LOUISVILLE - SOUTHERN INDIANA OHIO RIVER BRIDGES PROJECT

Updated Financial Plan

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Federal Highway Administration

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Kentucky Transportation Cabinet
Indiana Department of Transportation

In conjunction with:
Kentucky Public Transportation Infrastructure Authority
Louisville and Southern Indiana Bridges Authority

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Executive Summary

INTRODUCTION

The Initial Financial Plan (IFP) for the Louisville-Southern Indiana Ohio River Bridges Project (Project) was approved by the Federal Highway Administration (FHWA) in January 2008. This document presents the Updated Financial Plan for the Project. This update includes current cost and expenditure data through State Fiscal Year (SFY) 2010, the current schedule for delivering the Project and the financial analyses presently being developed.

PROJECT OVERVIEW

The Louisville-Southern Indiana Ohio River Bridges Project is a construction and reconstruction project being undertaken to address long-term cross-river transportation needs in the Louisville metropolitan area (LMA). The Project has been developed over approximately 40 years in recognition of the need to improve cross-river mobility between Jefferson County, Kentucky and Clark County, Indiana (see Figure ES-1). In September 2003, the FHWA issued a Record of Decision (ROD) that identified the preferred alternative in the Final Environmental Impact Statement (FEIS) as two new Ohio River bridge crossings, connected approaches and the reconstruction of the Kennedy Interchange.

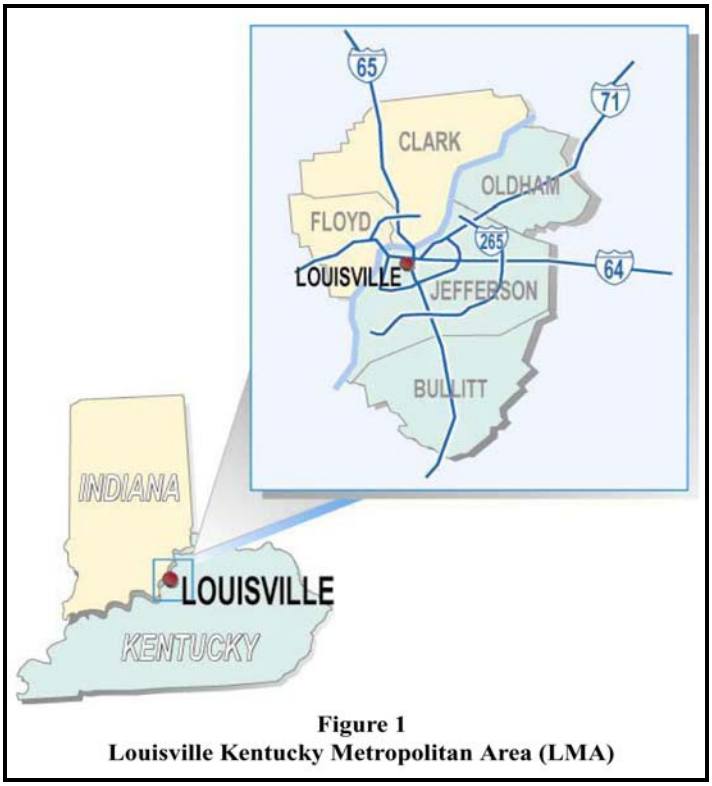

Figure ES-1. Louisville Kentucky Metropolitan Area

The Project has two primary components, further divided into six sections:

a) Reconstruction of the Kennedy Interchange where I-64, I-65 and I-71 converge in downtown Louisville (#1) and the construction of a new Downtown Bridge just east of the existing Kennedy Bridge (I-65) (#2), along with the approach in Indiana (#3).

b) A new East End Bridge (#5) located about eight miles from downtown Louisville, connecting the Gene Snyder Freeway (KY 841) to the Lee Hamilton Highway (IN 265), along with approaches in Kentucky (#4) and Indiana (#6). This element of the Project will complete the 265 corridor.

PROJECT SPONSORS

Both Kentucky and Indiana (the States) remain committed to delivering the Project, as evidenced by the following recent actions, culminating in the formation of the Louisville and Southern Indiana Bridges Authority (the Authority):

- The Kentucky General Assembly in 2009 enacted House Bill 3 (now codified as Kentucky Revised Statutes Chapter 175B, and hereafter referred to as the Bi-State Authority Statute). This legislation established a framework for developing significant transportation projects under the oversight of the Kentucky Public Transportation Infrastructure Authority (KPTIA).

- The Bi-State Authority statute also authorized the creation of the Authority for the purpose of financing, constructing and managing the Project as a significant transportation project between Kentucky and Indiana;[1]

- Indiana Governor Mitch Daniels issued an Executive Order in December 2009, authorizing Indiana's participation in the Authority;[2]

- The two Governors, in conjunction with the Mayor of Louisville, constituted and organized the Authority. The Authority is tasked with developing a financial plan for the Project and, ultimately, participating in the development of the Project;[3] and

- On March 25, 2010, the Kentucky General Assembly ratified the formation of the Authority in order to allow it to move forward expeditiously with the Project.[4]

The States and the Authority (together, the Project Sponsors) are working cooperatively to develop and implement plans for delivery of the Project , and KPTIA is participating with the Authority in the review and submission of this Updated Financial Plan to FHWA, as required by Kentucky House Bill 4 (2010).

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[1] *See generally* KRS 175B.005 *et seq*. (formerly known as "House Bill 3"); *see also* KRS 175B.030.
[2] Executive Order 09-11 (December 2009).
[3] The authority is comprised of 14 members: seven appointed by Indiana Governor Mitch Daniels, three appointed by Kentucky Governor Steve Beshear and four appointed by Louisville Mayor Jerry Abramson. The work of the authority is supported by an executive director and a communications director.
[4] On March 25, 2010, Kentucky Governor Steve Beshear signed into law Senate Joint Resolution 169, pursuant to which the Kentucky General Assembly ratified the formation of the Authority.

Additionally, both States have taken actions to expand the range of possible funding and financing strategies available to the Project. Specifically:

- The Bi-State Authority Statute recognizes the possibility of using tolls and, by granting authority to enter into a development agreement, the possibility of utilizing public-private partnership structures as a means to deliver the Project;[5] and

- In its most recent 2010 session, the Indiana General Assembly amended both the State's tolling statutes and its public-private partnership statute to apply expressly to the Project, allowing it to have the benefit of these tools related to the Indiana components.[6]

OVERVIEW OF FINANCIAL PLAN DEVELOPMENT

The Project Sponsors continue to devote a significant amount of resources to developing a financial plan for the Project. In particular, the States have re-evaluated the availability of state and federal funding and have determined that, in light of recent economic conditions, uncertainty surrounding the reauthorization of the federal highway program and other statewide transportation commitments, the Project cannot be funded solely through these revenue sources. As a result, the Project Sponsors have been directed by their respective Governors to explore alternative project revenue options supported by current statutory authority in order to deliver the Project in the most cost-effective manner.

Additionally, since the Authority was created in 2010, the Project Sponsors' goals for the finance plan have been further developed. They include:

1) Ensuring that cost sharing arrangements are equitable and the States' financial obligations to the Project are manageable;
2) Ensuring that the Project delivers value to the States, taxpayers, project partners, and end users through appropriate toll rates and the lowest feasible Project cost;
3) Developing the Project in a manner that supports congestion management for the region; and
4) Delivering a Project that is a self-sustaining, integrated cross-river mobility solution for future generations.

The Project Sponsors are in the preliminary stages of evaluating a variety of alternative revenue sources, while continuing to move forward with pre-development activities. Such activities have included:

- Kentucky's issuance of $100 million of $231 million of authorized GARVEE bonds for the Project;
- The Kentucky legislature's provision of flexibility to issue additional GARVEE bonds for the Project as an alternative to future pay-as-you-go funding resources;
- Regular Authority meetings since February 2010 that have explored a wide range of funding and finance options for the Project;

[5] Kentucky Revised Statutes ("KRS") Section 175B.030 (6) and (7).
[6] *See* Indiana Senate Enrolled Act No. 382 (2010).

- The formation of a Finance and Construction Planning Committee which is charged with overseeing financial plan development and pre-construction activities on the Authority's behalf;
- Submission of an Expression of Interest to FHWA in May 2010 to begin the process of obtaining federal approval for tolling;
- The preparation of various preliminary traffic and revenue analyses to evaluate the level of revenues that may be generated by the Project under a variety of tolling scenarios; and
- The Project Sponsors' authorization of continued development of a time-of-day travel demand model to enable more precise traffic estimates for peak and off-peak hours and enable the project team to evaluate a more comprehensive range of tolling options and policies.

OVERVIEW OF THE UPDATED FINANCIAL PLAN

This Updated Financial Plan is being submitted jointly by the Kentucky Transportation Cabinet (KYTC) and the Indiana Department of Transportation (INDOT), in conjunction with the Louisville and Southern Indiana Bridges Authority (LASIBA) and the Kentucky Public Transportation Infrastructure Authority (KPTIA), pursuant to Kentucky House Bill 4 (2010). The Updated Financial Plan revises the Initial Financial Plan approved by FHWA in January 2008 to include revised and updated Project cost estimates, Project schedule, and expected revenue and funding sources. This update also includes a discussion of potential alternative revenue and project delivery models, an assessment of risks that may have a negative impact on the Project, and the Project Sponsors' strategies to mitigate these risks.

This Updated Financial Plan does not provide the ultimate financial plan for the Project, due to the extensive amount of work required to evaluate the alternative revenue, project delivery, and financing options currently under development. The Project Sponsors are committed to developing a viable financial plan that recognizes the limitations on state and federal transportation funding and finds the right balance of funding alternatives to meet the following goals:

- Ensuring that the States' contributions to the Project are manageable in light of other statewide transportation needs;
- Keeping tolls at the lowest level possible; and
- Promoting transportation system efficiency and managing traffic impacts in the region.

In order to understand and evaluate the tolling options, the States are developing a comprehensive time-of-day travel demand model for the Project. The model will help the Project Sponsors evaluate a comprehensive range of tolling scenarios and pricing mechanisms and understand the potential traffic impacts associated with each scenario. To date, preliminary analyses indicate that, in combination with conventional federal and state funding, sufficient toll revenues may be generated solely from tolling the East End and Downtown bridges under certain assumptions, although this scenario may not be fully responsive to all of the Project Sponsors' goals described above.

This document demonstrates the States' commitment to completing the Project and to sound financial planning, as required by Section 106 of Title 23 and modified by Section 1305 (b) of the Transportation Equity Act for the 21st Century (TEA-21) and Section 1904 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). This document addresses the following requirements (by chapter):

- **Chapter 1. Introduction** – This chapter provides an overview of the Project by section, describes the management plan, and provides a history of the Project to date, including a review of the status of all ongoing activities.
- **Chapter 2. Project Cost Estimate** – This chapter provides a detailed estimate of Project costs and updated cost estimates. It also summarizes the costs incurred to date and provides detail on key cost-related assumptions.
- **Chapter 3. Implementation Plan** – This chapter provides information on the planned schedule for completing the Project, including information regarding the assignment of responsibilities and a summary of the necessary permits and approvals. This chapter also includes an assessment of a variety of project delivery methods.
- **Chapter 4. Financing and Revenue** – This chapter describes the anticipated plan of finance for the Project, including a range of potential sources of funds and financing methods, and an assessment of the availability of these funding sources. This chapter also includes a discussion of factors that may impact the availability of funding or financing for the Project.
- **Chapter 5. Project Cash Flow** – This chapter provides an annual construction cash flow schedule for the Project and an overview of the planned sources of funds. This chapter also addresses the estimated long term operations and maintenance costs of the Project and how these costs will be managed.
- **Chapter 6. Risk Identification and Other Factors** – This chapter identifies anticipated risks that could affect the Project and, in particular, the financial plan for the Project. This chapter also provides mitigation strategies to manage such risks and addresses the impact of the Project on each State's transportation program, budgets, and other projects.

SUMMARY

Based upon the information provided in this Updated Financial Plan, the Project Sponsors believe that the Project can be completed in accordance with the current projected construction schedule. Future updates to the Financial Plan will reflect any changes to anticipated funding sources, project delivery methods, cost estimates and schedule.

The Project Sponsors are fully committed to delivering the Project in a timely and cost-effective manner that meets the adopted Project goals.

Chapter 1. Introduction

INTRODUCTION

The Initial Financial Plan (IFP) for the Louisville-Southern Indiana Ohio River Bridges Project (Project) was approved by the Federal Highway Administration (FHWA) in January 2008. This document presents the Updated Financial Plan for the Project. This update includes cost and expenditure data through State Fiscal Year (SFY) 2010, the current schedule for delivering the Project and the financial analyses presently being developed. This Updated Financial Plan has been prepared generally in accordance with FHWA's Financial Plans Guidance. Once the Financial Plan has been more fully developed, more detailed cost and revenue history, cost and revenue trends and summaries of significant cost changes will be included in future Annual Updates.

PROJECT DESCRIPTION

The Louisville-Southern Indiana Ohio River Bridges Project is a construction and reconstruction project being undertaken to address long-term cross-river transportation needs in the Louisville metropolitan area (LMA). The Project was developed over an almost 40-year period (see *Project History* below), in recognition of the need to improve cross-river mobility between Jefferson County, Kentucky and Clark County, Indiana (*see Figure 1-1)*. In September 2003, FHWA issued a Record of Decision (ROD) confirming the selected alternative identified in the Final Environmental Impact Statement (FEIS) consisting of two new Ohio River bridge crossings and the reconstruction of the Kennedy Interchange.

Figure 1-1. Louisville Kentucky Metropolitan Area

From a design perspective, there are six sections that form the two primary elements of the Project: A) Downtown improvements, which comprise Sections 1, 2 and 3; and B) East End improvements, which comprise Sections 4, 5 and 6. The geographic layout of each of the six major construction segments is shown in Figure 1-2 and described in further detail below.

Figure 1-2 Project Sections

1. Kennedy Interchange

The Kennedy Interchange is the convergence of Interstates 64, 65, and 71 in downtown Louisville, known as "Spaghetti Junction." The Project will reconfigure and rebuild the Kennedy Interchange south of its existing location. Improvements will include:

- The elimination of left exit ramps from the Interchange and tight weave patterns between the merge and diverge points of the Interchange ramps
- A new partial interchange at I-71 and Frankfort Avenue/Ohio Street
- The extension of Witherspoon Street for connectivity to Frankfort Avenue and the Interchange, providing new access to the Butchertown Historic District
- Extension of Clay and Campbell Streets through the Interchange to allow improved access to River Road
- Approximately 40 acres of additional green space for Waterfront Park and the Downtown Development Corporation
- A reduction in roadway piers obstructing sightlines in Waterfront Park

2. Downtown Bridge (I-65)

The new Downtown Bridge will carry traffic north on Interstate 65, spanning the Ohio River immediately upstream, or east, of the existing Kennedy bridge, which currently carries all I-65 traffic. Once opened, the new, six-lane bridge will allow the existing Kennedy Bridge to transition to a six-lane bridge for I-65 southbound traffic only.

The new facility will be a three-tower, cable-stayed bridge. This structure was selected by the Ohio River Bridges Project's Executive Bridge Type Selection Committee after extensive community involvement. The three-tower, cable-stayed bridge includes:

- One pair of 210-foot center towers and two pairs of 125-foot adjacent towers supporting cables on either side of the bridge deck
- Two 750-foot deck spans on either side of the center towers with 250-foot deck spans on either side connecting to approach structures
- Two 12-foot shoulders on each side of the bridge
- A 17-foot pedestrian/bicycle path along the upstream (east) side of the crossing

3. Indiana Approach

The Downtown element of the Project also incorporates changes to the I-65 approaches in Indiana, including the realignment of southbound I-65 to the existing Kennedy Bridge and construction of a new segment of northbound I-65 from the new Downtown Bridge. The improvements to the current configuration include:

- A new ramp system connecting the Clark Memorial Bridge with I-65
- Additional access between Clarksville and Jeffersonville with the opening of Sixth Street under I-65
- A new connection with I-65 at Court Avenue
- A reconfigured Interchange at 10th Street
- Improved access at I-65 north of Stansifer Avenue

4. Kentucky Approach to the East End Bridge

The Kentucky approach to the new East End Bridge will widen the existing KY841 (Gene Snyder Freeway) to six lanes from I-71 to its current terminus at U.S. 42 and extend it 1.4 miles to the bridge. The extension will add a new, six-lane (three northbound, three southbound) section to the Gene Snyder Freeway, which the East End Bridge will connect to the Lee Hamilton Highway in Indiana.

This section has several distinctive features, including:

- A 2,000-foot tunnel under U.S. 42 and the historic Drumanard Estate
- A redesigned partial interchange at U.S. 42 that retains current access, allowing traffic to enter and exit KY 841 only in the direction of I-71

- An overpass crossing Harrods Creek at the Harrods Creek Marina
- A new traffic signal at the U.S. 42/KY 841 intersection, synchronized with the signal at the adjacent intersection of U.S. 42 and Wolf Pen Branch Road
- A multi-use pathway near the Ohio River Terrace Character Area

5. East End Bridge

The East End Bridge will be a new six-lane facility (three northbound, three southbound), crossing the Ohio River just north of Harrods Creek on the Kentucky side and connecting to just north of Utica on the Indiana side. This section will connect the Gene Snyder Freeway in Kentucky to the Lee Hamilton Highway in Indiana, completing the 265 corridor in the eastern portion of the Louisville-Southern Indiana metropolitan area. The new bridge will be a median-tower, cable-stayed center cables bridge type including:

- Two towers rising 200 feet from the center of the bridge deck with cables extending to the roadway median
- Two 12-foot shoulders on either side of the bridge
- A 17-foot pedestrian/bicycle path along the downstream (west) side of the crossing

6. Indiana Approach to the East End Bridge

The Indiana approach to the new East End Bridge will add a new, six-lane (three northbound, three southbound) 3.4-mile extension to IN 265 (Lee Hamilton Highway) from its current terminus at IN 62 to the Ohio River. This section will connect the Lee Hamilton Highway to the Gene Snyder Freeway in Kentucky via the East End Bridge.

This section features:

- The addition of a new, full interchange at Old Salem Road
- Reconstruction of the IN 265/IN 62/Port Road interchange
- Updates to Utica-Sellersburg Road near the new 265 corridor

PROJECT HISTORY

The inception of the Ohio River Bridges Project occurred over 40 years ago as part of the development of a regional transportation planning process. Below is a chronology of major Project milestones.

- **1963**

  The transportation planning process began in 1963 when the states of Indiana and Kentucky, together with the local communities, established a cooperative

transportation planning program and a metropolitan planning organization (MPO) known as the Kentuckiana Regional Planning and Development Agency (KIPDA). That early program resulted in the LMA's first transportation plan in 1969.

- **1969**

  The recommendations of the first long-range plan in 1969 included "extension of I-265 through Clark County [Indiana] with a crossing of the Ohio River at Utica [as] an extremely important addition to the freeway system." This extension would have connected with the then-proposed I-265/KY 841 near U.S. 42 in eastern Jefferson County, Kentucky.

- **1978**

  The next long-range transportation plan, completed in 1978, again called for the extension of I-265 from I-65 in Indiana to the terminus of I-265/KY 841 at U.S. 42 in Kentucky and included a bridge over the Ohio River.

- **1991 – 1994**

  Between 1991 and 1994, KYTC and INDOT sponsored the Metropolitan Louisville Ohio River Bridge Study. This study investigated the need for a new Ohio River bridge in the LMA and evaluated four potential corridors for construction of such a bridge. The third long-range transportation plan for the LMA was prepared by KIPDA in 1993. This plan again recommended an extension of I-265 between I-65 in Indiana and I-265/KY 841 in Kentucky with a new Ohio River bridge. (An extension of I-265 has been constructed from I-65 to S.R. 62 in southeastern Clark County, Indiana. That extension, which has been designated S.R. 265, ends short of an Ohio River crossing.) In 1993, KIPDA also recommended improvements to the complex Kennedy Interchange in downtown Louisville to alleviate congestion and safety problems. Known locally as "Spaghetti Junction," the Kennedy Interchange is the convergence of three interstate highways — I-64, I-65, and I-71 — and is located on the southern bank of the Ohio River at the base of the Kennedy Bridge, which carries I-65 across the Ohio River.

- **1995**

  Based on results of the Metropolitan Louisville Ohio River Bridge Study and over 25 years of local transportation planning, KIPDA initiated a Major Investment Study in 1995 to "address the problem of current and future travel mobility across the Ohio River between Kentucky and Indiana in the Louisville region." The Ohio River Major Investment Study (ORMIS) evaluated a wide range of transportation improvements that might address cross-river mobility needs, including light rail transit, multiple new highway bridge corridors, reconstruction of the Kennedy Interchange, travel demand management strategies, transportation system management measures, and enhanced bus service.

- **1996**

  The KIPDA's Transportation Policy Committee unanimously endorsed the recommendation of the ORMIS Committee for a preferred investment strategy incorporating the following four elements:

  - A "two-bridge solution;"

- Bus-oriented transit improvements;
- Short-term traffic operational improvements; and
- A regional financial summit to deal with funding needs.

The "two-bridge solution" included: building a new bridge parallel to the Kennedy Bridge (I-65) between downtown Louisville and Jeffersonville, Indiana; reconstructing the Kennedy Interchange adjacent to the Kennedy Bridge; and building another new bridge approximately eight miles east of the Kennedy Bridge, connecting KY 841/I-265 (Gene Snyder Freeway) in eastern Jefferson County, Kentucky, with S.R. 265 at S.R. 62 in southeastern Clark County, Indiana.

- **1997 – 1998**

  Based on the ORMIS recommendations and the KIPDA long-range transportation plan, INDOT and KYTC agreed in December 1997 to jointly pursue needed improvements to cross-river mobility between Jefferson County, Kentucky and Clark County, Indiana. The Federal Highway Administration issued a Notice of Intent in the Federal Register on March 27, 1998 indicating that FHWA, in cooperation with INDOT and KYTC, would prepare an EIS to evaluate alternatives for improving cross-river mobility between Jefferson and Clark Counties, including the ORMIS recommendation.

- **2003**

  The Federal Highway Administration issued a Record of Decision selecting the preferred alternative as a Two Bridges/Highway Alternative, with the specific elements selected in the Far East and Downtown corridors, as well as the Kennedy Interchange Reconstruction option.

- **2008**

  The Federal Highway Administration approved the Initial Financial Plan for the Project. The States also submitted a Project Management Plan for approval that was acknowledged and approved by FHWA on December 8, 2008.

- **2010**

  The Authority was established, pursuant to the Bi-State Authority Statute, to oversee the financing and construction of the Project. Indiana Governor Mitch Daniels issued an Executive Order in December 2009 authorizing Indiana's participation in the Authority, and its formation was ratified by the Kentucky General Assembly in late March 2010, as required by the enabling statute.

PROJECT COST SHARING

In 1993, the Commonwealth of Kentucky, acting through the Kentucky Transportation Cabinet (KYTC) and the State of Indiana, acting through the Indiana Department of Transportation (INDOT), agreed to jointly pursue needed improvements to cross-river mobility within the Louisville metropolitan area. This joint pursuit was "codified" in a series of formal agreements, including a 1997 Memorandum of Agreement for preparation of the Environmental Impact Documents and Preliminary Bridge Study Report and a 2004 Memorandum of Agreement for

design and construction of the two bridges and approaches (commonly referred to as the Bi-State Management Agreement).

The Bi-State Management Agreement allocated the Project's costs between the States; however, in the course of identifying and evaluating alternative revenue sources and project delivery options for the Project, the Project Sponsors may re-evaluate this cost sharing arrangement.

PROJECT MANAGEMENT AND OVERSIGHT

In 2009, the Kentucky General Assembly enacted the Bi-State Authority Statute, which authorized the creation of the Louisville and Southern Indiana Bridges Authority. The Authority's mission is to finance, construct and oversee the Project, with the first step being the submission of this Updated Financial Plan and subsequently the development of the ultimate financial plan for the Project. Indiana's participation in the Authority was authorized by an Executive Order from Indiana Governor Daniels in December 2009, and the Authority's formation was formally ratified by the Kentucky General Assembly in 2010.

In accordance with the Bi-State Management Agreement, the States formed the Bi-State Management Team (BSMT) to manage the Project. Representatives from KYTC and INDOT comprise the BSMT, along with a non-voting, ex-officio member from FHWA. The BSMT has retained a General Engineering Consultant to execute selected program management services on its behalf.

The BSMT oversees all project activities, from preliminary engineering and environmental phases through final construction. The form of oversight, however, may be subject to change based on the ultimate delivery model selected for the Project. The BSMT is also responsible for developing the Project Management Plan (PMP) to prescribe the project management and oversight methods, including scope, schedule, and cost oversight and cost containment procedures. The PMP was submitted to, and approved by, FHWA in December 2008. The BSMT is also responsible for dispute resolution and determining the allocation of any costs that may arise from unforeseen events.

OVERVIEW OF CURRENT ACTIVITIES AND PROJECT SCHEDULE

Table 1-1 lists each of the six Project sections, the major section-specific activities that are currently underway and the planned completion date for these sections. All dates are based on a state fiscal year (SFY) ending June 30.

Table 1-1. Current Activities and Status

Project Section	Current Activities	Approximate Status[1]	Estimated Construction Start Date (SFY)[1]	Estimated Open to Traffic Date (SFY)[1]
Section 1 - Kennedy Interchange	Design phase ROW phase	50% complete 5% complete	2014	2022
Section 2 - Downtown Bridge	Design phase	20% complete	2016	2020
Section 3 - Downtown Indiana Approach	Design phase ROW phase	5% complete 0% complete	2016	2020
Section 4 - East End Kentucky Approach	Design phase ROW phase	50% complete 50% complete	2013	2017
Section 5 - East End Bridge	Design phase	30% complete	2013	2017
Section 6 - East End Indiana Approach	Design phase ROW phase	35% complete 60% complete	2013	2017
Other costs[2]	Ongoing			

(1) Based on state fiscal years ending June 30.

(2) Includes costs that are not section-specific.

The current Project schedule is based on public delivery of the Project utilizing traditional design/bid/build contracting processes. To date, Project development activities have been scheduled and coordinated in such a way as to meet the Project construction schedule shown in Figure 1-3. The Project construction schedule has been structured to minimize the impact on existing traffic throughout the construction period.

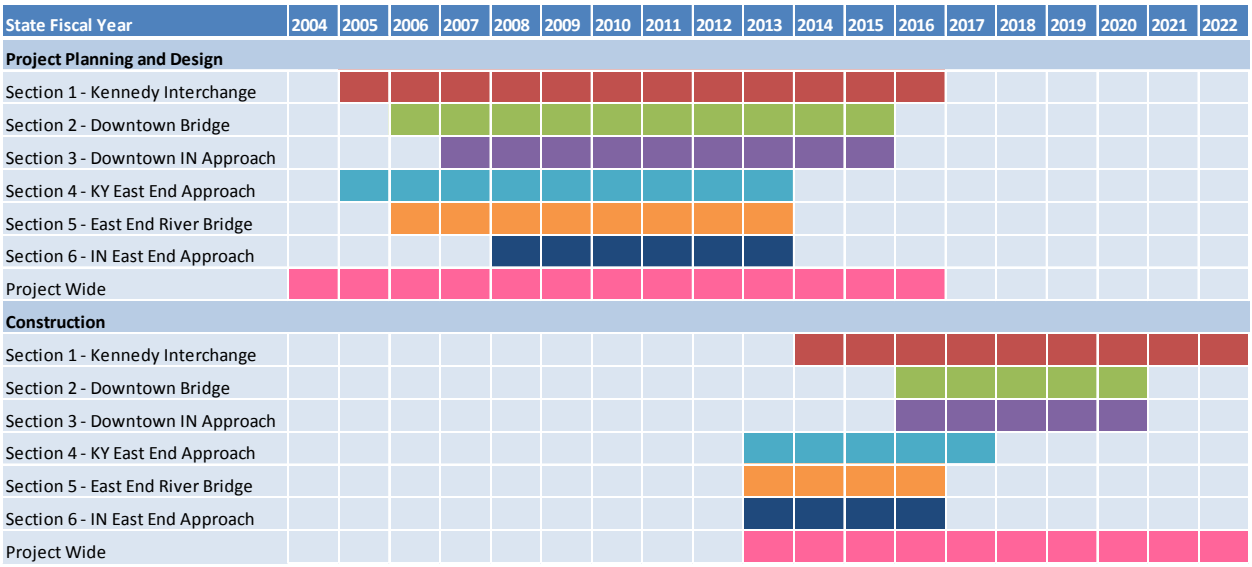

Figure 1-3. Project Schedule Overview

The Project Sponsors are currently evaluating the potential benefits of alternative project delivery contracting tools that may accelerate the Project schedule. The alternative project delivery models that may be considered range from design-build to full concession, under which the private sector would have the responsibility to design, build, finance, operate and maintain the Project. The benefits from the use of alternate contracting methods may include acceleration of Project construction, potential Project cost guarantees and more certainty surrounding Project completion dates. For further discussion, see Chapter 3.

Chapter 2. Project Cost Estimate

INTRODUCTION

This chapter provides a detailed description of Project cost elements and current cost estimates in year-of-expenditure dollars for each element. This chapter also summarizes the costs incurred to date since the Record of Decision and provides detail on key cost-related assumptions.

CURRENT COST ESTIMATES

The current total estimated cost for the Project is $4.083 billion, based on projected year-of-expenditure dollars (i.e., on a cash flow basis in nominal terms). This cost estimate: (i) reflects updated estimates prepared in early 2010 by the Project Sponsors and (ii) includes project phasing and adjustments to the unit cost estimates used in the Initial Financial Plan (IFP) cost estimate. As discussed further below, current cost estimates include a long-term annual inflation factor consistent with the methodology employed by the States in their respective statewide construction programs.

The current cost estimate of $4.083 billion is only slightly higher than the original IFP estimate of $4.068 billion. The variance is attributable to a number of factors, including (i) a greater level of accuracy due to the more advanced stage of design; (ii) the incorporation of various value engineering concepts, reducing certain Project costs; and (iii) the refinement of the Project schedule, including both to account for some delay in implementation but also the accelerated funding availability from alternative revenues compared to the pay-as-you-go funding proposed in the IFP. Value engineering concepts incorporated to date represent projected savings of at least $200 million, and include: (i) modifications to the SR 265/SR 62 Interchange (approximately $53 million) and (ii) the East End Bridge tower foundation design (approximately $44 million).

Table 2-1 and Figure 2-1 provide an overview of Project costs, broken down by section and by cost element based on the following: (i) current Project schedule, (ii) current cost estimates, and (iii) public delivery of the Project. The estimates are presented in year-of-expenditure dollars and incorporate reasonable inflation estimates.

Table 2-1. Project Cost Estimate – by Section and by Element
(Year-of-Expenditure $, millions)

Project Segment	Construction and Contingency	Other Costs (Design, ROW, etc.)	Total Cost [1]
Section 1 – Kennedy Interchange	$1,294.7	$235.3	$1,530.0
Section 2 – Downtown Bridge	482.2	27.9	510.1
Section 3 – Downtown IN Approach	324.5	68.3	392.7
Section 4 – KY East End Approach	783.7	101.4	885.2
Section 5 – East End River Bridge	384.0	22.2	406.2
Section 6 – IN East End Approach	194.1	40.7	234.8
Other Costs [2]	0.0	124.2	124.2
TOTAL [1]	**$3,463.2**	**$620.0**	**$4,083.2**

(1) Totals may not sum due to rounding.

(2) Includes costs that are not section-specific.

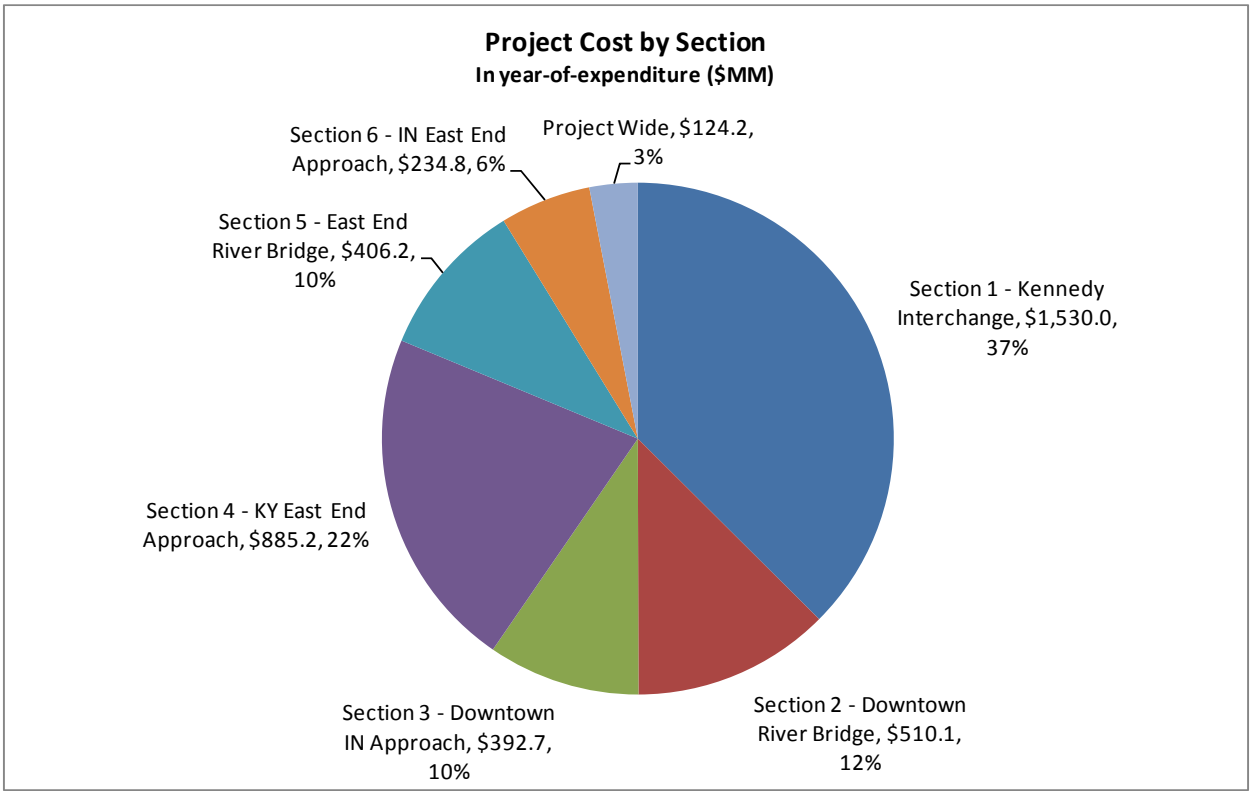

Figure 2-1. Total Expenditures by Section

INFLATION ASSUMPTIONS AND COST ESTIMATING METHODOLOGY

Inflation Assumptions

Over much of the past decade, the highway construction industry experienced significant cost inflation; however, recent experience in many states indicates that bids are coming in lower than engineers' estimates, indicating general downward pressure on prices. While employing the standard practice of using historical trends to predict future outcomes has become more difficult given a lack of a consistent pattern in recent trends, the Project Sponsors believe that historical averages should be realized over the construction period.

For purposes of the IFP, a 10% average annual inflation rate was used for construction costs through 2007, based on observed inflationary trends from 2003 to 2006. The rate was reduced to 8% in 2008 and further reduced to a more historically consistent 4% annual rate in 2009, based on a review of Producer Price Index (PPI) trends. While not identical, this methodology is consistent with how both States forecasted inflation in their respective statewide construction programs at that time. For the purpose of this Updated Financial Plan, however, a long-term inflation rate of 4% has been assumed due to the fact that current cost estimates were updated in 2010 and the market appears to be returning to historic levels based on recent new construction PPI trends and averages.

Additionally, design and program management costs, predominantly comprised of labor costs, are conservatively assumed to grow at 4% annually, compared with an historical average Consumer Price Index (CPI) rate of 2.5%. For purposes of the IFP, a 5% inflation rate was applied to Right of Way costs. Given current market conditions and the amount of ROW acquired to date or currently underway, the Updated Financial Plan assumes a 4% inflation rate for ROW costs. Enhancement costs are not inflated, as these amounts are fixed pursuant to the Record of Decision.

Cost Estimating Methodology

Current cost estimates have been developed by the Bi-State Management Team, in conjunction with the GEC and FHWA. The cost estimates were developed by breaking down the Project into the six major sections plus an "Other Costs" category and, further, into nine major elements. The methodology for each element is further described below.

Cost Elements
Engineering and Design
Preliminary and final engineering design services through construction documents. Engineering cost estimates are based on costs of the phased design contracts currently executed or in negotiation, plus estimates for the cost of future design phases. Total engineering and design costs reflect a 5% design contingency.
Design Program Management
Cost to each state for services of the GEC during the design phase and miscellaneous departmental program management costs. This element is shown in three different components: Design Program Management INDOT and Design Program Management KYTC to cover the GEC costs, and Design Program Management KYTC Misc to cover KYTC internal costs (i.e. staff charges and statewide letter agreements used to supplement staff for program management activities). The costs of similar activities during the construction phase are included in the Construction Administration and Inspection element. Program Management estimates are based on currently negotiated contracts and estimates that cover the currently planned Project schedule.
Construction Administration and Inspection
All construction and program management, administration, and inspection activities during the construction phase of the Project. Construction Administration and Inspection costs are estimated at 8% of the construction cost estimate.
Construction
Estimated cost of construction. Construction estimates reflect current prices inflated for year of expenditure utilizing multiple design-bid-build contract packages throughout the construction period.
Construction Contingency
Contingency to cover additional construction services in the event unforeseen circumstances arise that result in additional cost. Construction contingency estimates are based on the level of engineering undertaken to date for each Project section. Section 1 utilizes a 10% contingency; Sections 2, 3, 5 and 6 utilize a 20% contingency; and Section 4 utilizes a 25% contingency.
Utilities
All public and private project-related utility relocation and new utility construction. Costs include those related to telephone, electric, gas, fiber optics, water, sewer, TV cable, and storm drainings and are based on the most up-to-date cost information available.
Right of Way Acquisition
Appraisals, administration, management, and acquisition of required right of way. Costs include completed and anticipated right of way acquisition and are based on the most up-to-date market information available.
Enhancements
Various Project-related commitments as identified in the Record of Decision. This includes fixed dollar commitments made for an East Louisville Downtown Area Planning Study, West Louisville Access Planning Study, Minority Historic Rehabilitation Craftsman Training Program, Rehabilitation of Trolley Barn Buildings in West Louisville and a Clark County Planning Study.

Cost Elements
Historic Mitigation
Implementation of mitigation of sensitive historic properties. This includes costs for such items as the acquisition and renovation of the Spring Street Freight House in Indiana, the acquisition and rehabilitation of Rosewell in Kentucky, the development of six Historic Preservation Plans and Treatment Plans for the Vermont American and the Cold Ice and Storage buildings in Kentucky, interpretative signing, and noise studies for specific buildings in the Butchertown Historic District.

Figure 2-2 and Table 2-2 provide a summary breakdown of Project costs by section, cost element and State, in year-of-expenditure dollars.

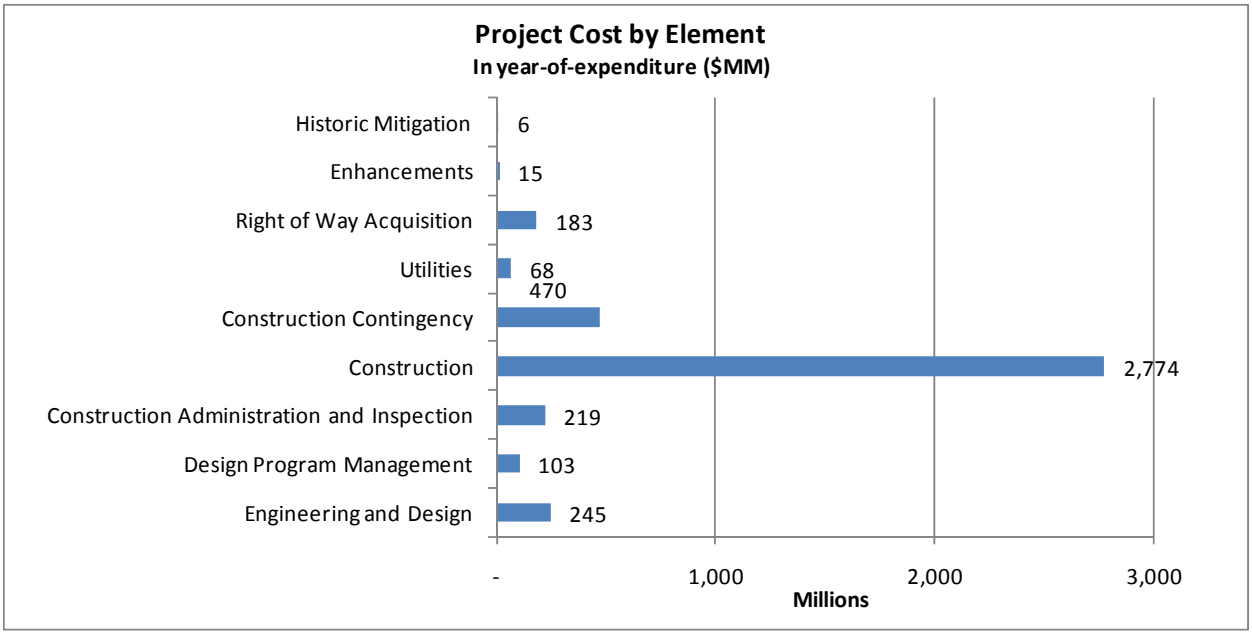

Figure 2-2. Project Cost by Element

As mentioned previously, the Bi-State Management Agreement allocates the Project's costs between the States; however, in the course of identifying and evaluating alternative revenue sources and project delivery options for the Project, the Project Sponsors may re-evaluate this cost sharing arrangement.

The following table shows the breakdown of costs based on the Bi-State Management Agreement allocation, in which costs associated with the main river structures and approach spans for the Downtown Bridge and the East End Bridge are to be shared on a 50-50 basis between the States, and costs associated with the approach roadways, structures, and interchanges on each side of the river are the responsibility of each state, respectively.

Table 2-2. Project Cost Estimate by Project Section, Element, and State
(Year-of-Expenditure $, millions)

	Cost by Section										Total Cost by State		
Project Element	**1 - KY**	**2 - KY**	**2 - IN**	**3 - IN**	**4 - KY**	**5 - KY**	**5 - IN**	**6 - IN**	**Other - KY**	**Other - IN**	**KY**	**IN**	**TOTAL**
Engineering and Design	$122.7	$14.0	$14.0	$17.0	$37.7	$11.1	$11.1	$17.0	-	-	$185.5	$59.0	$244.5
Design Program Management-INDOT	-	-	-	-	-	-	-	-		30.6	-	30.6	30.6
Design Program Management-KYTC	-	-	-	-	-	-	-	-	64.8		64.8	-	64.8
Design Program Management-KYTC Misc	-	-	-	-	-	-	-	-	7.3		7.3	-	7.3
Construction Administration and Inspection	85.1	15.1	15.1	20.3	47.1	12.0	12.0	12.1	-	-	159.3	59.5	218.8
Construction	1,103.3	188.4	188.4	253.5	589.3	150.0	150.0	151.7	-	-	2,030.9	743.5	2,774.5
Construction Contingency	106.3	37.7	37.7	50.7	147.3	30.0	30.0	30.3	-	-	321.3	148.7	470.0
Utilities	23.0	-	-	4.1	36.5	-	-	4.5	-	-	59.5	8.6	68.1
Right of Way Acquisition	89.6	-	-	47.2	27.2	-	-	19.2	-	-	116.8	66.4	183.2
Enhancements - KYTC *									14.7		14.7	-	14.7
Historic Mitigation - KYTC									4.5		4.5	-	4.5
Enhancements - INDOT *										0.3	-	0.3	0.3
Historic Mitigation - INDOT										2.0	-	2.0	2.0
TOTAL **	**$1,530.0**	**$255.1**	**$255.1**	**$392.7**	**$885.2**	**$203.1**	**$203.1**	**$234.8**	**$91.3**	**$32.9**	**$2,964.6**	**$1,118.6**	**$4,083.2**

** Enhancement costs are fixed dollar commitments and are therefore not escalated over time.*
***Totals do not sum due to rounding.*

PROJECT EXPENDITURES

As shown in Table 2-3, approximately $164 million has been expended on the Project through the end of SFY 2010.

Table 2-3. Total Expenditures to Date by State Fiscal Year
(Year-of-Expenditure $, in millions)

SFY	KY	IN	Total
2004	$1.0	$0.6	$1.6
2005	15.1	4.1	19.2
2006	29.3	7.2	36.6
2007	29.9	6.7	36.6
2008	17.7	4.4	22.2
2009	17.8	7.6	25.4
2010	17.2	5.5	22.7
TOTAL	**$128.1**	**$36.1**	**$164.3**

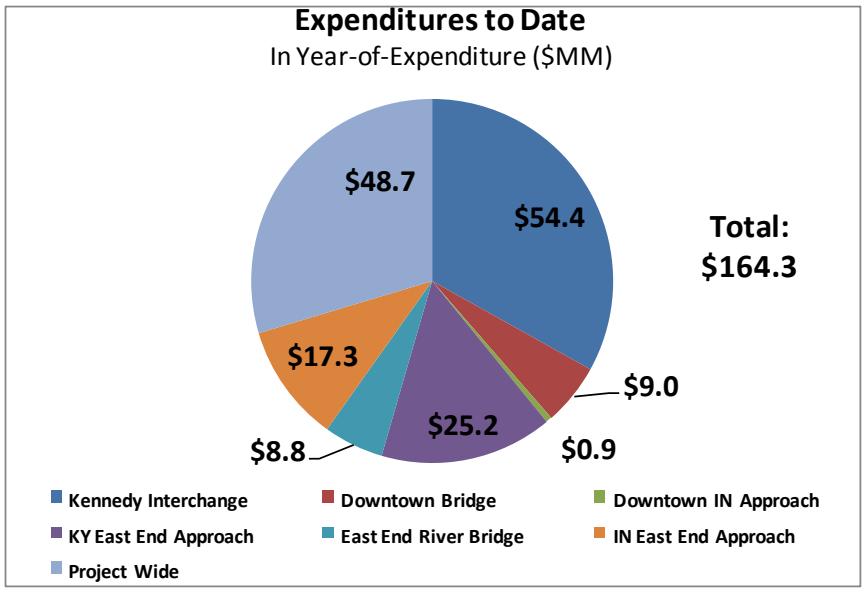

Figure 2-3. Total Expenditures to Date

Table 2-4 provides a summary of the projected future expenditures for the Project, by state fiscal year and based on the current year of expenditure estimates.

Table 2-4. Projected Future Expenditures by State Fiscal Year
(Year-of-Expenditure $, in millions)

SFY	Total
2011	$70.5
2012	104.4
2013	277.7
2014	573.5
2015	669.8
2016	500.2
2017	406.5
2018	407.9
2019	380.0
2020	260.5
2021	192.1
2022	76.0
TOTAL	**$3,919.0**

Figure 2-4 shows funds expended on the Project to date and anticipated future expenditures. Figure 2-5 shows historic and future Project expenditures by section.

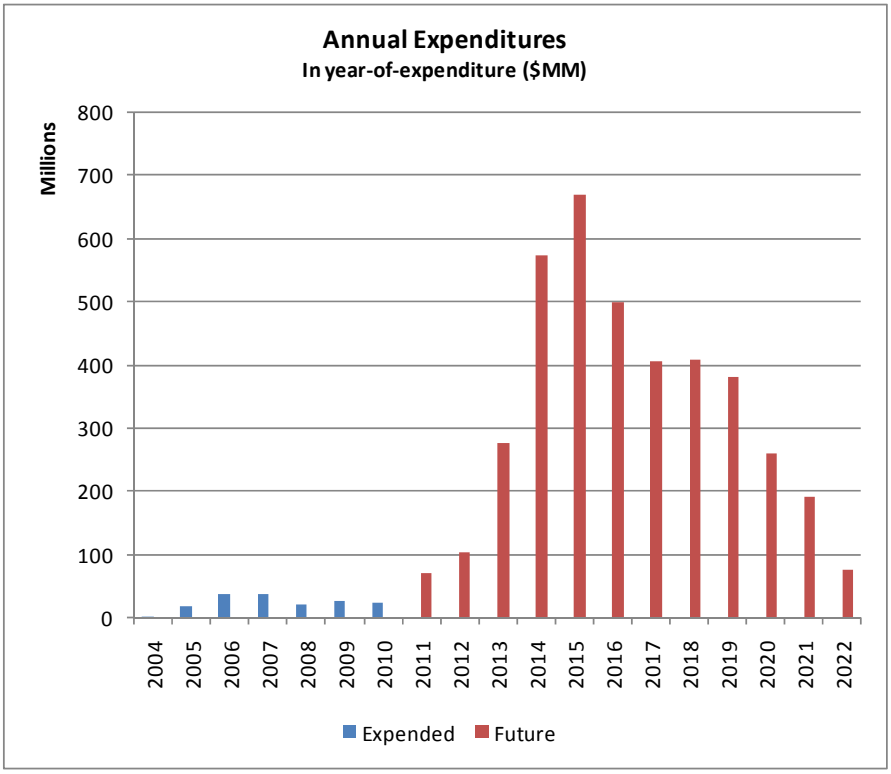

Figure 2-4. Historical and Projected Annual Expenditures

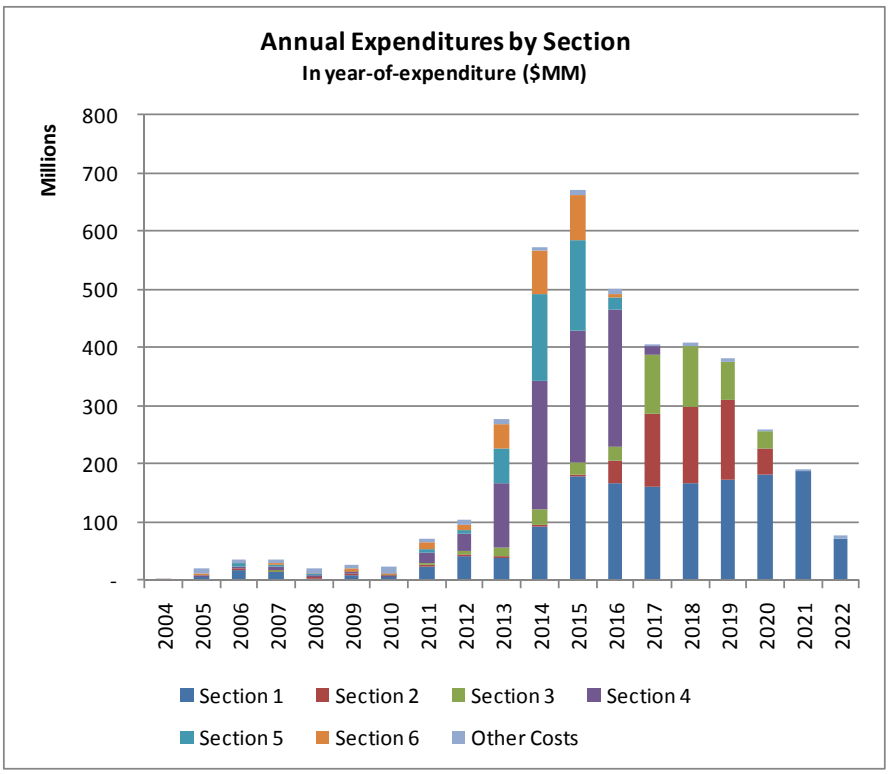

Figure 2-5. Annual Expenditures by Section

COST MANAGEMENT RESPONSIBILITY

The Bi-State Management Team (BSMT) has ongoing responsibility for Project oversight, particularly the management of Project costs and schedule. The BSMT recognizes the importance of cost control and that there are various risks that may affect Project costs. Proposed approaches to mitigating or managing Project cost and schedule risks are discussed further in Chapter 6.

FACTORS AFFECTING PROJECT COSTS

As the ultimate financial plan for the Project is developed, alternative contracting structures will be considered and may be implemented if their use enhances the financial feasibility of the Project and provides value to the States and the region's taxpayers. The Project Sponsors anticipate that such contracting options may have a positive impact on Project costs. Recent U.S. experience with alternative delivery models, such as design-build or full concession, have resulted in construction cost savings that are partly attributable to the competitiveness, innovation and enhanced cost efficiencies the private sector can bring to large infrastructure projects.

Additionally, under alternative delivery models, the Project may benefit from a shortened project delivery timeline compared to those necessary under the traditional design-bid-build model identified in the IFP. The potential acceleration of project delivery could further reduce Project

costs by limiting the impact of inflation. Alternative project contracting and delivery options are discussed further in Chapter 3.

The Project Sponsors will continue to monitor and adjust the cost estimates as the Project becomes more clearly defined and to account for the potential benefits of alternative delivery structures. Cost estimates will also be monitored and updated to reflect changing economic conditions that may affect Project costs, such as materials and labor market dynamics, inflation and commodity prices.

Chapter 3. Implementation Plan

INTRODUCTION

This chapter provides information on the planned implementation schedule for the Project as well as a discussion of potential alternative project delivery options. It also provides additional information regarding the allocation of implementation responsibilities and a summary of the necessary permits and approvals.

PROJECT SCHEDULE OVERVIEW

Based on the currently planned traditional public delivery approach, the Project is expected to be complete by the end of SFY 2022 (*see Figure 3-1 and Table 3-1*). The East End improvements are expected to open to traffic in SFY 2017, the new Downtown Bridge is expected to open to traffic in SFY 2020, and the Kennedy Interchange is expected to be completed in SFY 2022. Additionally, once the new Downtown Bridge is open, the existing I-65 Kennedy Bridge will undergo the necessary modifications to accommodate southbound traffic only.

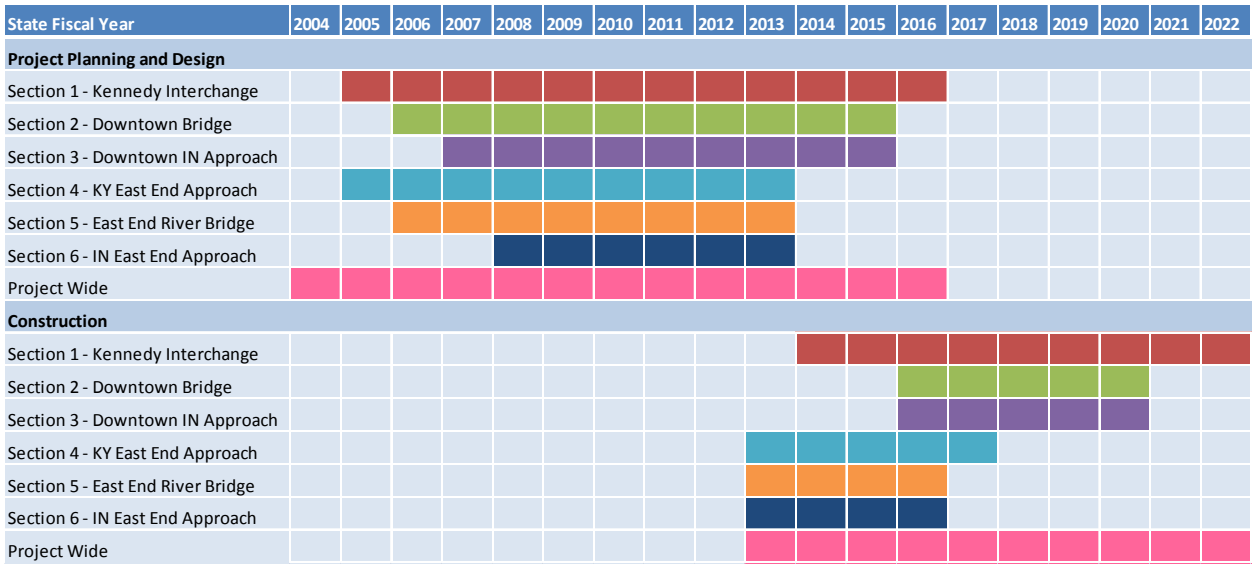

Figure 3-1. Project Schedule Overview

Given the complexity of the Project, coordination of design and construction sequencing among the various sections will be critical. In order to meet the planned schedule, design of Sections 1 and 4 was initiated first, as these sections are the most challenging from a design and construction perspective. Design for the Downtown Bridge (Section 2), the East End Bridge (Section 5), and the Indiana East End Approach (Section 6) began in 2008. Section 3 is in very preliminary planning stages; however, work on this Section will be accelerated given its

interdependence with the Kennedy Interchange component. The following table shows the current status of each section of the Project.

Table 3-1. Current Activities and Status

Project Section	Current Activities	Approximate Status[1]	Estimated Construction Start Date (SFY) [1]	Estimated Open to Traffic Date (SFY)[1]
Section 1 - Kennedy Interchange	Design phase ROW phase	50% complete 5% complete	2014	2022
Section 2 - Downtown Bridge	Design phase	20% complete	2016	2020
Section 3 - Downtown Indiana Approach	Design phase ROW phase	5% complete 0% complete	2016	2020
Section 4 - East End Kentucky Approach	Design phase ROW phase	50% complete 50% complete	2013	2017
Section 5 - East End Bridge	Design phase	30% complete	2013	2017
Section 6 - East End Indiana Approach	Design phase ROW phase	35% complete 60% complete	2013	2017
Other costs	Ongoing			

(1) Based on state fiscal years ending June 30.

While the current Project implementation approach is a traditional public delivery, the Project Sponsors are also evaluating alternative delivery models that may affect the current Project schedule, as discussed in more detail below. The Project Sponsors believe that while it is premature to develop a schedule for an alternative delivery model, recent precedent demonstrates that the construction schedule may be compressed under an alternative contracting method. Additionally, many alternative project delivery structures provide greater certainty with respect to Project schedule, as they may incorporate guaranteed completion dates, a single point of responsibility, and/or a compressed procurement schedule. Future updates to the Financial Plan will reflect potential improvements to the Project schedule once the final project delivery model has been selected.

TRADITIONAL PROJECT DELIVERY PLAN

Given the complexity of the Project and the design-bid-build contracting process, the Project Sponsors recognize the importance of close coordination to promote the most effective project sequencing, and have developed mechanisms to ensure that such coordination will occur, including support provided by the BSMT. To date, the BSMT, acting through the GEC, has coordinated the scope development process for all section design contracts in order to ensure design compatibility, along with a consistent work structure and process. The GEC and the BSMT are responsible for monitoring Project design, development and performance and will obtain updated section construction cost estimates from the respective design engineers as the Project progresses.

If the Project is delivered under a traditional public delivery model, the GEC will create a master project schedule based on the individual schedules provided by the section design consultants in order to effectively coordinate Project activities. This schedule will consider required coordination among sections and the phasing aspects of each Project component. As each section progresses through design and construction, the schedule will be developed in greater detail.

ALTERNATIVE PROJECT DELIVERY OPTIONS

The Project Sponsors are evaluating various alternative contracting methods permitted under current Indiana and Kentucky law that may potentially expedite project delivery. Such alternative delivery models are expected to improve the feasibility of the Project through accelerated project delivery; avoidance of inflation costs; the infusion of additional sources of financing; and the transfer of various risks to the private sector, such as revenue risk, construction risk and/or long-term operating and maintenance risks.

In its 2009 legislative session, the Indiana General Assembly amended the State's public-private partnership statute to expressly permit the use of alternative contracting methods in delivering the elements of the Project to be administered by Indiana.[7]

The Kentucky General Assembly enacted the Bi-State Act which gives the Authority the ability to utilize alternate delivery methods for development of the Project via a pre-development agreement. The Project Sponsors are evaluating a variety of alternative delivery models in the context of this existing legislative authority, which may limit the models Kentucky may be able to utilize for those portions of the Project under its management.

A sample of the types of alternative delivery models under consideration by the Project Sponsors include:

1) Design-Build (DB): In this model, the private sector designs and builds the Project, while the Project Sponsors would finance, operate and maintain the Project.

   Considerations: This method provides price and schedule risk transfer to the private sector during the construction phase but does not alleviate the financing burden from the Project Sponsors or provide the state sponsors with any risk transfer during the operating phase.

2) Design-Build-Finance (DBF): Under a DBF model, the private sector would design, construct, and finance the Project, while the Project Sponsors would retain responsibility for operating and maintaining the Project.

   Considerations: This method may accelerate project delivery, reduce the impact of inflation on Project costs and eliminate certain financing risks; however, it does not promote synergies between the construction and operational phases as the Project Sponsors would retain the risks and costs associated with operations and maintenance.

3) Design-Build-Operate-Maintain (DBOM): The DBOM model transfers responsibility to the private sector for risks related to the design, construction, operations, and maintenance of the Project for the life of the contract; however, the responsibility and risks associated with financing the Project are retained by the public sector.

   Considerations: This method provides for synergies between the construction and operational phases; however, it does not relieve the financing burden on the public sector.

[7] *See* Indiana Enrolled Act No. 382 (2010)

4) Design-Build-Finance-Operate-Maintain (DBFOM)**:** In this model, the private sector designs, builds, finances, operates, and maintains the Project for the contract term. The Project Sponsors may retain revenue risk, depending upon the payment mechanism to be implemented (as described in Chapter 4).

   Considerations: This structure can result in significant synergies, as the private sector may take a whole-life costing approach to both the construction and operational phases.

5) Concession**:** This model transfers the greatest amount of risk to the private sector. The private sector is responsible for the design, construction, financing, operation and maintenance of the Project. Under this type of arrangement, the private developer is given the right to collect and retain toll revenues, along with accepting the risk that revenues will be sufficient to repay debt and equity investors.

   Considerations: The Project Sponsors would transfer significant direct responsibility to the private sector during the operating period. The Project Sponsors would retain some control throughout the operating period such as over tolling policies, including limitations on maximum toll rates. This structure may result in significant synergies between construction and operational periods, and precedent has indicated that it may provide construction cost savings.

PERMITS AND APPROVALS

Permit acquisition is the responsibility of the individual section designers, on behalf of the States. Application for appropriate permits or preparation of required notifications to permitting agencies is monitored by the BSMT and GEC to assure that the applications are filed in a timely manner. The permitting process is in the early agency coordination phase and the Project Sponsors have begun discussions with the permitting agencies in order to ensure that permits will be received on a timely basis. The permits and notifications required by the FEIS are outlined in Table 3-2.

Table 3-2. Required Permits or Notifications

Agency	Permit/Notification[1]
U.S. Army Corps of Engineers	Section 404 Permit for Discharge of Dredged or Fill Material into Waters of the United States
U.S. Army Corps of Engineers	Section 10 Construction, Dumping and Dredging Permit
U.S. Coast Guard	Section 9 Bridge Permit
Federal Aviation Administration	FAA Form 7460-1 Notice of Proposed Construction or Alteration
Kentucky Airport Zoning Commission	Lighting required for top of structures of Ohio River
Kentucky Natural Resources and Environmental Protection Cabinet, Division of Water	Floodplain Construction Permit
Kentucky Natural Resources and Environmental Protection Cabinet, Division of Water	Section 401 Water Quality Certification
Kentucky Natural Resources and Environmental Protection Cabinet, Division of Water	Rule 5 National Pollution Discharge Elimination System
Indiana Department of Environmental Management	Section 401 Water Quality Certification

Agency	Permit/Notification[1]
Indiana Department of Environmental Management	Rule 5 National Pollution Discharge Elimination System
Indiana Department of Natural Resources	Construction in a Floodway Permit

(1) Note: not all permits/notifications apply to all sections of the Project.

In addition to the above permits and approvals, approval from FHWA will be required if the Project is to be tolled. An Expression of Interest was submitted to FHWA in May 2010 to initiate this process. As discussed further in the Risk Management section of this Updated Financial Plan (*see Chapter 6*), early and frequent communication and coordination with the permitting agencies will facilitate the permitting process.

The Project Sponsors are also in the process of developing plans for undertaking an evaluation of any changes in environmental impacts associated with tolling the Project, as well as to account for any changes resulting from the passage of time since the Record of Decision was issued. The Project Sponsors will closely coordinate with FHWA in conducting the required review, work and public involvement under the National Environmental Policy Act (NEPA) to secure the necessary federal approvals and action related to this process.

Chapter 4. Financing and Revenues

INTRODUCTION

This chapter discusses the current financial plan in the context of funding. Specifically, it presents the range of funding options under consideration and includes state transportation and federal-aid formula funds, federal discretionary funds, and Project revenues. The chapter then provides an overview of alternative revenue sources, financing, and alternative project delivery options to be considered in the development of the Financial Plan. A discussion of risks associated with funding availability is also included.

UPDATES TO THE FINANCIAL PLAN PROCESS

The Project Sponsors are fully committed to delivering the Project in the most cost-effective manner for both local residents and users of the transportation improvements. This commitment is evidenced by the continued investment in various pre-construction activities.

In the Initial Financial Plan, the States proposed to fund the Project on a pay-as-you go basis using conventional transportation program funding sources. With refined cost estimates and an altered landscape of state and federal funding availability, Indiana and Kentucky have determined that these resources will be insufficient to fully fund the Project. Therefore, the Project Sponsors are evaluating alternative financing and revenue options to be utilized in conjunction with state and federal resources.

Since the Authority was created in 2010, the Project Sponsors' goals for the finance plan have been further developed. They include:

1) Ensuring that cost sharing arrangements are equitable and the States' financial obligations to the Project are manageable;
2) Ensuring that the Project delivers value to the states, taxpayers, Project partners, and end users through appropriate toll rates and the lowest feasible Project cost;
3) Developing the Project in a manner that supports congestion management for the region; and
4) Delivering a Project that is a self-sustaining, integrated cross-river mobility solution for future generations.

CURRENT FINANCIAL PLAN

The current financial plan anticipates that the Project will be funded by a combination of state and federal transportation program funds (including GARVEE bond proceeds), federal discretionary program funds, and Project revenues. Additionally, the Project Sponsors are assessing the financial benefit of utilizing a variety of alternative revenue sources and project delivery methods. Such alternatives may help deliver the Project or certain elements of the Project on an accelerated basis or may be utilized in combination with a pay-as-you-go finance plan.

OVERVIEW OF FUNDING OPTIONS AND STATUS OF FUNDING AVAILABILITY

For the purposes of this Updated Financial Plan, the availability of each source of funding is characterized under one of the following categories:

- **Expended Funds** – includes funds expended to date.
- **Committed Funds** – includes funds that have been authorized for the Project but not yet expended. This commitment covers funding included in each state's biennial budget for State Fiscal Years 2011 and 2012, the Transportation Improvement Program (TIP) for the Kentuckiana region, GARVEE bonds that have been authorized and issued but unexpended, GARVEE bonds that have been authorized but are yet to be issued, and committed federal discretionary funds that remain unspent.
- **Scheduled and/or Anticipated Funding** – refers to (1) funding included in the States' multi-year plans but not yet committed through the appropriate budgetary process; and (2) funding that can be reasonably anticipated to be available for the Project but which is not yet formally committed in a binding budget or planning document. This includes future federal or state funding, toll revenues, and/or alternative revenues anticipated to become available for the Project in the future.

Table 4-1 shows the expected availability of revenue and financing sources. Current estimates indicate that at least $2.2 billion of project revenues could be needed to bridge the gap between total project costs and expected state and federal funding, and initial studies indicate that toll revenues could be sufficient to fill this gap. Given the unpredictability of state and federal funding, however, additional project revenues may be required.

Table 4-1. Estimated Funding Availability (in millions)

Funding Source		Expended	Committed (in Budget)	Scheduled and/or Anticipated	Total
Kentucky	Federal-aid Formula and State Transportation Funds, including GARVEE debt proceeds	$ 75.6	$ 350.2 (1,2)	$ 500.0	$ 925.8
	TEA-21 HPP (incl. state match)	21.6	-	-	21.6
	SAFETEA-LU HPP & Discretionary (incl. state match)	16.7	17.5	-	34.2
	Annual Federal Appropriation Earmarks	14.2	6.3	-	20.5
	Future Federal Discretionary Programs			317.0	317.0
	Subtotal	128.1	374.0	817.0	1,319.1
Indiana	Federal-aid Formula and State Transportation Funds	16.9	17.8	400.0	434.7
	TEA-21 HPP (incl. match)	9.1	4.3		13.4
	SAFETEA-LU HPP (incl. match)	6.5	15.9		22.4
	Annual Federal Appropriation Earmarks	3.6			3.6
	Future Federal Discretionary Programs			90.0	90.0
	Subtotal	36.1	38.0	490.0	564.1
Subtotal - State and Federal		**164.2**	**412.0**	**1,307.0**	**1,883.2**
Project Revenues	Toll-Based Funding			2,200.0	2,200.0
Subtotal - Project Revenues		**-**	**-**	**2,200.0**	**2,200.0**
Total - All Sources		**$ 164.2**	**$ 412.0**	**$ 3,507.0**	**$ 4,083.2**

(1) Includes previously obligated but unexpended dollars (approximately $18 million), additional funds designated in the 2010-2012 Biennial Budget ($105 million), issued but unexpended GARVEE bond proceeds (approximately $96 million), and authorized but unissued GARVEE bonds ($131 million). Together, these sources comprise $350.2 million in committed and available resources for the Project.

(2) Does not include additional Kentucky funds for debt service obligations on GARVEE bonds which constitute an additional commitment of state resources and are accounted for in the Metropolitan Transportation Plan.

STATE TRANSPORTATION AND FEDERAL-AID FORMULA FUNDING

Overview

Both Kentucky and Indiana have utilized federal-aid resources for Project expenditures incurred to date and have committed additional funding from their respective near-term federal-aid highway funding programs. Federal-aid formula funds expended on the Project to date have been matched by Kentucky through a combination of state road funds and toll credits and by Indiana from state funds.[8] Both states have a demonstrated track record of meeting their state match obligations through a variety of state funding sources, including state-imposed fuel taxes and a variety of transportation-related fees, and it is anticipated that future state matching requirements will be satisfied utilizing the same approach.

Federal-aid and state funding projected to be available for the Project are consistent with each state's budget and the Transportation Improvement Program for the region. Further, based on each state's historical federal-aid program funding, including increases in funding between ISTEA ("Intermodal Surface Transportation Efficiency Act of 1991"), TEA-21 ("Transportation Equity Act for the 21st Century") and SAFETEA-LU ("Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users"), the States reasonably expect subsequently reauthorized federal surface transportation programs will be funded at levels that are at least commensurate with current funding levels. Additionally, the States anticipate state matching dollars will be available to fully utilize all federal resources.

Kentucky

In addition to previously expended federal and state funds of $75.6 million (exclusive of federal discretionary funding), the Kentucky Transportation Cabinet has committed $350 million of funding to the Project. This includes funding provided in the State's 2010-2012 biennial budget, previously issued GARVEE bond proceeds not yet expended, and future GARVEE bond issuances.

The primary near-term anticipated federal funding categories include Interstate Maintenance (IM), National Highway System (NHS), and Surface Transportation Program (STP). Kentucky will continue to make necessary adjustments and additional financial commitments to the Project as part of the State's standard two-year budgetary process.

To date, Kentucky has issued $100 million of GARVEE bonds and has specific legislative authority to issue an additional $131 million of GARVEE bonds to fund the Project. The debt service on these bonds will be paid from future federal reimbursements. Additionally, in the 2010 Extraordinary Session, the Kentucky General Assembly provided KYTC with the flexibility to issue an additional $105 million in GARVEE bonds in lieu of annual pay-as-you-go funding. KYTC is evaluating the benefits of this authority.

Indiana

In addition to the $16.8 million of funds expended to date (exclusive of federal discretionary funding), Indiana's contributions to the Project will likely come from the Major Moves Program

[8] The application of "toll credits" for matching federal transportation funds is a mechanism allowed by the federal-aid program whereby prior state reinvestment of toll dollars in projects throughout the state can be utilized to offset the required non-federal matching funds for current investments. It does not relate to the future tolling of any facilities, including the Ohio River Bridges Project itself.

and other state transportation program resources.[9] Included in these resources for both "committed" and "scheduled and/or anticipated" would be federal categories such as Interstate Maintenance (IM), National Highway System (NHS), Surface Transportation Program (STP), and Equity Bonus as well as any additional eligible federal funds provided to the State under reauthorization.

FEDERAL DISCRETIONARY FUNDING

Overview

A portion of the Project is expected to be funded by discretionary federal funding. These funds include High Priority Project (HPP) funds and other federal funding specifically designated for the Project which have either already been received or are reasonably anticipated to be received.

Over the past 25 years, Kentucky and Indiana have secured discretionary funding from the federal Highway Trust Fund and General Appropriations Budget for the Ohio River Bridges Project. To date, the Project has received $24.1 million in direct federal appropriations. In addition, the Project received $91.6 million High Priority Project funding designations under TEA-21 and SAFETEA-LU. Given the States' success in securing federal discretionary funding to date, the States will continue to identify and, as appropriate, pursue additional opportunities for federal discretionary funds for the Project.

Kentucky

To date Kentucky has received and expended $52.5 million in federal discretionary dollars on the Project, and an additional $23.8 million of discretionary funds has been allocated and is yet to be expended. These amounts were provided under TEA-21, SAFETEA-LU and direct federal appropriations. An additional $317 million is reasonably projected to be available through similar federal discretionary programs in the future.

Indiana

Under TEA-21 and SAFETEA-LU authorizations as well as direct federal appropriations, Indiana received and expended 19.2 million in federal discretionary dollars on the Project, and an additional $20.2 million of discretionary funds has been allocated and is yet to be expended. An additional $90 million is reasonably projected to be available via similar federal discretionary programs in the future.

PROJECT REVENUES

Project revenues are expected to be necessary to bridge the gap between total Project costs and available state and federal funds, and initial studies indicate toll revenues generated on the Project could be sufficient to fill this gap. Both states have the requisite legislative authority to impose tolls on the Project. Specifically, Kentucky's Bi-State Authority Statute provides tolling authority for the Project[10] and the Indiana General Assembly amended its tolling and public-

[9] The State of Indiana launched the Major Moves Program in late 2005 to fund a $12 billion plan to significantly improve and expand Indiana's highway infrastructure (involving a $2.6 billion allocation and earned interest to the Major Moves Program from the long-term lease of the Indiana Toll Road).
[10] Kentucky Revised Statutes ("KRS") Section 175B.030

private partnership statutes in 2010 to expressly permit both tolling and public-private partnerships to be utilized in delivering the Project.[11]

While each state has the requisite authority to impose tolls, FHWA approval must also be secured. The Project Sponsors are actively pursuing guidance from FHWA's Office of Innovative Program Delivery through the submission of an Expression of Interest on May 27, 2010. The Project Sponsors are awaiting a response from FHWA.

Table 4-2 summarizes the candidate federal tolling and pricing programs and evaluates the applicability of each program to the Project. While no decision has yet been made regarding which programs the Project Sponsors will utilize, it is likely to include Section 129 Toll Agreements, the Value Pricing Pilot Program, and/or the Interstate Reconstruction and Rehabilitation Pilot Program. All programs will require supplemental environmental clearances to be completed prior to full FHWA approval. Additionally, these programs may be subject to change during the reauthorization of the federal highway program.

[11] *See* Indiana Senate Enrolled Act No. 382 (2010)

Table 4-2. Comparison of Federal Tolling Programs

Tolling Program/Statutory Provision	Speed	Revenue Flexibility	Scope
S. 129	Potentially fast to the extent federal authorization can be secured	Relatively high	• Limited to Downtown Bridge and approaches (includes at least a portion of Kennedy Interchange), East End Bridge and approaches, and the Sherman Minton and Clark Memorial Bridges • Existing bridges are only eligible as part of reconstruction/rehabilitation projects
Interstate Reconstruction and Rehabilitation Pilot	Potential to expedite application; will depend upon speed of federal action	Relatively Low (funds must be used only on specific facility)	• Only needed for portions of Kennedy Interchange ineligible under Section 129
Interstate Construction Pilot	Potential to expedite application; will depend upon speed of federal action	Relatively Low (funds must be used only on specific facility)	• Only needed if East End Bridge is pursued as an interstate project
Value Pricing	Anticipated to be low; requires comprehensive plan, application, and federal review (including re-designation from another state)	Highest (no limitations beyond toll agreement requirements)	• Applicability to all Project elements as well as regional/statewide projects • Potential value to state beyond single application • Requires variable pricing
HOV (HOT) Lanes	Nearly immediate	High (revenues can be used broadly as long as facility is maintained)	• This program is applicable to any HOT lanes on bridges or approaches • If HOV lanes are used for traffic management, this program is unnecessary
Express Lanes	Program currently inactive	N/A	• Requires reauthorization

(1) All programs are dependent upon the speed of federal action

Other Revenues

The Authority will continue to investigate alternative revenue sources that may be imposed by the States or local governments in the Louisville Metropolitan Area. These revenue sources, if determined to be suitable for the Project and capable of timely implementation, could serve to augment the currently identified funding sources. The availability of such other revenues is likely dependent upon local elections or actions by local government officials; as such, the Project Sponsors have no direct control over the availability of these funding sources. Given the

level of uncertainty surrounding such funding sources, other revenues have not been assumed in this Updated Financial Plan.

PROJECT REVENUE, FINANCING, AND PROJECT DELIVERY OPTIONS

As previously stated, the Project Sponsors are committed to developing a realistic financial plan for the Project that balances state funding requirements and Project revenue sources. A variety of financing mechanisms and tools are likely to be utilized under either a public or alternative delivery structure. This section provides an overview of the range of project revenue, financing, and delivery options under consideration.

Project Revenue Options

Table 4-3 summarizes the range of tolling options currently under evaluation by the Project Sponsors. Each scenario will be analyzed using a variety of toll rates. The results will be evaluated based on the following broad parameters:

1. Level of funding generated;
2. Expected traffic impacts; and
3. Financial impact on users of the Project.

Table 4-3. Estimated Range of Tolling Options

Scenario	Downtown Bridge	East End Bridge	I-64 Bridge	US 31 Bridge	Kennedy Interchange	Potential Diversion Impact	Potential Revenue Capacity (1)
1	✓	✓				• High • I-64, US 31, local routes	• Medium
2	✓	✓	✓			• Medium • US 31	• High
3	✓	✓	✓	✓		• Low	• High
4	✓	✓			✓	• Medium • I-64, local routes	• Medium-high

(1) Higher revenue capacity may result in a lower unit toll.

Traffic diversion is an important part of the evaluation of tolling options as it may create or exacerbate congestion on other facilities in the region. The Project Sponsors are committed to managing congestion throughout the region and, therefore, alternative tolling scenarios and methods will be developed that may more effectively manage congestion by balancing traffic demand and capacity.

In addition to changes in congestion, traffic on tolled facilities will vary based upon the tolling scenario and toll rate. Depending on the toll rate assumed, traffic diverting to toll-free bridges may increase, thus reducing both traffic volumes on tolled facilities and toll revenues. Tolling scenarios will be evaluated using a comprehensive time-of-day travel demand model, which is

currently being developed and is anticipated to be ready in the first quarter of 2011. The Project Sponsors are committed to adopting a tolling policy that will provide the necessary project funding at the lowest toll rates possible. Such policies may include frequent user discounts, time-of-day pricing and various other congestion pricing mechanisms.In connection with the evaluation of tolling scenarios, the Project Sponsors are basing their planning assumptions on the use of high speed, all-electronic non-stop tolling for the Project.

Financing Options

Under a public delivery model, the Authority or the state sponsors (as applicable) would issue tax-exempt toll revenue bonds. Additionally, the ultimate financial plan is likely to take advantage of a loan or other credit assistance under the Transportation Infrastructure Finance and Innovation Act (TIFIA) or a similar federal credit program assumed to be available at the time of Project financing. If delivered under a traditional model, the Project Sponsors would retain responsibility for constructing, operating, maintaining, and financing the Project. The Project Sponsors would also retain revenue risk. Additionally, the traffic and revenue estimates would be based on a conservative "investment-grade" analysis that may limit the amount of upfront Project funding.

Under an alternative delivery model, many risks historically retained by the public sector may be transferred to the private sector. Depending upon the alternative delivery structure selected, the private sector may be responsible for constructing, operating, maintaining, and financing the Project. The private sector may also assume revenue risk. The preferred financial instruments utilized by the private sector may include Private Activity Bonds secured by toll revenues or availability payments (discussed below), TIFIA or other federal credit assistance, commercial bank debt, and equity. Under the alternative delivery model, traffic and revenue forecasts for the equity sponsor may be more aggressive than the traditional delivery model, thus potentially providing more upfront funding for the Project.

The Public Sponsors will have the discretion to choose the level of risk they wish to transfer to the private sector through any of the project delivery models described in Chapter 3. The Project Sponsors will undertake a comparative analysis in order to determine which model (including public, private, or a combination) provides the greatest value to the states, taxpayers, and users of the Project.

Project Delivery and Payment Options

Under a public delivery model, the States will retain all project risks including construction, traffic, revenue, financing, operations and lifecycle risks. Each scenario described in Table 4-2 will be analyzed under both a public and alternative delivery model (see Chapter 3 for a discussion of alternative delivery models under consideration). A public sector comparator analysis will be performed to establish a hypothetical, risk-adjusted whole-life project cost under a public delivery model. This will form the basis for comparing results under various alternative delivery models. This comparative management tool will help the Project Sponsors make informed project delivery decisions that will result in overall best value.

For any of the alternative delivery models described in Chapter 3, the Project Sponsors may consider a variety of payment mechanisms to compensate the private sector for the construction, operation and maintenance of the Project, each of which may have benefits and limitations based on the States' current statutory authority.

1) Project revenues: Under this payment mechanism, the developer collects tolls directly from users of the project. As such, the developer assumes the risk that traffic will meet projections and generally will also assume the associated toll evasion and collection

risks. The project sponsor would have no ongoing responsibility to provide funds to the developer and may receive the benefit of sharing in revenues generated by the project if it performs better than forecasted.

2) Shadow payments: In this case, the project sponsor makes payments to the developer based on traffic volume. Under this payment mechanism, the developer bears the risk of meeting traffic projections, while the state is responsible for collecting tolls and, as such, retains collection and toll evasion risk. The project sponsor also retains control of the tolling policies. This structure shares project revenue risk between the public and the private sector.

3) Availability payments: The private sector partner is compensated by periodic payments from the project sponsor. Payments commence when the project is operational. Performance and availability standards are agreed upon by the private sector partner and the project sponsor, and payments are subject to deductions if the project is unavailable or the project does not perform to standards. The project sponsor sets tolling policies and retains traffic and toll collection risk; however, as maximum payments are determined upfront, annual budgetary requirements are relatively stable and known at the outset.

As a component of its evaluation of various tolling scenarios, the Project Sponsors are also considering a number of congestion management techniques that would help maximize traffic management performance and limit the amount of traffic diversion. As noted earlier, these techniques may include high occupancy vehicle restrictions, dedicated transit lanes, variable time-of-day pricing, frequent user discounts, differential toll rates for commercial and residential traffic, and/or limitations on truck traffic on competing facilities. Congestion management across the region is an important priority and will help to ensure the community realizes the benefits of enhanced cross-river mobility.

KEY REVENUE-RELATED ASSUMPTIONS, RISKS, AND MITIGATIONS

The funding available for the Project will be subject to risks that cannot be fully known at this time. The following is a summary of potential risks that may affect the financing of the Project and the Project Sponsors' assessment of mitigating factors:

1) *Ability to secure the necessary federal approvals for tolling the Project*: The Project Sponsors submitted an Expression of Interest to FHWA's Office of Innovative Program Delivery in May 2010. Since then, the Project Sponsors have participated in several meetings with FHWA and USDOT staff. Given the national and regional importance of the Project, the Project Sponsors believe that appropriate federal approvals may be obtained in a timely manner.

2) *Availability of state and federal revenue sources beyond those currently committed to the Project*: The States have demonstrated a strong commitment to ensuring the Project is delivered. This commitment is demonstrated through the investment of funds to date as well as the authorization of GARVEE bonds for the Project by the Kentucky General Assembly. The States believe that it is reasonable to assume that future state and federal funds will be made available to fund the Project as detailed in this Updated Financial Plan.

3) *Whether toll revenues will meet projections*: The Project Sponsors are developing traffic and revenue forecasts under a variety of tolling scenarios. While risk

inherently exists in traffic and revenue forecasts, the rigor employed in developing an investment-grade traffic and revenue report and the sensitivity testing performed on these estimates will help to ensure Project financing is based on reasonable toll revenue estimates.

4) *Access to the capital markets for bonding of toll revenues*: The disruption in the capital markets in 2008 has made access to the market more difficult for low investment-grade credits, including start-up toll projects. However, based on recent successful transactions for projects similar to the Project, the Project Sponsors believe there is a market for new user fee supported projects. The Project Sponsors will continue to monitor the market and update the financial plan as appropriate.

5) *Availability of a TIFIA loan*: A TIFIA loan or similar federal credit instrument would provide a flexible, cost-effective funding mechanism for the Project; however, some uncertainty surrounding the reauthorization of the TIFIA program exists. In the event that the program is not reauthorized or the Project is unsuccessful in securing federal credit assistance, the Project Sponsors believe a viable financial plan may still be developed.

Chapter 5. Project Cash Flow

INTRODUCTION

This chapter provides an estimated annual construction cash flow schedule for the Project and an overview of the planned sources of funds. This chapter also addresses the estimated long-term operations and maintenance costs of the Project and how these costs will be managed.

ESTIMATED SOURCES AND USES OF FUNDING

The Project is currently anticipated to be funded with a combination of state, federal-aid formula funding, federal discretionary funding, and Project revenues.

As described more fully in Chapter 4, Figure 5-1 presents the estimated sources and uses of funds for the Project. Current estimates indicate that at least $2.2 billion of project revenues will be needed to bridge the gap between total project costs and expected state and federal funding; however, given the unpredictability of state and federal funding, additional toll revenues may be required. The Project Sponsors anticipate that the Project will have flexibility to meet annual cost requirements by financing against the anticipated funding streams (i.e., the Project will not be dependent on pay-as-you-go funding).

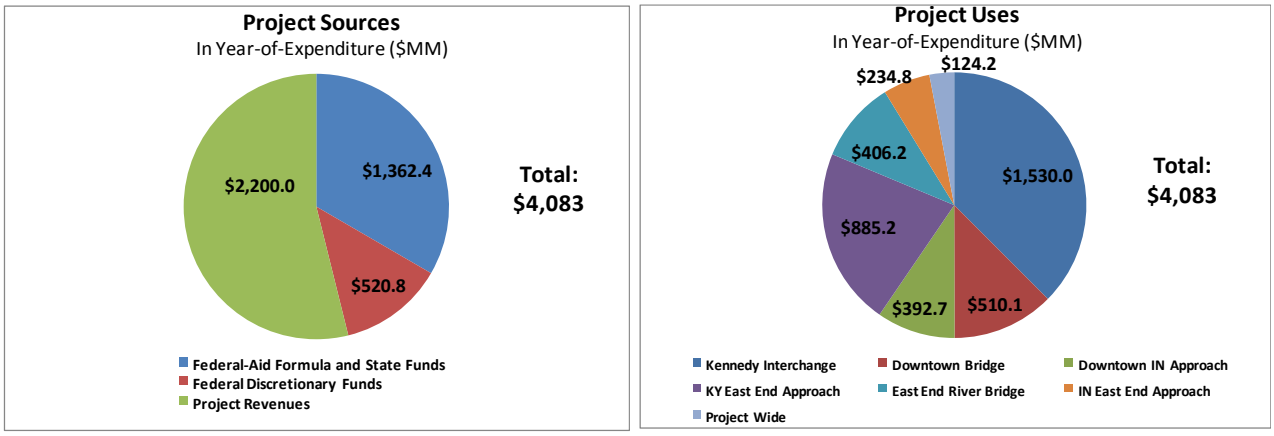

Figure 5-1 Estimated Project Sources and Uses of Funds

PROJECT CASH FLOW

Figure 5-2 summarizes the anticipated annual cash outlays for the Project if it is delivered under a public delivery model. Cash outflows and funding availability will continue to be refined as the Project progresses towards construction. If the Project is delivered under an alternative delivery model, the construction schedule may be adjusted by the successful proposer and will be provided in future Annual Updates.

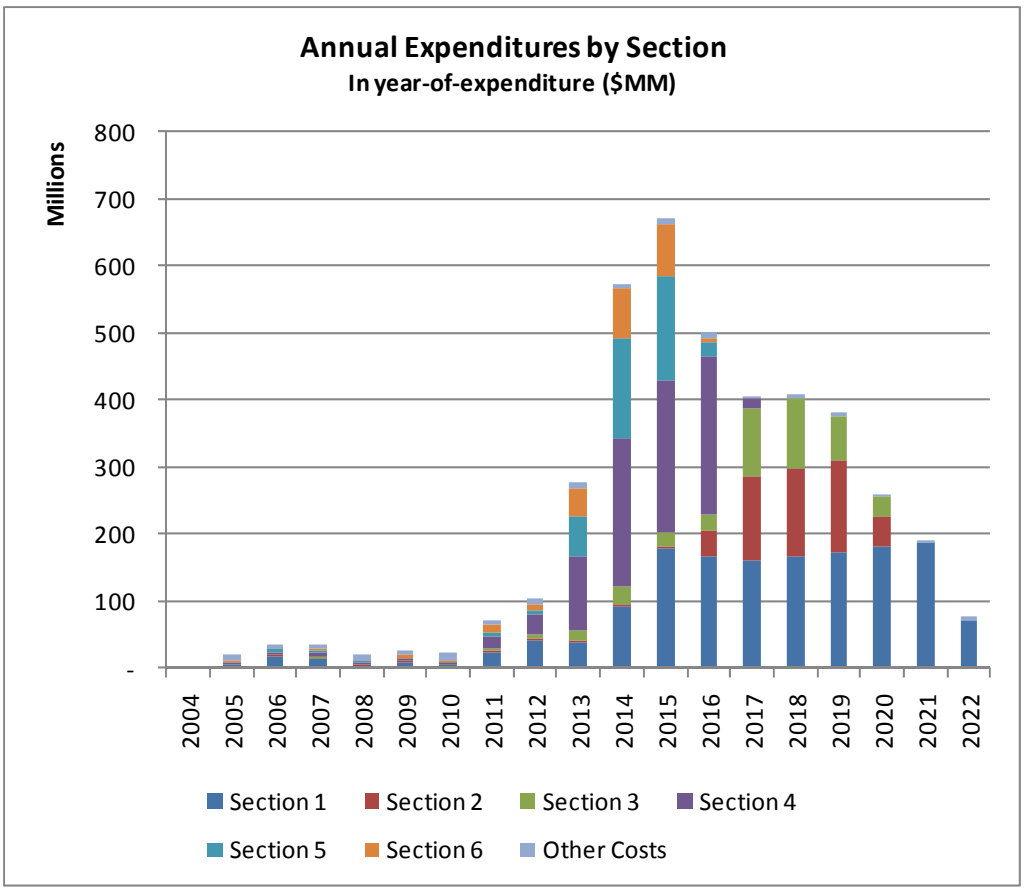

Figure 5-2. Total Estimated Project Annual Outlays
(Year-of-Expenditure $, in millions)

The Project Sponsors are continuing to develop a viable financial plan for the Project and will develop detailed schedules to ensure sufficient funding is available to meet expected expenditures on the Project. Consideration will be given to the timing and availability of state and federal funds and the timing of any debt that may be issued by the public or private sector. Regardless of whether the Project is delivered under a public or an alternative delivery model, any party issuing debt for the Project will be incentivized to ensure the Project is fully funded and open to traffic as scheduled.

CASH MANAGEMENT TECHNIQUES

For Project funding expected to be contributed from state and federal sources, the States intend to utilize available cash management techniques, including but not limited to Advance Construction, to manage the timing of cash needs against the availability of federal and state funds. For example, the Secretary of KYTC has the authority to "concurrently advance projects in the Biennial Highway Construction Plan by employing management techniques that maximize the Cabinet's ability to contract for and effectively administer the project work." All state revenues flowing through Kentucky's Road Fund are subject to the cash management principles outlined in KYTC's "Cash Management Spending Plan" (dated September 29, 2003). The Spending Plan also established a legislatively-mandated safeguard directing that KYTC not draw Road Fund cash balances below $100 million without the approval of the State Finance and Administration Cabinet. Indiana has similar capabilities and provisions. Kentucky also

intends to utilize GARVEE debt financing to manage the cash flow needs of the Project, including already issued GARVEE debt as well as authorized but unissued amounts.

For any funding that is provided from bond proceeds, appropriate oversight mechanisms will be put in place through the requirements of the legal documents. These may include controls over disbursement of proceeds for construction and annual reporting requirements.

OPERATIONS AND MAINTENANCE COSTS

The Project Sponsors understand that the financial plan must account for reasonably anticipated operations and maintenance costs. These costs include routine operations and maintenance expenditures, major maintenance requirements, and, to the extent tolling is deployed, toll operations costs.

The Project Sponsors are preparing cost estimates for operations and maintenance, toll collection, and long-term lifecycle costs under the same range of revenue options shown in Table 4-3. These costs will be incorporated into all financial analyses under both public and alternative delivery models to ensure sufficient revenues will be available to pay these costs, and they may include funding of renewal and replacement reserves throughout the life of the Project.

If an alternative delivery model is utilized, the Project Sponsors may incorporate operating and maintenance standards into the contract to ensure that the Project is maintained at appropriate levels for the term of the contract. Penalties may be imposed on the private partner if these standards are not maintained, thus providing incentive for sufficient funds to be budgeted. Additionally, the contracts may include minimum performance standards that must be met when the Project is handed back to the Project Sponsors at the end of the term of the agreement.

CHAPTER 6. Risk Identification and Other Factors

INTRODUCTION

This chapter addresses a number of important factors that could affect the Project and, in particular, the financial plan for the Project. These risks fall under one or more of the following categories: Project cost, Project schedule, financing and revenue, and long-term operations and maintenance. Significant consideration has been given to identifying risks and potential mitigation measures, and this chapter outlines these factors. Additionally, this chapter addresses the impact of each state's financial contribution to the Project on their respective statewide transportation programs.

PROJECT COST RISKS AND MITIGATION STRATEGIES

The following factors have been identified as possible reasons for cost overruns.

Risk	Mitigation Strategy
Original Cost Estimates	
The risk that original cost estimates are lower than bids received.	Under a public delivery model, as Project design progresses, the GEC will review each design consultant's construction estimate and perform an independent check of the "top ten" bid items identified as having the greatest potential to affect the construction bids. Value engineering also will be utilized to help control construction costs. Value Engineering will be performed at the 60 percent design stage and will be independently conducted by the States. Value Engineering was conducted on Section 4 in 2007, Sections 1, 2 and 5 in 2008, and Section 6 in 2010. Under an alternative delivery model, the Project scope will be well defined prior to bid submission, and recent US public-private partnership experience history indicates competition may result in aggressive bids below the state sponsor's estimates.
Inflation	
Highway construction inflation has been very volatile over the past several years and could significantly increase the cost of the Project.	Reasonable inflationary assumptions based on recent and historical trends in construction inflation have been included in current cost estimates. The BSMT is actively monitoring and updating Project costs in order to ensure that cost increases are identified early. Adequate design and construction contingencies are in place to compensate for higher than anticipated inflation.

Risk	Mitigation Strategy
Contingency	
The amount of contingency factored into Project cost estimates may be insufficient to cover unexpected costs or cost increases.	Project costs are being re-evaluated as design of the Project progresses on a public delivery basis. At major milestones during the design (i.e., 30 percent, 60 percent, 90 percent and 100 percent), construction estimates will be updated. As the Project sections near 100 percent design, cost estimates will be more accurate, and contingencies can be adjusted accordingly.
Cost Overruns During Construction	
Cost overruns after start of construction that could result in insufficient upfront funds to complete the Project.	If the Project is pursued through an alternative delivery model, contracts are likely to incorporate guaranteed maximum price provisions to transfer this risk to the private sector. If the Project is pursued under a public delivery model, the Project Sponsors will employ proactive oversight of Project costs.

PROJECT SCHEDULE RISKS AND MITIGATION STRATEGIES

The following risks have been identified as those that may affect Project schedule and, therefore, the ability of the Project Sponsors to deliver the Project on a timely basis.

Risk	Mitigation Strategy
NEPA	
Although there is a ROD for the Project, further NEPA approval will be required for tolling.	A thoughtful strategy for minimizing the amount of time required for NEPA approval is currently in development, and the Project Sponsors will closely coordinate with FHWA in pursuing the necessary approvals.
NEPA Litigation	
Lawsuits filed within the statutory protest period may result in significant delays to the start of construction and expose the Project to additional inflationary costs.	To mitigate the potential impacts of future litigation that could cause schedule delays and cost escalation, risk and mitigation measures were addressed in the Environmental Impact Statement (EIS). The BSMT intends to adhere to the recommendations outlined in the EIS.
Permits and Approvals	
Delays in the receipt of permits and approvals may delay the start of construction.	The States have initiated activities necessary to secure all permits and will have a single point of contact to manage each process. Both states have a track record of success in acquiring similar permits for river crossings.
ROW Acquisition	
A large number of ROW parcels will need to be acquired for the Project and variances in cost and time forecasts may impact both Project cost and schedule.	Both states have identified the potential properties to be acquired and are proceeding with acquisitions. The Project Sponsors believe that the current budget for ROW is reasonable.

Risk	Mitigation Strategy
Unanticipated Site Conditions	
As materials are exposed, unanticipated geotechnical concerns for the construction of the tunnel, in particular, and for other subsurface construction of other structures could be identified that may delay the schedule or increase costs.	Extensive analysis undertaken as part of the FEIS means that the risk of unanticipated site conditions is extremely low. Additionally, geotechnical investigations are ongoing on several sections of the Project, and preliminary results do not indicate any significant problems.
Schedule Coordination	
Due to the size and complexity of the Project, poor project scheduling and coordination could delay the project schedule.	If the Project is delivered under a public delivery model, the GEC is responsible for coordinating development of the following design elements: hazardous waste investigations, context sensitive solutions, Intelligent Transportation Systems, signage, maintenance of traffic, construction phasing, pavement markings, lighting, Project controls (includes scope, cost, schedule, change management, reporting, risk analysis, document control, and construction cost trends), public involvement and communications, and design reviews. This process also involves managing the coordination and communication among the section designers to ensure design compatibility among the sections and to exploit potential efficiencies by coordinating design efforts. Regular weekly or monthly meetings, monthly status reports, earned value analysis, and schedule reviews are being conducted to ensure the Project remains on schedule. If the Project is delivered through an alternative delivery model, the private sector will bear this risk and will be highly incentivized to open the Project to traffic at the earliest possible opportunity.

Financing and Revenue Risks and Mitigation Strategies

The following risks may negatively affect the Project Sponsors' ability to finance the Project cost-effectively and operate and maintain the Project over time.

Risk	Mitigation Strategy
Required Approvals	
Delays in FHWA approval of tolling could affect cost and schedule.	The Project Sponsors have submitted an Expression of Interest to FHWA's Office of Innovative Program Delivery and have participated in several meetings with FHWA and USDOT staff to provide an overview the Project. Given the national and regional importance of the Project, the Project Sponsors are comfortable that appropriate federal approvals will be obtained in a timely manner.

Risk	Mitigation Strategy
Availability of State and Federal Funding	
The States have identified and committed various levels of traditional funding for the Project within the timeframe of their budget planning cycles. Funding beyond this period is subject to risk.	The States have demonstrated a strong commitment to ensuring that the Project is delivered given the investment of funds to date and the authorization of GARVEE bonds for the Project by the Kentucky General Assembly.
Toll Revenue Risk	
Toll revenues could be less than projected, which could jeopardize the ability for Project debt to be repaid and for sufficient funds to be available for long-term operations and maintenance.	The Project Sponsors are developing traffic and revenue forecasts under a variety of tolling scenarios. While uncertainty inherently exists surrounding traffic and revenue forecasts, the rigor of an investment-grade traffic and revenue report and the sensitivity testing performed will help to ensure financing is based on the most realistic and reasonable toll revenue estimates.
Toll Collection Risk	
Toll revenues could be less than forecasted if toll collection mechanisms are inadequate or ETC equipment deficiencies result in the inability to identify users of the Project.	The Project Sponsors will ensure that the most reliable electronic tolling equipment is utilized and all steps are taken to minimize toll evasion. Additionally, the States will seek robust enforcement legislation.
Capital Market Access	
Capital market volatility could limit access to financing and/or increase financing costs.	Based on recent transactions, the Project Sponsors believe there is a market for new user fee supported projects. The Project Sponsors will continue to monitor the market and update the finance plan as appropriate. If the Project is delivered under an alternative delivery model, the private sector may be responsible for providing financing. The private sector has a demonstrated track record of securing bank financing or capital market financings even in the current market.
Availability of Federal Financing Tools	
Uncertainty surrounding the reauthorization of federal highway funding could limit access to favorable federal financing tools (e.g. TIFIA).	In the event that the TIFIA program is not authorized or the Project Sponsors are unsuccessful in securing federal credit assistance, the Project Sponsors believe a viable finance plan can still be developed.

IMPACT ON STATEWIDE TRANSPORTATION PROGRAMS

The States have both made specific commitments to the completion of the Project and intend to make additional commitments as needed. Based on federal funding received by the States under the past several federal highway program reauthorizations, the Project Sponsors reasonably expect that future federal surface transportation programs will be funded at levels at least commensurate with current funding levels. Based on this expectation, as well as reasonable expectations regarding the availability of corresponding state transportation funds, the Project Sponsors believe that the federal-aid highway formula, federal discretionary and state transportation funds designated in this Financial Plan Update are reasonably expected to be available for the Project. However, given the unpredictability of state and federal funding, additional project revenues may be required.

Kentucky will continue to make additional financial commitments to the Project based on the State's standard two-year budget procedures and in accordance with the State's Highway Plan. The Highway Plan ensures that funding for the Project is fully considered in the context of any potential impact on other projects in the State's transportation program.

The Indiana Department of Transportation has provided for substantial funding for the Project through a combination of state and federal funding, including but not limited to the State's *Major Moves* Transportation Program. Indiana will continue to make specific financial commitments to the Project based on its standard budget procedures and in accordance with the State's Transportation Plan. Given the size of the anticipated financial commitment for the Project in relation to the rest of Indiana's transportation program, the State does not foresee difficulty in meeting the financial commitments on the desired schedule.