

Railroad Outage:
Bridge Modification

LOCATION

Broken Bow, OK

CUSTOMER

Osmose Railroad
Services, Inc

DESCRIPTION

Diamond wire
sawing four large
pockets in railroad
bridge pier retrofit
project.

Bluegrass Notches Four Piers in Twelve Days

General contractor Osmose Railroad Services Inc. faced a challenge. The Madison, Wisconsin based firm needed to upgrade the superstructure of a railroad bridge over the Mountain Fork Little River at Broken Bow, Oklahoma – and do it under live trains that crossed the bridge twice a day or more.

To help meet the challenge, Osmose called upon Bluegrass Concrete Cutting to cut large pockets to modify four concrete bridge piers. The pockets enabled Osmose to fit new welded steel girders under the tracks and upgrade the bridge for heavier, faster trains.

Working under live train traffic and fifty feet above water, Bluegrass used diamond wire sawing to cut the four pockets slightly ahead of schedule, in just twelve ten-hour days. The piers were solid concrete monoliths, four in a row across the river. Each pocket, or notch, measured four feet deep from the top, twelve feet wide across the pier, and seven feet horizontally through the pier in the direction of the trestle.

“Bluegrass got in, got out, and gave us nice clean cuts,” says David Franz, regional bridge engineer for Osmose. “The cutting went very well.”

One challenge Bluegrass faced was to perform the cutting from above the piers. Technicians worked from carts on the railroad tracks and had to reach the wire down between the ties to make the vertical cuts. Then, at least twice a day, had to remove the saws and back off the tracks for a train to pass. Each train meant that the cutting ceased for more than an hour.

After making the two vertical cuts in each pier, Bluegrass wire sawed horizontally twelve feet across the bottom of the pocket.

Bluegrass makes its own diamond wire for such operations by stringing proprietary diamond beads on aircraft cable. The controlled demolition contractor maintains an inventory of more than one hundred thousand feet of diamond wire.