Successes In Stewardship

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Agency Coordination and Public Involvement Deliver Milton-Madison Bridge Project on Time and on Budget

The Milton-Madison Bridge, which connects Milton, Kentucky and Madison, Indiana, has been an important fixture on the Ohio River since its opening in 1929. For the past 85 years the bridge has connected local residents to important services, fueled economic development, and supported historic tourism in both towns. Though the bridge had been rehabilitated several times, it was deemed structurally deficient in 2008, so the Kentucky Transportation Cabinet (KYTC) and the Indiana Department of Transportation (INDOT) kicked off a collaborative effort to replace the bridge.

Structural damage was one of the many reasons KYTC and INDOT moved forward with the bridge replacement (top). The old bridge's 20-foot-wide road deck could not accommodate commercial traffic and the bridge had a weight limit of 3 tons (bottom). (Courtesy of FHWA Indiana Division Office)

KYTC and INDOT worked closely with a variety of Federal, State, and local agencies, including the Federal Highway Administration (FHWA), as well as with the public to select the best method to handle the bridge replacement. The bridge needed to be replaced, including having its main river piers substantially rebuilt, the main river truss and approach spans reconstructed, and its road deck widened. Presenting additional complications were the historic communities on both sides—one of them a National Historic Landmark District. To avoid disrupting the local economy with a lengthy construction process, the project team selected a design-build method that allowed the bridge to remain open except during two closures, totaling 40 days.

Communication and collaboration throughout the process among all stakeholders—environmental agencies, historic preservation entities, project planners, consultants, and the public—led to a project design and delivery process that minimized impacts to Milton's and Madison's economic, environmental, and historic resources. Thanks to an innovative truss-slide procedure where the new bridge was built separately and then slid into place on the existing, reinforced piers, the bridge remained open to traffic throughout the process and was officially completed on April 17, 2014.

Streamlined Project Decisionmaking Minimizes Local Impacts

To begin the collaborative decisionmaking process, KYTC and INDOT invited more than 100 agencies to participate in the project design and delivery process. They received responses from 29 of these agencies, which included the U.S. Coast Guard, the U.S. Army Corps of Engineers, and the National Park Service. Agency participation is a requirement of Section 6002 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which specifies that lead agencies should identify and invite relevant Federal and non-Federal agencies to participate in a project's environmental review process.

The 29 participating agencies and the public were essential to defining the project's purpose and need, developing bridge location alternatives, evaluating alternatives, and creating the methodologies used for environmental data collection and analysis. Their close coordination led the Milton-Madison Bridge project to be completed in record time and with minimal impact on the local economies. Had the bridge been closed for a year, as initially proposed, local impacts would have been significant—the closest bridges are 46 miles downstream and 26 miles upstream. Instead, the bridge demolition, construction, and final slide became tourist attractions in and of themselves. The project has received accolades from *Popular Science* and *Roads & Bridges Magazine*.

A design-build approach and prefabricated bridge elements and systems—two Every Day Counts initiatives—allowed for the new bridge to be constructed in 27 months and with only 40 days of closures. Initial proposals anticipated that the bridge would be closed for an entire year, but the winning proposal cut that time by 325 days. A three-day closure shifted traffic onto the new bridge with temporary piers and just over a month-long closure slid the new bridge from the temporary piers onto the existing piers. The Milton-Madison Bridge slide was the largest horizontal bridge slide to be completed in the U.S. The project also saved money. Incorporating the innovative truss-slide approach, the Walsh Construction Company was able to reduce costs to 20 percent lower than the original project estimate. In addition, the project received $20 million in funding through the Federal Transportation Investment Generating Economic Recovery Discretionary Grant program.

Project Commitments

As part of the Milton-Madison Bridge project's environmental process and historic Section 106 mitigation, the project team committed to a multitude of activities in Milton and Madison that would be completed throughout the course of the project. Commitments included:

- Aesthetics of Replacement Truss
- Madison Tourism/Marketing Campaign
- Milton Tourism/Marketing Campaign
- Business Planning Seminar/Consultation
- Provisions for Emergency Medical Service
- Traffic Management Plan
- Innovative Construction Techniques to Limit Closure
- Regatta Racecourse Relocation Survey
- Milton Bicycle/Pedestrian Study
- Milton River Walk Study
- Peregrine Falcon Coordination
- Offer Existing Bridge Truss for Relocation
- Madison Historic Preservation Officer
- Preservation of Bridge Builder Plate
- Documentation of Existing Bridge
- Renovation of 1929 Film of Bridge Ceremony
- Construction Vibration Monitoring
- Limit Construction Activity for Special Events
- Jaycee Park Improvements
- Parallel Section 106 Process for Approach Improvements
- Milton Boat Ramp Improvements
- Amend National Register Form (Milton)
- Archaeological Commitments

Structured Public Engagement Increases Community Contributions to the Planning Process

Public involvement was also a crucial part of the Milton-Madison Bridge project's success. To start, the project team established a Project Advisory Group (PAG) that consisted of area residents whose interests spanned business development, historic preservation, education, healthcare, emergency services, and more. The PAG met eight times during the National Environmental Policy Act process to advise the project team on local perspectives. Newsletters, media placements in local newspapers, public meetings, flyers, project displays, and highway signs communicated project milestones and provided opportunities for public comment. A project website was also consistently updated and advertised as a way for residents to stay informed and to easily access important documents.

The bridge after the slide was completed. (Courtesy of FHWA Indiana Division Office)

As a result of the project team's public engagement efforts, hundreds of community members got involved and their ideas and concerns were incorporated in the decisionmaking process. Bicycle and pedestrian facilities, for instance, were added to the new bridge due to public interest.

Stakeholder Participation Minimizes Effects on Historic and Natural Resources

Milton and Madison are both home to large historic districts that could have potentially been affected by the bridge construction,

and the bridge itself is home to a once-endangered species that required attention. Due to the collaborative nature of this project, KYTC and INDOT heard and addressed stakeholders' concerns and ideas regarding the area's historic and natural resources. Section 106 of the National Historic Preservation Act (NHPA) also played an important role in coordinating the many stakeholders involved with the historic districts that fall within the project area. All of downtown Madison is on the National Historic Register, and three sites, the Lanier Mansion State Historic Site, the Shrewsbury-Windel House, and Eleutherian College are designated National Historic Landmarks. In 2006, the city was designated a National Historic Landmark District. Milton has two designated historic districts: the Third Street District and the Hunter's Bottom District. Throughout the planning process, consulting parties such as the Historic Landmarks Foundation of Indiana, the National Trust for Historic Preservation, and the Miami Tribe of Oklahoma met regularly to discuss the potential adverse effects that could result from the project and the best ways to avoid or minimize those impacts.

Few environmental impacts were identified as likely to result from the project, but there was one wildlife species that could have been disturbed by the bridge construction. Since 2002 several peregrine falcons have nested in the truss on the Milton-Madison Bridge. When construction progressed to the truss where the falcons had previously nested, the project contractor installed a new nesting box underneath the new truss, which was not disturbed during the final bridge slide. In March 2014, for the fourth consecutive year since construction began, the falcons have hatched eggs in the box. In May 2014, the Kentucky Department of Fish and Wildlife Resources banded the chicks so that they can be identified in the future.

Accelerating Project Delivery on the Largest Truss Bridge in North America

Transparent processes, open communication, organized agency coordination, strong public participation, and guidance from Section 6002 of SAFETEA-LU and Section 106 of the NHPA accelerated the delivery of the Milton-Madison Bridge project, resulting in minimal impacts to the local economies and historic landmarks. By involving stakeholders early and often in the project development and implementation phases, KYTC and INDOT were able to address concerns as they arose and incorporate them into the planning process.

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Look What's New!

- FHWA recently released *Advancing a Sustainable Highway System: Highlights of FHWA Sustainability Activities*. This report illustrates how sustainability has been incorporated into a wide variety of FHWA programs, projects, policies, processes, and partnerships. Click here to read the report.
- In May, FHWA issued a report on the Nonmotorized Transportation Pilot Program (NTPP). This report summarizes the progress and results of the NTPP from August 2005 through December 2013. For more information, click here.