

Less Time, More Bonus Money

Try on this challenge for size: You've got from March 6 until November 21 to remove 2.5 miles of six-lane Interstate highway, build 12 bridges, do the excavation and sewers and pave mostly five lanes in each direction with concrete. That's the job awarded late in 2009 to Milestone Contractors of Indianapolis, for \$72.8 million. The project was located on I-465 near Indianapolis.

So how did Milestone do? The contract with the Indiana Department of Transportation carries an incentive/disincentive clause of \$60,000 per day. The maximum incentive could go to 15 days of payments. In fact, Milestone and its subcontractors reached substantial completion 16 days early and earned the entire incentive payment of \$900,000.

"The biggest challenge was the time frame," says Scott Cornelius, the project manager for Milestone. "We did some preliminary work through the winter months, but the main construction started on March 6 and had to be completed by November 21. It was a very aggressive schedule. We used multiple crews and did some double-shifting.

"Some night-time lane closures were allowed, but at all other times we had to maintain three lanes of traffic in each direction," Cornelius says. "We used three main phases of construction. We pushed East-bound traffic towards the middle in the first main phase, and reconstructed the Eastbound outside lanes. In the second phase we pushed that East-bound traffic over onto the new lanes and completed the remaining construction for the East-bound lanes. And then in the last main phase, we moved all of the West-bound traffic over to the East-bound lanes and reconstructed all of the West-bound side."

Antigo Construction, a subcontractor, broke up the existing concrete pavement with a multi-head breaker. Once an all-Caterpillar fleet of excavators and a dozer had removed the broken pavement, the earthwork began.

Milestone and Berns Construction, a subcontractor, split up the excavation work. "We split the project into East and West halves," says Cornelius. "Berns performed work on the West half with excavation and sewer work. Milestone performed the work on the East half. We also had 12 bridges and we performed all but two of the bridges. A subcontractor, His Construction, LLC, built the other two.

Earthwork equipment included Caterpillar equipment as follows: a D6NXL dozer, a D5KXL dozer with a GPS system, a D6N dozer with a GPS system, a 330DL excavator, a Model 735 haul truck, a CS563C vibratory dirt roller, a CP563



A fleet of Caterpillar excavators remove broken concrete pavement from the I-465 site.

sheepsfoot roller and a Komatsu PC-308 excavator.

The contract called for 240,000 cubic yards of excavation, some hauled to disposal, the remainder used for fills on site.

When the subgrade was brought to its proper elevation, another subcontractor, Mt. Carmel Sand and Gravel, moved in with a fleet of equipment to accomplish lime stabilization to a depth of 16 inches. Two Mack custom spreader trucks spread the lime and two Mack water trucks added water. One Wirtgen 2400 soil stabilizer mixed the lime into the subgrade. Three Caterpillar machines shaped and compacted the grade: a Model 163H motor grader, a Model 753 vibratory sheepsfoot roller, and a Model 753 vibratory steel wheeled roller.

"Then we placed subbase for the PCC," says Cornelius. That consisted of a total of 9 inches of crushed limestone. The bottom 6 inches was 3/4-inch dense-graded stone, and the top 3 inches was open-graded material to make it drainable." For fine grading the subgrade and placing the subbase, a Caterpillar 14H motor grader equipped with Trimble grade control swung into action.

"We worked a six-day-a-week schedule with some work on Sundays," Cornelius says. "We did some double-shifting, but that was not constant. The pavement removal phase was double shifted, and so was placement of barrier walls for maintenance of traffic. Some miscellaneous bridge activities were double shifted. Concrete paving was not double-shifted." ❖