

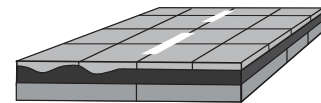
Targeted Overlay Pavement Solutions (TOPS)

Targeted overlays fit the treatment to the condition of the existing pavement.



U.S. Department
of Transportation
**Federal Highway
Administration**

Bonded Concrete on Composite



Iowa

In 2011, the Iowa Department of Transportation constructed its first concrete overlay on a two-lane roadway **while maintaining through traffic**. The project was on an 18.82-mile section of US 18 in northeastern Iowa. The original 1938 concrete pavements that comprised this section were built 18 and 20 feet wide and had received several asphalt overlays totaling 6 inches over the years.

Variable milling to a depth of ½ to 1½ inches was performed to establish a grade profile. To accommodate a wider cross section, existing asphalt shoulders were removed and replaced with full-depth concrete slabs placed monolithically during the paving operation. The paved shoulders were 8 inches thick, and the mainline overlay was 4½ inches thick.

Contract specifications called for work zone lengths of 2 miles for subdrain and patching work. Bridge work was performed using a single lane of traffic controlled by traffic signals. For the overlay paving and shouldering work, a 3.5-mile work zone was allowed with a single lane of traffic and the use of a pilot car.

The project was paved with stringless total station control for the first half-width pass. A safety wedge was used at the centerline for the first pass, with a fabric placed under the wedge to accommodate its later removal. The second pass was paved with one leg up on the newly placed pavement, locked to grade, with stringless total station control on the shoulder side.

Communication was key. Before project paving began, an informational meeting was held for the cities, businesses, and residents affected by the project. Updates regarding upcoming schedules were posted on social media.



Second pass of paving operation (ACPA)



US 18 open to traffic (Iowa DOT)

[Visit our website](#) for more information on Targeted Overlay Pavement Solutions.

Concrete Materials

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