

EXCELLENCE IN CONSTRUCTION PARTNERING First Annual Awards



ITD/AGC Annual Excellence in Construction Partnering Awards - 2020 Nomination Form -

Contract Number/Route/Milepost:	Construction Engineer:
8482 I-86 MP 14.32-14.33	Douglas Yearsley
Project Name:	Date Project Started:
Raft River Bridge EB and WB Lanes	02/18/2019
Contractor Name:	Date Project Completed if applicable:
Western Construction, Inc.	12/05/2019
Email:	Phone #:
garry@wciboise.com	208-345-1440

1. Did the Contractor/ITD team participate in a Partnership Workshop or informal partnering?

Y 🗹 N 🗆

2. Category of Award (select one):

State Highway Projects (select size):

- □ Projects less than \$1 million
- □ Projects \$1 million \$5 million
- □ Projects \$5 million \$10 million
- ☑ Projects greater than \$10 million

Local Road Projects (select size):

- □ Projects less than \$3 million
- □ Projects greater than \$3 million

3. Application:

Please provide an overview of the project explaining scope of work, cost, and schedule. Be sure to include the below evaluation criteria where applicable.

Evaluation Criteria:

(1) Safety First, (2) Customer-Focused Results, (3) Innovative Problem Solving, (4) Overcoming Extraordinary Challenge,(5) Effective Contract Administration, and (6) Timely Completion of Project.

Project Overview:

In 2017, widespread spring flooding in South-central Idaho caused a three day closure of Interstate 86 near Raft River. This prompted ITD to move forward more quickly with plans to replace three antiquated bridges in the area. Crews replaced the three aging structures in 2019; two bridges were on the interstate, and a third ran parallel to the highway on a county route.

Raft River is usually a dry riverbed about the size of an irrigation ditch, but there is always potential for the channel to fill with water. Such was the case in 2017 when heavy rain coupled with rapid snowmelt caused a massive amount of water to converge on the dry riverbed. The water continued to rise until it flooded over the interstate, resulting in a closure that severed a vital transportation link.

Sediment from up-stream had begun collecting under the bridges from the time they were built. The sediment build-up had raised the channel floor about five feet, increasing the flood potential. To mitigate this, crews not only dug out 3,000 cubic yards of sediment, they also factored in a continuing sedimentation rate and raised the roadway 10 feet to accommodate continued sediment buildup and subsequent raise of water level. During construction, a substantial amount of fill was needed to raise the interstate. Materials sources close to the project had very silty and sandy properties that would not work well for fill. Because of this, the department decided to blast rock knobs out of the roadway median in order to acquire needed materials. Not only did this get rid of rock that could be a hazard, it also created a safety zone for vehicles drifting into the median and provided rock materials that would hold up better in wet conditions. There were multiple benefits to this approach; the contractor was able to move large amounts of materials quickly, and using on-site materials allowed ITD to accomplish more with the funds allocated for the project.

Before construction, ITD spoke with neighboring property owners to determine what impacts the work would have. ITD worked to keep operations moving and not make construction onerous for nearby farmers and dairies dependent on the county roadway. The area sees heavy agricultural use and a closure of the county road would have required individuals to detour around the site, adding 40 miles to their trip. ITD was very aware of the need to maintain routes for farmers transporting products. The project team provided options that ultimately eliminated the need for a detour.

The contractor and ITD coordinated with multiple agencies to make this project successful.

The Idaho Department of Fish and Game worked with ITD and the contractor, Western Construction, to put up fencing in the area that abuts the Minidoka National Wildlife Refuge.

Raft River Recharge Group, LLC also worked with ITD to acquire a permit and have Western Construction install pipe casings via trench when work in the area was underway. The casings will be utilized in the future as part of an ongoing project to help recharge and stabilize ground water levels, address flood prevention, and reduce sediment loads.

Realizing it would be foolish to replace the two interstate bridges if there would still be a bottleneck for the water on the county system at the Baseline Road bridge, ITD conducted outreach with the local Burley Highway District. With the understanding that another flood event could undermine the functionality of the interstate, it was determined that replacement of the county owned Baseline Road bridge would become part of the ITD project.

ITD coordinated with the Burley Highway District and determined there was enough money in the budget to build all three bridges. By including the third bridge replacement in the project, it also allowed ITD more flexibility with grades and with the placement of retaining walls further from the interstate.

During construction, ITD and Western Construction successfully executed a plan that allowed traffic from Baseline Road to move across the closed eastbound lanes of the interstate, as well as across a pipe in the river. Because of very wet soil, in a practice not common to South---central Idaho, geogrid was utilized to place the pipe which allowed for vehicles to cross the river while crews simultaneously constructed the bridges without impacting interstate traffic.

In order to further reduce impacts to interstate traffic, ITD required the contractor to build the Baseline Road bridge and the eastbound I-86 bridge at the same time.

ITD also used a completion-date contract, requiring the contractor to complete the project in one season instead of two. Western Construction, partnered with ITD throughout all phases of the project to complete each in a timely manner. A project that typically would have taken multiple construction seasons, due to the number of bridge replacements and significant change in road grade, was completed in just nine months.

Interstate flooding 2017 over the Raft River Bridges



Raft River prior to construction (taken from Baseline Road bridge)



Removing rock knob in median



View of construction on two bridges and water in Raft River



Aerial view of Finished Project looking to the south west.











