

## US 31 OVER I-465 INDIANAPOLIS, INDIANA

### MOVEABLE BARRIER FOR CONSTRUCTION LICK CREEK BRIDGE SUPERSTRUCTURE REPLACEMENT

#### MOVEABLE BARRIER SAVES MONEY & MITIGATES CONGESTION

In October, 2010, construction was completed on the Lick Creek Bridge carrying US 31 over I-465 in southern Indianapolis. US 31 is a busy urban arterial that carries over 54,000 vehicles per day, and it was apparent that the construction project would significantly impact traffic and cause major delays. The Lick Creek Bridge carries six lanes of traffic, with two through lanes in each direction and a ramp lane in both the northbound and southbound direction. It was determined that the bridge was too narrow to maintain the current traffic flow during construction, and the original construction plans called for a temporary widening of the bridge that inflated the cost of construction to an estimated \$6,000,000.

Because US 31 has a directional traffic flow with a significantly higher volume in the northbound lanes during the AM peak and higher southbound volume in the PM peak, the concept of a moveable barrier was introduced. The move-

able barrier would physically separate the northbound and southbound traffic, but it could be quickly reconfigured several times per day to provide two lanes for peak traffic in each direction using a total of only three lanes in a 2/1, 1/2 configuration.

Because the bridge no longer had to be widened, the estimated project cost was revised to \$4.8 million, which was \$1.2 million in savings over the original estimate. In addition to the cost savings, the moveable barrier provided benefits to motorists by maintaining the same number of traffic lanes throughout the entire project, and the surrounding neighborhoods benefited from the reduced impact to air quality that is typically created from traffic backups. The project exceeded INDOT's original expectations in several categories including overall project cost and potential impact on the motoring public, and it received an ACEC Honor Award in Indiana.

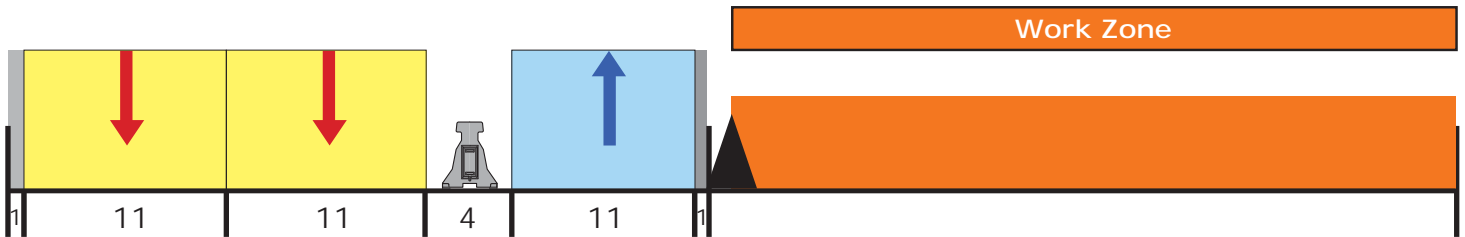


Moveable Barrier separates traffic with positive protection on US 31, IN

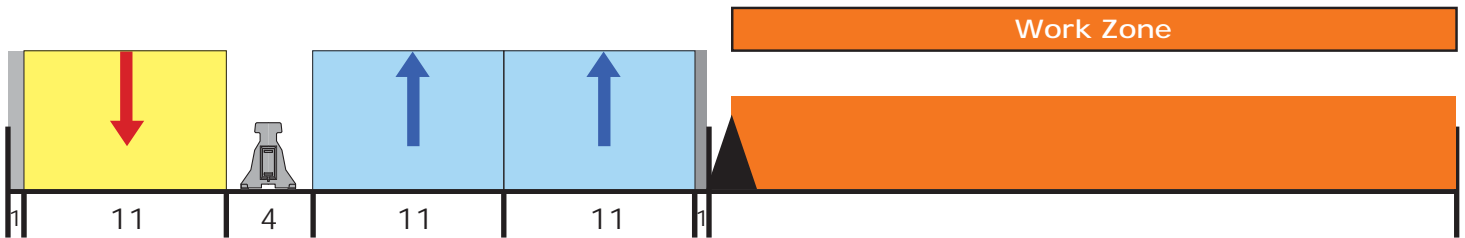


INDOT saved \$1.2 million in construction costs

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CONSTRUCTION: AM PEAK



CONSTRUCTION: PM PEAK

### Project Highlights:

- Original project estimate = \$6,000,000
- Revised estimate with MB = \$4,800,000
- Actual project bid - \$4,016,316
- 1606 LF of Moveable Barrier = \$327,640
- \$1,200,000 savings for the agency
- 1 Barrier Transfer Machine
- Barrier moved twice per day
- Reduced user delay costs
- Improved local air quality

