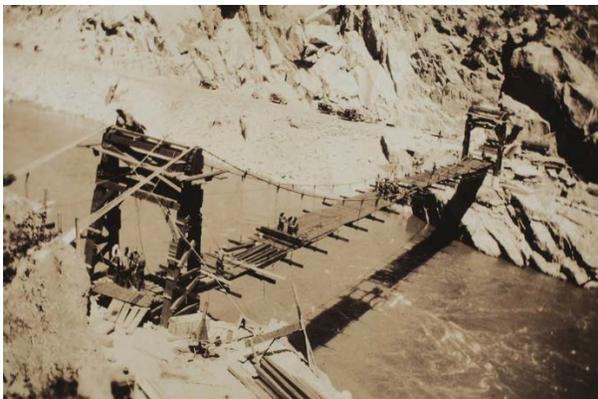


Manning Crevice Bridge Replacement

Riggins, Idaho

In 1934, members of the Civilian Conservation Corps (CCC) built the Manning Crevice Bridge as part of Franklin D. Roosevelt's efforts to create jobs during the Great Depression.

Fast forward 83 years. The Western Federal Lands Highway Division (WFLHD) began construction of a safer and stronger replacement bridge which will provide vital access to tourism and recreation in the Riggins, Idaho area, including the Salmon River, the Gospel Hump Wilderness and the Frank Church River of No Return Wilderness. The decision to build a newer bridge came after an inspection of the existing bridge was completed in 2016; the existing bridge was found to be out of compliance with current bridge standards and unsafe for public use.



1934 BRIDGE



2017 BRIDGE

The Manning Crevice Bridge, an existing timber-towered suspension bridge located on the Salmon River Road just outside Riggins, Idaho, had width, height, and turning limitations and was load restricted. Extremely sharp curves onto the bridge from both ends required wheel rub rails to direct the wheels away from the support posts and to keep vehicles on the structure. Additionally, the concrete anchor blocks showed extreme deterioration and cracking of the concrete, and the timber support towers were showing evidence of catastrophic decay.

The current project will correct all deficiencies by constructing the new bridge slightly upstream from the existing bridge. Spanning over 300 ft from canyon wall to canyon wall, the single-tower, one-lane asymmetrical suspension bridge is the best solution to replace the existing bridge.



Mock up drawing of proposed 2017 Suspension Bridge



Original Photo of Bridge



2016 Photo of Original Bridge

The Manning Crevice Bridge Replacement project is the first Construction Manager/General Contractor(CM/GC) approach to a project that WFLHD has used. The use of CM/GC on this project provided WFLHD, the US Forest Service and Bureau of Land Management the opportunity to gain experience and a better understanding of how CM/GC works within the confines of federal acquisition regulations. CM/GC is also part of the Federal Highway's Every Day Counts initiative, which transforms the way FHWA does business by shortening project delivery times and accelerating technology and innovation in projects.

From a design perspective, having the contractor involved in the development of the plans and specifications provided an excellent opportunity for agency staff to learn the value of obtaining contractor input early in the process. This value should carry over to future projects and provide the incentive to other agencies to look beyond the conventional design, bid and build process and to seek ways to incorporate innovative contracting methods.

The load capacity of the old bridge was limited to 16 tons. The new structure will be open to all state legal loads and will not post any load restrictions. In April 2017, workers performed ground anchor block testing, one of the proven ways to ensure the bridge has the necessary strength to handle all loads. Testing required a massive stressing ram so large and heavy that it had to be set into each of the nine anchor locations with a crane. Ground anchors were tested to a load of over 175 tons (351,000 lbs) which is approximately the weight of 30 average size elephants. These loads are about ten times that carried by typical soil and rock bar anchors.





Workers brave the heights to attach cables which will provide stabilization to the bridge

In June 2017, the contractor erected a 75 ft steel tower for support of the bridge on the north end. Work continues with forming and tying rebar at the north end anchorage blocks and abutment wingwalls, while micropiles are drilled, and rebar placed and grouted on the south end. In August 2017, connecting the bridge suspension cables to the threaded bars took place.



The 75 ft Steel Tower erected on the north end



Concrete support form for Steel Tower

The new suspension bridge is scheduled to be completed in the spring of 2018.