

TOWNSHIP REPLACES A BRIDGE

A Small Town Bridge Demolition Project Led to a More Stable Road over the Maple River

By Ivy Chang



southwest of Fargo, knew that work had to be completed this summer, and the county let the project.

Scott Sellin, an owner and vice president of Highways at Sellin Brothers, said work began after Labor Day and required three weeks. “We replaced this old wood span bridge with triple-lined, 114-inch metal culverts that have wing walls. First, we removed the old bridge using our Komatsu 300 excavator to demolish the structure, leaving some of the abutments on both sides of the Maple River. We salvaged all the bridge planking and hauled it away.

“Then we removed the concrete piers that were pretty much shot. The two piers tipped over easily and fell as we leaned the excavator against them to remove them. We left the abutments in, used the excavator to dig out the piers and bailed them out of the river.”

Temporary pipe reroutes river

Sellin’s construction crew built earthen cofferdams to put in a temporary pipe that rerouted the river but kept it flowing. “We excavated in the river channel and had to set the culverts on top of the pipe bed, fabric and gravel that provided a solid base for the culverts. We contracted with a gravel supplier, Rustad Gravel, who hauled in the rocks. We laid more fabric, more rock, then fabric on top of that and finally laid more Class 5 aggregate to help support the rock on the riverbed,” said Sellin.

Sellin Brothers rented a 70-ton Link-Belt crane from Industrial Builders, West Fargo, which delivered the crane to the site and set the culverts, provided by Johnston Fargo Culvert, Fargo, ND, on top of the rocks. “The culverts were 42 feet long with a head wall and a drop wall all in one piece,” said Sellin. The pipes were dropped on the riverbed of rocks perpendicular to the old bridge, and Sellin’s crew bolted the three pipes together side by side to handle more water flow into the river.

After installing the pipes, the crew back-filled with aggregate on top of them and used controlled density fill, a concrete-like product, between the connected pipes. “The fill assures that we had compaction and support around the pipes,” explained Sellin.

Removing abutments

“We removed some of the abutments to lower the grade of the road and had to pound out some of the concrete in the abutments.” The north abutment stayed in place and the crew used its Komatsu D61PX dozer to grade and keep the reinforcement in that abutment. Sellin said, “Unfortunately, the south abutment fell in the river because it was unstable, and we removed the entire abutment.”

The crew imported dirt and built up the south abutment area with other materials. After the wing walls were installed in the river, Sellin said they put in about 250 yards of rip rap on the inlet and the outlet. That area was seeded.

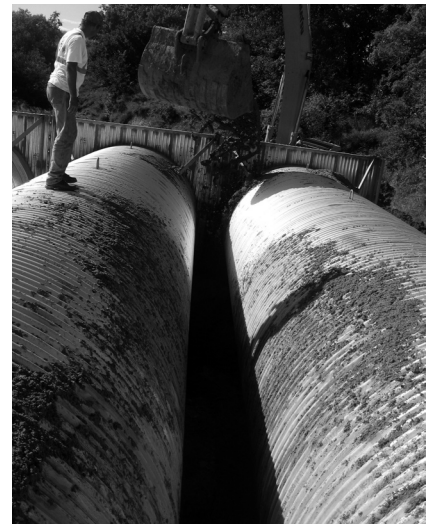
On top of the newly installed culverts, Sellin Brothers backfilled with Class 5 aggregate over imported clay dirt and realigned the new road. “We had to re-grade the existing road and match the new elevation on both sides of the river. The old bridge and this new road are about the same height,

and we graded on both ends of the culverts for a few hundred feet to match the levels,” said Sellin.



More aggregate and mulch

After putting more aggregate on top of the road, the crew cleaned up around the river and seeded the sides of slopes at the abutment and the newly built area. Crews



also placed mulch everywhere that was disturbed by construction.

“The newly built road will not be paved because it’s a little township road with farms

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on either end of the road and cattle roaming the area,” Sellin said. “Now, people can travel over the road.”

For Sellin Brothers, construction season is from mid-April until Thanksgiving. “This season has been difficult for grading projects,” said Sellin. “In the past, we had about 60-percent underground projects and 40-percent grading projects, but this year we had about 90-percent underground and utility projects and 10-percent grading projects.”

The business owns all of its equipment, about 40 pieces, and has a maintenance shop where, in winter, a few employees maintain the equipment. “We employ 40 to 50 people in a season and they’re mostly seasonal employees. We have nine permanent employees who work year round,” said

Sellin.

With all the underground work, Sellin Brothers does not own directional drills and hires subcontractors to provide drilling work.

Second generation takes over

In 1947, Sellin Brothers began when Harold Sellin, Scott’s father, began the business with his twin brother, Roy, in Hawley, a small Minnesota town 20 miles east of Moorhead and Fargo on Minnesota Highway 10.

“My father didn’t get married until he was 50 years old, so he was in the business a long time before he started a family. We’re the second generation after 61 years in business,” said Sellin, who with brothers Mark and Joel run the road and earthmoving business.

When the business began, it concentrated on grading roads until 1978. “There wasn’t that much grading then because interstate highways had been built, so we needed to diversify. We bought an excavator and went into underground and utility work. We did some excavating in road projects before buying the excavator but we had to get educated on excavation as we went along, and now the majority of our work is underground utilities.”

Sellin Brothers concentrates on county and state projects and a few local underground projects. “We still work on grading

projects, but they’re getting fewer, especially this year. I think there wasn’t enough funding for county and state projects. With increased costs of everything, too many contractors needed work and there wasn’t enough work available.”

To see the article online, log on to www.acppubs.com/article/CA6605627.html.

The National Corrugated Steel Pipe Association would like to thank Ivy Chang and Construction Bulletin for their permission to re-print this article which was originally printed in the



October 20, 2008 edition of Construction Bulletin.

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PIPELINE • Summer 2009

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