



# Accelerated Construction Technology Transfer (ACTT)

December 2003, West Monroe, Louisiana



IMPROVED  
**CONSTRUCTION**  
AND  
**SYSTEM PRESERVATION**  
TECHNOLOGIES  
performance of highway systems  
new strategies to enhance the quality

Accelerated Construction Technology Transfer (ACTT) is a strategic process that uses various techniques and technologies to reduce construction time on major highway projects while enhancing safety and improving quality. The process is implemented by conducting 2-day workshops for State departments of transportation (DOTs). The American Association of State Highway and Transportation Officials (AASHTO) and the Federal Highway Administration (FHWA) jointly fund ACTT workshops.

In December 2003, the Louisiana Department of Transportation and Development (LDOTD) hosted an ACTT workshop that brought together attendees from several States. The goal of the workshop was to draw on the expertise of participants to help LDOTD achieve its goal of minimizing construction time on the Monroe Bridge Rehabilitation Project on I-20. The project will restore the superstructure and address structural deficiencies in this 40-year-old bridge that crosses the Ouachita River. Due to the project's limited scope, only three of ACTT's 11 Skill Sets were utilized at the workshop: traffic/ITS/safety, structures/materials, and construction.

The biggest challenge the project presents is traffic control during construction. Approximately 95,000 vehicles a day travel over the bridge, which has two 3.6 m (12 ft) lanes in each direction. Shifting through traffic onto other highway systems in the area would result in a detour of 96.6 km (60 mi) or more.

Opening the workshop on December 15 were two officials representing LDOTD, the Secretary of Operations and the Monroe District Administrator. Following their remarks, Tucker Ferguson, Chief of the Contract Management Division of the Pennsylvania Department of Transportation (PENNDOT), and Dan Sanayi, Construction and System Preservation Engineer for FHWA, served as moderators. They began the workshop with an overview of the ACTT process. Attendees then took a bus tour to see the project location and alternate river crossings and detour routes. Over the next day and a half, participants broke into the three skill set groups to examine how ACTT methods could be implemented to accelerate various aspects of the projects.

At the close of the workshop, the Skill Set teams presented numerous ideas and recommendations, many of which were deemed viable and will be pursued, according to LDOTD. Among recommendations presented were:

- For the laminated deck areas, use Very Early Strength (Rapid Set) Latex Modified Concrete (LMC-VE).
- Consider use of structural fibers to improve toughness of the overlay, since it has to be reopened to through traffic daily.



LDOTD Workshop

- Place overlay at nights while the bridge is closed to traffic to avoid premature cracking of the mat or loss of strength due to vibration.
- Completely close the Interstate to traffic at night and provide for two lanes of continuous flow traffic to detour from I-20 onto local streets. Allow I-20 lane closures only at night.
- Ensure prior completion of nearby projects to ease traffic flow. At the time of the workshop, the project was scheduled to undergo construction concurrently with some other area projects.
- Restrict all Interstate traffic detours to the roadway network adjacent to the Interstate, avoiding Interstate traffic detours to other Ouachita River crossings.
- Modify traffic signals on other river crossings to allow for dynamic traffic flows.
- Implement an aggressive incident management system, including performance-based wrecker service.
- Use a smart work zone with cameras, variable message signs, and advance warning signs.
- Extend the limits of the project to perform all needed rehabilitation at one time.

With the workshop now completed, it remains for LDOTD to sift through the reports produced by the Skill Set groups and decide which ideas should be implemented in future planning, design, and construction phases of the project.

To find out more about the project and the implementation of recommendations, contact:

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