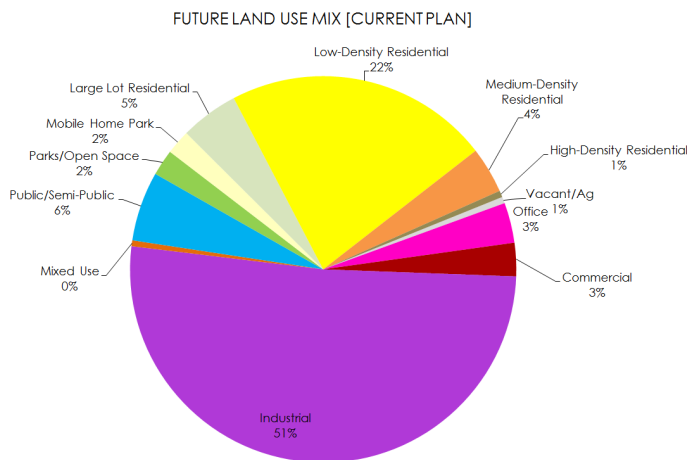
EXISTING ZONING

Existing zoning is consistent with the land use and supports various types of industrial and residential development.



Adopted Future Land Use

Together the City of Bonner Springs' Vision 2025 Comprehensive Plan (adopted in 2008), The Edwardsville Plan (adopted in 2012), and the UG's City-wide Master Plan (adopted in 2008) recommend that about half (51%) of the K-32 planning area develop industrially. Low-density residential uses would make up the second most prominent type of development, consisting of 22% of the overall corridor:



In addition, the Vision 2025 Comprehensive Plan recommends the following in relation to K-32 in Bonner Springs:

Parks, Open Space, and Connectivity:

- Plan for a trail along abandoned railroad from 138th at K-32, west and north, with a small park at the head of the trail south of Whispering Woods.
- Pursue land and easement donation/dedications for trails and bike lanes, and secure land or easements from landowners and new developments.
- Incorporate trails into the design and construction of new developments.
- Provide connectivity between all trails and public open spaces.

Economic Development:

- Promote community aesthetic improvements to create a "Bonner Springs character" in community gateways, such as the K-32 entrance to the city.
- Establish landscape planting themes for K-7/K-32.

Future Commercial Needs:

- Plan for good urban design and implementation of its major transportation plan at key interchanges, including those at and intersections with K-32 through the city.
- Extend the "atmosphere" of the central business district boundary to include adjacent residential and commercial areas down side streets, and consider a roundabout at the K-32 intersection.
- Provide "way-finding" directional signage from K-32 and incorporate a special design theme consistent with the historic character of downtown that links the downtown with its perimeter districts, both residential and commercial.

The Edwardsville Plan recommends that growth and expansion of the community be enhanced south of and along K-32. It recommends continued concentration of development along K-32 at 4th Street and west of 4th due to the steep terrain on the north and floodplain designation on the south. The Plan also notes the following stormwater and sewer concerns for Edwardsville in relations to the K-32 planning area:

Stormwater: Many of the City's streets use a combination of drainage ditches and culverts to divert stormwater. Newer subdivisions and some recently improved roads include curb and gutter. Stormwater drainage can be a challenging issue due to the City's proximity to flat areas near the Kansas River and the hilly terrain north of K-32.

Sewer: Sewer lines are currently limited to the southern portion of K-32 and extend slightly north of the highway. Hundreds of septic systems serve residential and other properties throughout Edwardsville. This limits the types of development that can currently occur within the City, and the densities at which they can develop. The following facilities are located within Edwardsville to serve the City's residents:

- Woodend Pump Station (9th and Woodend)
- Lift Station at 106th and Kaw Drive is served by 6" lines
- Lift Station at 111th and Black is served by 8" lines

Betts Creek Sub-Drainage Area: About 2,880 acres in size north of K-32 Highway, the entire Betts Creek sub-drainage area makes up almost half of the total land area for the city of Edwardsville, or 4.5 square miles of the approximately 9.5 square miles of land area within the corporate limits of Edwardsville. There are three branches to the Betts Creek sub-drainage basin. The western leg drains near the intersection of Edwardsville Road and K-32 Highway and encompasses the drainage area between 104th Street and Edwardsville Road. The main branch of Betts Creek extends essentially from 110th Street and Interstate 70 at the northern extent of the City, south to near the intersection of 98th Street and K-32 Highway. The eastern branch of Betts Creek generally drains only the land area between 98th Street and 94th Street, south of Kansas Avenue.

Kaw Valley: Characterized mostly by the lowland surrounding the Kansas River, the Kaw Valley land area in the City is located mostly south of K-32. This relatively flat land area was formed over many centuries by the Kansas River meandering from its river banks and flooding. The downstream portions of the other sub-drainage basins technically encompass the Kaw Valley area of Edwardsville as each creek drains into the Kansas River. However, the lack of slope, the unique soils of the valley floor area, and the potential of flash flooding define the unique development characteristics of this southern portion of the City.

UG's City-wide Master Plan includes the following recommendations for the K-32 area:

Urban Design: Use urban design and streetscape improvements to change 78th Street (from K-32 to Parallel Parkway) and Kansas Avenue (from the Kansas/Missouri state line to the Turner Diagonal) into a Primary Image Streets where they serve as one of the first and final impressions of the City for visitors, residents, and workers near the K-32 corridor. Detailed direction for Primary Image Streets includes:

- Incorporating (a minimum 10-foot wide with a minimum 5-foot landscaping zone between the walk and back of the curb) on both sides of the street to accommodate comfortable pedestrian and bicycle connections as well as retail businesses and outdoor cafes.
- Gateways and/or public art incorporated into major intersections and districts.
- Street trees, planters, site furnishings (benches, movable planters, way-finding, interpretive signage bike racks, trash receptacles), decorative banners, and pedestrian lighting are also recommended.

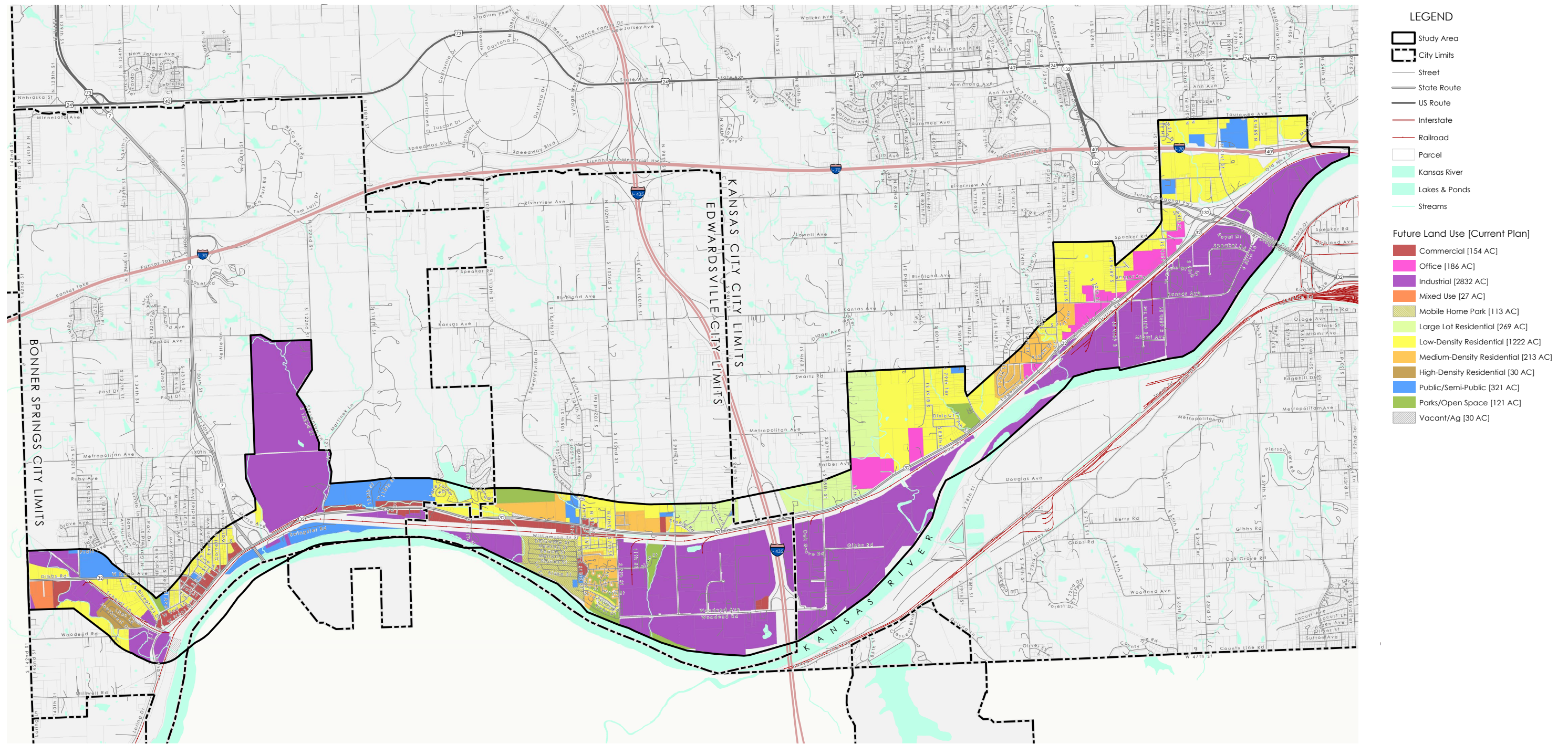
Image Streets: Reinforce the perceptions of individual neighborhoods by creating Secondary Image Streets, e.g. at Kansas Avenue (Turn Diagonal to I-435). Specific guidance for Secondary Image Streets includes:

- Sidewalks on both sides of the street (a minimum of 8-feet wide with a 5-foot minimum landscaping zone between the walk and the back of curb) to accommodate pedestrian connections.
- Minor "neighborhood" gateways at major intersections.
- Decorative banners on street lights that highlight neighborhood identity.
- Basic site furnishings (benches, bike racks, trash receptacles) at major intersections and transit stops.
- Pedestrian lighting to illuminate neighborhood-retail areas, trails, parks frontages, and activity areas; lighting fixture styles should reflect neighborhood character.

Revitalization and Green Design:

- Provide a jobs/housing balance and utilize existing incentives, such as Empowerment Zones, to encourage local businesses to hire residents who live within the City.
- Work with the State of Kansas to upgrade local incentive packages and tools for attracting and retaining businesses and industries thereby making the city more competitive with other cities within the metropolitan area and across the country. Such incentive packages should be targeted to businesses and industries that create local jobs.
- Upgrading aging and deteriorating infrastructure to attract new industries and businesses.
- Attracting "green" industries that employ a large percentage of local residents and provide job training programs.
- Working with MARC, the Environmental Protection Agency (EPA), American Institute of Architects (AIA), American Planning Association (APA), Kansas City Home Builders Association (KCHBA), and others to provide training and education to building professionals, homebuyers, homeowners, realtors, lenders and general public about best practices for green and energy efficient construction (Leadership in Energy and Environmental Design - LEED standards).
- Proactively acquire, clean up and reuse brownfields sites.
- Construct bicycle and pedestrian trail connections to complete the portion of the MetroGreen trail system along the Kansas River and construct associated amenities, such as ample landscape buffers from adjacent industrial uses, streetscape and pedestrian-scale lighting.

K-32 Tri-City Multimodal Redevelopment Plan
FUTURE LAND USE (current plan)



Transportation

Roadways: K-32 is an east-west state highway with paved shoulders, medians (striped, concrete, and raised), and turn lanes at key intersections. It consists of 13.5-foot asphalt lanes and ranges from two to five lanes in width. Because it functions as both a state highway and city street, K-32 is also referred to as a City Connecting Link whereby KDOT and the Tri-Cities coordinate responsibilities.

Bike Routes, Sidewalks, and Trails: Although cyclists, walkers, and joggers use the route, there are no specific accommodations for them on K-32 with the exception of sidewalks on the north side of K-32 in downtown Bonner Springs. Sidewalks are also present on some of the local, north-south streets that connect to K-32, specifically those west of the K-7/I-70 interchange (on the north side of K-32) and at 4th Street (south of K-32).

MARC's MetroGreen plan recommends the development of a multiuse trail along K-32 and K-7. During the K-32 planning process, the City of Bonner Springs and KDOT began initial discussions for installing a portion of the trail on K-7 over K-32 that could connect to the City's parks. The City of Edwardsville is constructing trails near its south industrial area and near the Kansas River. UG's adopted policies also support trail development in Wyandotte County's K-32 corridor.

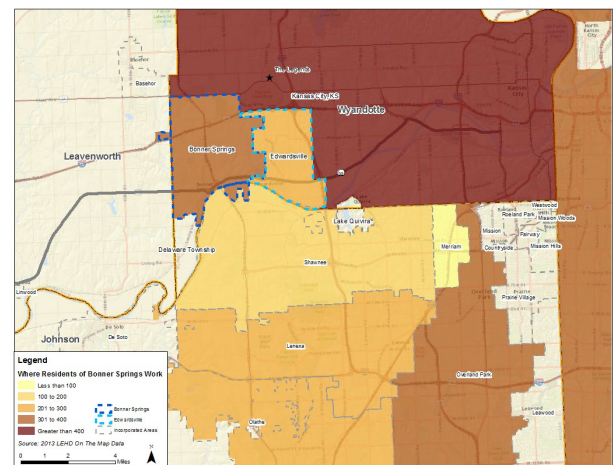
Future sidewalk and/or multiuse trail construction will be necessary if K-32 is to become a multimodal corridor that enables pedestrians to travel from all directions and reach key destinations, such as downtown redevelopment areas, employment centers, and entertainment options.

Transit Service: Bus service is available in some parts of the K-32 corridor. Tiblow Transit operates within Bonner Springs Monday through Friday, 8:30 a.m. to 4:30 p.m. The service connects to parts of Kansas City, Kansas three days a week; provides pickups in Edwardsville two days-a-week, serves parts of Kansas City, Kansas three days a week, and serves the Johnson County Medical facility two days a week. UGTransit (UGT) operates Route 115 Kansas Avenue, which operates at the very eastern edge of the K-32 corridor at Kansas Avenue and 78th. The routes operate Monday through Friday from 5:30 a.m. to 7:30 p.m. at a 60-minute frequency.

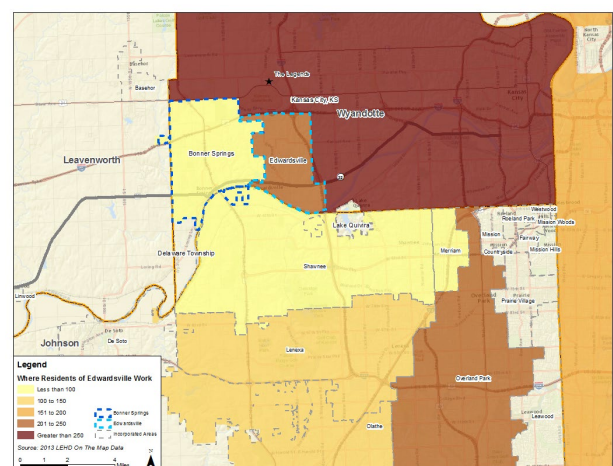
Transportation to Work: Based on the 2010-2014 U.S. Census American Community Survey, most (81%) of Wyandotte County residents drive alone to work. An estimated 14% carpool and the balance walk, use public transit or transit, and work from home. The average commute time is approximately 21 minutes. No transit service currently serves the entirety of the K-32 corridor. A large number of workers and residents travel between Edwardsville, Bonner Springs, and surrounding communities.

Adding regularly scheduled transit options would increase the ability of employees to access employment sites within the corridor and in other parts of the metropolitan area. Transit options could also provide corridor residents with improved access to medical, social, retail, and transportation

Where Bonner Springs Residents Work (see Transit Memo in appendix)



Historic Edwardsville Residents Work (see Transit Memo in appendix)



services outside the corridor. What's more, increasing corridor transportation options could increase the appeal of living in or visiting the corridor for Millennials who increasingly prefer less dependence on personal vehicles.

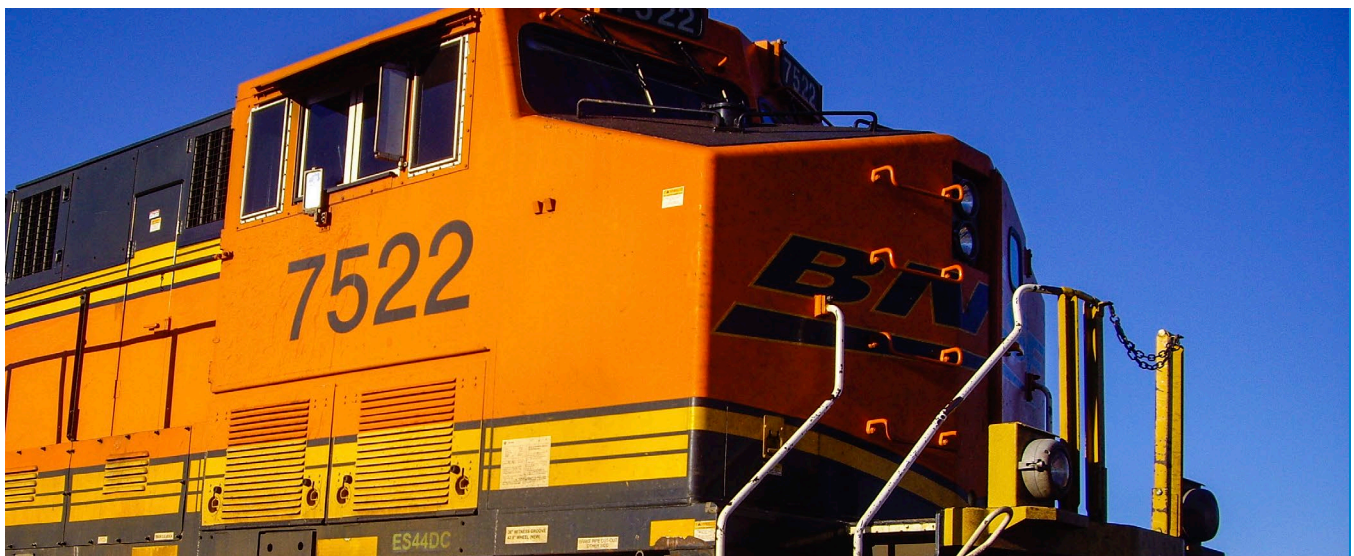
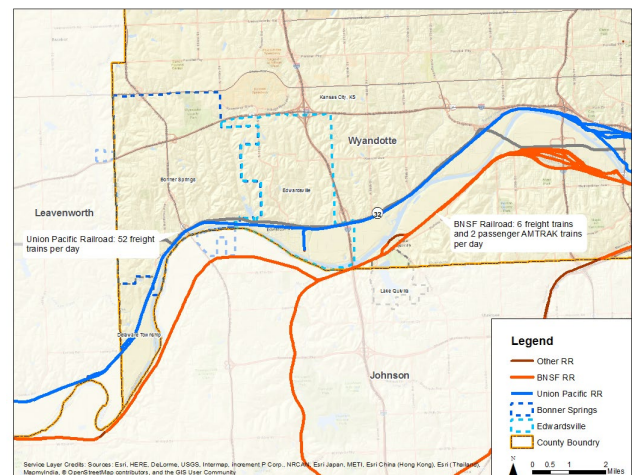
Freight: K-32 parallels two railroad lines. The Union Pacific line operates directly adjacent to the K-32 corridor on the north side of the Kaw River and runs 52 freight trains per day. The BNSF operates on the south side of the river with six freight trains and two AMTRAK passenger trains (Southwest Chief) per day. KDOT estimates 1,000 trucks travel K-32 each day. Community members have commented that the traffic creates congestion on K-32. They have also commented about issues with train noise and crossing the tracks.

Interurban Passenger Rail: A 2002 study examined the feasibility of operating commuter rail between Lawrence and Kansas City. The BNSF line was evaluated as an alternative due to the rail line accessing much higher population portions between Lawrence and Kansas City than the Union Pacific line. The study recommended that capacity improvements would be necessary at several points along the line to avoid conflicts with freight or existing Amtrak service.

- Capacity improvements would be required at De Soto to allow the RoadRailer (AMTRAK mail and express) switching operations during commuter periods; at Argentine Yards to mitigate the very heavy freight traffic; and at Union Station to provide rail connections to the station itself. Additionally, the railroad may require a "capacity contribution" from commuter rail as a cost of entry to the line.

- Because the capital costs necessary to make the line suitable for commuter passenger rail service would be \$11.7 million, with a \$5.2 million annual operating cost for three trips in the morning and three in the evening, with a projected 2,238 daily rail trips, this was determined to be insufficient ridership for the cost. The study estimated that the subsidy required for a daily round-trip between Lawrence and Kansas City would be \$12.98 per rider, which would result in a \$3.7 million annual operating subsidy.
- Since the time of the interurban study, the annual population growth rate of 0.6% in Wyandotte County, 2.85% in Bonner Springs, and 1.4% in Edwardsville, or elsewhere along the BNSF line, has not been sufficient to increase ridership potential. The figure below displays the existing rail service.

Railroad Service (see Transit Memo in appendix)





COMMUNITY ENGAGEMENT

Over the course of nearly a year, the planning team engaged Bonner Springs, Edwardsville, and Kansas City community members in person and thousands in the Tri-cities and nearby communities via online tools during the community engagement process for the K-32 Tri-City Multimodal Redevelopment Plan. Four periods of community engagement took place in coordination with the four phases of the planning process. Each began with a Stakeholder Advisory Committee meeting followed by two public meetings (alternating Tri-City locations), an online opinion poll/comment form, social media posts (Facebook.com), and a Planning Commission update.

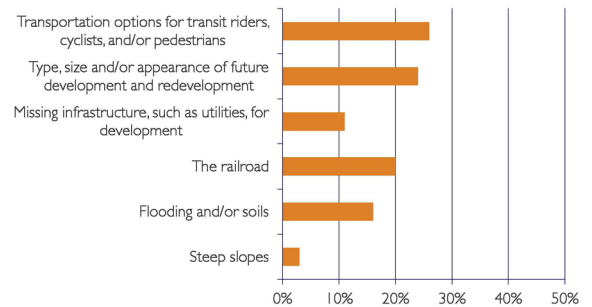
Community Engagement



Round One

The first period focused on identifying the vision for the corridor; top challenges and opportunities, and ideal accomplishments. Participants mapped their comments on large-scale, corridor maps and provided additional feedback about the types of challenges and opportunities that were identified and why.

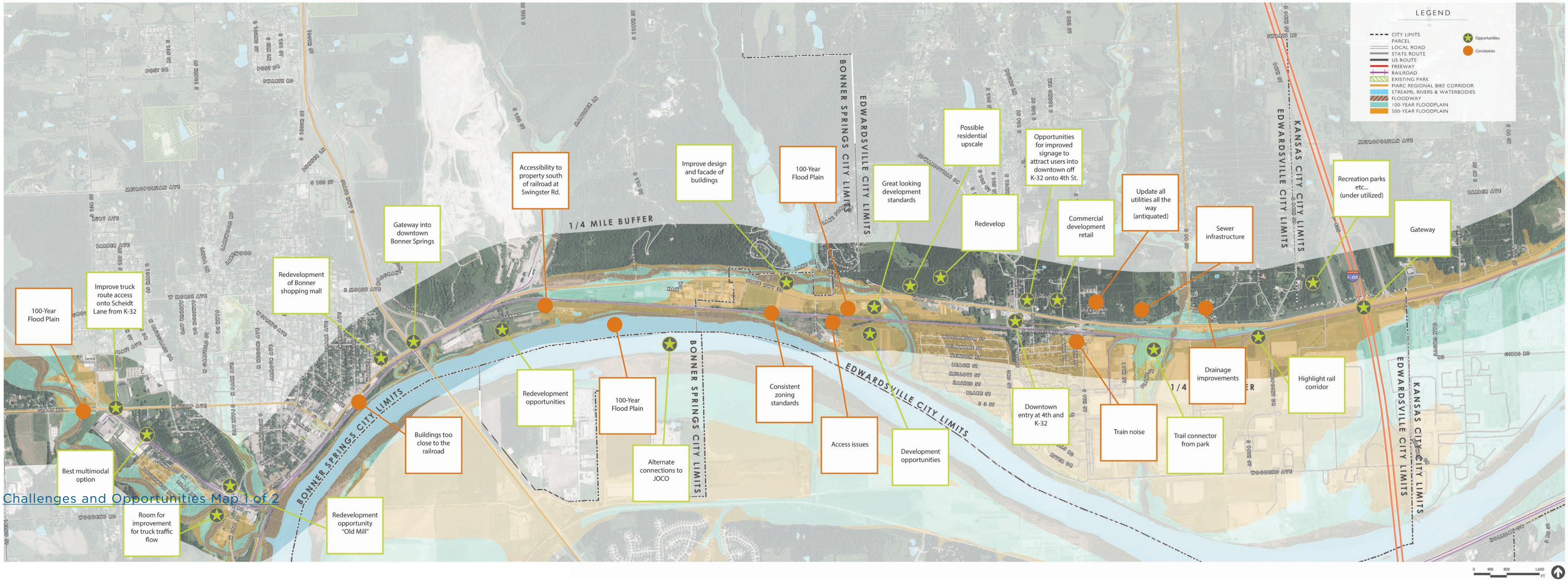
Top Challenges



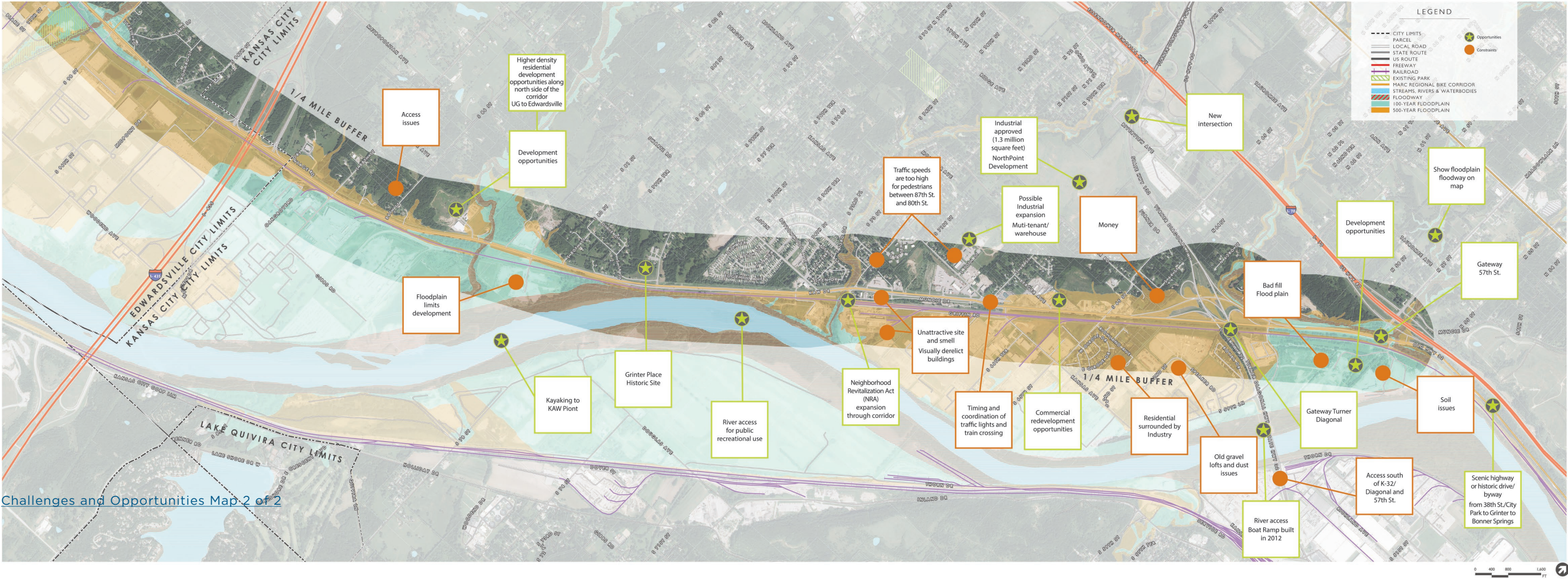
The top three challenges related to the railroad, multimodal transportation options, and the type, size, and scale of future development. Meeting participants commented about the lack of sidewalks for walking along K-32 to shopping destinations and restaurants and pedestrian accommodations for crossing K-32 to reach Edwardsville Elementary School and other locations. They also discussed emergency response and access issues tied to trains blocking entry into Edwardsville. Additional comments about the railroad focused on train noise and associated traffic. Other comments concerned the appearance of the overall corridor. Community members expressed a desire to place utility lines underground, improve and maintain building facades, and a need to be sensitive about the way in which future development relates and transitions over time in relation to existing uses throughout the corridor.

K-32 Tri-City Multimodal Redevelopment Plan

CHALLENGES AND OPPORTUNITIES (1 of 2)

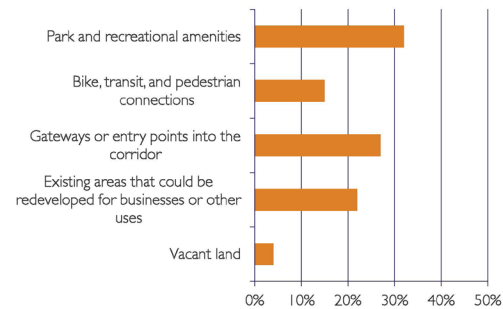


K-32 Tri-City Multimodal Redevelopment Plan
CHALLENGES AND OPPORTUNITIES (2 of 2)



The top two opportunities to leverage for K-32's future included park and recreational amenities and existing areas that could redevelop for businesses or other uses. Community members commented about the importance of redeveloping existing and/or vacant land along the highway and updating downtown areas in a way that could attract new investment, add jobs, and increase the tax base. They also commented about incentivizing existing businesses to update and/or clean up their buildings. Building updates would happen in coordination with infrastructure improvements, such as the installation of curbs, gutters, utility burial, highway paving/restriping, and more. Feedback about recreational opportunities involved connecting to the Kansas River by providing access for kayaking, canoeing, and fishing. Adding a trail between the river and the railroad was also important to community members.

Top Opportunities



Round Two

The second period of engagement centered on identifying redevelopment areas, investing in transit and bicycle/pedestrian improvements, and converting K-32 to a parkway.

Meeting attendees discussed the possibility of redeveloping the areas generally defined as Sheidt Lane, downtowns, K-7 Interchange, large parcels of land, 65th Street and Turner Diagonal. They commented that targeted activities made sense and stressed the importance of focusing on Downtown Bonner Springs and Edwardsville, creating unique personalities for them, adding retail, restaurants, and other items. They commented that redevelopment should consider existing businesses and residents, as redevelopment activities in one area could have negative stormwater (silt and erosion control) impacts on nearby properties, such as Lake of the Forest.

Transportation-related comments focused on the need for ingress/egress improvements at various corridor intersections. The need for safe pedestrian access across K-32 was also a topic of conversation. Community members commented about including a robust trails network that would attract Millennials who are moving back to the area because of its safe and affordable feel and amenities. They also commented that K-32 is a popular route for both bicyclists and motorcycle riders.

Community members were in favor of exploring the idea of converting K-32 to a landscaped parkway similar to the way in which Highway 210 (Armour Road) travels through North Kansas City in Missouri, transforming from a 7- and 6-lane divided roadway to a 3-lane road (see photo below). Downtown Highway 210 is tree lined, includes two through lanes, a central turn lane, traffic signals, diagonal parking, sidewalks, and buildings that are close to the sidewalk edge.



Round Three

A third period of meetings and polling concerned the phased improvement scenario for the corridor. The scenario consisted of a realistic, 10-year vision (2015-2025) and a year 11+ (2026 and Beyond) aspiration for land use, development, and multimodal transportation. Those who attended the meetings shared their thoughts about changing the character of roadway to correspond to the types of activity centers located along it, such as downtowns, historic sites, employment concentrations, and other areas.

They commented that a proactive approach to redeveloping downtown Bonner Springs and Edwardsville was important and discussed place-making strategies, the importance of balancing natural with industrial uses, and eliminating the perception that the Kansas River is a barrier. They also commented that transit connections and vanpooling locations would help visitors and job seekers outside the corridor reach it from places close to I-70, such as the Legends at Village West shopping center and the proposed Turner Diagonal Business Park in Kansas City, Kansas.

Additional conversations with stakeholders indicated that some community members were against narrowing K-32 through downtown areas. They commented that doing so would result in negative impacts, such as traffic bypassing their community and becoming too congested. They also commented that cyclists travel K-32 but expressed concern about adding bicycle accommodations to a route that semi-trucks also use.

Round Four

The fourth and final period of meetings and polling concerned the initial draft of the **K-32 Tri-City Multimodal Redevelopment Plan** and its implementation steps. Participants commented on the most important implementation priorities for the corridor. Key priorities related to redevelopment, transportation, parks and open space, place-making, and financing improvements. When asked about the degree of importance that should be assigned to top priority recommendations, community members responded that the following were very important:

- Conducting a traffic study to 1) determine the roadway improvements needed to accommodate all travelers along K-32 safely and 2) improve access management policies.
- Targeting redevelopment activities to top priority activity centers, including downtowns and other areas.

Community members review the phased improvement scenarios for the K-32 corridor



Community members review top priority recommendations for improving K-32 in Wyandotte County





PRELIMINARY IMPROVEMENT CONCEPTS

The project team and community members explored focus areas for potential improvement efforts rather than pursuing block-by-block redevelopment of the 8-mile K-32 corridor.

Preliminary Improvement Concepts

Potential Improvements

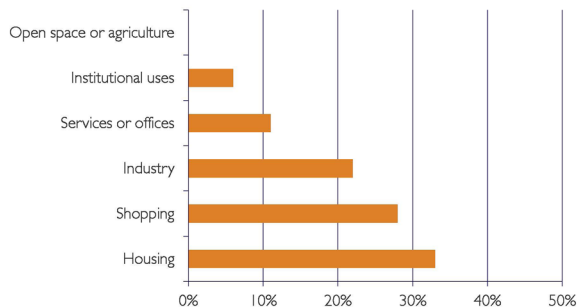
Key improvement concepts involved:

- Scheidt Lane
- Downtown Bonner Springs and Edwardsville
- K-7 Interchange
- Large parcels of land
- 5th Street and Turner Diagonal
- 78th Street
- Converting K-32 into a parkway
- Transit routes

Scheidt Lane Area

The Scheidt Lane area was largely identified because it consists of older residential development that is in need of repair and/or upgrade. The area is also adjacent to industrial development, opposite a railroad spur, and within the floodplain. If it were redeveloped, it could become open space, additional industry, or other types of development. Community members commented that the area should remain residential, specifically high density residential, to continue to accommodate the Bonner Springs Estates mobile home park.

Scheidt Lane Development Options

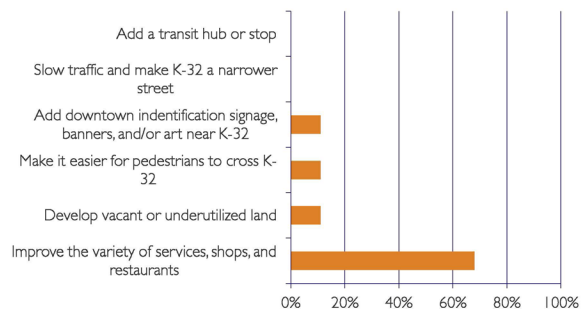


Downtowns

Downtown Bonner Springs and Downtown Edwardsville were targets because early in the planning process, community members identified this improvement as an important opportunity for the corridor that could benefit residents and visitors alike. Improving the downtown areas might also slow the traffic that community members have commented (throughout the planning process) travels too fast through both cities. If purposeful redevelopment and investment efforts were pursued, both downtowns could be transformed into active, multimodal, mixed use (residential/office retail or retail/service/public-semi-public) centers with unique community identities that reflect their historic pasts.

The City of Bonner Springs has invested in banners, pedestrian-level lighting, and sidewalks in its downtown, including along K-32. It is also interested in redeveloping its Historic Downtown. Underutilized sites could be

Important Strategies for Strengthening Downtown Areas



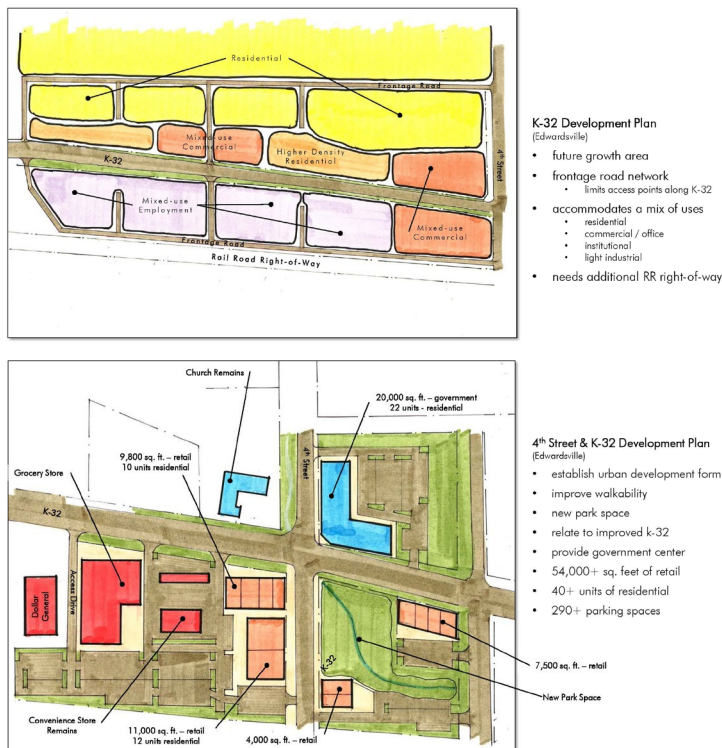
Sample Downtown Bonner Springs Improvement Concept



redeveloped with retail services, such as a neighborhood market on the ground floor and residential above. If Tiblow Transit relocates closer to K-32, it could become a multimodal transit hub and include a transit route that travels along K-32, into Historic Downtown Bonner Springs, and through the redevelopment site.

The City of Edwardsville conducted a building efficiency and safety analysis during 2015/2016, and as a result, has expressed interest in relocating its municipal offices to a vacant parcel of land located on the northeast corner of K-32 at 4th Street. The move could provide the opportunity to combine government services with the community's retail needs, including providing medical or pharmaceutical services for the City's older residents, in the same building. Moving north would also create an opportunity to redevelop the existing government complex as a second mixed use node that serves the needs of Edwardsville residents. Fourth Street would then connect both potential mixed-use centers and provide not only a vehicular connection, but also a multiuse path for those walking or biking between the nodes, Edwardsville Elementary School, Edwardsville Christian Church, the local U.S. Post Office, housing, as well as the Edwardsville Community Center.

Sample 4th Street Improvement Concepts

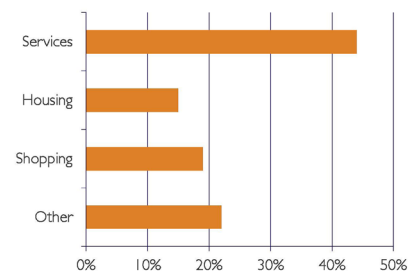


Community members indicated the most important revitalization strategy for Downtown Bonner Springs and Edwardsville was improving the variety of services, shops, and restaurants. The strategy of slowing traffic along K-32 and narrowing it, e.g. from four lanes to three lanes and including an on-street bike path, sidewalks that are buffered by on-street parking, and landscape amenities was not selected, although doing so would enhance downtown revitalization and redevelopment activities and improve traffic safety.

K-7 Interchange Area

The K-7 Interchange area is the gateway into Bonner Springs for all travelers coming from Edwardsville on the west, both Bonner Springs and Kansas City on the north, and Shawnee on the south. Land on the north side of K-32, just west of the interchange and near Werner Street, is developed with auto-oriented uses, including a small commercial shopping center that is approximately 50% vacant and a gas station. If redeveloped, the new center could offer retail/services and/or entertainment. If the center's buildings were positioned near the street edge, parking could be located to the side and/or rear of the buildings or even on the street. The shift in building and parking location would support a more walkable, downtown shopping experience. In addition, there is an opportunity to improve the connection to Moon Marble Company, which is directly across the street on the south side of K-32. Community members have frequently commented that Moon Marble is a major tourist and shopping destination.

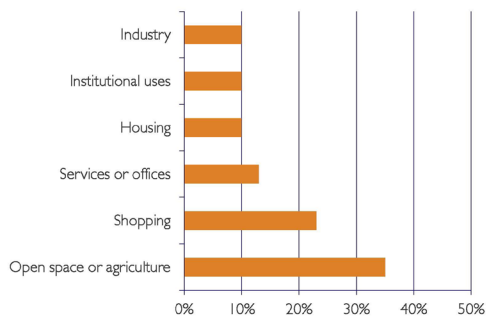
K-7 Interchange Development Options



Large Parcels

Development parcels in single ownership offer broad opportunities for development and redevelopment, as they could become new neighborhoods, recreation and entertainment destinations, or other features. However, community members commented that those that are east of the K-7 and I-70 interchange in Bonner Springs should remain undeveloped or unchanged. Doing so is consistent with recent development initiatives, such as Holliday Sand and Gravel Company's plans to develop its site into an industrial park.

Development Options for Large Parcels



78th Street Area

The State of Kansas owns the Grinter Historic site, including the Grinter Barn, home, and surrounding land. Undeveloped land exists near the northeast corner of K-32 at 78th Street. A large area of open space surrounded by woodlands characterizes the site. If the trees on the site were preserved, there is potential to develop a restaurant and entertainment venue on the remaining land and link it to the Grinter Museum via a pedestrian path. Community members have expressed a desire for more entertainment options within the K-32 corridor; such as a restaurant to help draw people to the Grinter Museum and thereby make the site an even more appealing destination. Some community members also commented that a turn lane should be added to K-32 to permit safer turning movements onto 78th Street. Others have reached out to elected officials, asking for the installation of a traffic signal at this location.

Grinter Place Development Plan

- maintain natural/rural character
- maintain historic site and structures
- create new retail, restaurant, recreation & entertainment venue
 - provide parking for new venue
- connect historic site and new venue by road and by trail
- use existing clearing and treed area for recreation and trail system

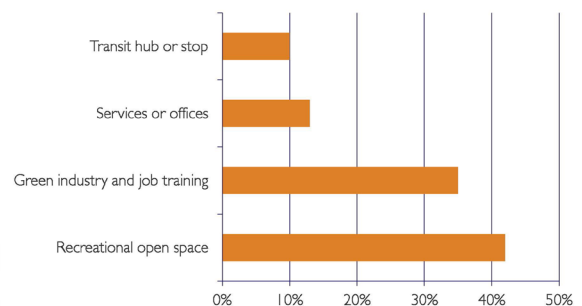


65th Street and Turner Diagonal Area

The area east and west of 65th Street and the Turner Diagonal is home to approximately 1/3 of the industrial development within the K-32 corridor. The portion south of K-32 is mostly within the floodplain. Its redevelopment potential beyond industry is limited. If a significant redevelopment opportunity were to become available, it would be possible to streamline interior roadway circulation, manage access, and more efficiently serve business and industrial park development and the truck traffic it generates. Land on the north side of K-32 could provide industrial uses or job training services that complement the one million square feet of industrial development proposed for the 130-acre Turner Commerce Center just north of the Turner Diagonal.

Because of flooding concerns, community members commented that future development of land in the 65th and Turner Diagonal area should be redeveloped as a combination of green industry, job training, and recreational/open space. Community members also commented that providing access to the river would benefit the entire K-32 corridor, as the nearest access point beyond the corridor is in DeSoto, Kansas. Providing river access to this area may be possible via Mill Creek. Other river access points would be located farther west, for example at K-7 in Bonner Springs and 4th and 98th Streets in Edwardsville. Further, incorporating stormwater best management practices into the area could help address future flooding issues, as some of the streets in this target area have concrete drainage ditches. In the future, the ditches could become vegetated swales in small drainage areas that have low water runoff.

65th Street & Turner Diagonal Dev. Options



Converting K-32 to a Parkway

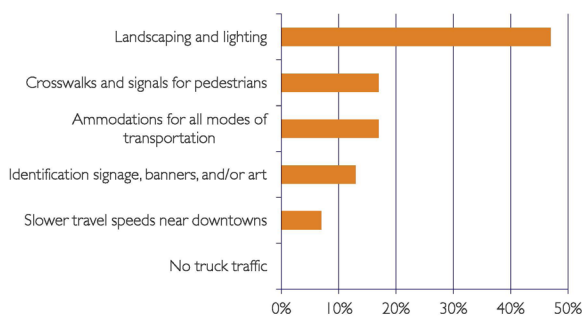
Today K-32 is a generally a 4- to 5-lane, divided state highway that motorists use to quickly connect to employment destinations, highways (K-7 and US-69) and interstates (I-435 and I-70), shopping, and other destinations. Its speed limit ranges from 30-35 mph near the downtown areas to 55 mph outside of them. It includes signals at key intersections, such as Kansas Avenue, 4th Street, Cedar Street, and other locations.

To help slow traffic and incorporate bicycle/pedestrian accommodations, it may be possible to modify K-32 to look and feel like a parkway. Typical parkways are wide, median-divided roadways lined with trees and lighting. They may also include turn lanes and bicycle/pedestrian paths. Community members were in favor of the idea of converting the feel of K-32 into a parkway rather than maintaining it as a state highway. Lighting was the feature noted most important to include with the concept. There was also support for the idea of renaming K-32 to "Kaw Valley Parkway", "Kaw River Parkway", or "Kaw River Scenic Byway", which opens opportunities to create marketing and branding materials (signage, banners, art, and much more) for the corridor that describe it as a destination of the same name while reflecting the uniqueness of each of the Tri-Cities.

Sample Parkway Concept



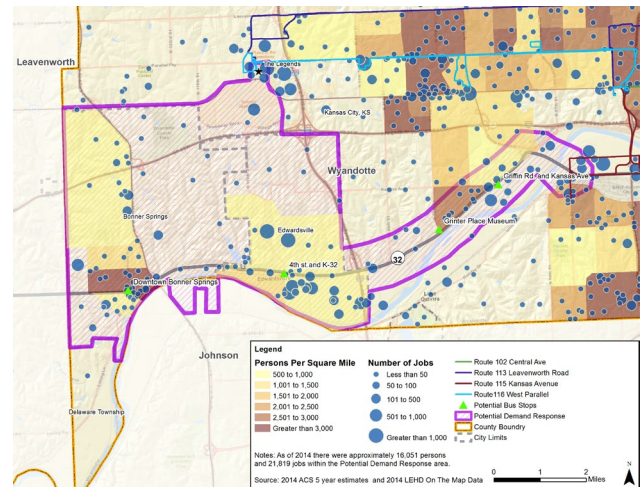
Converting K-32 to a Parkway



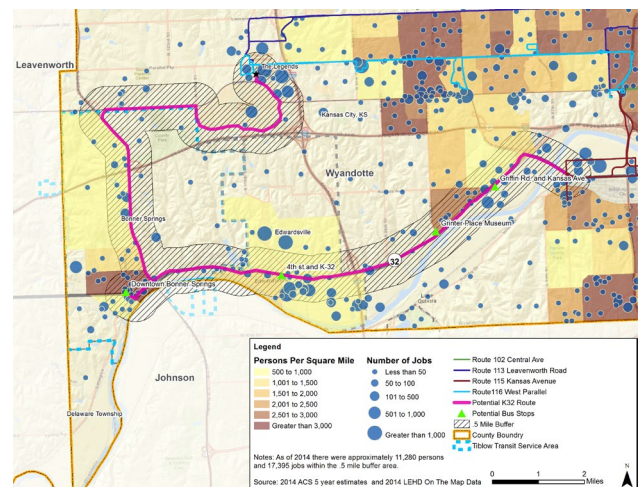
Transit Routes

Because of the costs and densities associated with providing rail transit in the corridor, the planning team explored on-demand and fixed route bus services. See the table on page 33.

Option for On-demand Bus Service



Option for Fixed Route Bus Service

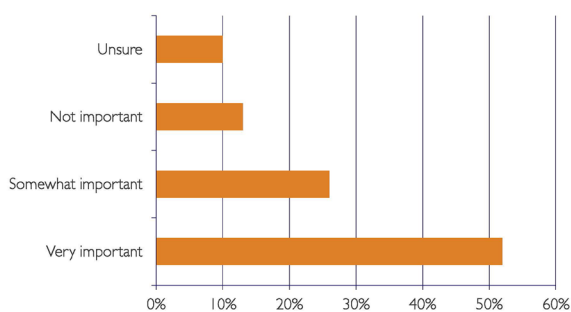


Estimated Transit Costs

Type	Description	Service Span	Frequency	Annual Operating Costs
MetroFlex	<ul style="list-style-type: none"> Improves the existing demand-response service and could be implemented with less capital and operations investment than other alternatives Increases the service areas to all of Bonner Springs and Edwardsville Connects into Kansas City at Village West and along Kansas Avenue 	Monday-Friday from 8 AM to 5:30PM	On-demand	\$241,000
Fixed Route (Baseline)	<ul style="list-style-type: none"> Introduces regularly scheduled fixed route service throughout the corridor Includes bus stops at (a minimum) of downtown Bonner Springs, Edwardsville at 4th Street, Grinter Museum, industrial employment opportunities on Kansas Avenue, and the Legends at Village West 	Monday-Friday from 8 AM to 7:30PM	60 minutes	\$708,000
Fixed Route (Higher frequency)	<ul style="list-style-type: none"> Includes added frequency, flexibility, and convenience for riders 	Monday-Friday from 8 AM to 7:30PM	30 minutes	\$1,290,000

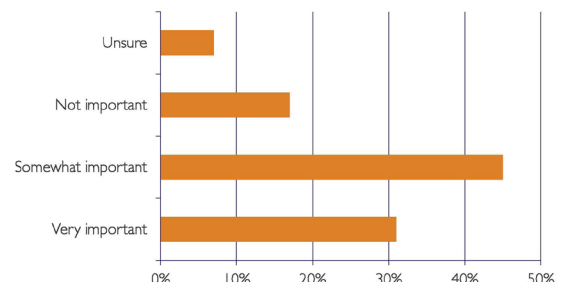
Additionally, community members commented that investing in transportation projects that improve bicycle/pedestrian accommodations and transit were important. This suggests the potential for the creation of a multimodal transportation network in the corridor. The Tri-Cities could jointly pursue funding and incorporate the network into targeted redevelopment and/or development locations.

Investment in Transportation that improves transit, and bicycle/pedestrian options



When asked about the importance of increasing housing densities to support better transit (bus and/or rail), community members indicated that doing so was somewhat or very important. The City of Bonner Springs currently operates Tiblow Transit within its city limits. Community response indicated that there was interest in exploring the expansion of the service to areas beyond the City, recognizing that future transit service would likely be limited to on-demand bus service until greater population and employment densities reach the thresholds that could support an investment in fixed route bus service and/or rail.

Increasing Housing Densities to Support Better Transit (bus and/or rail)





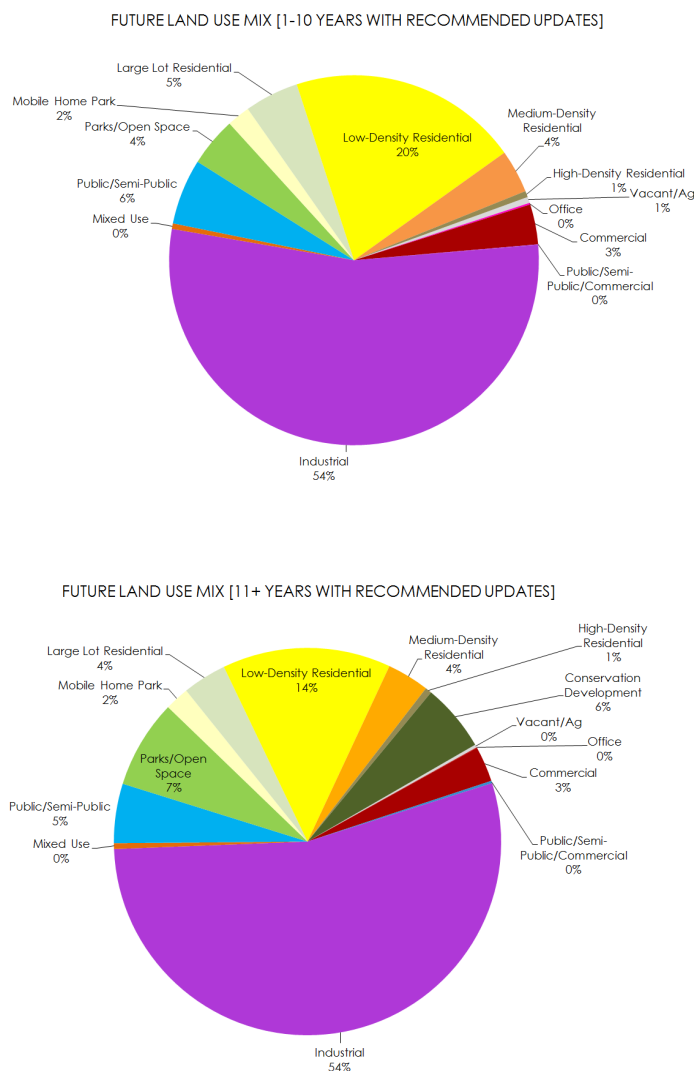
RECOMMENDATIONS

The review of existing conditions, analysis of challenges and opportunities, and input from community members on the preliminary improvement concepts helped frame the recommended action steps for the K-32 corridor.

Recommendations

The resulting recommendations support the vision and assume a combination of realistic and aspirational efforts will be coordinated to achieve it. Recommended actions steps relate to redevelopment, parks and greenways, transportation, infrastructure, place-making, environmental considerations, and financing improvements. They are organized into the following categories:

- Corridor-wide
- Bonner Springs
- Edwardsville
- Kansas City



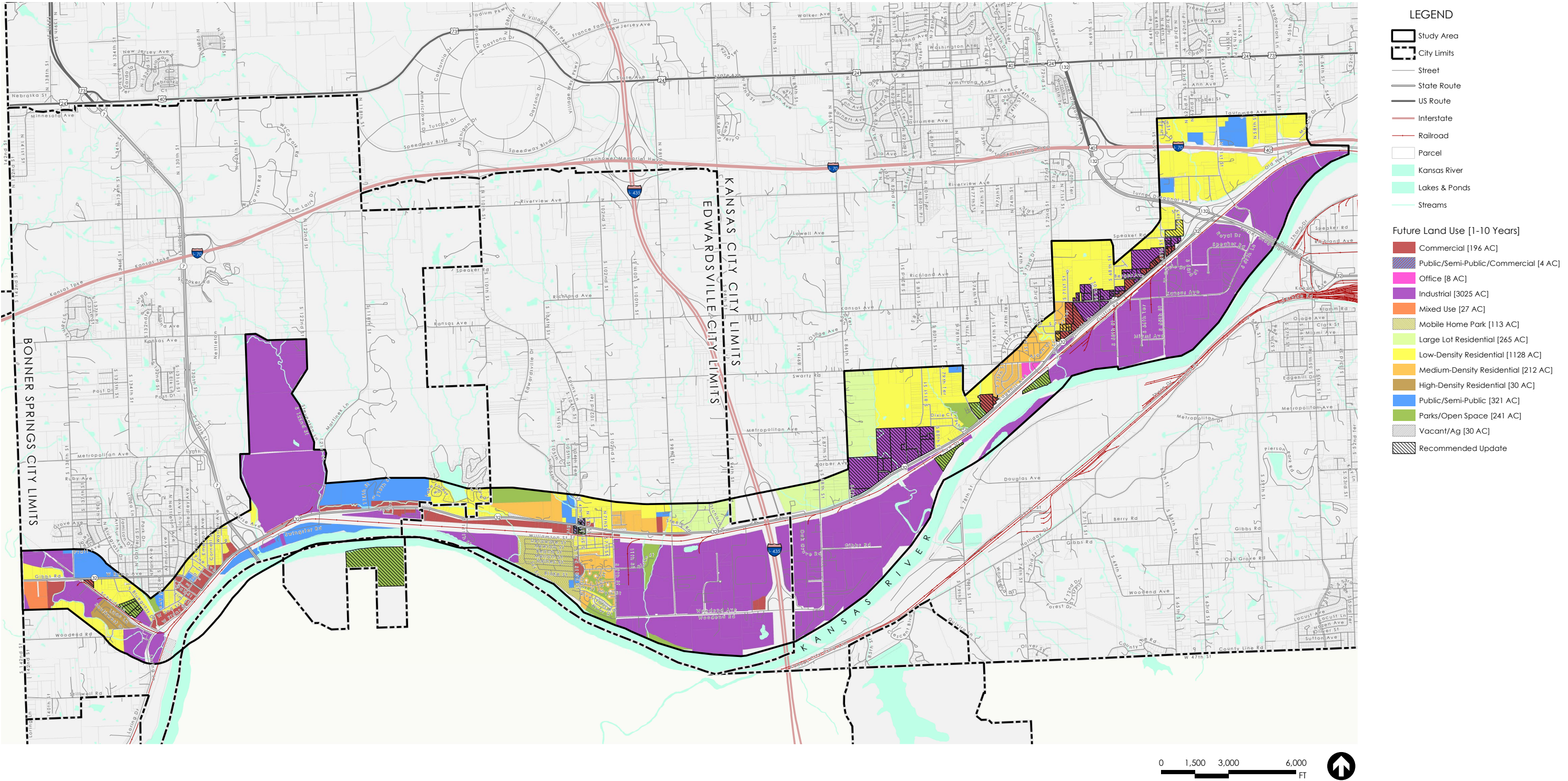
“Creating a regional destination characterized by green industries and business parks, attractive development, strong downtowns, and recreational areas set within a scenic and friendly environment that is accessible to residents and visitors by walking, biking, riding transit, and ‘driving’”

Corridor - Wide

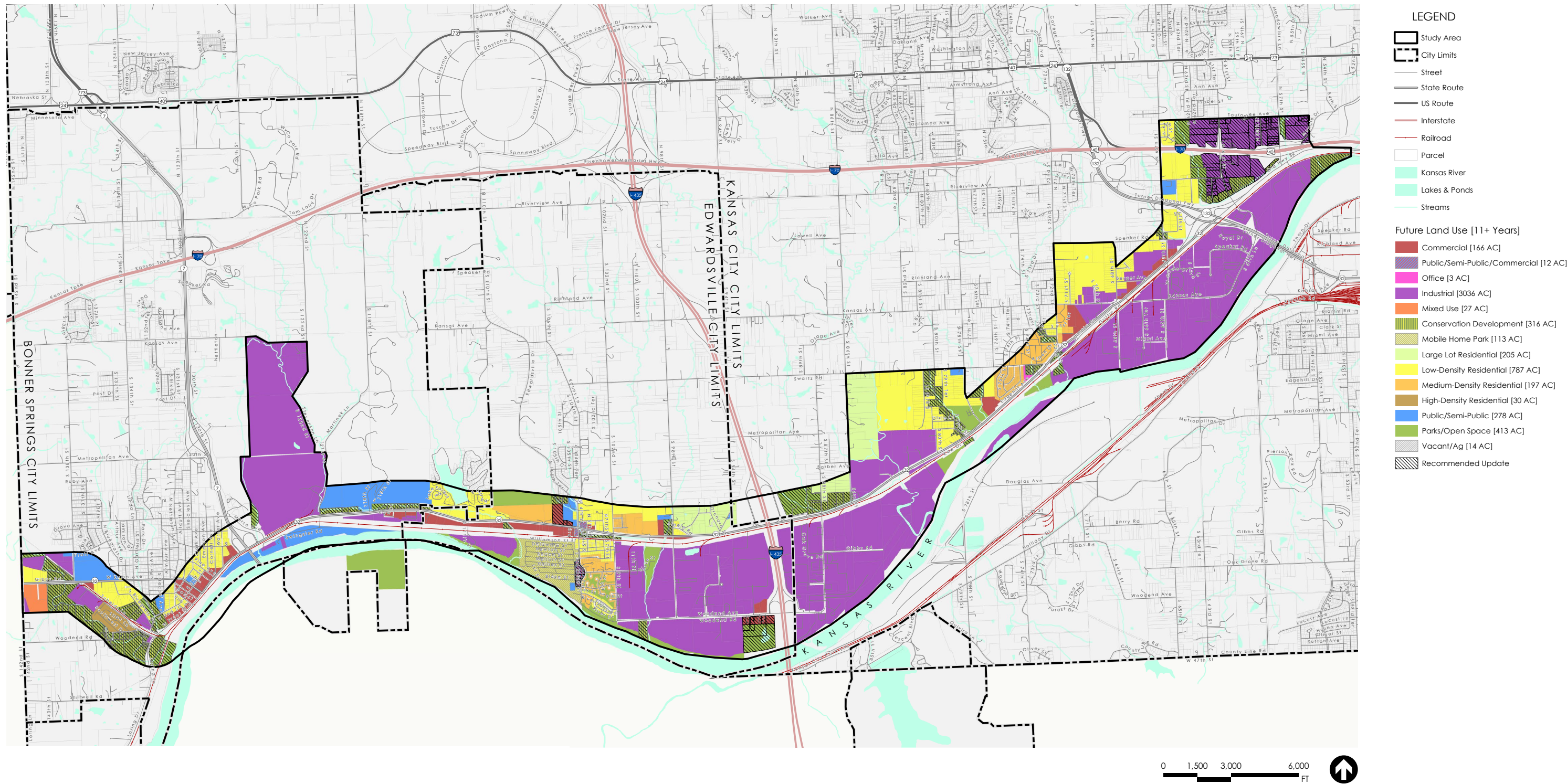
Action Steps for Redevelopment

- Target redevelopment activities to top priority activity centers, including K-32 in Historic Downtown Bonner Springs, near K-7, 4th Street, 78th Street, and the 65th Street/Turner Diagonal areas.
- Establish public-private partnerships to achieve desired land use and development outcomes.
- Support industrial expansion in south Wyandotte County by allowing industry to continue occupying more parcels in the K-32 corridor than any other type of land use and development.
- Encourage the continued development of the K-32 corridor as an employment center that draws workers from beyond the planning area to train for and obtain jobs at K-32's green industries and business parks.
- Incentivize the development of green industries within the K-32 corridor that provide job training, employ a large percentage of local workers, and pay higher wages.
- Combine industrial investment with compatible investments in human capital, providing workers with a combination of job training and on-the-job training for the wide range of jobs that are available in the K-32 corridor.
- Explore connections between green industry and health and wellness and leverage them to promote the development of K-32 as a "green" corridor that benefits residents, workers, and visitors.
- Encourage redevelopment efforts, such as business and industrial park development, that will help the K-32 corridor reach population and employment densities necessary to support on-demand transit service.
- Conduct a market study to define the capacity and potential for retail/service and entertainment development in the corridor.
- Increase housing diversity (type, location, and cost) to attract young families and professionals to the corridor and encourage older residents to age in place.

K-32 Tri-City Multimodal Redevelopment Plan
FUTURE LAND USE (1-10 Years with Recommended Updates)



K-32 Tri-City Multimodal Redevelopment Plan
FUTURE LAND USE (11+ Years with Recommended Updates)



Action Steps for Parks and Greenways

- Preserve and increase parks/open space to expand the idea of “green” in the K-32 corridor; so it not only means jobs, but also recreation, and thereby draws new people to the area.
- Encourage developers to pursue conservation development (residential and non-residential) options rather than conventional development techniques so additional parks/open space is provided within the corridor.
- Market the economic benefits of conservation development, such as lower infrastructure and maintenance costs, greater residential appreciation values, and greater access to trails and greenways, versus conventional development approaches to perspective developers and future residents.
- Enhance multiuse trails by buffering them with green space, so eventually the “Kaw Valley Greenway” (or similarly named) system could be created.
- Increase the number of Kansas River access points by exploring connections via K-7, 4th Street, 98th Street, and Mill Creek.

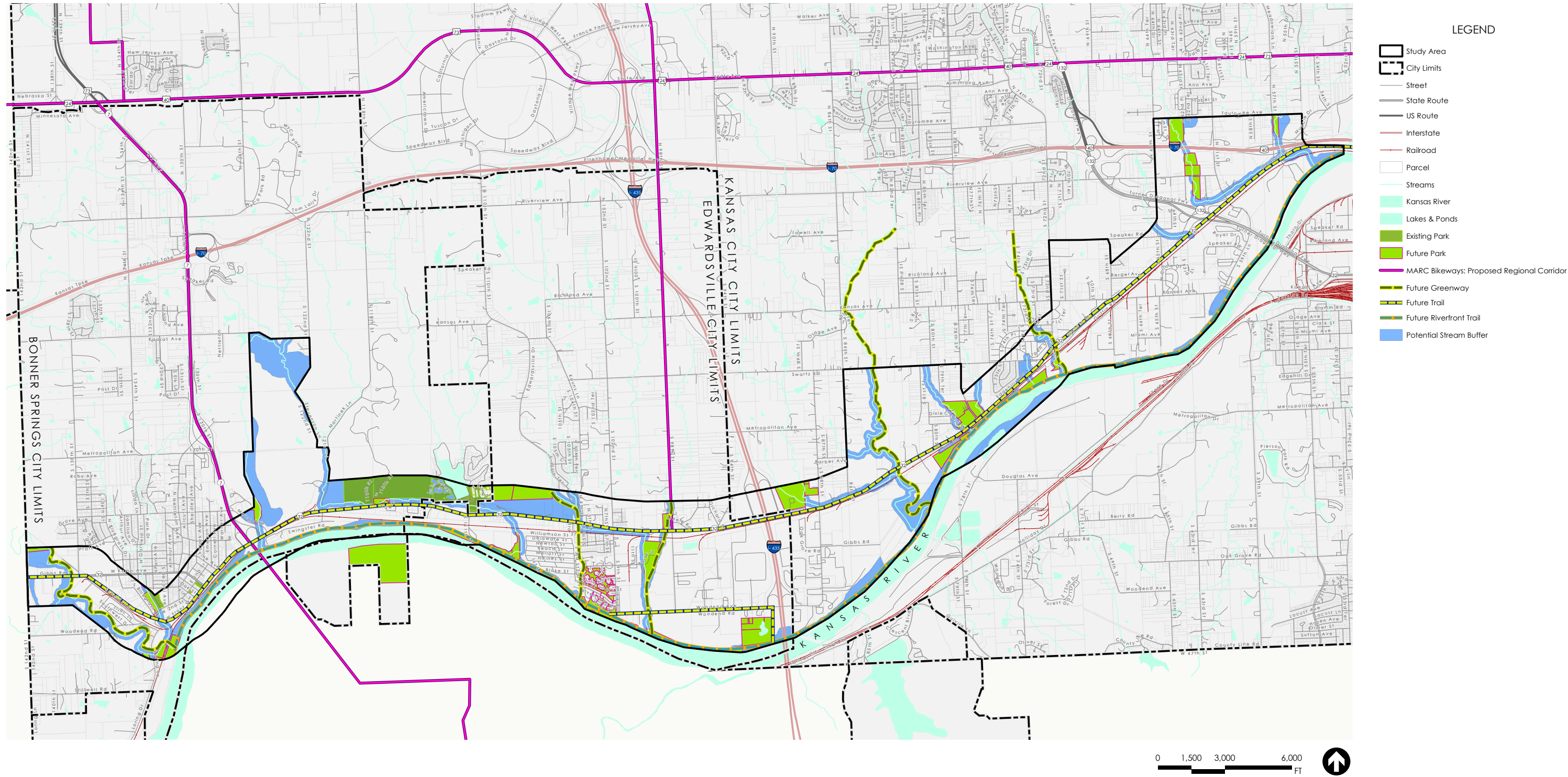
Action Steps for Infrastructure

- Minimize the impact of overhead utility lines within or adjacent to redevelopment projects.
- Determine important locations for consolidating, burying, or relocating utility lines and poles, ensuring the locations consider targeted redevelopment areas.
- Develop a plan for utility line consolidation.
- Install curbs and gutters along K-32 where they do not currently exist to improve the appearance of the corridor.

Action Steps for Transportation

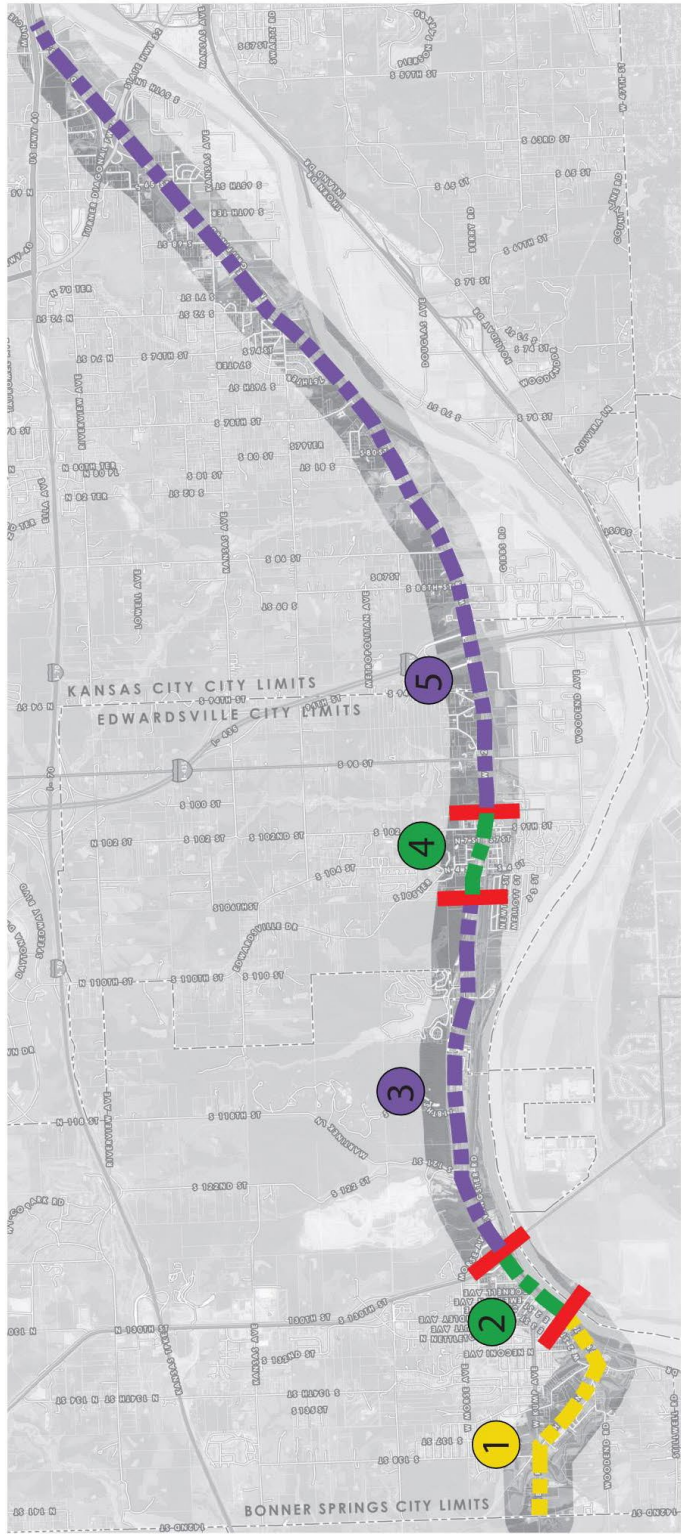
- Conduct a traffic study to forecast future traffic demand (vehicle, bicycle, pedestrian, and bus) and the corresponding number of travel lanes, ideal widths, and speed limits needed to safely accommodate all travelers along K-32; and then coordinate the study’s results with the State’s access management policies.
- Strive to build transportation improvements within existing right-of-way limits and thereby reduce or eliminate property acquisition needs.
- Repave K-32, install access control measures, and re-stripe it based on the warranted typical sections.
- Ensure key activity centers, such as Downtown Bonner Springs and Edwardsville, Grinter Museum, and employment areas, are accessible via a network of multiuse trails, greenways, on-street cycling provisions and/or transit.
- Expand transit service to the K-32 potential on-demand bus service area, providing connections to the Legends at Village West, the proposed Tiblow Multimodal Transit Hub, State Avenue transit route, the future Turner Commerce Center, and other employment areas.
- Develop transit alternatives, such as carpooling, vanpooling, on-demand bus or shuttle service, Uber arrangements, and/or other options, to provide workers (who are within the K-32 potential demand response bus service area) with transportation to and from jobs within the corridor and to the proposed Turner Commerce Center.
- Pair expanded transit service and transit alternatives with the timeframes assigned to first, second, and third shifts at major employment areas.
- Explore a range of National Association of City Transportation Officials (NACTO) recommended bikeway facilities, including but not limited to two-way cycle tracks (two-way, one-side), for K-32 and apply the type most appropriate to the varied segments of the highway.
- Consider the recommendations of the K-32 Railroad Quiet Zone Study.

K-32 Tri-City Multimodal Redevelopment Plan
PARKS AND GREENWAYS



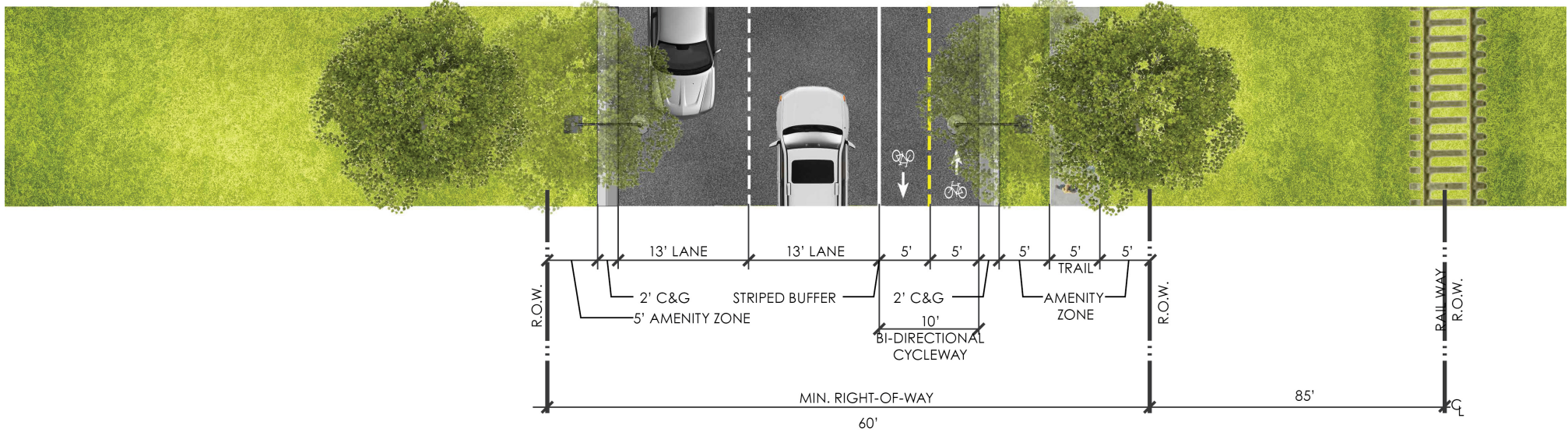
K-32 Tri-City Multimodal Redevelopment Plan

FLEXIBLE ROADWAY WIDTH BASED ON ADJACENT DEVELOPMENT CHARACTER



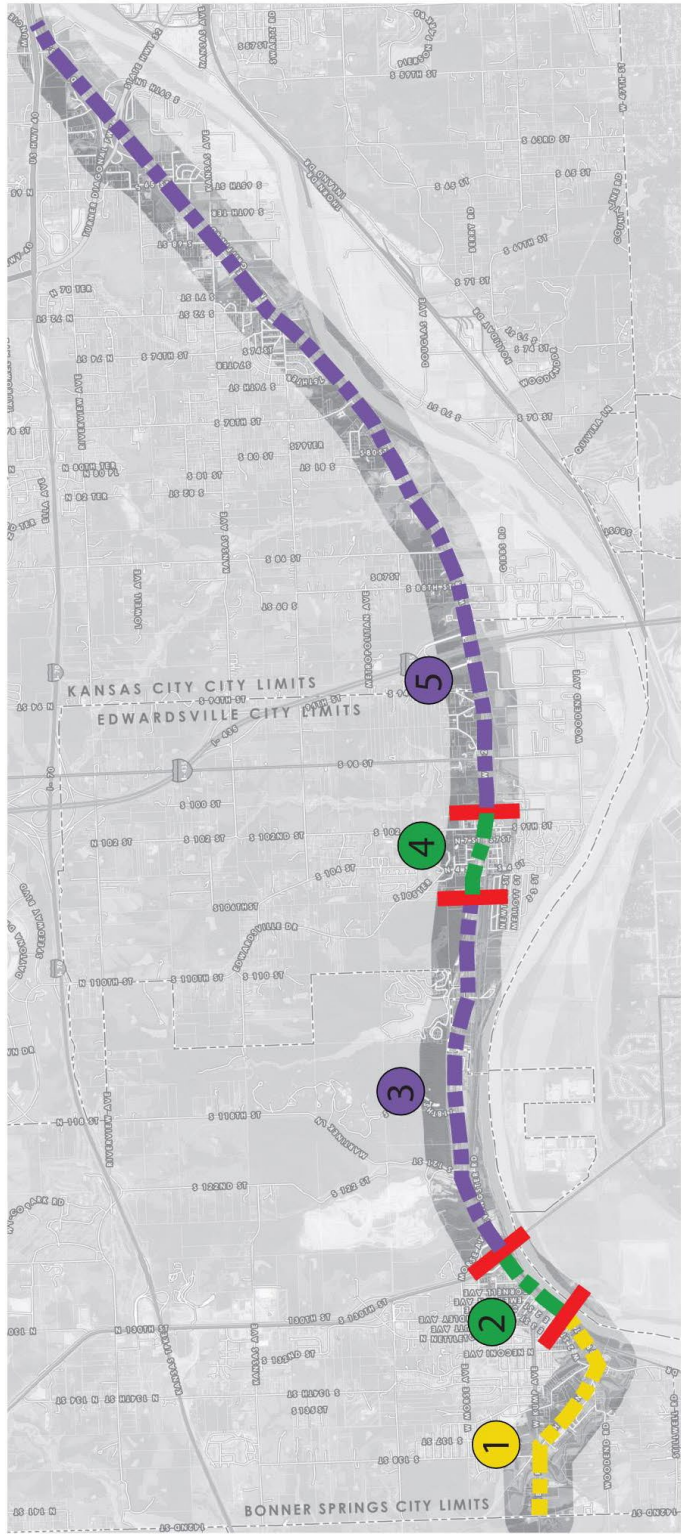
1

- URBAN/ PRAIRIE**
- EXISTING ROW: 60'
 - MIN. ROW NEEDED: 60'
 - VIEW: LOOKING TO WEST

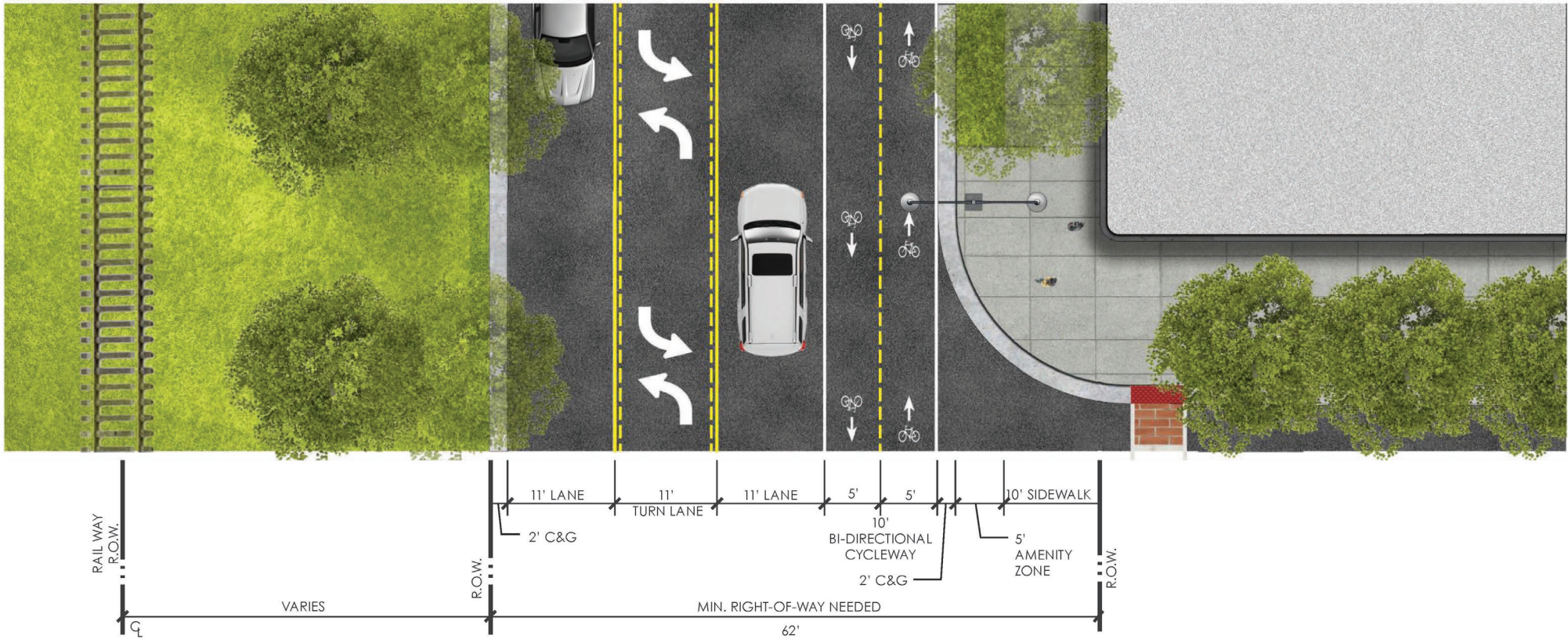


K-32 Tri-City Multimodal Redevelopment Plan

FLEXIBLE ROADWAY WIDTH BASED ON ADJACENT DEVELOPMENT CHARACTER

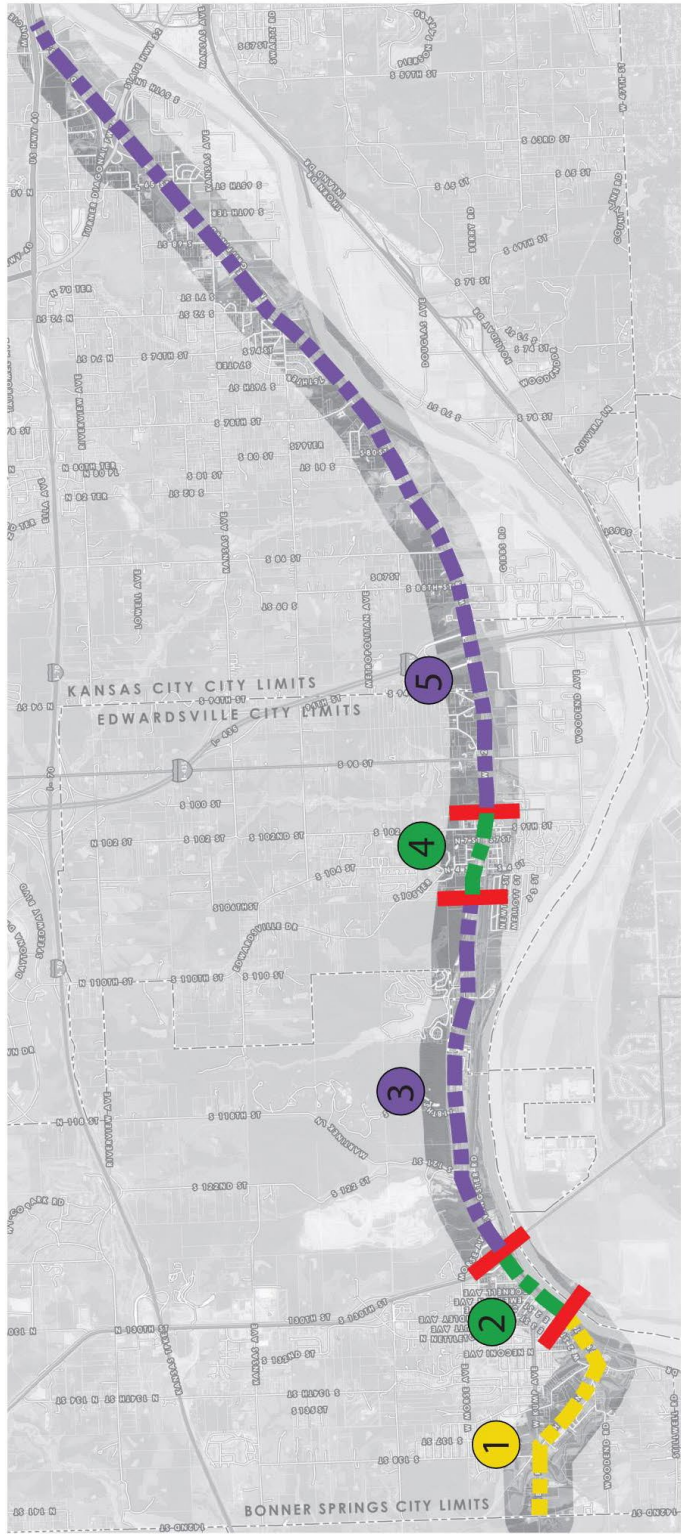


- 2a MAIN STREET/ PRAIRIE**
- EXISTING ROW: 62'
 - MIN. ROW NEEDED: 62'
 - VIEW: LOOKING TO WEST

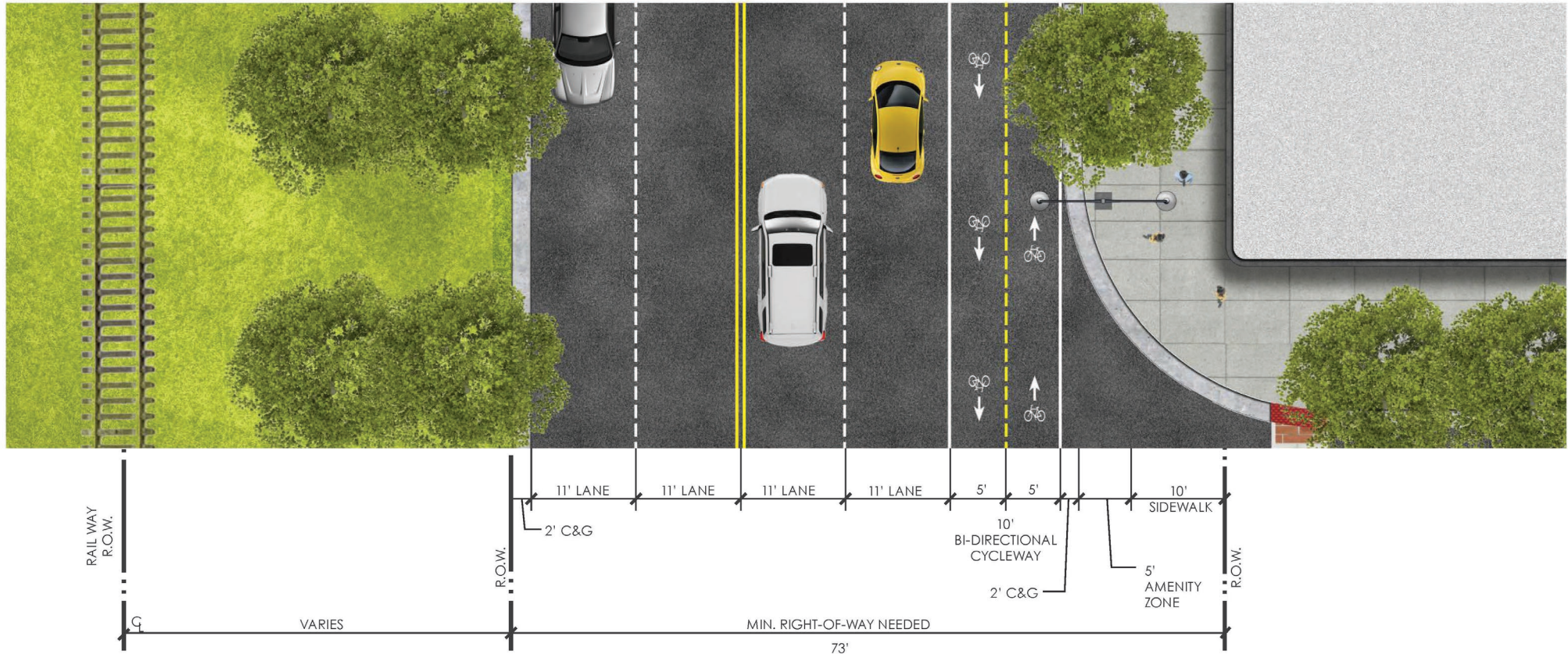
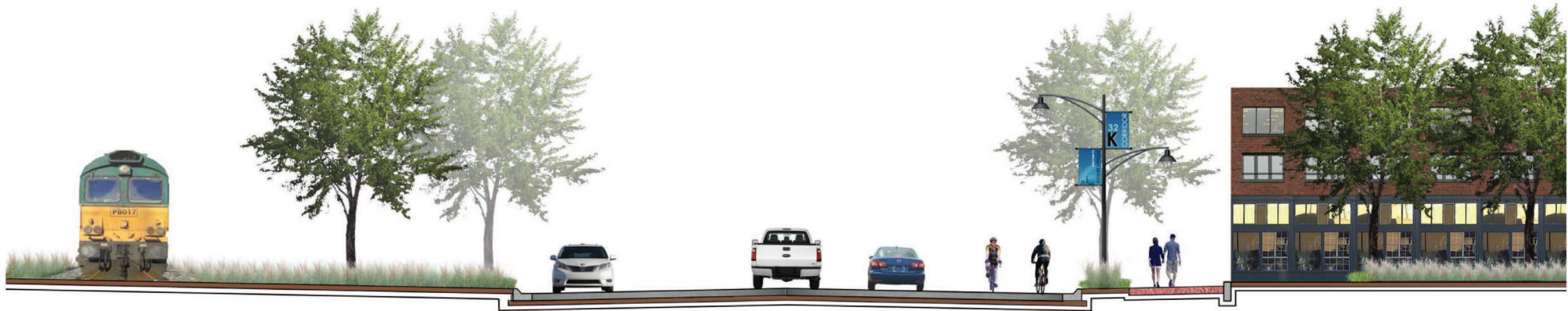


K-32 Tri-City Multimodal Redevelopment Plan

FLEXIBLE ROADWAY WIDTH BASED ON ADJACENT DEVELOPMENT CHARACTER

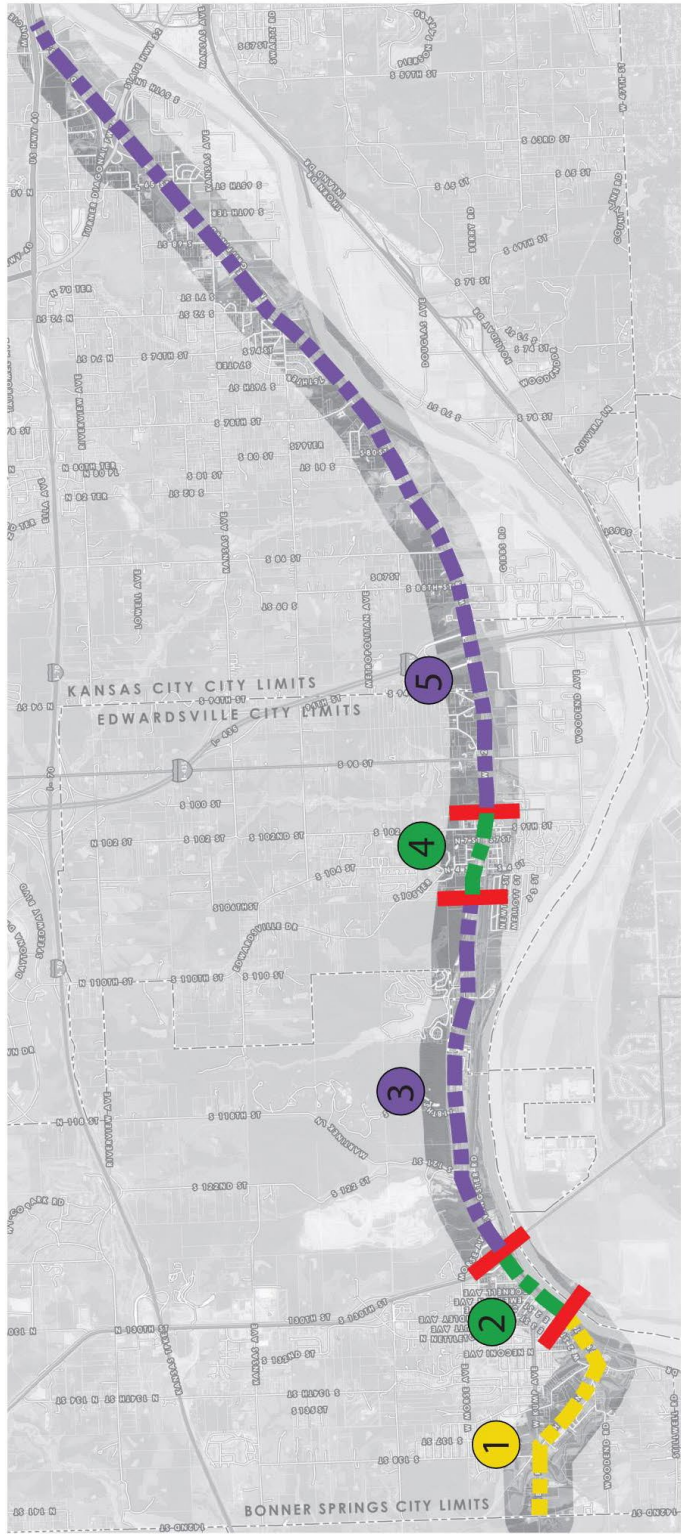


- 2b MAIN STREET/ PRAIRIE**
- EXISTING ROW: 62'
 - MIN. ROW NEEDED: 73'
 - VIEW: LOOKING TO WEST

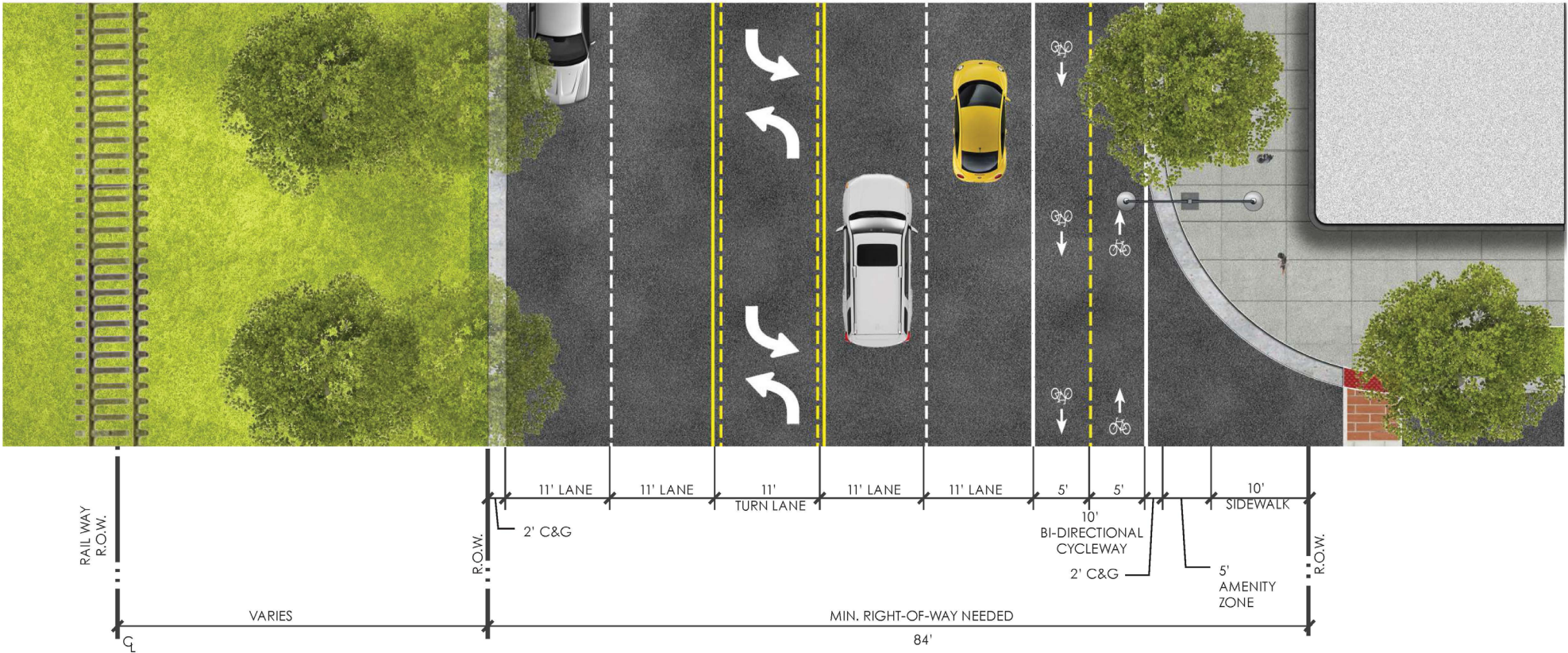


K-32 Tri-City Multimodal Redevelopment Plan

FLEXIBLE ROADWAY WIDTH BASED ON ADJACENT DEVELOPMENT CHARACTER

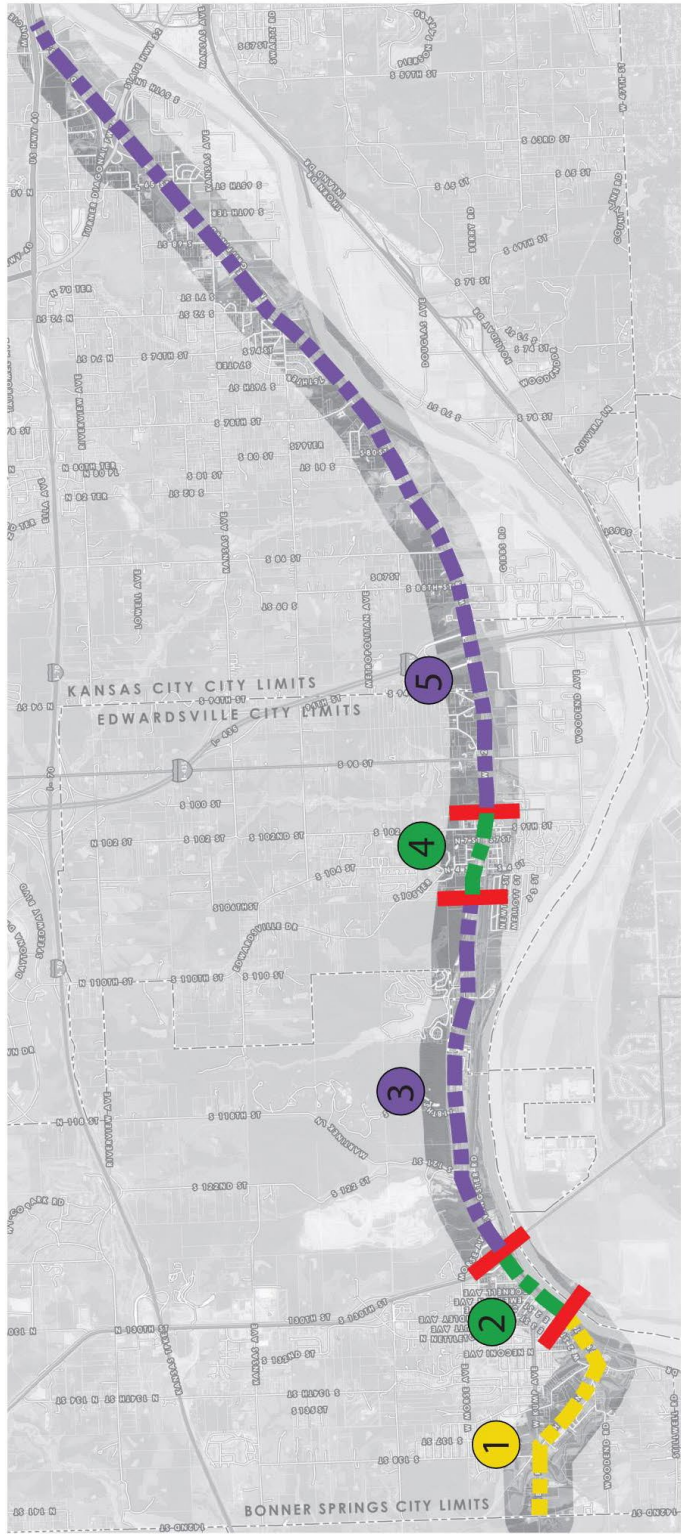


- 2c MAIN STREET/ PRAIRIE**
- EXISTING ROW: 62'
 - MIN. ROW NEEDED: 84'
 - VIEW: LOOKING TO WEST



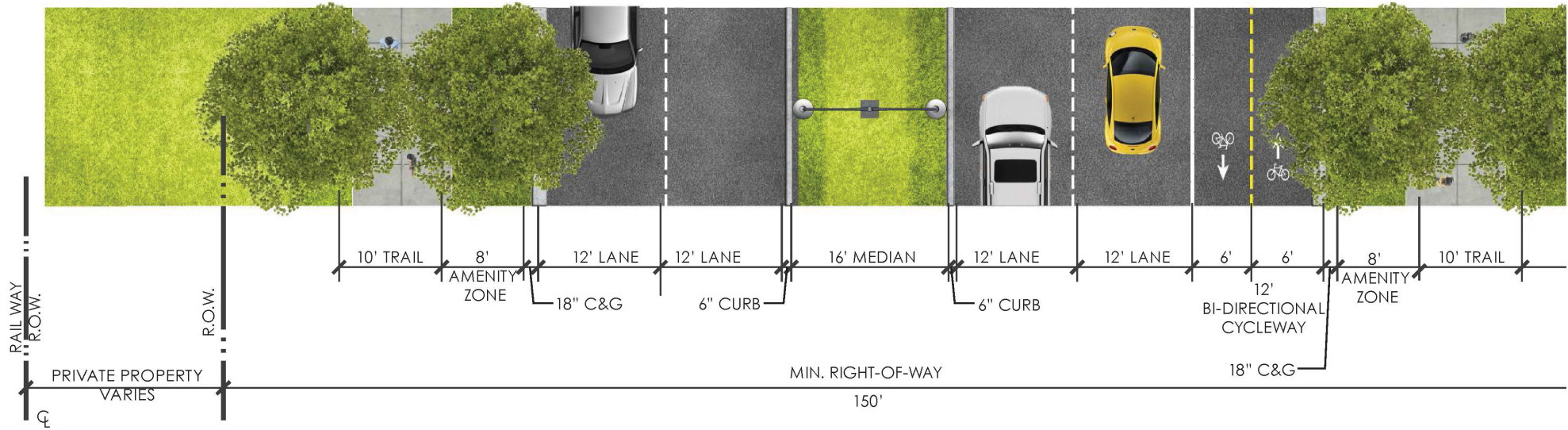
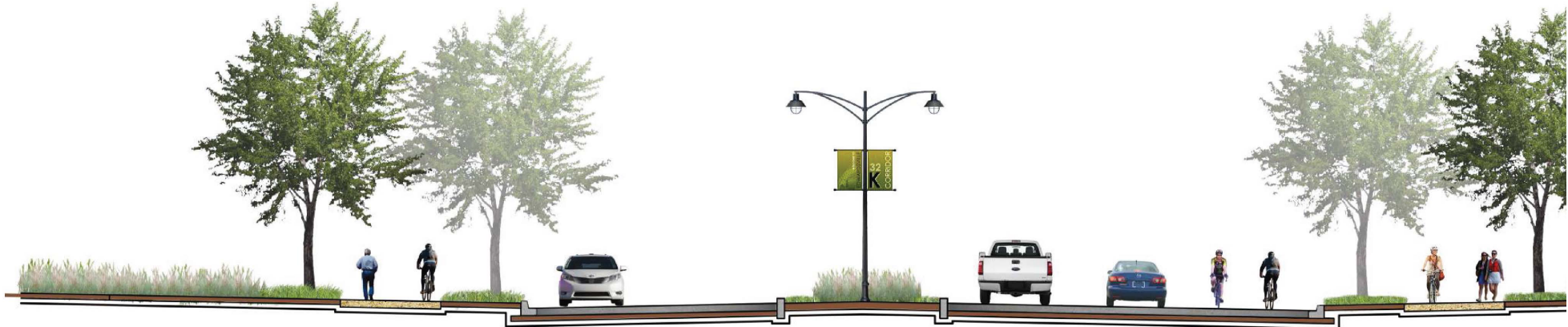
K-32 Tri-City Multimodal Redevelopment Plan

FLEXIBLE ROADWAY WIDTH BASED ON ADJACENT DEVELOPMENT CHARACTER



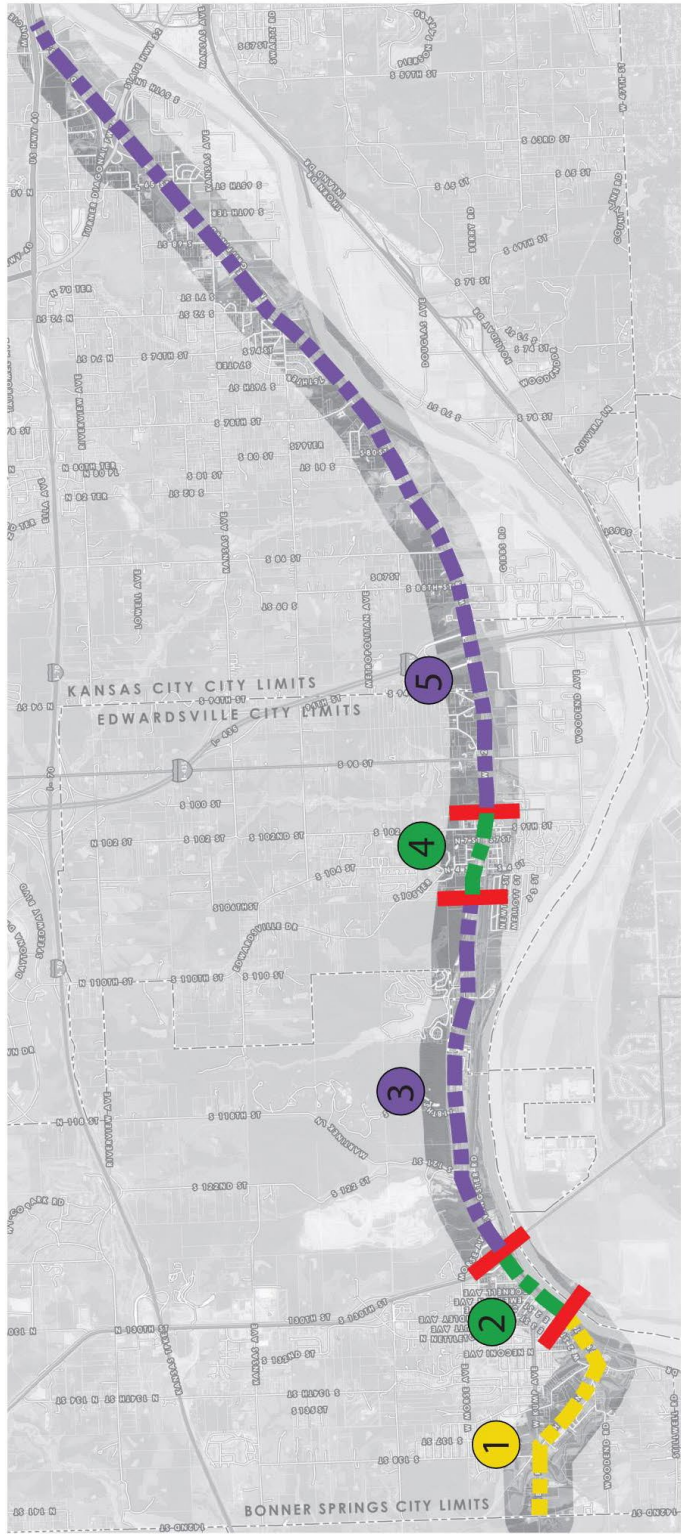
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- INDUSTRIAL/ PRAIRIE**
- EXISTING ROW: 150'
 - MIN. ROW NEEDED: 150'
 - VIEW: LOOKING TO WEST

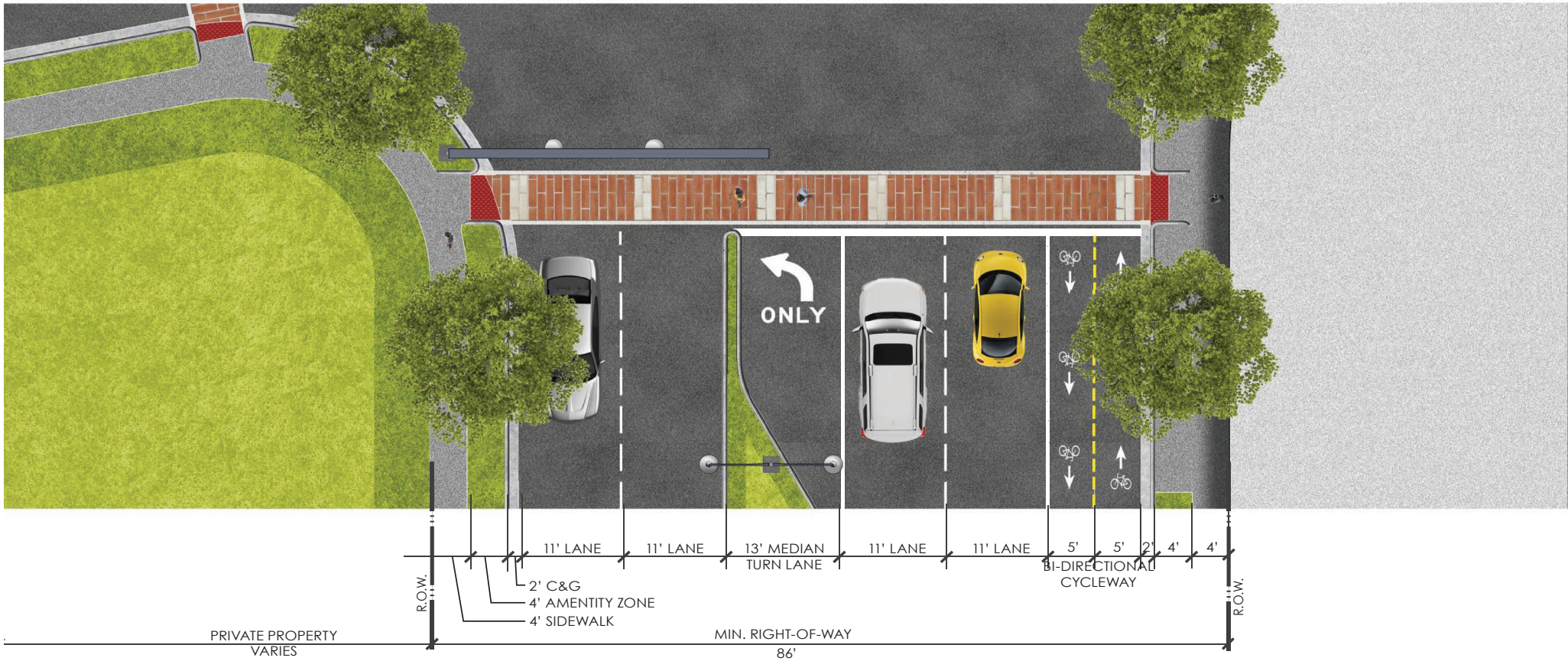


K-32 Tri-City Multimodal Redevelopment Plan

FLEXIBLE ROADWAY WIDTH BASED ON ADJACENT DEVELOPMENT CHARACTER

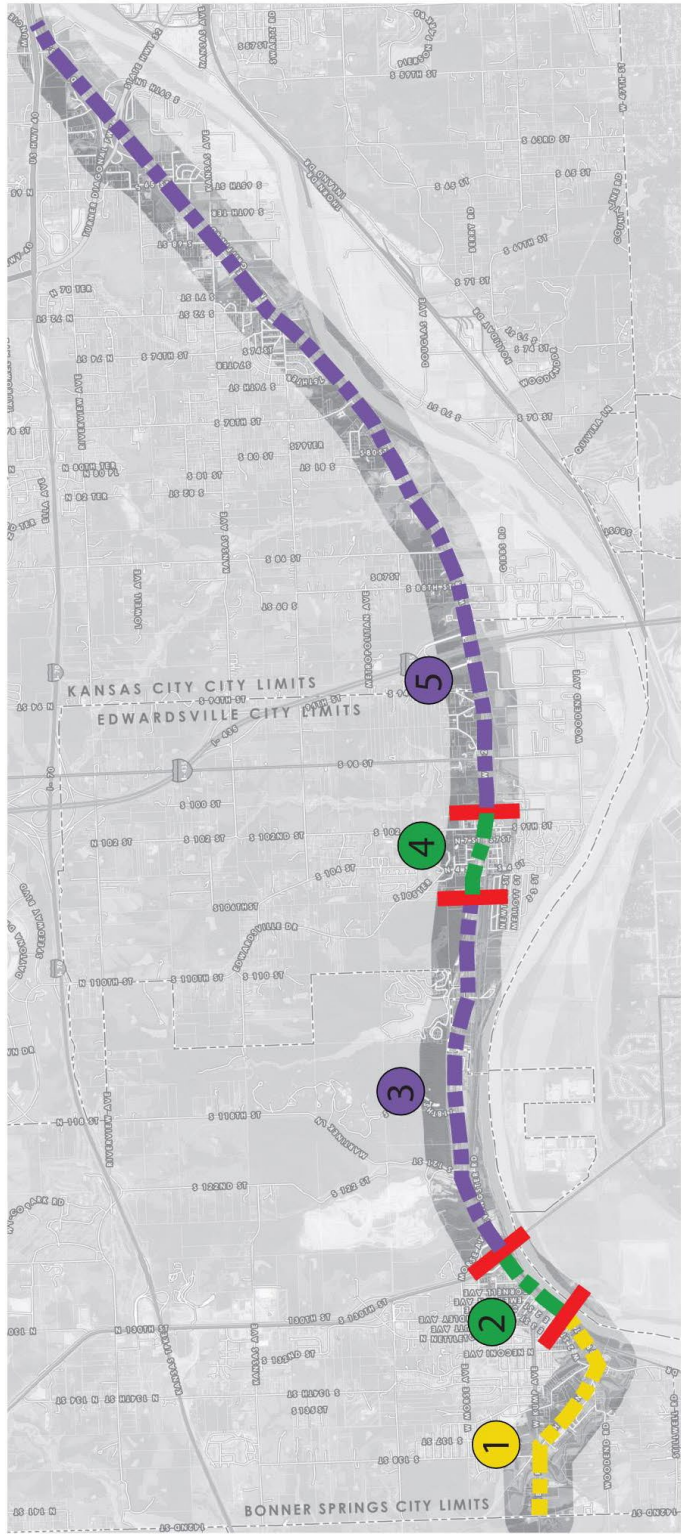


- 4 MAIN STREET/ PRAIRIE**
- EXISTING ROW: 86'
 - MIN. ROW NEEDED: 86'
 - VIEW: LOOKING TO WEST

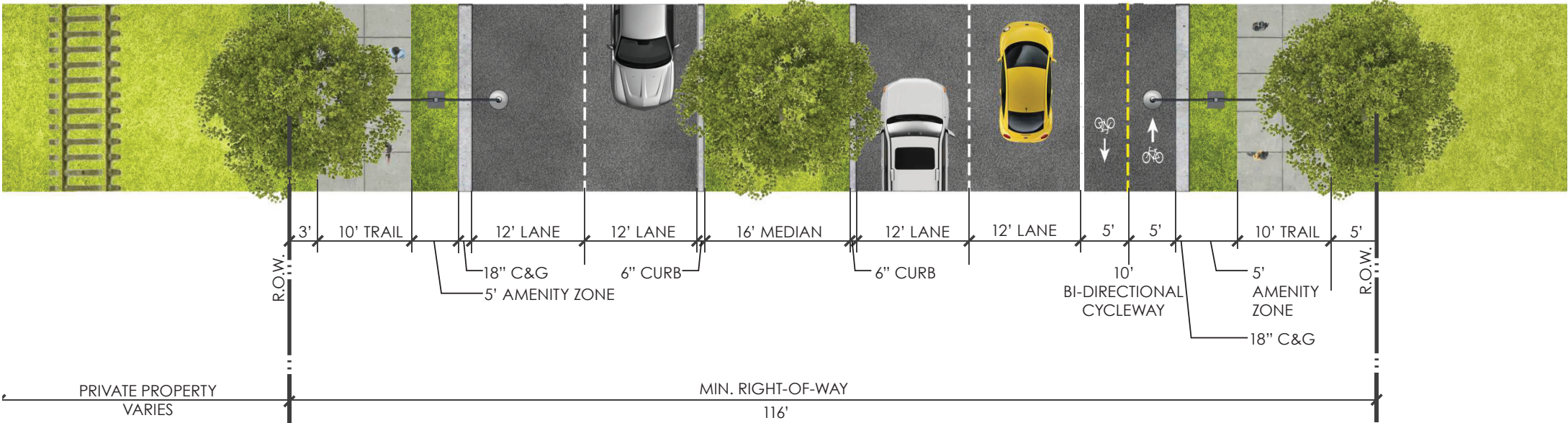
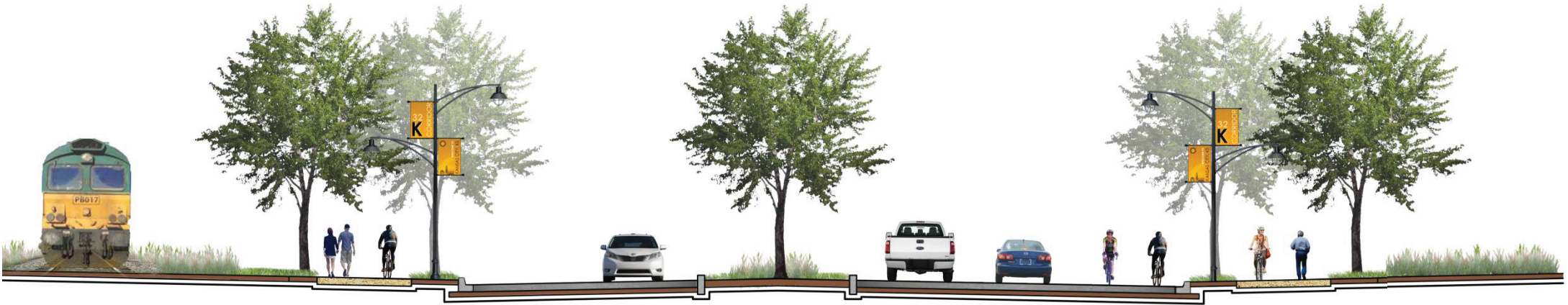


K-32 Tri-City Multimodal Redevelopment Plan

FLEXIBLE ROADWAY WIDTH BASED ON ADJACENT DEVELOPMENT CHARACTER



- 5 INDUSTRIAL/ PRAIRIE**
- EXISTING ROW: 150'
 - MIN. ROW NEEDED: 150'
 - VIEW: LOOKING TO WEST



Action Steps for Place-making

- Allow the roadway width and amenities along K-32 to respond to the character of the land use and development adjacent to the route.
- Improve K-32 by giving it the feel of a prairie-like “parkway” and include curbs and gutters, landscaped medians, tree-lined street edges, turn lanes, and lighting throughout.
- Utilize an urbanized streetscape treatment inside the downtown areas that includes art, manicured trees and shrubs, pocket parks, benches, trash receptacles, and other items.
- Provide a prairie-like landscape treatment outside of downtown areas that consists of taller, native trees, shrubs, and grasses.
- Rename K-32 to “Kaw Valley Parkway” or something similar to begin to change the perception that the corridor is a higher speed corridor with few places to stop.
- Develop a branding and way-finding system of identification signage, banners, colors, and more for the renamed K-32 that reflects its new name and the unique character of each of the Tri-Cities.

Sample Banner and Lighting (Not to Scale)



Sample Signage Options (Not to Scale)



Top Reasons to Be in the Corridor



SHOP



EAT



LEARN



RELAX



EXERCISE



NATURE



CANOE



FESTIVALS

Corridor Destinations

DOWNTOWNS

TIBLOW DAYS

MOON MARBLE

CAMP NAISH

PAPA BOB'S BARBEQUE

EDWARDSVILLE DAYS

SMOKIN' IN THE VILLE BBQ
COMPETITION

GRINTER MUSEUM

KOBI'S BAR AND GRILL

PARKS AND OPEN SPACES

"KAW VALLEY TRAILS AND
GREENWAYS"

"KAW VALLEY GREEN INDUSTRIAL
PARK"

RACES

FESTIVALS

• Action Steps for Environmental Conservation

- Conduct a Stream Asset Inventory to determine the quality of streams in the corridor and prioritize them.
- Protect priority streams and adjacent wooded areas and steep slopes (15% or more) with vegetated stream buffers.
- Incorporate stormwater best management practices, such as vegetated swales, in small drainage areas that have low water runoff and concrete drainage ditches to help address areas with flooding issues.



Action Steps for Financing Improvements

- Partner as “Tri-Cities” to pursue state and federal transportation funding for corridor-wide improvement projects
- Partner with adjacent municipalities, such as the City of Shawnee, to fund improvements that provide recreational amenities or connections that benefit both communities.
- Focus capital improvement efforts on priority activity centers, specifically K-32 in Historic Bonner Springs, near K-7, 4th Street, 78th Street, and the 65th Street/ Turner Diagonal areas.
- Develop programs that provide grants to small businesses that may fit within recommended mixed use centers; grants would assist with start-up inventory, marketing, and other operating costs.
- Explore opportunities to create small business incubator spaces and/or pop-up stores within recommended mixed use centers; either could become long-term tenants.
- Make façade rebate programs available to local business owners who want to invest in façade, landscape, and/or lighting improvements for their properties.
- Provide financial incentives, such as Tax Increment Financing (TIF), which can be used to fund land acquisition and relocation, public improvements (curbs, sidewalks, and streets), site preparation (demolition), and transit development, to spur redevelopment of priority K-32 activity centers.
- Include K-32 utility and stormwater projects within the capital improvement programs of each of the Tri-Cities.
- Include projects for recommended K-32 off-street trails and on-street cycle routes within the capital improvement programs for the Tri-Cities as well as those for regional and state agencies.
- Pursue state Transportation Alternatives (TA) Program dollars to fund K-32 facilities for pedestrians and bicycles, landscaping and scenic beautification, archaeological planning and research related to transportation, and the Safe Routes to School program.
- Pursue Surface Transportation Program (STP) funding for either the construction of bicycle transportation facilities and pedestrian walkways, or non-construction projects (such as maps, brochures, and public service announcements) related to safe bicycle use and walking within the K-32 corridor.
- Pursue Congestion Mitigation and Air Quality (CMAQ) Program funding for detailed planning, design, and construction of the “Kaw Valley Greenway system within the K-32 corridor.
- Pursue Highway Safety Improvement Program (HSIP) funding for general transportation and bicycle/pedestrian safety projects, such as bike lanes, roadway shoulders, crosswalks, and other intersection improvements and signage.
- Pursue State and Highway Safety Grant funding for bicycle and pedestrian safety programs as well as education, enforcement, and research programs intended to reduce traffic crashes, deaths, injuries, and property damage.
- Partner with transit providers, such as Tiblow Transit and Kansas City Area Transportation Authority (KCATA), and major employers to create a Transportation Management Association (TMA) that can be leveraged to provide workers with transportation to job concentration areas.
- Explore the possibility of expanding Ride KC: Bridj (on-demand shuttle service through KCATA) to the recommended K-32, a potential on-demand transit service area.
- Consider creating a Transportation Development District (TDD) to finance the costs of expanding transit service to the K-32 potential on-demand bus service area.
- Consider a sales tax increase and/or a municipal utility fee to help fund the costs of providing transit service within the K-32 potential on-demand bus service area and thereby connect workers to key destinations, especially employment areas and downtowns.
- Explore funding options, such as capital improvement program allocations, for the projects recommended in the K-32 Railroad Quiet Zone Study.

Community-Specific

Recommendations for specific areas of Bonner Springs, Edwardsville, and Kansas City are described within the pages that follow.

BONNER SPRINGS

Tiblow Multimodal Transit Hub

Developing a “historic” feeling multimodal transportation hub in close proximity to downtown would reflect the area’s historic context, complement the City’s efforts to improve the look and feel of the area, and enhance strategies for drawing economic development downtown. Creating the Tiblow Multimodal Transit Hub would require a series of land use, transportation, and place-making steps.

Historic Downtown Bonner Springs “Before”



Historic Downtown Bonner Springs “After”



Action Steps for Land Use

- Maintain Kelly Murphy Park as an amenity that is accessible from the transit hub.
- Replace existing strip commercial development with a series of mixed use buildings that combine ground floor retail with second and/or third floor residential units.
- Attract a small grocery store or market that could locate within one of the new mixed use buildings.
- Relocate the Tiblow Transit Headquarters to the site and include office and residential uses within the building.
- Allow unoccupied surface parking to serve as farmers market locations that provide community members with additional access to fresh food choices.
- Coordinate with developers to 1) donate right-of-way for planned amenity zones and wider sidewalks that support both pedestrian traffic and outdoor eating opportunities; or 2) incorporate the aforementioned features into the development plan.

Action Steps for Transportation

- Ensure a range of parking options, including surface parking behind buildings, bike racks in front of buildings, and/or other parking options is provided.
- Provide pedestrian access through the site, including between buildings.
- Include a transit stop and route bus service so it travels along K-32 and through the newly created transit hub.
- Explore multimodal, roadway cross-sections via traffic and access management studies that consider future redevelopment plans for the area between Oak Street and the K-7 Interchange.
- Explore opportunities to provide more than one type of roadway cross-section between Oak Street and the K-7 Interchange.
- Provide a combination of on-street cycling and off-street pedestrian paths.
- Construct intersection crosswalks with patterned concrete so motorists recognize them as important pedestrian areas.

The City of Bonner Springs envisions providing multimodal transportation options in its downtown area. However, right-of-way is limited, especially between Oak Street and Warner Street. Typical sections that involve additional turning opportunities, planted amenities, and wider sidewalks will require the purchase of right-of-way from adjacent property owners or the donation of the same to the City. The City should conduct traffic and access management studies to determine the safest multimodal roadway configuration(s) for the area considering future redevelopment plans.

Road dieting the area between Oak and Warner Streets would reduce the impacts of wider options while providing space for on-street bicycle accommodations or even parking. According to KDOT, the K-7 Interchange has traffic volumes of 10,000 vehicles per day and 1,000 trucks travel the corridor daily. Since the 1970s, the Federal Highway Administration (FHWA) has recommended road diets for 4-lane roads with traffic volumes of less than 20,000 vehicles per day due to the number of conflict points and other safety issues associated with turning movements on four-lane, undivided roadways. Three-lane options have fewer conflict points.

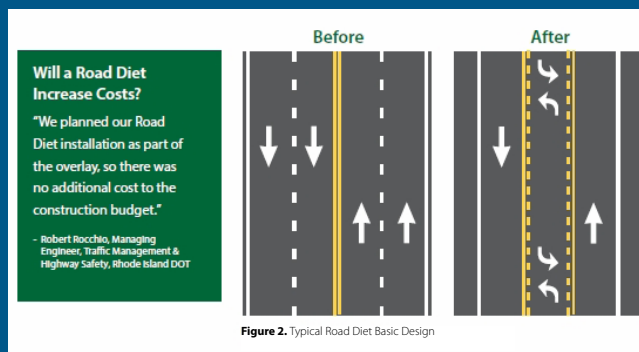
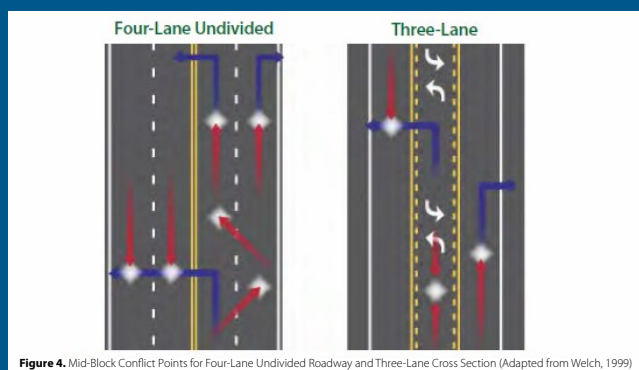
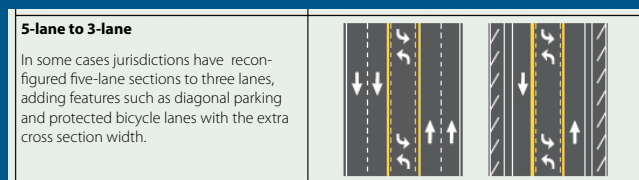


Figure 2. Typical Road Diet Basic Design



Images taken from FHWA Road Diet Informational Guide: FHWA Safety Program retrieved from http://safety.fhwa.dot.gov/road_diets/info_guide/ldig.pdf

Action Steps for Place-making

- Place mixed use buildings of up to three floors in height close to the street edge of K-32 to further define Historic Downtown Bonner Springs' urban form and make them more accessible to pedestrian and bicycle traffic.
- Locate the new transit facility close to the street edge to make it more accessible to pedestrians and bicyclists.
- Use masonry building materials and colors that complement those elsewhere downtown.
- Utilize building designs that include ample glass to maximize the visibility of people.
- Include a wide sidewalk on the north side of K-32 that abuts new mixed-use buildings, so sidewalk café options could be created.
- Include street art, trees, flower beds, and pocket parks.

K-7 INTERCHANGE - Shopping Area

Revitalizing the strip shopping area on the north side of K-32 (west of the K-7 Interchange) would expand the shopping and restaurant options available for Bonner Springs residents and visitors. Implementing the change would involve several land use, transportation, and place-making action steps.

Action Steps for Land Use

- Redevelop the existing strip commercial center on the north side of K-32 with mixed uses (residential and retail) that are organized in buildings that include two to three floors.
- Redevelop the east side of Warner Street with additional mixed use (residential and retail) development in buildings of two to three floors.
- Encourage the development of a small or quick-service restaurant at the northeast corner of K-32 and Warner Street.

Action Steps for Transportation

- Provide a range of parking options, including surface parking behind buildings, bike racks in front of buildings, and/or other parking options.
- Provide pedestrian access through the recommended redevelopment sites, including between buildings.
- Continue exploring roadway typical cross-sections that consider future redevelopment plans for the area between Oak Street and the K-7 Interchange.
- Incorporate a transit stop into the development plan for the K-7 shopping area to serve mixed use centers and nearby housing.
- Provide a pedestrian bridge over the Kansas River via K-7 that connects the proposed trails on K-32 and the south side of the river.

K-7 Proposed Pedestrian Bridge





K-7 Interchange Shopping Area “Before”

Action Steps for Place-making

- Place mixed use buildings of up to three floors in height close to the street edges of K-32 to further define Downtown Bonner Springs' urban form and make them more accessible to pedestrian and bicycle traffic.
- Use masonry building materials and colors that complement those elsewhere downtown.
- Support building designs that use ample glass to maximize the visibility of people.
- Include a wide sidewalk on the north side of K-32 that abuts new mixed buildings, so sidewalk café options could be created.
- Include street art, trees, flower beds, and pocket parks
- Connect nearby retail/residential developments with one another via civic plaza space.

K-7 Interchange Shopping Area “After”



EDWARDSVILLE - 4th Street Development Plan - Phase I of 2

Moving some of the services currently available at 4th Street and Blake north to K-32 affords the opportunity to develop a mixed-use center that offers both government and retail services in a prominent location along the corridor. The shift would be part of a dual-phase development plan involving several land use, transportation, and place-making steps.

Action Steps for Land Use

- Develop the vacant corner of K-32 at 4th Street with a mixed use building that offers government/retail services, such as post office needs, city hall functions, and small retail services, on the first floor and residential units on the second floor.
- Replace the existing post office at the southwest corner of K-32 and 4th Street with mixed use buildings that provide ground floor retail with residential above.
- Develop a small (20,000 to 24,000 square foot) grocery store that offers an expanded range of items at a compatible price point to those currently available at the nearby Dollar General store.
- Create parks/open space at the southeast corner of K-32 at 4th Street.
- Encourage the development of additional retail at the southeast corner of K-32 at 4th Street.

Action Steps for Transportation

- Strive to maintain a multimodal, five-lane roadway section in the vicinity of 4th Street.
- Provide an on-street cycling path on the north side of K-32.
- Provide sidewalks on both the north and south sides of K-32 to connect pedestrians to nearby destinations.
- Provide sidewalks on 4th Street to safely connect residents to Edwardsville Elementary School and destinations south of K-32.
- Construct intersection crosswalks with patterned concrete so motorists recognize them as important pedestrian areas.
- Reduce the speed limit to 35 mph in consideration of development and corresponding bicycle/pedestrian movements in all directions of the improved K-32 and 4th Street intersection.

K-32 at 4th Street “After” (looking east on K-32)





K-32 at 4th Street “Before”

Action Steps for Place-making

- Place mixed use buildings close to the street edges of 4th Street and K-32 to further define Downtown Edwardsville's urban form and make them more accessible to pedestrian and bicycle traffic.
- Place parking to the side or rear of buildings rather than in the front and opposite K-32.
- Utilize building designs that include ample glass to maximize the visibility of people.
- Install trees and other landscaping within the proposed median and on the north and south sides of K-32 to create a tunnel effect for drivers that contributes to their driving more slowly through the 4th Street portion of the corridor.

K-32 at 4th Street “After”



EDWARDSVILLE - 4th Street Development Plan - Phase 2 of 2

Leveraging the proposed new 4th Street mixed use node as a catalyst, development could continue happening west of 4th Street and along both sides of K-32 as part of a dual-phase development plan involving several land use, transportation, and place-making steps.

Action Steps for Land Use

- Encourage the north side of K-32 to develop with small retail nodes.
- Support retail with higher density residential development (town homes, apartments) that front K-32 while low density residential uses (single-family homes) occupy the remaining area.
- Develop mixed use and additional retail on the south side of K-32.

Action Steps for Transportation

- Construct a reverse frontage road on the north side of K-32 between 2nd and 4th Streets.
- Construct a reverse frontage road on the south side of K-32 between 2nd and 4th Streets.
- Construct a north-south collector street between 2nd and 4th Streets that connects frontage roads to K-32.

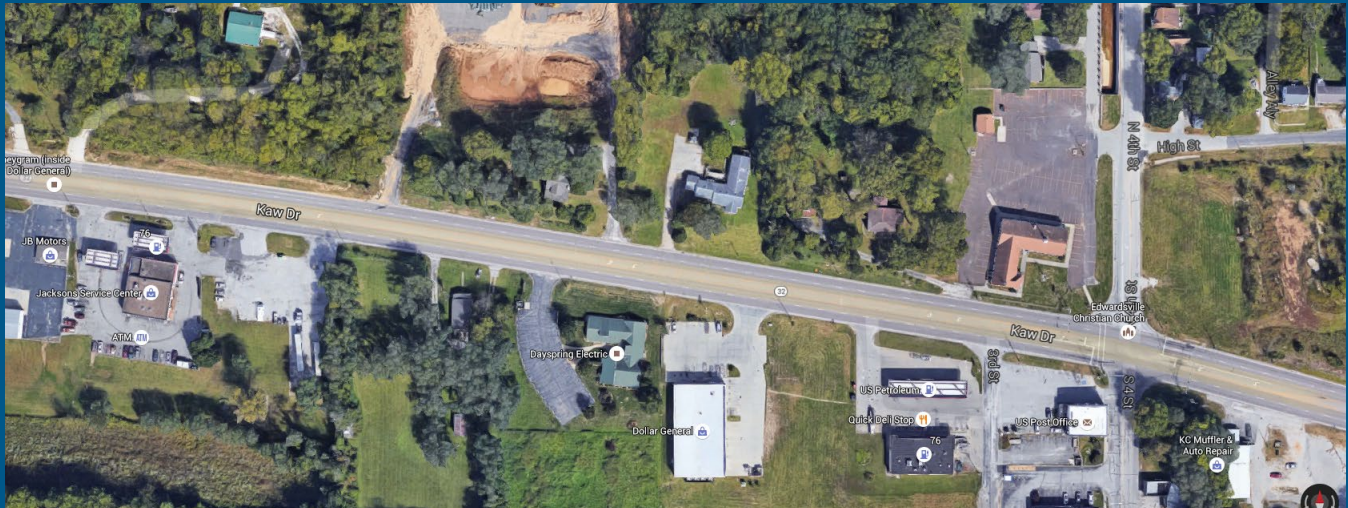
- Incorporate bicycle/pedestrian facilities into frontage roads and collector streets.
- Construct intersection crosswalks with patterned concrete so motorists recognize them as important pedestrian areas.
- Limit direct vehicular access for new development to frontage roads.
- Incorporate a transit stop into the 4th Street development plan to serve mixed use centers and housing areas.

Action Steps for Place-making

- Continue the place-making action steps described with Phase I of the 4th Street Development Plan.
- Allow unoccupied parking areas to serve as alternate locations for farmers markets to increase community access to fresh food.

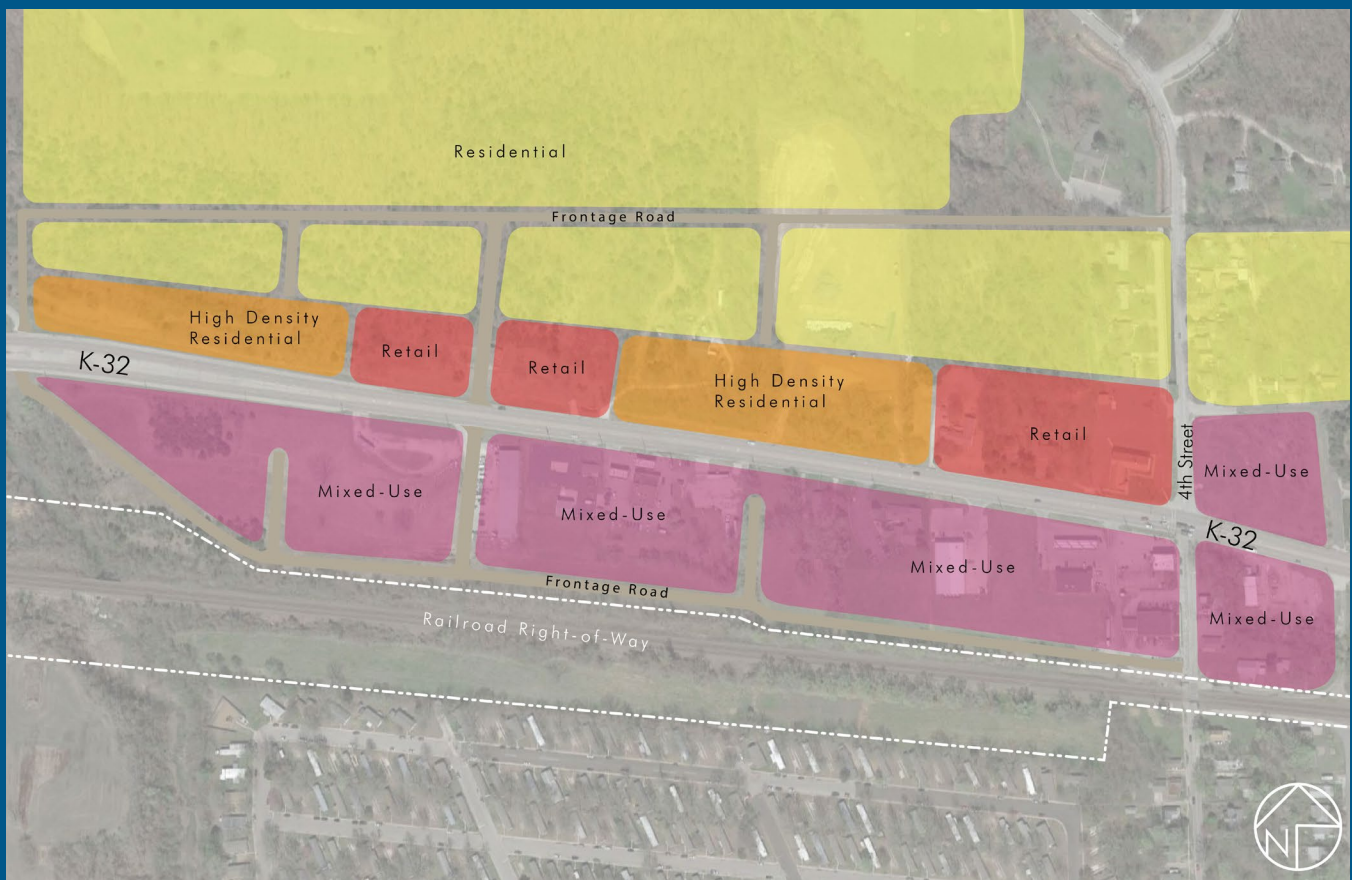
K-32 at 4th Street “After”





K-32 at 4th Street “Before”

K-32 at 4th Street “After”



KANSAS CITY - Grinter Place Restaurant/Entertainment

Developing a restaurant/entertainment venue on the undeveloped property located on the north side of K-32 just east of 78th Street would complement the Grinter Museum and historic site and increase its ability to draw visitors. The effort would involve a series of land use, transportation, and place-making actions steps.

Action Steps for Land Use

- Develop the site with a combination retail, restaurant (farm-to-table or alternative variation), and entertainment venue.
- Preserve portions of the site as open space to serve recreational purposes.

Action Steps for Transportation

- Link the newly created retail/restaurant/entertainment venue to Grinter Museum via multiuse path
- Provide a meandering pedestrian path to enhance on-site recreational opportunities and connect it to the large multiuse path that links to the museum.

- Provide direct vehicular access from K-32.
- Include a transit stop near 78th and K-32 to improve visitor access the site.
- Review and/or apply the recommendations of the DRAFT KDOT Traffic Investigation Report for K-32 at 78th Street (see the appendix) and thereby address the crash history at the intersection by 1) including an eastbound left turn lane and a westbound right turn lane, and 2) considering partially closing the 78th Street access and relocating the left turning movements to the 79th Street intersection.
- Conduct a traffic study to determine if a traffic signal is warranted on K-32 at 78th Street due to the additional traffic the new venue may generate.

K-32 at Grinter “After”





K-32 at Grinter “Before”

Action Steps for Place-making

- Allow for the development of a two-story building that includes plaza space that can accommodate outdoor dining, entertainment /performance, or gathering space.
- Utilize masonry building materials and colors that complement those in use on the Grinter property.
- Position parking to the rear of the building.

K-32 at Grinter “After”



KANSAS CITY - 65th Street/Turner Diagonal Development Plan

Reimagining the industrial area south of K-32 generally from 72nd Street to 57th Street as a industrial park that focuses on green industry, green building design, and green infrastructure would further the aspiration of attracting employers to the corridor who would employ local residents and provide job training programs. The project would involve a range of land use, transportation, and place-making actions steps

Action Steps for Land Use

- Consolidate industrial uses into target areas.
- Consider relocating higher density residential uses to alternative locations within the K-32 study area.

Action Steps for Transportation

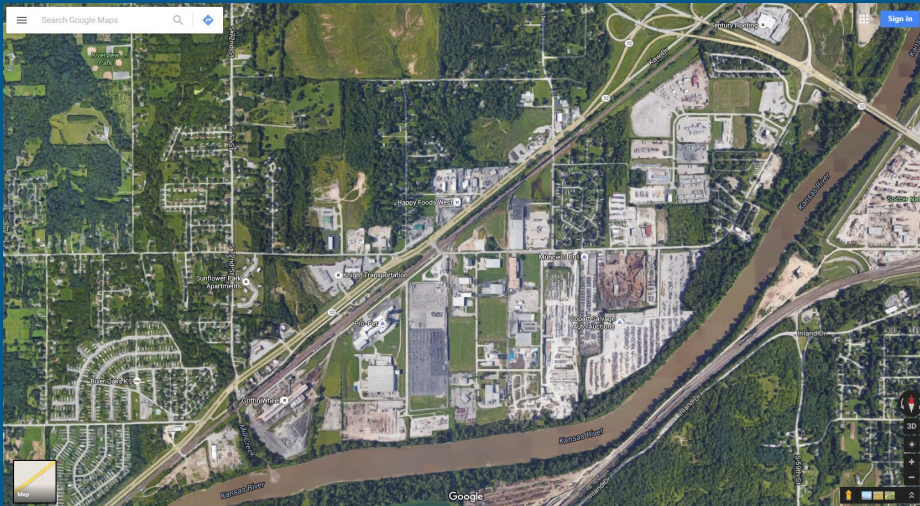
- Streamline interior roadway circulation and manage access to more efficiently serve business and industrial park development along with the truck traffic it generates.
- Provide transit stops and/or vanpooling locations to help job seekers outside the corridor reach it from places near I-70, such as the Legends at Village West and the proposed Turner Diagonal Business Park.

Action Steps for Place-making

- Explore LEED principles of building design, construction, operations and maintenance, and/or interior design with developers.
- Encourage developer pursuit of LEED certification and reference the LEED New Construction and Major Renovation checklist for projects seeking LEED credits for location and transportation, sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, innovation, and regional priority (usgbc.org).
- Use stormwater water best management practices, such as native vegetation swales, to address silt and erosion control issues.

65th Street/Turner “After”





65th Street/Turner “Before”

65th Street/Turner “After”



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IMPLEMENTATION

Recommended action steps for implementing the K-32 Tri-City Multimodal Redevelopment Plan are summarized within the implementation matrix in this section. The matrix describes both corridor-wide and community-specific actions. It also suggests implementation responsibility and timing as follows:

Responsibility

City: City of Bonner Springs, Edwardsville, and/or the Unified Government of Wyandotte County-Kansas City, Kansas

Agency: KDOT, MARC, KCATA, economic development groups, and others

Private Sector: Private individuals or groups, including developers

Area Businesses: Tri-City businesses

Timing

Short-term: Years 1 - 5

Medium-term: Years 6 - 10

Long-term: Years 11+

On-going

CORRIDOR WIDE

Action Steps		Responsibility				Timing			
		City	Agency	Private Sector	Area businesses	Short	Medium	Long	On-going
REDEVELOPMENT									
a	Target redevelopment activities to top priority activity centers	X	X						X
b	Establish public-private partnerships to achieve desired land use and development outcomes	X	X	X					X
c	Support industrial expansion in south Wyandotte County	X		X					X
d	Encourage continued development of the K-32 corridor as an employment center that draws workers from beyond the planning area to train for and obtain jobs at K-32's green industries and business parks	X	X						X
e	Incentivize the development of green industries within the K-32 corridor that provide job training, employ a large percentage of local workers, and pay higher wages	X	X						X
f	Combine industrial investment with compatible investments in human capital, providing workers with a combination of job training and on-the-job training	X	X	X	X	X			
g	Explore connections between green industry and health and wellness, leveraging them to promote the development of K-32 as a "green" corridor	X	X	X		X			
h	Encourage redevelopment efforts that will help the K-32 corridor reach population and employment densities necessary to support on-demand transit service	X	X						X
i	Conduct a market study to define the capacity and potential for retail/service and entertainment development in the corridor	X				X			
j	Increase housing diversity (type, location, and cost) to attract young families and professionals to the corridor and encourage older residents to age in place	X							X

CORRIDOR WIDE

Action Steps		Responsibility				Timing			
		City	Agency	Private Sector	Area businesses	Short	Medium	Long	On-going
PARKS AND GREENWAYS									
a	Preserve and increase parks/open space to expand the idea of “green” in the K-32 corridor, so it not only means jobs, but also recreation	X							X
b	Encourage developers to pursue conservation development (residential and non-residential) options rather than conventional development techniques, so additional parks/open space is provided	X	X						X
c	Market the economic benefits of conservation development versus conventional development approaches to perspective developers and future residents	X	X						X
d	Enhance multiuse trails by buffering them with green space, so eventually the “Kaw Valley Greenway” system could be created	X	X					X	
e	Increase the number of Kansas River access points	X	X						X
TRANSPORTATION									
a	Conduct a traffic study to forecast future traffic demand (vehicle, bicycle, pedestrian, and transit) and the corresponding number of travel lanes, bike/pedestrian facility types, ideal widths, and speed limits needed to safely accommodate all travelers along K-32; and then coordinate the study’s results with the State’s access management policies	X	X			X			
b	Strive to build transportation improvements within existing right-of-way limits	X	X	X					X
c	Repave K-32, install access control measures, and re-stripe it based on the warranted typical sections	X	X				X		

CORRIDOR WIDE

Action Steps		Responsibility				Timing			
		City	Agency	Private Sector	Area businesses	Short	Medium	Long	On-going
TRANSPORTATION (CONT.)									
d	Ensure that key activity centers are accessible via a network of multiuse trails, greenways, on-street cycling provisions and/or transit	X	X						X
e	Increase the number of Kansas River access points	X	X						X
f	Expand transit service to the K-32 potential bus service area	X	X	X	X				X
g	Develop transit alternatives to provide workers with transportation to and from jobs within the corridor and to the proposed Turner Commerce Center	X	X	X	X				X
h	Pair expanded transit service and transit alternatives to the timeframes assigned to first, second, and third shifts at major employment areas	X	X	X	X				X
i	Explore a range of National Association of City Transportation Officials (NACTO) recommended bikeway facilities for K-32 and apply the type most appropriate to the varied segments of the highway	X	X						X
j	Consider the recommendations of the K-32 Railroad Quiet Zone Study	X	X			X			
INFRASTRUCTURE									
a	Minimize the impact of overhead utility lines within or adjacent to redevelopment projects	X	X				X		
b	Determine important locations for consolidating, burying, or relocating utility lines and poles, ensuring the locations consider targeted redevelopment areas	X	X	X			X		
c	Develop a plan for utility line consolidation	X	X	X	X		X		
d	Install curb and gutter along K-32 where they do not currently exist to improve the appearance of the corridor	X	X				X		

CORRIDOR WIDE

Action Steps		Responsibility				Timing			
		City	Agency	Private Sector	Area businesses	Short	Medium	Long	On-going
PLACE-MAKING									
a	Allow roadway width and amenities along K-32 to respond to the character of the land use and development adjacent to the route	X	X						X
b	Improve K-32 by giving it the feel of a prairie-like “parkway” and include curb and gutter, landscaped medians, tree-lined street edges, turn lanes, and lighting throughout	X	X				X		
c	Utilize an urbanized streetscape treatment inside the downtown areas that includes art, manicured trees and shrubs, pocket parks, benches, trash receptacles, and other items	X		X	X		X		
d	Provide a prairie-like landscape treatment outside of downtown areas that consists of taller, native trees, shrubs, and grasses	X	X				X		
e	Rename K-32 to “Kaw Valley Parkway” or something similar	X	X				X		
f	Develop a branding and way-finding system for K-32 that reflects its new name and the unique character of each of the Tri-Cities	X	X	X	X			X	
g	Develop a marketing strategy for the corridor	X	X	X	X			X	
ENVIRONMENTAL CONSERVATION									
a	Conduct a Stream Asset Inventory to determine the quality of streams in the corridor and prioritize them	X				X			
b	Protect priority streams and adjacent wooded areas and steep slopes (15% or more) with stream buffers	X							X
c	Incorporate stormwater best management practices in small drainage areas that have low water runoff and concrete drainage ditches	X	X	X	X				X

CORRIDOR WIDE

Action Steps		Responsibility				Timing			
		City	Agency	Private Sector	Area businesses	Short	Medium	Long	On-going
FINANCING IMPROVEMENTS									
a	Partner as “Tri-Cities” to pursue state and federal transportation funding for corridor-wide improvement projects	X	X	X	X				X
b	Partner with adjacent municipalities to fund improvements that provide recreational amenities or connections that concern both communities	X							X
c	Focus capital improvement efforts on priority activity centers	X	X						X
d	Develop programs that provide grants to small businesses that may fit within recommended mixed use centers	X							X
e	Explore opportunities to create small business incubator spaces and/or pop-up stores within recommended mixed use centers	X	X						X
f	Make façade rebate programs available to local business owners	X	X						X
g	Provide financial incentives to spur redevelopment of priority K-32 activity centers	X	X						X
l	Pursue Congestion Mitigation and Air Quality (CMAQ) Program funding for detailed planning, design, and construction of the “Kaw Valley Greenway system within the K-32 corridor	X		X	X				X
m	Pursue Highway Safety Improvement Program (HSIP) funding for general transportation and bicycle/pedestrian safety projects, other intersection improvements, and signage	X		X	X				X
n	Pursue State and Highway Safety Grant funding for bicycle and pedestrian safety, education, enforcement, and research programs intended to reduce traffic crashes, deaths, injuries, and property damage	X		X	X				X

CORRIDOR WIDE

Action Steps		Responsibility				Timing			
		City	Agency	Private Sector	Area businesses	Short	Medium	Long	On-going
FINANCING IMPROVEMENTS (CONT.)									
o	Partner with transit providers and major employers to create a Transportation Management Association (TMA) that can be leveraged to provide workers with transportation to job concentration areas	X	X	X	X				X
p	Explore the possibility of expanding Ride KC: Bridj to the recommended K-32 potential on-demand transit service area	X	X	X					X
q	Consider creating a Transportation Development District (TDD) to finance the costs of expanding transit service to the K-32 potential on-demand bus service area	X	X						X
r	Consider a sales tax increase and/or a municipal utility fee to help fund the costs of providing transit service within the K-32 potential on-demand bus service area	X	X						X
s	Explore funding options for projects recommended in the K-32 Railroad Quiet Zone Study	X	X						X

BONNER SPRINGS

TIBLOW MULTIMODAL TRANSIT HUB

Action Steps		Responsibility				Timing			
		City	Agency	Private Sector	Area businesses	Short	Medium	Long	On-going
LAND USE									
a	Maintain Kelly Murphy Park as an amenity that is accessible from the transit hub	X					X		
b	Replace existing strip commercial development with a series of mixed use buildings that combine ground floor retail with second and/or third floor residential units	X	X	X			X		
c	Attract a small grocery store or market that could locate within one of the new mixed use buildings	X		X			X		
d	Relocate the Tiblow Transit Headquarters to the site and include office and residential uses within the building	X		X			X		
e	Allow unoccupied surface parking to serve as farmers market locations that provide community members with additional access to fresh food choices	X			X		X		
f	Coordinate with developers to 1) donate right-of-way for planned amenity zones and wider sidewalks that support both pedestrian traffic and outdoor eating opportunities; or 2) incorporate the aforementioned features into the development plan	X	X	X			X		
TRANSPORTATION									
a	Ensure a range of parking options, including surface parking behind buildings, bike racks in front of buildings, and/or other parking options, is provided	X					X		
b	Provide pedestrian access through the site, including between buildings	X		X			X		
c	Include a transit stop and route bus service so it travels along K-32 and through the newly created transit hub	X		X			X		
d	Explore multimodal, roadway cross-sections via traffic and access management studies that consider future redevelopment plans for the area between Oak Street and the K-7 Interchange	X	X				X		

BONNER SPRINGS

TIBLOW MULTIMODAL TRANSIT HUB

Action Steps		Responsibility				Timing			
		City	Agency	Private Sector	Area businesses	Short	Medium	Long	On-going
TRANSPORTATION (CONT.)									
e	Explore opportunities to provide more than one type of roadway cross-section between Oak Street and the K-7 Interchange	X	X				X		
f	Provide a combination of on-street cycling and off-street pedestrian paths	X	X				X		
g	Construct intersection crosswalks with patterned concrete so motorists recognize them as important pedestrian areas	X	X				X		
PLACE-MAKING									
a	Place mixed use buildings of up to three floors in height close to the street edges of K-32 to further define Historic Downtown Bonner Springs' urban form and make them more accessible to pedestrian and bicycle traffic	X		X			X		
b	Locate the new transit facility close to the street edge to make it more accessible to pedestrians and bicyclists	X					X		
c	Use masonry building materials and colors that complement those elsewhere downtown	X		X			X		
d	Utilize building designs that include ample glass to maximize the visibility of people	X		X			X		
e	Include a wide sidewalk on the north side of K-32 that abuts new mixed buildings, so sidewalk café options could be created	X		X			X		
f	Include street art, trees, flower beds, and pocket parks	X		X	X		X		

BONNER SPRINGS

K-7 INTERCHANGE SHOPPING AREA

Action Steps		Responsibility				Timing			
		City	Agency	Private Sector	Area businesses	Short	Medium	Long	On-going
LAND USE									
a	Redevelop the existing strip commercial center on the north side of K-32 with mixed uses	X		X	X			X	
b	Redevelop the east side of Warner Street with additional mixed use development	X		X	X			X	
c	Encourage the development of a small or quick-service restaurant at the northeast corner of K-32 and Warner Street	X		X	X			X	
TRANSPORTATION									
a	Provide a range of parking options, including surface parking behind buildings, bike racks in front of buildings, and/or other parking options	X		X	X			X	
b	Provide pedestrian access through the recommended redevelopment sites, including between buildings	X		X	X			X	
c	Continue exploring roadway typical cross-sections that consider future redevelopment plans for the area	X	X					X	
d	Incorporate a transit stop into the development plan for the K-7 shopping area to serve mixed use centers and nearby housing	X	X	X	X			X	
e	Provide access over the Kansas River via a multiuse trail across the K-7 Bridge	X	X					X	

BONNER SPRINGS

K-7 INTERCHANGE SHOPPING AREA

Action Steps		Responsibility				Timing			
		City	Agency	Private Sector	Area businesses	Short	Medium	Long	On-going
PLACE-MAKING									
a	Place mixed use buildings of up to three floors in height close to the street edges of K-32 to further define Downtown Bonner Springs' urban form and make them more accessible to pedestrian and bicycle traffic	X		X	X			X	
b	Use masonry building materials and colors that complement those elsewhere downtown	X		X	X			X	
c	Support building designs that use ample glass to maximize the visibility of people	X		X	X			X	
d	Include a wide sidewalk on the north side of K-32 that abuts new mixed-use buildings, so sidewalk café options could be created	X		X	X			X	
e	Include street art, trees, flower beds, and pocket parks	X		X	X			X	
f	Connect nearby retail/residential developments with one another via civic plaza space	X		X	X			X	

EDWARDSVILLE

4TH STREET DEVELOPMENT PLAN - PHASE I OF 2

Action Steps		Responsibility				Timing			
		City	Agency	Private Sector	Area businesses	Short	Medium	Long	On-going
LAND USE									
a	Develop the vacant corner of K-32 at 4th Street with a mixed use building that offers government/retail services, such as post office needs, city hall functions, and small retail services, on the first floor and residential units on the second floor	X	X	X			X		
b	Replace the existing post office at the southwest corner of K-32 and 4th Street with mixed use buildings that provide ground floor retail with residential above	X	X	X			X		
c	Develop a small (20,000 to 24,000 square foot) grocery store that offers an expanded range of items at a compatible price point to those currently available at the nearby Dollar General store	X	X	X			X		
d	Create parks/open space at the southeast corner of K-32 at 4th Street	X					X		
e	Encourage the development additional retail at the southeast corner of K-32 at 4th Street	X					X		
TRANSPORTATION									
a	Strive to maintain a multimodal, five-lane roadway section in the vicinity of 4th Street	X	X				X		
b	Provide an on-street cycling path on the north side of K-32	X	X				X		
c	Provide sidewalks on both the north and south sides of K-32 to connect pedestrians to nearby destinations	X	X				X		
d	Provide sidewalks on 4th Street to safely connect residents to Edwardsville Elementary School and destinations south of K-32	X	X				X		
e	Construct intersection crosswalks with patterned concrete so motorists recognize them as important pedestrian areas	X	X				X		
f	Reduce the speed limit to 35 mph in consideration of development and corresponding bicycle/pedestrian movements in all directions of the improved K-32 and 4th Street intersection	X	X				X		

EDWARDSVILLE

4TH STREET DEVELOPMENT PLAN - PHASE I OF 2

Action Steps		Responsibility				Timing			
		City	Agency	Private Sector	Area businesses	Short	Medium	Long	On-going
PLACE-MAKING									
a	Place mixed use buildings close to the street edges of 4th Street and K-32 to further define Downtown Edwardsville's urban form and make them more accessible to pedestrian and bicycle traffic	X		X			X		
b	Place parking to the side or rear of buildings rather than in the front and opposite K-32	X		X			X		
c	Utilize building designs that include ample glass to maximize the visibility of people	X		X			X		
d	Install trees and other landscaping within the proposed median and on the north and south sides of K-32 to create a tunnel effect for drivers that contributes to their driving more slowly through the 4th Street portion of the corridor	X	X	X			X		

EDWARDSVILLE

4TH STREET DEVELOPMENT PLAN – PHASE 2 OF 2

Action Steps		Responsibility				Timing			
		City	Agency	Private Sector	Area businesses	Short	Medium	Long	On-going
LAND USE									
a	Encourage the north side of K-32 to develop with small retail nodes	X		X				X	
b	Support retail with higher density residential development (town homes, apartments) that front K-32 while low density residential use occupy the remaining area	X		X				X	
c	Develop mixed use and additional retail on the south side of K-32	X		X				X	
TRANSPORTATION									
a	Construct a reverse frontage road on the north side of K-32 between 2nd and 4th Streets	X	X					X	
b	Construct a reverse frontage road on the south side of K-32 between 2nd and 4th Streets	X	X					X	
c	Construct a north-south collector street between 2nd and 4th Streets that connects frontage roads to K-32	X	X					X	
d	Incorporate bicycle/pedestrian facilities into frontage roads and collector streets	X	X					X	
e	Construct intersection crosswalks with patterned concrete so motorists recognize them as important pedestrian areas	X	X					X	
f	Limit direct vehicular access for new development to frontage roads	X	X					X	
g	Incorporate a transit stop into the 4th Street development plan to serve mixed use centers and housing areas	X	X					X	
PLACE-MAKING									
a	Continue the place-making action steps described in Phase 1 of the 4th Street Development Plan	X	X	X				X	
b	Allow unoccupied parking areas to serve as alternate locations for farmers markets to increase community access to fresh foods	X		X				X	

KANSAS CITY

GRINTER PLACE ENHANCEMENT

Action Steps		Responsibility				Timing			
		City	Agency	Private Sector	Area businesses	Short	Medium	Long	On-going
LAND USE									
a	Develop the site with a combination retail, restaurant, and entertainment venue	X	X	X			X		
b	Preserve portions of the site as open space to serve recreational purposes	X	X	X			X		
TRANSPORTATION									
a	Link the newly created retail/restaurant/entertainment venue to Grinter Museum via multiuse path		X	X			X		
b	Provide a meandering pedestrian path on site to enhance on-site recreational opportunities and connect it to the large multiuse path that links to the museum			X			X		
c	Provide direct vehicular access from K-32	X	X	X			X		
d	Include a transit stop near 78th and K-32 to improve visitor access the site	X	X	X			X		
e	Review and/or apply the recommendations of the DRAFT KDOT Traffic Investigation Report for K-32 at 78th Street (see appendix)								
f	Conduct traffic and access management studies to determine if turn lanes and a traffic signal are warranted for K-32 at 78th Street due to the additional traffic the new venue may generate	X	X	X			X		
PLACE-MAKING									
a	Allow for the development of a two-story building that includes plaza space that can accommodate outdoor dining, entertainment /performance, or gathering space	X		X			X		
b	Utilize masonry building materials and colors that complement those in use on the Grinter property			X			X		
c	Position parking to the rear of the building			X			X		

KANSAS CITY

65TH AND TURNER DIAGONAL DEVELOPMENT PLAN

Action Steps		Responsibility				Timing			
		City	Agency	Private Sector	Area businesses	Short	Medium	Long	On-going
LAND USE									
a	Consolidate industrial uses to target sites							X	
b	Consider relocating higher density residential uses to other locations within the K-32 study area							X	
TRANSPORTATION									
a	Streamline interior roadway circulation and manage access to more efficiently serve business and industrial park development along with the truck traffic it generates	X		X				X	
b	Provide transit stops and/or vanpooling locations to help job seekers outside corridor reach it from places near I-70, such as the Legends at Village West and the proposed Turner Diagonal Business Park in Kansas City, Kansas	X	X	X				X	
PLACE-MAKING									
a	Explore Leadership in Energy and Environmental Design (LEED) principles of building design, construction, operations and maintenance, and/or interior design with developers	X		X	X			X	
b	Encourage developer pursuit of LEED certification and reference the LEED New Construction and Major Renovation checklist for projects seeking LEED credits	X						X	
e	Use stormwater water best management practices, such as native vegetation swales, to address silt and erosion control issues	X	X	X	X			X	



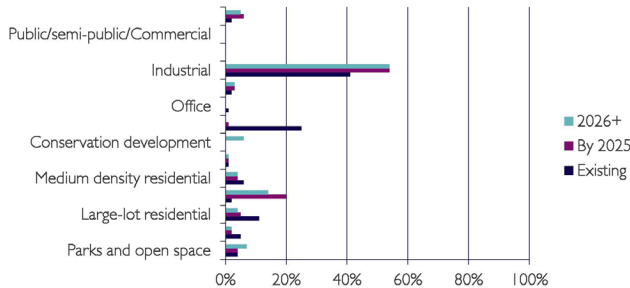
ANTICIPATED OUTCOMES

The planning team combined Geographic Information Systems analysis and MARC's Envision Tomorrow data to develop a range of anticipated outcomes for the land use, development, and transportation strategies recommend for the K-32 corridor. All assume that the vision is realized fully.

Land Use Mix

Industry would continue to occupy more parcels in the K-32 corridor than any other type of land use and development.

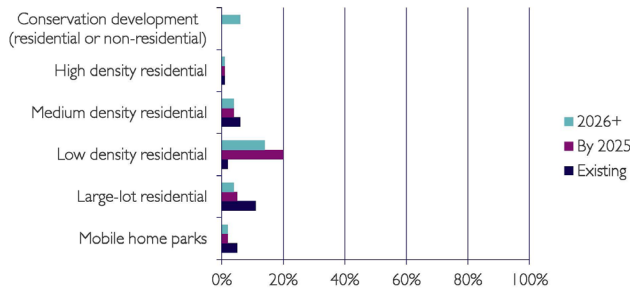
Land Use Mix



Housing Mix

Most of the housing in the K-32 corridor would be low density or large-lot residential. Most of the density needed to support bus service would come from industry, not housing.

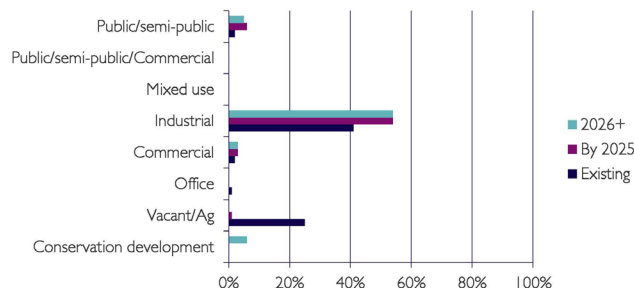
Housing Mix



Employment Mix

Industrial jobs, including those from green industry would make up over half of the employment opportunities in the K-32 corridor. Less than 1% would come from mixed-use development (public/semi-public/commercial and/or other combination).

Employment Mix



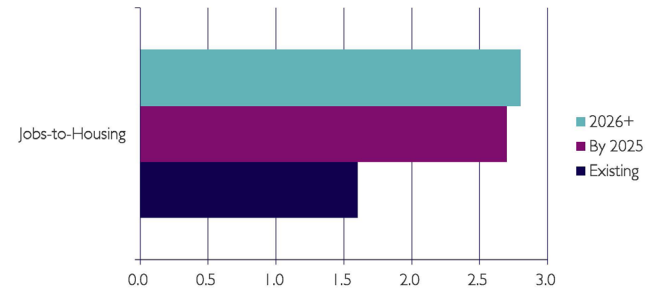
Jobs-to-Housing Balance

The K-32 corridor would continue developing as an employment center that draws workers from beyond the planning area.

Jobs-to-Housing Balance

(Assumption: X jobs per every 4 households; ideal is 0.75 - 1.5)

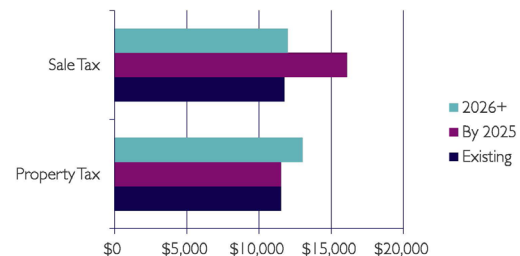
Resource: www.plan4sustainabletravel.org



Tax Revenue Per Acre

Recommended future land use would increase tax revenue in the K-32 corridor. Assuming full build out and an assessed valuation equal to the current rate, non-residential development would be a large contributor to the revenue generated.

Tax Revenue Per Acre

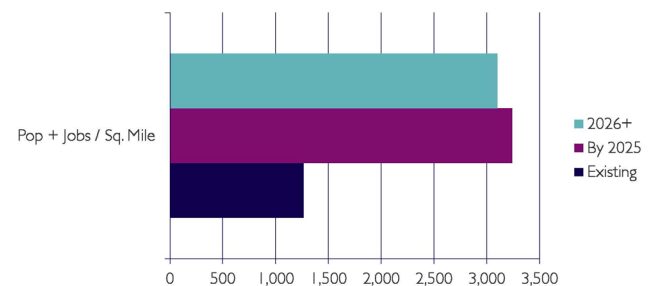


Transit Densities

Full built out could enable the corridor to reach the transit density needed to support on-demand bus service by 2025 or thereafter. Reaching density thresholds would be largely due to the job generation connected to industrial land uses.

Corridor Transit Densities

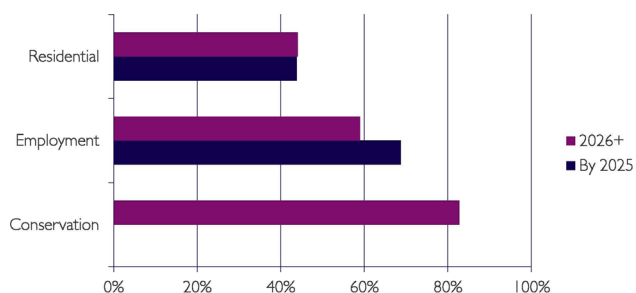
(2,328 needed for on-demand transit service)



Access to Transportation

Conservation development (residential and non-residential) parcels would have greater access to alternative modes of transportation than standard residential and employment parcels.

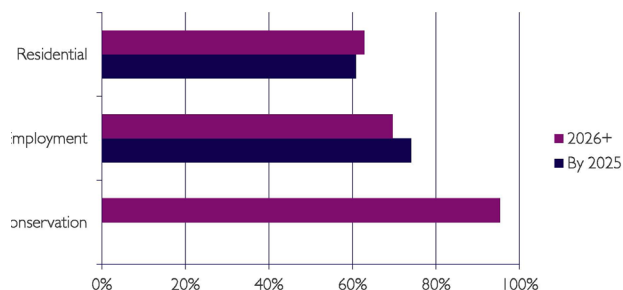
Corridor Access to Alternative Modes of Transportation
(Parcels within 1/8 mile of a transit stop, bike route, or trail)



Access to Nature

More conservation parcel (residential and non-residential) would have access to parks, open space, and trails in the future than typical residential and employment parcels.

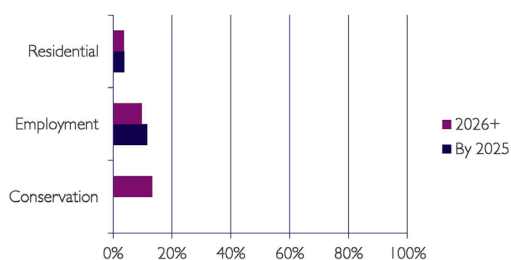
Corridor Access to Nature
(Parcels within 1/8 mile of parks, open space, and trails)



Flood Protection

In the coming years, fewer residential and employment parcels will be within the floodplain or stream buffer. Conservation developments will help protect natural features. All parcels shall comply with local, State and Federal regulations.

Corridor Flood Protection
(Parcels within 100-year floodplain or 150-foot stream buffer)



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APPENDIX

The planning team developed detailed summaries of community engagement for each of the four phases of the K-32 planning process. Findings memoranda related to area transit service and a traffic investigation of K-32 at 78th Street were also developed. All such summaries and findings reports are included in this appendix. The final draft of the Railroad Quiet Zone Study is also included.

COMMUNITY ENGAGEMENT SUMMARY - ROUND 1 OF 4

K-32 Tri-City Multimodal Redevelopment Plan (Wyandotte County)

Period: Late October – Mid-December 2015

Overview

Via a Stakeholder Advisory Committee (SAC) meeting, two public meetings, a Planning Commission update, social media, and other digital tools, the study team engaged community members in person and online as part of the first of four rounds of community engagement for the *K-32 Tri-City Multimodal Redevelopment Plan* in Wyandotte County, Kansas. The first round of engagement began during late October 2015 and ended during mid-December of the same year. Engagement activities are shown in the table below. Meeting and online opportunities were advertised via e-blasts, press releases, and/or social media.

Activity	Date and Time	Location	Number Engaged
Facebook	On-going	https://www.facebook.com/K-32-Tri-City-Multimodal-Redevelopment-Plan-561181087353830/?f=ts	10,567 reached and 335 actions/posts engagements via served posts that were linked to e-blasts and/or the online comment form Note: It is likely some community members were touched more than once through Facebook
SAC Mtg. No. 1	Oct. 28 at 5:30 p.m.	Edwardsville City Hall	16
Online Comment Form	Nov. 11 – Dec. 11	K32.digicate.com	84
Public Mtg. No. 1	Nov. 18 at 6 p.m.	Midtown MetroCenter, Kansas City	7
Public Mtg. No. 2	Nov. 19 at 6 p.m.	South Park, Bonner Springs	9
Planning Commission Update	Nov. 21 at 10 a.m.	Neighborhood Resource Center, Kansas City	8

The purpose of the first round of engagement was to:

- Hold the first SAC and two identical public meetings to kick-off the *K-32Tri-City Multimodal Redevelopment Plan* in Wyandotte County with stakeholders and the general public.
- Gather feedback about the corridor vision, existing conditions, challenges, opportunities, and outcomes via in-person public meetings and online tools.
- Blend the feedback gathered into similar information gathered during the October 18 advisory committee kick-of meeting.
- Incorporate the feedback into the planning commission update scheduled for November 21, 2015 plus the improvement scenarios that are anticipated to be shared with stakeholders and the community during January 2016.
- Incorporate the feedback gathered during Round 1 engagement as improvement concepts are developed through spring 2016.

Online Commenting

Study comments were collected online from November 11 through December 11, 2015 at k32.digicate.com. A total of 84 people responded to the survey's multiple choice and open-ended questions. Respondents' frequently used words to comment on each of the three topics (Vision, ideal outcomes/accomplishments, and other comments) are described via the wordle.com word map below and on pages 5 and 9 of this report. The words used the most frequently appear largest in the maps. The verbatim responses are also included.

- ☐ **Vision:** In 2025, what ONE WORD or PHRASE would you like to be able to use to describe the K-32 corridor in Wyandotte County, Kansas? (76 responses)



- Smooth
- Modern and clean
- Bike lanes. Beautification like State Ave. has.
- Safe
- 32 split
- Rural
- Sleek
- K-32
- Multi modal
- Multifunctional
- Commuter friendly
- Scenic
- Just re-pave. The highway is fine.
- Why stop at 57th Street go all the way to 18th and Central Ave.
- Clean
- Industry
- Rural
- Industrial Boulevard
- Trashy
- 32/70 Transit
- Multimodal
- State of the Art
- Blue Collar Hi-way
- Convenient alternative to I-70 easy drive with not too many signal lights until you get to Muncie
- Business
- Scenic
- Industry Jobs
- Busy
- Same
- Kaw River Route
- Vibrant
- Great
- Transit
- Revitalized
- pedestrian and bicycle friendly yet maintain efficiency of traffic flow
- Improved
- It's fine please leave it alone.
- Efficiency
- JAIL
- Modern
- Park
- Business
- Connected
- Residential

- Scenic & uncongested
- Industrial Park
- Attractive
- Easy for daily commuting.
- Pedestrian accessible
- History
- Safe vital prosperous family friendly fun. I know how about an arts district in Bonner Springs/Edwardsville?!?!?!?
- That Bonner Springs has a small town atmosphere
- Too Industrial
- A safe route with economic value
- Gravel running trail
- Viable
- It looks nice
- Scenic
- Potential
- Beautiful
- Practical
- Opportunity! This corridor and areas to the north in KCK provide great opportunities for infill residential/commercial development.
- Slower
- Not over crowded but useful
- Scenic
- I am case manager in emergency assistance with Catholic Charities on Central. I have become aware over some time of the frustration of multiple clients of us and Bishop Sullivan Employment Service that are really negated from job possibilities in the Edwardsville area. I speak in favor of this extension to substantially give these job seekers without their own vehicles a prime possibility for employment. Actually this benefits us as a culture and gives those who find employment a significant self esteem boost.
- Community friendly
- Quiet
- Quiet
- Updated
- Historic pathway through southern WyCo
- More lanes - or semi-only lanes!
- Industrial
- Updated
- Convenient
- Beautiful
- Southwest connector

- [illegible]

- Page 5 of 17

- Provide direction for development that will preserve the corridors bucolic character. The last thing we need is for it to become North Broadway 87th Street in Lenexa or South Metcalf.
- Making a clean and useful area that merchants will be willing to locate.
- Park atmosphere.
- Multi modal and walkable.
- Purposeful.
- Free flow of traffic.
- Making the most use of the land for high growth opportunities. To bring basic stores to the city of Edwardsville so that those citizens don't have to travel far to get groceries and home goods.
- After seeing options to fix I feel flooding is the biggest opportunity for safety improvements. Otherwise the highway is pretty decent.
- Economy progress of the local area. Make a multipurpose destination.
- Public transportation accessible to Edwardsville and Bonner Springs residents.
- Manufacturing.
- Keep small town feel. No big highways.
- Job security.
- Internet.
- Transmitting goods from rail to truck.
- To improve the local economy.
- A state of the art much nicer looking highway along with redevelopment of businesses/vacant buildings along the highway that would attract new development (commercial and residential).
- Development of better roadways i.e. more left turn accesses to allow for continued two way traffic more shoulder space. Incorporate more retail development i.e. shopping center with food market in Edwardsville. Provide a Kaw River bike and walk trail parallel to river with parks and benches (as seen in Parkville MO).
- I would like to see a river walk park with a paved walking trail along the river.
- New business.
- Beautification.
- Bring good jobs, a river park so we can enjoy natural resource.
- Limit the number of manufacturing/trucking companies along the corridor. There are already too many south of K-32 which is increasing truck traffic and dangerous driving conditions with semi-trucks.
- Shopping Restaurants Entertainment
- A good plan to grow K-32 corridor into a safe vibrant area one KC can be proud of.
- Update some of the run down parts of the businesses.
- Transit.
- Create a plan to positively revitalize the area.
- Connectivity with the community.

- Be an alternative route to downtown other than I-70....with new businesses along the way.
- I would like to know why it needs to be redeveloped. I live off of Kansas Ave and K-32. The traffic is busy from 5-6pm on the week days but other than that its moderately busy. It's the one highway you can take to get to downtown KCK that isn't overcrowded. I am all for change if you can prove that there needs to be one but I'm sorry I don't see it.
- Create a new county jail that is more efficient and spacious enough to save the county money on farm outs and maintenance cost.
- Connect surrounding communities and revitalize the area.
- Parks.
- Increase the number of businesses which will add tax income and jobs to the county.
- Beautification.
- Avoid any additional light or heavy industrial use in favor of residential and small retail use.
- Make K-32 a preference over all other current avenues available to commute between eastern & western Wyandotte County.
- Industry and jobs.
- Make the K-32 corridor as attractive as possible.
- Public usage projects to include: mass transit options, parks and recreation areas, sidewalks, and a Community Center; all of these are lacking in that area now.
- Pedestrian access is most important!
- Bike trail, Community Farmers Market, Walking trails.
- Updated shopping areas along the corridor would be great!
- Keep industry east of I-435.
- Development use like other cities (i.e. San Antonio Chicago St. Louis) along the river for bike trails, retail, and restaurants. Let's USE the river!
- Safe but still fast highway to the city.
- Running / Walking trails.
- Family interactive options.
- Make it look nice not trashy like it is now.
- Positive economic impact.
- Better connections and way finding.
- Guide for the future.
- Improvement.
- Improve safety and options for bicycle and pedestrian connections to areas to north of K-32 in KCK. As area (hopefully) densities in the future these will become more important. This area is also a natural future public transit corridor maybe even including commuter rail some day in the distant future.
- Slow traffic, reroute traffic.
- Useful development.
- Develop something specifically for public to use and enjoy.

- Open employment opportunities to job seekers who do not have their own transportation.
- Provide convenient yet family and community friendly access across the county including sidewalks and well-lit areas.
- Either get rid of the traffic lights that have made it more dangerous for us who are residents on K-32 or the lumbering trucks (semis) that make it worse because of all the traffic lights that have been installed. I wish the truck drivers would take I-70 and 435 from 57th street to Woodend instead of K-32. The traffic is terrible since they put in the lights about 12 years ago and people get frustrated behind all the big trucks and are trying to pass them and this makes it frightening on 32 in the day especially. It makes it scary to stop to turn onto our street because we have people driving 60 mph even though we signal way in advance they will not get out of the passing lane and afraid we are just going to get creamed there one day. Also train horns have gotten a lot louder in the last 25 years. Shawnee can get the railroad to curb this why can't we in K.C., Ks? However it is very nice and quiet here in the evenings and I hope it stays that way.
- Trash and trains.
- Provide incentives to current businesses to update/clean up existing structures in order to retain the historical aspects of the area while providing good faith efforts to said businesses by upgrading infrastructure to reduce the potential for flooding on small and large scales. Use the railroad to any advantage - marketing examples for potential mixed use development or only allow new business on the north side of K-32 so flood barriers can be developed on the south side. Make sure businesses on the south side have the first opportunity to bid/lease on completed portions of new developments. Ensure developers understand the importance of keeping current business in the area and helping them thrive. Give those businesses tax breaks / incentives to move into the new developments to the north of K-32 because the river will flood again like in 1993. Moving isn't feasible for Griffin Wheel and EARP Meats but small businesses won't survive. And please listen to the people that live and work on the area. Get an idea of their needs and dreams before making rash decisions. Try not to be too political and show transparency.
- Clean up make more attractive.
- Less terrible traffic from 435 to K7.
- Bring new businesses into existing vacant buildings.
- Develop areas that are more appealing to visitors and families and not so much of the warehouse type businesses. Strip malls restaurants grocery store casino just more fun exciting things to do for everyone and stop with all the unappealing warehouses!! And stop the damn train noise constantly!! Quiet zone thru Edwardsville and Bonner with trains.
- Unsure.
- Provide a scenic by-way that makes use of the beautiful natural landscape

- o Lights at 98th Street.
- o Create a viable hike bike trail well separated from road that goes all the length but especially 65th to Edwardsville.

- [illegible]

- Page 9 of 17

can help bring revenue to the town.

- A side walking/biking trail similar to Katy Trail.
- Don't make it like an interstate.
- Keep the community posted (Bonner Springs Chieftain). Let's make K-32 nice and efficient and bring new developments to the area.
- Take this opportunity to develop an area that represents our growing community in the southwest area of Wyandotte County. Redevelopment of existing businesses to update and add a curb appeal.
- There is significant tractor trailer traffic using K-32 as a transportation corridor. These trucks are causing significant damage to the asphalt. (See intersection at 88th Street)
- Employ Wyandotte County.
- Turn lane from Kaw River Route East bound to 78th street North bound.
- Nothing.
- Again show me why K-32 needs to be redeveloped? Couldn't the money be better spent elsewhere?
- New jail.
- Do no harm. There are currently pockets of very nice residential areas along the K-32 corridor (ex. Historic Lake of the Forest) that would be harmed by heavy development along certain parts of the K-32 corridor.
- Keep traffic free flowing & do not lose all the beautiful open spaces of land including the tree line of the Kaw River.
- I know nothing of the plan and will still be out of town the nights of the meetings so I'm unable to comment on the plan.
- It is my wish that the construction on Eastbound I-70 be completed prior to ANY construction at K-32 and 57th Street as the 57th Street exit is currently the fastest way to travel to the downtown area.
- There needs to be transportation from Edwardsville on K-32 to downtown Kansas City, Kansas!
- I would like to see more development done that will not only help the community but bring more commercial buildings - this area has history behind it and would like to keep it this way.
- I think it's a great idea and am looking forward seeing what happens. I would like to see the small town feel stay in the Bonner Springs/Edwardsville area but updates are needed to attract businesses.
- West of I-435 should be more of a scenic recreational area. We should be able to enjoy the Kaw River Valley area. Good for fall drives, motorcycle rides, biking and hiking areas. Promote stores and business that cater to these activities. A gateway to the country.
- Industrial is not the answer.
- We really do not know what the plan is so hard to comment.
- There are not enough amenities to draw young professionals to Wyandotte County to live. Nothing would do more to encourage an influx of this much needed demographic than a recreation area that includes a long unpaved well-maintained running trail. Look to downtown

- Austin, Texas for an example. Hundreds if not thousands of people access their downtown running trail on a daily basis. Locally English Landing Park in Parkville is an example of a recreational area people would consider a valuable amenity near their homes or places of employment.
- o Check out the riverfront area in Parkville, Missouri it is beautiful and functional. Make the new development blend in rather than destroy the feel of the area. Think Hobby Lobby, Michaels, Joann's. These types of businesses are only available to WYCO residents in JOCO. We need to capture the money our residents are forced to spend across the county line.
 - o Slower speed limit could help on the eastern part of the corridor.
 - o Standards are too low. Too many derelict buildings.
 - o Thank you for those who seek employment access to these possibilities.
 - o I understand its importance as a route for trucks and big rigs but I would like to feel safer and enjoy the county access with more safety features and pedestrian accessibility.
 - o I don't know if any property is available around Swartz or old Muncie station area anywhere that would could have a nice park with river viewing access and a short hiking trail between the railroad and the river and fishing access and parking would be great because a lot of people do like to fish in the river but the city has blocked off on Woodend so they have no where to park anymore. We have a river here and it would be nice to have access to it besides Kaw Point or Edwardsville (who doesn't really keep their area up). There are a lot of residents on 32 and it would be nice if we had something besides more trucks and industrial chaos coming in out here.
 - o No more traffic lights. Would rather the city stay away from doing anything in this area if they are just going to cause more congestion on K-32.
 - o Challenges - railroad + auto traffic, especially signalized.
 - o Keep it industrial or agricultural.
 - o I think it's a great idea but try to make the area more appealing to everyone. There is a lot of great potential on the vacant land and it should be put to good use if going to make this work.
 - o One of the most beautiful drives and areas in the county.
 - o Glad we are doing. Plans help us get better decisions.

Social Media

A Facebook page was created for the study and available at <https://www.facebook.com/K-32-Tri-City-Multimodal-Redevelopment-Plan-561181087353830/?fref=ts>. It reached 10,567 people during Round 1 engagement. Most have self-identified themselves as being in Bonner Springs, Edwardsville, or Kansas City, Kansas (+25 miles). Page viewers range in age from 25 to 64. The page has 24 likes. A combination of 335 actions were taken (link clicks,

page likes, post likes, comments, and shares) during Round 1. The following six comments were posted to the page:

- *In 2025, what one word or phrase should describe K-32 in Wyandotte County, Kansas?*
 - Cohesive
 - What is this all about?
 - The K-32 Tri-City Multimodal Redevelopment Plan for Wyandotte County is starting. The plan is a joint effort of the Unified Government of Wyandotte County - Kansas City and the Cities of Bonner Springs and Edwardsville, Kansas, hereafter referred to as the "Tri-Cities", in coordination with the Kansas Department of Transportation (KDOT) and Mid-America Regional Council (MARC).
- Really?
- Longevity
- *General comments*
 - Is there a website where I can see the map in this picture better? I'd like to know what areas will be affected.
 - Why does everything have to be "developed"? Why can't we just have wooded areas?

The Tri-Cities are hosting two public meetings and online commenting through December 11, 2015 to gather public input on the vision, challenges, opportunities, and outcomes for the plan. The planning area spans K-32 from N. 57th Street on the east to the westernmost limits of Bonner Springs on the west. See here for more information: <http://conta.cc/ISGTUyL>.

In Person Meetings

Several in-person meetings were coordinated. A SAC kick-off meeting was held on October 28 followed by a public meeting in the Unified Government of Wyandotte County-Kansas City, Kansas (UG) on November 18 and an identical public meeting in Bonner Springs on November 19. A similar, planning commission update was held on November 21. During each meeting, the Consultant Team provided an overview of the study area and planning process. Then the team asked meeting participants specific discussion questions in order to gather feedback related to the vision for the corridor and the ideal outcomes for the study. Area challenges and opportunities were also mapped and discussed. The comments received are organized by discussion question in the table on pages 13-17 of this report. The corresponding challenges and opportunities maps are attached.

Corridor Vision: In 2025, what ONE WORD or PHRASE would you like to be able to use to describe the K-32 corridor in Wyandotte County?

Planning & Design

SAC Kick-off Mtg.	UG Public Mtg.	Bonn. Sprgs. Public Mtg.	UG Planning Comm.
<input type="checkbox"/> Walkability <input type="checkbox"/> Traffic control – Reduce speed by 10 mph; access management <input type="checkbox"/> Alternative transportation (walk, bike) <input type="checkbox"/> Sustainable model (economic) <input type="checkbox"/> Attractive – Landscape / signage guide <input type="checkbox"/> Landscaping – Design guidelines (building design, beyond trees, maintenance (who?)) <input type="checkbox"/> Cohesive but unique <input type="checkbox"/> “Consistent” roadway cross-section – Drives development <input type="checkbox"/> Industrial areas can look attractive <input type="checkbox"/> Storm sewer, curb and gutter <input type="checkbox"/> State Avenue, Merriam Drive look <input type="checkbox"/> Trails – CMAQ and TAP <input type="checkbox"/> (funding options)	<input type="checkbox"/> Scenic <input type="checkbox"/> Opportunity – multimodal, economic, livability <input type="checkbox"/> Unity + cohesive <input type="checkbox"/> Character – “face town” <input type="checkbox"/> Flood - Finished Floor Elevation (flood analysis) is 18” above <input type="checkbox"/> Flooding <input type="checkbox"/> Developing in the floodplain <input type="checkbox"/> What about agricultural uses? <input type="checkbox"/> Former Potato King used to here (historic ties)	<input type="checkbox"/> Safe <input type="checkbox"/> Future – Not limiting <input type="checkbox"/> History <input type="checkbox"/> Accessible <input type="checkbox"/> Walkability <input type="checkbox"/> Consistency in future <input type="checkbox"/> Economic development <input type="checkbox"/> Inviting (lighting) <input type="checkbox"/> Pride <input type="checkbox"/> Maintainability <input type="checkbox"/> Enhancement (softer business appearance, landscape) <input type="checkbox"/> Destination <input type="checkbox"/> Preservation <input type="checkbox"/> Enhanced vistas/history <input type="checkbox"/> Sustainability	<input type="checkbox"/> Rural (farms, historic, landscape) <input type="checkbox"/> Strong visual quality <input type="checkbox"/> River accessibility (scenic) <input type="checkbox"/> Definition – Defining moment

Challenges: What CHALLENGES face the corridor? Where are they located?

SAC Kick-off Mtg.	UG Public Mtg.	Bonn. Sprgs. Public Mtg.	UG Planning Comm.
<ul style="list-style-type: none"> <input type="checkbox"/> Rail – How does it interact with the corridor (passenger rail) <input type="checkbox"/> Apartments / residential next to business/industrial areas <input type="checkbox"/> 3 major highways (gateways) <input type="checkbox"/> Land use and development isn't cohesive (varies, easier to market) <input type="checkbox"/> Mixed use corridor <input type="checkbox"/> Same issues for residents and businesses <input type="checkbox"/> More parkway like (more local community needs, better lighting) <input type="checkbox"/> Soils and floodplain <input type="checkbox"/> Railroad and train noise <input type="checkbox"/> Cliff-like elevations are hard for development <input type="checkbox"/> Missing storm sewer 	<ul style="list-style-type: none"> <input type="checkbox"/> Maintaining agricultural uses <input type="checkbox"/> Sidewalks to Dollar General <input type="checkbox"/> Safety – Conflict between different modes of transportation on a state highway <input type="checkbox"/> Highway widening went behind buildings – No buildings are occupied and unattractive <input type="checkbox"/> Timing of traffic signals with rail crossings, e.g. at K-32 and Kansas Avenue (back-ups) <input type="checkbox"/> Difficult to access the north side of Edwardsville <input type="checkbox"/> 12 fatalities over 10 years (see: http://metrocosm.com/10-years-of-traffic-accidents-mapped.html) 	<ul style="list-style-type: none"> <input type="checkbox"/> Site, smell, dirty industries <input type="checkbox"/> Money <input type="checkbox"/> Topography <input type="checkbox"/> Lack of density for transit <input type="checkbox"/> Redefining current uses of corridor <input type="checkbox"/> Perception of the corridor <input type="checkbox"/> Getting current business owners and people to buy-in <input type="checkbox"/> Safe, wider sidewalks may involve right-of-way acquisition (highway speeds) 	<ul style="list-style-type: none"> <input type="checkbox"/> Variable right-of-way <input type="checkbox"/> Direct connections for emergency response (Edwardsville – Emergency Management Service south of the railroad) <input type="checkbox"/> Emergency response coordination with the railroad <input type="checkbox"/> Train noise

Opportunities: What community features should be leveraged as OPPORTUNITIES for the future K-32 corridor? Where are they located?

SAC Kick-off Mtg.	UG Public Mtg.	Bonn. Sprgs. Public Mtg.	UG Planning Comm.
<ul style="list-style-type: none"> <input type="checkbox"/> Vacant ground <input type="checkbox"/> Walking/biking – south side of railroad (old Sand development to Bonner Springs and Shawnee; 2020 park opportunity) <input type="checkbox"/> Redevelopment of substandard structures <input type="checkbox"/> 4th and K-32 redevelopment opportunity <input type="checkbox"/> Develop gateways <input type="checkbox"/> Commercial redevelopment <input type="checkbox"/> Enhance current bike and running events (ride and running routes) 	<ul style="list-style-type: none"> <input type="checkbox"/> River access: Next closest is De Soto (10 miles away); <input type="checkbox"/> River access potential: Bridge at K-7/K-32 (5 miles way, De Soto to Edwardsville) <input type="checkbox"/> Emergency access funds for access point <input type="checkbox"/> River recreation – floating, fishing 	<ul style="list-style-type: none"> <input type="checkbox"/> Residential on the north side <input type="checkbox"/> Preservation of Parkland – destination <input type="checkbox"/> Development opportunity between the railroad and river <input type="checkbox"/> Community cooperation, opportunities for shared uses and transit <input type="checkbox"/> Enhance the visibility / appearance of existing businesses in the corridor and attract more people <input type="checkbox"/> Lighting for the corridor overall and its businesses 	<ul style="list-style-type: none"> <input type="checkbox"/> Trails and trail heads <input type="checkbox"/> Multimodal facilities <input type="checkbox"/> Rural character <input type="checkbox"/> Floodplain filling – Soils make it possible to move from one existing location to another within the corridor <input type="checkbox"/> New Catholic church in Bonner Springs <input type="checkbox"/> Cell phone towers and internet access – Google Fiber for education and business

Ideal Outcomes: What's the number one thing that you'd like *K-32 Tri-City Multimodal Redevelopment Plan* to ACCOMPLISH?

SAC Kick-off Mtg.	UG Public Mtg.	Bonn. Sprgs. Public Mtg.	UG Planning Comm.
<ul style="list-style-type: none"> <input type="checkbox"/> Implementable <input type="checkbox"/> Inspirational <input type="checkbox"/> Cohesive look and design throughout the corridor (develop look) – Affects roadway width (buildings can look different 	<ul style="list-style-type: none"> <input type="checkbox"/> Stop and shop (Edwardsville and Bonner Springs) <input type="checkbox"/> Scenic (beyond I-435) <input type="checkbox"/> Maintain what we have – local and accessible 	<ul style="list-style-type: none"> <input type="checkbox"/> Economic development <input type="checkbox"/> More visitors and people can enjoy the corridor and access it via multiple modes <input type="checkbox"/> Destination <input type="checkbox"/> Tourism – 	<ul style="list-style-type: none"> <input type="checkbox"/> Destinations – Bonner Springs and Edwardsville <input type="checkbox"/> Public infrastructure that enhances rural character while providing access <input type="checkbox"/> Organic

<p>but roadway width should be cohesive) – Look at KCK – 47th Street corridor: Committee review of development proposals for consistent look (Rainbow Boulevard to 7th or 8th)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Complete streets concept <input type="checkbox"/> Consistent <input type="checkbox"/> Form-based, not use-based (not form based code) <input type="checkbox"/> Railroad at the table (landowner) 		<p>Recreation, bike ride</p> <ul style="list-style-type: none"> <input type="checkbox"/> Celebrate history of the interurban rail, Potato King (first African American farmer, needed rail to deliver crops to Kansas City) <input type="checkbox"/> Edwardsville – 3,000 people per day <input type="checkbox"/> Ability to draw population or customers from unincorporated Leavenworth County (tax dollars) <input type="checkbox"/> Heavy/light industrial development with supportive commercial in Kansas City <input type="checkbox"/> Enhanced image of Wyandotte County via improved corridor image 	<p>development (non-homogenous destination, rural, rocky)</p>
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Other Comments: What other comments dos you have about the *K-32 Tri-City Multimodal Redevelopment Plan*?

SAC Kick-off Mtg.	UG Public Mtg.	Bonn. Sprgs. Public Mtg.	UG Planning Comm.
<ul style="list-style-type: none"> <input type="checkbox"/> Improve all utilities (too old) 	<ul style="list-style-type: none"> <input type="checkbox"/> What's the purpose of K-32? 	<ul style="list-style-type: none"> <input type="checkbox"/> Disinvestment will continue due to floodplain (Bonner Springs) 	<ul style="list-style-type: none"> <input type="checkbox"/> What could the corridor support in terms of retail? <input type="checkbox"/> Traffic study – Where is traffic coming from (https://www.ksdot.org/Assets/www

			<p>ksdot.org/bureaus/burTransPlan/maps/CountMaps/Cities/kcmet13.PDF)</p> <ul style="list-style-type: none"> □ Talk with Healthy Communities Wyandotte's Infrastructure Action Team (http://www.wycockck.org/HCWActionTeams.aspx?menu_id=1485#tabs2-pane4)
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COMMUNITY ENGAGEMENT SUMMARY - ROUND 2 OF 4

K-32 Tri-City Multimodal Redevelopment Plan (Wyandotte County)

Period: Late January – Mid-February 2016

Overview

Via two public meetings, a Planning Commission update, social media posts, and other digital tools, the study team engaged community members in person and online as part of the second of four rounds of community engagement for the *K-32 Tri-City Multimodal Redevelopment Plan* in Wyandotte County, Kansas. The second round of engagement began during late January and ended mid-February 2016. Engagement activities are shown in the table below. Meeting and online opportunities were advertised via e-blasts, press releases, and/or social media.

Activity	Date and Time	Location	Number Engaged
Facebook	On-going	https://www.facebook.com/K-32-Tri-City-Multimodal-Redevelopment-Plan-561181087353830/?fref=ts	12,898 reached and 270 actions/posts engagements via served posts that were linked to e-blasts and/or the online comment form Note: It is likely some community members were touched more than once through Facebook
SAC Mtg. No. 2	Jan. 21 at 6 p.m.	Bonner Springs City Hall	0 Note: Meeting was cancelled to inclement weather
Online Comment Form	Jan. 14 – Feb. 12	K32.digicate.com	34
Public Mtg. No. 1	Jan. 26 at 6 p.m.	Grinter Place Friends (Grinter Barn)	13
Public Mtg. No. 2	Jan. 27 at 6 p.m.	Edwardsville Community Center	17
Planning	Feb. 6 at 10 a.m.	Neighborhood	8

Commission Update	Resource Center, Kansas City
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The purpose of the second round of engagement was to:

- ☐ Hold two identical public meetings as part of Phase 2 (Exploring) of the ***K-32 Tri-City Multimodal Redevelopment Plan*** in Wyandotte County with the general public
- ☐ Review the feedback gathering during Phase 1 (Learning) of the planning process
- ☐ Gather feedback about the potential corridor improvement scenarios via the in-person public meetings and online tools
- ☐ Blend the feedback gathered into similar information gathered during the January 21 advisory committee meeting
- ☐ Incorporate the feedback into the planning commission update scheduled for February 6, 2016 plus the preferred improvement scenario that is anticipated to be shared with stakeholders and the community during March 2016

Online Commenting

Study comments were collected online from January 14 through February 12, 2016 at k32.digicate.com. A total of 34 people responded to the survey's multiple choice and open-ended questions. Responses included:

- ☐ **Potential Target Areas:** The K-32 study team is exploring locations for new development, redevelopment and/or infill. Which of the following potential areas should be targeted for future improvements? Select up to 6 responses.
 - ☐ Downtown Bonner Springs and Edwardsville (13 responses)
 - ☐ Scheidt Lane area (6 responses)
 - ☐ K-7 Interchange area (3 responses)
 - ☐ 65th Street area (3 responses)
 - ☐ Turner Diagonal area (4 responses)
 - ☐ Large parcels of ground (0 responses)
- ☐ **Scheidt Lane Area:** In the future, what types of land use and development are most important to see happening in the Scheidt Lane area? Select up to 2 responses.
 - ☐ Housing (6 responses)
 - ☐ Shopping (5 responses)
 - ☐ Industry (4 responses)
 - ☐ Services or offices (2 responses)

- Schools, churches, or other institutional areas (1 response)
- Open space or agriculture (0 responses)
- **K-32 through Downtown:** In your opinion, what are the most important strategies for strengthening K-32 through Downtown Bonner Springs and Edwardsville? Select up to 3 responses.
 - Improve the variety of services, shops, and restaurants (19 responses)
 - Develop vacant or underutilized land (3 responses)
 - Make it easier for pedestrians to cross K-32 (3 responses)
 - Add downtown identification signage, banners and/or art near K-32 (3 responses)
 - Slow traffic and make K-32 a narrower street (0 responses)
 - Add a transit hub or stop (0 responses)
- **K-7 Interchange Area:** In the future, what types of land use and development are most important to see happening in the K-7 Interchange area? Select up to 2 responses.
 - Services (12 responses)
 - Other (6 responses)
 - Shopping (5 responses)
 - Housing (4 responses)
- **65th Street and Turner Diagonal Areas:** In the future, what types of land use and development are most important to see happening in the 65th Street and Turner Diagonal areas? Select up to 2 responses.
 - Recreational open space (13 responses)
 - Green industry and job training (11 responses)
 - Services offices (4 responses)
 - Transit hub or stop (3 responses)
- **Large Parcels of Land:** In the future, what types of land use and development are most important to see happening on large parcels of land? Select up to 3 responses.
 - Open space or agriculture (11 responses)
 - Shopping (7 responses)
 - Services or offices (4 responses)
 - Housing (3 responses)
 - Schools, churches, or other institutional uses (3 responses)

- Industry (3 responses)
- **K-32 Parkway:** Parkways are wide roadways that are lined with trees and lighting. They may also include medians with similar lighting and landscaping. If K-32 were transformed into a parkway in the future, what features should it include? Select up to 3 responses.
 - Landscaping and lighting (14 responses)
 - Crosswalks and signals for pedestrians (5 responses)
 - Accommodations for all modes of transportation (5 responses)
 - Identification signage, banners, and/or art (4 responses)
 - Slower travel speeds near downtowns (2 responses)
 - No truck traffic (0 responses)
- **Truck Traffic:** How would removing truck traffic from K-32 affect the corridor? (22 responses)
 - With all of the industry present I am not sure you could divert all truck traffic from K-32 from 57th west to I-435 or K-7. West of I-435 it would be possible but whether it would be a good idea depends on to where such traffic would be diverted. This idea makes a great deal of sense through Bonner Springs and to a lesser extent through downtown Edwardsville.
 - K-32 has lot of industrial so removing truck traffic may leave businesses to look elsewhere. Not a good idea to completely remove it.
 - Removing truck traffic would be bad. There are many industrial businesses in the area and they need the use of trucks.
 - There are too many industries that are dependent on truck traffic along K-32. Removing that traffic would negatively affect those industries and possibly cause businesses to move out of the area.
 - Truck traffic does not need to be removed. The area should be left industrial just like it has been for years. That is what the Muncie area is known for. Do not fix something that is not broke just to be spending money and raising our taxes for no good reason.
 - I don't believe that's a good idea.
 - How can you remove truck traffic that would be dumb.
 - It would greatly improve it. I've used K-32 as a bike connection between KCK and Bonner Springs and it would be nice to eliminate them from the road.
 - There are many businesses that have a lot of truck usage on K-32 that would be hurt.

- It would create a more livable transportation area. Walking biking - slower living.
- Not at all. Take away gas and food sales. More on Sat. Sunday and PM.
- Lot of businesses off 32 need trucking.
- I feel it's important to accommodate existing freight traffic and industrial services along the corridor.
- No appropriate goal. K-32 is essential corridor and must service trucks.
- Less noise more pedestrian-friendly increase property values.
- I would leave truck traffic.
- It would greatly reduce accidents.
- I would not do this yet.
- Not sure.
- This could be a benefit to the downtowns - Slowing traffic and making it more accessible. Would it adversely affect the industrial development?
- Removing truck traffic along K-32 would force trucks north on Turner Diagonal and potentially 65th Street to get to I-70 then I-435 making longer routes.
- I feel it's important to accommodate existing freight traffic and industrial services along the corridor.

- ☐ **Increasing Housing Densities:** How important is it to increase the number of housing units per acre in order to support better and/or expanded transit service within the K-32 corridor?
 - Somewhat important (13 responses)
 - Very important (9 responses)
 - Not important (5 responses)
 - Unsure (5 responses)
- ☐ **Investment in Transportation:** How important is it to focus future investments in transportation improvements on projects that improve transit and bicycle/pedestrian accommodations (trails, sidewalks) along K-32 and/or the Kansas River rather than on vehicular improvements? Select 1 response.
 - Very important (16 responses)
 - Somewhat important (8 responses)
 - Not important (4 responses)
 - Unsure (3 responses)

- **Other Comments:** What other comments do you have about potential K-32 improvements? (19 responses)
- From 57th west to K-7 K-32 is a major traffic artery. Slowing down traffic through this area would be a bad idea. A pedestrian bridge in the area of downtown Edwardsville would be a great way to unify that community. West of K-7 the parkway idea is an excellent one as truck and through traffic can be diverted onto K-7. Pedestrian access across K-32 to the river at the eastern end of the corridor in question would be nice as well.
 - Attracting a grocery store somewhere between Edwardsville and Bonner Springs would be a great addition to local residents and to all the commuter traffic.
 - A stoplight at the intersection of K-32 and 79th street would improve safety
 - Why does K-32 need to be improved? Whose hair brain idea is this our Unified Government? Do they need to spend money for something else stupid like so many of the other things they do. Maybe they just need a way to raise our taxes some more.
 - The on ramp to Turner diagonal heading east/north east needs to be made safe.
 - Lights at 98th St. You have them at Woodend and not K-32. Lots of traffic from that area
 - This survey doesn't do a good job of soliciting input. Design a better process. Also work with K-DOT to allow for more community projects to be championed. Help residents of Wyandotte County develop processes by which they can incorporate their own vision for how spaces around K-32 can develop through creative place-making and other more community-based efforts.
 - K-32 through Downtown - Move K-32 West (Scheidt) away from CBD K-7 Interchange Area - Other - Park land (no access) K-32 Parkway - Accommodations for all modes of transportation - Shared lanes, express buses.
 - Exit lanes for turns. Housing could come later if K-32 could handle traffic first.
 - If you can't improve or construct sidewalks/shared-use-paths in the near-term, consider improving the shoulders and replace dead light bulbs and improve lighting along the corridor. Bicycle/pedestrian way-finding will also improve the corridor.
 - Bike route along north side up the bluff. Don't oversell what this can be or pretend changes that aren't realistic --- Very industrial program

- The corridor is looking unkempt and scruffy. Pedestrians have no sidewalks or crosswalks and it is even more dangerous since the Dollar General store went in. There is little incentive to move there as it is noisy dirty and there is no neighborhood aesthetic.
- I think this is a great idea. Anything we can do to improve K-32 would be welcome. There is so much potential to do great things along the river such as bike/hike trails and connected parks much like the Indian Creek trails in Johnson County. Safety needs to be addressed right away. I would like to see the speed limit reduced down to 45 mph where it is currently 55 and installing turning lanes needs to be a priority. I think one of the very first things that needs to be taken care of is lighting. K-32 is a very busy highway and is dark from Swartz to I-435.
- Focus Edwardsville/Bonner Springs corridor.
- Increasing housing densities: Would rather see employment or transit nodes/housing/job access.
- Encouraging way-finding/place-making for increased unity between 3 communities create a sense of place. Attract recreation and perhaps residents.
- Would like to see trail connectivity to KC to Bonner Springs - increase recreational uses.
- Due to the rural character of the corridor, the trail network needs to be established/enhanced that promotes walkability.

Social Media

A Facebook page was created for the study and available at <https://www.facebook.com/K-32-Tri-City-Multimodal-Redevelopment-Plan-561181087353830/?fref=ts>. It reached 12,898 people during Round 2 engagement. Most have self-identified themselves as being in Bonner Springs, Edwardsville, or Kansas City, Kansas (+25 miles). Most page viewers range in age from 25 to 54. The page has 54 likes. A combination of 270 actions were taken (link clicks, page likes, post likes, comments, and shares) during Round 2. The following five comments were posted to the page:

- *If the Wyandotte County K-32 corridor were improved at key locations over the next several years, what types of land use and development, transportation options, and/or other items should be included?*
 - I think a QuikTrip off of K-32 and 435 would be good.
 - I so agree w/that – they have a wide variety of different types of foods as well as gas.
 - Have air force do a bombing pass and start over.



- We need turning lanes so people don't get killed.
- A thriving red light district would be nice.

In Person Meetings

Several in-person meetings were coordinated. Although the second SAC meeting on January 21 was cancelled due to inclement weather, a public meeting was held in UG on January 27 and in Edwardsville on the following day. A planning commission update was held on February 6. During each meeting, the Consultant Team provided an overview of the study schedule, planning process, community feedback received to date, and potential focus areas for redevelopment. The team then used a large-scale map (attached) to ask meeting participants questions related to various development options for the corridor. Notes from the comments received are organized by discussion question in the table on pages 8-16 of this report.

Potential Target Areas: Should redevelopment and new development activities in the 8-mile K-32 corridor happen block-by-block or in targeted locations?

SAC Kick-off Mtg.	UG Public Mtg.	Edwardsville. Public Mtg.	UG Planning Comm.
<input type="checkbox"/> N/A - Meeting cancelled	<u>Targeting</u> <ul style="list-style-type: none"> <input type="checkbox"/> Limit development due to flooding <input type="checkbox"/> Trailer park floods <u>Ideas for the Future</u> <ul style="list-style-type: none"> <input type="checkbox"/> Can we clean this area up? <input type="checkbox"/> Businesses are shabby, run down – clean up, tear down/rebuild <input type="checkbox"/> Grocery store is needed – Could be food desert <input type="checkbox"/> Junk store (old hardware store) – Aware of the issues, could give away free bread <input type="checkbox"/> Recreational, e.g. bird watching 	<u>Targeting</u> <ul style="list-style-type: none"> <input type="checkbox"/> Targeting is fine but consider existing businesses, residents, stormwater impacts, silting at Lake of the Forest <input type="checkbox"/> Make sense like the Sprint Center area <input type="checkbox"/> Makes zoning easier <input type="checkbox"/> Slow traffic down in the cities of Edwardsville and Bonner Springs <input type="checkbox"/> Get infrastructure fixed – Dangerous ingress/egress, 78th Street into Bonner Springs, and sewer utilities 	<u>Targeting</u> <ul style="list-style-type: none"> <input type="checkbox"/> Focus on downtowns (Edwardsville)

		<input type="checkbox"/> Was farmland	
Potential Target Areas (Continued): The K-32 study team is exploring location for new development, redevelopment and/or infill. Which of the following potential areas should be targeted for future improvements: Scheidt Lane, Downtown Bonner Springs and Edwardsville, K-7 Interchange area, 65 th Street area, Turner Diagonal area, and/or large parcels of ground (in single ownership)?			
SAC Kick-off Mtg. <input type="checkbox"/> N/A - Meeting cancelled	UG Public Mtg. <u>Old Town on Muncie</u> <input type="checkbox"/> Located on K-32 east by creek, south side was town of Muncie – Old depot, K-32 moved to north side of town but was located to the south, nice community <input type="checkbox"/> History of the area – destination, keep people here, draw families, carry on Grinter History <u>Bonner Springs</u> <input type="checkbox"/> Love the trains and to hear them pass by (others can't hear) <input type="checkbox"/> Relationship with Moon Marble – Send visitors back and forth <input type="checkbox"/> Residential housing hasn't really changed in 40 years <input type="checkbox"/> New single family housing <input type="checkbox"/> Shortage of light industrial	Edwardsville. Public Mtg. <u>Scheidt Lane</u> <input type="checkbox"/> Residential in the future, zoning around it is heavy industrial, 1/3 of mobile homes in the floodplain <input type="checkbox"/> Spur track <input type="checkbox"/> Complete street – Multimodal, like the parkway section, walkable, well lighted <input type="checkbox"/> Sewer design is about 80% <u>Downtown Bonner</u> <input type="checkbox"/> Downtown Bonner Springs – Make it a destination with unique shops, antiques, artists; provide start-up businesses with marketing and accounting needs/training <input type="checkbox"/> One thing to improve – Getting people there via K-32 <input type="checkbox"/> Old Thriftway and Dollar General – Property has closed but acts	UG Planning Comm. <u>Look and Feel</u> <input type="checkbox"/> Focus on scale and type of development <input type="checkbox"/> Preserve small town scale <input type="checkbox"/> Agricultural character <input type="checkbox"/> Restored businesses – Moon Marble <input type="checkbox"/> Focus on parking in Bonner Springs and Edwardsville – UG has done this on State Avenue, identify the first features and who maintains the lighting, etc <input type="checkbox"/> Two-way cycle track in the center of K-32 <input type="checkbox"/> Experience Tiblow Days – 3-day carnival in Bonner Springs (Moon Marble is involved) <u>Lake of the Forest</u> <input type="checkbox"/> Speeding, drainage causes silt problems in the lake

<p><u>Other Areas</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Redevelop, housing, intersections <input type="checkbox"/> Infrastructure and clean it up <input type="checkbox"/> Small businesses would be great – Enhance them <input type="checkbox"/> Family restaurant – Like Cracker Barrel <input type="checkbox"/> Keep open areas and farmland <p><u>Reference Areas</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Parallel Parkway's vacant buildings – City regulations for development <input type="checkbox"/> Cooperate Woods was developed with trails 	<p>like an anchor – Business / mixed use with second and third story housing</p> <ul style="list-style-type: none"> <input type="checkbox"/> Open on Sundays <input type="checkbox"/> Entertainment needed – Bowling alley in downtown Edwardsville and Bonner Springs <input type="checkbox"/> Why go downtown? <input type="checkbox"/> Walmart moved in and everything went away – A lot of uses went to K-7 in north Bonner Springs <input type="checkbox"/> Downtown needs personality, e.g. art community, something for kids and parents <p><u>K-7 Interchange Area</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Gateway on the west side <input type="checkbox"/> Take corner - Need to have more of a presence <input type="checkbox"/> Strip center could use redevelopment per 2/3 vacant <input type="checkbox"/> Chevy dealership has buses parked there and looks bad – Those in the bus lot are for sale <input type="checkbox"/> If that's the image people would like 	<p><u>Younger Generations</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Feedback from young parents in relationship to parks? <input type="checkbox"/> Appealing to millennials is important - Lots live by Price Chopper and nearby park off of Morris / Nettleton intersection <input type="checkbox"/> Millennials are moving back because the community's safe, affordable, and has amenities
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		<p>to see...then okay...could be better</p> <p><u>Camp Naish/Rock Quarry Areas</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> The camp has utility issues – No thought to moving, Boy Scouts own portion on the north end (beyond the study area) that may be for sale <input type="checkbox"/> Shawnee Rock is planning for an industrial park <input type="checkbox"/> Flooding a big issue south of K-32 near the camp and quarry <p><u>Downtown Edwardsville</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Needs retail and infrastructure, restaurant diversity, and ingress/egress into city <input type="checkbox"/> Railroad tracks are an obstacle to the area – Emergency response time to get north, agreements in place <input type="checkbox"/> Pedestrians moving across – Handicapped people need to get to shopping, e.g. dollar store 	
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	<ul style="list-style-type: none"> <input type="checkbox"/> Clean up <input type="checkbox"/> Popular cycling route + motorcycles <p><u>86th Street</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Existing development has one way in/out <p><u>65th and 72nd Streets</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Future recreational opportunities <input type="checkbox"/> Cleaner or greener businesses – Training related to support new development <input type="checkbox"/> Job training – already a training center off of 88th Street <input type="checkbox"/> Historically industrial <input type="checkbox"/> Old town of Muncie <input type="checkbox"/> Soccer fields <p><u>Reference Areas</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Junction City – Water parks, sports fields built to help bring in retail 	
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Investment in Transportation: How important is it to focus future investments in transportation improvements on projects that improve transit and bicycle/pedestrian accommodations (trails, sidewalks) along K-32 and/or the Kansas River rather than on vehicular improvements? If improve transit is important, how important is to increase the number of housing units per acre in order to better support and/or create expanded transit service in the K-32 corridor?

SAC Kick-off Mtg.	UG Public Mtg.	Edwardsville. Public Mtg.	UG Planning Comm.
<input type="checkbox"/> N/A - Meeting cancelled	<u>Bike/Ped</u> <ul style="list-style-type: none"> <input type="checkbox"/> No sidewalks from neighborhood to grocery store <input type="checkbox"/> People need sidewalks, buses to jobs <input type="checkbox"/> Keep trails close to river <input type="checkbox"/> Trails would be used <input type="checkbox"/> Bike path segregated from road – Cyclists or children to access food <input type="checkbox"/> Shared lanes – Create crossings (railroad), cyclists will go where they can <input type="checkbox"/> Downtown – Really don't need bike facility per traffic goes 20 mph <input type="checkbox"/> Signage and way finding to direct trail users and pedestrians <input type="checkbox"/> Bike lanes, trails don't need to be on both sides of the road <input type="checkbox"/> Fix the road first <input type="checkbox"/> Better than Indian Springs Mall 	<u>Bike/Ped</u> <ul style="list-style-type: none"> <input type="checkbox"/> Trails along the river – Connect to historic sites, schools, parks, commercial, etc <input type="checkbox"/> Ottawa Trail – Prairie Spirit Trail and this could be a draw to this area <input type="checkbox"/> Bicycle racing on K-32 <input type="checkbox"/> Great for levee trails east of here – Expand length of the trails for Wyandotte County residents <input type="checkbox"/> Railroads are the complicating factor <input type="checkbox"/> Bonner Springs – Tracks close to the river, water wells – Homeland Security issue <input type="checkbox"/> Use old interurban track – North side of K-32 <input type="checkbox"/> Rail banking the right-of-way 	<u>Transit</u> <ul style="list-style-type: none"> <input type="checkbox"/> Bus route should go to the Legends, etc and then to Bonner Springs and other K-32 destinations <input type="checkbox"/> Can't have demand for something you've not experienced

<p><u>Transit</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Is there a need for transit in the corridor? <input type="checkbox"/> Used to be interurban line from Bonner Springs to KCK <input type="checkbox"/> Transit wasn't catching on here <input type="checkbox"/> KCATA is flexible and will put in a line to see if it works – Loops through Edwardsville and Bonner Springs <input type="checkbox"/> Bus – Up the hill to businesses, e.g. 110th Street, etc <input type="checkbox"/> K-7 to I-435 is busier 	<p><u>Transit</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> May not work here <input type="checkbox"/> Density will drive the need for transit <input type="checkbox"/> Historically – K-32 connected the area to downtown KCK <input type="checkbox"/> Could be a lot of commerce and they want to maintain that <input type="checkbox"/> Light rail has been here and gone – Commuter rail left <input type="checkbox"/> Not a major use <input type="checkbox"/> All are aspects but not a priority <input type="checkbox"/> A lot of Leavenworth and Johnson County come through K-32 to get from K-7 to I-435 <input type="checkbox"/> Could have a good draw from the Speedway <input type="checkbox"/> Edwardsville – Losing out on retail, close 100th Street on rare weekends <input type="checkbox"/> Millennials have different value system, spend/save differently – Look at newer generations, not buying houses (renting instead) 	
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		<input type="checkbox"/> Generational look – Focus on traffic and recreational things, lower hanging fruit, not fighting current development <input type="checkbox"/> Bonner Springs – Can't do trail along river <input type="checkbox"/> Can new generations stay here?	
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K-32 Parkway: Parkways are wide roadways that are lined with trees and lighting. They may also include medians with similar lighting and landscaping. If K-32 were transformed into a parkway in the future, what features should it include?

SAC Kick-off Mtg.	UG Public Mtg.	Bonn. Sprgs. Public Mtg.	UG Planning Comm.
<input type="checkbox"/> N/A - Meeting cancelled	<input type="checkbox"/> Like parkway idea – Make it a parkway with lighting (single row in the media) <input type="checkbox"/> Bypass on Bonner Springs portion if it's going to be state highway <input type="checkbox"/> Like bike/ped accommodations - Sidewalks, bus stops, citizen accents <input type="checkbox"/> Exits – turn lanes to get on/off K-32 <input type="checkbox"/> Islands, medians, enhance to draw people in	<input type="checkbox"/> Not like State Avenue – Harder to get to businesses, landscaping dies, no maintenance <input type="checkbox"/> Don't damage business by making it hard to get to <input type="checkbox"/> Narrow – Okay with bike lanes <input type="checkbox"/> Scheidt Lane – Takes trucks <input type="checkbox"/> 2 lanes in both directions could be good with median <input type="checkbox"/> KCK portion is almost parkway like today	<input type="checkbox"/> Destinations – Bonner Springs and Edwardsville

Other Comments: What other comments dos you have about the *K-32 Tri-City Multimodal Redevelopment Plan*?

SAC Kick-off Mtg.	UG Public Mtg.	Bonn. Sprgs. Public Mtg.	UG Planning Comm.
<input type="checkbox"/> N/A – Meeting cancelled	<input type="checkbox"/> “Not another Piper” – Took farmland away and replaced it with asphalt and development <input type="checkbox"/> South of State Avenue was poverty area <input type="checkbox"/> Old area called “Lowring ”	<input type="checkbox"/> Kansas water highways – River Scenic byway – Mike Caldwell at Kaw Point	<input type="checkbox"/> Lake of the Forest has a community building – Have public meeting there <input type="checkbox"/> What does north Bonner Springs think of K-32 <input type="checkbox"/> Engage railroad more so you can support for projects

COMMUNITY ENGAGEMENT SUMMARY - ROUND 3 OF 4

K-32 Tri-City Multimodal Redevelopment Plan (Wyandotte County)

Period: Mid-March – Mid-April 2016

Overview

Via a Stakeholder Advisory Committee (SAC) meeting, two public meetings, a Planning Commission update, social media posts, and other digital tools, the study team engaged community members in person and online as part of the third of four rounds of community engagement for the *K-32 Tri-City Multimodal Redevelopment Plan* in Wyandotte County, Kansas. The third round of engagement began during mid-March and ended mid-April of 2016. Engagement activities appear in the table below. Advertising for meeting and online opportunities happened via e-blasts, press releases, and/or social media.

Activity	Date and Time	Location	Number Engaged
Facebook	On-going	https://www.facebook.com/K-32-Tri-City-Multimodal-Redevelopment-Plan-561181087353830/?f=ts	15,469 reached and 336 actions/posts engagements via served posts of project materials that were linked to e-blasts and/or the online comment form Note: It is likely some community members were touched more than once through Facebook
SAC Mtg. No. 3	Mar. 10 at 6 p.m.	Bonner Springs City Hall	10
Online Comment Form	Mar. 17 – Apr. 15	K32.digicate.com	9
Public Mtg. No. 1	Mar. 30 at 6 p.m.	Neighborhood Resource Center	2
Public Mtg. No. 2	Mar. 31 at 6 p.m.	Bonner Springs Community Center	22
Planning Commission	Apr. 9 at 10 a.m.	Neighborhood Resource Center,	6

Update	Kansas City
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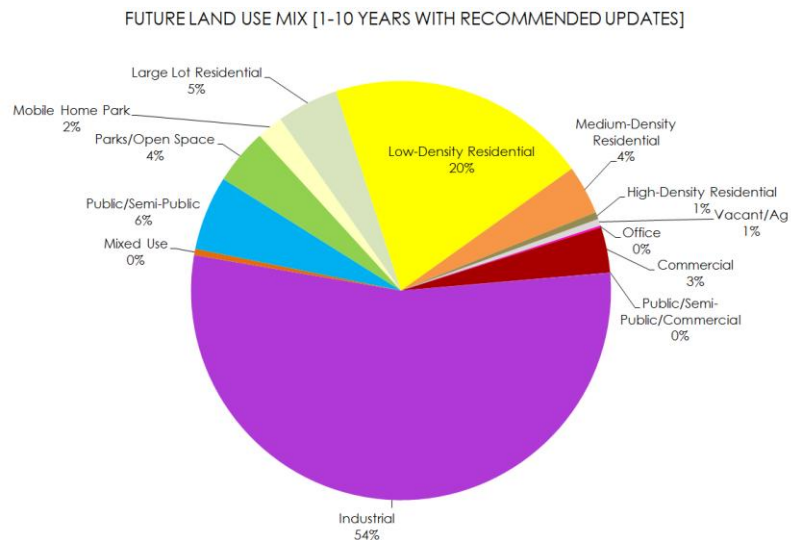
The purpose of the third round of engagement was to:

- ☐ Hold two identical public meetings as part of Phase 3 (Defining) of the *K-32 Tri-City Multimodal Redevelopment Plan* in Wyandotte County
- ☐ Review the feedback collected during Phase 1 (Learning) and Phase 2 (Exploring)
- ☐ Gather feedback about the phased improvement scenario for the corridor.
- ☐ Incorporate the feedback received into the materials that will be developed for the planning commission update (early April 2016) and the revised preferred improvement scenario that is anticipated to be incorporated into the draft of *K-32 Tri-City Multimodal Redevelopment Plan* and shared with the community during June and July of 2016.

Online Commenting

Study comments were collected online from March 17 through April 15, 2016 at k32.digicate.com. Nine people responded to the survey's multiple choice and open-ended questions. Verbatim responses included:

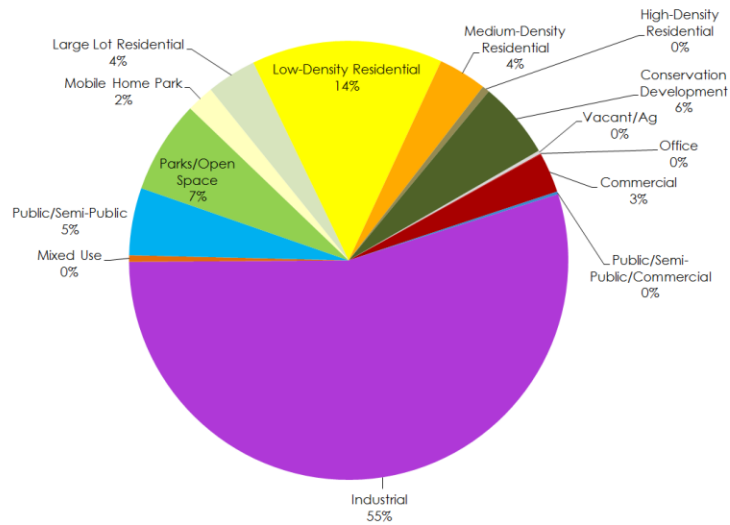
- ☐ **Question 1 - Recommendations for Future Land Use and Development (2015-2025):** See the chart below. Over the next 10 years, improved downtowns, warehousing, assembly, and green industrial growth, plus additional services are recommended for the K-32 corridor. What are your thoughts about the proportions of recommended land use and development shown in the chart?



- o Too much industrial leads to too many big trucks... think there are too many already.
- o Need more commercial

- I think the total residential of 30% is unrealistic but it would be great if that happened! If you have that much residential you may want more parks/open space than the graph shows.
 - Good
 - One large issue that should be addressed in the Union Pacific crossing of K-32 just west of 121st Street to service Buzzi Unicem USA. This activity needed to allow shipping of rail cars from a large Bonner Springs business disrupts traffic flow creates safety hazards and noise from the trains horn blasts when crossing K-32. Union Pacific has relayed to me that cars and trucks interfere with the train while crossing. This is the ONLY at-grade crossing of significance along the entire K-32 section included in the Plan. There is a spur crossing at K-32 and Scheidt Lane in Bonner Springs but it is used much less often. The Buzzi Unicem crossing is used 3-5 times per week and therefore is a constant traffic flow disruption. This crossing should be eliminated by requiring improved access to the facility by elevated crossing or K-32 requires a bridge to span across the at-grade crossing to eliminate this hazard. The traffic situation will only get worse in future years.
 - How about like sooooo many other cities we develop the river. You know like the San Antonio Riverwalk.
- **Question 2 - Goals for 2015-2025:** If the K-32 corridor were improved over the next 10 years, what short-term goals would be most important to pursue from 2015 to 2025?
- Reduce big rig traffic.
 - Reduce congestion and large truck traffic on western part of the corridor (Edwardsville and Bonner). Make it more residential friendly. Eliminate train horns.
 - Better road maintenance. I avoid that corridor east of I-435 because the road is not very good.
 - Developing industrial and retail that looks good. We look like the bottoms and it is not attractive.
 - Bike lanes/walking trails/ development along the river
- **Question 3 - Recommendations for Future Land Use and Development (2026 and Beyond):** See the chart below. Over the next 20 to 30 years, additional industrial development, more parks and/space plus conservation development projects (non-residential and residential) that protect natural features are recommended for the K-32 corridor. What are your thoughts about the proportions of recommended land use and development shown in the chart?

FUTURE LAND USE MIX [11+ YEARS WITH RECOMMENDED UPDATES]



- More commercial
- Unknown
- Good
- No more industrial

□ **Question 4 -Goals for 2026 and Beyond:** If the K-32 corridor were improved over the next 20-30 years, what long-term goals would be most important to pursue?

- Landscaping beautification. Side walks at appropriate locations. Lower speeds at congested areas.
- Unknown -
- Beautification and development of attractions.
- Develop the River.... Commerce trails shopping restaurants river cruises... think BIG

□ **Question 5 - 5-Lane Parkway Sections:** If K-32 were transformed into a parkway with trees, lighting, medians, turn lanes, and curbs, the overall roadway could include five, 12-foot lanes. What other elements would be important to include if a 5-lane parkway were created? Select up to 6 responses.

- Off-street bicycle/pedestrian accommodations (3 responses)
- On-street bicycle accommodations (3 responses)
- Other (3 responses)
- Way-finding signage for destinations, such as downtowns and a trails systems (2 responses)
- Prairie-like look and feel with lots of trees (1 response)
- Buildings of no more than 2- or 3-stories high (0 responses)

- ☐ **Question 6 - 2- and 3-Lane Parkway Sections:** If K-32 were transformed into a landscaped parkway with trees, lighting, medians, turn lanes, and curbs, the portion of the roadway that traveled through downtown areas could include 2 or 3, 12-foot lanes instead of five. Which other elements would be important to include if a 2- or 3-lane parkway were created? Select up to 6 responses.
 - ☐ On-street bicycle accommodations (3 responses)
 - ☐ Off-street bicycle/pedestrian accommodations (2 responses)
 - ☐ Buildings of no more than 2- or 3-stories high (1 response)
 - ☐ Way-finding signage (1 response)
 - ☐ Prairie-like look and feel with lots of trees (0 responses)
 - ☐ Other (0 responses)
- ☐ **Question 7 - Branding:** Creating a unique name or symbol for a special place is part of community branding. If the improved K-32 were renamed, would it be called "Kaw River Parkway" or something else?
 - ☐ Kaw Valley Parkway
 - ☐ Kaw River Parkway sounds nice
 - ☐ Kaw River Scenic Bi-way
 - ☐ Kaw Riverwalk
- ☐ **Question 8 - Branding (continued):** What aspects of the improved K-32 corridor are most important to incorporate into future branding and marketing materials that could be developed for the corridor? Rank them from 1 (most important) to 6 (least important).
 - ☐ Downtowns (3 responses)
 - ☐ Kansas River (2 responses)
 - ☐ Agriculture (1 response)
 - ☐ Industry (1 response)
 - ☐ Corridor history (0 responses)
 - ☐ Recreation (0 responses)
- ☐ **Question 9 – Place-making:** Creating physical places that people enjoy and love to share with others is part of place-making. What should be the most important place-making strategy for K-32? Select 1 response.
 - ☐ Cleaning up the corridor by adding landscaping, curbs, and more (5 responses)
 - ☐ Adding buildings to key intersections (1 response)
 - ☐ Renaming K-32 to Kaw River Parkway or something else (1 response)

- Ensuring the heights and materials of new buildings complement the existing character of the corridor (0 responses)
- Developing a unique brand for the corridor (0 responses)
- Other (0 responses)
- **Question 10 – Place-making (continued):** Why did you respond that **INSERT RESPONSE TO QUESTION 9** was the most important place-making strategy for K-32?
 - Cleaning up the corridor by adding landscaping curbs and more
 - Adding buildings to key intersections
 - Ensuring the heights and materials of new buildings complement the existing character of the corridor
 - Developing a unique brand for the corridor
 - Renaming K-32 to Kaw River Parkway or something else
 - Cleaning up the corridor by adding landscaping curbs and more
 - There needs to be more activity along K-32 proper. Commercial that is not on K-32 is challenged. There are also some obvious gaps in development that detract from any feeling of vibrancy.
 - If not attractive it will always be industrial -- Need to brand a Main Street in Edwardsville -- More businesses in downtown Bonner
 - It's time to move our city forward like Chicago
- **Question 11 - Key Destinations:** In your opinion, what should be the top destinations to visit in the corridor? Why?
 - Wyco residents need access to the river in Bonner Springs. The river was a big part of the city's history and a big opportunity for recreational use. Hiking trails and maybe even a boat ramp like Edwardsville has would be a huge improvement.
 - Restaurants service stations grocery stores
 - Downtown Bonner Springs
 - Marbles in Bonner Kaw River (walkway fishing boat launch)
 - The shopping the cycling trail
- **Question 12 - Other Comments:** What other comments do you have about the recommended 10-year and 20- to 30-year land use and development vision, street cross-sections, branding, place-making strategies, or key K-32 destinations?
 - The corridor in KCK and the corridor in Edwardsville and Bonner are slightly different and could be evaluated differently. Heavy truck traffic should be directed to I-435 and to access roads.

- Find ways to promote turning off 435 or K-7 for events etc. Signage (digital or banners). No one knows to pull off or why. Where will the funding come from?
- No more industry

Social Media

A Facebook page was created for the study and available at <https://www.facebook.com/K-32-Tri-City-Multimodal-Redevelopment-Plan-561181087353830/?fref=ts>. Its posts reached 15,469 people during Round 3 engagement. Most have self-identified themselves as being in Bonner Springs, Edwardsville, or Kansas City, Kansas (+25 miles). Most page viewers range in age from 25 to 54. The page has 74 likes. A combination of 336 actions were taken (link clicks, page likes, post likes, comments, and shares) during the third phase of engagement. Facebookers posted the following six comments to the page:

- *What goals would a realistic, 10-year improvement vision for the K-32 corridor in Wyandotte County, Kansas include? What would a 20- to 30-year improvement aspiration involve in terms redevelopment, new development, infill, transportation options, recreational opportunities, corridor branding, and other items?*
 - A multi use trail is so important. Crushed limestone like a rail trail that would eventually get replaced with pavement would get so much use.
 - How about farm land?
 - Outstanding!
 - 4RealDoe
- *It needs to be left alone. Why does everything have to be developed up to look like JoCo, Lee's Summit, Blue Springs and any other city the same way. Why can't green space be left alone as just that green space? Farm land be left as that farm land. It is all about politics. If people want developed areas move there. What good is a metropolitan city like Kansas City in general if it all looks the same and you can't tell where you are unless it were not for street signs. More you develop the more it will cost you to live there. Then in order to have change you have to tear down and start over. I wonder how long this will stay up before it is developed.*
- *When is the next meeting? They'll be June 29 and 30.*

In Person Meetings

Several in-person meetings were coordinated including a third SAC meeting on March 10, public meetings on March 30 and 31, and a planning commission update on April 9. During each meeting, the Consultant Team provided an overview of the study schedule, planning process, community feedback received to date, and outlined the phased improvement scenario for the corridor, including land use and development, multimodal transportation,

and place-making. Notes from the comments received are organized by discussion question in the table on pages 8-14 of this report.

General: What comments, questions, or concerns do you have about the phased improvement scenario?

SAC Kick-off Mtg.	UG Public Mtg.	Bonner Sprgs. Pub. Mtg.	UG Planning Comm.
<u>General</u> <ul style="list-style-type: none"> <input type="checkbox"/> Truck traffic <input type="checkbox"/> Effects of traffic on pedestrians <input type="checkbox"/> Multimodal connections <input type="checkbox"/> Transit connections to Legends, downtown, Bonner Springs, Edwardsville <input type="checkbox"/> Does transit encompass all the potential activity/employment centers <input type="checkbox"/> Allow people from outside the corridor to access the corridor <input type="checkbox"/> Renaming corridor? Kaw River Parkway? Branding makes a lot of sense. 95th Street-Prairie Star Parkway <input type="checkbox"/> Generally okay with idea of rebranding corridor <input type="checkbox"/> Signage – school district is interested in this to promote the 	<u>Scheidt Lane Area</u> <ul style="list-style-type: none"> <input type="checkbox"/> Truck route through Bonner Springs – off beaten path <input type="checkbox"/> Bonner Springs: Interest in relocating mobile home park? No. <input type="checkbox"/> Why have all the industrial along K-32, except for mobile home park, which is the largest, flattest area? <input type="checkbox"/> Edwardsville: Need to think long-term about the corridor; housing growth north of K-32 <u>K-7 Interchange Area</u> <ul style="list-style-type: none"> <input type="checkbox"/> Quarry – Making a new business park would be very expensive – Utilities laid on top of rock <u>65th/Turner Diagonal</u> <ul style="list-style-type: none"> <input type="checkbox"/> Response to “green” industry? <u>Short-term Vision</u> <ul style="list-style-type: none"> <input type="checkbox"/> Parcel depths? <input type="checkbox"/> Access for residential? 	<u>General</u> <ul style="list-style-type: none"> <input type="checkbox"/> Activity centers, Grinter place – will these be turn lanes? Needed. <input type="checkbox"/> Transportation – employment focused transit <input type="checkbox"/> Bonner – most of historical growth hasn’t been jobs, been residential instead; the city of Edwardsville is opposite <input type="checkbox"/> Independent jobs don’t support much food service, retail. <input type="checkbox"/> If we don’t make some of these changes, won’t attract any growth <input type="checkbox"/> Clear relationship between trails, recreation and house values. Take advantage of flood plain <input type="checkbox"/> Walking/bike trail on I18th Street to Village West <input type="checkbox"/> Bike path on K-32 is important 	<u>General</u> <ul style="list-style-type: none"> <input type="checkbox"/> Where will Tiblow Days go – depends on parking at Oak and K-32 <input type="checkbox"/> Wal-Mart created affecting shopping/grocery market <input type="checkbox"/> Bonner Springs-Main Street America concept – Possible opportunities to fund improvements <u>Intensity</u> <ul style="list-style-type: none"> <input type="checkbox"/> More identifiable – change in speed limit <input type="checkbox"/> Market study: Walmart and Price Chopper on K-7 affect what is going to happen on K-32

<p>school district</p> <ul style="list-style-type: none"> □ Balance between unifying parkway and identifying communities □ Store gives a sense of permanence □ Reasons to be in corridor: 4-5 events during the year, Marble Day; Jazz Festival; Edwardsville Day; Marathon Events 	<ul style="list-style-type: none"> □ Access control will be an issue – No stopping distance □ No existing stop light □ Should be smaller industrial – Doesn't seem like much intensification □ There is demand for industrial, not residential, to justify a ton of improvements 		
<p><u>Branding</u></p>	<p><u>Oak Street Area</u></p> <ul style="list-style-type: none"> □ Bring downtown's urban feel to K-32 		
<ul style="list-style-type: none"> □ Balancing natural with industrial - Biggest challenge for Edwardsville □ Addition of conservation areas (but buffering along K-32 in Edwardsville will remove a lot of visible areas) 	<p><u>4TH Street Area</u></p> <ul style="list-style-type: none"> □ No pressure on K-32 – Two stories that could be both public and office; only place to put a Walgreens, CVS, or grocery store – Very little market here for much of anything □ Right now there's a ton of industry, growing commercial – Should just build up cash reserves 		
	<p><u>Grocery Store Concept</u></p> <ul style="list-style-type: none"> □ Both Bonner and Edwardsville want a grocery store □ Small flex use from 4th Street west – Cities could require 		

<p>buildings to have some type of façade [enhancement]</p> <ul style="list-style-type: none"> <input type="checkbox"/> Parcels are skinny <p><u>Grinter Place</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Like the idea of bringing in a destination (tourist) <input type="checkbox"/> D. Rose formatted on steroids <input type="checkbox"/> Farm-to-table restaurant concept/education <p><u>Transit Hub</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Needs are farther south of K-32 in industrial park <input type="checkbox"/> Employment is spread out – Affects service <input type="checkbox"/> Need a hub at Turner Commerce Center (3,000 jobs; 1 million square feet) – Connect to Edwardsville <input type="checkbox"/> Look at vanpool approach <input type="checkbox"/> Surface Transportation Program proposal – Could have 20,000 jobs in the area in the next five years <input type="checkbox"/> Lack of shift change alignment <input type="checkbox"/> How to get working poor from jobs they have not to higher wage jobs here 		
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Parks and Greenways

- ☐ Topography of the northeast corner of I-435 and K-32?
- ☐ Very few north-south streams are wet – only during summer
- ☐ Gullies don't have flowing bodies of water except during rains
- ☐ Most creeks don't even have a mapped floodway
- ☐ Streamway buffers are a pain – community doesn't like it
- ☐ KCK has more effective ways to build trails than streamway buffers
- ☐ Trails plan only has the realistic trails

Future Land Uses

- ☐ Edwardsville – Encourage mobile home park to be mixed use (at least)
- ☐ Schools and amenities are why people come to the area
- ☐ Not a whole lot could be built that isn't already floodplain

Recreation

- ☐ Everyone wants the river to be the big

	<p>recreational area,, but there are only a few placed that make sense – Recreation could be built in floodplain and</p> <ul style="list-style-type: none"> □ Millennials and college kids really like green <p><u>Place-making</u></p> <ul style="list-style-type: none"> □ Like the idea of having more signage, e.g. monument sign in each community 		
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Strengths: What are the strongest aspects of the phased improvement scenario?

SAC Kick-off Mtg.	UG Public Mtg.	Bonner Sprgs. Pub. Mtg.	UG Planning Comm.
<ul style="list-style-type: none"> □ Quiet zone should be in post 10-year scenario □ Urban prairie section should have sidewalks on both sides □ Clean the street up - River seems to be a barrier - Not a whole lot of population growth in Wyandotte County - This plan would help change that 	<ul style="list-style-type: none"> □ Coordination aspects (signage) □ KCK easiest to develop due to staff □ Edwardsville has greatest opportunity □ Bonner Springs is only looking at one corner 	<ul style="list-style-type: none"> □ Kaw River Parkway - Historically known as "Kaw Valley" □ Trail connection to Shawnee Indian Park □ Store (grocery) at Oak & K-32 – Wanted - OK to show market or grocery – Is / will there be enough people for a Bonner Springs grocery store? 	<ul style="list-style-type: none"> □ Overall corridor planning: Tri-city branding □ Nodes: Edwardsville and Bonner Springs

Improvements: What aspects of the phased improvement scenario need to be improved?

SAC Kick-off Mtg.	UG Public Mtg.	Bonner Sprgs. Pub. Mtg.	UG Planning Comm.
<ul style="list-style-type: none"> <input type="checkbox"/> Separate cycle lanes from traffic on K-32 (have a lot of right-of-way in Edwardsville) but specific to different areas / sections <input type="checkbox"/> Take 3-lane parkway concept along entire corridor? 	<ul style="list-style-type: none"> <input type="checkbox"/> Public private partnerships <input type="checkbox"/> Transit <input type="checkbox"/> Bonner Springs too focused on transit <input type="checkbox"/> What are the top five implementation steps? 	<ul style="list-style-type: none"> <input type="checkbox"/> Look at Kaw Valley Parkway – was a Kaw Valley Rail <input type="checkbox"/> People in greater KC area think of this area as “poor ugly stepchild” - People need to appreciate our great access - Opportunity for growth rear central KC region <input type="checkbox"/> Protect access – don’t like narrower roads - Should maintain 4-lanes with turning lanes, like sample Kansas City section - Could combine with sidewalks and bike lanes - OK to restrict speeds, build up to property lines OK with bike/ped <input type="checkbox"/> Think narrowing will hurt both Bonner and Edwardsville <input type="checkbox"/> Last street improvement 	<ul style="list-style-type: none"> <input type="checkbox"/> Sharpening focus and message <input type="checkbox"/> Relating future land use to market potential especially residential growth. <input type="checkbox"/> What’s high density residential?

		<p>expanded K-32</p> <ul style="list-style-type: none"> <input type="checkbox"/> No feasible reason for parking on Front Street <input type="checkbox"/> Needs to be turn lane at Edwardsville <input type="checkbox"/> Has to be implementable and affordable both from timing and funding <input type="checkbox"/> Concern about speed of trains <input type="checkbox"/> Turn lane at 78th Street and Morris <input type="checkbox"/> Interaction between this plan and KDOT important <input type="checkbox"/> If not enough right-of- way for Kansas City-like section, drop bike lanes and sidewalk. <input type="checkbox"/> Places – Kobi's Bar and Grill (Bike Show) <input type="checkbox"/> How long will it take? <input type="checkbox"/> Important to cooperate between 3 cities when chasing funding 	
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COMMUNITY ENGAGEMENT SUMMARY - ROUND 4 OF 4

K-32 Tri-City Multimodal Redevelopment Plan (Wyandotte County)

Period: Early June – Early July 2016

Overview

Via a Stakeholder Advisory Committee (SAC) meeting, two public meetings, a Planning Commission update, social media posts, and other digital tools, the study team engaged community members in person and online as part of the fourth of four rounds of community engagement for the *K-32 Tri-City Multimodal Redevelopment Plan* in Wyandotte County, Kansas. The fourth round of engagement began during early June and ended early July of 2016. Engagement activities appear in the table below. Advertising for meetings and online opportunities happened via e-blasts, press releases, and/or social media.

Activity	Date and Time	Location	Number Engaged
Facebook	On-going	https://www.facebook.com/K-32-Tri-City-Multimodal-Redevelopment-Plan-561181087353830/?fref=ts	7,657 reached and 144 actions/posts engagements via served posts of project materials that were linked to e-blasts and/or the online comment form Note: It is likely some community members were touched more than once through Facebook
SAC Mtg. No. 4	Jun. 8 at 6 p.m.	Edwardsville City Hall	13
Online Comment Form	Jun. 15 – Jul. 8	K32.digicate.com	40
Plan. Comm. Update	Jun. 18 at 10 a.m.	Neighborhood Resource Center	3
Public Mtg. No. 1	Jun. 29 at 6 p.m.	Neighborhood Resource Center	3
Public Mtg. No. 2	Jun. 30 at 6 p.m.	Edwardsville Community Center	6

The purpose of the fourth round of engagement was to:

- ☐ Hold two identical public meetings as part of Phase 4 (Adopting) of the *K-32 Tri-City Multimodal Redevelopment Plan* in Wyandotte County.
- ☐ Gather feedback about priority implementation steps.
- ☐ Incorporate the feedback gathered into the final draft of the plan of *K-32 Tri-City Multimodal Redevelopment Plan* to be approved by the Tri-Cities' planning commission and adopted by City Council and Board of Commissioners from July to September 2016.

Online Commenting

Study comments were collected online from June 15 through July 18, 2016 at k32.digicate.com. Forty (40) people responded to the survey's multiple choice and open-ended questions. Verbatim responses included:

- **Question 1: Redevelopment** – How important is it to encourage the continued development of the K-32 corridor as an employment center?
 - ☐ Very important (18 responses)
 - ☐ Somewhat important (14 responses)
 - ☐ Not important (5 responses)
 - ☐ Unsure (1 response)
- **Question 2: Redevelopment (continued)** – How important is it to target redevelopment activities to top priority activity centers, including downtowns and other areas?
 - ☐ Very important (22 responses)
 - ☐ Somewhat important (9 responses)
 - ☐ Not important (6 responses)
 - ☐ Unsure (3 responses)
- **Question 3: Transportation** – How important is it to 1) conduct a traffic study to determine the roadway improvements needed to accommodate all travelers along K-32 safely and 2) to improve access management policies?
 - ☐ Very important (26 responses)
 - ☐ Somewhat important (7 responses)
 - ☐ Not important (5 responses)
 - ☐ Unsure (1 response)

- **Question 4: Parks and Open Space** – How important is it to preserve and increase parks/open spaces to expand on the idea of “green” in the K-32 corridor.
 - ☐ Very important (20 responses)
 - ☐ Somewhat important (11 responses)
 - ☐ Not important (8 responses)
 - ☐ Unsure (0 response)
- **Question 5: Place-making** – How important is it to allow the roadway width and amenities along K-32 to respond to the character of the land use and development adjacent to it
 - ☐ Very important (18 responses)
 - ☐ Somewhat important (13 responses)
 - ☐ Not important (7 responses)
 - ☐ Unsure (1 responses)
- **Question 6: Place-making (continued)** – How important is it to improve K-32 by giving it the feel of a “parkway” with curbs, turn lanes, traffic signals, landscaping, lighting, a new name, and more.
 - ☐ Very important (14 responses)
 - ☐ Somewhat important (11 responses)
 - ☐ Not important (11 responses)
 - ☐ Unsure (2 response)
- **Question 7: Financing Improvements** – How important is for local governments to partner as “Tri-Cities” to pursue state and federal transportation funding for corridor-wide improvement projects
 - ☐ Very important (27 responses)
 - ☐ Somewhat important (6 responses)
 - ☐ Not important (6 responses)
 - ☐ Unsure (1 response)
- **Question 10:** What other comments do you have about the implementation priorities for the K-32 corridor in Wyandotte County? (29 responses)
 - ☐ Eating establishments for the workers off 435 and K-32.
 - ☐ We need a grocery store out West (past 86th Street) and more restaurants. Sidewalks in the neighborhoods would be better

utilized versus sidewalks directly on K-32.

- Improvements mustn't negatively impact the residential areas along K-32.
- Would like to see river access along K-32 with bike and walking paths along the river. Could be used as additional transportation to/from work. In addition there should be a special lane for truck traffic. Many times during the commute along K-32 tractor trailers dump trucks and other large commercial vehicles drive side by side and do not remain in the right hand lane when not passing. This obstructs the flow of traffic in the area. It is especially bad in the Muncie area.
- I think trying to make a riverfront would be a great idea for the county. Something where you can have retail restaurants sporting activities trails for walking/running/biking among other things. That might bring people from other counties (and possibly other states) to the area. We have a river that doesn't really flood lets use it to our advantage instead of just letting it lay barren.
- I think the run down businesses and old buildings on K-32 need to be shut down or torn down. Wyandotte is doing lots of improvements and the business by the Wild Woody's grocery store are very scary from the outside. I would never go in them.
- Don't put anymore traffic lights up on K-32 this has made the highway much more dangerous. I have lived here for 30 years and the highway has become a nuisance with all the traffic lights along with all the semi trucks on this highway don't know why they don't use I-70. Between the trucks and the traffic signals and the regular traffic speeding and driving crazy trying to get away from the trucks that are barely crawling because they have to keep stopping at these lights and it takes them too long to get moving after stopping so many times people speed and weave in and out trying to get out from behind them. It is not going to be a parkway its got too many trucks its a highway good grief.
- Walk/Bike trail along the river / K-32.
- K-32 is a vital connection for the citizens in Bonner/Edwardsville to get to I-435 and points east. It is also a convenient access for folks from KCK to get to Bonner/Edwardsville. Having lived in all three cities in the last 40 years I have used K-32 often and do so at least several times a week now (now living in the Turner area). I feel the center turn lanes now in use are sufficient for the current traffic as well as some increased traffic. The center

median upgrades along State Ave. in KCK are wonderful but doing the same thing along K-32 would be an increased obstacle as would be a parkway feel and more traffic lights. The eastern section of K-32 (from the Turner Diagonal east to Meadowlark) would be a much better area for the center median upgrades. Not sure what amenities could be applicable for the stretch from Meadowlark Lane east due to lack of right of way space.

- ☐ Need transportation routes to get people from inner downtown KCK Bonner and Edwardsville to work at jobs on K-32 corridor. It will attract more businesses to the industrial park area and increase jobs in our city.
- ☐ Community input of residents/business owners in the areas affected.
- ☐ Keep the community safe and clean. Bonner Springs has always been a good community. Let's keep it that way.
- ☐ Lighting along roadways.
- ☐ Needs to have local input.
- ☐ It's about time we have sports parks like Overland Park has. I have pictures of the poor quality of our ball fields. The city gives tickets to residents who let weeds grow high but this city won't cut there own. I have pictures.
- ☐ It would be good to improve the flow where 32 intersects with Turner diagonal and the segment between Edwardsville and Bonner is practically a business park now so perhaps encouraging that?
- ☐ We are having trouble funding the schools. Why the hell are you talking about improvements to the 32 Hwy corridor and multi-modal. Let industry pay for that thru taxes. Stop spending our taxes on stuff for private corporations. Fund the schools for now worry about green initiatives when we have money for it. Improve the parks we already have update the playgrounds.
- ☐ A NEW BETTER GROCERY STORE AND MODERN MORE UP TO DATE RETAIL IN KCK. THE STORES ARE DINGY DIRTY AND NOT DESIRABLE. K-32 LOOKS LIKE A NEWER ARMOURDALE. CLEAN IT UP ADD SOME SOUND BARRIERS FOR THE FOLKS WHO HAVE TO LISTEN TO TRAINS ALL NIGHT AND DAY.
- ☐ If the other plans are implemented more housing for seniors needs to be included. If green space is implemented them ____ issues parks for seniors need to be included. Get the business

first before tax payer money is spent.

- Need more shopping and restaurant places but don't want to lose rural feel to area.
- The area at K-7 and K-32 needs something. The ramp to K-7 north is too close to Morse Avenue. I wish I could think of a fix but I can't. I just know that when I am headed west on 32 and need to go north on 7 its very uncomfortable when cars are trying to enter 32 from Morse.
- There are several homes on our street that are rental properties that either are boarded up and obviously not able to be rented they are in such poor condition then there is another house where everyone parks their car on the grass on the front of the house. It seems to me these homeowners who rent their property should be held responsible for how this looks in the neighborhood where we want a decent looking street it reflects on our homes.
- The speed limit at 55 mph in Edwardsville is too fast cars are going way to fast and the lack of street lights makes it dangerous. Slow down the traffic and add more street and traffic lights.
- Before you do anything else try and maintain it.
- Gain easements big enough to accommodate future growth and set utilities there to save money in the future. Make sure businesses have adequate access based upon the traffic types of vehicles they use.
- I grew up here then moved away for forty some years. My son was murdered here and his killer spent only a few months in jail. Crime and school accreditation are number one problems here. Before you put money into a trail where criminals will thrive spend more effort on cleaning up the crime and schools.
- A major priority should be placed on having safe bike trails throughout the county.
- Too many lights on K-32 now and way too many trucks on Woodend need to be encouraged to stop using 32 and use I-70 and 435.
- Great ideas! Gives much better feel to a livable area.

Social Media

A Facebook page was created for the study and available at <https://www.facebook.com/K-32-Tri-City-Multimodal-Redevelopment-Plan-561181087353830/?fref=ts>. Its posts reached 7, 657 people during Round 4 engagement. Most have self-identified themselves as being in Bonner Springs, Edwardsville, or Kansas City, Kansas (+25 miles). Most page viewers range in age from 25 to 54. The page has 82 likes. A combination of 144 actions were taken (link clicks, page likes, post likes, comments, and shares) during the fourth phase of engagement. The following comment was posted to the page:

- *What should be included among the most important implementation priorities for the K-32 corridor in Wyandotte County? Tell us at k32.digicate.com now through July 8, 2016.*
 - This asked some silly questions.

In Person Meetings

Several in-person meetings were coordinated including a fourth SAC meeting on June 8, planning commission update on June 18, and public meetings on June 29 and 30. During the SAC and planning commission meetings, the Consultant Team provided an overview of the study schedule, planning process, community feedback received to date, and priority recommendations. The SAC did a priority recommendations dot exercise during their meeting, allocating up to five dots to key recommendations. The feedback from their meeting was then shared during the planning commission update and leveraged to create the questions in the online survey at k32.digicate.com. Notes from the comments received are organized by discussion question in the table on pages 7-9 of this report. Responses from the public meeting are included with the aforementioned survey results (pages 2-6 of this report).

General: What comments, questions, or concerns do you have about the priority recommendations?

SAC Kick-off Mtg. -

Employment Center

- Other implementation efforts will increase employment 2X
- Leveraging strengths
- Utilize existing infrastructure

Targeting

- Positive impact on image of cities (dramatic – 2X)
- Place-making
- Address Hodge/Dodge development

UG Planning Comm.

General

- Farmer's markets in Bonner Springs and Edwardsville?
- 57th Lane rezoning: Mobile homes flooded in 1993
- Community feeling on mobile home parks?
- How many units in each mobile home park?
- Trend in smaller living, reduced costs, etc.

- Provides consistency
- ☐ Hub concept – Utilizing strengths, support transit (Bonner Springs), and leverage funding
- ☐ Attracts people – Provides destination

Traffic

- ☐ Necessary evil
- ☐ Starting point
- ☐ Critical to substantive multimodal
- ☐ Include bicycle, pedestrian, and traffic volumes (multimodal approach)

Access Management

- ☐ Need to know optimal access points – Support traffic flow
- ☐ Goes hand in hand with traffic study
- ☐ Development and character – Drives access?
- ☐ Not traditional access management study – Focus on KDOT access management policy and combine with multimodal traffic study

Utilities

- ☐ Being done (Bonner Springs) – Remove from priorities list

Parks and Open Space

- ☐ Helps with connectivity to other communities, river, and parks
- ☐ Destination – Reason to come to town/corridor
- ☐ Leverage existing asset

Roadway Width

- ☐ Need to respond to development
- ☐ Way to slow down traffic

Parkway

- ☐ Improve look of corridor – Modernize roadway, more inviting

- ☐ Dull drive now – Beautification will make it better; maintain it
- ☐ Like recreation and trails concepts
- ☐ Think of K-32 as an alternative to I-70 now - If it were more inviting, it would be more of a destination
- ☐ Place-making – Have to know what destinations are there; short-term improvements could change the corridor to a regional destination

for people, and more lit (Kansas City, Kansas)

Partnering

- ☐ Financially necessary
- ☐ Multiple players – Coordination necessary





MEMO

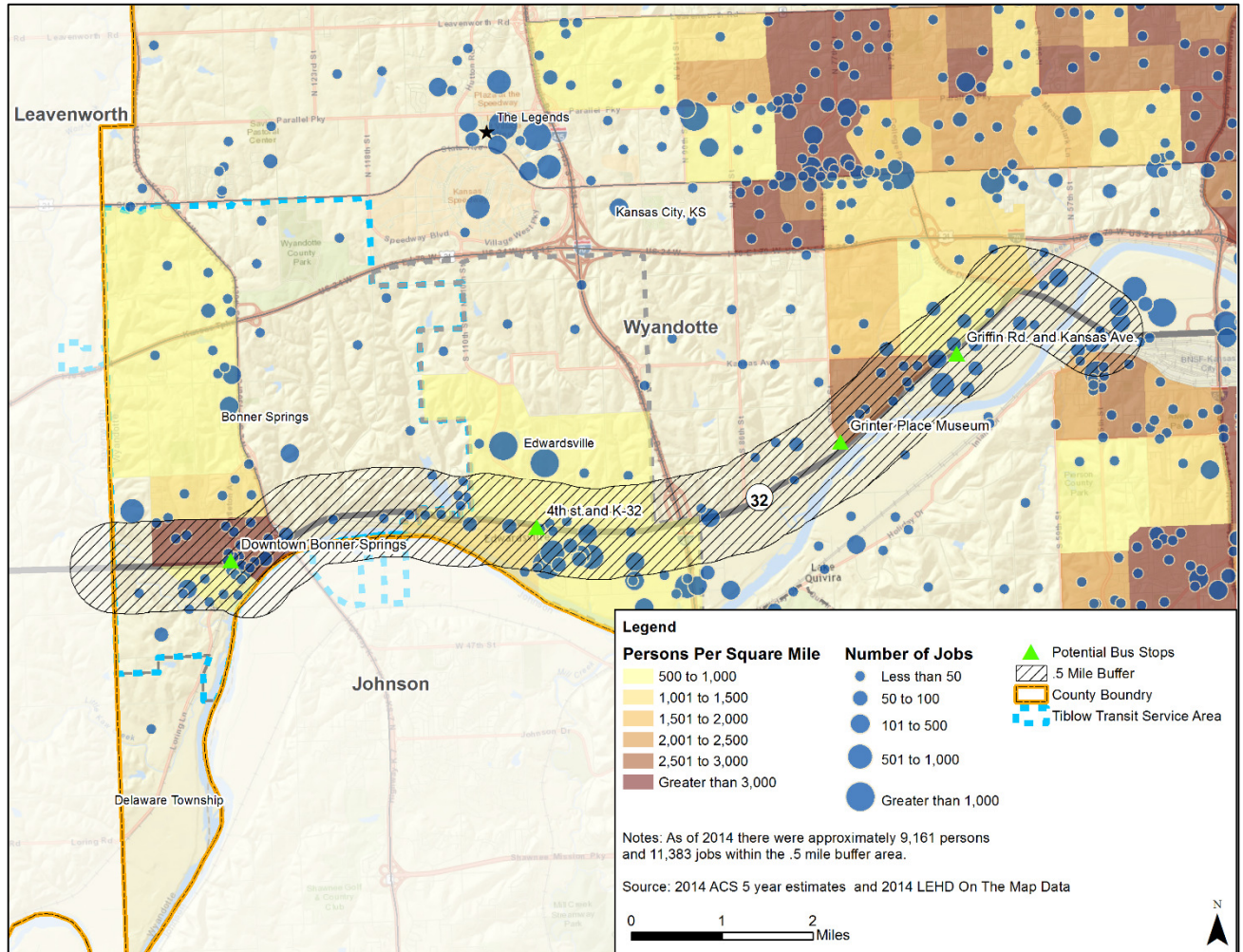
<input type="checkbox"/>	Overnight
<input type="checkbox"/>	Regular Mail
<input type="checkbox"/>	Hand Delivery
<input checked="" type="checkbox"/>	Other: Email

TO:	Tri-City Multi-Modal Redevelopment Committee
FROM:	Tom Worker-Braddock, Olsson Associates
RE:	Transit Alternatives in the K-32 Corridor
DATE:	April 8 th , 2016
PROJECT #:	015-2664

Introduction

The Tri-City Multi-Modal Redevelopment effort is examining opportunities for a multi-modal approach to redevelopment along the K-32 corridor. Different transit strategies were examined that may be suitable for differing levels of population and employment density in a redeveloping corridor. These modes would enhance access to jobs, services, and other opportunities along the corridor, and promote connections to adjacent activity centers. It assumes a correlation between mobility and activity along the corridor. Figure 1 displays the employment and population characteristics along the K-32 corridor.

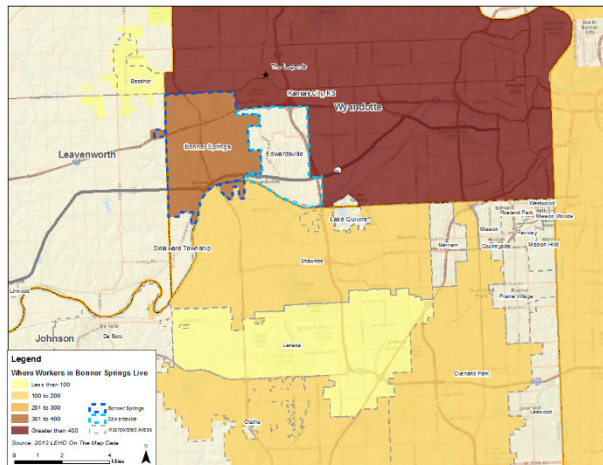
Figure 1: Population and Employment surrounding the K-32 Corridor



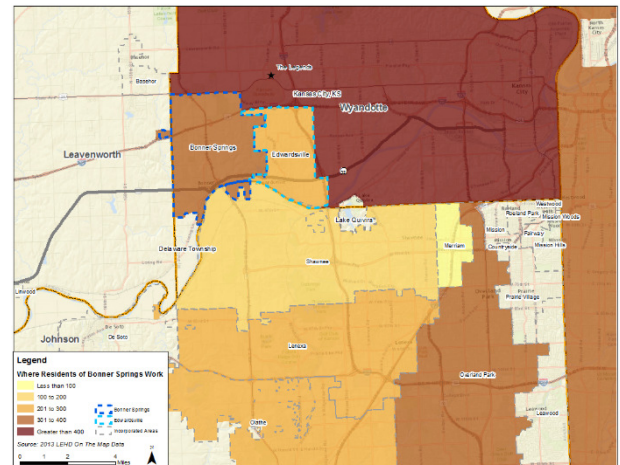
Benefits of Transit in the Corridor

No transit service currently serves the entirety of the K-32 corridor. Aside from a UGT route at the very eastern edge of the corridor, no transit service connects to destinations outside the corridor more than three days-a-week. As Figure 2 shows, a large amount of workers and residents travel between Edwardsville and Bonner Springs, and other surrounding cities. Adding regularly scheduled transit options would increase the ability for employees to access employment sites both within the corridor and to other parts of the metro. These same transit options could also provide additional connections to corridor residents with easier transportation access to medical, social, retail, and transportation services outside the corridor. Finally, increasing corridor transportation options could also increase the appeal of living in, or visiting the corridor for those, like the Millennial generation, who increasingly prefer a lifestyle less dependent on personal automobiles¹.

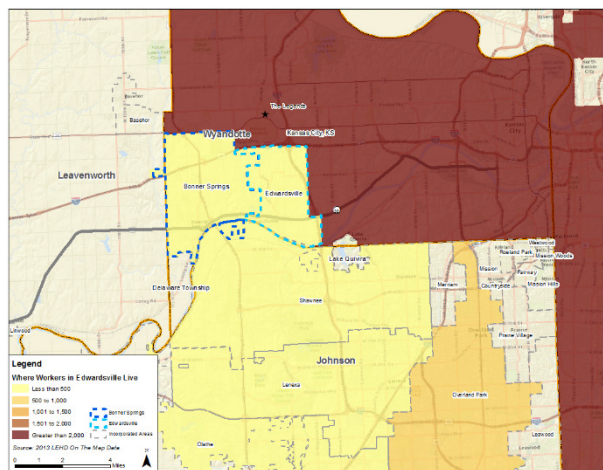
Figure 2: Corridor Worker and Resident Flows



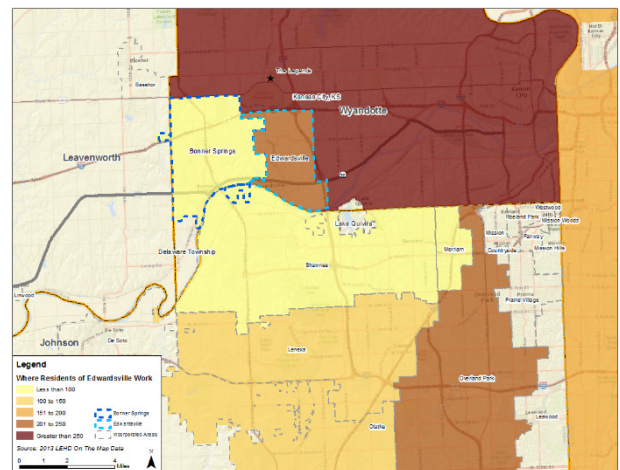
Where workers in Bonner Springs live



Where residents of Bonner Springs work

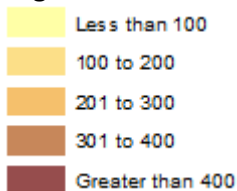


Where workers in Edwardsville live



Where residents of Edwardsville work

Legend



Source: 2013 LEHD On the Map Data

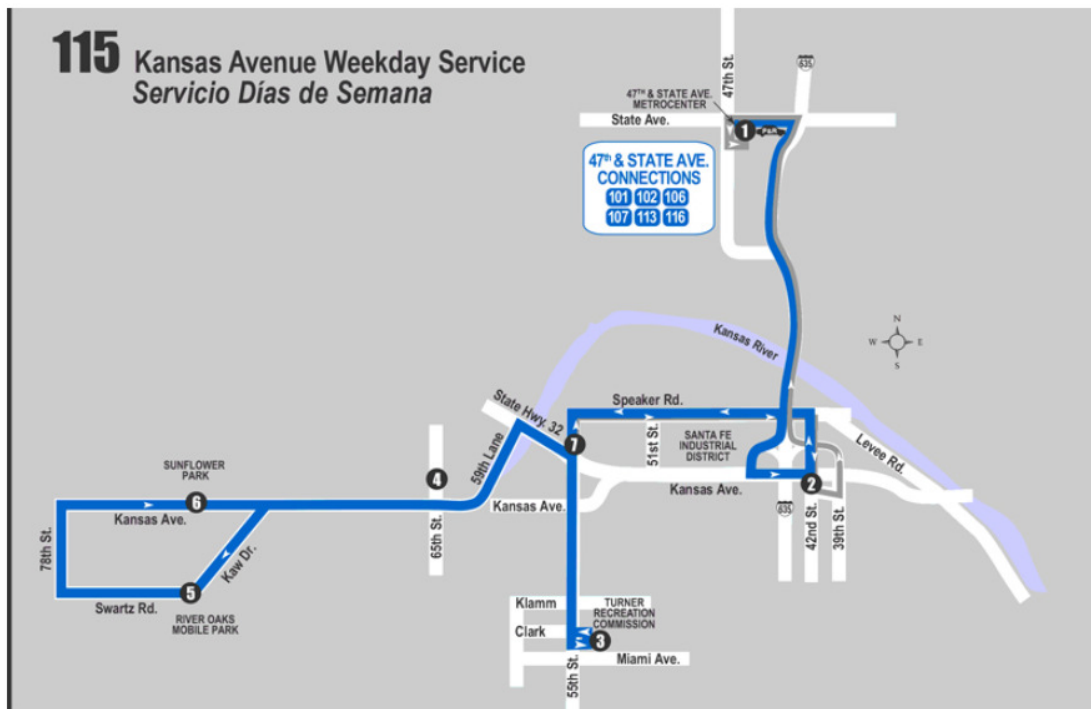
¹ “Census Data Shows How Much Less Millennials and Gen-Xers Commute by Car”, by Joseph Kane and Adie Tomer. Accessed at <http://usa.streetsblog.org/2014/10/08/census-data-shows-how-much-less-millennials-and-gen-xers-commute-by-car/>

Existing Transit within the Corridor

Transit service is currently provided in some parts of the K-32 corridor. Tiblow Transit operates within Bonner Springs, Monday through Friday from 8:30 to 4:30 pm. The service connects to parts of Kansas City, Kansas three days-a-week; pickups in Edwardsville and service to the the Johnson County Medical facility are provided two days-a-week.

Unified Government Transit operates Route 115 Kansas Avenue which operates at the very eastern edge of the K-32 corridor at Kansas Avenue and 78th. The route operates Monday through Friday from 5:30 am to 7:30 pm at an hour frequency.

Figure 3: UGT Route 115 Kansas Avenue

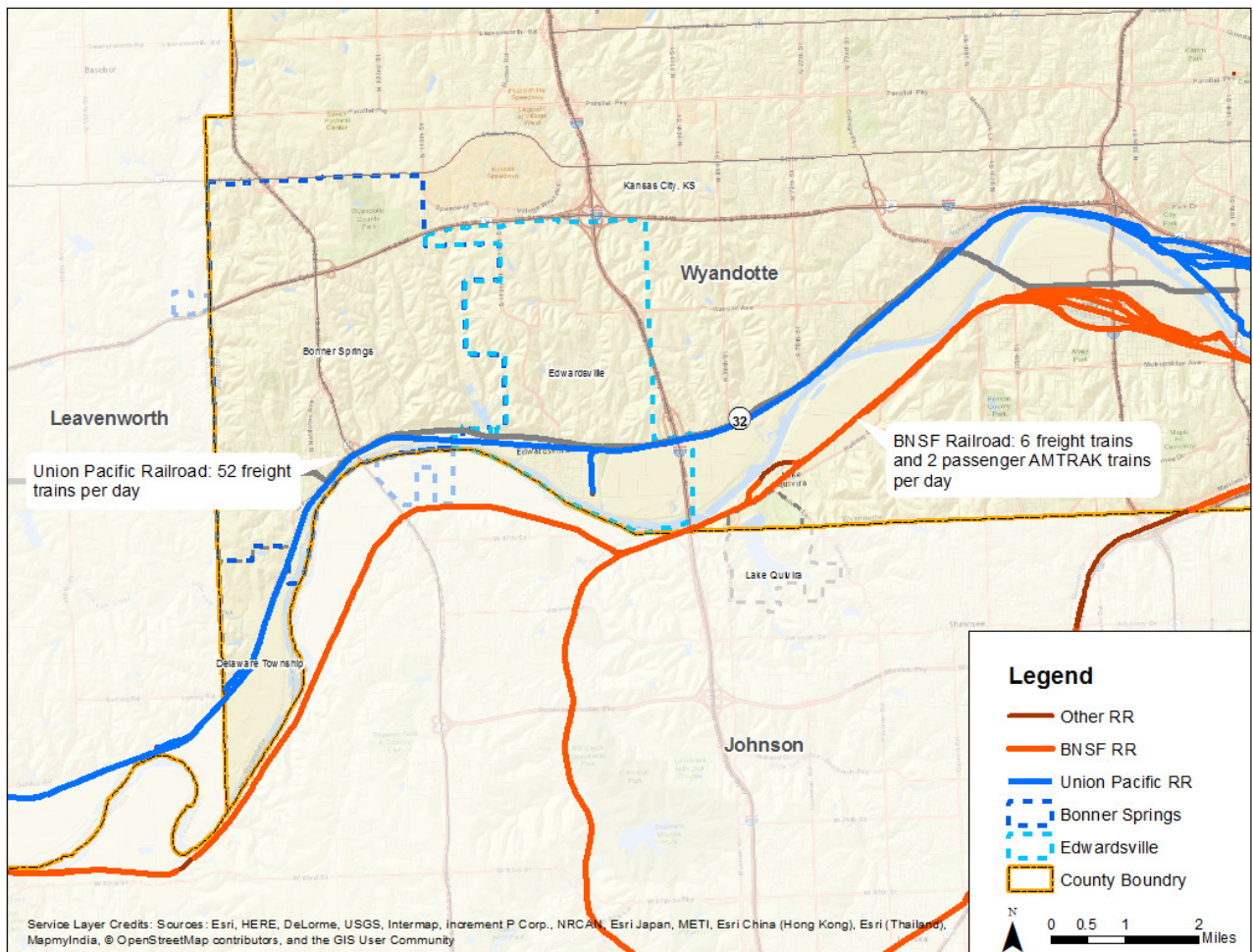


Interurban Passenger Rail in the Corridor

The K-32 corridor parallels two railroad lines. The Union Pacific line operates directly adjacent to the K-32 corridor on the north side of the Kaw River, and experiences 52 freight trains per day. The BNSF operates on the south side of the river with six freight trains and two AMTRAK passenger trains (Southwest Chief) per day. A 2002 study examined the feasibility of operating commuter rail between Lawrence and Kansas City. The BNSF line was evaluated as one alternative due to the rail line accessing much higher population portions between Lawrence and Kansas City than the Union Pacific line. The study recommended that capacity improvements would be necessary at several points along the line to avoid conflicts with freight or existing Amtrak service. The capacity improvements would be required at De Soto to allow the RoadRailer (AMTRAK mail and express) switching operations during commuter periods, at Argentine Yards to mitigate the very heavy freight traffic, and at Union Station to provide rail connections to the station itself. In addition, the railroad may require a “capacity contribution” from commuter rail as a cost of entry to the line.

Capital costs to make the line suitable for commuter passenger rail service would be \$117 million, with a \$5.2 million² annual operating cost for three trips in the morning and three trips in the evening, with a projected 2,238 daily rail trips. This was determined to be insufficient ridership for the cost. The study estimated that the subsidy required for a daily round-trip between Lawrence and Kansas City would be \$12.98 per rider, which would result in a \$3.7 million annual operating subsidy. Since the time of the study, the population annual growth rate of 0.6 percent in Wyandotte County, 2.85 percent in Bonner Springs, and 1.4 percent in Edwardsville, or elsewhere along the BNSF line, would not have been sufficient to significantly increase ridership potential. Figure 4 displays the existing rail service.

Figure 4: Existing Rail Service



Transit Alternatives in the Corridor

As part of the K-32 multi-modal project, additional alternatives to deliver transit, besides rail, were evaluated. These modes would enhance access to jobs, services, and other opportunities. The model assumes a correlation between mobility and activity along the corridor. This correlation is substantiated through an analysis of the relationship between transit ridership and employment/population density along

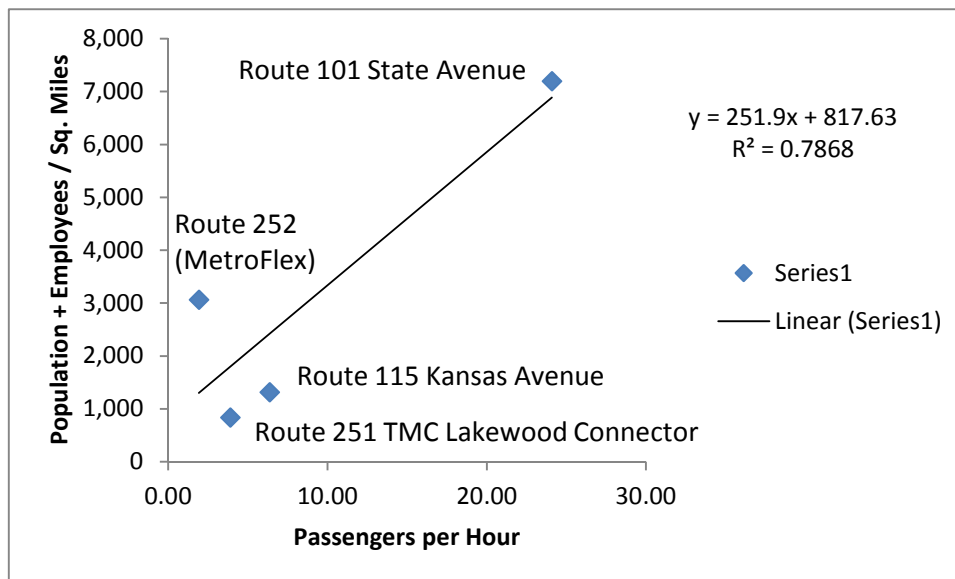
² Capital and Operating costs are 2002 dollars, not adjusted for inflation.

four representative corridors or areas in the Kansas City metro. These areas include the corridor along the alignment of Route 115 Kansas Avenue; Route 251 TMC Lakewood Connector; Route 252 Lee's Summit MetroFlex, and Route 101 State Avenue.

Three modes were evaluated and range from comparatively less expensive, with less defined service, to comparatively more expensive with higher levels of service. The modes evaluated include a flex route service, similar to Tiblow Transit, a baseline fixed route service similar to that operated on Kansas Avenue, and a higher frequency fixed route service. The result of the analysis is illustrated in Figure 5. The resulting correlation was then used as a basis for projecting employment and population density requirements necessary to yield assumed levels of transit ridership associated with different levels of transit investment.

In addition, the potential of rail service is discussed, as well as opportunities for employer-based transportation.

Figure 5: Correlation between Ridership and Land Use Density



The three modes examined assumed service areas within the corridor of downtown Bonner Springs, Edwardsville at 4th Street, the Grinter Place Museum; and serving the industrial area at 55th Street and Turner Diagonal Freeway, and the Village West Shopping Center.

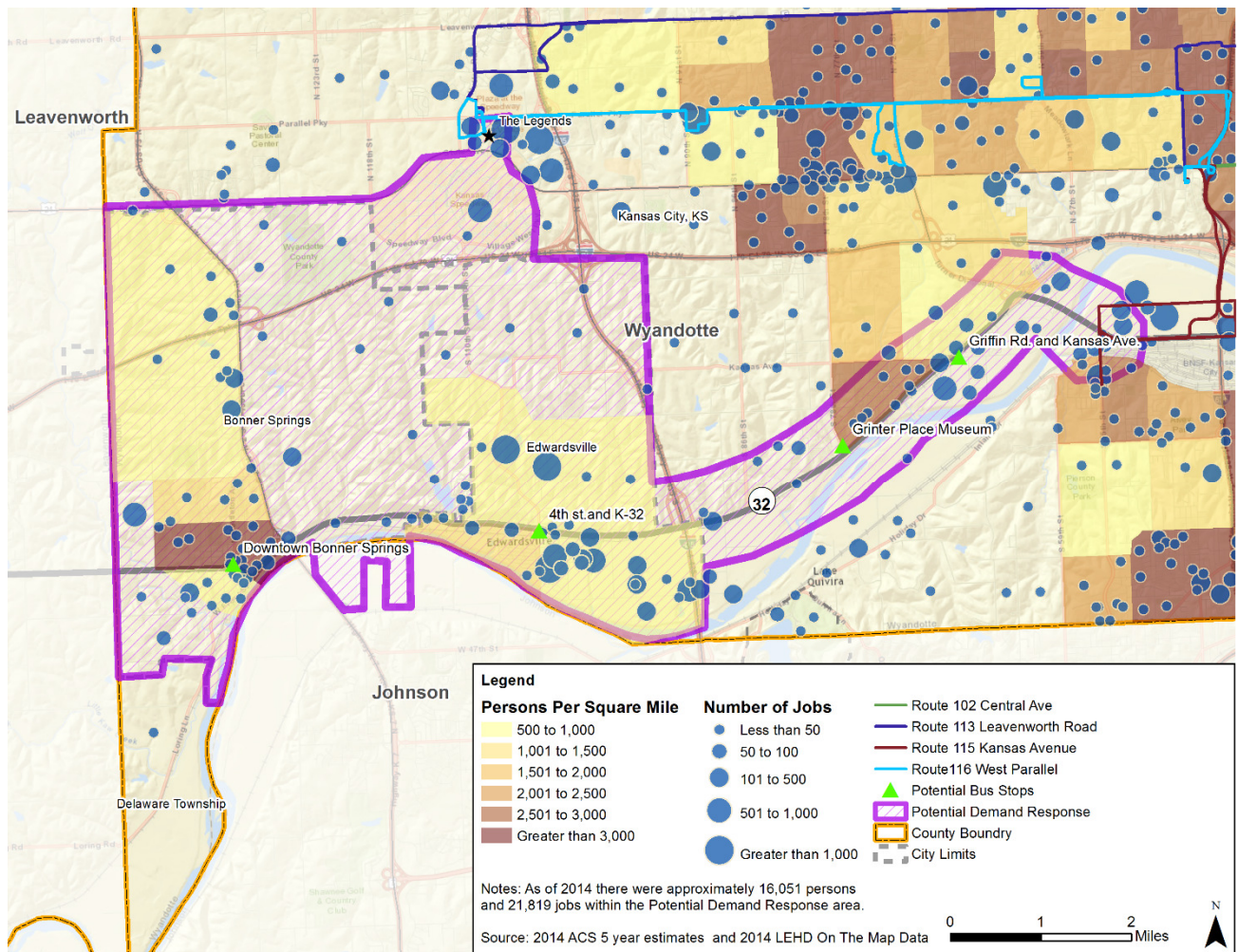
MetroFlex

This option represents improvements to the existing demand response service and is an alternative that could be implemented with less capital and operations investment than the other alternatives. This alternative includes:

- Increasing the service area of demand response service to all of Bonner Springs, Edwardsville, and connecting into Kansas City, Kansas at Village West, and along Kansas Avenue.
- Increase the service span of the transit service to 8:00 am to 5:30 pm, or 9.5 hours a day Monday through Friday.

This option would give corridor residents the ability to travel along the corridor, while also making connections to other transit services provided by the Kansas City Area Transportation Authority (KCATA) and Unified Government Transit (UGT) at the Legends, and along Kansas Avenue. This service area is shown in Figure 6.

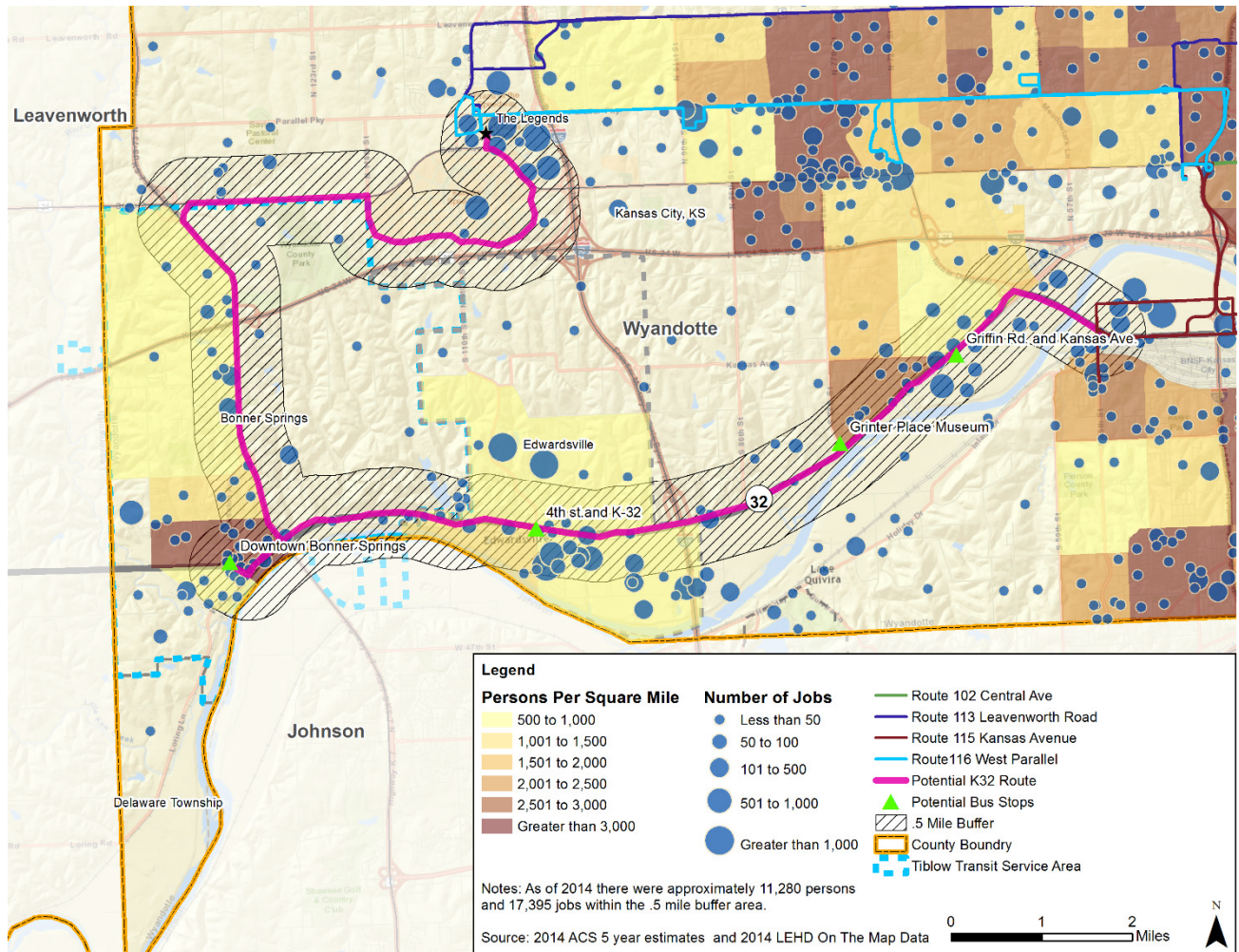
Figure 6: MetroFlex Alternative



Baseline Fixed Route Service

This option represents introducing a regularly scheduled fixed transit route throughout the corridor. The alternative includes bus stops at (a minimum) of downtown Bonner Springs, Edwardsville at 4th Street, the Grinter Place Museum, industrial employment opportunities on Kansas Avenue, and the Legends. This would have the same operating characteristics as KCATA Route 115 Kansas Avenue, operating from approximately 5:30 am to 7:30 pm, Monday through Friday with an all-day hour frequency. The consistency of the route will provide a consistent transportation option for residents and employees moving up and down the corridor, as well as to make scheduled time connections with the State Avenue Connex service at the Legends. This potential fixed route is shown in Figure 7.

Figure 7: Alignment of Fixed Route Alternatives



Higher Frequency Fixed Route

This option would be similar to the baseline fixed route option, with a 30-minute frequency. The added frequency would provide users added flexibility and convenience in using transit to meet their transportation needs along the corridor.

Comparison of Modes

Each of the three transit modes being evaluated can be described in terms of their respective operating characteristics and their cost to operate and maintain.

Table 1: Operating Characteristics and Costs of Different Modes

Mode	Service Span	Frequency	Approximate Annual Operating Costs
MetroFlex	M-F, 8:00 am to 5:30 pm	On-Demand	\$ 241,000
Baseline Fixed Route	M-F, 5:30 am to 7:30 pm	60 minutes	\$ 708,000
Higher Frequency Fixed Route	M-F, 5:30 am to 7:30 pm	30 minutes	\$ 1,290,000

The correlation between transit ridership and density of employment and population was used to develop density targets for each of the three transit scenarios described here. The ridership yield for each scenario is based on a desired performance level. The measure of performance used for this effort was the cost per rider. For the baseline fixed route and the higher frequency fixed route, the desired cost per rider was assumed to be \$4.00. This is consistent with the performance of existing transit routes in the metropolitan area that are considered to be successful and productive. For the expanded demand response scenario, the desired cost per rider was \$20.00. The higher cost per rider for demand response service is due to the mode typically serving lower density areas that exhibit less propensity to use transit.

The ridership yield for each scenario established by the assumed performance level was then correlated to an associated (employment + population) density. Table 2 shows the density requirements necessary to support the respective transit scenarios, at the desired cost per rider.

Table 2: Density Requirements

Mode	Total Capital Cost	Annual Operating Cost	Operating + Capital Cost	Cost/ Passenger	Weekday Ridership	Daily Hours	Pass/ Hours	Density (Pop+ Employment / Sq. Miles)
MetroFlex	\$50,000	\$241,000	\$291,000	\$20	57	9.5	6.0	2,328
Baseline Fixed Route	\$800,000	\$708,000	\$1,508,000	\$4	1478	28.16	52.5	14,040
Higher Frequency Fixed Route	\$1,200,000	\$1,290,000	\$2,490,000	\$4	2441	42.3	57.7	15,352

Density = $251.9x + 817.63$

x = Passengers/Hour

Current Corridor Density: 1,594

As shown in the table, the average combined (population + employment) density in the corridor necessary to support the demand response scenario is 2,328. The current corridor density is 1,594 combined residents and employees per square mile.

CC: File

MEMO



DATE: July 7, 2016

TO: Hugh Bogle, P.E.
District One Engineer (Topeka)

FROM: David J. Northup, P.E. DJN
Traffic Engineering Unit

RE: K-32 @ 78th Street
City of Kansas City
Wyandotte County

SUB: DRAFT Traffic Investigation

Attached is a DRAFT traffic investigation for K-32 @ 78th Street in the City of Kansas City in Wyandotte County. Please review and provide comments by August 5, 2016. If you have any questions, please contact me at 785-296-1167.

Attachment

c: Leroy Koehn, P.E. - Metro North Engineer (Bonner Springs)
Brian Gower, P.E. - State Traffic Engineer

TRAFFIC INVESTIGATION
DRAFT
July 7, 2016

K-32 @ 78th Street
City of Kansas City
Wyandotte County

KANSAS DEPARTMENT OF TRANSPORTATION
BUREAU OF TRANSPORTATION SAFETY AND TECHNOLOGY

Background

The Bureau received a request to have consideration of a traffic signal at the intersection of K-32 & 78th Street added to the recommendations of the K-32 Tri-City Multi-modal Redevelopment Plan in Wyandotte County. State Senator Pat Pettey forwarded this request to KDOT on behalf of Friends of Grinter House. Grinter House is a historical site that is located on the NW corner of this intersection.

The request that was received from Senator Pettey referenced concern about crash history at this location. The TE Unit is aware that the City, and more specifically the neighborhood closest to this intersection, has been interested in having safety improvements made to the intersection for a number of years.

Roadway Characteristics

K-32 is a 4-lane divided highway in the vicinity of 78th Street. It has two, 12 feet wide, through lanes each direction, and a 15 feet wide raised grass median. There are no auxiliary lanes at 78th Street. However, at 79th Street there is a short right turn lane for WB traffic.

78th Street is a two lane city street designated at a Class A Thoroughfare, meaning arterial street designation, from K-32 north to Parallel Parkway. Currently 78th Street is two lanes wide with open drainage from K-32 north to Riverview.

K-32 Corridor Plan

Basic groundwork has been laid for the creation of the K-32 Tri-City Multi-modal Redevelopment Plan in Wyandotte County. The 'Tri-Cities' plan, as it is known informally, is being sponsored by the Mid America Regional Council. The western limit of the corridor plan is the west city limit of Bonner Springs, and the eastern limit of the corridor plan is at 57th Street.

A primary focus of the 'Tri-Cities' plan seems to be the creation of a walking-biking trail along the K-32 alignment. In some sections, there will be a 10 feet wide trail along both sides of K-32; in other sections there would be a 15 feet wide trail only along one side of K-32; and in still other sections there would only be a sidewalk on one side of K-32. All sections propose having two-way bicycling capability, on-street, along one side of K-32.

Two way left turn lanes (TWLTL), for left turning vehicles to turn off of K-32, are only proposed for downtown Bonner Springs and downtown Edwardsville. Right turning lanes, for traffic exiting K-32, are not proposed anywhere along the 'Tri-Cities' plan. For the stretch of the 'Tri-Cities' plan at K-32 & 78th Street, the proposal is for a 10 feet wide trail along both sides of

K-32; and 5 feet wide bicycle lanes adjacent to traffic along one side of K-32; but left turning lanes and right turning lanes are not currently proposed.

Crash Analysis

Crash history was reviewed for calendar years 2011 through 2015. Reference is made to the crash diagram at the end of this report for complete details.

It was found that there were 7 reported crashes in the 4 year period. The average crash rate for intersections in urbanized areas in Kansas is 10 crashes per ten million entering vehicles (TMEV). This location is considered urbanized due to the traffic volumes and its location within a large city, even though development near this intersection is sparse, having a more rural appearance. The computed crash rate for this location is 3.54 crashes per TMEV.

Of the reported crashes, there were two fatal crashes, 3 injury crashes, and 2 property damage only (PDO) crashes. Six of the crashes involved vehicles turning to or from 78th Street. The other crash involved one vehicle overtaking another.

Speed Data

Speed data is shown in a chart at the end of this report. The data is summarized in the table below. It appears that there is good compliance with the posted speed limit.

LOCATION	DATE	PERCENTAGE IN PACE	MEDIAN OF PACE (MPH)	85TH PERCENTILE (MPH)	EXISTING POSTED SPEED (MPH)	RECOMMENDED POSTED SPEED (MPH)
K-32 @ 78th Street	5/26/2016	76.9	55	58	55	Leave as is

Count Data

Traffic count data was collected, which is presented at the end of the report. It was found that the 24-hour volume for all three approaches combined was 13,563 vehicles on May 31, 2016. Classification data was collected and it was found that the traffic along K-32 is 20% trucks.

Peak hour turning movement counts were also recorded. This data showed that, for the 4 hours during which data was collected, 7.2 % of SB vehicles turn left, 0.7 % of WB vehicles turn right, and 5.7 % of EB vehicles turn left. During the evening peak period, 9.6 % of EB vehicles turn left.

Signal Warrant Analysis

The Manual on Uniform Traffic Control Devices (MUTCD) provides traffic volume thresholds that are to be met to satisfy conditions when traffic signals could be considered for installation. The MUTCD encourages discounting of right turning vehicles when considering these volume thresholds, because vehicles are allowed to make a right turn on red (RTOR) unless signs are posted prohibiting such moves.

As can be seen in the summary table below, none of the volume thresholds are satisfied for consideration of a traffic signal at this time. A traffic signal warrant analysis chart is provided at the end of this report for additional information.

K-32 @ 78th Street						
REDUCED WARRANT ANALYSIS RESULTS						
-----	Warrant #1 Condition A (8 Hrs. Req.).	Warrant #1 Condition B (8 Hrs. Req.).	Warrant #1 Cond. A & B (8 Hrs. Req.).	Warrant #2 (4 Hrs. Req.).	Warrant #3 (1 Hr. Req.).	Warrant #7 Cond. A or B (8 Hrs. Req.).
Warrant Satisfied	No	No	No	No	No	No
Hours Met	0	1	0 1	1	0	0 4

Recommendations

Past traffic review by both the City and KDOT have revealed that there are constraints making it difficult to widen the highway. These constraints include the proximity of the UPRR on the south side of the roadway, ROW limits for both the railroad and the highway, drainage features for the highway and the watershed to the north, and possibly restrictive sight distance for all vehicles needing to maneuver through the intersection. A large corridor type project may have sufficient funding and opportunities for geometric improvement that an isolated intersection improvement project could not realize.

Looking at the crash pattern, it appears that the elements that would be the most effective at addressing safety concerns would be the addition of an EB left turn lane and a WB right turn lane. These lane additions would enable vehicles turning from the highway to get out of the streams of higher speed through vehicles, and be able to negotiate their turn or even wait for an adequate gap in traffic without the concern of being rear-ended by another inattentive driver.

If geometric improvements at 78th Street are not feasible or affordable in the near term, it might be feasible to add an EB left turn lane and extend the WB right turn lane at the 79th Street intersection. Such improvements could be accompanied by closure of the median opening at 78th Street; with the intent of eliminating the possibility of crashes involving left turning vehicles at 78th Street. It would be important to evaluate the available intersection sight distance at 79th Street to assure that whatever concerns currently exist at 78th Street aren't simply shifted to 78th Street. This option might be resisted by Friends of Grinter House since they like to use the K-32 frontage road for parking and staging when they have activities on their grounds.

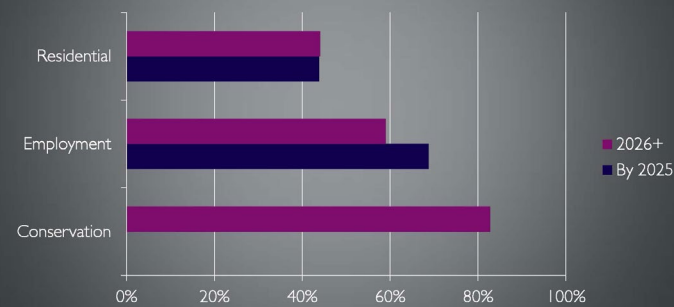
Summary

- In order to address the crash history, geometric improvements should be considered at this location, which include the addition of an EB left turn lane and a WB right turn lane.
- MUTCD criteria need to be considered when evaluating the need for a traffic signal. Traffic signal volume criteria in the MUTCD are not satisfied at the present time. A traffic signal should not be installed until warrant criteria are satisfied and the auxiliary lanes are added.
- If the City and the neighborhood would be agreeable, if geometrically feasible, and if adequate intersection sight distance is available; consideration could be given to partially closing the 78th Street access and relocating the left turning movements to the 79th Street intersection.
- The comprehensive 'Tri-Cities' corridor plan should include the recommended auxiliary lanes at 78th Street.
- If the 'Tri-Cities' study embraces a traffic signal; a component should be added to the study that addresses future traffic growth that would bring this location to the level that satisfies MUTCD criteria.

Anticipated Outcomes of the Recommendations for K-32

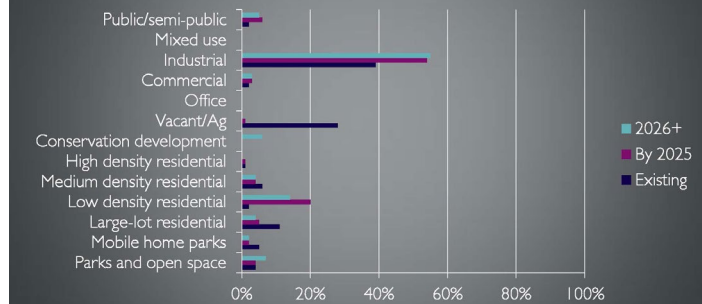
The land use and development recommendations for the K-32 corridor are anticipated to yield six key outcomes in the coming ten years or more. See the charts below.

Corridor Access to Alternative Modes of Transportation (Parcels within 1/8 mile of a transit stop, bike route, or trail)



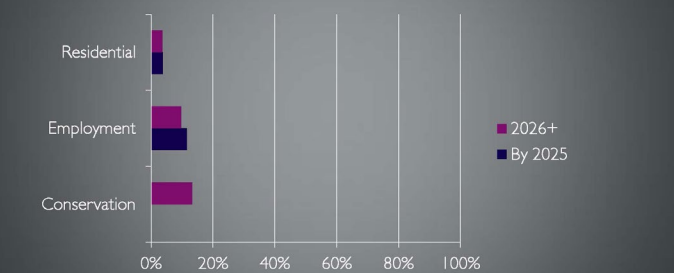
More conservation development (residential and non-residential) parcels will have access to alternative modes of transportation than standard residential and employment parcels.

Corridor Land Use Comparison



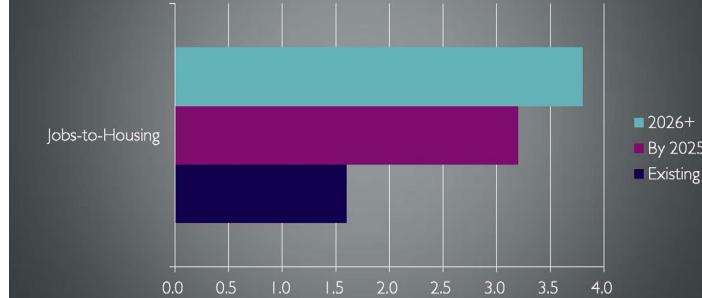
Industry will continue to occupy more parcels in the K-32 corridor than any other type of land use and development.

Corridor Flood Protection (Parcels within 100-year floodplain or 150-foot stream buffer)



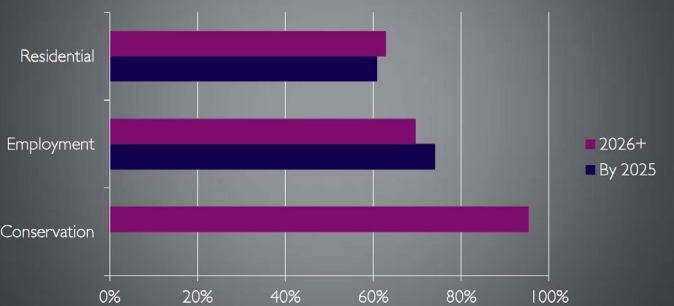
In the coming years, fewer residential and employment parcels will be within the floodplain or stream buffer. Conservation developments will help protect natural features.

Jobs-to-Housing Balance (Assumption: X jobs per every 4 households; ideal is 0.75 - 1.5) Resource: www.pian4sustainabletravel.org



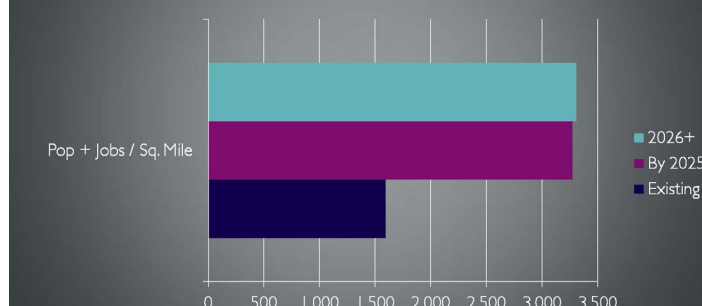
The K-32 corridor will continue to be an employment center that draws workers from beyond the study area for the K-32 Tri-City Multimodal Redevelopment Plan.

Corridor Access to Nature (Parcels within 1/8 mile of parks, open space, and trails)



More conservation parcels (residential and non-residential) will have access to parks, open spaces, and trails in the future than typical residential and employment parcels.

Corridor Transit Densities (2,328 needed for on-demand transit service)



The K-32 corridor will reach the transit density needed to support on-demand transit service within the next ten years or so.

About the Project

The Unified Government of Wyandotte County – Kansas City and the Cities of Bonner Springs and Edwardsville, Kansas, hereafter referred to as the “Tri-Cities”, in coordination with the Kansas Department of Transportation and Mid-America Regional Council (MARC), are kicking off the K-32 Tri-City Multimodal Redevelopment Plan in Wyandotte County. The planning area spans K-32 from N. 57th Street on the east to the westernmost limits of Bonner Springs on the west.



K-32 Tri-City Multimodal Redevelopment Plan

Wyandotte County, Kansas



Today, K-32 is an important vehicular route, connecting Wyandotte County to Greater Kansas City. However, its potential as an economic generator, a multimodal corridor, and an environmental asset has yet to be realized. How K-32's opportunities and challenges are leveraged for overall corridor redevelopment will be discovered as we work together with community members like you, stakeholder advisory committee members, and many others. For more information, please contact Beth Dawson, Senior Land Use Planner, MARC, at bdawson@marc.org or 816-474-4240.

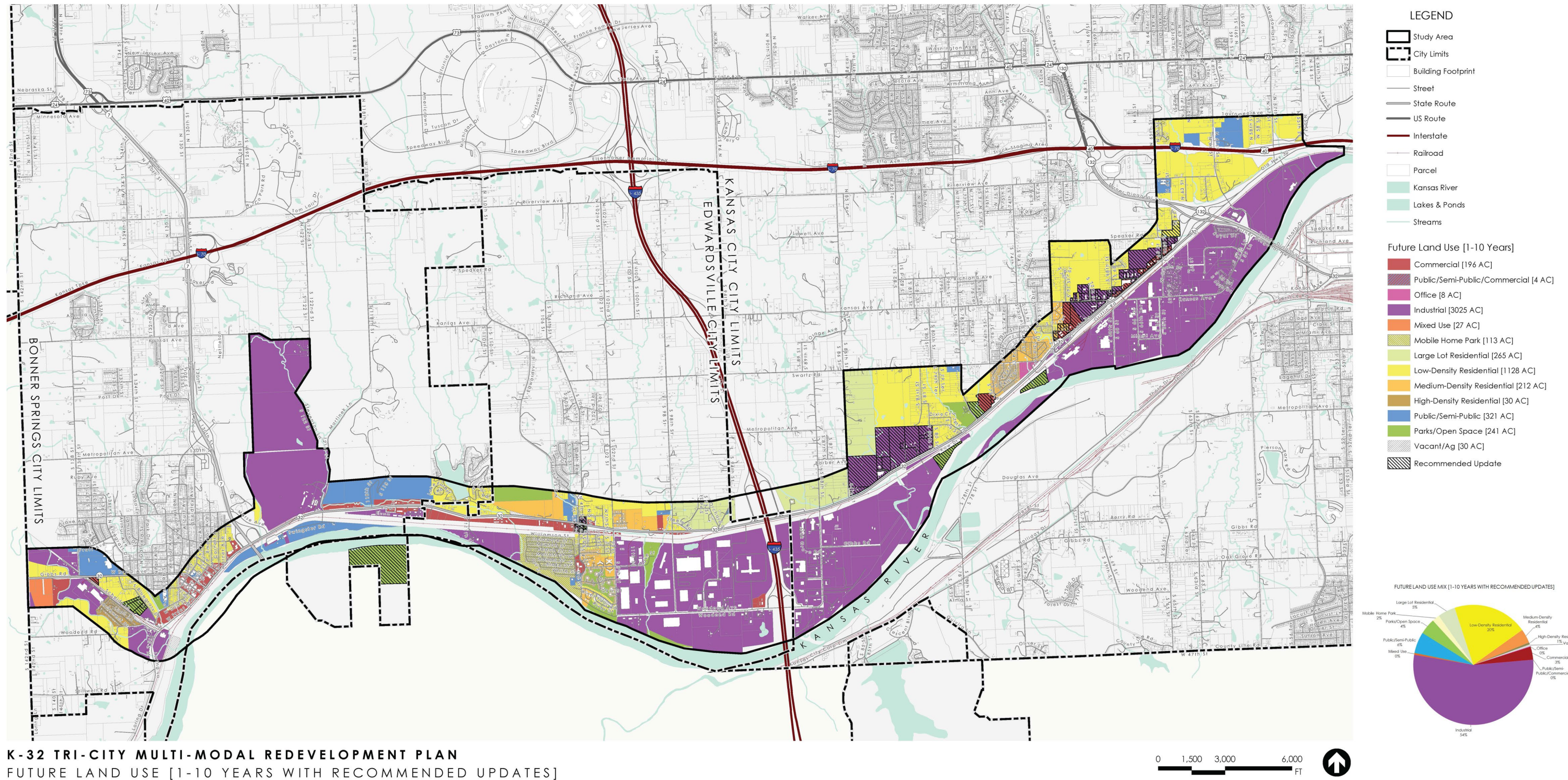
Process & Schedule



Comment online 24/7 via www.k32.digicate.com

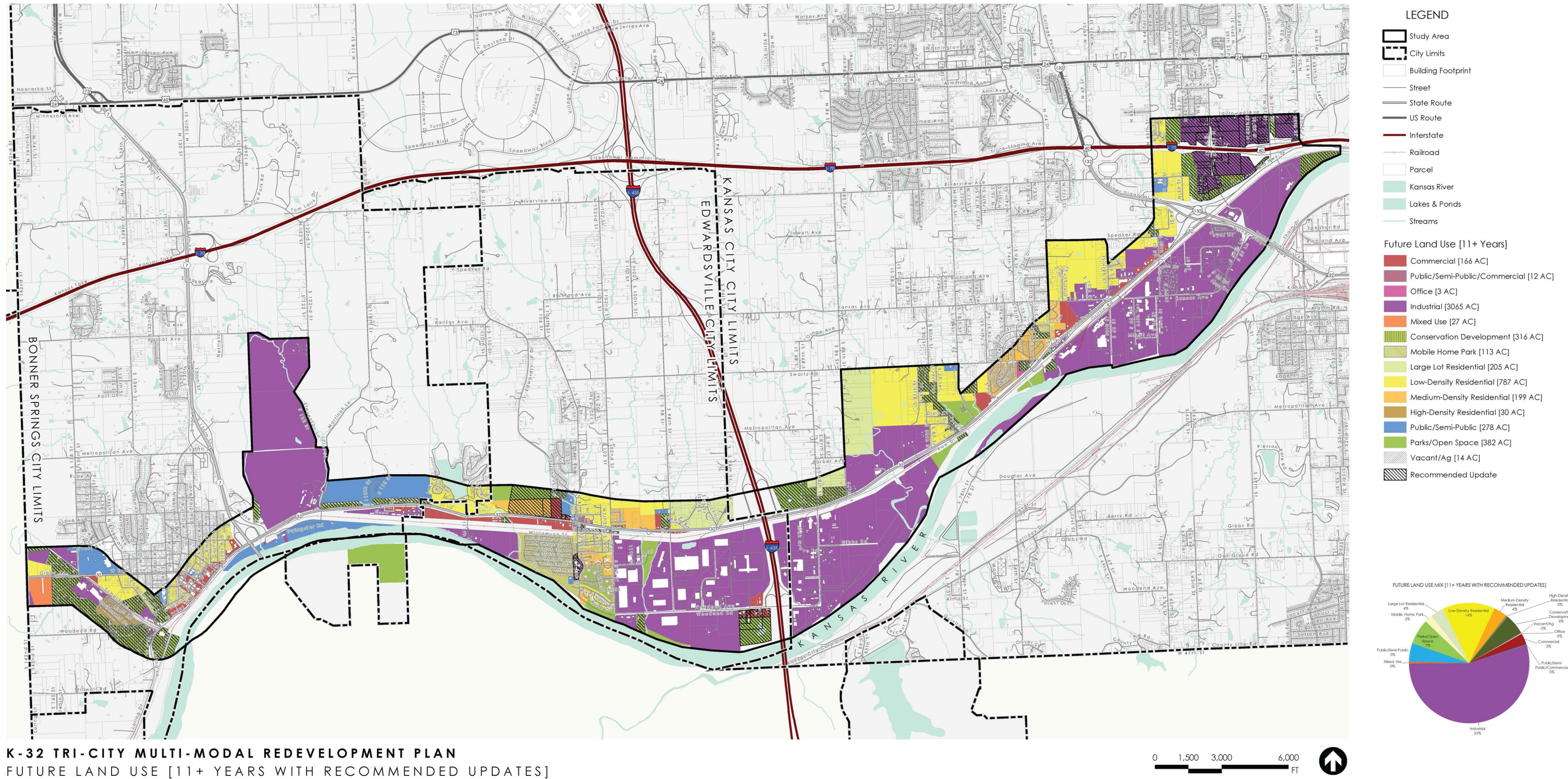
Recommended Future Land use and Development (2015 - 2025)

Based on the community feedback received during the previous two phases of the K-32 planning process (Phase 1 - Learning and Phase 2 - Exploring), responding to realistic redevelopment opportunities and new development potential as well as focusing on downtowns would be among the short-term goals for future land use and development in the K-32 corridor. As a result, improved downtowns, warehousing, assembly, and green industrial growth, plus additional services are recommended for development within the K-32 corridor over the next ten years.



Recommended Future Land use and Development (2026 and Beyond)

The community comments collected thus far suggest that building on “green” by preserving and increasing parks/open spaces, planning for additional redevelopment, including conservation development options for residential and non-residential uses, plus promoting and marketing recreational spaces, multimodal connections to destinations, and development activity would be included among the long-term goals for future land use and development in the K-32 corridor. Consequently, additional industrial development, more parks and/spaces plus conservation development projects (residential and non-residential) that protect natural features (steep slopes, woodlands, waterways) are recommended for development within the K-32 corridor over the next 11 years and beyond.



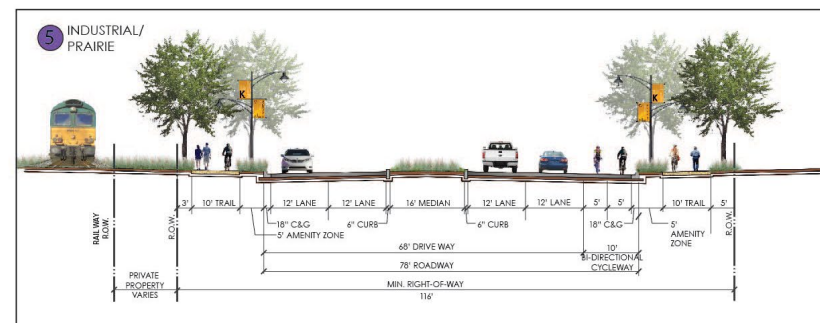
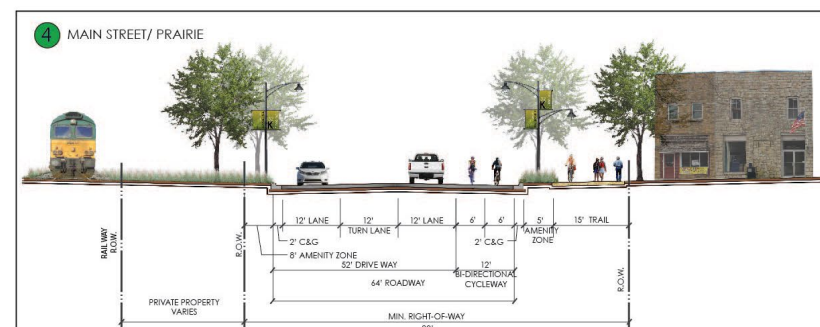
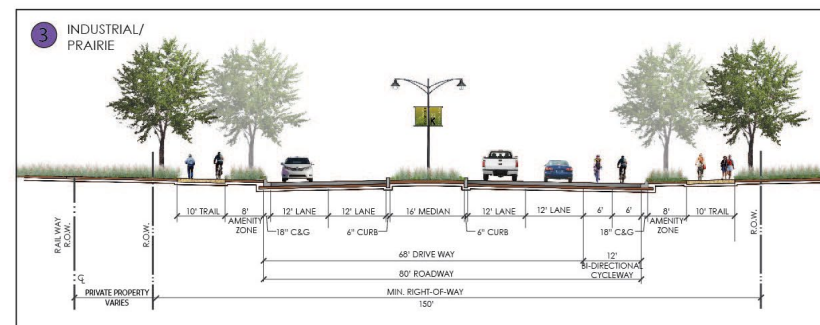
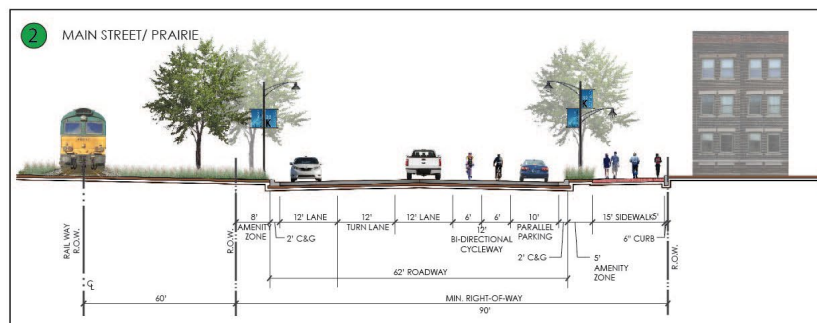
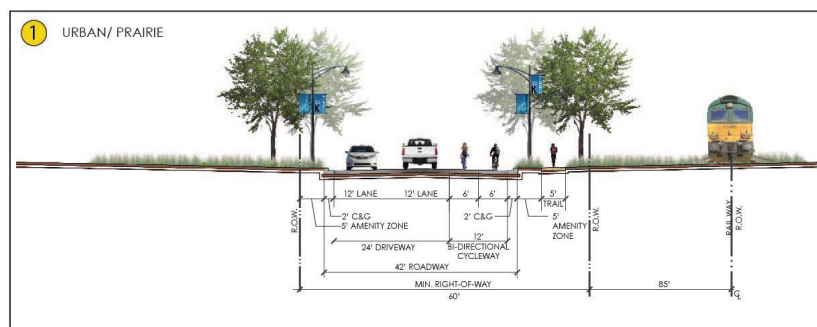
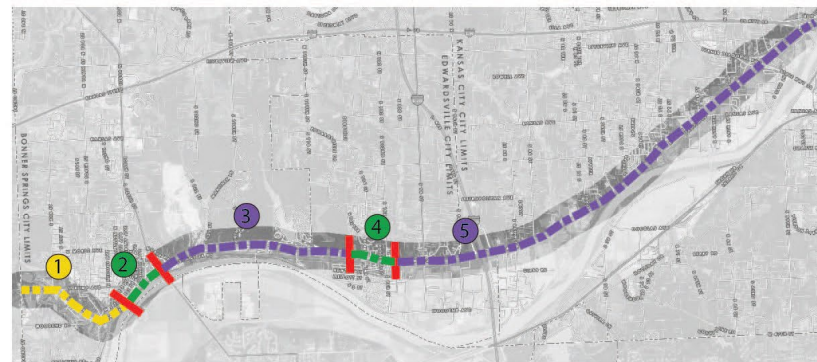
Sample Street Sections

Community input indicates that there is support for converting K-32 into a parkway and that the new parkway should respond to the character of the surrounding communities. Doing so could mean that the width of the road might change from N. 57th Street on the east to the westernmost limits of Bonner Springs on the west.

If K-32 were to become a parkway with trees, lighting, medians, turn lanes, and curbs, the overall roadway could include five, 12-foot lanes. The portions that travel through downtown Bonner Springs and Edwardsville could be narrower and include two or three travel lanes rather than five. To further enhance the parkway idea, several other elements could also be included, such as a prairie-like look and feel with lots of trees, way-finding signage, off-street bicycle/pedestrian accommodations, on-street bicycle accommodations, and buildings of no more than two or three stories in height.

In addition, branding could be applied to the corridor. Branding involves creating a unique name or symbol for a special place like the improved K-32 corridor. If the route were renamed, community members have suggested that it be called "Kaw River Parkway" or something more. Over time, a brand could be developed that reflects the corridor's history, agriculture, industry, downtown Bonner Springs and Edwardsville, the Kansas River; and recreational opportunities.

The map below and the five, typical roadway sections that accompany it combine to show how the width of K-32 might vary along the route.



Creating a Special Place

Creating physical places that people enjoy and love to share with others is part of placemaking. Feedback from community members suggests that important placemaking strategies for K-32 should involve:

- Cleaning up the corridor by adding landscaping, curbs, and more
- Adding buildings to key intersections
- Ensuring the heights and materials of new buildings complements the existing character of the corridor
- Developing a unique brand for the corridor
- Renaming K-32 to Kaw River Parkway or something more
- Other strategies

Placemaking also involves identifying ten or more destinations within a special area and providing ten or more reasons for experiencing each of them. Through the K-32 planning process, the study team and community members have identified a list of important K-32 destinations. The list includes, but is not limited to, the following: Downtown Bonner Springs and Edwardsville, Tiblow Days, Moon Marble, Camp Naish, Papa Bob's Barbecue, Edwardsville Days Festival, Smokin' the Ville Barbecue Competition, Grinter Museum, parks and open spaces, green industrial centers, "Kaw River Trails and Greenways", jazz and autumn festivals, as well as marathons and cycling events. All of the aforementioned destinations could be enhanced with an agreed upon way-finding signage system plus other branding and marketing strategies.

CONCEPTUAL CORRIDOR BANNERS & LIGHTING FOR CITIES (NOT TO SCALE)



SAMPLE CITY GATEWAY SIGNAGE (NOT TO SCALE)



ACCIDENT SUMMARY

No. Of Accidents: 7
Fatal: 2
Personal Injury: 3
Property Damage: 2

STUDY PERIOD

2011 - 2015

Injury Record: 5
Fatalities: 5
Personal Injuries: 3



78th Street

CONTRIBUTING FACTORS

ROAD SURFACE COND.

1. Dry
2. Wet
3. Water Const.
4. Snow/Ice
5. Slippery
6. Unknown

LIGHT COND.

1. Daylight
2. Dawn/Dusk
3. Dark, LTG.
4. Dark, NO LTG.
5. Unknown

01/11/2011 (19:15) Dry (Dark w/lights) A

07/21/2013 (15:08) Dry (Daylight) M

03/04/2011 (06:45) Dry (Daylight) V2-D, V2-J

02/17/2015 (08:50) Dry (Daylight) D1-J, D2-A
V1 was non-contact. Load on V2 shifted forward into cab.

05/16/2013 (15:28) Dry (Daylight) M

10/16/2015 (17:23) Dry (Daylight) A

09/04/2015 (15:20) Dry (Daylight) D1-A, D2-O
D2 did not turn into nearest lane.

06/09/2015 (06:40) Dry (Daylight) Stuck Deer

ADT = 13,563

ACCIDENT RATE

(# Acc.)(10³) 3.54
(365)(Yrs.)(ADT)
Critical Rate: 14.66

LEGEND

Fatality —●— Uninvolved Vehicle —●—
Personal Injury —○—
Property Damage —◇—
Fixed Object —□—

Case # Date (Time) Road Cond. Light Cond. Action

COLLISION DIAGRAM

KANSAS DEPT. OF TRANSPORTATION
BUREAU OF TRANSPORTATION SAFETY
& TECHNOLOGY

Intersection at K-32 & 78th Street
Kansas City

COUNTY: Wyandotte DATE: 04/26/2016
COMPLETED BY: DJN

DRIVER ACTION

- | | |
|---------------------------------|---|
| A. Illegal or Unsafe Speed | O. Improper Lane Change |
| B. Impeding Traffic | P. III or Med. Condit. |
| C. Following Too Close | Q. Brakes Failed |
| D. Improper Overtaking | R. Alcohol Related |
| E. Improper Turn | S. Unknown Reason |
| F. Improper Start, Stop, Park | T. Hit & Run |
| G. Traf. Control Viol'n. Lights | U. Vision Obstructed by Other Vehicles and/or Sun |
| H. Traf. Control Viol'n. Signs | |
| J. Fail to Yield R/W | |
| K. Drove Left of Center | |
| L. No or Improper Signal | |
| M. Careless- Inattention | |
| N. Avoid Vehicle, Object, Ped. | |

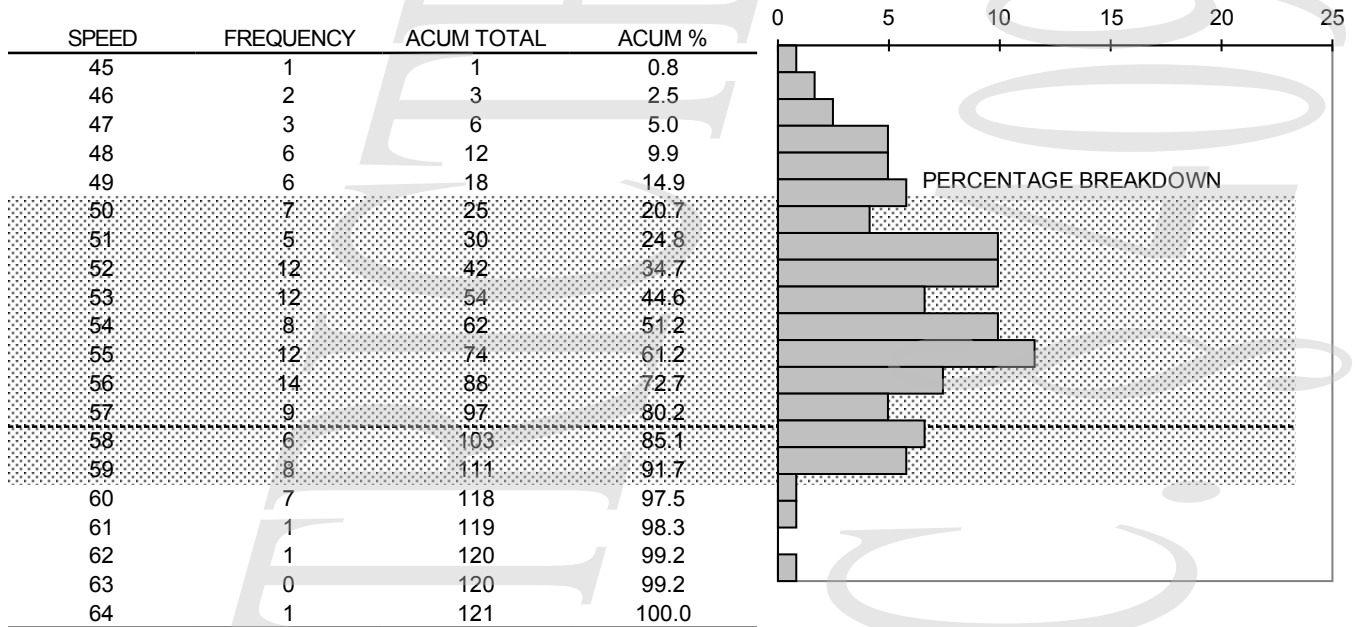
SPEED STUDY

KANSAS DEPARTMENT OF TRANSPORTATION BUREAU OF TRAFFIC ENGINEERING

CITY: Kansas City
OBSERVER: JC
DATE: May 26, 2016

COUNTY: Wyandotte
SPEED LIMIT: 55 mph
DIRECTION: Westbound/Eastbound

LOCATION: K-32 @ 78th St.
TIME START: 2:24 PM
TIME END: 2:35 PM



AVERAGE SPEED = 54.1
50th PERCENTILE = 53.8
85th PERCENTILE = 58.
90th PERCENTILE = 58.7
95th PERCENTILE = 59.6

PACE = 50 - 59
VEHICLES IN PACE = 93
% IN PACE = 76.9
% BELOW PACE = 14.9
% ABOVE PACE = 8.3

SAMPLE VARIANCE = 15.4049587
STANDARD DEVIATION = 3.9249151
RANGE 1*S = 65.28926
RANGE 2*S = 97.52066
RANGE 3*S = 100.

City: Kansas City
 County: Wyandotte
 Location: K-32 @ 78th St.
 Counted By: JC

File Name : K-32 @ 78th St.
 Site Code : 00000000
 Start Date : 5/31/2016
 Page No : 1

Groups Printed- Cars - Trucks

	78th St From North				K-32 From East				No Road Exists From South				K-32 From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
06:30 AM	18	0	2	20	0	153	0	153	0	0	0	0	0	105	4	109	282
06:45 AM	8	0	0	8	1	160	0	161	0	0	0	0	0	104	5	109	278
Total	26	0	2	28	1	313	0	314	0	0	0	0	0	209	9	218	560
07:00 AM	12	0	2	14	1	110	0	111	0	0	0	0	0	130	3	133	258
07:15 AM	12	0	0	12	0	145	0	145	0	0	0	0	0	148	3	151	308
07:30 AM	16	0	1	17	1	165	0	166	0	0	0	0	0	178	4	182	365
07:45 AM	14	0	1	15	2	137	0	139	0	0	0	0	0	148	1	149	303
Total	54	0	4	58	4	557	0	561	0	0	0	0	0	604	11	615	1234
08:00 AM	5	0	2	7	1	115	0	116	0	0	0	0	0	100	2	102	225
08:15 AM	10	0	2	12	0	86	0	86	0	0	0	0	0	91	2	93	191
*** BREAK ***																	
Total	15	0	4	19	1	201	0	202	0	0	0	0	0	191	4	195	416
*** BREAK ***																	
04:00 PM	12	0	0	12	1	151	0	152	0	0	0	0	0	134	6	140	304
04:15 PM	13	0	2	15	0	164	0	164	0	0	0	0	0	113	11	124	303
04:30 PM	10	0	0	10	1	150	0	151	0	0	0	0	0	155	12	167	328
04:45 PM	13	0	0	13	1	228	0	229	0	0	0	0	0	120	15	135	377
Total	48	0	2	50	3	693	0	696	0	0	0	0	0	522	44	566	1312
05:00 PM	12	0	0	12	2	222	0	224	0	0	0	0	0	137	13	150	386
05:15 PM	8	0	0	8	1	256	0	257	0	0	0	0	0	138	19	157	422
05:30 PM	11	0	1	12	3	175	0	178	0	0	0	0	0	137	16	153	343
05:45 PM	6	0	1	7	2	179	0	181	0	0	0	0	0	113	9	122	310
Total	37	0	2	39	8	832	0	840	0	0	0	0	0	525	57	582	1461
Grand Total	180	0	14	194	17	2596	0	2613	0	0	0	0	0	2051	125	2176	4983
Apprch %	92.8	0	7.2		0.7	99.3	0		0	0	0	0	0	94.3	5.7		
Total %	3.6	0	0.3	3.9	0.3	52.1	0	52.4	0	0	0	0	0	41.2	2.5	43.7	
Cars	178	0	14	192	17	2318	0	2335	0	0	0	0	0	1847	122	1969	4496
% Cars	98.9	0	100	99	100	89.3	0	89.4	0	0	0	0	0	90.1	97.6	90.5	90.2
Trucks	2	0	0	2	0	278	0	278	0	0	0	0	0	204	3	207	487
% Trucks	1.1	0	0	1	0	10.7	0	10.6	0	0	0	0	0	9.9	2.4	9.5	9.8

TRAFFIC SIGNAL WARRANT ANALYSIS - VOLUME WARRANTS

KANSAS DEPARTMENT OF TRANSPORTATION

BUREAU OF TRAFFIC ENGINEERING

Major Street : K-32
Minor Street : 78th St.
City : Kansas City
County : Wyandotte

Time Count Began : 4:00 PM
Date : May 31, 2016
Day of Week of Count: Tuesday

Is the intersection in a community with a population less than 10,000 or are speeds greater than 40 mph? **yes**

Adjustment factor for day of week and month of year of count . . . Major Street 0.905
Number of Lanes 2 Minor Street 0.905
1

Time	Major Street			Total	Minor Street			*
	Approach Volumes				Approach Volumes			
Beginning	EAST	WEST			NORTH	SOUTH		
12:00 m	54	68	110		3	0		3
1:00	37	44	73		3	0		3
2:00	51	36	79		4	0		4
3:00 am	69	44	102		6	0		5
4:00	125	73	179		11	0		10
5:00	289	183	427		24	0		22
6:00 am	501	357	776		45	0		41
7:00	483	520	908		67	0		61
8:00	326	357	618		43	0		39
9:00 am	281	268	497		32	0		29
10:00	291	278	515		24	0		22
11:00	331	265	539		26	0		24
12:00 n	341	327	605		29	0		26
1:00	349	309	595		41	0		37
2:00	376	361	667		43	0		39
3:00 pm	499	487	892		38	0		34
4:00	615	519	1026		35	0		32
5:00	744	536	1158		36	0		33
6:00 pm	334	307	580		28	0		25
7:00	216	226	400		19	0		17
8:00	163	163	295		15	0		14
9:00 pm	153	154	278		9	0		8
10:00	106	130	214		13	0		12
11:00	95	119	194		9	0		8
24HR Total	6829	6131			603	0		

Note: ≡ Total of both approaches.
• The HIGHEST approach only.

NOTE: Minimum hourly volumes reduced for population <10,000 or speed >40 mph (70% Factor)

NOTE: Adjusted for day of week/month of year (both major and minor streets)

Warrant #1 - Condition A

Percent of Warrant	Volumes Met	Minor
26	3	
17	3	
19	4	
24	5	
43	10	
102	21	
185	39	
216	58	
147	37	
118	28	
123	21	
128	23	
144	25	
142	35	
159	37	
212	32	
244	30	
276	31	
138	24	
95	16	
70	13	
66	8	
51	11	
46	8	

Warranting Volumes
420 105

Hours Met 0
Warrant Met No

Warrant #1 - Condition B

Percent of Warrant	Volumes Met	Minor
17	6	
12	6	
13	8	
16	9	
28	19	
68	42	
123	77	
144	115	
98	74	
79	55	
82	42	
86	45	
96	49	
94	70	
106	74	
142	64	
163	60	
184	62	
92	47	
63	32	
47	26	
44	15	
34	23	
31	15	

Warranting Volumes
630 53

Hours Met 1
Warrant Met No

Warrant #1 - Combination of Conditions A & B

For this warrant vehicle volume requirements for conditions A and B are reduced to 56% Factor
NOTE: Conditions A and B SHALL BOTH meet a minimum of 8 hours. However, the 8 hours satisfying condition A NEED NOT be the same as the 8 hours satisfying condition B.

Condition A B
Hours Met 0 1
Warrant Met No

Warrant #2

Warrant Volume	Percent of Warrant
0	*****
0	*****
0	*****
0	*****
0	*****
190	12
90	46
60	102
120	33
160	18
160	14
150	16
130	20
130	28
110	35
70	49
60	53
60	55
130	19
200	9
260	5
270	3
0	*****
0	*****

Warranting Volumes
From MUTCD Fig. 4C-2

Hours Met 1
Warrant Met No

Warrant #3

Warrant Volume	Percent of Warrant
0	*****
0	*****
0	*****
0	*****
0	*****
330	7
170	24
140	44
230	17
290	10
280	8
270	9
240	11
240	15
210	19
140	24
110	29
90	37
250	10
340	5
0	*****
0	*****
0	*****

Warranting Volumes
From MUTCD Fig. 4C-4

Hours Met 0
Warrant Met No

***** Major Street volume is so low that no Minor Street warrant exists

FINAL

Tri-City Quiet Zone Feasibility Study

June 2016

 **OLSSON**®
ASSOCIATES

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PURPOSE & INTRODUCTION

The MARC Tri-City Multi-modal Redevelopment Plan will create a vision on how to redevelop the K-32 corridor in Wyandotte County. It will include the Kansas communities of Kansas City, Edwardsville and Bonner Springs. The plan will address and guide future transportation enhancements and needs driven by redevelopment through the exploration of redevelopment scenarios using data indicators, performance measures and other environmental or market driven data along the corridor.

One part of this Redevelopment Plan is the preparation of a Locomotive-Horn “Quiet Zone (QZ)” Feasibility Study in coordination with the USDOT-- Federal Railroad Administration’s (FRA’s) Train Horn Rule. The implementation of a QZ would allow for the reduction of noise pollution in the residential areas adjacent to K-32 by eliminating the on-board locomotive-horn warnings at the at-grade highway/rail crossings.

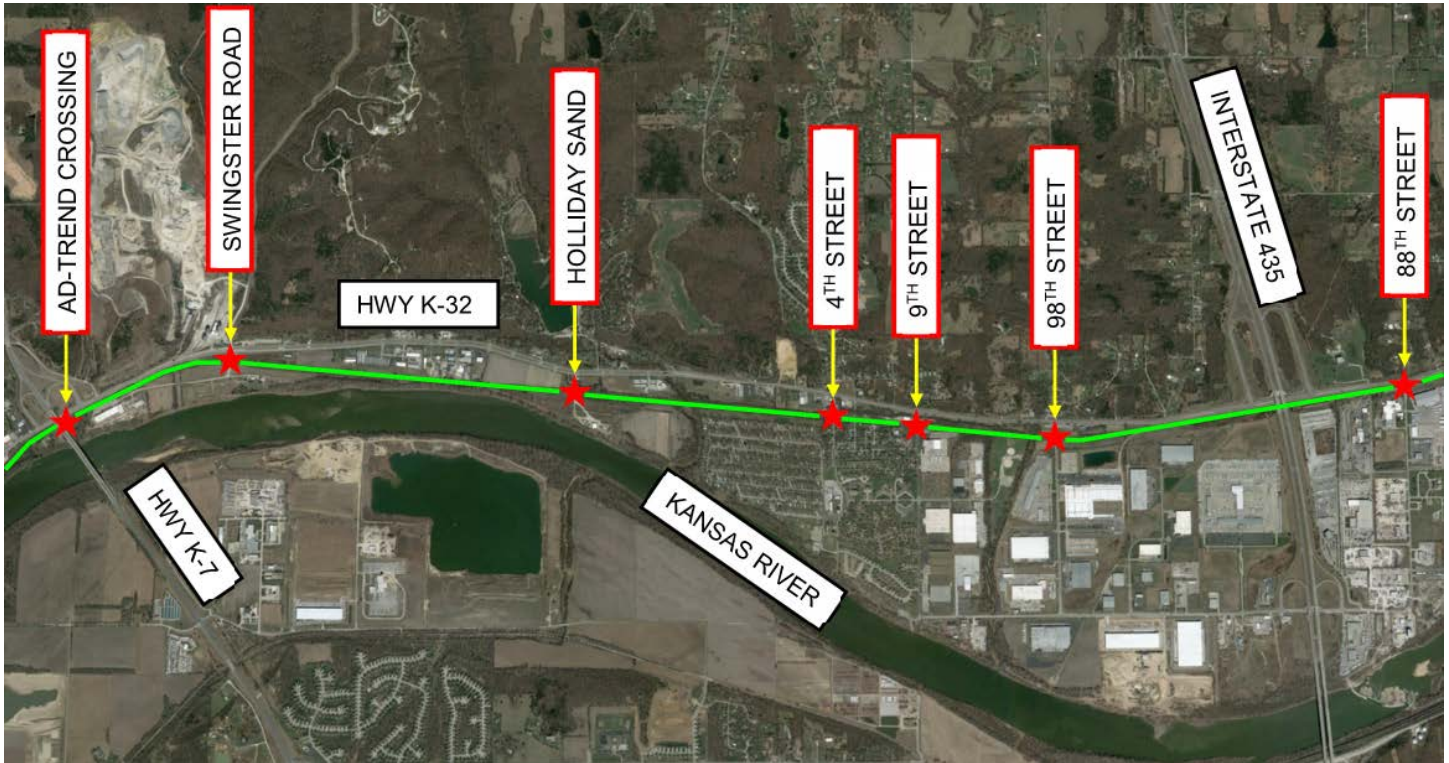


Figure 1: Map of K-32 Corridor

1) RESIDENTIAL AREAS IMPACTED BY LOCOMOTIVE-HORNS

The goal of this QZ Feasibility Study is to address the residential areas impacted by noise pollution from the sounding of the recognized audio safety warnings from on-board locomotive-horns. Four residential areas along the parallel K-32 and Union Pacific Railroad Company (UP) corridors are identified as: Bonner Springs to the west of K-7, the Bonner Springs Lake of the Forest residential development, Edwardsville north of K-32, and Edwardsville south of the UP rail corridor.

The FRA Train Horn Rule requires the lead locomotive to be equipped with a locomotive-horn that produces a minimum sound level of 96 dB(A) and a maximum sound level of 110 dB(A) at 100 feet forward of the locomotive in its direction of travel. To help understand these sound levels, following are some generally recognized noise sources and their corresponding dB(A)'s:

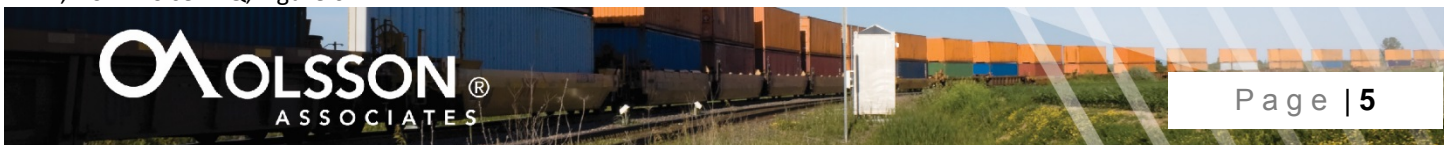
- Emergency sirens at 50 feet---100 to 110 dB(A)
- Un-muffled diesel trucks at 50 feet---90 to 100 dB(A)
- Use of shop tools---80 to 90 dB(A)
- Speech at 3 feet—shout 80 to 90 dB(A); loud voice 70 to 80 dB(A); normal voice 50 to 70 dB(A).

The US Environmental Protection Agency (EPA) has stated that the typical ambient sound level in a suburban residential area is 55 dB(A) and 60 dB(A) in an urban residential area. The US Department of Housing and Urban Development (HUD) has an existing standard for residential noise used in funding decisions for residential developments. Ambient noise levels under 65 dB(A) are considered acceptable; ambient noise levels 65 to 75 dB(A) are normally unacceptable; and ambient noise levels above 75 dB(A) are unacceptable.

To help understand the measurement of noise, the intensity of noise is measured in decibels (dB). To measure the way a human ear interprets sound a descriptor called “A-weighted sound level” indicating the sound has been filtered to reduce the strength of the very low and high frequency sounds. This filters out the sounds a human ear doesn’t hear, such as high frequency dog whistles and low frequency seismic disturbances. Thus noise measurements relating to the human ear are measured in dB(A)'s. dB(A)'s are measured on a logarithmic scale and an increase of 10 decibels corresponds to an approximate doubling of subjective loudness.

With the average daily train traffic of 51 trains/day and locomotive-horns being required to be blown 15 to 20 seconds in advance of each crossing leads to a total of 892.5 seconds (15 minutes) of train horns per day for each highway/rail crossing using an average of 17.5 seconds of horn activation. For the seven (7) highway/rail crossings in the approximately 5 mile long rail corridor being studied, the total time of train horn activation is 6,247.5 seconds (104 minutes). The sound level from the locomotive-horns dissipates from its source, the locomotive, based on geometric divergence from ground (buildings and vegetation) effects and atmospheric effects. Figure 2¹ is based on average urban and suburban conditions to display how sound levels dissipate over distance from the source of the noise.

¹ FRA, Horn Noise FAQ, Figure 6



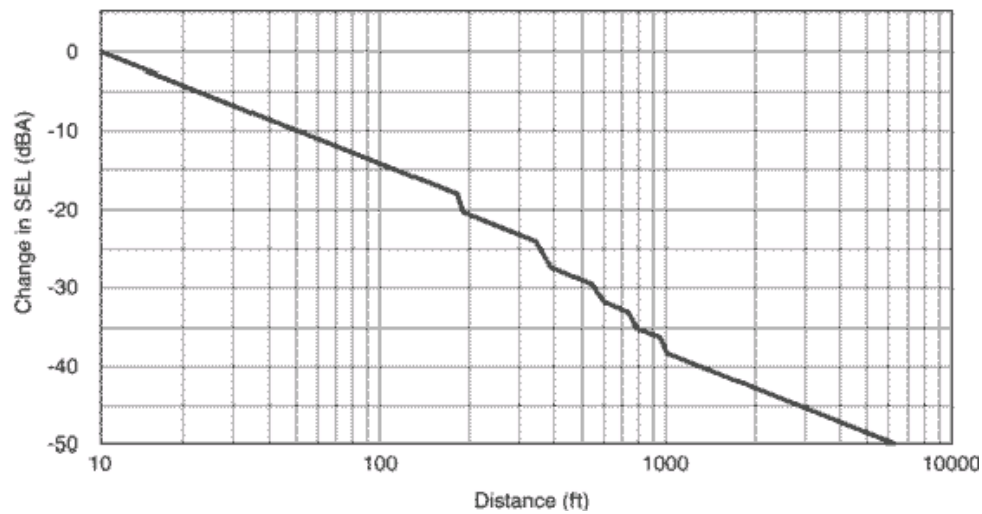


Figure 2: Model of Sound Propagation from Noise

Using this sound level dissipation from Figure 2, it can be expected for a sound level of 110 dB(A) at the lead locomotive to be reduced to 75 dB(A) at 1000 feet from the crossing and reduced to 60 dB(A) at 6000 feet. Using the minimum required dB(A) of 96 reduces the sound level being dissipated to 61 dB(A) at 1000 feet and 46 dB(A) at 6000 feet.

A comparative analysis of the sound levels and the durations of these sound levels are provided in Table A. It should be noted that there have been no actual sound levels measured or the measurement of factors that influence the dissipation of sound. It is an empirical method to evaluate the sound levels of the locomotive-horns within the four residential neighborhoods.

Distance from Crossing- for crossings within 6000 feet

Neighborhood	88th	98th	9th	4th	Holliday Sand	Swingster	Ad-Trend
Bonner Springs—City Hall							2850
Lake of the Forest—Club House				4850	1700		
Edwardsville—Elementary School		4500	2700	2450	5700		
Edwardsville—City Hall		4550	2350	1950	5400		

Calculated dB(A)

Bonner Springs—City Hall							65
Lake of the Forest—Club House				62	69		
Edwardsville—Elementary School		62	66	67	61		
Edwardsville—City Hall		62	67	68	62		

Daily Minutes of select dB(A) sound levels for each neighborhood

Bonner Springs—City Hall							17
Lake of the Forest—Club House				34	17		
Edwardsville—Elementary School		51	34	17	68		
Edwardsville—City Hall		51	34	17	68		

Table A: Sound Levels by Neighborhood

2) TRAIN HORN RULE

The process for evaluating the feasibility of locomotive horn quiet zones is detailed in the US Department of Transportation, Federal Railroad Administration’s Train Horn Rules—“49 CFR Parts 22 and 229—Use of Locomotive Horns at Highway-Rail Grade Crossings; Final Rule”. The existing warning systems and all crossing safety aspects of each crossing is evaluated by an On-Site Diagnostic Team with representation of all entities and jurisdictions with transportation safety responsibilities for the highway-rail at-grade crossings. This team recommends safety measures for each crossing within the quiet zone rail corridor to offset the safety provided by the on-board locomotive horn; and ultimately qualify all crossings within the rail corridor for the locomotive horn quiet zone.

The final rule provides an opportunity for localities nationwide to mitigate the effects of train horn noise by establishing new quiet zones. In a quiet zone, railroads have been directed to cease the routine sounding of their horns when approaching public highway-rail grade crossings. Train horns may still be used in emergency situations or to comply with other Federal regulations or railroad operating rules. Localities desiring to establish a quiet zone are first required to mitigate the increased risk caused by the absence of a horn.

A quiet zone is a section of a rail line at least one-half mile in length that contains one or more consecutive public highway-rail grade crossings at which locomotive horns are not routinely sounded when trains are approaching the crossings. The prohibited use of train horns at quiet zones only applies to trains when

approaching and entering crossings and does not include train horn use within passenger stations or rail yards. Train horns may be sounded in emergency situations or to comply with other railroad or FRA rules even within a quiet zone. Quiet zone regulations also do not eliminate the use of pedestrian bells at crossings. Communities wishing to establish quiet zones must work through the appropriate public authority that is responsible for traffic control or law enforcement at the crossings.

3) UP RAIL CORRIDOR

The Golden State Route, comprised of the Pratt, Herington, Topeka, and Kansas subdivisions, enters Kansas near Liberal, in the State's southwestern corner, and terminates at Kansas City, passing through Hutchinson and Topeka en route. It serves as a primary route between Southern California and the Ports of Los Angeles and Long Beach and Kansas City. At Kansas City, it connects to UP routes to St. Louis and Chicago. Traffic on the Golden State is primarily domestic and international intermodal freight, finished domestic and imported autos and light trucks, and general manifest freight moving in individual carloads. Significant local traffic is generated at Hutchinson and Topeka. Most of the Golden State is single-track and it is equipped with Centralized Traffic Control (CTC). It is about 455 miles in Kansas. Approximate rail traffic per day is 25 trains.

The Marysville Cutoff, comprised of the Marysville and Kansas subdivisions, begins at Gibbon, Nebraska, where it leaves UP's principal east-west main line, the Overland Route, enters Kansas along its northern border and terminates at Kansas City. It is about 173 miles in Kansas. The line serves as a primary outlet route for unit coal trains from the Gillette Field of the Powder River Basin in Wyoming to utilities in Kansas, Missouri, Oklahoma, Louisiana, Arkansas, Texas, and the Southeast. It also serves as a return route for empty coal trains. The Marysville Cutoff is mostly double-track and equipped with CTC. Approximate rail traffic per day is 60 trains.

The Kansas Pacific, consisting of the Kansas, Salina and Sharon Springs subdivisions, begins at Kansas City and leaves Kansas at its western border near Sharon Springs en route to its terminus at Denver. Primary traffic is unit coal trains that originate in the Yampa and North Fork Coal Fields in Colorado en route to utilities in Kansas and the Midwest, empty return coal trains, and locally originating unit grain trains and grain moving in blocks of 26 or 52 cars. The Kansas Pacific is mostly single-track and equipped with CTC. It is about 445 miles in Kansas. Approximate rail traffic per day is 15 trains.

These three above UP lines merge into UP's Eastern Division's double track main line at Topeka that heads toward Kansas City and markets beyond. This rail line has the heaviest tonnage of all rail lines in Kansas as its primary commodity is coal. At 110 to 160 million tons per mile, this UP rail line is among the heaviest density rail lines in the nation.²

Table B details the characteristics of the five public and two private crossings on the UP's Eastern Division's double track main line through Bonner Springs, Edwardsville and the western edge of Kansas City, Kansas.³

² KDOT, Kansas State Rail Plan, June, 2011

³ FRA, Highway/Rail Crossing Inventory



WY Co UPRR Corridor—FRA Inventory Information

MILE POST	DOT #	ROUTE	2010 ADT	THROUGH TRAINS/DAY	MAXIMUM SWITCH TRAINS/DAY	TIME TABLE SPEED	MAINLINE TRACKS	OTHER TRACKS	JURISDICTION
12.06	813204H	88th St	3360	44	2	65	2		Kansas City
13.34	813208K	98th St	1640	44	2	60	2		Edwardsville
13.84	813212A	9th St	2165	44	2	60	2	1	Edwardsville
14.13	813215V	4th St	4190	44	2	60	2		Edwardsville
15.06	813216C	Hol Sand priv xing	N/A	44	2		2		Edwardsville
16.31	906164W	Swingster Rd	380	52	2	55	2		Bonner Springs
16.96	813737T	Ad-Trend priv xing	N/A	52	2		2		Bonner Springs

Table B: WY CO UPRR Corridor

4) QZ'S IN KC

There are currently six Locomotive-Horn Quiet Zones on the Kansas side of the Kansas City Metropolitan Area. They were all implemented after passage of the USDOT-FRA Train Horn Rule. They were not Pre-rule Quiet Zones that were grandfathered in; they all were accomplished through the implementation of approved safety measures. Table C details the specifics of each Quiet Zone.

Locomotive-Horn Quiet Zones Implemented on the Kansas Side of the KC Metro Area

RR CO	RR ROUTE	TRAINS /DAY	JURISDICTION	CROSSINGS	TYPE OF QZ	SAFETY MEASURE IMPLEMENTED
BNSF	Transcon	84	Edgerton	Nelson St	24 Hour	SSM-Medians, w/ intersection mod
BNSF	Transcon	84	JO County	199th St	24 Hour	SSM-Medians, w/ pavmnt widening
BNSF	Transcon	84	Olathe	Dennis Ave	24 Hour	SSM-Medians
BNSF	Transcon	84	Olathe	Elm St	24 Hour	4 Quad Gates
BNSF	Transcon	84	Olathe	Cedar St	24 Hour	Closure & Cul de Sacs
BNSF	Transcon	84	Olathe	Loula St	24 Hour	SSM-Medians
BNSF	Transcon	84	Olathe	Park St	24 Hour	4 Quad Gates
BNSF	Transcon	84	Olathe	135th/Santa Fe	24 Hour	4 Quad Gates
BNSF	Transcon	84	Olathe	Poplar St	24 Hour	Closure & Cul de Sacs
BNSF	Transcon	84	Olathe	Spruce St	24 Hour	Existing Gr Sep RR over
BNSF	Transcon	84	Olathe	Prairie St	24 Hour	Closure & Cul de Sacs
BNSF	Transcon	84	Olathe	Mulberry St	24 Hour	SSM-Medians
BNSF	Transcon	84	Olathe	Harold St	24 Hour	SSM-Medians
BNSF	Transcon	84	Olathe	Woodland St	24 Hour	SSM-Medians
BNSF	Transcon	84	Olathe	College Blvd	24 Hour	New Gr Sep RR under
BNSF	Transcon	84	Olathe	K-10	24 Hour	Existing Gr Sep RR under
BNSF	Ft Scott	37	Olathe	Loula St	24 Hour	New Gr Sep RR over
BNSF	Ft Scott	37	Olathe	Park St	24 Hour	New Gr Sep RR over
BNSF	Ft Scott	37	Olathe	135th/Santa Fe	24 Hour	New Gr Sep RR over
BNSF	Ft Scott	37	Olathe	Ridgeview Rd	24 Hour	New Gr Sep RR over
BNSF	Ft Scott	37	Olathe	127th St	24 Hour	Existing Gr Sep RR under
BNSF	Ft Scott	37	Olathe	119th St	24 Hour	Existing Gr Sep RR under
BNSF	Transcon	84	Lenexa	Prairie Star Pkwy	24 Hour	Existing Gr Sep RR under
BNSF	Transcon	84	Lenexa	87th Lane	24 Hour	SSM-Medians
BNSF	Transcon	84	Lenexa	87th Pkwy	24 Hour	Existing Gr Sep RR under
UP	Coffeerville	28	Overland Park	159th St	24 Hour	SSM-Medians, w/ pavmnt widening
UP	Coffeerville	28	Overland Park	151st St	24 Hour	SSM-Medians, w/ pavmnt widening
UP	Coffeerville	28	Overland Park	Kenneth Rd	24 Hour	SSM-Medians, w/ pavmnt widening
UP	Omaha	33	Ft Leavenworth	K-92	Night-time	Existing Gr Sep RR under
UP	Omaha	33	Ft Leavenworth	Columbus St	Night-time	Locked gates w/ notification lights
UP	Omaha	33	Ft Leavenworth	Rialto Rd	Night-time	Locked gates w/ notification lights

Table C: Locomotive Horn Quiet Zones

5) AVAILABLE SAFETY MEASURES

The process for evaluating the feasibility of locomotive horn quiet zones is detailed in the US Department of Transportation, Federal Railroad Administration's Train Horn Rules—"49 CFR Parts 22 and 229—Use of Locomotive Horns at Highway-Rail Grade Crossings; Final Rule". The existing warning systems and all crossing safety aspects of each crossing is evaluated by an On-Site Diagnostic Team with representation of all entities and jurisdictions with transportation safety responsibilities for the highway-rail at-grade crossings. This team recommends safety measures for each crossing within the quiet zone rail corridor to offset the safety provided by the on-board locomotive horn; and ultimately qualify all crossings within the rail corridor for the locomotive horn quiet zone.

The Train Horn Rule provides for the opportunity of locomotive-horn free Quiet Zones when Substantial Safety Measures (SSM's) are in place on all public crossing within a rail corridor. Minimum requirements for Quiet Zones are that the rail corridor be $\frac{1}{2}$ mile or more in length and that all public crossings have a flashing light and gate signal system with constant warning time train detection circuitry. There are five SSM's available to be used for the implementation of Quiet Zones: 1.) temporary crossing closure, 2.) four quadrant gate systems (Figure 3 depicts a four quadrant gate system⁴), 3.) medians or channelization devices, 4.) one way crossing with gate coverage of entire route, and 5.) permanent crossing closure.

It should be noted that it is the policy of Class I Railroad Company's to require the jurisdiction with maintenance responsibility for the crossing approaches to provide funding for the annual maintenance of the two additional exit gates for new four quadrant gate installations. This expense can range from \$10,000 to \$15,000 per year.

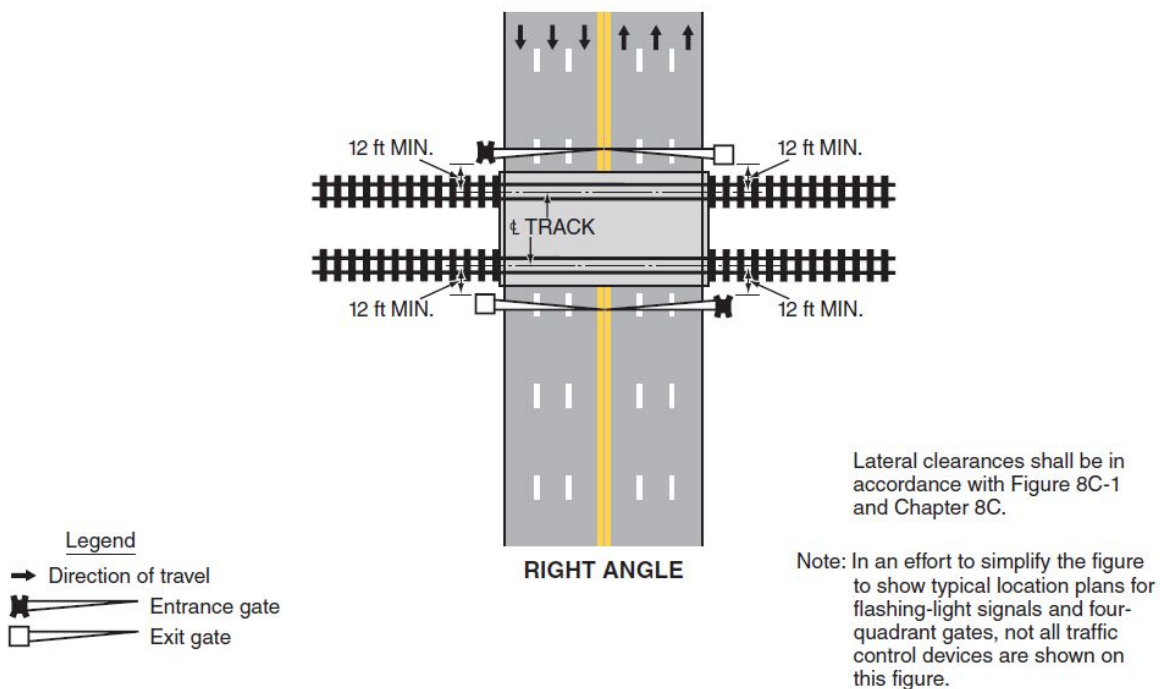


Figure 3: Four Quadrant Gate System

⁴ Manual of Uniform Traffic Control Devices, (MUTCD), Section 8D.05

Stationary horn systems “Wayside Horn Systems (WHS) are allowed to replace the activation of on-board locomotive horns on a “one for one” basis. The crossing will not technically be a part of a QZ as the WHS provides the audible warning on the each approach to the crossing. They are required to provide a minimum sound level of 92 dB(A) measured 100 feet from the centerline of the nearest track.⁵ The area of influence for the WHS is 10% of the area of influence for the on-board locomotive-horns. WHS’s require that the crossing be equipped with a flashing light with gate warning system that has CWT train detection circuitry. The WHS is a traffic control device and as such will be owned and maintained by the jurisdiction responsible for the public roadway. There will be a hard-wired interconnect between the highway/rail signal system and the WHS. Annual fees estimated for each WHS are in the range of \$5,000 for the interconnect with the railroad company’s signal system, \$10,000 for a \$10 million general liability policy, and \$5,000 for maintenance of WHS; for a total annual expense of \$20,000/year.

6) INDIVIDUAL CROSSINGS IN QZ FEASIBILITY STUDY

A meeting was held on October 15, 2015 in the City of Edwardsville Training Room to kick-off this QZ Feasibility Study. Requirements for implementing a locomotive-horn QZ and the allowable safety measures to offset the risk of not blowing the on-board locomotive-horn were presented. Meeting was attended by all required entities; Union Pacific, Federal Railroad Administration, Kansas Department of Transportation, City of Bonner Springs, City of Edwardsville, City of Kansas City, and the Unified Government of Wyandotte County. On-Site Diagnostic Reviews were held at the two crossings representative of the greatest challenges to the implementation of this proposed QZ; the public crossing of 4th Street and the private crossing into Holliday Sand, both within the corporate limits of the City of Edwardsville. Minutes of the October 15, 2015 project kick-off meeting and on-site diagnostic reviews for this QZ Feasibility Study is included in Appendix A.



The analysis of each individual crossing’s safety measure options will be ordered from west to east. All viable safety options will be evaluated for each crossing, including engineer’s opinion of costs and a discussion of the pros and cons of each option. The set of plan sheets for all safety options considered and the engineer’s opinion of costs are included in Appendix B.

The farthest west crossing under consideration for this QZ is the Ad-Trend private crossing located under the K-7 bridge, inside the corporate limits of the city of Bonner Springs. FRA has interpreted their Train Horn Rule to not allow private crossings to be at the termini of a QZ. This provides three options for inclusion of the Ad-Trend crossing in the QZ; 1.) Extend the QZ so it terminates at a public crossing, 2.) Convert the crossing to a public crossing, or 3.) Close the crossing and provide alternate access. Option 1.) is not viable as the next public crossing to the

southwest is 142nd St which is 4 miles away and there would be another 4 private crossings within this additional 4 mile rail corridor that would need to be addressed. Option 2.) the conversion of this private crossing to a

⁵ Appendix E to Part 222—Requirements for Wayside Horns, USDOT, FRA, 49 CFR Part 222 Use of Locomotive Horns at Highway Grade Crossings; Final Rule

public crossing is only viable by installing flashing light and gate with CWT train detection circuitry and a WHS system as the crossing is too close to K-32 to allow for the required 60 foot median on the southbound approach to the crossing. The engineer's opinion of costs for this safety improvement option, including preliminary engineering and contingencies is \$533,000 with an annual expense of \$20,000. Option 3.) is not fiscally viable as the alternate access provided via a new connecting road to Swingster Rd. The engineer's opinion of cost for this safety improvement option, including preliminary engineering and contingencies is \$904,000.



Swingster Rd is 0.65 miles east of the Ad-Trend private crossing, and is also within the corporate limits of the city of Bonner Springs. It is currently a two lane paved route with a straight post flashing light and gate warning system with CWT. Two options were evaluated for this crossing. The first is a WHS system with an engineer's opinion of cost or \$162,000 for the installation and an annual cost of \$20,000. The second option is pavement widening with 4 foot wide 100 foot long medians on each approach. This pavement widening will require adjustment of the straight post flashing light and gate mechanisms on each approach. The pavement widening will be accomplished in conjunction with milling and overlaying the approaches. The engineer's opinion of cost for this option, including preliminary engineering and contingencies is \$532,000.



The Holliday Sand private crossing is the next crossing to the east and is within the corporate limits of the city of Edwardsville. This private crossing ties directly into 111th St which has an intersection with K-32. There were four safety improvement options considered for this crossing, Option 1.) is to implement a night-time only QZ at this crossing using locked gates on each approach with locomotive engineer notification lights adjacent to each main line. The engineer's opinion of cost including preliminary engineering and contingencies for this option is \$95,000. Option 2.) is the installation of a flashing light and gate signal system with CWT, widening and paving approaches, and the installation of 4 foot wide 100 foot long medians on each approach. The engineer's opinion of cost including preliminary engineering and contingencies for this option is \$513,000. Option 3.) is installation of a flashing light and gate signal system with CWT and a WHS system. The engineer's opinion of cost including

preliminary engineering and contingencies for this option is \$533,000 with an annual expense of \$20,000. Option 4.) is closure of this crossing with alternate access via a new connecting road to Swingster Rd. The engineer's opinion of cost including preliminary engineering and contingencies for this option is \$541,000..



The next crossing is 4th St which is the first of three public crossings within the corporate limits of the city of Edwardsville. There were three safety options investigated for this crossing, with each option including sidewalks on both sides of the crossing to be in line with the overall multi-modal concept for the K-32 corridor. Option 1.) is the installation of a four quadrant gate system. The engineer's opinion of costs including preliminary engineering and contingencies is \$722,000 with annual maintenance expense of \$10,000 for the maintenance of the exit gates and the vehicle detection loops in advance of the exit gates. Option 2.) is the installation of a WHS system with an engineer's opinion of cost including preliminary engineering and contingencies of \$323,000, with an annual cost of \$20,000. Option 3.) is modifications of access to 4th St within the limits of the addition of 4 foot wide 100 foot long medians on each approach, the engineer's opinion of cost including preliminary engineering and contingencies is \$825,000.



The 9th St crossing is 0.29 mile east of the 4th St crossing. One safety improvement option was evaluated for this crossing, that being a 4 foot wide 60 foot median on the southbound approach and a 4 foot wide 100 foot long median on the north bound approach. In addition sidewalks on both sides, the pavement was widened, milled and overlaid. The existing straight post flashing light and gate signal mechanisms will need to be adjusted to allow for the pavement widening. The engineer's opinion of cost including preliminary engineering and contingencies for this safety improvement is \$680,000.



The 98th St crossing is the eastern crossing within the corporate limits of the city of Edwardsville. . One safety improvement option was evaluated for this crossing, that being 4 foot wide 100 foot long medians on each approach. In addition sidewalks on both sides, the pavement was widened, milled and overlaid. The engineer's opinion of cost including preliminary engineering and contingencies for this safety improvement is \$213,000.



The 88th St crossing is on the eastern edge of the UP rail corridor being studied for the Feasibility of implementing a locomotive-horn QZ. This crossing is within the corporate limits of the city of Kansas City, Ks. One option was evaluated for this crossing, the addition of sidewalks on both sides of the crossing and a four quadrant gate system. The design of the four quadrant gate system will require the analysis of the timing for the exit gates to accommodate the interconnection of the highway/rail warning system with the K-32 highway intersection traffic signal. The engineer’s opinion of costs including preliminary engineering and contingencies for this safety option is \$606,000.

Table D, below provides brief descriptions of the pros and cons of each option or safety alternative considered for the five public and two private crossings evaluated in this QZ Feasibility Study. It should be noted that there were five other public crossings within the study area. All of these five are industrial rail leads with very minimal train traffic that do not justify the implementation of a QZ. Each of these five industrial lead crossings will likely experience more locomotive-horn noise from switch movements, which are not subject to QZ requirements of not blowing on-board locomotive-horns, than from movements across the crossings.

Pros & Cons of Tri-City QZ | Safety Improvement Concepts
Engineer’s Opinion

CROSSING	SAFETY CONCEPT—DESCRIPTION	ENGINEER'S OPINION OF TOTAL COSTS	PROS	CONS
Ad-Trend Private xing	Option 1—Xing closure with alternate access	\$904,000	Only feasible alternative as a private xing can't be the terminus of a QZ & access will be thru Swingster Rd xing	Expensive safety improvement for relatively little use
Ad-Trend Private xing	Option 2—Conversion to Public Wayside Horn System (WHS)	\$533,000	Only feasible option if this crossing remains open as the crossing is too close to K-32 to allow for medians	Not technically a QZ and there will be an annual expense in the range of \$20,000

Swingster Rd	Option 1—Wayside Horn System (WHS)	\$162,000	The WHS will only impact the desired receivers, that being the motorists approaching this xing	Not technically a QZ and there will be an annual expense in the range of \$20,000
Swingster Rd	Option 2—Medians on each approach	\$532,000	This option totally upgrades the signal system, widens & repaves the approaches & totally silences on-board locomotive horns	Expensive option due to the signals being too close to existing pavement to allow for widening w/o a new signal system
Holliday Sand Private	Option 1—Lockable Gates w/ Notification lights for a night-time only QZ	\$95,000	Most economical option w/o road or signal improvement costs	Would only be a night-time QZ & would require a considerable commitment of resources to ensure gates were locked and opened per an agreed schedule
Holliday Sand Private	Option 2—Approach medians w/ signal system, widening & paving of approaches	\$513,000	Total QZ with state of the art signal system	Expensive option due to required signal system & approach widening & paving
Holliday Sand Private	Option 3—WHS	\$533,000	This option while requiring a flashing light and gate signal system will not require roadway improvements	Not technically a QZ and there will be an annual expense in the range of \$20,000, & residence on 111th St will experience longer durations of warning horn
Holliday Sand Private	Option 4—Joint use access on UP row	\$541,000	Xing will be closed & an alternate route will provide access thru the Swingster Rd xing	Will require lengthy access road w/ streambed stabilization near KS River & row joint use agrmt w/ UP
4th Street	Option 1—Four Quadrant Gate System w/ sidewalks on both sides of xing	\$722,000	Will not require road improvement will add sidewalks on each side of xing, and will be state of the art new signal system	Expensive option for no roadway improvement and will require an annual maintenance expense for exit gates and in-pavement vehicle detection loops of \$10,000

4th Street	Option 2—WHS, with sidewalks on both sides of xing	\$323,000	Will not require road improvements will add sidewalks on each side of xing, & is the most economical option for 4th St	Not technically a QZ and there will be an annual expense in the range of \$20,000, & businesses & residences along 4th St will experience longer durations of warning horn
4th Street	Option 3—Medians w/ revised accesses, sidewalks on both sides	\$825,000	Will be total improvement to 4th St, will be a total QZ, will have sidewalks on both sides of crossing, & access intersections will be outside of medians	Most expensive option & will involve the purchase of row
9th Street	Medians on each approach, w/ new signal system	\$680,000	Will be a total QZ with new state of the art signal system, new widened pavement approaches with medians	Expensive option due to existing signals being too close to pavement to allow for the placement of medians
98th St	Medians on each approach, w/ sidewalks on both sides of xing	\$213,000	Will be a total QZ w/ approach widening, paving & medians, & sidewalks will meet project's multi-modal requirement	Xing is being improved to address a possible future need of sidewalks
88th St	Four Quad Gate system, w/ sidewalks on both sides of crossing	\$606,000	Will be a total QZ w/ a state of the art four quad gate system that will be designed to function safely w/ interconnected K-32 traffic signal will have sidewalks on both sides of xing & will meet project's multi-modal requirement	Will require an annual maintenance expense for exit gates & in-pavement vehicle detection loops, also xing is being improved to address a possible future need of sidewalks

Anchor private xing (crossing added via Addendum explained in Chapter 7)	Same as Option 2 for the Holliday Sand private xing Approach medians w/signal system, widening & paving of approaches	\$513,000	Total QZ with state of the art signal system	Expensive option due to required signal system & approach widening & paving
Swartz private xing (crossing added via Addendum explained in Chapter 7)	Same as Option 2 for the Ad-Trend private xing, WHS	\$533,000	Only feasible option if this xing remains open as the crossing is too close to K-32 to allow for medians	Not technically a QZ and there will be an annual expense in the range of \$20,000
Kansas Ave. (Crossing added via Addendum explained in Chapter 7)	Same as 88th St. Four Quad Gate system, w/sidewalks on both sides of crossing	\$606,000	Will be a total QZ w/a state of the art four quad gate system that will be designed to function safely w/interconnected K-32 traffic signal will have sidewalks on both sides of xing & will meet project's multi-modal requirement	Will require an annual maintenance expense for exit gates & in-pavement vehicle detection loops, also xing is being improved to address a possible future need of sidewalks
65th St. (crossing added via Addendum explained in Chapter 7)	Same as 98th St. Medians on each approach, w/sidewalks on both sides of xing	\$213,000	Will be a total QZ w/approach widening, paving & medians, & sidewalks will meet project's multi-modal requirement	Xing is being improved to address a possible future need of sidewalks

Table D: Pros & Cons of Tri-City QZ | Safety Improvement Concepts

7) ADDENDUM TO SCOPE OF WORK

During review of the Draft report, there was discussion addressing the inclusion of four additional crossings in the final report as an addendum to the original scope. The original scope only addressed the UP rail corridor at-grade crossings from 88th St west to the Ad-Trend private crossing. This addendum will include consideration of feasible safety improvement options for the eastern four crossings; two public crossings (65th St and Kansas Ave) and two private crossings (Anchor and Swartz).

The four crossings to the east of 88th St., to be evaluated for their feasible safety improvement options are: Anchor private crossing, DOT # 813202U, milepost 11.09; Swartz private crossing, DOT # 813201M, milepost 9.86; Kansas Ave (3 crossings) DOT # 813198G, milepost 8.91, DOT # 813199N, milepost 8.96, DOT # 813200F, milepost 8.91; 65th St, DOT # 813197A, milepost 8.45. Each of these four crossings will be evaluated for the most feasible safety improvement to allow for the implementation of a QZ, with estimated costs based on like improvements from crossings included in the draft report.

The Anchor private crossing is similar to the Holiday Sand private crossing. The most feasible option for this crossing will be the addition of non-traversable medians with a flashing light and gate signal system with CWT train detection circuitry. This route will require the widening and paving of the crossing approaches. This improvement option for the Holiday Sand private crossing is \$513,000 which will be used as the estimated cost to evaluate the Anchor private crossing.

The Swartz private crossing is similar to the Ad-Trend private crossing as it is too close to K-32 to allow for the installation of medians. The most feasible option is a flashing light and gate signal system with CWT train detection circuitry with a WHS system. The cost to be used in evaluating this crossing is estimated at \$533,000, with an annual cost of \$20,000.

The Kansas Ave crossing is three crossings in the FRA inventory, and in total represents four sets of tracks being crossed by Kansas Ave. The Kansas Ave crossing is bordered by the K-32 intersection on the north and the Griffin Rd intersection on the south. The close proximity of both of these intersections allow for only one feasible safety alternative to allow for the crossing's inclusion in the QZ, that being a four quadrant gate system similar to the one proposed for the 88th St crossing. The estimated cost for the 88th St four quadrant gate system is \$606,000, which will be the estimated cost used for the evaluation of the Kansas Ave crossing. The four quadrant gate system will require an estimated annual cost of \$10,000 for the maintenance of the two exit gates and the in-pavement vehicle detection loops.

The 65th St crossing is similar to the 98th St crossing where non-traversable medians are the safety improvement option recommended. This median option will require pavement widening, milling and overlaying on both approaches. The estimated cost for 98th St is \$213,000, which will be used for the evaluation of the 65th St crossing.

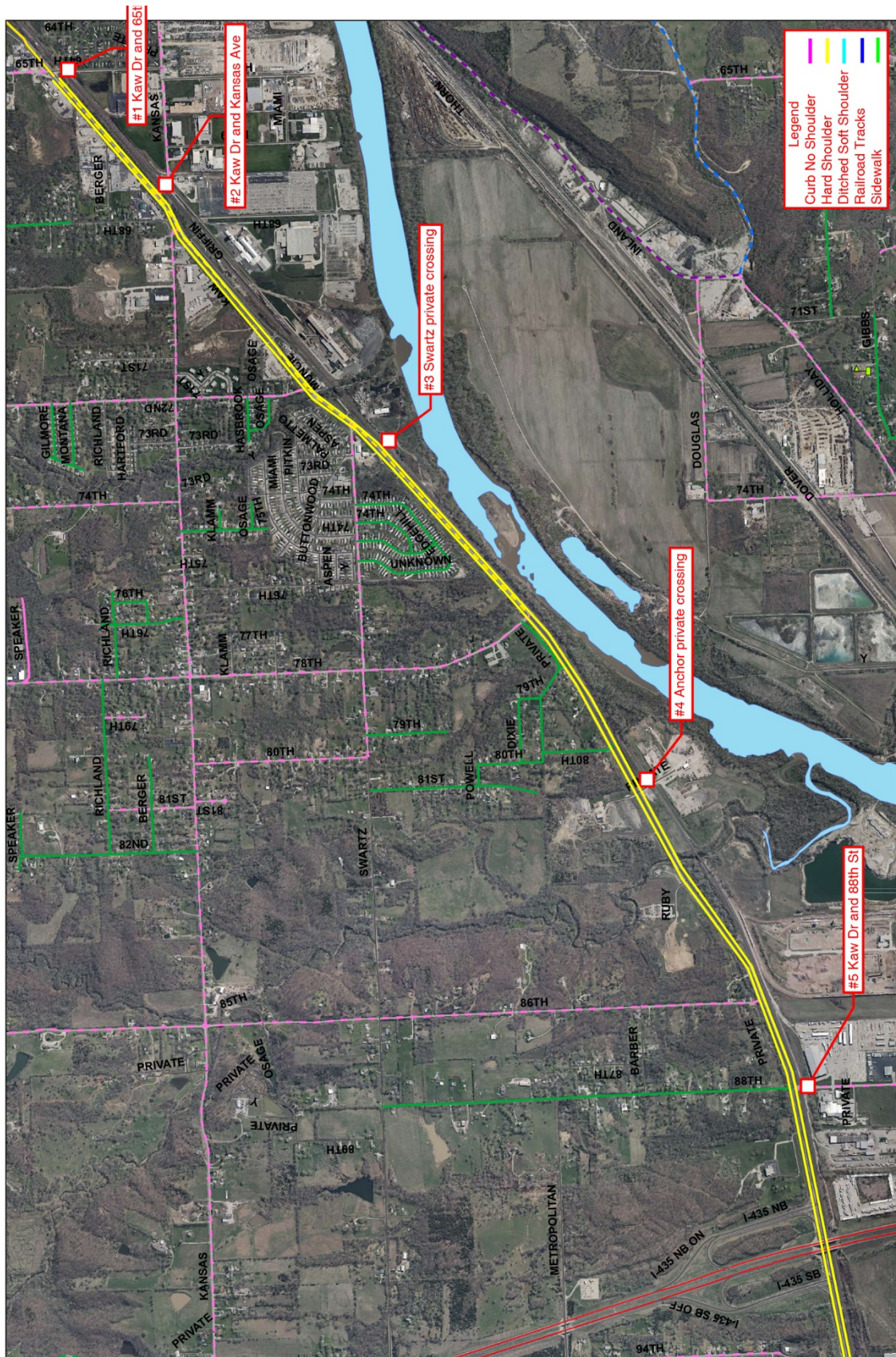


Figure 4

8) PUBLIC INPUT

The Draft Quiet Zone Feasibility Study report was made available to the Stakeholder Advisory Committee. Details of the study were included with information presented at the project's public meetings. Detailed presentations of the study were made to the Wyandotte County Unified Government Public Works Committee, the Board of Commissioners of the Wyandotte County Unified Government and the City of Edwardsville City Council. Below in Table XXX is the estimate of costs for each crossing most probable Substantial Safety Measure (SSM) option for each crossing.

Ad-Trend private crossing (will require conversion to public)	WHS	\$533,000
Swingster Rd. public crossing	Medians	\$532,000
Holliday Sand private crossing (suggested conversion to public)	Medians	\$513,000
4 th St. public crossing	Medians	\$825,000
9 th St. public crossing	Medians	\$680,000
98 th St. public crossing	Medians	\$213,000
88 th St. public crossing	4 Quad Gates	\$606,000
Anchor private crossing (suggested conversion to public)	Medians	\$513,000
Swartz private crossing (suggested conversion to public)	WHS	\$533,000
Kansas Ave. public crossing	4 Quad Gates	\$606,000
65 th St.	Medians	\$213,000

Total Engineer's Opinion of Costs **\$5,767,000**

Table E: Estimate of Costs

Through these public meetings, review of the draft report and presentations to jurisdictional organizations, there were significant questions and comments relative to the overall Quiet Zone and select crossings. The overall comments and questions were generally related to the functioning of a Quiet Zone and what was the required noise intensity and time duration of locomotive-horn activation (see Chapter 1 for the answer). UP's policy of locomotive-horn activation at private crossings in urban/suburban settings, being the same as public crossings, was shared. The safety at these private crossings was emphasized as each represent the opportunity to be crossed by the public and as such viewed as a public crossing with the expectation of the audible safety warning of an approaching train via the activation of the on-board locomotive-horn. It was shared that the issue of four private crossings within this total rail corridor is significant in relation to FRA's ruling that a Quiet Zone cannot terminate at a private crossing.

Considerable discussion was shared on the possibility of phasing the implementation of the total Quiet Zone into manageable segments. One major limiting factor is the FRA Train Horn Rule that requires a Quiet Zone to be at a minimum ½ mile in length along the rail corridor. Since the on-board locomotive-horns are required to be activated between 15 second and 20 seconds in advance of each crossing, the minimum time duration of the 15 second horn activation for a 60 mph train is ¼ mile in advance of the crossing. Using this 60 mph speed provides the justification for the ½ mile requirement, (1/4 mile on each crossing approach). Another consideration is the governmental jurisdiction for the crossings, while it is possible to have multi-jurisdictional Quiet Zones; the implementation is better defined when limited to one funding jurisdiction.

There was also discussion on the strategy of improving pedestrian access across all crossings where there was obvious existing or planned pedestrian crossings. This strategy is in line with the goal of the overall corridor project. There was also evidence of the existing need for improved pedestrian access across the 4th St crossing. In conjunction with improving the pedestrian access across the 4th St crossing, it was shared that this route is the major access to Edwardsville and any improvements to the 4th St crossing needs to extend both north and south to opportune locations.

The Ad-Trend private crossing provides access to the Ad-Trend advertising sign and the UP Police firing range, which is jointly used by the City of Bonner Springs Police. For this crossing to be within the Quiet Zone it is required to be converted to a public crossing. While it could function as a private crossing with the recommended option of a WHS it will not provide the need or requirement for the general public to use this crossing, as there is limited land available between the UP row and the Kansas River. A future strategy worth consideration for this crossing is the relocation of the advertising sign and the firing range to negate the need for this crossing and its subsequent closure.

The Holliday Sand private crossing currently provides access the Holliday Sand Co. maintenance operations and agricultural activities. This crossing serves a significant acreage of land between the UP row and the Kansas River. The southbound approach to the crossing ties directly into 111th St. The opportunity for expanded economic activities and the immediate tie into the City of Edwardsville street system provide valid reasons for conversion of this crossing from private to public.

The overall message of crossing safety was shared at all public meetings and presentations to governmental entities. The current on-board locomotive-horn is a recognized effective audible safety warning for trains approaching crossings. To quiet this warning a safety improvement is required to offset the safety provided by the on-board locomotive-horn. This fact in itself is the basis for allowing the implementation of Quiet Zones through the Supplementary Safety Measures (SSM) process. It was also shared that there will be times and instances when the locomotive engineer will be required to activate the on-board locomotive-horn; whenever there are railroad or street maintenance or construction activities near the crossing, the presence of trespassers or animals on UP row, and any special situations where the engineer feels the audible warning is required.

9) CONCLUSION & RECOMMENDATION

This UP rail corridor being studied as to the feasibility of one or more locomotive-horn Quiet Zones, traverses three cities (Bonner Springs, Edwardsville, and Kansas City) all within the Unified Government of Wyandotte County. The rail corridor is a double main line route with a significant number of through freight trains per day (currently 52 trains/day). There are industrial leads and resulting rail switching operations at both ends of the rail corridor within the study limits from the west end at the Ad-Trend private crossing (directly under the K-7 overpass) in Bonner Springs to the 65th St crossing in Kansas City. This UP rail corridor is bordered on the south by the Kansas River and on the north by K-32, and in select locations there is very little spatial separation between the UP's two main lines and these two bordering features. This limiting spatial separation impacts the ability to provide alternate access to property between the UP corridor and the Kansas River. It also requires the interconnection of highway/highway traffic signals and the highway/rail signal systems at both the 88th St and Kansas Ave crossings, to assure vehicles are not trapped on the crossings by the highway/highway signal system when trains are approaching the crossing. UP has sponsored a study on these interconnected signal systems and the recommendations from this study will need to be considered in the final design of Quiet Zone safety improvements for these two crossings.

This study has identified select areas (residential, business and school) that would benefit in reduced noise pollution from the implementation of locomotive-horn Quiet Zones. The key factor in measuring this impact is the proximity of the crossing to each select area, so the benefits vary greatly for each crossing.

This corridor includes 1 private and 1 public crossing in Bonners Springs; 1 private and 3 public crossings in Edwardsville; and 2 private and 3 public crossings in Kansas City. The private crossings represent considerable challenges for their incorporation into a Quiet Zone. As per FRA Train Horn Rules a Quiet Zone cannot terminate at a private crossing. All four private crossings have passive private crossing warning signs which would require at a minimum expensive flashing light and gate signal systems for their inclusion in a Quiet Zone. Currently none of the four private crossings experience enough traffic to justify the expenditure of funds for the installation of a flashing light and gate signal system. There would have to be valid business reasons for the private entities responsible for the private crossing agreement with UP to agree to their funding of this type of warning system. It would also require a special situation to justify the expenditure of public funds for this type of warning system on a private crossing. Based on the Quiet Zone requirements and funding considerations for private crossings there are only two viable options for their inclusion in a Quiet Zone: 1.) closure of the private crossing with alternate access (if required) provided via a public crossing; and 2.) conversion of the private crossing to a public crossing.

While this study addresses nine highway/rail at-grade crossings (4 private and 5 public) along approximately 8.5 miles of the UP rail corridor, the FRA Train Horn Rule allows for the phasing or implementation of multiple Quiet Zones. These individual Quiet Zones are required to be a minimum of ½ mile in length. While a Quiet Zone can be implemented within multiple jurisdictions, it is much less complicated if the Quiet Zones lie totally within the sponsoring jurisdiction. Following the ½ mile length requirement and avoiding multiple jurisdictions there are several phasing options available for the implementation of locomotive-horn Quiet Zones. Initial phasing options for consideration by jurisdiction are as follows:

BONNER SPRINGS-There is essentially one viable Quiet Zone that includes the Ad-Trend private crossing and the Swingster Rd crossing. While there are two options for the Ad-Trend private crossing with the closure of the crossing and the relocation of the advertising sign and the shooting range is the most probable. The Swingster Rd crossing safety improvement required for the Quiet Zone would be non-traversable medians on each approach.

EDWARDSVILLE-There are three viable phasing options for the implementation of Quiet Zones in Edwardsville: 1.) the Holliday Sand Private crossing will meet the requirements for a stand-alone Quiet Zone with the most probable safety improvement being the conversion to a public crossing with non-traversable medians on each approach; 2.) 4th St and 9th St will require that these two crossings be addressed as one Quiet Zone with the most probable safety improvements being a major renovation of 4th St with non-traversable medians on each approach and for 9th St the same non-traversable medians without the major renovation; and 3.) 98th St can be a stand-alone Quiet Zone with non-traversable medians on each approach.

KANSAS CITY-There are three viable phasing options for the implementation of Quiet Zones in Kansas City: 1.) the Anchor Rd private crossing can be a stand-alone Quiet Zone with the most probable safety improvement being the conversion to a public crossing with non-traversable medians on each approach; 2.) the Swartz Rd private crossing can be a stand-alone Quiet Zone with the most probable safety improvement being the conversion to a public crossing with safety improvement of a Wayside Horn System (WHS); and 3.) the Kansas Ave and 65th St will require that these two crossings be addressed as one Quiet Zone with the most probable safety improvement for Kansas Ave being a four quad gate system and for 65th the safety improvements being non-traversable medians on each approach.

The overall purpose of this locomotive-horn Quiet Zone Feasibility Study is to provide options and cost estimates to allow decisions on the possible design and implementation of Quiet Zones. While phasing options have been suggested above, the available options are not limited to the suggested options.

APPENDIX A

Tri-City Multi-Modal Redevelopment Plan | Quiet Zone Feasibility Study Kick-Off Meeting

October 15, 2015 | Edwardsville Training Room

ATTENDEE	ORGANIZATION	TITLE	PHONE	E-MAIL
Al Cathcart	Olsson Associates	PM for QZ Study	785-249-9126	acathcart@olssonassociates.com
Mitch Sothers	KDOT- Coordinating		785-296-3529	mitchs@ksdot.org
Shawn Hennes	KDOT- Coordinating		785-296-0204	shawnh@ksdot.org
Reid Catt	Olsson Associates		913-381-1170	rcatt@olssonassocaites.com
Ryan Kubert	Olsson Associates		402-310-0276	rkubert@olssonassociates.com
Marcia Harrington	City of Bonner Springs		913-667-1703	marciah@bonnersprings.org
Ken Millsap	Holliday Sand		913-492-5920	kmillsap@hollidaysand.com
Michael Webb	City of Edwardsville		913-441-3707	mwebb@edwardsvilleks.org
Beth Dawson	MARC		816-701-8325	bdawson@marc.org
Peter Yazbec	City of Edwardsville		913-441-3707	pyazbec@edwardsvilleks.org
Byron Toy	Unified Government		913-573-5757	btoy@wycokck.org
Eric Nobert	Unified Government	Engineering Spec.	913-573-5783	enobert@wycokck.org
Steve Rhoades	Vireo		816-777-3004	steve@bevireo.com
William Cleveland	FRA	Crossing Mgr.	816-329-3840	william.cleveland@dot.gov
Howard Gillespie	FRA	Crossing Mgr.	816-329-3840	howard.gillespie@dot.gov
Lindsey Douglas	UP	Dir. Of Public Affairs	816-399-1625	lmdouglas@up.com
John Simpson	UP	Sr. Mgr. Xing Compliance	816-399-1692	johnsimpson@up.com
Bill Heatherman	UG Wyco/KCK	Country Engineer	913-573-5416	bheatherman@wycokck.org
Mike Benjamin	UP	Mgr. Spec. Projs.	816-399-1703	mbenjamin@up.com
Lideana Laboy	UG Wyco/KCK	City Traffic Engr.	913-573-5771	llaboy@wycokck.org

MEETING MINUTES:

Staff in attendance introduced themselves and explained their interest and perceived involvement in the Quiet Zone (QZ) Feasibility Study.

Beth Dawson will be the MARC project Manager and she provided an overview of the project, and explained the use of STP funds for the project.

Bill Heatherman with UG shared that he sees the Quiet Zone technical analysis feeding into the planning study. Goal today is to listen and hear all options, costs etc.

A set of aerial photo concepts were passed out to all in attendance and it was decided to review the 5 public and 2 private crossings starting at the west crossing.

The first crossing is a private crossing, essentially under the east K7 structure over the UP. The private use agreement is with Ad-Trend for their access to an advertising sign. Crossing is also used to access a shooting range used by UP Police and City of Bonner Spring Police. The concept presented was for a night time only QZ, via the use of locked gates on each approach with notification lights for the locomotive engineer to inform him that the gates were closed and locked so that he/she is not required to blow the on-board locomotive horn. Based on the goal of the meeting to investigate all potential safety improvement concepts for each crossing independent of their cost, it was mutually agreed that other concepts should be evaluated for this crossing. Subsequent to this meeting it has been determined that the following three concepts will be investigated: 1.) close crossing and provide alternate access off form Swingster Road, 2.) Install a flashing light and gate signal system with Constant Warning Time (CWT) train detection circuitry and a Wayside Horn System (WHS), and 3.) Install a flashing light and gate signal system with Constant Warning Time (CWT) train detection circuitry, widen. Pave approaches and add 100 medians on each approach. FRA staff shared a recent interpretation of the Train Horn Rule that does not allow a QZ to start or stop at a private crossing, if the private crossing is outside of a ¼ mile from a public crossing within the QZ. Swingster Road is the first public crossing to the west and it is 0.65 miles from this private crossing. 142nd Street is the next public crossing to the southwest and it 3, 87 miles from this private crossing and there is 4 additional private crossings in this 3, 87 mile space. This essentially rules out all options rather than closure or converting the use to a public crossing (then all previously listed options would be viable) if this crossing is to be included in the QZ. There was a concern noted about the limited sight distance at this crossing due to vegetation and the K-7 bridge columns.

UP Right-of-way all the way to the river, UP is the property owner and owns all the way up to the building and the property owner lease UP Ground for the parking.

The second crossing discussed was Swingster Road, a public crossing with the required flashing light and gate signal system with Constant Warning Time (CWT) train detection circuitry. The safety concept for this crossing was minor pavement widening, milling, overlaying and 100' long 4' wide medians. The need for illumination of this crossing was mentioned, while not required for a QZ, it is a viable safety improvement, the need for it should be weighed against the amount of traffic using the crossing during night conditions.

The third crossing to be discussed was Holiday Sand Co. Crossing, used for their vehicle maintenance operation and a private farming operation. Coming off of K-32 it's platted as a public road, 111th St. Need to look property line data. Have agreement from Holiday Sand but not with the other users. Concept presented was locked gates on each approach with a notification light when gates are locked closed. QZ would be a night time only QZ. Liability questions over other users about access to the gate and opening and closing was discussed. Holiday Sand operations are generally from 7 am to 10 pm. Regardless of time duration there would be required horn signal if gate is open. A similar gate closing system is in place on Fort Leavenworth and the Fort's security staff control opening and closing of the crossing gate system. When the gate is locked then the notification light provides the locomotive engineer the knowledge that it is safe not to blow the horn. During the day when the security staff has opened the gates the notification light is off and the locomotive engineers activate the on-board locomotive horn. It was determined that we need to explore other options for this crossing, so the appropriate representatives can make the decision.

The fourth crossing reviewed was the 4th Street crossing. The concept presented was a four quadrant gate system. The use of medians was ruled out as there are public alley intersections and business access that would be within the first 60 feet of medians, which is not allowable under the Train Horn Rule.. Left turns are currently restricted going north on 4th Street. Alleys are on each side of the railroad. There is considerable pedestrian traffic crossing at 4th Street and also trespassing across the two main lines approximately 175 feet west of the crossing. Improvement concepts definitely need to address safe pedestrian crossing. There is a concern that the highway/highway traffic signal at K-32 should be interconnected with the highway/rail signal system to avoid vehicles being trapped on the crossing when trains are approaching.

The fifth crossing to be reviewed was the 9th Street crossing. The concept presented was a 60 foot median on the southbound approach to accommodate commercial drives. In addition to a 100' median on the northbound approach there was proposed minor pavement widening, milling and overlay. Any improvements to 9th Street will definitely need to address future pedestrian crossings, especially if K-32 has a trail and path.

This crossing has a large peak of car traffic during shift changes of businesses to the south of the crossing. Intersection at K-32 is presently not signalized. There have been two recent train/car crashes at this crossing occurring on the same night, both when drivers went around road closed sign.

The sixth crossing concept to be reviewed was the 98th Street crossing. The concept presented was 4 foot wide 110 foot long medians on each approach, along with minor pavement widening, milling and overlay. The K-32 intersection is not signalized and the results of a recent traffic study have shown the intersection is close to meeting the warrants for a traffic signal. There has been some accident experience at the intersection, generally involving a left turning movement. When the railroad signal gates down, traffic does back up onto K-32. There is a considerable amount of truck traffic on 98th. It was shared that the threshold for consideration of interconnecting signals is a distance of less than 200 feet.

The seventh crossing concept to be reviewed was the 88th Street crossing. The concept for this crossing was a 4 quadrant gate system, since required median lengths could not be attained at this crossing due to the limited space between the crossing and the K-32 intersection. This rail road signal is interconnected to the K-32 traffic signal. There is a study that addresses this interconnect and other interconnected signal systems between UP crossings and K-32 traffic signals. Results of this study will need to be addressed when designing the proposed 4 quadrant gate system.

Additional details and ideas shared that were generally independent of any one crossing are as follows:

- Howard Gillespie, FRA Crossing Safety Manager, shared information on FRA's Train Horn Rule. The impetus for the rule came about in Florida when the Florida East Coast Railroad silenced the locomotive horns system-wide and collisions went up. The locomotive horns were reintroduced and accidents were reduced. Howard also shared several components of the train horn rule. On-board locomotive horns are now required to be a minimum of 96 dba and a maximum of 110 dba at 100 feet forward of the locomotive in the direction it is travelling. Train horn is to provide a warning to motorists. Prior to the rule it was distance spacing. With slow moving train, when they past a quarter mile they would have to sound. Some are a 1/4 mile and some can be miles long. Basic number 1 premise it's about safety. Train and car collision is blunt force trauma. Each individual crossing has its own issues, trains per day, truck traffic, cars....etc. There is a risk calculator that compares each crossing's risk index against the National Significant Risk Threshold (NSRT). Each type of Supplemental Safety Measures (SSM's) have calculated risk reduction factors and the use of this risk reduction is what allows for the implementation of locomotive horn QZ's. The NSRT is reviewed and

recalculated on an annual basis. Howard shared that locomotive engineers will err on the side of safety and will blow the horns when they sense an emergency situation. Trespassing is a national problem and is one instance when a locomotive engineer can blow the horn to warn trespassers. Another instance of horn activation is for maintenance of way railroad worker protection, must sound horn to protect construction and/or maintenance staff within 25 feet of the centerline of the track.

- It was shared that for railroad crossings generally the desired lane widths are 12 feet, the desired median widths are 4 feet (but 2 foot wide medians are allowable), and the medians need to be considered non-traversable they must 6 to 9 inches in height. The highway/rail signals are required to be *' 3" off the edge of the shoulder or 4' 3" off the back of a curb in front of the signal. All dimension requirements will need to be in compliance with the standards required for each jurisdiction. The need for sidewalks and the sidewalk standard also must be evaluated as per each jurisdiction's standards.
- Four quadrant gates systems are most expensive safety measure and include the provision of the local jurisdiction being responsible for the maintenance of the two exit gates, estimated to be an annual expense of \$10,000 to \$15,000.
- Medians are generally the most economical safety measure.
- Could there be consideration of closure of crossings as there is access to I-435 that avoids at-grade crossings.
- UP through train traffic is currently 51 trains/day with no current projected increase.
- Wayside Horn Systems (WHS) are a traffic control device and are owned and maintained by the local jurisdiction. This jurisdiction in addition to owning and maintaining the WHS would be required to provide a \$10 million general liability insurance policy and be charged a fee for the interconnect with the railroad signal. The total cost of the maintenance, liability insurance and interconnect fee will be in the range of \$15,000. The installation cost for a WHS system on a two lane arterial will be in the range of \$120,000. UG Commissioners have discussed wayside horns, and they needs to be an option/concept that is considered for select crossings.
- The cost of maintaining flashing light and gate signal systems at private crossings will generally be the responsibility of the entity named on the private crossing agreement. Jurisdictions could in select instances agree to be responsible for this expense.
- What does it take to convert private crossing to a public crossing? The public entity would own and maintain the route on each approach to the crossing.
- Does Edwardsville need to do place all three public crossings within a QZ? The minimum length for a QZ is ½ mile. The 98th Street crossing is ½ mile from the 9th Street crossing, so it is possible, although not desirable to include just and 4th and 9th Streets in a QZ.

- UP's policy is to blow their on-board locomotive horn at private crossings that have regular traffic. Do not blow them at little used private agricultural/farm crossings.
- What areas will be the beneficiary of the proposed QZ? The feasibility study needs an exhibit detailing areas of impact and benefit.
- Add sidewalk, widen crossing, take sidewalk behind the gates is not a problem.
- UP has had trespass problems near Bonner Springs due to the crowded rail corridor with K-32 on one side and the Kansas River on the other. UP has a wide row and through the narrow sections of the corridor owns all the way to the Kansas River. In select areas UP has added fencing to deter trespassing.


Due to the direction that the Feasibility Study address multiple concepts for each crossing the decision was made that On-Site Diagnostic Reviews be made only at the 4th Street and Holliday Sand crossings. As these two crossings together are representative of the multiple concerns at the other five crossings.


The review at 4th Street emphasized the need for sidewalk crossings. The review defined the present need for a sidewalk on the west side of crossing. A sidewalk on the east side while not currently needed, it should be considered in light of possible future K-32 multi-modal improvements. Consideration should be given to fencing along the UP row in the crossing's southwest quadrant to deter trespassing across the two main lines via a visible path through the vegetation. The proposed four quadrant gate system is a viable safety option for this crossing. Need to address the possible railroad signal interconnection with the K-32 traffic signal and the interconnection's operation in conjunction with the 4 quadrant gate system. There is the possibility of a total rebuild of 4th Street and the modification of the public accesses that would be within the 60 foot median length, therefore allowing the less expensive median safety measure to be used on this crossing.

The review of the Holliday Sand (111th Street) private crossing provided a consensus that concepts in addition to the proposed night time gate closure be considered. The crossing currently has a lockable gate on the southbound approach to the crossing. Holliday Sand has a maintenance facility that addresses large truck and construction equipment and this crossing is currently their only access. There is also farming operations as there is a considerable distance and acreage between the Kansas River and the UP in this area.

This meeting provided excellent insight into the scope of safety improvement concepts that the three sponsoring jurisdictions would like considered in this QZ Feasibility Study.

APPENDIX B

		ENGINEER'S OPINION OF COST			
		Client: MARC			
		Project: Quiet Zone - Ad-Trend Option 1			
		OA Project Number: 015-2664			
		Date: 10/29/2015			
	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST \$	COST \$
1	Mobilization	1	Lump Sum	\$22,500.00	\$22,500.00
2	Clearing and Grubbing	1	Lump Sum	\$20,000.00	\$20,000.00
3	Flagging (12 hour days)	5	Days	\$1,400.00	\$7,000.00
4	General Removals	1	Lump Sum	\$3,500.00	\$3,500.00
5	Removal of Crossing Panels	50	Lin. Ft.	\$40.00	\$2,000.00
6	Embankment	15000	Cu. Yd.	\$24.00	\$360,000.00
7	Excavation (Unclassified)	78	Cu. Yd.	\$22.00	\$1,716.00
8	Aggregate Base (4")	1688	Sq. Yd.	\$6.00	\$10,128.00
9	Signing and Striping	1	Lump Sum	\$5,000.00	\$5,000.00
10	Fence (Chainlink) (72")	450	Lin. Ft.	\$28.00	\$12,600.00
11	Guardrail, Steel Plate (MGS)	65	Lin. Ft.	\$46.00	\$2,990.00
12	10' X 7' RCB (including headwall, wingwalls, aprons, toewall, etc.)	230	Lin. Ft.	\$950.00	\$218,500.00
13	Traffic Control	1	Lump Sum	\$3,500.00	\$3,501.00
Sub-Total					\$669,435.00
Contingency				20%	\$133,887.00
Survey, Engineering, Testing, and Inspection				15%	\$100,415.25
OPINION OF PROBABLE COST					\$903,737.25

		ENGINEER'S OPINION OF COST			
		Client: MARC			
		Project: Quiet Zone - Ad-Trend Option 2			
		OA Project Number: 015-2664			
		Date: 12/1/2015			
	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST \$	COST \$
1	Entrance Gates (Paired)	1	Lump Sum	\$290,000.00	\$290,000.00
2	Wayside Horn System	1	Each	\$120,000.00	\$120,000.00
Sub-Total					\$410,000.00
Contingency				20%	\$82,000.00
Survey, Engineering, Testing, and Inspection				10%	\$41,000.00
OPINION OF PROBABLE COST					\$533,000.00



ENGINEER'S OPINION OF COST

Client: MARC

Project: Quiet Zone - Swingster Opt. 1

OA Project Number: 015-2664

Date: 10/29/2015

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST \$	COST \$
1	Wayside Horn System	1	Each	\$120,000.00	\$120,000.00

Sub-Total		\$120,000.00
Contingency	20%	\$24,000.00
Survey, Engineering, Testing, and Inspection	15%	\$18,000.00
OPINION OF PROBABLE COST		\$162,000.00



ENGINEER'S OPINION OF COST

Client: MARC

Project: Quiet Zone - Swingster Opt. 2

OA Project Number: 015-2664

Date: 10/29/2015

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST \$	COST \$
1	Mobilization	1	Lump Sum	\$22,500.00	\$22,500.00
2	Clearing and Grubbing	1	Lump Sum	\$5,000.00	\$5,000.00
3	Flagging (12 hour days)	10	Days	\$1,400.00	\$14,000.00
4	Entrance Gates (Paired)	1	Lump Sum	\$290,000.00	\$290,000.00
5	Mill and Overlay (2")	796	Sq. Yd.	\$25.00	\$19,900.00
6	Aggregate Base (4")	116	Sq. Yd.	\$6.00	\$696.00
7	Concrete Pavement (9")	116	Sq. Yd.	\$55.00	\$6,380.00
8	Raised Median (6")	90	Sq. Yd.	\$40.00	\$3,596.00
9	Signing and Striping	1	Lump Sum	\$5,000.00	\$5,000.00
10	Concrete Curb & Gutter	534	Lin. Ft.	\$22.00	\$11,748.00
11	Traffic Control	1	Lump Sum	\$15,000.00	\$15,000.00

Sub-Total		\$393,820.00
Contingency	20%	\$78,764.00
Survey, Engineering, Testing, and Inspection	15%	\$59,073.00
OPINION OF PROBABLE COST		\$531,657.00





ENGINEER'S OPINION OF COST

Client: MARC

Project: Quiet Zone - Holliday Sand Option #1

OA Project Number: 015-2664

Date: 10/29/2015

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST \$	COST \$
1	Lockable Gate System	1	Lump Sum	\$70,000.00	\$70,000.00

Sub-Total		\$70,000.00
Contingency	20%	\$14,000.00
Survey, Engineering, Testing, and Inspection	15%	\$10,500.00
OPINION OF PROBABLE COST		\$94,500.00



ENGINEER'S OPINION OF COST

Client: MARC

Project: Quiet Zone - Holliday Sand Option #2

OA Project Number: 015-2664

Date: 10/29/2015

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST \$	COST \$
1	Mobilization	1	Lump Sum	\$10,000.00	\$10,000.00
2	Clearing and Grubbing	1	Lump Sum	\$3,500.00	\$3,500.00
3	Flagging (12 hour days)	10	Days	\$1,400.00	\$14,000.00
4	Entrance Gates (Paired)	1	Lump Sum	\$290,000.00	\$290,000.00
5	Asphalt Surface (2")	1022	Sq. Yd.	\$10.00	\$10,224.00
6	Asphalt Base (8")	1022	Sq. Yd.	\$32.00	\$32,716.80
7	Aggregate Base (4")	1022	Sq. Yd.	\$6.00	\$6,134.40
8	Signing and Striping	1	Lump Sum	\$10,000.00	\$10,000.00
9	Raised Median (6")	89	Sq. Yd.	\$40.00	\$3,560.00

Sub-Total		\$380,135.20
Contingency	20%	\$76,027.04
Survey, Engineering, Testing, and Inspection	15%	\$57,020.28
OPINION OF PROBABLE COST		\$513,182.52





ENGINEER'S OPINION OF COST

Client: MARC
 Project: Quiet Zone - Holliday Sand Option #3
 OA Project Number: 015-2664
 Date: 10/29/2015

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST \$	COST \$
1	Entrance Gates (Paired)	1	Lump Sum	\$290,000.00	\$290,000.00
2	Wayside Horn System	1	Each	\$120,000.00	\$120,000.00

Sub-Total \$410,000.00
 Contingency 20% \$82,000.00
 Survey, Engineering, Testing, and Inspection 10% \$41,000.00
OPINION OF PROBABLE COST \$533,000.00



ENGINEER'S OPINION OF COST

Client: MARC
 Project: Quiet Zone - Holliday Sand Option #4
 OA Project Number: 015-2664
 Date: 10/29/2015

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST \$	COST \$
1	Mobilization	1	Lump Sum	\$10,000.00	\$10,000.00
2	Clearing and Grubbing	1	Lump Sum	\$30,000.00	\$30,000.00
3	Flagging (12 hour days)	5	Days	\$1,400.00	\$7,000.00
4	Removal of Crossing Panels	64	Lin. Ft.	\$40.00	\$2,560.00
5	Linear Grading	67	Sta	\$2,000.00	\$134,000.00
6	Roadway Barricades	2	Each	\$2,500.00	\$5,000.00
7	Signing and Striping	1	Lump Sum	\$2,500.00	\$2,500.00
8	Fence (Chainlink) (72")	3435	Lin. Ft.	\$28.00	\$96,180.00
9	Aggregate Base (4")	17502	Sq. Yd.	\$6.00	\$105,014.40

Sub-Total \$392,254.40
 Contingency 20% \$78,450.88
 Survey, Engineering, Testing, and Inspection 18% \$70,605.79
OPINION OF PROBABLE COST \$541,311.07





ENGINEER'S OPINION OF COST

Client: MARC
 Project: Quiet Zone - 4th St Opt. 1
 OA Project Number: 015-2664
 Date: 10/29/2015

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST \$	COST \$
1	Mobilization	1	Lump Sum	\$25,000.00	\$25,000.00
2	Clearing and Grubbing	1	Lump Sum	\$1,500.00	\$1,500.00
3	Flagging (12 hour days)	5	Days	\$1,400.00	\$7,000.00
4	Crossing Panel Extension	56	Lin. Ft.	\$600.00	\$33,600.00
5	Concrete Sidewalk (4")	788	Sq. Ft.	\$5.00	\$3,939.00
6	Four-Quadrant Gate System	1	Lump Sum	\$400,000.00	\$400,000.00
7	Fence (Chainlink) (72")	895	Lin. Ft.	\$28.00	\$25,060.00
8	Signing and Striping	1	Lump Sum	\$2,500.00	\$2,500.00
9	Concrete Curb & Gutter	44	Lin. Ft.	\$22.00	\$968.00
10	Traffic Control	1	Lump Sum	\$15,000.00	\$15,000.00
11	K-32 Traffic Upgrades	1	Lump Sum	\$20,000.00	\$20,000.00

Sub-Total \$534,567.00
 Contingency 20% \$106,913.40
 Survey, Engineering, Testing, and Inspection 15% \$80,185.05
OPINION OF PROBABLE COST \$721,665.45



ENGINEER'S OPINION OF COST

Client: MARC
 Project: Quiet Zone - 4th St Opt. 2
 OA Project Number: 015-2664
 Date: 10/29/2015

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST \$	COST \$
1	Mobilization	1	Lump Sum	\$10,000.00	\$10,000.00
2	Clearing and Grubbing	1	Lump Sum	\$1,500.00	\$1,500.00
3	Flagging (12 hour days)	5	Days	\$1,400.00	\$7,000.00
4	Crossing Panel Extension	56	Lin. Ft.	\$600.00	\$33,600.00
5	Concrete Sidewalk (4")	788	Sq. Ft.	\$5.00	\$3,940.00
6	Wayside Horn System	1	Lump Sum	\$120,000.00	\$120,000.00
7	Fence (Chainlink) (72")	895	Lin. Ft.	\$28.00	\$25,060.00
8	Signing and Striping	1	Lump Sum	\$2,500.00	\$2,500.00
9	Concrete Curb & Gutter	44	Lin. Ft.	\$22.00	\$968.00
10	Traffic Control	1	Lump Sum	\$15,000.00	\$15,000.00
11	K-32 Traffic Upgrades	1	Lump Sum	\$20,000.00	\$20,000.00

Sub-Total \$239,568.00
 Contingency 20% \$47,913.60
 Survey, Engineering, Testing, and Inspection 15% \$35,935.20
OPINION OF PROBABLE COST \$323,416.80





ENGINEER'S OPINION OF COST

Client: MARC

Project: Quiet Zone - 4th St Opt. 3

OA Project Number: 015-2664

Date: 10/29/2015

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST \$	COST \$
1	Mobilization	1	Lump Sum	\$25,000.00	\$25,000.00
2	Clearing and Grubbing	1	Lump Sum	\$1,500.00	\$1,500.00
3	Flagging (12 hour days)	10	Days	\$1,400.00	\$14,000.00
4	Crossing Panel Extension	56	Lin. Ft.	\$600.00	\$33,600.00
5	Concrete Sidewalk (4")	1035	Sq. Ft.	\$5.00	\$5,173.00
6	Entrance Gates (Paired)	1	Lump Sum	\$290,000.00	\$290,000.00
7	Property in NE Quadrant	1	Each	\$120,000.00	\$120,000.00
8	Fence (Chainlink) (72")	895	Lin. Ft.	\$28.00	\$25,060.00
9	Signing and Striping	1	Lump Sum	\$5,000.00	\$5,000.00
10	Mill and Overlay (2")	1202	Sq. Yd.	\$25.00	\$30,042.50
11	6" Raised Median	88	Sq. Yd.	\$40.00	\$3,520.00
12	Asphalt Surface (2")	549	Sq. Yd.	\$10.00	\$5,490.00
13	Asphalt Base (8")	549	Sq. Yd.	\$32.00	\$17,568.00
14	Traffic Control	1	Lump Sum	\$15,000.00	\$15,000.00
15	K-32 Traffic Upgrades	1	Lump Sum	\$20,000.00	\$20,000.00

Sub-Total

\$610,953.50

Contingency

20%

\$122,190.70

Survey, Engineering, Testing, and Inspection

15%

\$91,643.03

OPINION OF PROBABLE COST

\$824,787.23



ENGINEER'S OPINION OF COST

Client: MARC
 Project: Quiet Zone - 9th St
 OA Project Number: 015-2664
 Date: 10/29/2015

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST \$	COST \$
1	Mobilization	1	Lump Sum	\$25,000.00	\$25,000.00
2	Clearing and Grubbing	1	Lump Sum	\$2,500.00	\$2,500.00
3	Flagging (12 hour days)	10	Days	\$1,400.00	\$14,000.00
4	Crossing Panel Extension	40	Lin. Ft.	\$600.00	\$24,000.00
5	Concrete Sidewalk (4")	2913	Sq. Ft.	\$24.00	\$69,912.00
6	Entrance Gates (Paired)	1	Lump Sum	\$290,000.00	\$290,000.00
7	Raised Median (6")	72	Sq. Yd.	\$40.00	\$2,872.00
8	Mill and Overlay (2")	857	Sq. Yd.	\$25.00	\$21,422.50
9	Asphalt Surface (2")	109	Sq. Yd.	\$10.00	\$1,091.00
10	Asphalt Base (8")	109	Sq. Yd.	\$32.00	\$3,491.20
11	Concrete Curb & Gutter	430	Lin. Ft.	\$22.00	\$9,460.00
12	Inlet (Area) (4'x6')	2	Each	\$5,000.00	\$10,000.00
13	Traffic Control	1	Lump Sum	\$10,000.00	\$10,000.00
14	K-32 Traffic Upgrades	1	Lump Sum	\$20,000.00	\$20,000.00

Sub-Total **\$503,748.70**
 Contingency 20% **\$100,749.74**
 Survey, Engineering, Testing, and Inspection 15% **\$75,562.31**
OPINION OF PROBABLE COST \$680,060.75



ENGINEER'S OPINION OF COST

Client: MARC
 Project: Quiet Zone - 98th St
 OA Project Number: 015-2664
 Date: 10/29/2015

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST \$	COST \$
1	Mobilization	1	Lump Sum	\$25,000.00	\$25,000.00
2	Clearing and Grubbing	1	Lump Sum	\$2,500.00	\$2,500.00
3	Flagging (12 hour days)	5	Days	\$1,400.00	\$7,000.00
4	Crossing Panel Extension	40	Lin. Ft.	\$600.00	\$24,000.00
5	Concrete Sidewalk (4")	3844	Sq. Ft.	\$5.00	\$19,220.00
6	Raised Median (6")	90	Sq. Yd.	\$40.00	\$3,600.00
7	Mill and Overlay (2")	975	Sq. Yd.	\$25.00	\$24,367.50
8	Asphalt Surface (2")	153	Sq. Yd.	\$10.00	\$1,526.00
9	Asphalt Base (8")	153	Sq. Yd.	\$32.00	\$4,883.20
10	Concrete Curb & Gutter	717	Lin. Ft.	\$22.00	\$15,774.00
11	Traffic Control	1	Lump Sum	\$10,000.00	\$10,000.00
12	K-32 Traffic Upgrades	1	Lump Sum	\$20,000.00	\$20,000.00

Sub-Total **\$157,870.70**
 Contingency 20% **\$31,574.14**
 Survey, Engineering, Testing, and Inspection 15% **\$23,680.61**
OPINION OF PROBABLE COST \$213,125.45





ENGINEER'S OPINION OF COST

Client: MARC
 Project: Quiet Zone - 88th St
 OA Project Number: 015-2664
 Date: 10/29/2015

	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST \$	COST \$
1	Mobilization	1	Lump Sum	\$25,000.00	\$25,000.00
2	Clearing and Grubbing	1	Lump Sum	\$1,000.00	\$1,000.00
3	Crossing Panel Extension	60	Lin. Ft.	\$600.00	\$36,000.00
4	Concrete Sidewalk (4")	1072	Sq. Ft.	\$5.00	\$5,357.65
5	Traffic Control	1	Lump Sum	\$10,000.00	\$10,000.00
6	Four-Quadrant Gate System	1	Lump Sum	\$400,000.00	\$400,000.00

Sub-Total		\$477,357.65
Contingency	20%	\$95,471.53
Survey, Engineering, Testing, and Inspection	7%	\$33,415.04
OPINION OF PROBABLE COST		\$606,244.22

PRELIMINARY PLANS
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This aerial map shows the Kalamazoo River flowing through a landscape of fields, forests, and some developed areas. Three labels are present: 'HIGHWAY K-32' in the upper center, 'HIGHWAY K-7' on the left side near a bend in the river, and 'INTERSTATE 435' on the right side. Seven black arrows originate from the top edge of the page and point to various locations along the river, including the area near Highway K-32, the bend near Highway K-7, and the area near Interstate 435.

<u>SHEET NO.</u>	<u>TITLE</u>
1	TITLE SHEET
2-3	AD-TREND PRIVATE CROSSING
4-5	SWINGSTER ROAD CROSSING
6-11	HOLLIDAY SAND PRIVATE CROSSING
12-14	4TH STREET CROSSING
15	9TH STREET CROSSING
16	98TH STREET CROSSING
17	88TH STREET CROSSING

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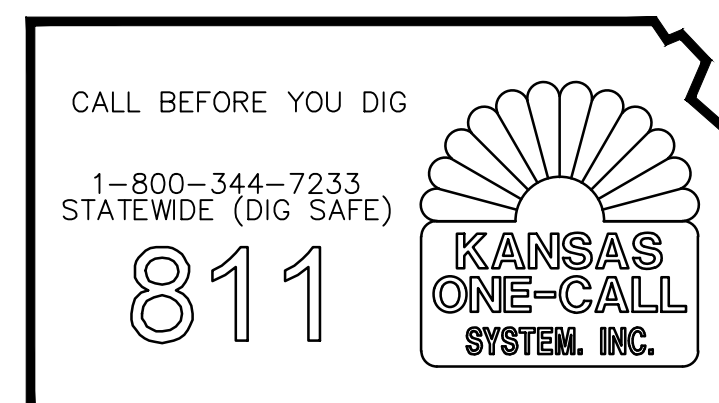
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TITLE SHEET	
MARC K-32 QUIET ZONE FEASIBILITY ANALYSIS AND REPORT	
WYANDOTTE COUNTY, KANSAS	2015

drawn by: _____ RTK
checked by: _____ TMC
approved by: _____ TMC
QA/QC by: _____ RBC
project no.: _____ 015-2664
drawing no.: T_TTL_52664.dwg
date: _____ 12/3/2015

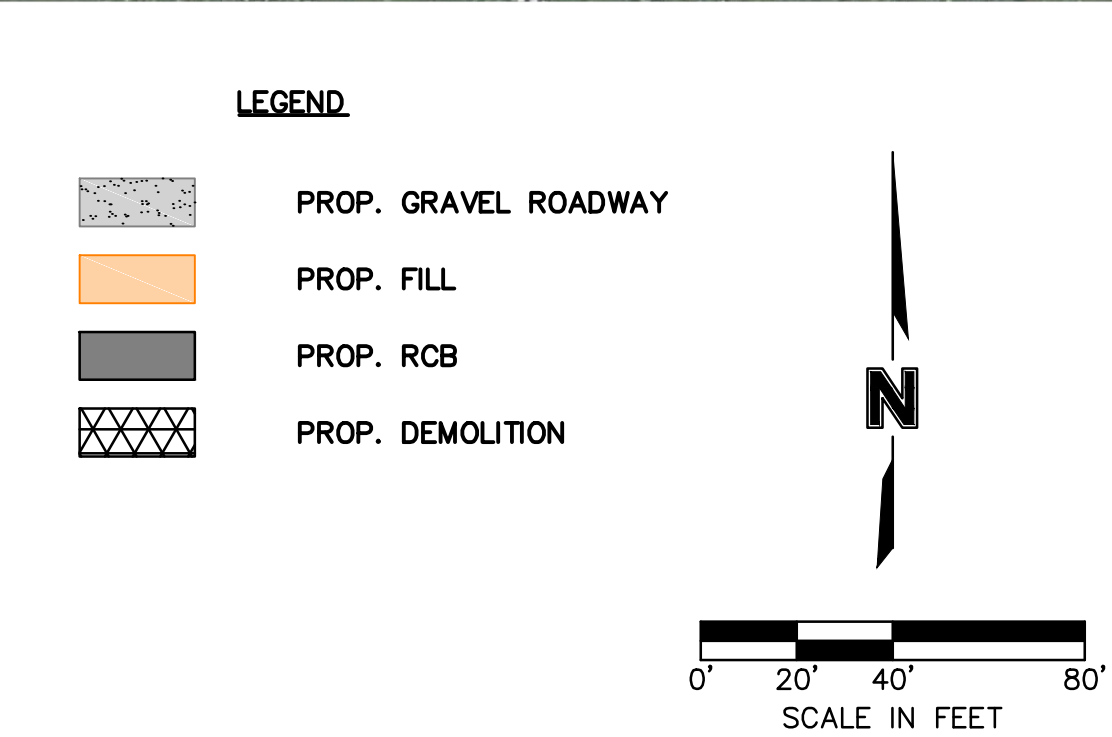
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1 OF 17

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AD-TREND PRIVATE CROSSING OPTION 1: CROSSING CLOSURE	MARC K-32 QUIET ZONE FEASIBILITY ANALYSIS AND REPORT	
	WYANDOTTE COUNTY, KANSAS	
drawn by: _____ checked by: _____ approved by: _____ QA/QC by: _____ project no.: _____ drawing: K2PRIVATE_52664.dwg date: _____	RTK TMC TMC RBC 015-2664 12/3/2015	2015
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2	OF	17


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DATE: Dec 03, 2015 9:33am XREFS: T_TBLK_52664 USER: rkubert




LEGEND




EXIST. GATE (TO REMAIN)




PROP. GATE




PROP. MEDIAN




PROP. NEW PAVEMENT



PROP. MILL & OVERLAY





SCALE IN FEET

SWINGSTER ROAD CROSSING
OPTION 1: WAYSIDE HORNS

MARC K-32 QUIET ZONE FEASIBILITY ANALYSIS AND REPORT

WYANDOTTE COUNTY, KANSAS

2015

drawn by: RTK

checked by: TMC

approved by: TMC

QA/QC by: RBC

project no.: 015-2664

drawn by: TBLK_52664.dwg

date: 12/3/2015

SHEET

5 OF 17

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DATE

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BY

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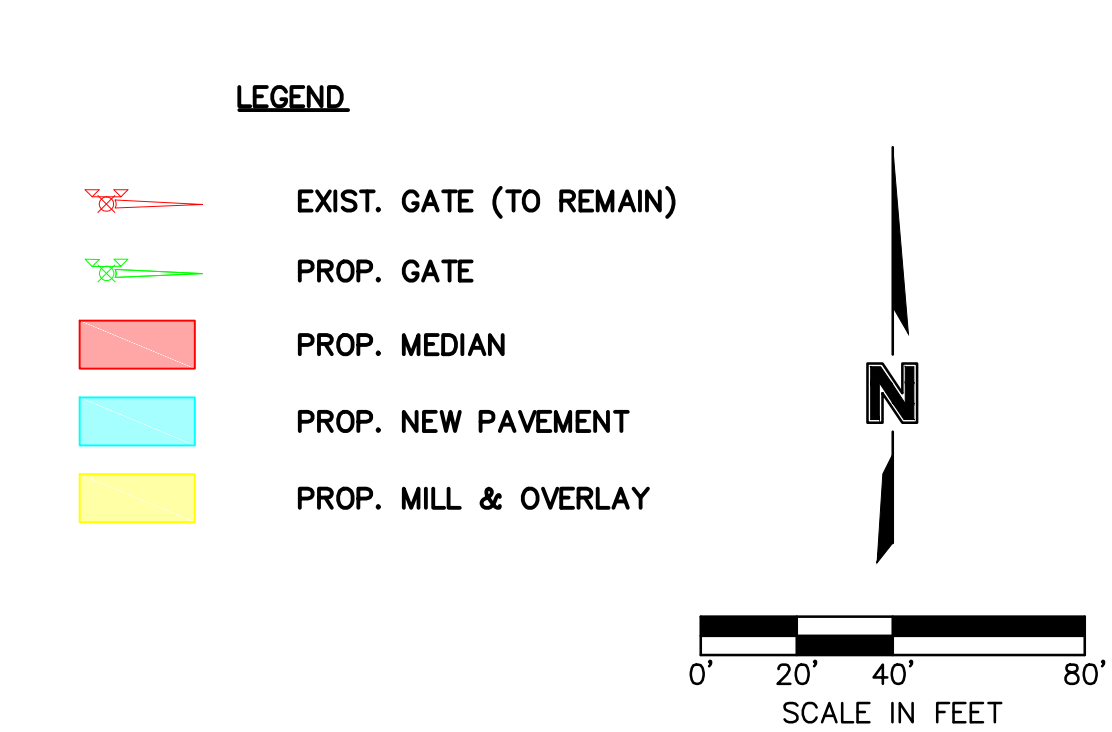
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SWINGSTER ROAD CROSSING OPTION 2: PAVEMENT WIDENING

MARC K-32 QUIET ZONE FEASIBILITY ANALYSIS AND REPORT

WYANDOTTE COUNTY, KANSAS

2015

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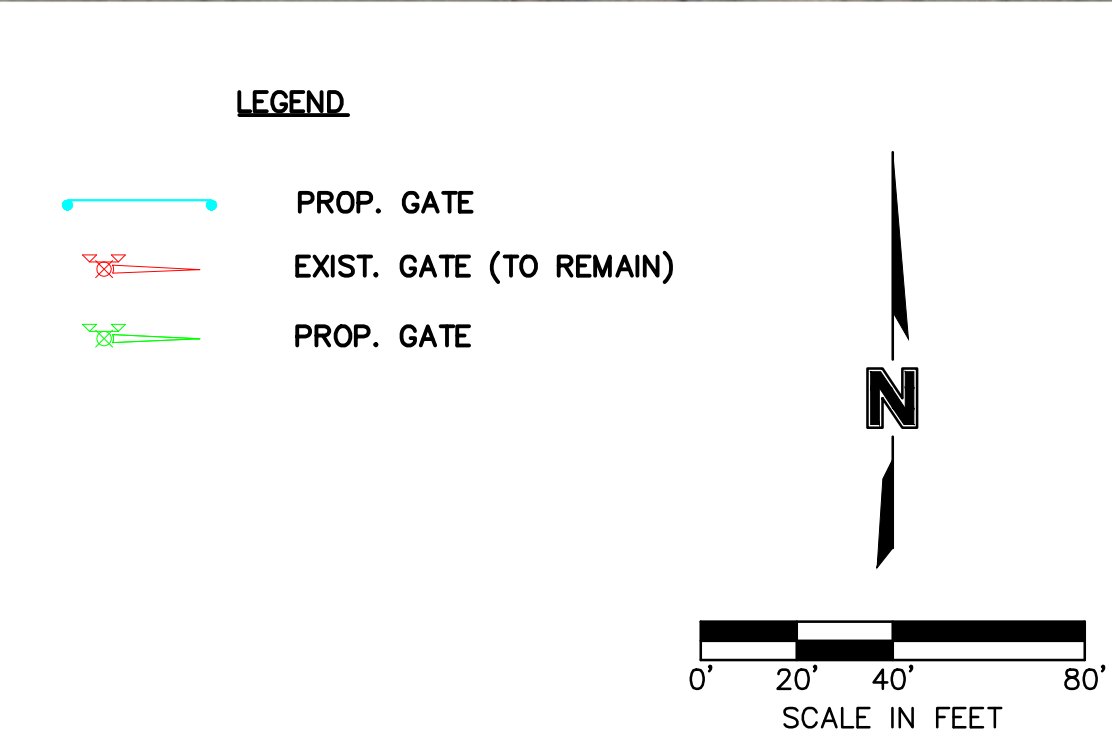
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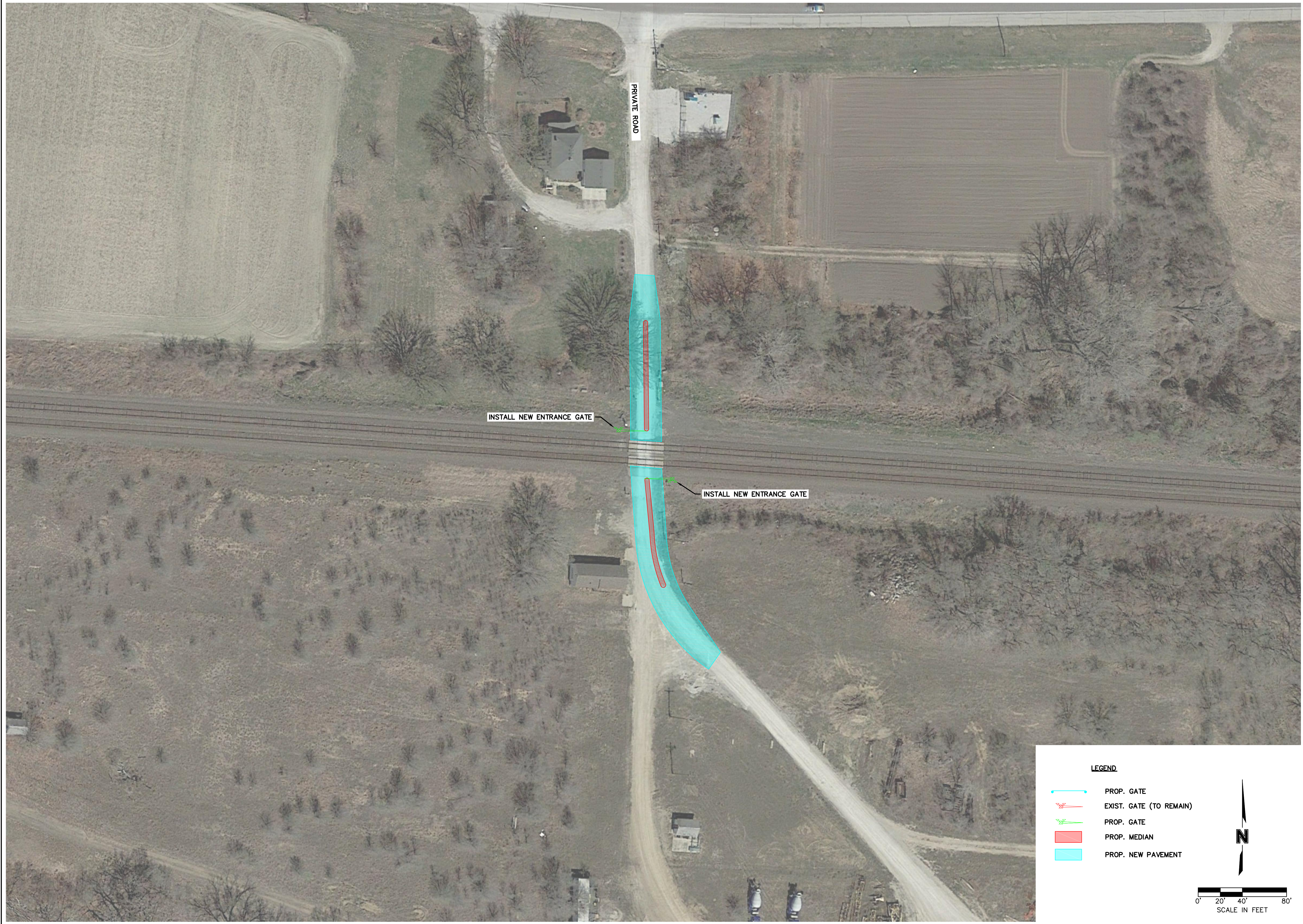
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HOLLIDAY SAND PRIVATE CROSSING OPTION 1: LOCKABLE GATES	
MARC K-32 QUIET ZONE FEASIBILITY ANALYSIS AND REPORT	
WYANDOTTE COUNTY, KANSAS	2015

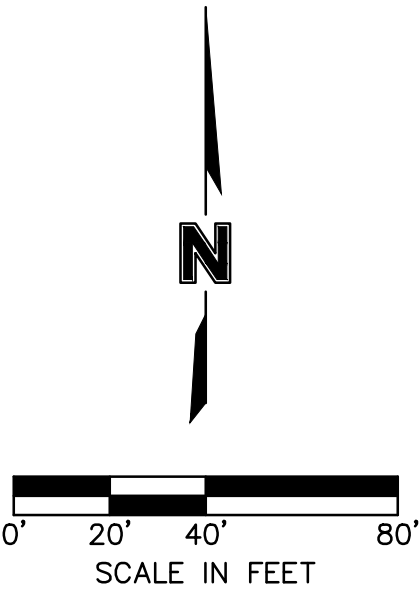
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approved by: _____ TMC
QA/QC by: _____ RBC
project no.: 015-2664
drawing title: SAND 52664.dwg
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LEGEND

- | | |
|---|-------------------------|
|  | PROP. GATE |
|  | EXIST. GATE (TO REMAIN) |
|  | PROP. GATE |
|  | PROP. MEDIAN |
|  | PROP. NEW PAVEMENT |



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drawing title: _____
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SHEET
7 OF 17

HOLLIDAY SAND PRIVATE CROSSING OPTION 2: NEW PAVEMENT & GATES

MARC K-32 QUIET ZONE FEASIBILITY ANALYSIS AND REPORT

2015

WYANDOTTE COUNTY, KANSAS

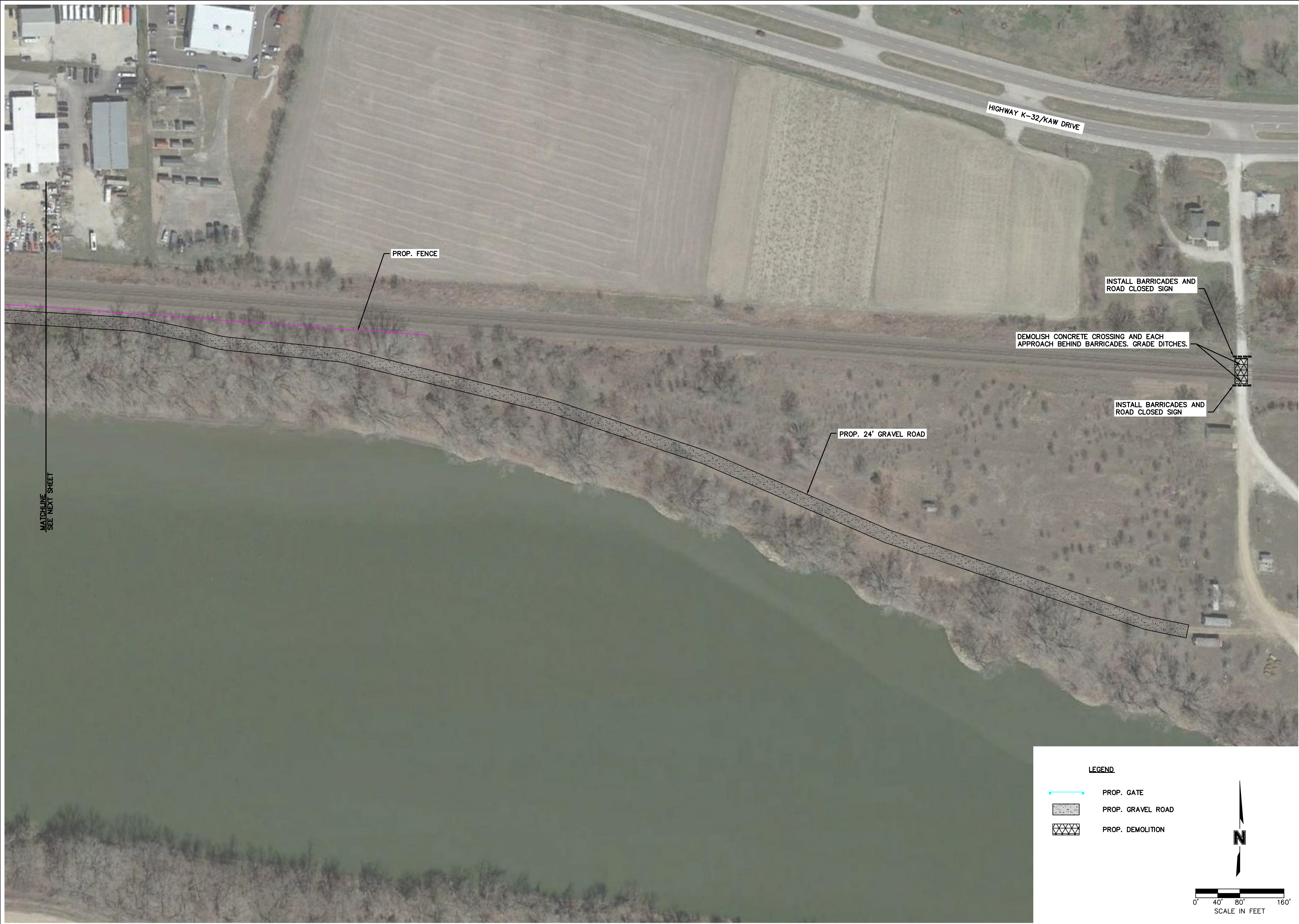
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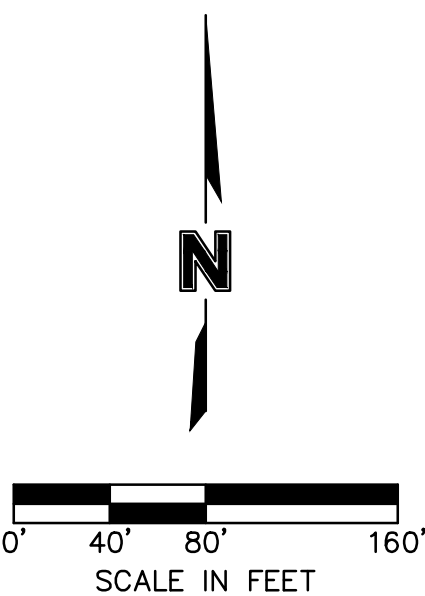


LEGEND

PROP. GATE

PROP. GRAVEL ROAD

PROP. DEMOLITION



HOLLIDAY SAND PRIVATE CROSSING
OPTION 4: CLOSE CROSSING & NEW ACCESS ROAD

MARC K-32 QUIET ZONE FEASIBILITY ANALYSIS AND REPORT

WYANDOTTE COUNTY, KANSAS

2015

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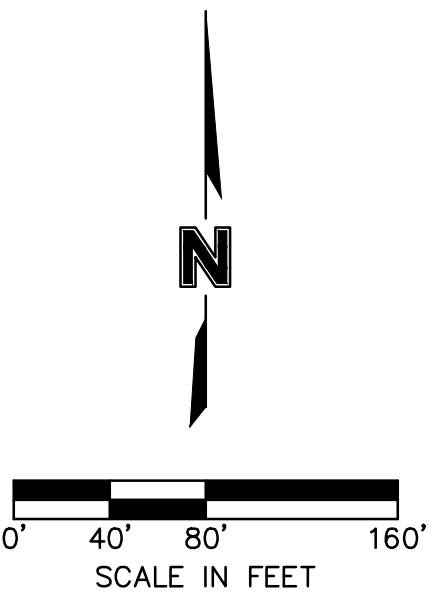


LEGEND

PROP. GATE

PROP. GRAVEL ROAD

PROP. DEMOLITION



HOLLIDAY SAND PRIVATE CROSSING
LOCKED GATES & SWINGER ROAD ACCESS OPTION
MARC K-32 QUIET ZONE FEASIBILITY ANALYSIS AND REPORT

WYANDOTTE COUNTY, KANSAS

drawn by: _____ RTK
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QA/QC by: _____ RBC
project no.: _____ 015-2664
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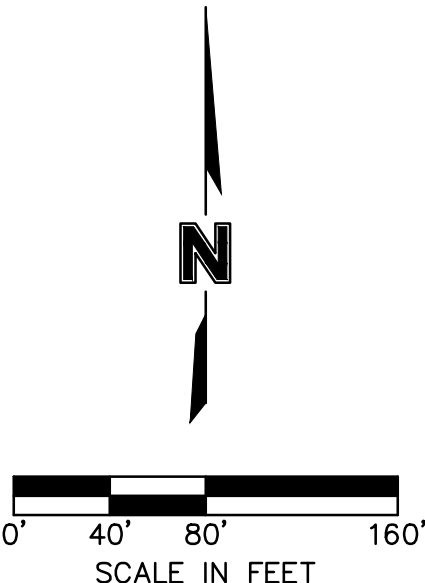


LEGEND

PROP. GATE

PROP. GRAVEL ROAD

PROP. DEMOLITION



HOLLIDAY SAND PRIVATE CROSSING
LOCKED GATES & SWINGER ROAD ACCESS OPTION
MARC K-32 QUIET ZONE FEASIBILITY ANALYSIS AND REPORT

WYANDOTTE COUNTY, KANSAS

2015

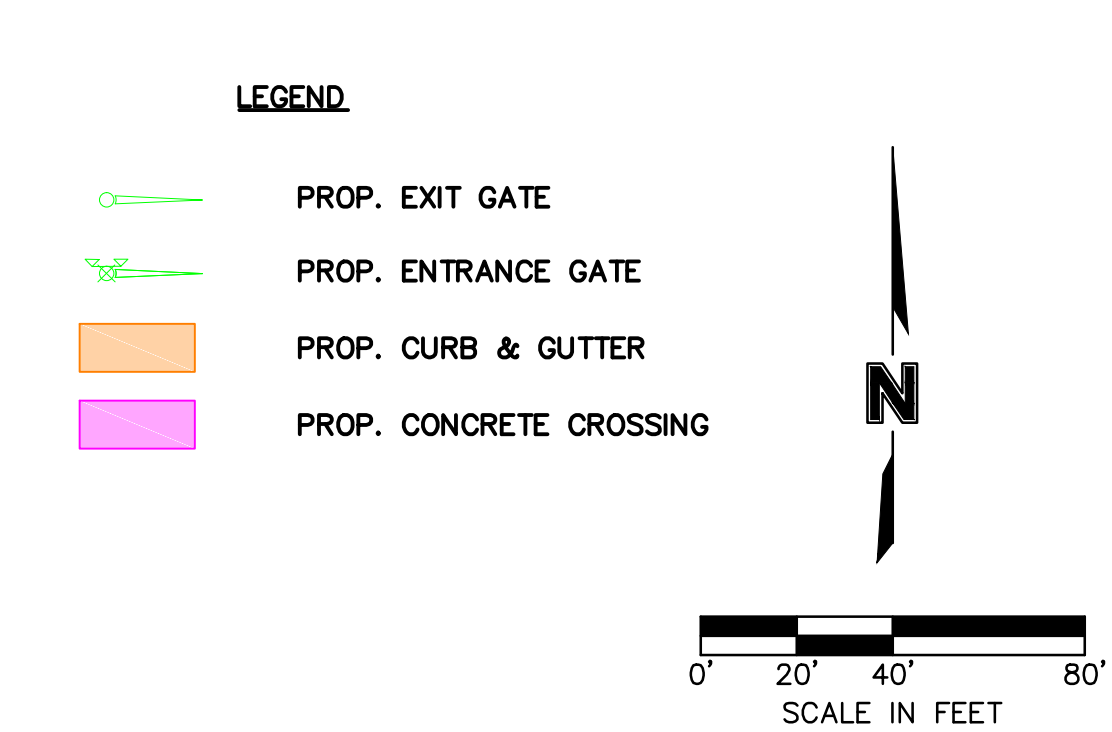
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drawing no.: _____ 52664.dwg
date: _____ 12/3/2015

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OF 17

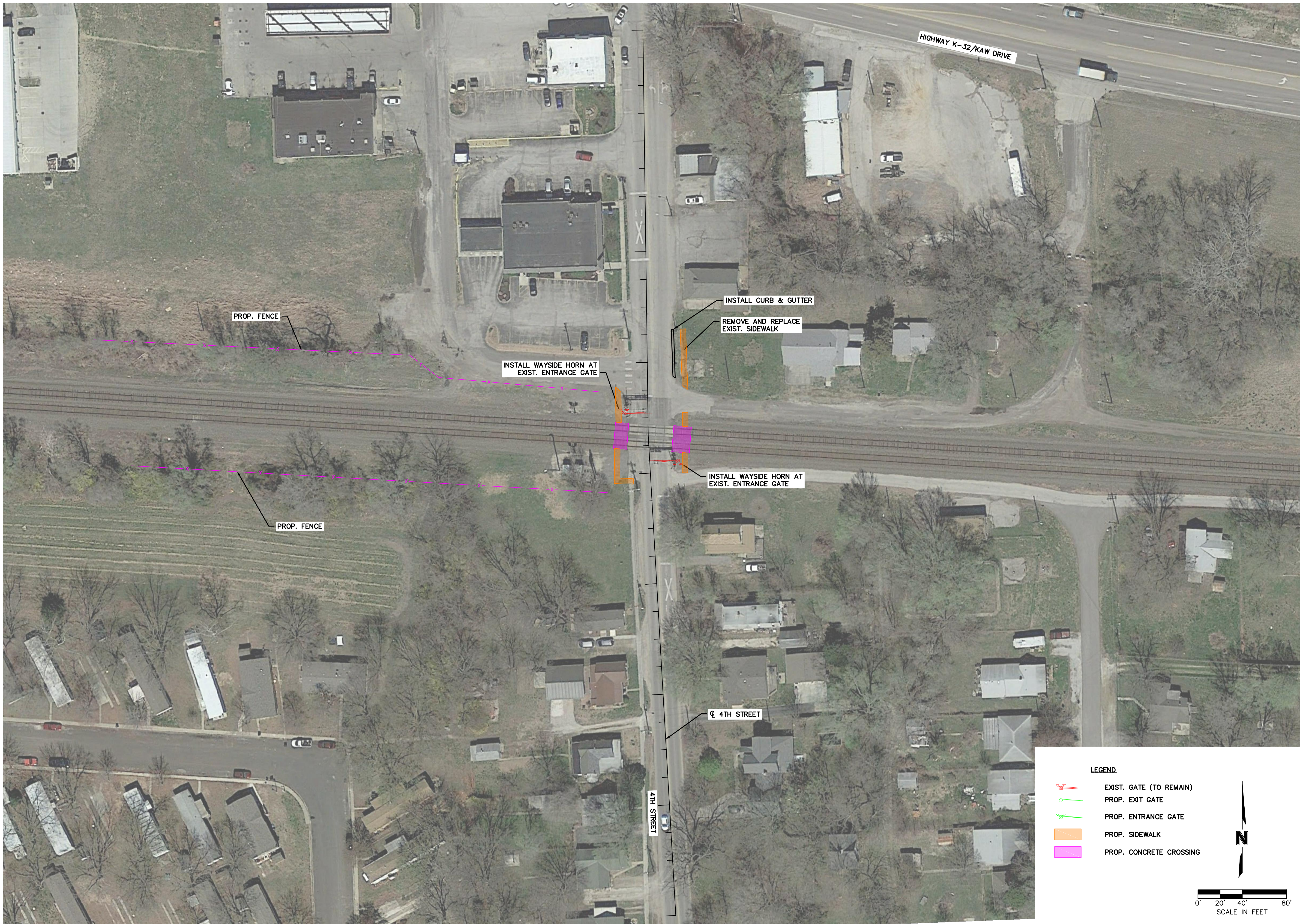
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4TH STREET CROSSING OPTION 1: FOUR QUADRANT GATES	MARC K-32 QUIET ZONE FEASIBILITY ANALYSIS AND REPORT	
	WYANDOTTE COUNTY, KANSAS	2015
drawn by: _____ checked by: _____ approved by: _____ QA/QC by: _____ project no.: _____ drawing no.: _____ date: _____	RTK TMC TMC RBC 015-2664 52664.dwg 12/3/2015	SHEET 12 OF 17



EXIST. GATE (TO REMAIN)

PROP. EXIT GATE

PROP. ENTRANCE GATE

PROP. SIDEWALK

PROP. CONCRETE CROSSING

SCALE IN FEET

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4TH STREET CROSSING
OPTION 2: WAYSIDE HORNS

MARC K-32 QUIET ZONE FEASIBILITY ANALYSIS AND REPORT

WYANDOTTE COUNTY, KANSAS

2015

drawn by: _____ RTK

checked by: _____ TMC

approved by: _____ TMC

QA/QC by: _____ RBC

project no.: 015-2664

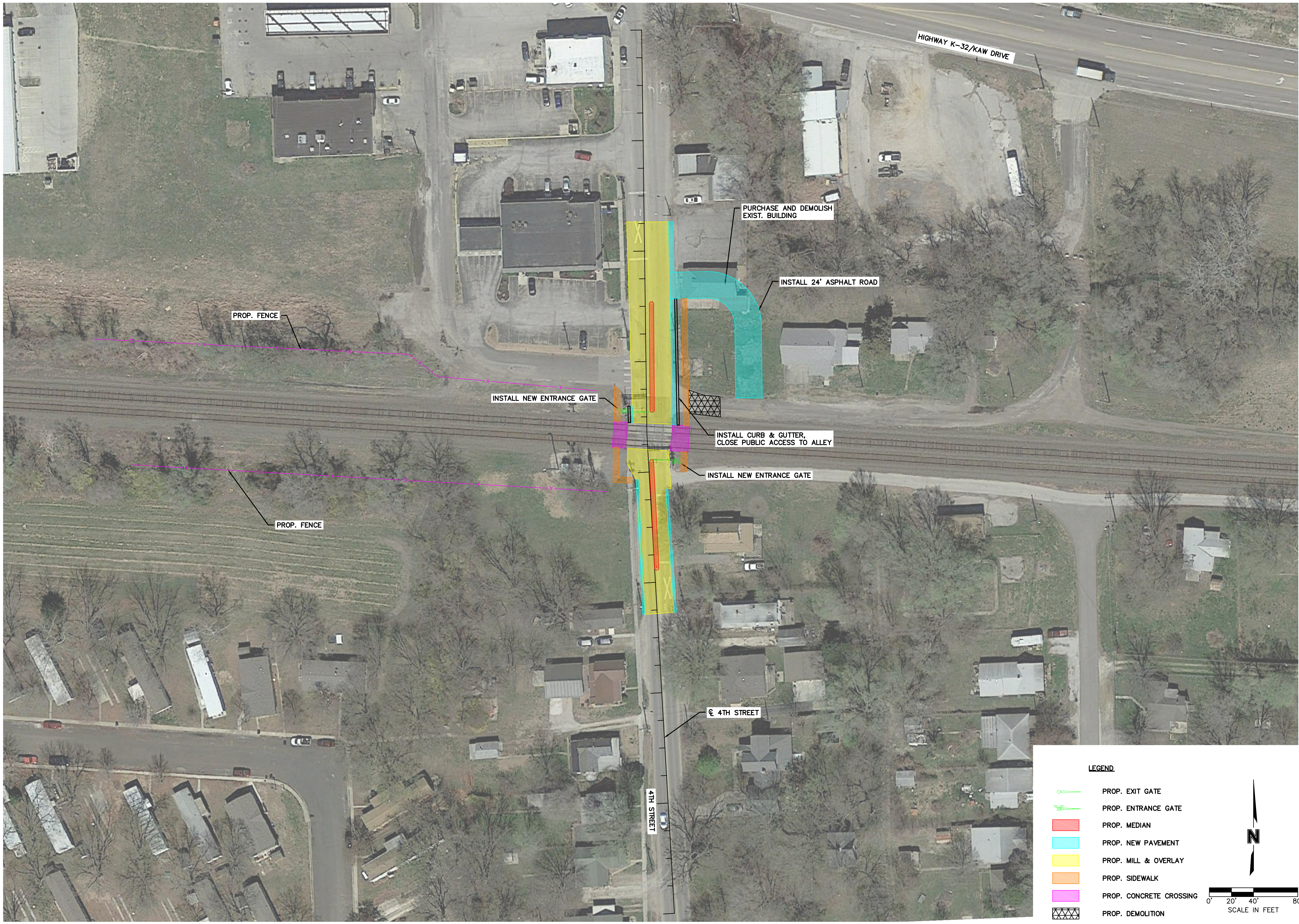
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date: 12/3/2015

SHEET

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4TH STREET CROSSING
OPTION 3: PAVEMENT WIDENING

MARC K-32 QUIET ZONE FEASIBILITY ANALYSIS AND REPORT

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checked by: _____ TMC
approved by: _____ TMC
QA/QC by: _____ RBC
project no.: 015-2664
drawing: TBLK_52664.dwg
date: 12/3/2015

BY

REVISIONS DESCRIPTION

DATE

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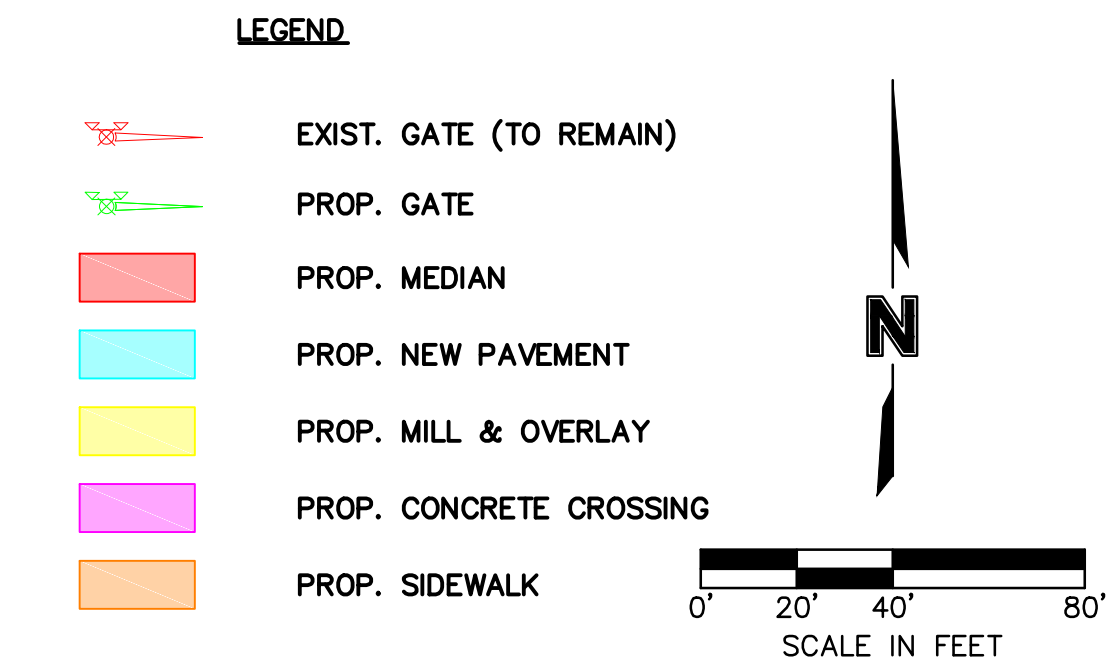
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2015

WYANDOTTE COUNTY, KANSAS

SHEET
14 OF 17

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9TH STREET CROSSING

MARC K-32 QUIET ZONE FEASIBILITY ANALYSIS AND REPORT

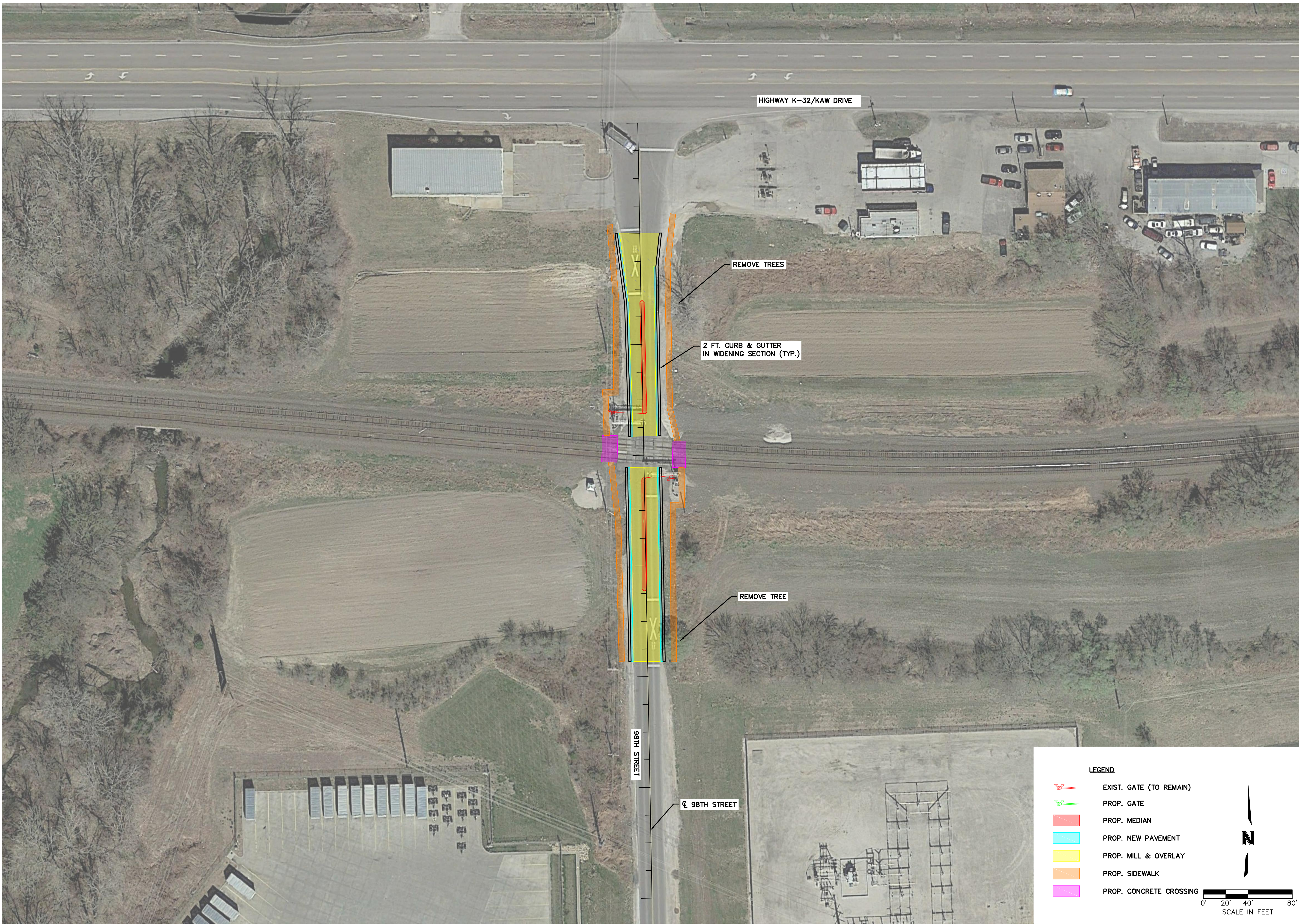
WYANDOTTE COUNTY, KANSAS

2015

REVISIONS

7301 West 133rd Street, Suite 200
Overland Park, KS 66213-4750
TEL 913.381.1170
FAX 913.381.1174
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DWG: F:\PROJECTS\015-2664\40-Design\AutoCAD\Final Plans\Sheets\TRNS\T_98THSTREET_52664.dwg
DATE: Dec 03, 2015 9:35am XREFS: T_TBLK_52664 USER: rkubert



EXIST. GATE (TO REMAIN)

PROP. GATE

PROP. MEDIAN

PROP. NEW PAVEMENT

PROP. MILL & OVERLAY

PROP. SIDEWALK

PROP. CONCRETE CROSSING

LEGEND

drawn by: RTK
checked by: TMC
approved by: TMC
QA/QC by: RBC
project no.: 015-2664
drawing: 98THSTREET_52664.dwg
date: 12/3/2015

0' 20' 40' 80'

SCALE IN FEET

N

98TH STREET CROSSING

MARC K-32 QUIET ZONE FEASIBILITY ANALYSIS AND REPORT

98TH STREET CROSSING

2015

WYANDOTTE COUNTY, KANSAS

drawn by: RTK
checked by: TMC
approved by: TMC
QA/QC by: RBC
project no.: 015-2664
drawing: 98THSTREET_52664.dwg
date: 12/3/2015

SHEET

16 OF 17

REV. NO.

DATE

REVISIONS DESCRIPTION

BY

NOT FOR CONSTRUCTION

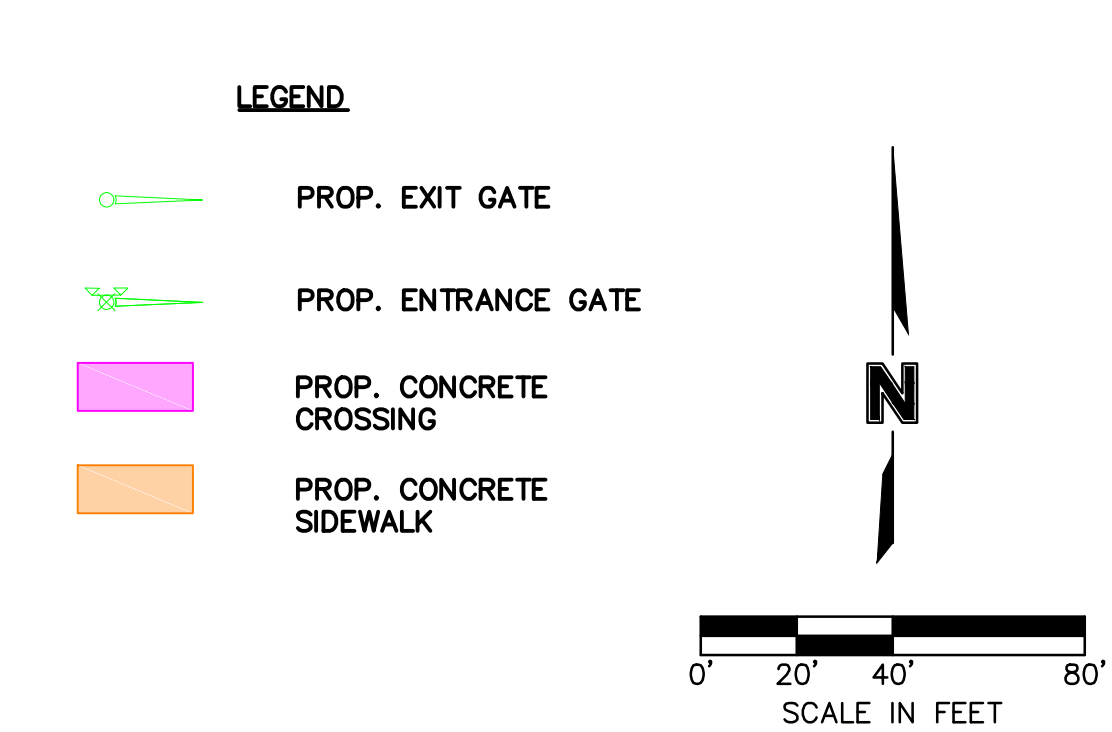
REVISIONS

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