

CHAPTER 1

PURPOSE AND NEED STATEMENT

FHWA requires environmental studies for federal funded projects. An Environmental Impact Statement (EIS) is prepared for projects where the action is expected to have significant effect on the human and natural environment.

This chapter provides an introduction and background information related to the I-70 Second Tier Environmental Impact Statement (EIS) in **Section 1.1 Project Background**. This is followed by a description of the purpose of the I-70 Second Tier EIS and a demonstration of the need for improvements along the I-70 Study Area in **Section 1.2 Purpose and Need**.

1.1 Project Background

This section introduces the I-70 Second Tier EIS and provides some background as well as the relationship with the I-70 First Tier EIS completed in 2011.

What is the I-70 Second Tier Environmental Impact Statement?

The Missouri Department of Transportation (MoDOT) and the Federal Highway Administration (FHWA) propose improving the existing I-70 corridor extending approximately 6.8 miles from the end of the last ramp termini west of The Paseo interchange to east of the Blue Ridge Cutoff interchange to meet the current and future traffic, safety, and access needs across and to/from I-70. The Second Tier EIS was initiated under the guidelines outlined in Section 6002 of the transportation highway law known as Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) and the National Environmental Policy Act (NEPA). Since the start of this study, a new transportation bill, (Moving Ahead for Progress in the 21st Century Act (MAP-21)) was signed into law July 6, 2012 and governs the Second Tier EIS study process.

The purpose of the I-70 Second Tier EIS is to evaluate and document the potential human and natural impacts of the

What is a Purpose and Need Statement?

A Purpose and Need Statement describes the transportation problems that a proposed project is to address.

What is the National Environmental Policy Act (NEPA)?

The National Environmental Policy Act (NEPA) is an environmental law that established national policy promoting the protection, maintenance, and enhancement of the environment. NEPA requires Federal agencies to consider potential environmental impacts of their proposals, document the analysis, and make this information available to the public for comment prior to implementation.

proposed alternative(s). The I-70 Second Tier EIS evaluates alternatives that address travel demand and the overall performance of the corridor to safely move people and goods.

Why is I-70 in Kansas City Important?

The 6.8 mile I-70 corridor that is the subject of this Second Tier EIS is vital to serving the greater Kansas City regional transportation demands including commuters, transit, and local and national freight movements. In addition to serving local needs, I-70 in Kansas City is also the main artery for traffic traveling to and from other cities and places across the state and nation. Some of the interstate traffic heading east and west through Kansas City is bound for major population centers in Missouri or other adjacent states and beyond.

How Does This Study Differ from the I-70 First Tier EIS?

The I-70 Second Tier EIS in Kansas City is the final part of a tiered environmental documentation process. Tiering complies with NEPA requirements and other environmental regulations. The first tier documents addressed broad programs or overall corridor strategies and issues in an initial, higher level environmental impact analysis. More specific improvement alternatives and impacts are analyzed in this second tier study. The tiered process enables a decision-making process that focuses on issues that are ready for decision and reduces repetition in environmental documentation. The first tier document frames and narrows the boundaries and scope for second tier projects. The tiered process provides a consistent strategy decision across a longer corridor which allows Sections of Independent Utility (SIU) to be studied or built without studying or building the entire corridor.

One way to visualize the tiered process is as an umbrella. This corridor umbrella covers and identifies future detailed second tier project level studies of shorter sections, which will have their own future environmental evaluation documents. The second tier studies will analyze shorter portions of I-70 but in greater detail. The I-70 Second Tier EIS is a subset of the I-70 First Tier EIS Study Area. For most of this length, I-70 is a six-

What is a Section of Independent Utility?

A Section of Independent Utility (SIU) is a section of a larger project that can function on its own without further improvements to adjoining road sections.



Illustration of the Tiered Environmental Process. The First Tier Study covers a corridor that will be broken down into multiple future Second Tier environmental studies.

lane divided and fully access-controlled interstate facility. The following are the five SIUs approved in the First Tier EIS:

1. **Downtown SIU** - Downtown Loop to The Paseo
2. **Urban SIU** - The Paseo (including the interchange) to U.S. 40
3. **I-435 Interchange SIU** - U.S. 40 (including the interchange) to Blue Ridge Cutoff (including the interchange)
4. **Suburban SIU** - Blue Ridge Cutoff to Lee's Summit Road (including the interchange)
5. **I-470 Interchange SIU** - Lee's Summit Road to east of I-470 and I-470 from 39th Street interchange to the U.S. 40 interchange

The I-70 Second Tier EIS Study Area is a combination of the Urban and I-435 SIUs, each of which has independent utility. The combination of the two SIUs will also have independent utility. MoDOT combined these two SIUs because they both have the same selected improvement strategy from the First Tier EIS; both require the same level of environmental analysis, an EIS, in the second tier evaluation process; and both have similar improvement needs. The I-70 Second Tier EIS Study Area is shown in **Figure 1-1** at the end of this chapter.

1.2 Purpose and Need

The overall purpose of the I-70 Second Tier EIS is to select an improvement alternative for this portion of the corridor, including future improvements and mode choices, which address the following needs.

- ***Improve Safety:*** Reduce crash rates and crash severity on I-70.
- ***Reduce Congestion:*** Remove key bottlenecks; reduce the potential for ramp back-up onto the freeway; and improve multi-modal travel times in coordination with plans put forward by local and regional agencies.
- ***Restore and Maintain Existing Infrastructure:*** Improve bridge and pavement conditions on I-70 and implement cost-effective investment alternatives.
- ***Improve Accessibility:*** Provide travel options for all residents; increase safe access across I-70 for

What are logical termini?

Logical termini are rational beginning and ending points for a transportation improvement and for a review of the environmental impacts.



I-70 Eastbound at the Jackson Curve

non-motorized travel; support local and regional land use plans.

- Improve Goods Movement: Improve the efficiency of freight movement on I-70.

Each of the purpose and need goals for improvements are discussed in further detail in the paragraphs below.

What Safety Improvements are Needed?

Improving safety on I-70 is a key element of the improvement alternatives. Traffic crashes are a cost to the travelers of I-70 in a variety of ways. Some crashes result in property damage, cause severe injury, and even loss of life. Traffic crashes also create congestion from blocked travel lanes resulting in increased gas consumption and lost time. Study Area improvements are intended to reduce the crash rates and to reduce the crash severity.



Vehicle Damage from a Crash

MoDOT provided crash data for the five year period from 2008 to 2012. Please review the crash and safety data disclaimer in the **Appendix A**. The crash data were evaluated and five year crash rates were developed across the corridor. The locations with crash rates more than 150 percent of the statewide average crash rate are highlighted in **Table 1-1**.

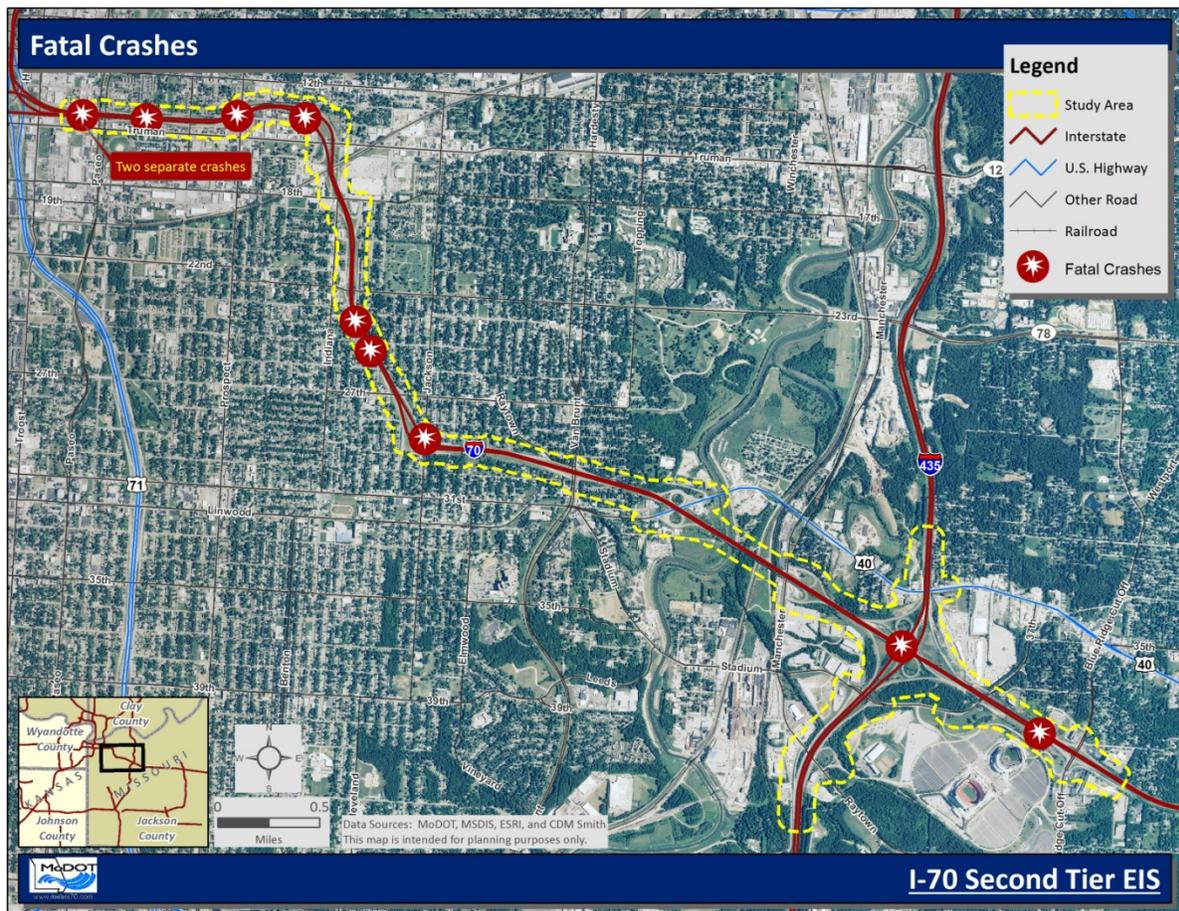
Table 1-1 Summary of Crash Analysis for the Period 2008-2012

Analysis Sections		Length (miles)	2008 to 2012 Crash Rate (Crashes Per 100 Million Vehicle Miles of Travel)		5 Year Crash Rate versus Statewide Average Crash Rate*	
			Eastbound	Westbound	Eastbound	Westbound
1	Paseo Interchange	0.87	125.94	159.40	101%	124%
2	Benton Curve	1.20	206.44	159.25	168%	140%
3	23rd Street Interchange	0.67	109.52	154.50	88%	123%
4	Jackson Curve	0.90	247.79	123.66	203%	100%
5	Van Brunt Interchange	0.73	225.09	150.00	174%	125%
6	U.S. 40 West Interchange	0.59	171.95	164.97	146%	163%
7	Manchester Interchange	0.57	258.65	216.14	208%	178%
8	I-435 Interchange	0.96	252.28	236.12	247%	201%
9	Blue Ridge Cutoff Interchange	1.28	163.25	131.84	144%	112%

*Statewide average crash rate for urban interstates as of November 2013. The 2011 Statewide Average Rate (109.61) is the most recently available.
Shading indicates sections which exceed the statewide average crash rates by more than 150 percent and have a higher need for improvements.

In the five year period from 2008 to 2012, ten crashes on I-70 involved a fatality and 28 crashes resulted in disabling injuries within the Study Area. The locations of those fatal crashes are shown in **Figure 1-2**. The majority of the crashes were rear end (42 percent) followed by out of control (19 percent) and passing (15 percent). Rear end collisions occur more frequently in congested areas and interchange areas as drivers fail to adjust for the slower moving and merging traffic. Improvements on I-70 that address two of the other identified needs, reduce congestion and restore and maintain the existing infrastructure may help reduce the number of rear end collisions. Approximately 74 percent of the total crashes caused only property damage while approximately 26 percent caused injury. Approximately 26 percent of all crashes occurred in dark conditions and approximately 23 percent of all crashes occurred in icy, snow, or wet pavement conditions.

Figure 1-2: Fatal Crashes in the Study Area 2008 to 2012



Disabling Injury Crashes

In a review of the 28 disabling injury crashes that occurred in the Study Area between 2008 and 2012, the following potential contributing circumstances were noted.

- excessive speed or driving too fast for conditions (30 percent)
- inattention (15 percent)
- improper lane usage/change (7 percent)

Alcohol was a probable factor in one of the 28 disabling injury crashes.

The majority of the disabling injury crashes were out of control crashes (31 percent) and rear end crashes (29 percent) accounting for nearly 60 percent of the disabling injury crashes. One of the disabling injury crashes involved a pedestrian.

Fatal Crashes

In a review of the ten fatal crashes occurring in the Study Area between 2008 and 2012, the following potential contributing circumstances were noted.

- alcohol was cited in five (50 percent) of the fatal crashes
- improper lane usage/change was cited in two (20 percent) of the fatal crashes
- excessive speed or driving too fast for conditions was cited in two (20 percent) of the fatal crashes
- undetermined/unknown in one (10 percent) of the fatal crashes

The pavement condition was dry for eight of the ten fatal crashes. A total of ten persons lost their lives; one person suffered a disabling injury; and ten persons received minor injuries in the fatal crash events in the Study Area between 2008 and 2012. Two of the fatal crashes involved a pedestrian.

Why is there Congestion on I-70?

Built in the 1950s, I-70 has far outlasted its original design life of 20 years and has carried traffic volumes of both cars and heavy trucks that have far exceeded original expectations. Traffic growth on I-70 is the result of population and economic growth in the Kansas City Metropolitan Area and the increase in travel through the region by cars and trucks. The population growth from 2000 to 2010 was just over 11 percent based on U.S. Census data. The Mid-America Regional Council (MARC) forecasts an additional 41 percent population growth in the metropolitan area by 2040. The total Jackson County population growth is expected to be nearly 21 percent between 2010 and 2040. The population growth most likely to impact the Study Area is focused around the Cities of Independence, Blue Springs, and downtown Kansas City.



I-70 Eastbound at Lister Avenue

As a result of population growth, where people live, locations of jobs, and the shopping and entertainment areas, the I-70 traffic volumes have been steadily increasing over the past 30 years; however, the completion of regional highway projects (Bruce R. Watkins and Three Trails Crossing) in the early 2000s, the recent economic slowdown, and gas price fluctuations have resulted in some traffic diversion away from I-70. **Figure 1-3** at the end of this chapter illustrates 2010 average annual daily traffic (AADT) volumes within the Study Area.

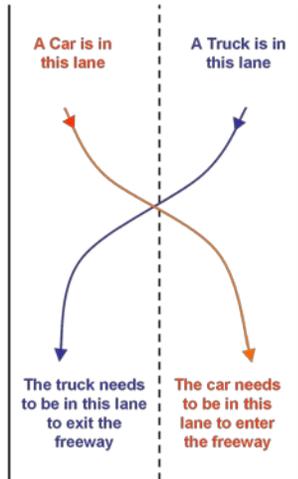
Commuter traffic in the study corridor is highly directional with approximately 70 percent of traffic destined towards the Kansas City Central Business District (CBD) during the morning and away from the CBD during the afternoon peak.

What Congestion Reduction Improvements are Needed?

Certain Study Area conditions that appear to be major corridor bottlenecks are described below.

- Benton/Jackson Curves: These curves have reduced interstate operations due to poor sight distance and 45 mile per hour curves in the roadway. The Benton and Jackson curves are areas of higher than average crash rates.

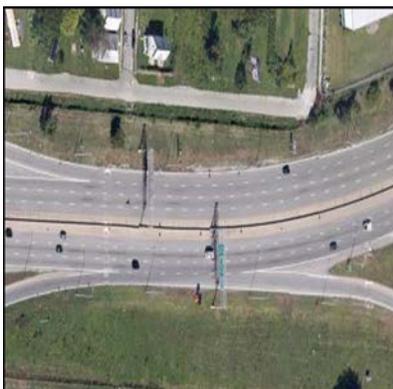
What is a weaving section?



The car and truck must cross the other traffic to get to the lane they want to be in.



Short merge area Prospect Avenue to westbound I-70



Short weave area westbound I-70 between 23rd and 18th Streets

- Interchange Spacing: The Study Area has 15 full or partial interchanges across 6.8 miles which averages to an interchange every half mile or less. As a result, there is less space available for merge and weave areas. FHWA guidance is one mile between urban interchanges.
- Interchange Merge and Weave Areas: There are several interchanges with short merge lane lengths and weave areas which limits the distance vehicles have to accelerate to up to the speed of traffic and join the traffic flow on I-70.

Measuring Existing Congestion: The Study Team modeled I-70 and the surrounding area to determine the expected 2040 travel speeds on I-70. This analysis allowed the Study Team to identify which sections of the Study Area had congested areas with travel speeds less than 25 miles per hour and in need of improvements. Travel speeds below 25 miles per hour generally relate to the heaviest congestion with stop and go traffic flows. The travel speed results are shown graphically in the **Appendix C**.

The following locations have congested areas in need of improvements:

- Prospect Avenue to Jackson Curve: The travel speed in the westbound direction is expected to need improvements by 2040 as the average travel speed is anticipated to drop below 25 mph between Jackson Avenue and 18th Street. This section has numerous short weave areas, merge areas, on-ramps, and off-ramps.
- Jackson Curve to U.S. 40: The travel speed in the westbound direction is expected to need improvements by 2040. The average travel speed is anticipated to drop below 25 mph. This section has short weave areas, merge areas, and on-ramp and off-ramps, as well as the speed reduced Jackson Curve.
- Manchester Trafficway to Blue Ridge Cutoff: The average travel speeds through this section of the Study

Area are expected to fall below 25 mph during the evening peak period.

What Existing Infrastructure Needs to be Restored and Maintained?

Other than short reconstructed portions, most sections of the Study Area are approximately 40 to 50 years old. Due to proper maintenance, the I-70 facility has outlasted its original design life of 20 years. Since the original construction, some interstate design standards have been revised and leave I-70 with some outdated design features.

A variety of data was gathered of the existing corridor's physical characteristics. Four categories were established for the organization and evaluation of this data:

1. Cross section elements (lane widths, shoulder widths, medians) – Lane widths, shoulder widths, and medians can provide drivers with a sense of comfort and safety as they drive the highway. Shoulders and medians also provide a refuge for disabled vehicles out of the travel lanes.
2. Alignment (curves, hills, and valleys) – Curves, hills and valleys limits the ability a driver's ability to see further ahead on the highway which can reduce a driver's reaction time to obstructions or slowing traffic in the road ahead or vehicles entering the highway.
3. Physical condition (pavement and bridge conditions) – Pavement and bridge conditions can slow traffic due to potholes on road and bridge surfaces. Over time, all road surfaces require maintenance which can add to temporary traffic slowdowns and delays as repairs are made.
4. Roadway layout – The roadway layout provides drivers to safely enter, exit, and change lanes on the highway. The use of ramps with space to speed up or slow down prior to entering or after exiting the travel lanes helps maintain the overall flow of traffic.

Cross Section Elements – The general cross section of I-70 is three 12 foot lanes in each direction. The directional lanes are separated with a barrier wall except in the Benton and Jackson

What is lane balance?



Eastbound at Prospect Avenue

Lane balance occurs when the number of through lanes before an exit ramp is equal to or greater than the number of lanes after.

What are geometrics?

Geometrics relate to the curves, hills, and valleys of a road. In addition, geometrics include the width of the road defined by the number of lanes, shoulders, and median.

Curves and the shoulder widths vary throughout the Study Area.

Locations with Alignment Issues - Geometric characteristics were measured using MoDOT and the American Association of State Highway and Transportation Officials (AASHTO) guidance. There are roadway characteristics that need improvements at the following locations:

- The Paseo to Jackson Curve - Both eastbound and westbound travel directions have improvement needs to hills, valleys, and sight distance issues slightly east of The Paseo, at Brooklyn Avenue, at Chestnut Avenue, at 23rd Street, and at Cleveland Avenue. There are improvement needs at the Benton Curve. Only the eastbound direction has hills, valleys, and sight distance issues at Truman Road and 18th Street.
- Jackson Curve to I-435 - Both eastbound and westbound travel directions have improvement needs to the hills, valleys, and sight distance issues through the I-435 interchange and Jackson Avenue interchange.

What is sight distance?

Sight distance is the distance required for a driver to see so that he or she can make a complete stop in the event of an unforeseen hazard.

Physical Condition: The Study Team characterized I-70 as an aging facility that requires annual maintenance to the pavement and bridges. The on-going maintenance needs of the pavement and bridges are not a determining factor in evaluating alternatives. The specific pavement and bridges that are currently in poor condition will require replacement or maintenance work regardless of the alternative selected by the Second Tier EIS process. The I-70 Second Tier EIS seeks solutions that modernize the freeway and reduce the need for the frequent regular maintenance that is needed today. The opportunity exists to enhance aesthetics along the corridor while improving the overall physical condition.

Roadway Layout: The Study Team conducted a system configuration evaluation based on AASHTO Principles of Good Urban Freeway Planning and Design. The following are key system configuration principles that Study Area improvements need to address where feasible:

- Provide lane balance and continuity – When a travel lane ends at an exit ramp or a lane ends and is required to move over a lane can create unexpected lane changes
- Improve interchange spacing – Closely spaced interchanges produce frequent locations for vehicles to enter and exit the highway which can slow the flow of traffic on the main travel lanes.
- Improve ramp lengths – Short ramp lengths do not vehicles to accelerate up to the speed before they enter the main travel lanes which can cause traffic to slow down.
- Improve the weaving areas within interchanges along the mainline – Weaving areas require vehicles to change lanes within a defined space to enter or exit the highway which can slow traffic on the main lane.

The Study Area locations that do not fully meet these AASHTO principles are listed below.

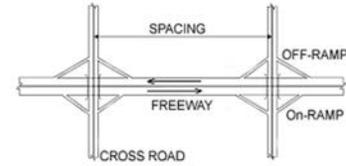
Improper Lane Balance - Improper lane balance contributes to the congestion problems in the corridor. The locations that represent bottlenecks with lane balance issues are on eastbound I-70 approaching The Paseo and eastbound I-70 at Prospect Avenue.

Improve Interchange Spacing – There are 15 full or partial interchanges within the 6.8 mile Study Area which is approximately one full or partial interchange every half mile. Current interchange spacing guidelines call for interchanges to be spaced one mile apart within urban areas.

Interchange Ramp Issues – There are a number of interchanges in the Study Area that do not provide full access to all directions of traffic.

- The Paseo to Jackson Curve - Brooklyn Avenue, Benton Boulevard, Truman Road, 18th Street, 27th Street, Myrtle Avenue, and Jackson Avenue all provide only partial access; the configurations can be confusing and counter-intuitive to driver expectations. There are undesirable eastbound exit ramp lengths and westbound entrance ramp lengths at The Paseo,

What is interchange spacing?



Interchange spacing is the distance between two grade-separated interchanges. Current interchange spacing guidelines call for interchanges to be spaced one mile apart within urban areas.

What is partial access?



27th Street Interchange

Partial access is when one or more movements at an intersection or interchange are not allowed or unavailable.

Brooklyn Avenue, Indiana Avenue, and 27th Street. Eastbound 23rd Street also has short on- and off-ramps lengths.

- Jackson Curve to I-435 - This section has short ramp lengths at the eastbound entrance ramp and the westbound exit ramp lengths at Van Brunt Boulevard. U.S. 40 and Manchester Avenue also have short ramp lengths. I-435 has two lane drops in the left lanes that serve left lane exit ramps.

Improve Weaving Areas - A number of locations in the project corridor have weaving areas of concern.

- The Paseo to Jackson Curve - This section is characterized by short weaving sections, short ramp lengths, and lane balance issues. There are needed improvements to weaving sections between The Paseo and Brooklyn Avenue, as well as the weaving section between 18th Street and 23rd Street in both directions.
- Jackson Curve to I-435 - This section has short weaving sections, short ramp lengths, and lane balance issues. There are short eastbound entrance ramp and the westbound exit ramp lengths at Van Brunt Boulevard. U.S. 40 and Manchester Avenue have short weaving sections and short ramp lengths. Another short weaving area exists at the westbound I-70 between U.S. 40 and Van Brunt Boulevard. Both the eastbound and the westbound directions have short weaving sections between Manchester Trafficway and I-435.



Sidewalk crossing under I-70

What Accessibility Improvements are Needed?

Often major linear features such as rivers and transportation corridors act as barriers to pedestrians, bicyclists, and those without motor vehicles.

Crossing I-70: The Study Area has 19 roadway bridges or underpasses and two pedestrian bridges crossing over I-70 which provide opportunities for enhancement. Some I-70 bridges and underpasses are connected to interchanges while others only provide access across the freeway. In either case, it

is important to provide facilities for bicyclists and pedestrians. These crossings are shown on **Figure 1-4** at the end of this section and listed below.

- The Paseo
- Woodland Avenue
- Brooklyn Avenue
- Prospect Avenue
- Chestnut Avenue
- Benton Boulevard
- Truman Road
- Indiana Avenue
- 18th Street
- 23rd Street
- Cleveland Avenue
- 27th Street
- Jackson Avenue
- Lister Avenue
- Van Brunt Boulevard
- U.S. 40
- Manchester Trafficway
- Stadium Drive
- Blue Ridge Cutoff



Pedestrian bridge near Van Brunt Boulevard

Each crossing provides aesthetic opportunities to create neighborhood specific identity or aesthetic improvements on the bridges, retaining walls, or other structures.

There are three locations (Manchester Trafficway, U.S. 40 Highway, and Stadium Drive) that are without sidewalks. To supplement the roadway crossings of I-70, there are two pedestrian bridges – one east of the Van Brunt Boulevard interchange at Oakley Avenue, and the second east of the Jackson Avenue interchange at Cypress Avenue.

Bicycle Facilities: The Kansas City Metropolitan Area does not currently have a regional network of fully interconnected bicycle facilities. There are three identified on-street bike lanes available throughout the Study Area according to the Bike KC Plan and Map. These on-street bike routes are along The Paseo, Woodland Avenue, Chestnut Avenue, and Blue Ridge Cutoff. However, additional non-motorized transportation system improvements within the Study Area and on routes paralleling or crossing the I-70 corridor may still be needed. For bicycle routes, I-70 presents a potential barrier due to the limited opportunities to cross and some crossings having narrow lanes and limited room for cyclists.



On-street Bike Lane

Transit Routes: Kansas City Area Transit Authority (KCATA) has eight bus routes that cross and four bus routes that travel on I-70 within the Study Area. In addition, over 12 percent of



KCATA Bus

Study Area workers use transit, walk, or other means to travel to work as shown in **Table 3.2-5**.

Improvement of accessibility across I-70 for pedestrians, bicyclists, and those without motor vehicles, is needed to serve and support the wide variety of land uses adjacent to the freeway. The land uses within the Study Area vary drastically from Kansas City's CBD to residential neighborhoods to major regional retail areas.

Together with a diverse land use, the Study Area contains schools, churches, parks, and recreational areas such as Grove Park and Cypress Park. It is important that improvements are sensitive to the needs of the local neighborhoods and businesses to access these key destinations located on either side of the freeway.

Why are Goods Movement Improvements Needed?

As a national freight center, Kansas City's mid-continent location makes the region a key location for the movement of goods. National cargo passes through the region by truck, rail, water, and air. I-70, I-35, I-29, and I-49 are the primary truck routes in the region with 27 percent of the pass through freight movements exiting the region on I-70 eastbound based on the *2008 Kansas City Regional Commercial Vehicle Origin and Destination Survey*. Regional truck generating areas within a few miles of the I-70 Second Tier Study Area include I-435 and Front Street, Downtown/West Bottoms, I-35 and Front Street, and Crown Center. In addition, Yellow Roadway Carriers is located east of I-435 between I-70 and U.S. 40.



Trucks on I-70 near Blue Ridge Cutoff

Trucks are an important component of the traffic stream in the Study Area. Approximately 11 percent of the daily vehicles in the corridor are trucks. Truck percentages during the peak periods (7:00 - 9:00 a.m. and 4:00 - 6:00 p.m.) are higher in the direction opposing commuter traffic due to the increase in the peak hour passenger vehicle traffic volumes as shown in **Table 1-2**. This indicates that trucks have a much smaller role in congestion during the peak periods and may be trying to avoid peak period congestion.

Table 1-2 Truck Percentages on I-70

Direction	Section	AM	PM	Daily
Westbound I-70	I-435 to Downtown Loop	9%	4%	11%
Eastbound I-70	Downtown Loop to I-435	3%	8%	11%

Trucks affect the freeway operations in a significant way. First, truck operations impact traffic flow. While the percentage of trucks on I-70 is relatively low in the peak direction during the peak periods, (three to four percent of the overall traffic flow) it has been observed that the mixture of slow traffic and hills on the corridor often cause trucks to accelerate slowly, impeding traffic flow.

What Other Upcoming Projects are Related to the I-70 Second Tier EIS?

As discussed, the I-70 Second Tier EIS covers two sections of the I-70 First Tier EIS. MoDOT intends to complete further NEPA studies on the other three adjacent sections of the I-70 First Tier EIS at a later date.

In January 2013, MoDOT separated out the replacement of the Manchester Bridge (two structures) between I-435 and 31st Street into its own Categorical Exclusion (CE) NEPA document and a design build process as the condition of the bridge required that this bridge replacement be accelerated. The separate project also included the replacement of the US-40 bridge over the Blue River as use of this bridge is needed for traffic relief during the replacement of the Manchester Bridge. The existing US-40 bridge had weight restrictions that meant it was unable to carry detoured I-70 traffic with its large amount of heavy trucks. Each of the structures to be replaced had reached the end of their useful life and required frequent and costly repairs, creating inconveniences to drivers. The project includes an added auxiliary lane on the Manchester Bridge in both directions. The Manchester Bridge project is compatible with all of the alternatives proposed for the I-70 Second Tier EIS and does not preclude the selection of any alternative.

The separate CE document was approved on March 3, 2013 and the design-build process has started for these bridge

replacements. The design-build process will also improve two deficient merge/weave movements between I-435 and the Manchester Trafficway interchange. MoDOT anticipates that this project will be completed by December 2015.

Summary

The purpose of the I-70 Second Tier EIS is to select an improvement alternative for the corridor, including future capacity and mode choices, that addresses the key needs outlined in this chapter. The Second Tier EIS has identified the five improvement goals as:

1. Improve Safety
2. Reduce Congestion
3. Restore and Maintain Existing Infrastructure
4. Improve Accessibility
5. Improve Goods Movement

The Study Team developed, refined, and evaluated I-70 corridor alternatives based on the purpose and needs outlined in this chapter while seeking to minimize impacts to the human and natural environment. The alternatives are described in **Chapter 2.0 Alternatives Considered**.

Figure 1-1 Study Area

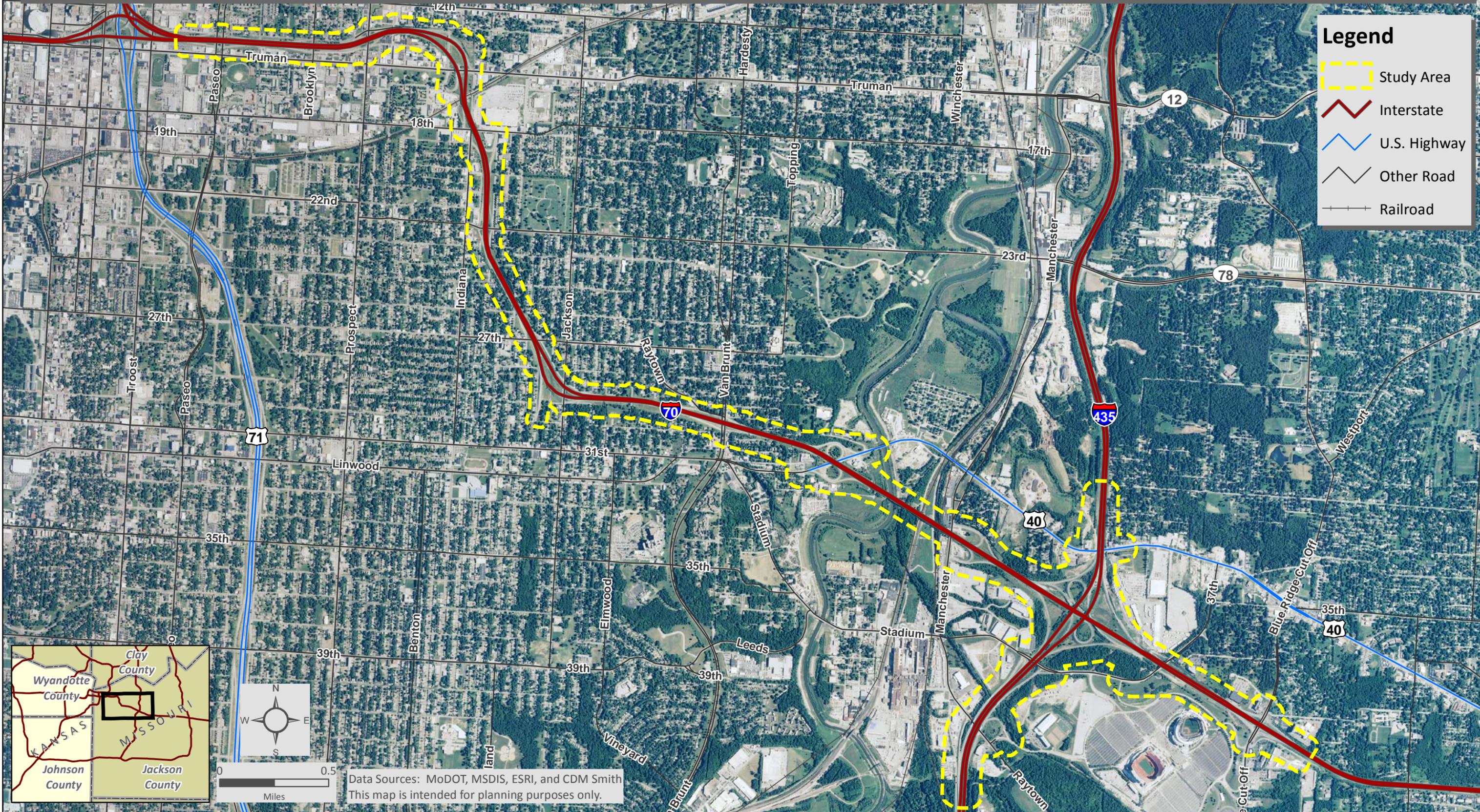


Figure 1-3 Traffic Volumes

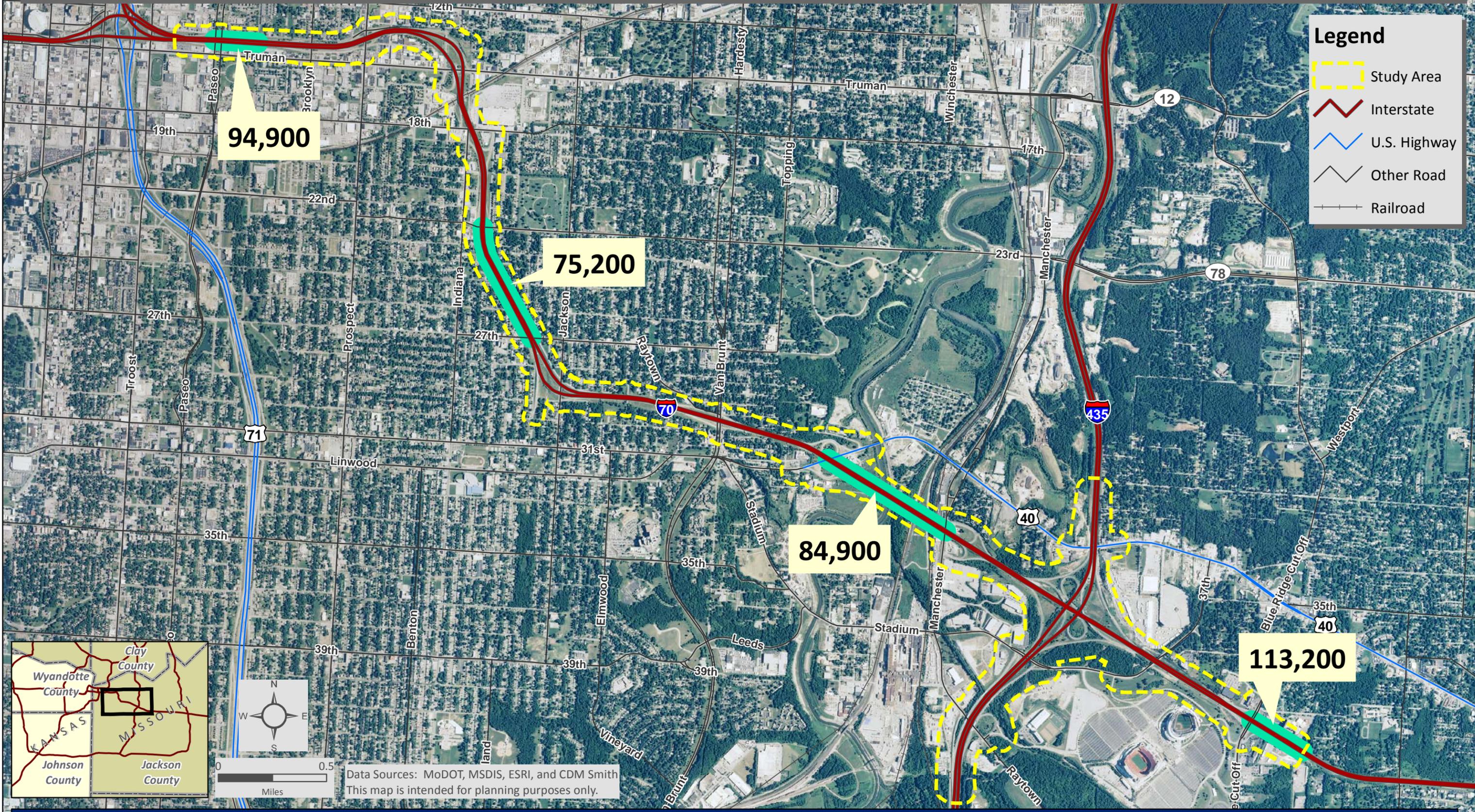
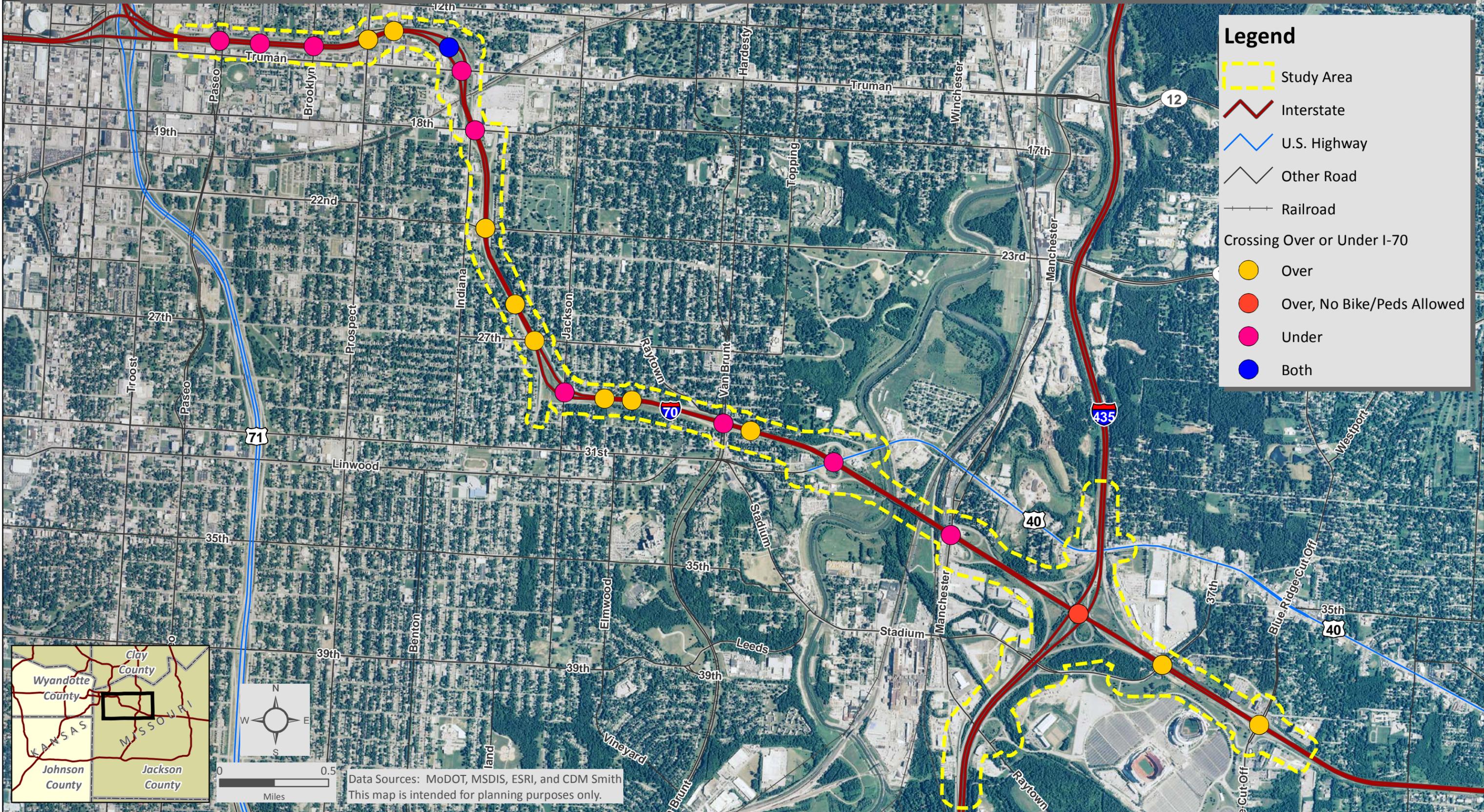


Figure 1-4 I-70 Crossings



Legend

- Study Area
- Interstate
- U.S. Highway
- Other Road
- Railroad

Crossing Over or Under I-70

- Over
- Over, No Bike/Peds Allowed
- Under
- Both



Data Sources: MoDOT, MSDIS, ESRI, and CDM Smith
 This map is intended for planning purposes only.