

OPEN HOUSE OUTLINE

This Open House is the last of three public meetings for the Route 92 Centennial Bridge Study. The material presented previously at the second Open House in July 2015 focused upon Corridor Screening and Alternatives. The material presented here at the final Open House advances the study by presenting information on the following elements:

- ✓ Tolling & Revenue Analysis and Results
- ✓ Bridge Plan, Elevation, 3-Dimensional Model
- ✓ Next Steps

PREVIOUS INPUT

The second Open House was held in two sessions on July 21 and July 23 in 2015. KDOT presented the latest information on the following elements:

- ✓ Travel Aspects
- ✓ Corridor Screening
- ✓ Bridge Design
- ✓ Assessment Review
- ✓ Alternatives
- ✓ Roadway Approaches

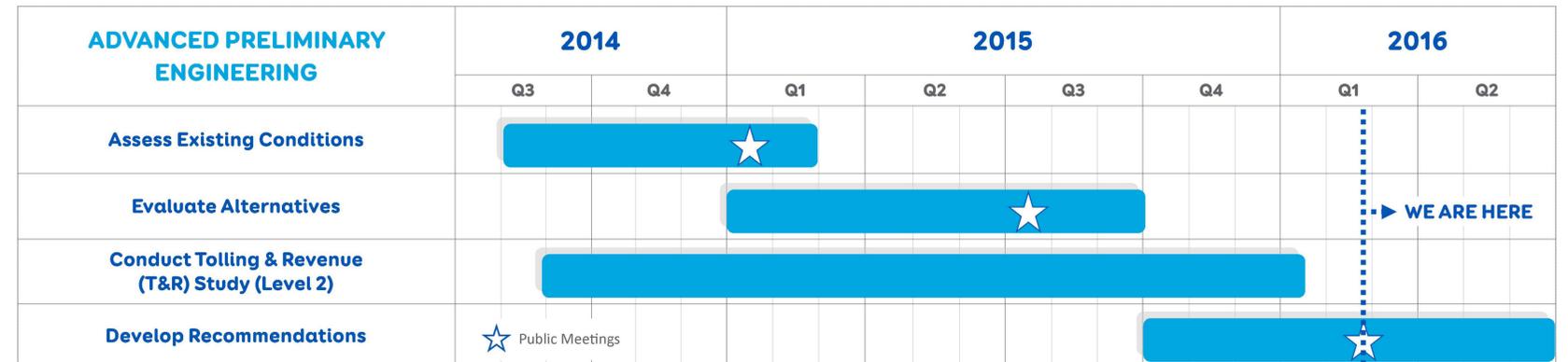
Approximately 65 individuals participated with over 75% completing a general feedback survey. KDOT also hosted a survey online where 290 additional general feedback surveys were completed.

NEXT STEPS

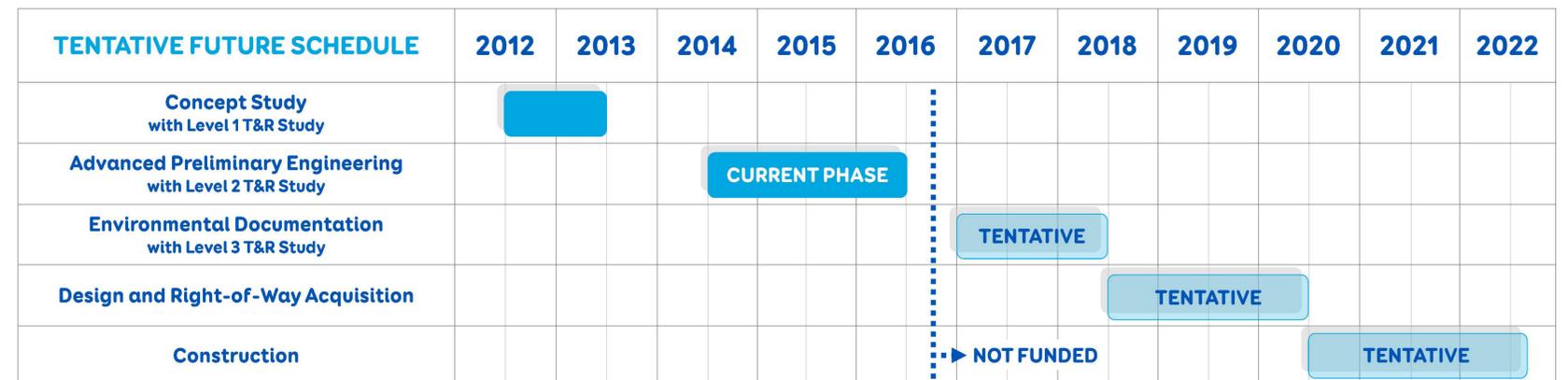
The study team will complete a report documenting the study process. The report will be reviewed by KDOT's Program Review Committee to determine if and when it will be feasible to advance the project. The final Route 92 Centennial Bridge report will be available in late Summer 2016 at www.ksdot.org/kcmetro.

STUDY SCHEDULE

The study includes four tasks. Three public meetings will be held to engage the public, stakeholders, and the community throughout the study. The study is anticipated to conclude in Spring 2016.



Next steps could include a Level 3 Tolling & Revenue (T&R) study and the appropriate level of environmental documentation. Then, design plans with right-of-way acquisition and construction could eventually occur. This tentative schedule forms the basis for revenue assumptions. Currently, there is no funding dedicated for construction.



STUDY PURPOSE

The Route 92 Centennial Bridge Study will assess existing conditions, evaluate alternatives, conduct a Tolling & Revenue Study, and develop a series of next steps. The study will determine:

- ✓ Bridge location
- ✓ Bridge type
- ✓ Probable costs
- ✓ Potential funding mechanisms
- ✓ Preliminary assessment of the potential environmental impact

STAY INFORMED

Thank you for your interest in the Route 92 Centennial Bridge Study. To find out more information about the study, visit the KC Metro Area website at:

www.ksdot.org/kcmetro

Find us on Twitter: [#Rt92centennialbridge](https://twitter.com/Rt92centennialbridge)



TOLLING & REVENUE PROCESS

In an attempt to close the funding gap for the construction, maintenance, and operation of the replacement Centennial Bridge, KDOT conducted a Tolling & Revenue (Level 1) study in 2013. The study determined that tolling could be a viable funding option and should be further studied.

A Tolling & Revenue (Level 2) analysis has been conducted as a component of this Advanced Preliminary Engineering study. The goal of the Tolling & Revenue study at this phase was to provide a mid-level analysis of revenue potential to determine if tolling could generate sufficient revenue for the project.

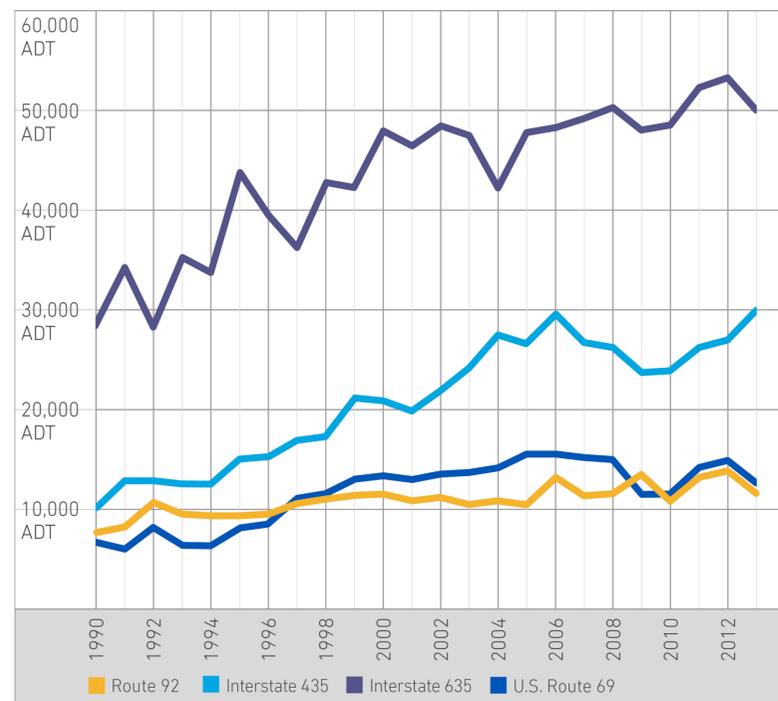
As part of the Level 2 analysis, detailed data collection effort included:

- ✓ Traffic Volume
- ✓ Transportation Projects
- ✓ Growth Trends

TRAFFIC VOLUME

Historical traffic volumes for major Missouri River bridge crossings (Route 92, Interstate 435, Interstate 635, and U.S. Route 69) is displayed in the chart below. From 1990 to 2013, the average annual growth rate for the Route 92 Centennial Bridge is 1.8 percent. In general, traffic volume increased more rapidly from 1990 to 2000 while there was no growth from 2000 to 2013.

Why is this analysis important? Current and historical traffic volumes are used to inform the traffic forecasting modeling process. Forecasted traffic volumes help understand the potential utilization of the replacement bridge.

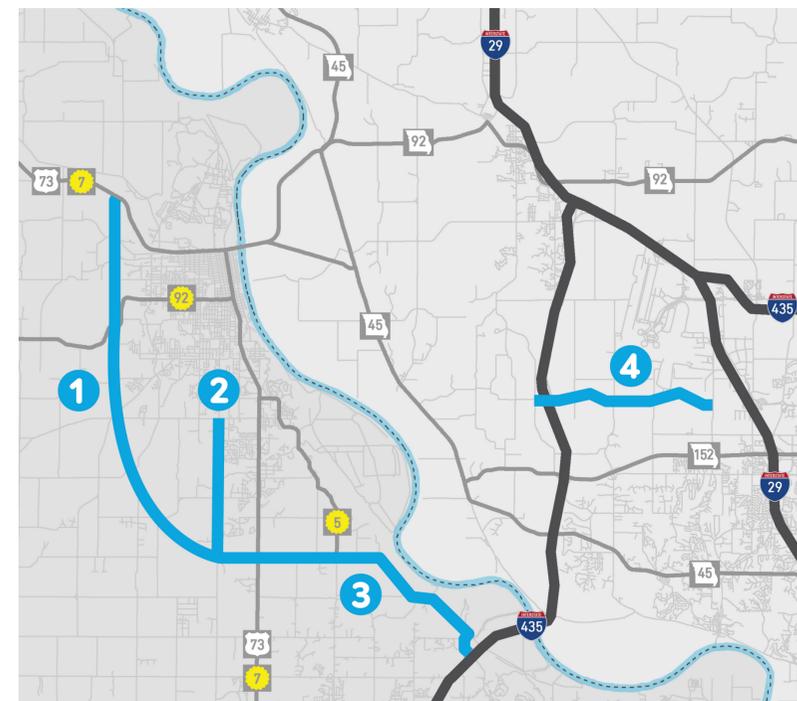


TRANSPORTATION PROJECTS

Several planned transportation projects from the region's 2040 Long-Range Transportation Plan are located in Leavenworth County and Platte County, including:

- 1 Leavenworth Bypass (planned 2030s)
- 2 147th Street and DeSoto Road (planned 2030s)
- 3 McIntyre Expressway (planned 2030s)
- 4 Tiffany Springs Parkway (planned 2040s)

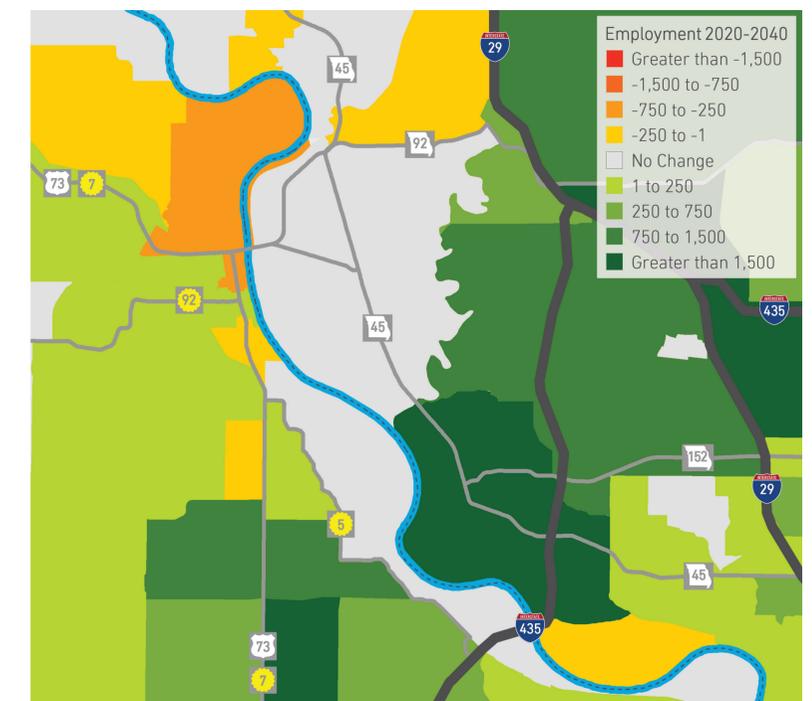
Why is this analysis important? These projects provide new or improved connections to the City of Leavenworth. Drivers may choose these routes as an alternative to the Route 92 crossing, which is an important consideration when projecting future traffic volume.



GROWTH TRENDS

Population and employment projections were used to analyze socio-economic growth between 2020 and 2040. In general, there is slow population growth projected for the City of Leavenworth whereas Platte County projects higher population growth. As shown in the map below, employment projections follow a similar pattern with limited employment growth in the City of Leavenworth and greater employment growth in Platte County.

Why is this analysis important? Population and employment growth projections help determine traffic generation potential and trip-making characteristics, which is another important traffic modeling assumption.



TOLLING & REVENUE RESULTS

PROBABLE PROJECT COSTS (FY 2016 million dollars)			
Construction Costs (including contingencies)	Kansas	Bridge	Missouri
Roadway	3.5	-	12.5
Bridge Removal	-	2.0	-
Bridge Structure	-	44.8	-
Bridge Shared-Use Path	-	6.4	-
Tolling Equipment	3.3	-	-
Miscellaneous	0.6	3.8	1.3
Construction Cost (by Element)	7.4	57.0	13.8
Construction Cost (by State)	35.9		42.2
Construction Cost (Total)	\$78.1 million		
Construction Cost (Rounded)	\$80 million		
Tolling Coverage	Kansas	Bridge	Missouri
Tolling Coverage (Kansas/Bridge)	\$65 million		-
Programming Costs	Kansas	Bridge	Missouri
Right-of-Way	0.06		0.06
Utilities	0.30		0.01
Inspections	11.5		
Programming Cost (Total)	\$11.9 million		
Total Project Costs (Rounded)	\$90 million		

Other Costs	Kansas	Bridge	Missouri
Aesthetics	TBD		-
Off-Bridge Shared-Use Path	0.1	-	0.2
Roadway Lighting	0.2		-

PROJECT COSTS

The schedule assumes, at the earliest, that construction of the replacement Centennial Bridge could potentially begin in 2020 with an opening date in 2022. Based on the costs provided in the table, the total project cost is estimated at \$90 million. The cost estimates also reflect the jurisdiction(s) responsible for specific components of the project. Cost estimates are currently presented in Fiscal Year (FY) 2016 dollars but will be inflated dependent upon the implementation schedule.

CONSTRUCTION COSTS

Construction costs represent the replacement bridge, roadway improvements for the Missouri and Kansas approaches, tolling equipment, and miscellaneous items. KDOT and MoDOT will share the construction cost for the replacement bridge. Total construction costs is estimated at \$80 million (FY 2016).

PROGRAMMING COSTS

Programming costs represent other necessary design considerations such as utility installation and relocation, right-of-way purchase, and inspections.

OTHER COSTS

Other costs represent the additional improvements that can be included in the project such as aesthetic improvements, connections for the shared-use path, and roadway lighting. These items may potentially be covered by county or local jurisdictions. Costs and funding commitments will be determined during the design stage.

TOLLING COVERAGE

Tolling coverage is the amount of the project cost that is estimated to be covered by tolling revenue. Based on state enabling legislation, only the construction cost of the Missouri River bridge and the Kansas roadway approach are eligible to be covered by tolling revenue. Based upon current market conditions and various assumptions, it is estimated that an acceptable level of coverage can be provided by tolling.

TOLLING REVENUE

The Tolling & Revenue process analyzed ranges of traffic and revenue projections based on varying assumptions to help inform decisions.

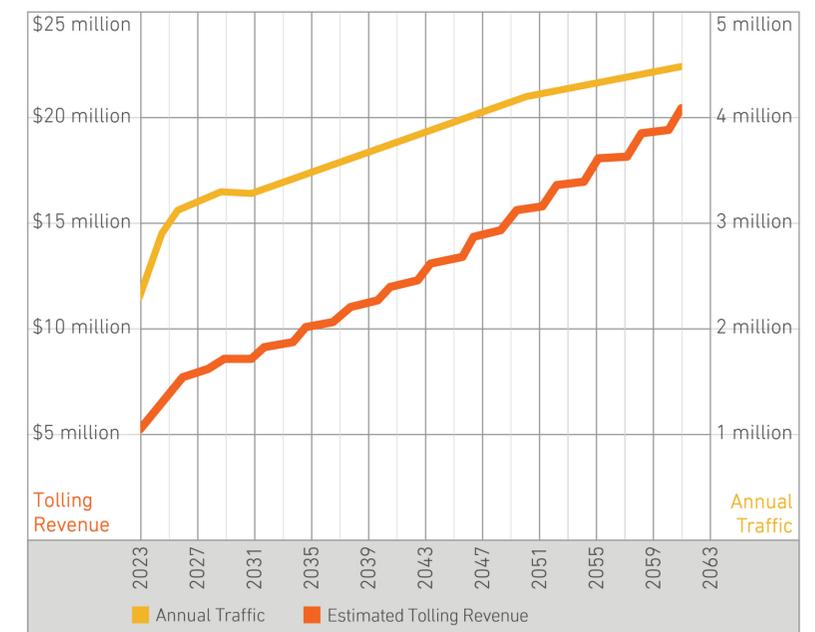
TOLL SENSITIVITY

An analysis was performed to understand the sensitivity of traffic patterns to a range of tolling scenarios and prices. Elements that were varied in the sensitivity analysis included:

- ✓ Higher or lower value of time
- ✓ Increase or decrease in traffic demand
- ✓ Impact of the Leavenworth Bypass
- ✓ Increase in share of truck traffic
- ✓ Fewer revenue days
- ✓ Higher tolling violation percentage

TRAFFIC AND REVENUE

The base toll rate (FY 2016) for vehicles with a transponder is assumed to be \$2.00 each way. For vehicles without a transponder, the toll rate is expected to be double the base toll rate (\$4.00) each way to account for video and billings costs. The figure below displays the projected traffic and tolling revenue.



RECOMMENDATIONS

This phase of the Route 92 Centennial Bridge study included Advanced Preliminary Engineering (APE) and a Tolling & Revenue (T&R) Level 2 study. The APE component developed a preferred concept with appropriate costs while the T&R component assessed the financial viability of tolling.

With this information, next steps in the process would include the development of an implementation plan and Tolling & Revenue Level 3 study. The Route 92 Centennial Bridge replacement is not yet funded for construction. Specifically, next steps include finalizing the following interrelated components:

- ✓ **Physical:** Bridge location and type has direct influence upon potential environmental impacts.
- ✓ **Environmental:** When to conduct environmental documentation is dependent upon available funding.
- ✓ **Financial:** Funding commitments affect the implementation schedule of the replacement bridge.

PHYSICAL

BRIDGE LOCATION

The location of the proposed bridge being advanced to the preliminary design stage is immediately north of the existing bridge. This location was chosen in part to minimize impacts to the adjacent Abernathy Complex, which was recently placed on the National Register of Historic Places, on the south side of the existing bridge.

OTHER DESIGN CONSIDERATIONS

A review of topographic features suggests the inclusion of retaining walls in certain locations to reduce right-of-way acquisition. Some geotechnical investigations will be conducted to determine if soil enhancements are necessary. Based upon the development of the bridge spans and pier locations, a review of potential utility conflicts indicates the need for some utility relocation. An access road will be provided to maintain the tolling equipment. Many of these features can be found on the rendered bridge plan with roadway approaches.

ENVIRONMENTAL

HISTORIC RESOURCES

The Kansas State Historic Preservation Office determined that the Centennial Bridge is eligible as a historic resource. Nevertheless, historic resources must perform as an integral part of a transportation system and can be rehabilitated or replaced to ensure public safety.

PUBLIC PARKS

Riverfront Park along the west bank of the Missouri River passes beneath the Centennial Bridge. The piers for the proposed bridge will impact parking areas. The project will mitigate impacts by relocating parking spaces.

ENVIRONMENTAL JUSTICE

Environmental Justice ensures the fair treatment and involvement of all people in project development and implementation. While the analysis of toll road pricing is complex, the project must specifically consider income, geographic, participation, opportunity, and modal equity.

FINANCIAL

FUNDING

In an era of reduced transportation investments coupled with increasing transportation needs, exploring alternate funding mechanisms is critical in advancing projects to design and construction. Tolling represents one potential alternate funding mechanism. With the project adjoining two states, it is also important to address political feasibility and institutional issues within each state.

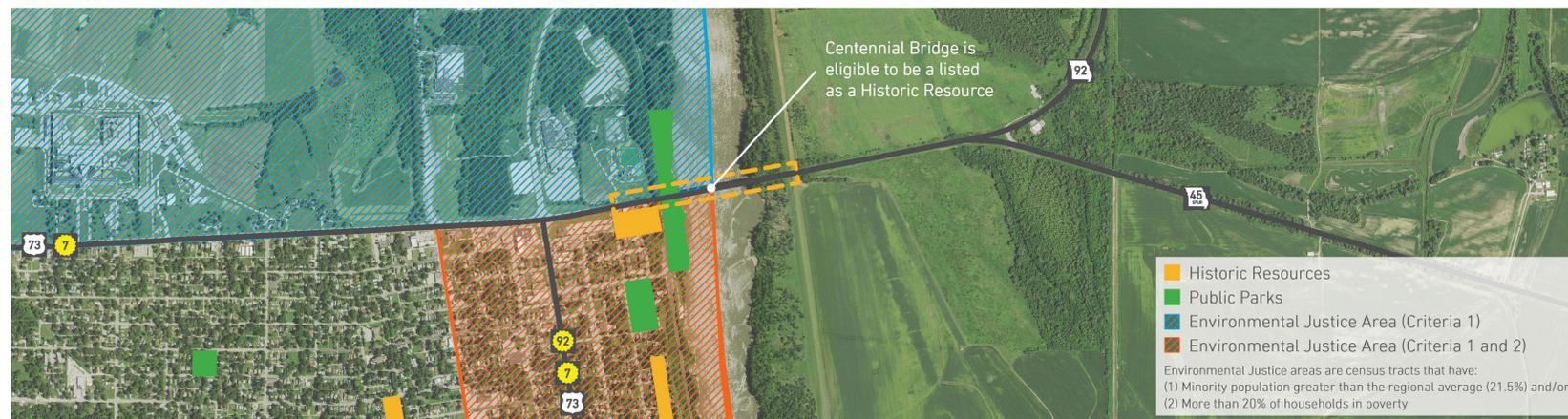
POLITICAL FEASIBILITY

In Missouri, legislation currently permits tolling on Interstate bridges across rivers. Therefore, tolling revenue would be eligible to cover the construction cost of the Centennial Bridge replacement but not the Missouri roadway approach.

KDOT would obtain authorization from the state Legislature to form a tolling authority for the Centennial Bridge replacement. The process for KDOT includes:

- 1 Obtain tolling authority from state Legislature
- 2 Establish tolling policies and ordinances
- 3 Contract with the Kansas Turnpike Authority (KTA) to provide All Electronic Tolling (AET) operation
- 4 Retire tolling authority after bonds are paid

A Tolling & Revenue (Level 3) study would provide an investment-grade level analysis necessary to obtain tolling authority.

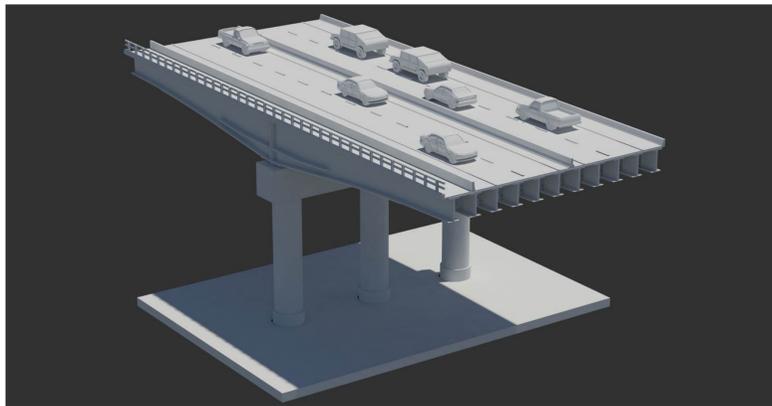




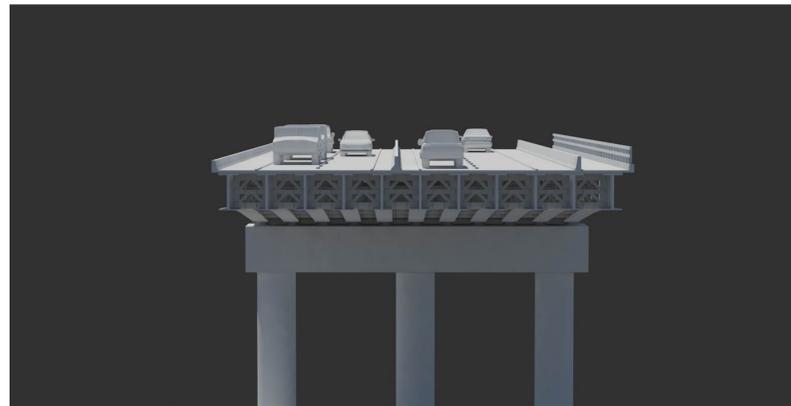
Route 92 Centennial Bridge Study KDOT Project No. 92-52 KA-3229-01
Leavenworth County, Kansas and Platte County, Missouri

3-DIMENSIONAL MODEL

Typical Section Model of Main Span over Missouri River



View looking north with shared-use path on south side

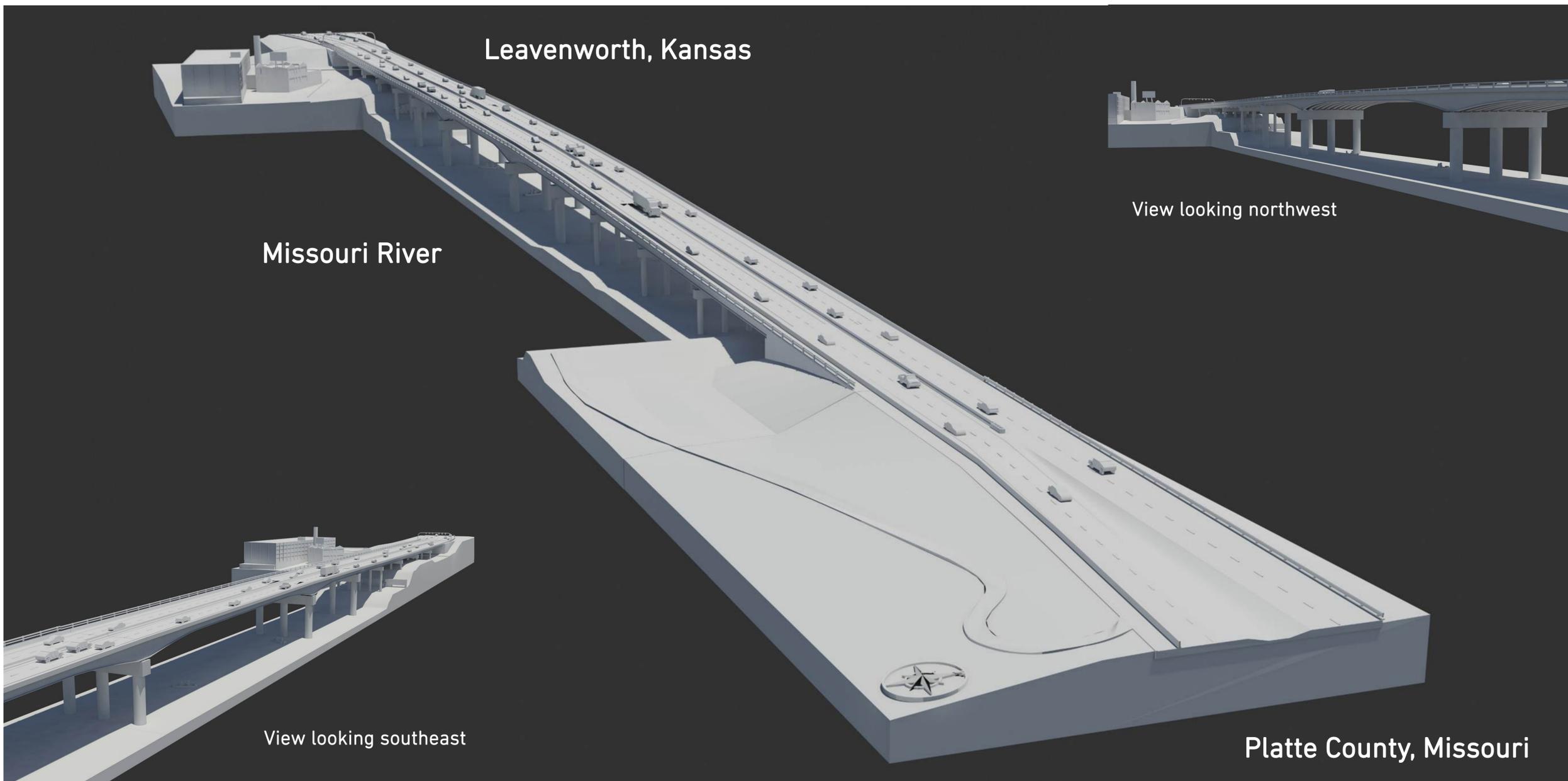


Cross section with haunched plate girders and deck slab



View looking up from the Missouri River

Full Model of Proposed Replacement Bridge over Missouri River



Leavenworth, Kansas

Missouri River

View looking northwest

View looking southeast

Platte County, Missouri