

## **Bridge Removal Without A Large Crane**

If WIBW were to do the restoration of the Bishop Bridge, we would do so without large cranes. This is for three reasons: minimal environmental impact, reduced risk to the historic bridge and reduced cost.

Cranes require very significant prep. In the case of the bridge in the attached images, several acres of land were proposed to be cleared/disturbed to allow the crane to lift the bridge. This included the cutting of numerous trees, creation of a 'crane pad' earthwork that was large and stable enough and correctly located to allow the crane to pick up the bridge. A prepared 'lay down' area that was a prepared place to set down the bridge on land that allowed access for disassembly.

The falsework (structure under the bridge) built for the job was an improved, modern take on the method used to originally erect the bridge. It uses pads that rest on top of the creek bed and no fill or stream entry with heavy equipment is required for installation or removal.

The method shown here allowed work to remain within the roadway easement. The entire environmental impact of the job was cutting one sapling growing under the bridge (3-1-22 image shows the stump).

Note: Janice Lynx and PA SHPO visited the site on Jan 24, 2022, so the 1-25-22 images are representative of what Janice and PA SHPO saw.

Although a slower process, there is no earthwork, fill, fill removal, tree cutting or hiring of cranes - reducing cost & having a lower impact on the setting/environment. It also uses a smaller crew.

The other issue with removing a bridge with cranes is there is a risk of destroying the bridge. An iron truss is an elegant minimalist structure that is designed to support a load moving across it's deck. It is delicate in all other aspects and can turn into a pile of what looks like iron spaghetti if not lifted correctly.

The project shown here was delayed from fall to winter; the winter work doubling the removal's duration due to the challenging conditions. Our proposal is for warm weather work (prefer a spring removal and a fall installation).

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