THE OHIO RIVER BRIDGES

WELCOME

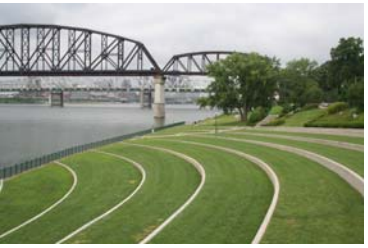
PUBLIC OPEN HOUSE

Downtown Bridge – Section 2

TONIGHT'S MEETING

4-8 p.m. **Self-Guided Tour of Exhibit Stations:**

- About the Project
- Team Information
- Bridge Type Selection Process
- Public Involvement
- Context Sensitive Design
- Project Parameters
- Bridge Types
- Environmental Issues
- DBE (Disadvantaged Business Enterprise) Involvement
- "View of the Bridge" Interactive Exhibit



5:00 p.m. **Presentation & Discussion***

6:30 p.m. **Presentation & Discussion***

*** These presentations are the same.**

Jeffersonville, IN and Louisville, KY : September 20 & 22, 2005

About the Project

Project Overview

- **Project goal:** address long term cross-river transportation needs in the Louisville/Southern Indiana region.
- **September 2003**: Detailed analyses and extensive public outreach culminated in Record of Decision and Federal Highway Administration authorization.

The Design Selection Phase

- Determines types of bridges and **Context-Sensitive Design** guidelines through extensive community feedback.
- Incorporating public input, cost and engineering feasibility, an executive oversight committee with bi-state representation will ultimately select the bridge type.

WE ARE HERE

The Downtown Bridge Design Team

- A team led by Michael Baker Jr., Inc. will come up with initial concepts for the new Downtown Bridge with Bi-State oversight.
- The work program includes creating initial design concepts and refining these concepts to a set of final bridge type alternatives.
- Bridge type selection is estimated to take one year.

The Section 2 Team

Bi-State Management Team
Kentucky Transportation Cabinet
Indiana Department of Transportation
Federal Highway Administration

Community Transportation Solutions
General Engineering Consultant

Project Manager
James B. Williams, PE

Deputy Project Manager
Robert Bondi, PE

Public Involvement
Laura Toole

Context Sensitive Design/Solutions
Skip Smallridge

Historic Preservation/ Environmental Compliance
Rick Fitch

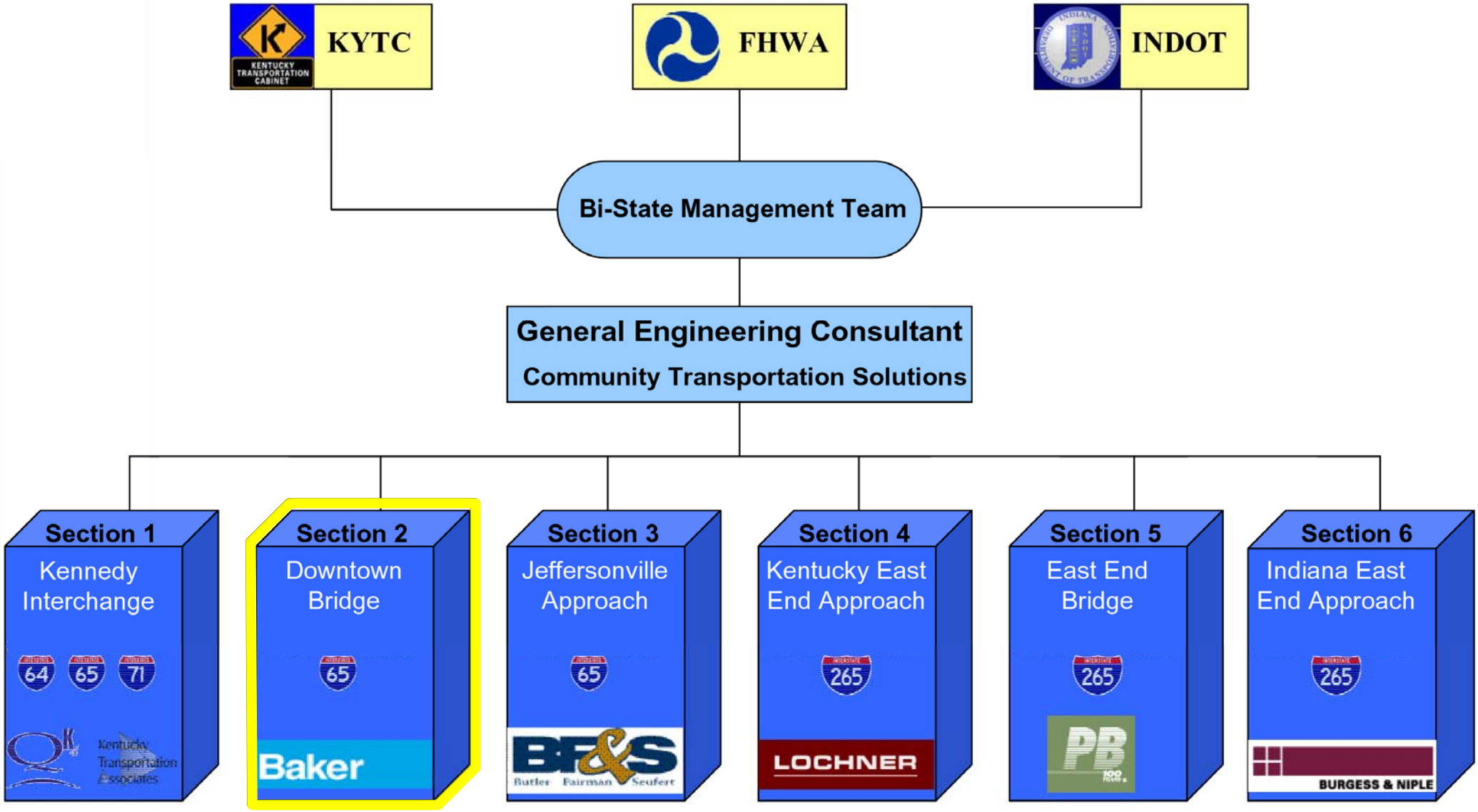
Disadvantaged Business Enterprise Participation
Rohena Miller

Bridge Managers
Robert Bondi, PE
Jeff Campbell, PE
John Dietrick, PE, SE

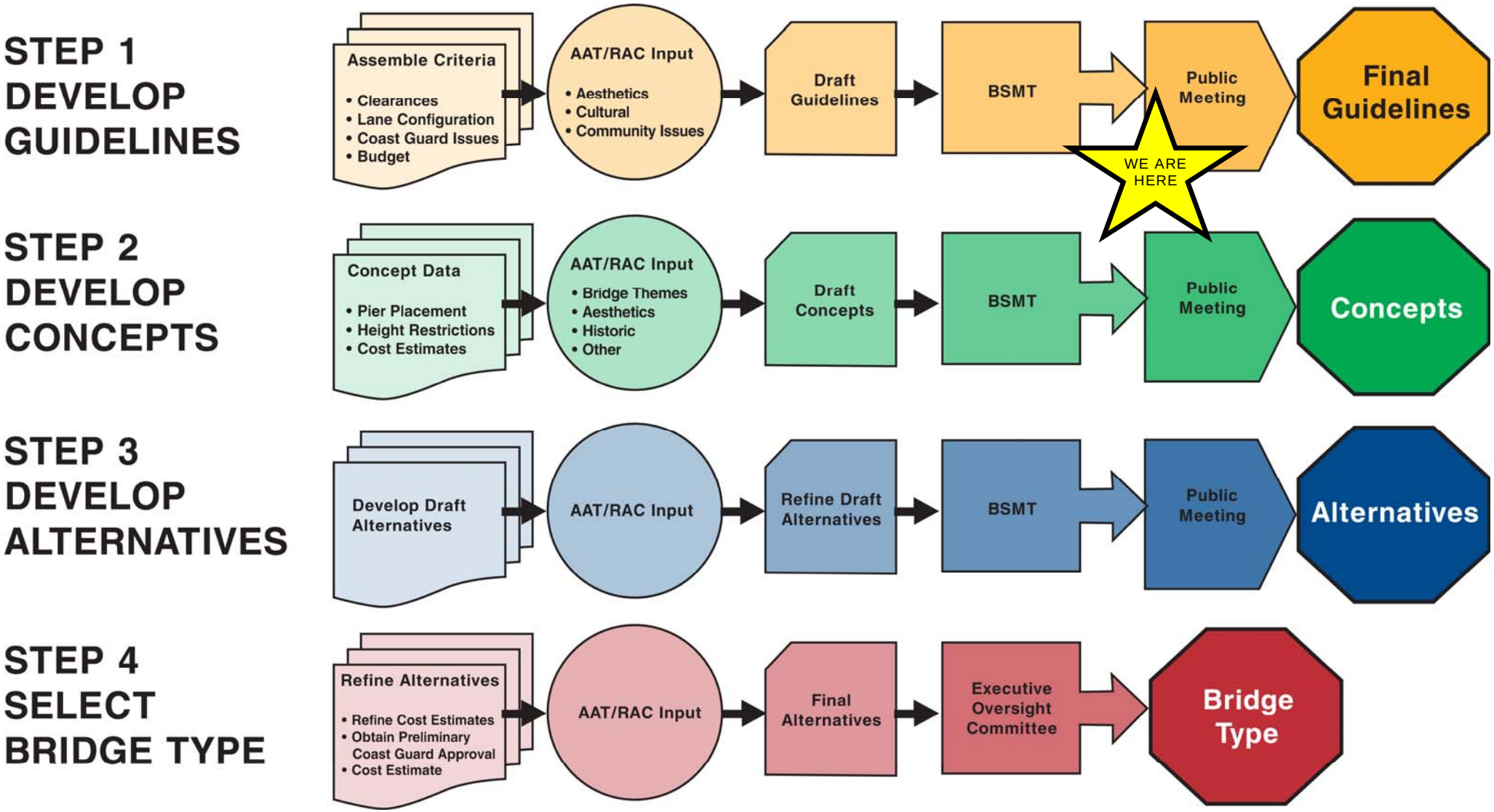
Bridge Architects
Christian Menn, PhD
Peter Taylor, PhD, PEng, PE
Daniel Tassin, PE

PHASE I & II AND FINAL DESIGN TEAMS

LSIORB Project Team



BRIDGE TYPE SELECTION



STEP 1 & STEP 2 EVENTS

General Public Meetings:

- ✓ September 20 & 22, 2005 (Project Parameters & Design Guidelines)
- ❑ November/December 2005 (Final Design Guidelines, Bridge Concepts)

Area Advisory Team (AAT)/Regional Advisory Committee (RAC) Meetings:

- ✓ June 30, 2005 (AAT only)
- ✓ August 9, 2005
- ❑ November 3, 2005 (Final Design Guidelines, Bridge Concepts)
- ❑ Winter 2006
- ❑ Spring 2006

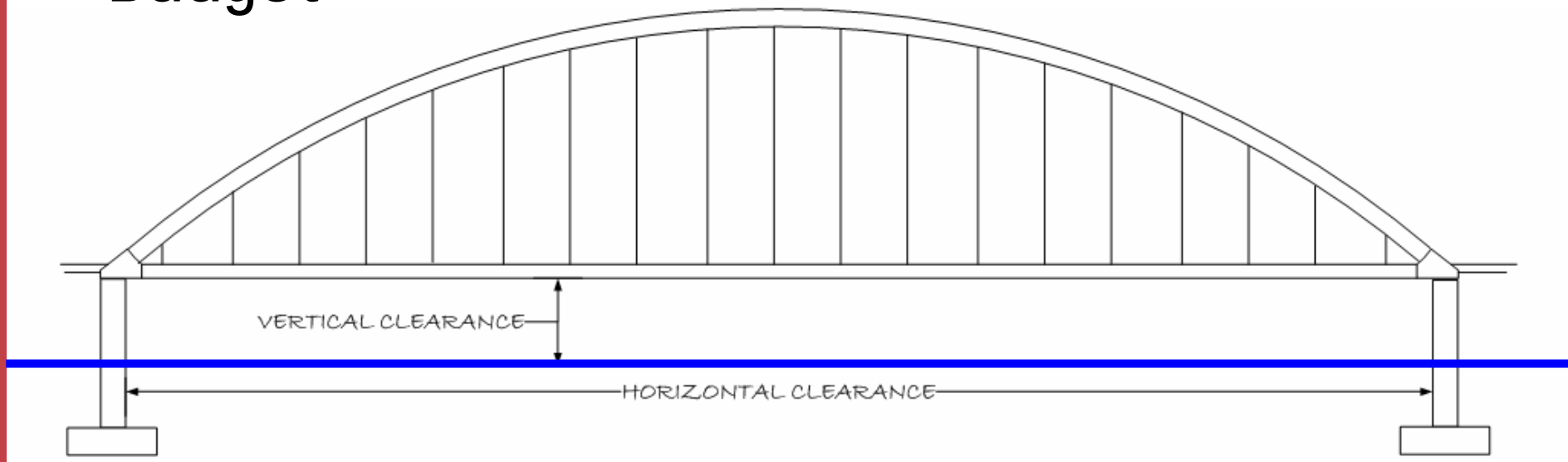
DBE Community Meeting:

- ✓ September 13, 2005

Downtown
Bridge

PRELIMINARY DESIGN PARAMETERS

- Navigation Clearances
- Design Specifications and Site Specific Loads
- Bridge Cross-Section
- Budget



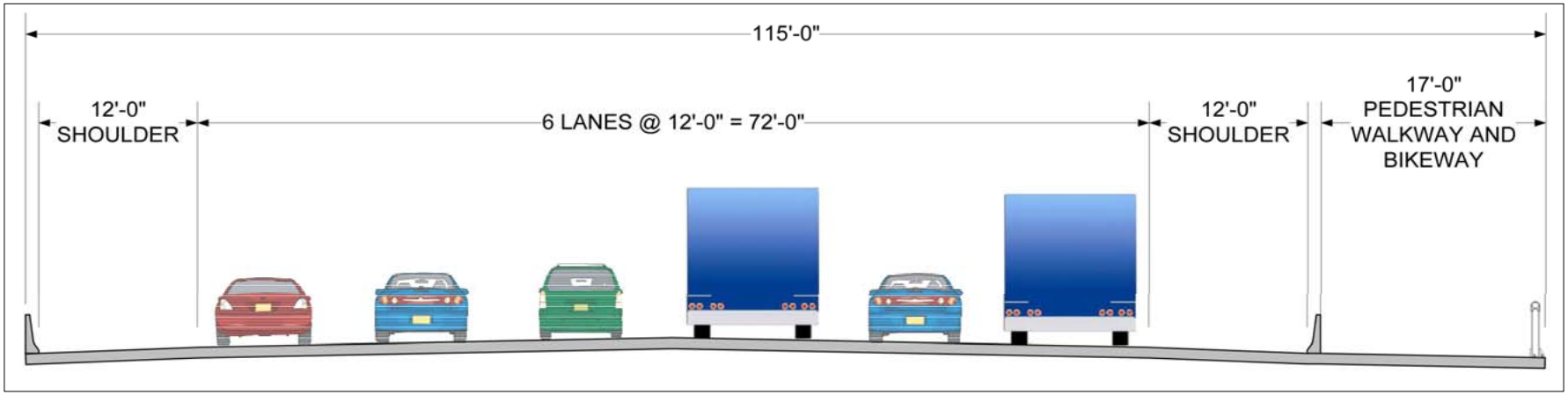
PRELIMINARY DESIGN PARAMETERS

- **Navigation Clearances (800’ – 1100’)**
  - Final minimum horizontal clearance is to be determined
  - Final minimum vertical clearance is 71 feet above normal pool, amount of feet above 100-year flood level is to be determined
  - Minimum vertical and horizontal clearances during construction are to be determined
- **Design Specifications and Site Specific Loads**
  - Design must meet all applicable roadway and structural design codes and specifications
  - Design must take into consideration site-specific loads: seismic, barge impact, wind, etc.

PRELIMINARY DESIGN PARAMETERS

Bridge Cross-Section

Must provide six adjacent one-way (northbound) 12-foot traffic lanes, two 12-foot shoulders and one 17-foot pedestrian/bike pathway on the east side of the bridge (upstream)



Budget

$203 Million construction budget

ENVIRONMENTAL PARAMETERS

- Section 4(f) Resources
- Historic Resources
- River Crossing Constraints
- Permits

U.S. COAST GUARD

Section 4(f) Resources:

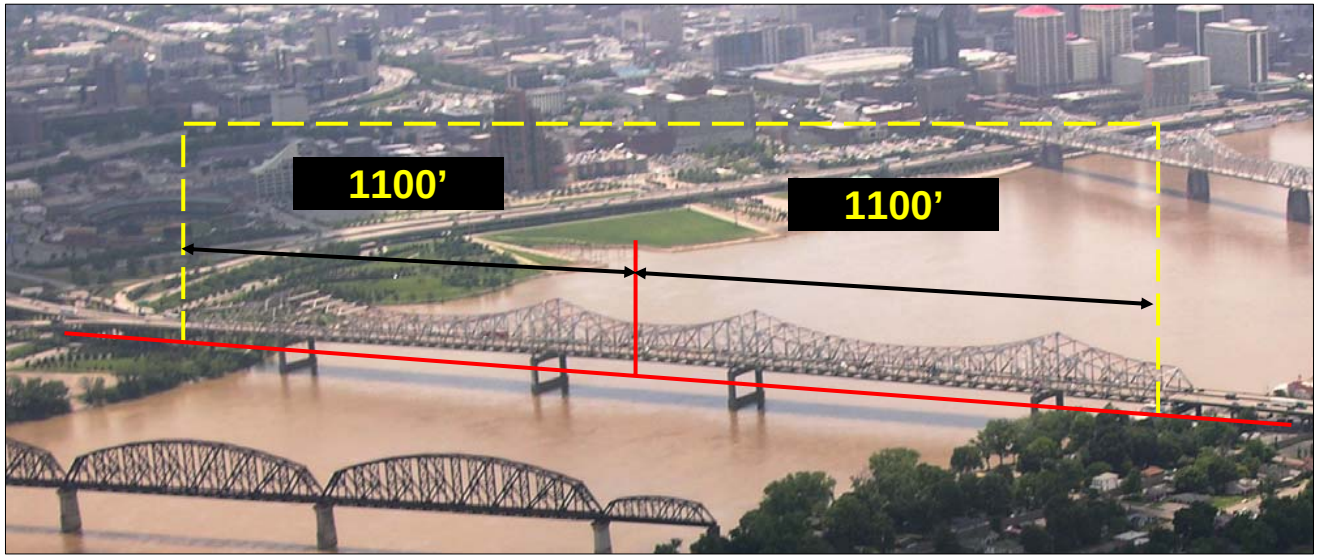
A Department of Transportation Act adopted in 1966 that requires the Federal Highway Administration to consider the impacts to park and recreational lands, wildlife and waterfowl refuges, and historic sites during transportation project development and determine that there are no "prudent and feasible" alternatives to taking the land of listed resources.

Historic Resources:

Covered under Section 106 of the National Historic Preservation Act of 1966 which governs the identification, evaluation, and protection of historic and archaeological resources affected by State and federal transportation projects.

ENVIRONMENTAL PARAMETERS

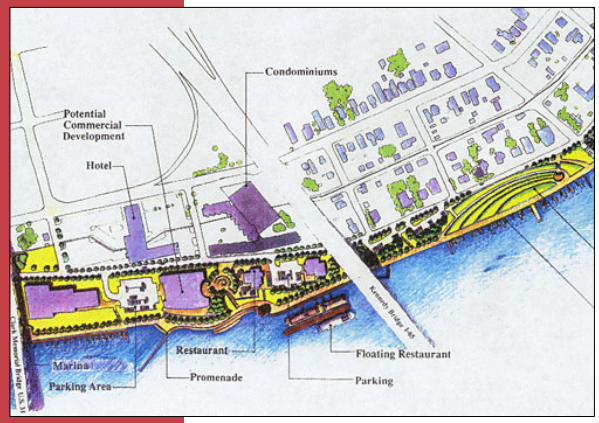
- **River Crossing Constraints**



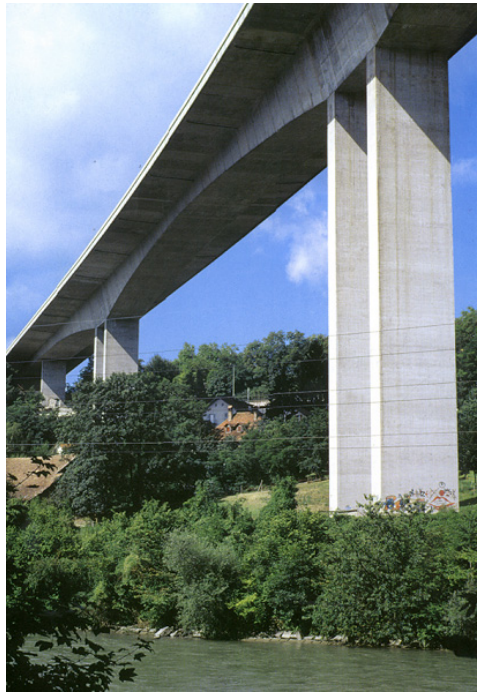
- **Permits**
  - US Coast Guard
  - US Army Corps of Engineers
  - Indiana Department of Environmental Management (IDEM)
  - Kentucky Environmental and Public Protection Cabinet (KEPPC)

CONTEXT SENSITIVE DESIGN (CSD)

The design addresses the **Structural**, **Aesthetic**, and **Contextual Issues** in an integrated manner from four points of view:



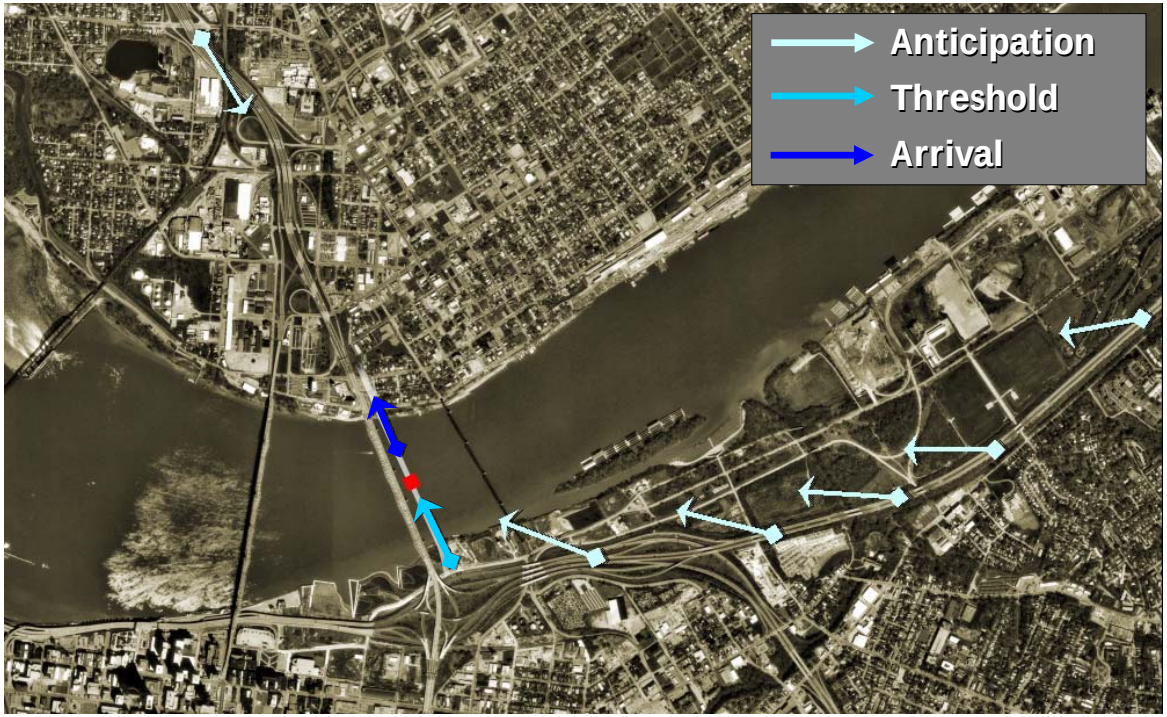
- **Landmark** in the Urban Landscape
- **Gateway** for Users
- An **Urban "Room"**
- The **Pedestrian Experience**

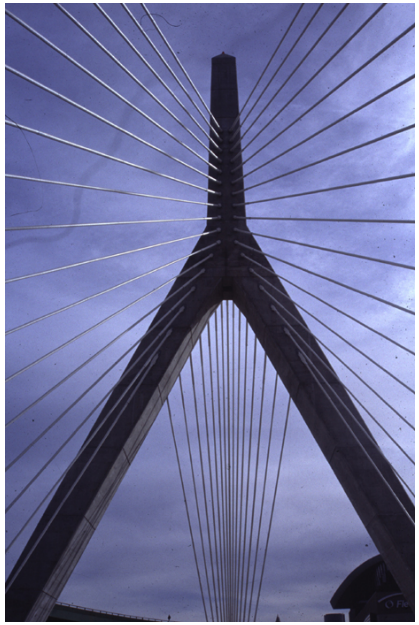


GATEWAY

Gateway Elements

- Approach/Anticipation
- Threshold
- Arrival
- Arch/Tower/Cables/Truss

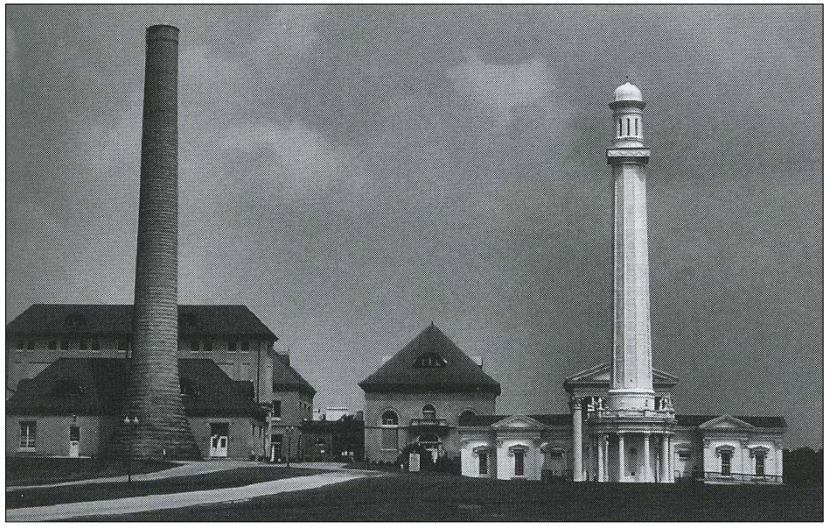




CONTEXT SENSITIVE DESIGN (CSD)

LANDMARK

Landmark in the urban landscape that exemplifies the design culture of our time and reflects the history and culture of the site.



CONTEXT SENSITIVE DESIGN (CSD)

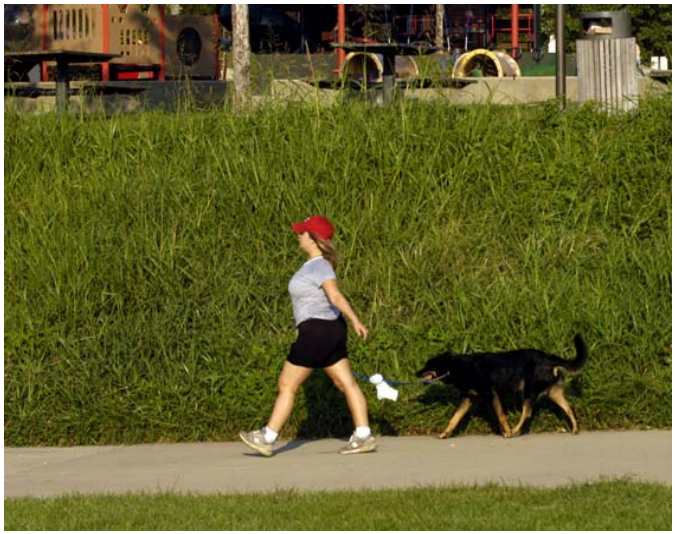
URBAN "ROOM"

The proximity of the bridges forms a new **urban space**.

PEDESTRIAN EXPERIENCE

What We've Heard

- Enhance the Pedestrian Experience
- Emphasize an Uncluttered/Visually Simple Appearance
- Maximize Sunlight at Ground Level
- Not an Intrusion… an Opportunity to Celebrate Design
- Maintain Sightlines/Visual Continuity of the Ground Plane at River's Edge
- Integrate Elements of the Bridge into Landscape and Park Lands



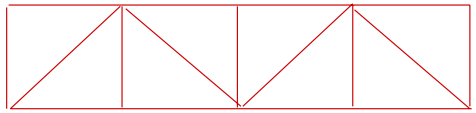
PEDESTRIAN EXPERIENCE

The Bridge from a Pedestrian Perspective

- Piers
- Underside of Deck
- Superstructure
- Secondary Elements

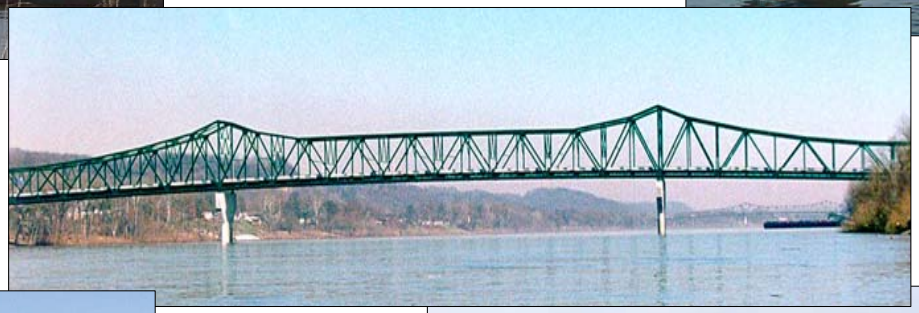
BRIDGE TYPES: TRUSS BRIDGE

Local Example of Through Truss (Kennedy Bridge)

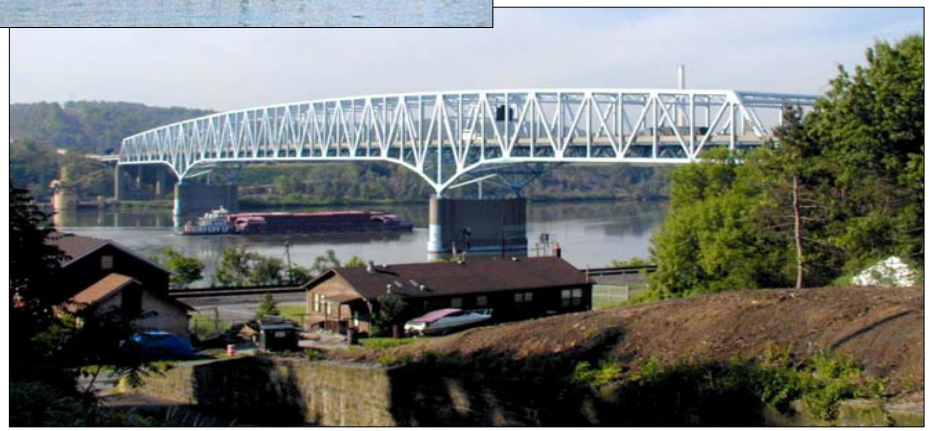


Variable Depth Truss

Deck Truss



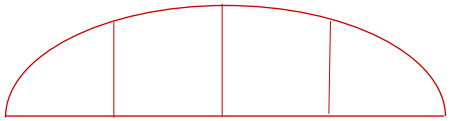
Constant Depth Truss

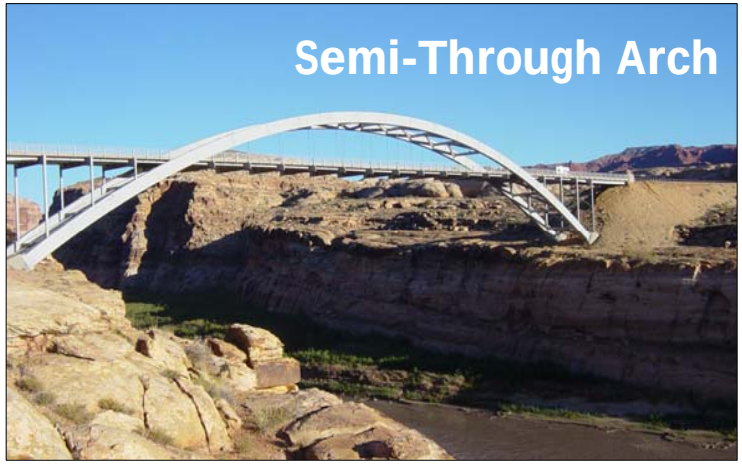


Truss Deepened over Pier

BRIDGE TYPES: ARCH BRIDGE

Local Example of Through Arch
(Sherman Minton Bridge)





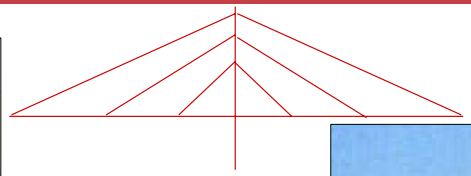
Parallel Arch Ribs with
Vertical Cables

Inclined Arch Ribs & Cables

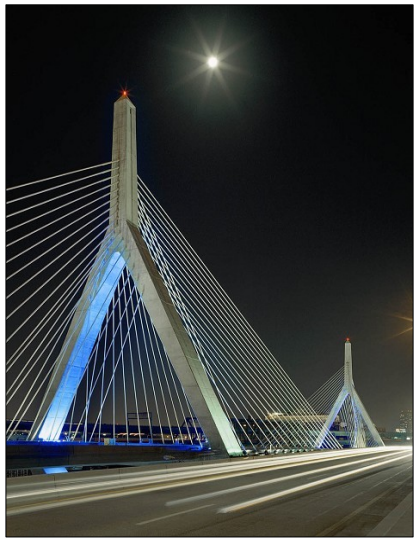
"Network" (Intersecting)
Cables

BRIDGE TYPES: CABLE STAYED

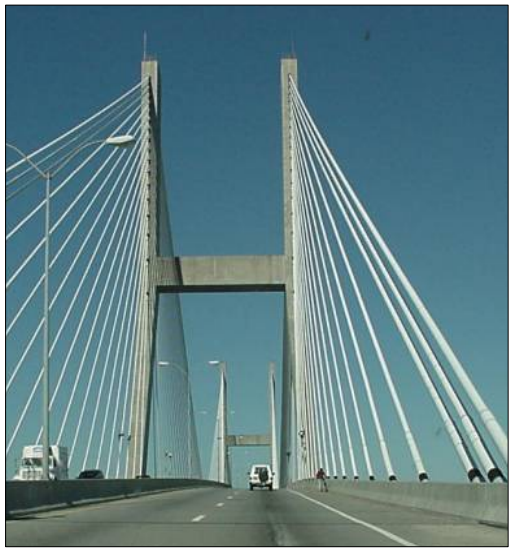
Local Example (Maysville Bridge)
Two Planes of Stays on Outside



Single Plane of Stays, Single Column Tower



A-Shaped Tower

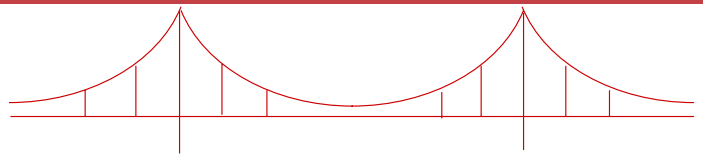


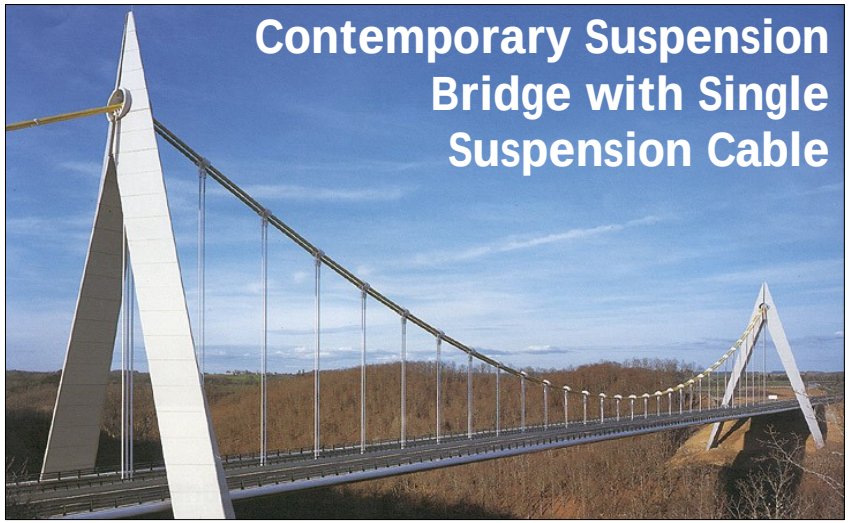
Portal Tower with Cables on Outside

Asymmetric Cable Arrangement

BRIDGE TYPES: SUSPENSION

Closest Local Example (Roebling Suspension Bridge)





Typical Anchorage for Suspension Bridge

Portal Tower with Cables on Outside of Deck

DBE Program

DBE: Disadvantaged Business Enterprise

Background:

The Kentucky Transportation Cabinet (KYTC) has a policy of nondiscrimination in the award of its contracts. It is KYTC's policy that DBE's have the opportunity to participate in all Federal highway projects through neutral means and a combination of race and gender conscious and race/gender neutral goals for projects financed in whole or in part by Federal Funds. The DBE program is to create a level playing field for all businesses that wish to contract with the cabinet, and to ensure that only firms that fully meet eligibility standards are permitted to participate as DBE contractors.

DBE Program

Section 2 DBE (Disadvantaged Business Enterprise) Firms:

- ClasSickle, Inc.
- Crosby | Schlessinger | Smallridge LLC
- Global Solutions, LLC
- Niche Marketing

Section 2 DBE Activities:

- ✓ Community Meeting: September 13, 2005
- ✓ Kentucky Engineer Scholars Program (KESP)
- ✓ National Minority Supplier Development Council National Convention
- ✓ Mentoring Program with Global Solutions

Section 2 DBE Participation Contact

Rohena Miller
502.583.5243
Rohena@nichemktg.com

STAY IN TOUCH

Downtown Bridge Office

9750 Ormsby Station Rd, Ste 210
Louisville, KY 40223
502-339-3557
502-339-4486 (FAX)

Section 2 Project Manager

J.B. Williams, P.E.
502-339-3557
jwilliams@mbakercorp.com

General Engineering

Robert Bondi
412-269-7907
rbondi@mbakercorp.com

John Dietrick
216-776-6626
jdietrick@mbakercorp.com

Context Sensitive Design

Skip Smallridge
617-399-7000
ssmallridge@cssboston.com

Environmental

Rick Fitch
614-459-2050
rfitch@burnip.com

Public Involvement

Laura Toole
914-333-5300
ltoole@mbakercorp.com

DBE Participation

Rohena Miller
502-583-5243
rohena@nichemktg.com

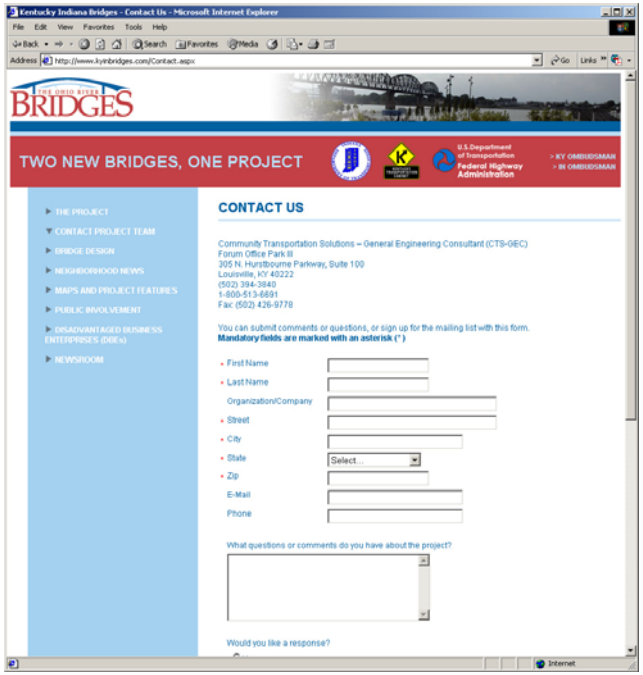
Community Transportation Solutions

General Engineering Consultant

Project Manager

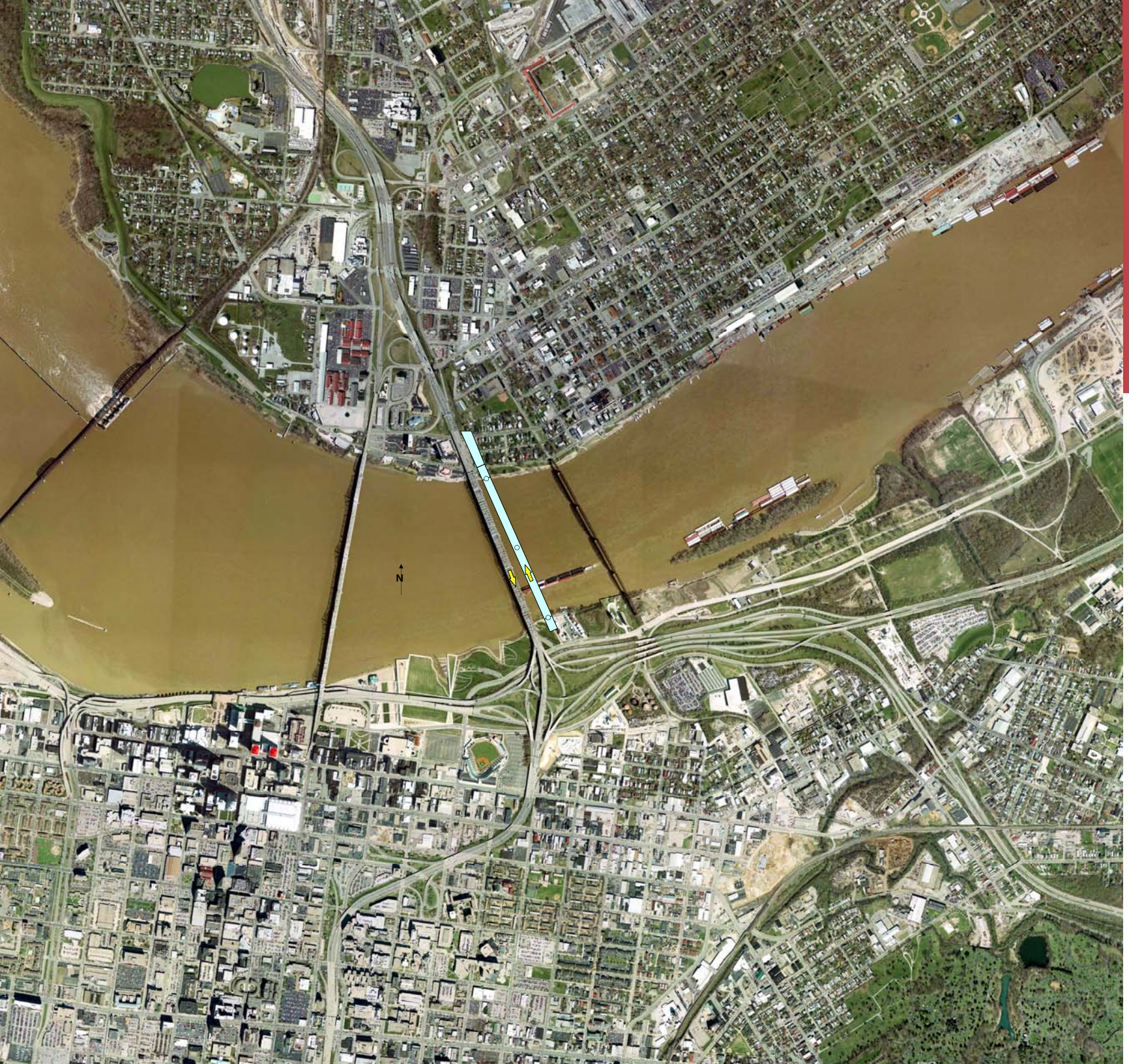
John Sacksteder
502.394.3847
jsacksteder@ctsgec.com

Website: *www.kyinbridges.com*



SPEAK TO US

WRITE TO US



YOUR VIEW OF THE BRIDGE

Place stickers for any of the following categories:

I see the bridge from where I…

- Live
- Drive
- Work
- Walk
- Bike
- Boat