



**THE LOUISVILLE-SOUTHERN INDIANA OHIO RIVER BRIDGES PROJECT
SECTION 2, DOWNTOWN BRIDGE**

**KENNEDY INTERCHANGE AND DOWNTOWN INDIANA
AREA ADVISORY TEAM DESIGN WORKSHOP
THE 300 SPRING BUILDING
300 SPRING STREET, JEFFERSONVILLE, IN
MARCH 27, 2008
6:00 - 8:00 PM**

SUBJECT: Three Tower Cable-Stayed Downtown Bridge Workshop – *Round Three*

MEETING ATTENDEES

AAT Members

Emily Boone – Clifton Community Council
Patty Clare – Downtown Development Corporation
Tony Decker – Jeffersonville Fire Department
Peggy Duffy – City of Jeffersonville
Carol Hensley – Main Street Association
Ted Pullen, P.E. – Louisville Metro Government
Joe Rafferty – Rose Hill Neighborhood Association
Tricia Tull – Jeffersonville Main Street, Inc.
Evelyn Umbach – Clarksville Parks Department
Mary Vanderpool – Southern Indiana Realtors Association

Ohio River Bridges Project Team Members

Paul Boone – Indiana Department of Transportation, Bi-State Management Team
Bob Lauder – Community Transportation Solutions-General Engineering Consultant
Carl Percy – Indiana Ombudsman
John Sacksteder – CTS-GEC
George Jones – Federal Highway Administration
Samantha Wright – Wilbur Smith Associates (Section 5 - East End Bridge)

Section 2 Design Team

Steve Goodpaster – American Engineers Inc.
Rick Fitch – Burgess & Niple
Stephanie Brooks – Michael Baker Jr., Inc.
Skip Smallridge – Crosby Schlessinger Smallridge
Aaron Stover – Michael Baker Jr., Inc.
J.B. Williams – Michael Baker Jr., Inc.
Joe Cosby – Niche Marketing
Cedric Goodrich – Niche Marketing

THE LOUISVILLE-SOUTHERN INDIANA OHIO RIVER BRIDGES PROJECT DOWNTOWN BRIDGE, SECTION 2

March 27, 2008 Area Advisory Team Meeting Summary

MEETING SUMMARY

At 6:15 PM, the meeting was called to order. J.B. Williams, project manager for the consultant team for the Downtown Bridge, welcomed the Area Advisory Team. The assembled members of the Design Team then presented the following information, shown below as abridged.

Meeting Agenda:

1. Meeting #2 Summary
 - a. Project Description & Context
 - b. Evaluation Results & Comments
2. Signage
3. Roadway Lighting
4. Barriers and Railings
5. Color
6. Under Bridge Treatment
7. Context Sensitive Design Features
8. Noise Mitigation
9. Questions/Comments
10. Next Step: Open Houses

Workshop #2 Summary

Project Description and Historic Context

- Proposed Bridge and Approach Structure
- Piers and Towers
- Existing Navigational Channel
- Bridge Cross Section
- Historic Context: “Defining Characteristics”
 - Jeffersonville
 - Angular features, “quasi-towers”
 - Octagonal building forms
 - Butchertown/Phoenix Hill
 - Simple, straightforward styles
 - Church spires throughout
 - Tapered tower shapes
 - Riverfront: Bridges and Parks
 - Triangular shapes on Second Street Bridge
 - Angular features in waterfront parks

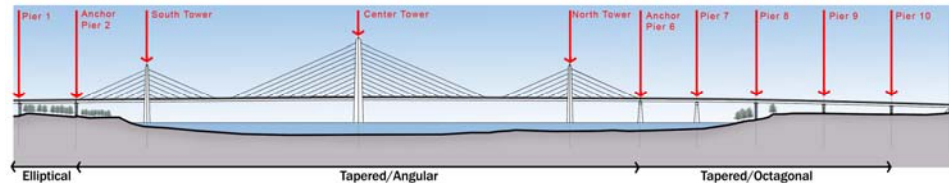
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March 27, 2008 Area Advisory Team Meeting Summary

AAT Meeting 2: Evaluation Results

- Option 1 – Tapered Towers and Piers: **Score 10**
- Option 2 – Elliptical Towers and Piers: **Score 1**
- Option 3 – Tapered Towers and Elliptical Approach Piers: **Score 1.5**

*Option 1:
Preferred Alternative*



AAT Meeting 2: Comments

Bridge Underside Treatment

- Do not cover up
- Do not provide underside covering
- Prevent bird roosting
- Keep simple and clean
- Embrace natural structure

Bridge Approach Interface

- Do not decorate
- Keep simple
- Use angular treatment consistent with tower

Straight Pier Cap vs. Arched Pier Cap

- Arched pier cap breaks up straight line effect
- Straight pier cap is more consistent and compatible with tapered tower

Other

- Avoid too much light
- Noise should be considered
- Color should be compatible with Kennedy Bridge
- Keep simple and honest

Recommendations

- Tapered/Angular Towers and Piers
- Arched pier cap and tower cross strut
- Slanted cheekwall at bridge/approach interface
- Treatment below structure to remain simple and “honest”

Tower Cross Struts

- Arched Tower
- Straight Tower

Response to Request for Similar Bridges

- Design team presented various examples

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March 27, 2008 Area Advisory Team Meeting Summary

- Parks and paths under bridges
- Art and light under bridges
- Various bridge enclosures

Bridge and Approach Signage

- Option A: Curvilinear (similar to Section 1 approach)
- Option B: Rectilinear

Roadway Lighting

- Option A: Curvilinear (similar to Section 1 approach)
- Option B: Rectilinear

Barriers and Railings

- Option A: Curvilinear (similar to Section 5 – East End Bridge)
- Option B: Rectilinear

Color

- Option A: Light Gray Concrete
 - Less dramatic light and shadow effect
- Option B: White Cement
 - Light reflection
 - Less heat absorption

Under Bridge Treatment

- Option A: No Grille
- Option B: Grille

Context Sensitive Design Features

Bridge Feature Lighting

- Option A: Emphasis on Bridge Form
- Option B: Emphasis on Bridge Elements /Vertical Channel

Lighting under Parks (same light fixtures as Section 1)

- Point lighting
- Grille as backlight

Possible Lighting Recommendations (Section 3 Design Scope)

- Pick up rhythm and pattern of setback and form along Riverside Drive (Jeffersonville)

Street Frontage Fencing

- Option A: Straight Fence and Landform
- Option B: Street Frontage Fence

THE LOUISVILLE-SOUTHERN INDIANA OHIO RIVER BRIDGES PROJECT DOWNTOWN BRIDGE, SECTION 2

March 27, 2008 Area Advisory Team Meeting Summary

Jeffersonville Underside Lighting

- Option A: Roadway and Sidewalk Lighting
- Option B: Streetscape Lighting with Street Frontage Fence

Bridge Approach Interface Treatment

- Cheekwall – Slanted Surface
- With or without night lighting

Noise Mitigation

Sources of Bridge Noise

1. Bridge Deck Surface
2. Joint Slap
3. Joint Leakage
4. Reflections off Bridge Substructure

Bridge Deck Noise Mitigation

- Using Barriers
- Quieter Surface Texture (Dragging and Tining)
- Quiet Pavement

Joint Strap Noise Mitigation

- Modular Expansion Joint
- Cantilever Finger Joint
- Sliding Finger Joint
- (Finger joints provide potential 4.5 dBA noise reduction)

Joint Leakage Noise Mitigation

- Addressed by Quiet Joint Technology for Joint Slap

Bridge Substructure Reflection Noise Mitigation

- Noise from Other Sources Negligible

Design Options (Preference Voting)

Tower Cross Struts:

A: Arched Tower Cross Strut

B: Straight Tower Cross Strut



**THE LOUISVILLE-SOUTHERN INDIANA OHIO RIVER BRIDGES PROJECT
DOWNTOWN BRIDGE, SECTION 2**

March 27, 2008 Area Advisory Team Meeting Summary

Railings/Sign Bridges/Roadway Lighting

A: Curvilinear (Section 1)



B: Rectilinear

Color

A: Light Gray



B: White

Bridge Feature Lighting

A: Emphasis on Bridge Form



B: Emphasis on Bridge Elements
- Vertical Channel

Under Bridge Treatment – Louisville

A: No Grille



B: Grille

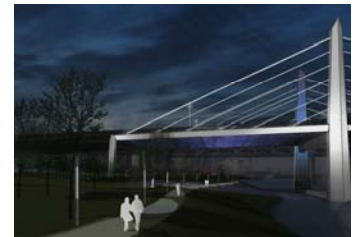
B1: No Lighting



B2: Point Lighting



B3: Back Lighting



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March 27, 2008 Area Advisory Team Meeting Summary

Under Bridge Treatment – Jeffersonville

A: Straight Fence



B: Street Frontage Fence

A: Roadway Lighting with Fence



B: Streetscape Lighting with Street Frontage Fence

Bridge/Approach Interface – Cheekwall

A. Slanted Surface: No Lighting



B: Slanted Surface: Lighting



Next Step: Open Houses

- *April 22, 2008* – Jeffersonville IN
6:00 - 8:00 PM at 300 Spring Building
- *April 24, 2008* – Louisville KY
6:00 - 8:00 PM at Frazier International History Museum

The Downtown Bridge design team will evaluate AAT preferences and, as approved by the Bi-State Management Team, present final aesthetic treatment recommendations at two identical Open Houses for the general public. Team will keep AAT members abreast of developments as Final Design moves forward.

Oral Questions/Comments

Bridge Lighting

- What about a “no light” option for the bridge?
- Need to ensure safety of nighttime boaters (will have red and green navigational lighting on piers)
- Like lighting options; would like to ensure energy efficiency

THE LOUISVILLE-SOUTHERN INDIANA OHIO RIVER BRIDGES PROJECT DOWNTOWN BRIDGE, SECTION 2

March 27, 2008 Area Advisory Team Meeting Summary

- How about using solar panels
- Timers on bridge lights to turn them down or off late at night
- Want to be sure artificial lighting does not adversely affect landscaped vegetation in parks (not much under the bridges)

Street Fencing

- Possibly put ironworks art along the street frontage fence in Jeffersonville

Tower Cross Strut

- Is this an aesthetic arch rather than a stronger arch? (For this structure: yes)

Railings/Sign Bridges/Roadway Lighting

- How many signs will be going on the new bridge? (No final signing plan yet)
- Curvilinear not as compatible with surrounding bridge structures
- Possibility of cantilevered sign from one side of the bridge; would like to see less bulk along bridge cross-section

Color

- How will raising/lowering water levels affect color?
- What about beige and brown elements (river is brown, contextual)

Under Bridge Treatment – Louisville

- Could there be lighting with the “no grill” option? (Yes; grille is in reference to bird roosting problem and offers more lighting options)
- Has Waterfront Park weighed on this? (We were hoping they would weigh on it at this meeting but did not attend)

Other

- Like the decorative frieze that reflects elements of the local natural environment

Preference Voting Sheet Comments

- Perhaps beige would be a better color [for the bridge] given the Kennedy Bridge color
- Prefer [street frontage fence] as it reflects the neighborhood
- Re bridge aesthetic lighting: Would like to see an “Option C”. Would prefer less light pollution and used energy, using solar as possible and turning lights down or off after midnight. It would be nice to have the option of full lighting for special occasions
- Point lighting is interesting
- Do not like the cheekwall lighting
- [Arched tower cross strut] provides a slight geometric variation that provides visual interest without being cluttered or clashing with the rest of the bridge form
- Although the curvilinear [signage] shape brings in or hints at the shape of the nearby Big Four Bridge, it is discordant with the geometry of the bridge

**THE LOUISVILLE-SOUTHERN INDIANA OHIO RIVER BRIDGES PROJECT
DOWNTOWN BRIDGE, SECTION 2**

March 27, 2008 Area Advisory Team Meeting Summary

- The white color of the bridge is a bit jarring and does not appear to be congruous with the nearby environmental elements
- I think we're starting to over-think this [bridge grille/no grille options]. Simple is the key. More importantly, what do Waterfront Park officials think?
- [Street frontage fence] helps to preserve the character of the neighborhood
- Re bridge aesthetic lighting: You lose any real impact if you don't light the entire simple frame of the bridge. There aren't enough elements to have an impact if they are the only items lit
- The affect of night lighting on plants in Waterfront Park should be considered
- [Streetscape lighting with street front fence] definitely preserves the character of the street and enhances the riverfront environment. [Roadway lighting] appears too urban
- [Cheekwall lighting] is starting to make things a bit busy
- Arched tower cross strut goes more with the flow of the river
- Rectilinear railings/sign bridges/roadway lighting is less obvious and obtrusive
- Light gray blends into the background more. Consider brown tones
- Prefer "no grille": minimalist approach
- Re Street frontage fence: Consider artistic metal frieze of naturalist birds and wildlife to adorn wall
- Prefer a "no bridge lighting" option, prefer to highlight the river and decrease the human footprint
- Re Streetscape lighting with street frontage fence: Consider artistic metal frieze of naturalist birds and wildlife to adorn wall
- Can solar panels be put on [cheekwall]; put on as many surfaces as possible
- Use of solar panels to be the electricity for the lights on the bridge
- Use a naturalist approach of having the wall on the Jeffersonville side to have the metal images of local birds that John James Audubon saw along the Ohio River here at the Falls [of the Ohio]. Maybe that could also be done on the Kentucky side on the piers on the Waterfront Park
- Consider brown tones for cement
- Re Arched tower cross strut: Diminished girth will be visually acceptable with the Arch
- Curvilinear [signs/railings/lighting] does not follow the same angular construction that is consistent with the rest of the Bridge
- Think differently [about rectilinear railings/signs/etc.] – add artistic angular design to sign standards. This keeps within bridge angles. Lighting standards should match.
- Is bridge deck span too wide for single pole sign structure?
- River levels and water conditions might reflect a poor aesthetic appearance on piers
- Grille adds artistic detail that will enhance pathways in Waterfront Park
- [Street frontage fence] With lighting detail and possible park addition is a very good touch

**THE LOUISVILLE-SOUTHERN INDIANA OHIO RIVER BRIDGES PROJECT
DOWNTOWN BRIDGE, SECTION 2**

March 27, 2008 Area Advisory Team Meeting Summary

- Can [bridge structure aesthetic] lighting combine emphasis on elements and form? The use of two colors will emphasize detail elements and also tie the 2nd Street Bridge into the Project
- Back lighting with color is the best option [for Waterfront Park underside]
- Do not emphasize the underside of the Bridge over the road [in Jeffersonville]. Keep attention on streetscape lighting.

There being no other questions or comments; the meeting was adjourned.

APPENDIX

WORKSHOP #3 AAT PREFERENCE VOTING RESULTS:

	Arched Strut	Straight Strut	Curvilinear	Rectilinear	Gray	White	No Grille	Grille	Jeffersonville, IN Straight Fence	Jeffersonville, IN Street Frontage
AAT Voting Average	8.8	4.4	3.6	9.2	9.0	2.4	7.5	4.5	4.5	8.5
	Bridge Form Aesthetic Lighting	Bridge Element Aesthetic Lighting	Waterfront Park – No Aesthetic Lighting	Waterfront Park – Point Lighting	Waterfront Park – Back Lighting	Jeffersonville, IN Roadway Lighting with Straight Fence	Jeffersonville, IN Streetscape Lighting with Street Frontage Fence	Slanted Surface, No Lighting	Slanted Surface, Lighting	
AAT Voting Average	8.8	4.4	3.6	9.2	9.0	2.4	7.5	4.5	4.5	