



EAST END BRIDGE

OPEN HOUSES

March 7, 2006 – Utica Community Center, Utica, IN 3 - 8 PM

March 9, 2006 – Best Western Inn, Louisville, KY 3 - 8 PM

SUMMARY

INTRODUCTION

As guests arrived they were asked to sign in and were given a packet of information (agenda, FAQs, “Where We Are Now,” comment sheet, contact information, project guidelines and parameters, project map, upcoming schedule, navigation channel fact sheet). They then had the opportunity to view board displays of six different bridge type alternatives, encompassing one basket-handle arch and five cable-stayed designs. Each display was depicted in context on the planned bridge site. Additional boards included a graphic presentation of the Bridge Type Selection Process, the project map and a cross-section of the bridge. Members of the East End Bridge design team met with guests, discussing the project and answering questions.

Invitations for the Open Houses were mailed to the entire project database, numbering approximately 2,100 people. In addition, advertisements were placed in The Louisville Courier-Journal, the New Albany Tribune and the Jeffersonville Evening News. There were print, radio and television stories previewing the Open Houses as well as print and broadcast coverage of both events.

A total of 261 people signed in at the two Open Houses (95 in Utica and 166 in Prospect).

EAST END BRIDGE PRESENTATION

Each Open House included two identical presentations at approximately 4:00 p.m. and 6:00 p.m. These presentations lasted just over an hour (the first presentation at Utica last an hour and a half due to lengthy Q&A with audience). East End Bridge Section 5 Manager Dan Carrier began each presentation by welcoming those in attendance, quickly reviewing the Bridge Type Selection Process and noting that this was Step 3 of the 4-Step process. He briefly explained that they would be seeing the six bridge type alternatives derived from the 15 bridge concepts from Step 2 and would have the chance to express their preferences through polling. Dan also said that the presentation would include discussion of an alternative comparison chart reviewing construction methods, maintenance issues and the construction cost relative to each of the alternative designs. He said there would also be polling on those issues to help identify the priority given to each of those elements in relation to one another. Dan said the feedback gathered from the polling and discussion would be used to help develop the final three bridge type designs in Step 4 of the Bridge Type Selection Process. Dan then turned the presentation over to Miguel Rosales (John Carr filled in for Miguel at the early presentation of both Open

Houses. Miguel was late due to weather-related airline delays each day), the architect for the East End Bridge, to give a general overview of the six design alternatives.

Miguel explained the characteristics of each of the six alternatives and noted that a truss type bridge had been removed from consideration as a result of feedback from the Area Advisory Teams, the Regional Advisory Committee and the general public. Miguel explained that the six alternatives were developed from the preference polling of the Area Advisory Teams, the Regional Advisory Committee and the general public in Step 2 of the Bridge Type Selection Process. Those polling results indicated a preference for:

- A bridge that blends in with the landscape
- A bridge with fewer and slender piers
- A bridge with shorter towers
- A bridge with a thin deck
- A bridge with a visually transparent and open look
- A bridge with low maintenance and minimum painted steel

Six bridge alternatives were developed using the results of the preference polling, consideration of the site context, the project parameters and project guidelines. The six alternatives presented to the public included one arch structure, four cable-stayed structures and one hybrid cable-stayed-suspension structure:

Alternative 1 – A basket handle arch with vertical ribs in the main span and a partial arch substructure supporting the deck in the end spans.



Alternative 2 – A cable-stayed bridge with a diamond tower, with the tower and cable connections on the outside of the deck.



Alternative 3 – A cable-stayed bridge with an “A”-shaped tower, with the tower and cable connections on the outside of the deck.



Alternative 4 – A cable-stayed bridge with a center tower in the median of the bridge deck and the cables connecting to the outside of the deck.



Alternative 5 – A cable-stayed bridge with a center tower in the median of the bridge deck and the cables connecting within the median on the deck.



Alternative 6 – A hybrid cable-stayed suspension bridge with a center tower in the median of the bridge deck and the cables connecting within the median on the deck.



The team then briefly took questions before moving ahead with the polling (comments, questions and responses are included below).

Ted Grossardt, with the University of Kentucky Transportation Center, was then introduced to explain and direct the polling process. Participants were given polling devices and directed to rank each of the various views (bluff, shoreline, pedestrian, drive-through) of the 6 alternatives from 1 (low) to 10 (high) as they were presented. Following the polling, Ted went through the results and gathered feedback from participants about why they liked or didn't like particular aspects of each of the views.

Dan then returned to introduce the portion of the presentation addressing construction cost, maintenance issues and construction methods. He then turned the program over to Ted who polled the audience as to how they felt about each of those issues compared to each other in relationship to the six alternatives (i.e., "Would you be willing to have a higher construction cost if it means fewer maintenance issues down the road?"). Following the polling, Dan closed the presentation by reminding the guests that the design alternatives would be on the project's Web site (www.kyinbridges.com) and that they could offer additional comments there and also let their friends know about that opportunity to comment. Dan also reminded guests that he and other members of the East End Bridge team were available for one-on-one discussions after the presentation.

DISCUSSION / COMMENTS

Utica, IN

March 7, 2006

3:00 p.m. to 8:00 p.m.

4:00 Presentation

General Discussion Items:

General Public	PB Team Response (As Necessary)
Which type is the bridge in Owensboro?	It's most like A2 and A3.
How long have you designed cable-stayed bridges? Do you know what the long-term maintenance is?	They have been built for 15-20 years in the US. They've been building them overseas since the 70's. The technology for the cables continues to improve.
In terms of hundreds of years, how long will cable-stays last?	The Cooper River bridge has a minimum design life of 100 years.
What materials would the superstructures be?	The towers would be concrete. The cables would be steel. The deck would be concrete. The arch would be structural steel. Painting techniques are better today than in the 1960s. Lead primers are not used anymore.
What are the costs of these?	Later in the presentation we will talk about the relative costs, maintenance and construction impacts for these 6 bridges.
Would the construction cost depend on whether you use non-union or union labor?	At this level, the labor costs are not specific enough to determine this.
Who made the selections from 15 concepts to 6 alternatives?	It was based on preferences from the public process and team input.
Who will be responsible for painting?	The maintenance cost is normally split 50/50 between the states, but has not yet been determined for this project.
All of the roadbeds are level in these bridges – why isn't there an arch in the deck?	The profile is set by the approaches – the tunnel on KY side and the bluff on IN side. Sight distance can be adversely affected with an arched deck, and generally requires a lower speed limit. They are not typically used in the US.
Will there be a walkway on the bridge?	Yes, on all of the alternatives.
Can you see the river from the walkway?	Yes, the barrier will only have to be built for pedestrians, not vehicles, so it can be transparent.
All of these show a night view. We haven't seen any details on lighting yet.	The details have not been developed at this point. The guidelines suggest that the lights be subtle and directed, so as not to impact the surrounding area as much as possible.
You should add fiber optic cable along the	

cords. It doesn't require bulbs.	
What is the design height of the barrier median?	The final height has not yet been determined, but it has to be at least 32 inches.
Didn't see any provisions for bike/ped lanes.	All of the alternatives have this facility. The cross section shows a 12' shoulder and barrier between the outer lane of traffic and the pedestrians. The height of the barrier will accommodate bike traffic.
I like the drive-through views – they gave a lot of good information.	
Is there a balance between initial cost and maintenance cost?	We will be polling one final time to find out your opinion of the relative importance of these factors.
Why wouldn't A2 be selected, based on the lower cost and maintenance? Are you just trying to spend all of your money?	Aesthetics does weigh into this too. We are going to poll and see how these factors are valued by the public.
It is rumored that the painting of the downtown bridge will cost more than the construction of this one. This should be kept in mind.	
It's going to be around longer than all of us – the aesthetics are important.	
There is not much difference between construction costs and construction methods. One affects the other and this question is not helpful.	

Alternative 1

General Public	PB Team Response (As Necessary)
The span of the river between the piers is the widest – best for navigation.	That is true – the channel is widest with the arch.
What are the arches made of?	Structural steel, steel girders, concrete deck.
Like the curve and aesthetics of this one.	
Does it wear any worse than the other ones?	The maintenance cost is higher for this one, since it has more exposed steel. It has to be painted. We will discuss these comparisons shortly.
Liked the piers, since they are largest and give the appearance of more stability. Same for A2 and A3.	The stability of the bridge will be the same for any of the alternatives (wind, seismic, barge impacts, etc...). It's just a matter of appearance.
Like the reflection of this one in the water – ties into nature with the shape of a rainbow or a fish.	
How tall is the foundation above the water surface?	About 15 feet or so in the picture. If the flood stage is up to the ribs of the side spans, they would be designed for barge impact.
The side ribs will collect trash.	

This one looks too massive from underneath.	
This pier type and side span could collect debris. The bridges with the solid piers are better.	

Alternative 2

Has this bridge been built anywhere in the U.S.?	It is similar to the Zakim Bridge in Boston, but it is a few lanes wider.
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Alternative 3

No Comments	
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Alternative 4

General Public	PB Team Response (As Necessary)
Doesn't do anything for me.	
Don't like the cables on the outside.	
Is this bridge in the U.S. anywhere?	Not this exact bridge. None of these bridges is an exact twin of an existing bridge. These alternatives include elements of other bridges.
The tower looks too much like Cleopatra's Needle – out of character in Utica.	
Don't like the cables on the outside.	
Snow and ice will fall off of the cables.	

Alternative 5

General Public	PB Team Response (As Necessary)
Clean look – can see through it.	
Like the cables in the middle.	
This would have minimal debris catching in the piers.	
Gives the appearance of an arched roadbed on the underside, where the deck is thicker.	
Looks like there are fewer cables on A5, this is a positive.	Right. A6 also has the vertical suspension cables.
Like the cables in the middle of the median on this and A6, gives separation between directions of traffic.	
Like the cables in the middle for the startling factor (bird droppings), and easier maintenance when not having to span traffic lanes to reach the bridge parts.	
Cables in the middle let the driver see the landscape.	
Cables in the middle eliminate the shadows	

and things falling from the cables from hitting traffic.	
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Alternative 6

General Public	PB Team Response (As Necessary)
Like the suspension cable.	
Like the limited number of piers.	
Like cables down the middle of the median.	
How tall are the towers off of the roadbed?	A1-A4 are about 300' above the river. A5 and A6 are about 265' above the river.
Does not have the same appeal as the other towers of similar type.	The main dimensions for the towers are generally the same, and the details can be interchanged.
Like the suspension wire. It's graceful.	
The deck is the same thickness all the way across?	Right – since the cables are all the way up the tower.
A5 and A6 don't have the overgrown massive look that the others do.	
Like A5 and A6, but also like the top of the tower on A4. Gives a finished look.	
A5 and A6 are shorter than the others?	By about 40 feet.
Like the crosshatched look on A6.	
The cable structure looks too busy on this one.	
A6 is spectacular.	
Minimizes shadows from cables, could help epileptic effect from flickering light.	
A5 and A6 are both winners.	
Why does this have lower maintenance than, say, A4?	If we can use a concrete box for this, it would be lower maintenance. A steel box would make it about the same maintenance.

6:00 Presentation

General Discussion Items:

General Public	PB Team Response (As Necessary)
Can the walkway be removed in the future on any of these?	It's in the Record of Decision, so it will stay for the East End Bridge.
There are no access ramps for any area roadways. How will this be handled?	This will be handled by Section 4 (KY approach) and Section 6 (IN approach).
Are there any major utilities that are planned to be attached to the bridge (like a 36-inch main water line from IN to KY)	We have not determined if utilities will go on this bridge, but experience says that local utilities will want to use the crossing.
What's the timeline for constructing each of these?	They would all take about 4 years to construct. It could vary a few months based on the time

	of year construction starts.
Who splits the cost for the maintenance of the bridge?	It will be split between IN and KY, although the actual split has not been determined for this bridge.
Will the bridges be lit up at night?	This has not been finalized yet. The lighting will likely be subtle and light the features of the bridge, not the surrounding area as much as possible. (Lighting is a key safety feature and that will be a consideration in any final lighting design.)
How fast are the cars going in the simulations?	Pretty fast.
Some that I liked best from the shore, I liked least in the drive-through.	
Cables on the sides make the drive-through more comforting.	
Having the structure/cables on the outside looks more like a bridge.	
Are the contractors responsible for maintenance?	There is usually a warranty period.
Construction methods are shown as relatively equal. It seems A1 would have the most impact on barge traffic due to the water methods.	A1 has a longer main span, due to the vertical clearance required and the arch shape of the bridge. The Coast Guard has provided the clearance for river traffic.

Alternative 1

General Public	PB Team Response (As Necessary)
Nicer architecture, better engineering design and seems more sound, more pleasing visually.	
There's not one like it around here.	
Like the triple arches.	
Feels more secure and substantial.	
Looks more structurally sound.	
Different from the other bridges around here.	
Why does this have the highest maintenance?	It has the most exposed structural steel of the six alternatives. Modern primers and topcoats do not contain lead, so do not cause as many problems as older paints.

Alternative 2

Too much like the bridge in Owensboro (also	
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A3).	
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Alternative 3

Besides the arch, this one is more pleasing, structurally sound and more interesting. Reminds me of the Owensboro Bridge.	
Feels like a gateway.	

Alternative 4

General Public	PB Team Response (As Necessary)
No Comments	

Alternative 5

General Public	PB Team Response (As Necessary)
Are they all white? Can they be other colors without having to paint them?	The cables can be in colored plastic sleeves. The towers are concrete, and coloring this much mass of concrete is difficult.
Are A5 and A6 more expensive to construct?	We will talk about these issues separately. Let's try to just talk about the way they look right now.
A5 and A6 give better views for the driver.	

Alternative 6

General Public	PB Team Response (As Necessary)
This is more visually interesting with the mix of cables.	
Like the small footprint in the water.	
Like the suspension design, too.	
Like that the cables come vertically down in the middle.	
Does not look stable.	
Do not like the criss-crossing of cables.	
Doesn't look any different than half of the other bridges on the Ohio.	

DISCUSSION / COMMENTS

Prospect, KY

March 9, 2006

3:00 p.m. to 8:00 p.m.

4:00 Presentation

General Discussion Items:

General Public	PB Team Response (As Necessary)
Why is there a 900' clearance requirement and a 1200' span?	It is due to the 30 degree skew in the bridge crossing. With this skew, a 1200' span gives a 900' clearance perpendicular to the river.
Why is all of the rainwater going to be collected and transported to the KY side?	That requirement is in the Record of Decision.
For aesthetics, should we just consider the 6 alternatives shown tonight?	That is the idea.
What if you think these questions are invalid?	Then you don't have to answer them.
What's the difference in cost, are we talking about millions?	This is really a relative question, we are not asking you to consider hard numbers.
The "construction methods" category sounds like dollars.	It could be things stacked on the shore, activity in the water, operations for riverboat captains, etc... that are not necessary related to money.

Alternative 1

General Public	PB Team Response (As Necessary)
Is the main span the same on this as on the others?	It is slightly wider, due to the shape of the arch and the vertical clearance requirements.
Very welcoming.	
Like nothing about it.	
Is this like the basket handle arch in Columbus, IN?	Yes it is similar, only larger.
Rivals St. Louis arch, but is twice as good.	
Looks more substantial. Feels more secure.	
More appropriate for historic and agricultural area.	
Would prefer something more elegant, like A5.	
Serves as a good gateway to Louisville.	
Echoes the Sherman Minton bridge.	
Looks like the piers would be larger in the water than the others.	The base would be larger than for the other alternatives.
Does the pier go from one edge of the bridge	Yes. The next view may help you see it better.

to the other?	
Looks like daredevils would climb it.	
Looks kind of plain.	
Very bold and not wimpy.	
Looks too massive at the bottom. The length of the pier is way too heavy looking for the superstructure.	
It seems too 20 th century, looks dated.	
Like it for the reasons the previous person doesn't.	
You know you are approaching a bridge.	
Like the vertical cables better, and that they are spread farther apart for the shadow effect.	
Acts as a gateway to both IN and KY.	
It's the best looking one.	
Clear and comforting view across the bridge.	
Architecturally more interesting in the drive through.	
Worried about the structural steel holding up.	
Would feel safe driving across the bridge.	

Alternative 2

Members of the Public	PB/KTC Team Members
No Comments	

Alternative 3

General Public	PB Team Response (As Necessary)
No Comments	

Alternative 4

General Public	PB Team Response (As Necessary)
No Comments	

Alternative 5

General Public	PB Team Response (As Necessary)
More elegant.	
Does not have the criss-crossing cables. Is the most elegant one of all.	
It's simple.	

Don't like the thickened deck. Like the straight deck better.	
How do you handle the torsion with the cables in the middle?	You use a box superstructure. We will talk more about this in a few minutes.
Does it matter whether cables are inside or outside for wind loads on cars?	It shouldn't matter between the alternatives.
Don't see the bridge coming, and doesn't feel secure.	
Feels like you could lose control and go off the bridge.	
Would feel safer going a higher rate of speed across this bridge. It is not distracting to look at while driving.	
Looks like sailboats.	
Simpler and more aesthetic than A6.	

Alternative 6

General Public	PB Team Response (As Necessary)
Like the open view.	
Like it better than A5. The curve of the cables is better than the angular cables.	
Don't like the criss-cross of the cables.	
The night view is nice.	
A5 and A6 nighttime view is great. It looks suspended.	
Simple and elegant.	
Can see the countryside from the bridge better than any other.	
More space for small boats to pass under the side spans (than the arch).	
Don't like the criss-crossing of the cables.	
Looks like a poor copy of the water tower.	
What is the box shown on the cross section?	That is a representation of the clearance envelope, it is not a structural component.

6:00 Presentation

General Discussion Items:

General Public	PB Team Response (As Necessary)
With cables in the center, how does the structure work?	A box structure is used to control torsion.
Why is there a walkway at all?	The walkway will connect to River Road and Indiana. It was committed to in the FEIS.
Is there something to protect you from the	Yes, there will be a barrier between the cars

cars?	and the walkway, and between the walkway and the edge of the bridge. The vehicle barrier will be AASHTO tested for safety, and will divert the cars back onto the roadway.
What is the speed limit in this section?	The speed limit will be the same as what the interstate is signed for – either 65 or 70.
How close is it to the next interchange?	About 2 miles on each side.
Are you prepared for a suicide attempt on the bridge?	The fire station will be prepared for whatever emergency may occur.
How long will it be lit at night? What about the people that live on shore?	Lighting studies will be undertaken in the next phase, and will consider minimizing impacts on surrounding properties.
What range of costs are we talking about?	The construction budget for Section 5 is \$221 million. All of these alternatives fit within the budget.
What is the dollar difference between the alternatives?	The cost estimates are not that detailed yet.
The ones that have a lot of cables have less maintenance?	Yes, the cables are greased/waxed and placed in a plastic sheath.
Is there a lifespan for the plastic sheathing?	The design life for the Cooper River bridge is 100 years, including the sheathing.
Without an idea of what percentage maintenance is of the total cost, it is difficult to compare maintenance and construction.	The project team will be addressing these issues in the next steps of the project. Once we narrow it down to three alternatives, the cost estimates will be more detailed.
As far as money goes, we in this room don't allocate the money, the legislature does. So how does our opinion matter?	We don't expect that any of the bridges will exceed the project budget. We are just trying to get an idea of the relative importance of these various factors from the audience.
What is the life expectancy of this bridge?	The typical design life of a bridge like this is about 100 years.
Weren't all of the alternatives rated about the same for construction methods?	Yes, for these six. In case something changes in the future, we would like to ask your opinion now while we can.

Alternative 1

General Public	PB Team Response (As Necessary)
Makes a bold statement.	
Design is distinctive.	
Looks like it would catch more trash at flood stage.	
Do not like the heavier piers in the water (seconded).	
The pier looks too heavy.	
Takes up too much area in the water.	
It has a bold look to it.	
It distracts from the natural surroundings.	
Can anything be done about the flaring steel	It is structurally required for this design.

that is under the deck?	
Is this a steel structure?	Yes.
Will it be painted?	Yes.

Alternative 2

General Public	PB Team Response (As Necessary)
No Comments	

Alternative 3

General Public	PB Team Response (As Necessary)
No Comments	

Alternative 4

General Public	PB Team Response (As Necessary)
No Comments	

Alternative 5

General Public	PB Team Response (As Necessary)
Streamlined.	
Least intrusive to the environment.	
Looks like a sailboat and fits in the river setting.	
Like the lighting.	
Like the tower shape.	
It is clean.	
Makes a nice, dramatic statement.	
Looks like a sailing ship.	
Provides openness for the pedestrian view.	

Alternative 6

General Public	PB Team Members (As Necessary)
Clean lines.	
It is different, with cables in the middle.	
The vertical cables are distracting.	
Roadbed has to be wider with the center tower (bad).	
Like the crisscrossing cables.	
Takes up less river area, smaller piers.	

Are the piers on the back further back than the others?	They are in the same place on the shoreline.
When the cables are in the middle, the pedestrian part will not be separated physically as much from the traffic. This may give the feeling of being unsafe, even though you are just as safe.	There is also a 12-foot shoulder and a barrier between the traffic and the pedestrian area, and this will provide some separation.
Looks like a giant spider web.	