

## Connected KC 2050 Amendment #2 for public review and comment

### BACKGROUND:

In June of 2020, the MARC Board of Directors approved Connected KC 2050 (CKC2050), the Kansas City region's long-range, Metropolitan Transportation Plan (MTP). This plan is a blueprint that describes how the region will manage, operate, and invest in its multimodal transportation system over the next 30 years. Connected KC 2050 describes the current and evolving surface transportation needs of the metropolitan area and identifies \$52.3 billion in anticipated transportation investments ranging from road and transit improvements to projects that enhance bike, pedestrian and freight movement. Amendments will be made to Connected KC 2050 as new projects, funding, or programs arise. MARC's Public Participation Plan requires that proposed amendments to the MTP be released for public review and comment.

MARC has received additional requests to amend Connected KC 2050, as follows:

- Amend project 1191, K-92 (Centennial) Bridge Replacement to update cost and transfer project from medium priority illustrative to constrained project listing.
- Amend project 1324, I-70/K-7 Interchange KA-1003-10 (Phase 5) to move this phase into illustrative project listing of the plan.
- Amend project 1328, I-70/K-7 Interchange KA-1003-11/15 (Phase 6 and 10) to split project up into two distinct CKC2050 projects and move Phase 6 to illustrative project listing of the plan.

### PROJECT SPECIFIC INFORMATION:

ConnectedKC 2050 Amendment #2 includes a request from KDOT to include the Centennial Bridge Replacement Project as a constrained project in CKC2050. Specifically, this request would move the project currently listed as a Leavenworth County sponsored project on the illustrative list (Project #1191), to a KDOT sponsored project on the constrained list. The project scope includes replacement of the existing bridge with an expansion of the structure to four lanes, and a 10-foot wide shared use bike/ped path. The project is currently authorized for preliminary engineering only.

Financial Constraint: Cost of the project is \$132m. The financial analysis in Connected KC 2050 requires an adjustment in order to show sufficient local and federal revenues to support the additional cost.

K-92 Centennial Bridge Project is currently included listed as a medium priority illustrative project. In order to maintain constraint in the plan, KDOT proposes to split the I-70/K-7 interchange project KA-1003-11/-15 Phase 6/10 (Project #1328) into two parts. KA-1003-15, Phase 10 would remain on the Constrained List of the Plan. KA-1003-11, Phase 6 would move to the Illustrative List of the Plan. Additionally, KDOT requests that KA-1003-10, Phase 5 be moved to the Illustrative List of Connected KC 2050 at this time. As a note, with this change, two phases of work at the I-70/K-7 interchange location (Phase 7-\$95.6m; and Phase 10-\$64.9m) would remain in CKC2050 as financially constrained projects.

Projects	Title	2020 - 2029	2030 - 2039	Actions
1191	K-92 Centennial Bridge replacement	\$132,000,000		Move to constrained project listing
1324	I-70/K-7 Interchange KA-1003-10 (Phase 5)		\$80,000,000	Move to illustrative project listing
1328	I-70/K-7 Interchange KA-1003-11/15 (Phase 10)	\$64,900,000		Split project up from Phase 6, and retain this phase in constrained listing
1328	I-70/K-7 Interchange KA-1003-11/15 (Phase 6)	\$90,100,000		Move to illustrative project listing

With proposed adjustments, financial analysis in Connected KC 2050 would show sufficient local and federal revenues to support the additional cost.

**POLICY CONSIDERATIONS:**

Metropolitan Transportation Plan amendments should follow policy guidance from Connected KC 2050 and policies adopted therein. (Complete and Green Streets, Major River Crossing Policy, Congestion Management, etc.)

K-92 Centennial Bridge

- o [Congestion Management Policy](#) updated and adopted through CKC2050. It indicates that projects that add SOV capacity should First document a congestion/reliability issue and concern. Consider TDM/TSM strategies and indicate how TDM/TSM strategies alone cannot address congestion issue.
- K-92 is identified in [MARC’s regional bikeway plan](#) as a planned “regional corridor” .
- [MARC’s Major River Crossing Policy](#) applies to this work, which indicates that investigation and evaluation of bicycle and pedestrian accommodations shall be conducted for all projects for bridges crossing the Missouri and Kansas Rivers when existing or anticipated demand exists and when sufficient existing or planned future bicycle or pedestrian traffic generators are located within one mile of the project. Proposed concept contemplates bicycle facilities.

KDOT has provided responses to various policy considerations, and these are included in the following page:

**RECOMMENDATION:**

Recommendation of approval by Staff & release for public review and comment.

**BUDGET CONSIDERATIONS:** None.

**STAFF CONTACT:** Martin Rivarola

## **Provided by KDOT --Centennial MTP Amendment Follow Up Responses Complete & Green Streets**

KDOT is planning to implement bicycle and pedestrian accommodations across this bridge as it is constructed thus making it a Complete Street for the region. Users of all ages and abilities will be able to cross the river using the bridge; however, the exact design of the accommodations will become clearer during the preliminary engineering phase of the project as will connections to the local bicycle and pedestrian system. Currently there is no fixed route transit service in this part of the region.

### **Major River Crossing Policy**

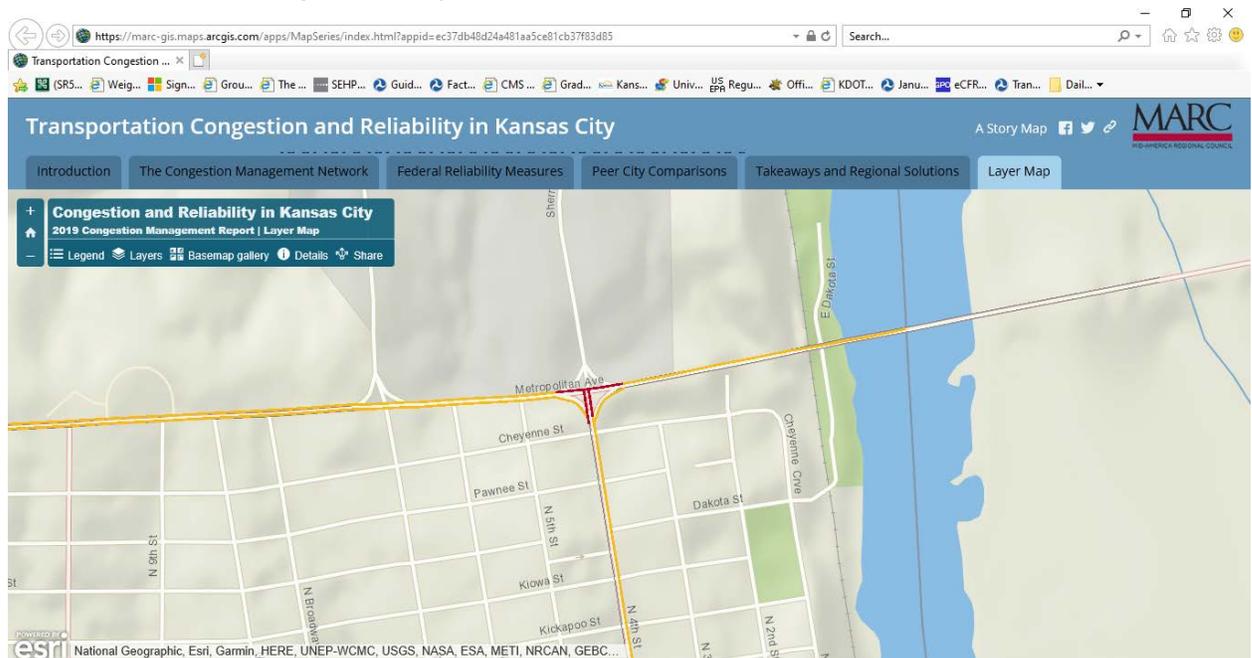
The Centennial Bridge, when replaced, is expected to provide bicycle and pedestrian accommodations thus satisfying MARC's Major River Crossing Policy. All users will be able to safely access the facility to cross the Missouri River. The exact design, however, of the accommodations will become clearer during the preliminary engineering phase of the project.

### **Green Infrastructure Framework**

KDOT actively designs projects to meet state and federal standards in order for necessary approvals to be obtained for the project to be let and constructed. At this time, these types of green infrastructure may not be compatible with the design of the project nor appropriate for the facility location. Nevertheless, at this phase in project development, project details related to these criteria haven't been determined. This will be considered during the design process.

### **Congestion Management Process**

Based on a review of the morning and afternoon congestion layers on MARC's Congestion Map, it does not appear that this is a significant concern for this bridge location at this point in time. Where present occasions of reoccurring congestion do not appear to be showing on MARC's congestion map, KDOT's concern remains the current and future and safety, mobility, and efficiency of the facility. Replacement of Centennial Bridge is being done to meet future projected travel demand levels and current design standards. It should be noted that the Advanced Preliminary Engineering (APE) Study acknowledges that traffic patterns and associated operations on either side of the bridge may change once it is replaced. This is highlighted by reviewing MARC's Congestion Map are the results of one of the federally required performance measures for the region: the travel time reliability of the National Highway System. At the intersection of 4<sup>th</sup> and Metropolitan there is a severe level of unreliability and a moderate level of unreliability on Metropolitan and on 4<sup>th</sup>.



## **KA-6016-01: Centennial Bridge Replacement on K-92 in Leavenworth County**

Bridge Replacement with an Expansion of the Structure to Four Lanes

### **Background**

The existing Centennial Bridge is a two-lane roadway with limited shoulder and is designated as Route 92 in Kansas. Route 92 is an east-west highway classified as a secondary arterial that crosses the Missouri River and continues easterly into Missouri until terminating at US-69 north of Excelsior Springs. In 2016, KDOT, together with its study partners, conducted an Advanced Preliminary Engineering (APE) study of this bridge that connects Leavenworth County, Kansas and Platte County, Missouri. The general purpose of the APE study was to develop a feasible solution for a replacement bridge and included an exploration of bridge type, size, and alignment, an estimation of probable costs, potential funding mechanisms, and a preliminary environmental review.

The study reviewed the existing conditions of the bridge which ultimately factored into the study's recommendations and initiated action to begin the development of this bridge replacement project. Based on the 2015 Kansas Bridge Inspection of the Bridge, the superstructure was found to be in satisfactory condition and the deck and substructure in good condition. The bridge did not meet federal guidelines to be classified as structurally deficient. However, the bridge, because of further inspections, has been identified as fracture critical. A fracture critical bridge has a steel member in tension, or with a tension element, whose failure would likely cause a portion of or the entire bridge to collapse. Fracture critical bridges could require emergency repairs and/or increased maintenance. Also, of important note, Centennial Bridge was designed and constructed in the 1950s making the geometrics of the roadway and the existing bridge be considered functionally obsolete, meaning it is built to outdated standards with narrow lane widths, lack of shoulder space, or low vertical clearance. Maintenance levels and the ongoing need for rehabilitation is another existing condition KDOT contends with on this structure due to its age. As the existing Centennial bridge continues to age, there is generally an increase in long term maintenance and repairs, particularly due to steel deterioration, to extend its service life.

The study, in consideration of existing conditions, significant public and stakeholder involvement, increasing traffic forecasts, and a host of additional determinants recommended the replacement of the bridge on an alignment immediately north of the existing bridge. This recommendation included associated network improvements on both the Kansas and Missouri sides of the river and the continued corridor preservation activities conducted by local jurisdictions. Consideration in the Centennial Bridge Study was also given to multimodal transportation. Dedicated bicycle and pedestrian accommodations are not provided on the existing Centennial Bridge, but the replacement configuration, as mentioned in the APE study, calls for a 10-foot wide shared-use path to be included. Further details and design considerations for bicycle and pedestrian accommodations will be made during the Preliminary Engineering work phase when it is underway.

### **Amendment Details**

In the 2020 Session, the Kansas State Legislature established the Eisenhower Legacy Transportation Program (or IKE), a 10-year program developed to preserve our existing system and implement major highway modernization and expansion projects and further our commitment to multimodal transportation and innovative technologies. In Spring 2020, Governor Kelly and Secretary Lorenz

announced the first round of expansion and modernization projects selected for inclusion in a development pipeline of projects for preliminary engineering work. Major highway projects, including bridge replacements such as Centennial, need to have preliminary engineering work completed so that projects may be considered for construction authorization when future funding becomes available.

The Centennial Bridge has moved from the Advanced Preliminary Engineering Study to the project development phase where KA-6016-01 provides funds for the Preliminary Engineering phase.

	KA-6016-01							
	<i>Federal/State AC Amount</i>	<i>Source</i>	<i>Year</i>	<i>State</i>	<i>Local</i>	<b>Total</b>	<i>AC Amount</i>	<i>AC Conversion Year~Source</i>
Eng	8560	ACNHP	2021	2140	0	10700.0	8560	2026~NHPP
Row	0	~	2024	3210	0	3210.0	0	~
Util	2568	ACNHP	2026	642	0	3210.0	2568	2026~NHPP
Cons/Ce	92020	ACNHP	2026	23005	0	115025.0	92020	2026~NHPP
<b>Total</b>	103148	~	~	28997	0	132145.0	103148	~

*(cost in thousands)*

Location: Centennial Bridge Replacement on K-92 in LV Co  
 Scope: Bridge Replacement-expanding structure to four lanes

Note: Program addition. Project is authorized for PE ONLY. The PE phase will utilize Advance Construction in the amount of \$ 8,560.0 K with conversion to NHPP in 2026. The total project cost is \$132,145.0 K but this estimate should be used for planning purposes only.

At this time, a Metropolitan Transportation Plan (MTP) amendment is requested by KDOT to include the Centennial Bridge Replacement Project in the constrained portion of the project listing of Connected KC 2050. This inclusion would involve moving the project from a Leavenworth County project on the Illustrative List (Project #1191) to being a KDOT project on the constrained list. To maintain fiscal constraint in the Plan, KDOT would propose to split the I-70/K-7 Interchange Project KA-1003-11/-15 Phase 6/10 (Project #1328) into two parts. KA-1003-15, Phase 10 would remain on the Constrained List of the Plan. KA-1003-11, Phase 6 would move to the Illustrative List of the Plan. Additionally, KDOT requests that KA-1003-10, Phase 5 be moved to the Illustrative List of Connected KC 2050 at this time. These actions in Connected KC will allow for the PE work phase of the Centennial Bridge Project to be amended into the 2020-2024 Transportation Improvement Program (TIP) and for the preliminary engineering work to proceed by mid-2021.