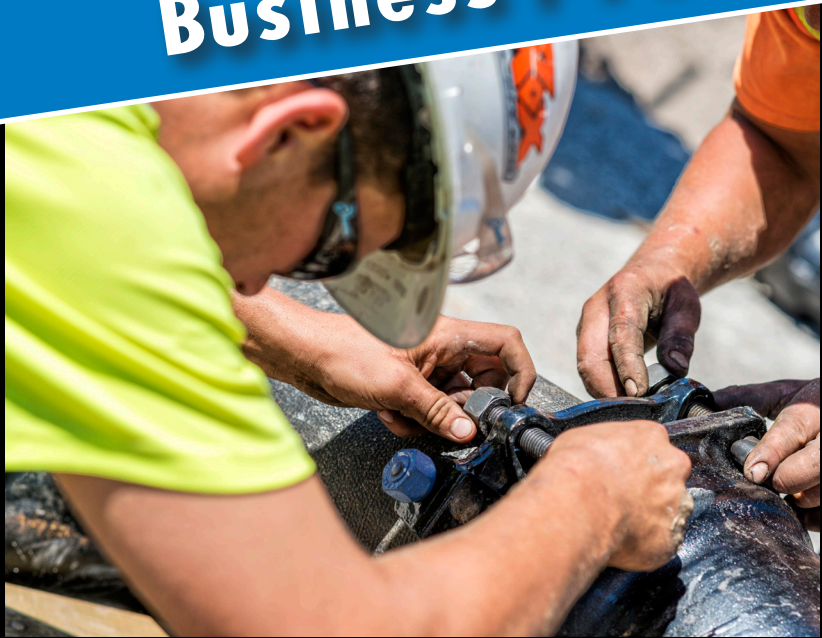


St. Ignace Business I-75



PROJECT: St. Ignace Business I-75

CHALLENGE: Equipment mobilization across the weight restricted Mackinac Bridge; out of town construction for three months

SOLUTION: Disassembling equipment, shipping equipment via barge, and reassembling; staying on schedule to allow crews weekends at home

OWNER: MDOT

CONTRACT AMOUNT: \$2,845,000.00

DESIGN ENGINEER: Chris Rupinski P.E., MDOT

ENGINEER CONTACT: (906) 293-5168

LOCATION: St. Ignace, Michigan

DATE STARTED: July 5, 2017

DATE COMPLETED: June 11, 2018

SELF-PERFORMED: 58%

PARTNERS: Rieth-Riley, Central Michigan Contracting, PK Contracting

On a recent job in St. Ignace, Michigan, Team Elmer's crews were a long way from home.

Over 80 miles of road and bridge stretched between the Team Elmer's offices in Hillman and the project worksite in St. Ignace, in Michigan's Upper Peninsula. The distance proved challenging as Team Elmer's crews worked to rebuild a deteriorated one-mile stretch of I-75.

The road, which provides a thoroughfare from the north side of St. Ignace to the downtown area, was in bad shape. That span of I-75 is the city's most-traveled stretch, not just for everyday traffic but also for major local attractions like parades and the annual Richard Crane Memorial Truck Show. With the road and the drainage systems in disrepair, Team Elmer's was low-bid for a full overhaul.

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The project consisted of roughly one mile of complete roadway reconstruction. That meant removing the existing pavement, doing a three-foot undercut to lower the road, installing new water main, replacing existing storm sewer and pipeline crossings, straightening out the geometrics and curves of the street, upgrading the guardrail system, and repaving the entire roadway. All told, the project left Team Elmer's with a three-month timeline and a lot of work to do.

Most of the biggest challenges of the job involved the location. First off, the three-month project cycle meant that crew members were away from their homes and families during the week through much of the job.

Secondly, the logistics of getting necessary equipment and supplies to the worksite were complex. Large equipment would need to be hauled to the site, material from the reconstruction would be recycled and reused on the project (saving the state valuable construction funds), and the closest sand subbase source was over an hour away.

When Team Elmer's removed 3,000 cubic yards of sub-grade undercut, the plan was to replace it with sand. To haul all the necessary material to the jobsite, multiple trucks were needed to keep up with the construction time frame for the project's duration due to the sand source being over an hour away.

Sand wasn't the only transportation issue. Team Elmer's needed multiple excavators and pieces of heavy equipment to handle the project in St. Ignace. Trucks are permitted to cross the Mackinac Bridge with gross vehicle weight less than 144,000 pounds. That stipulation ruled out hauling fully assembled heavy construction equipment over the bridge.

Team Elmer's crews disassembled excavators on the Lower Peninsula side, took them over the bridge in pieces to meet weight restrictions, and put them back together in St. Ignace. Our mobile concrete crushing unit — itself nearly double the bridge's max weight of 144,000 pounds — had to be ferried up to St. Ignace aboard a barge. Some 35,000 cubic yards of material were recycled on-site, crushing it into gravel for the road's new aggregate base. Adding value by saving reconstruction cost is a goal for Team Elmer's.

After a few months of work and a short winter break, Team Elmer's put the finishing touches on the new stretch of I-75. They bid the Mackinac Bridge and its amazing view goodbye and St. Ignace got a high-traffic roadway that looks better, drives better, and functions better than it has in years.

St. Ignace Business I-75 By The Numbers

- Pavement and Sidewalk Removal: 21,586 Square Yards
- Excavation: 31,004 Cubic Yards
- Subgrade Undercut: 400 Cubic Yards
- Aggregate: 32,845 Square Yards
- Sewer: 4,756 Feet
- Water Main: 683 Feet
- Hot Mix Asphalt: 10,768 Tons

