

**Missouri Department of Transportation – Route 71  
Bridges  
Bates and Vernon Counties, Missouri**



US Route 71 Bridge in Vernon County to be replaced



US Route 71 bridge over Miami Creek to be replaced

R^3C Design Group was recently hired to assist Burns and McDonnell with developing traffic control plans for the replacement of four bridges and re-decking of two bridges on Route 71 near Butler, Missouri. The project is going to include design of traffic control layout for shoo-flies to route traffic away from the bridges.

We display our **Responsibility** by developing a plan that promotes a balance by minimizing road user inconvenience during construction and maximizing contractor convenience. Safety would be our top priority throughout plan development. Because of the Business Route 71 interchange, a bridge re-decking over the railroad will be particularly challenging. This will include a combination of techniques as shoo-flies, ramp closures and detour plans. An initial study was completed to select the best approach for traffic control.

Because these bridges are part of MoDOT’s safe and sound bridge program, our engineers will have to be **Responsive** to complete plan production quickly. Further, the traffic control plan needs to be optimal so construction on all bridges can be completed in one season. Our responsiveness is further displayed when we developed four alternatives for the bridge over the railroad even before the project kick-off meeting. Because of our ability to think ahead to challenges during construction, we included a temporary break in the freeway for one of the bridges so that contractor access would not be jeopardized.

Our **Client-focus** will be displayed when we hone in on the cost of the traffic control. Because of the limited funds, it will be critical to keep track of costs and suggest options with the most benefit to cost. Therefore, the four factors that will drive the plan production will be safety, minimize road user inconvenience, maximize contractor convenience, and cost.

**The RIGHT factors during this project are:**

- Safety first
- Optimizing variables as safety, minimizing road user inconvenience, maximizing contractor convenience, and minimizing cost
- Track cost for every option so we maximize benefit to cost for MoDOT.
- Tracking costs for traffic control for all four bridges
- Develop a plan that will allow all four bridges to be completed in one construction season
- Use a combination of techniques from our toolbox of options.

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*Construction cost estimate: \$7.1 million*