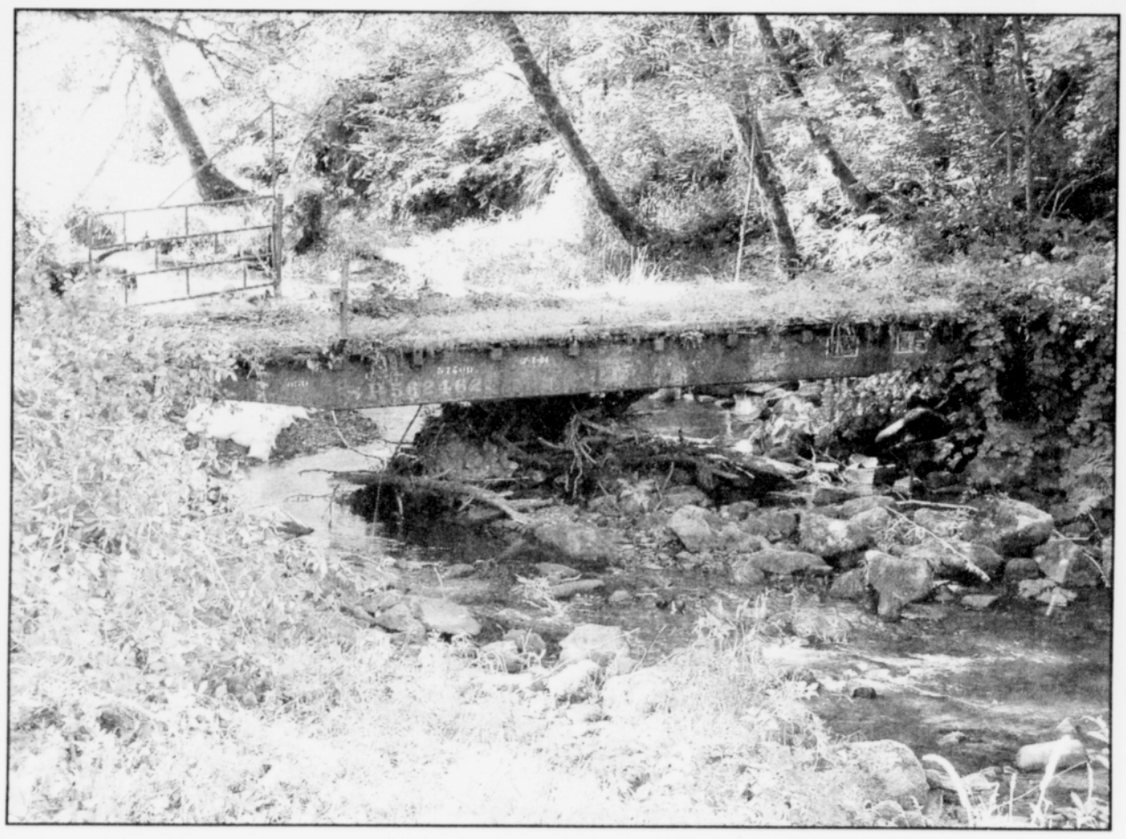

Photos by Jay Christensen

Bridge, con't from page 1

including those designed specifically for log hauling, are one of the firm's specialties.

The Natural Resources Department told McGee that we wanted something relatively low cost and low maintenance that would last for decades and be of sufficient strength to support logging equipment and log trucks. It also needed to be high enough above the stream to pass any debris that might float down during the high waters of winter storms.

The engineering firm came up with a number of options that were then provided to Tribal Council. The council opted to dispose of the old rail car and put in a permanent pre-stressed concrete bridge placed on pilings.

With design specifications and cost appraisal provided by McGee, the Natural Resources Department sent out a prospectus and bid package to several bridge construction companies. The contract was awarded to Mike Adams Construction of Stayton at a cost of just under $165,000. Mike Adams has extensive experience in placing concrete bridges over forest streams in the Coast Range and ended up being an excellent company with which to work.

Stream protection was the highest priority in planning and implementing the project. Little Rock Creek supports a variety of fish, including Chinook and Coho salmon, steelhead, cutthroat trout and eels, and is home of one of the Tribe's cultural fishing sites just upstream from the bridge location.

All work that had the potential of having an impact on the stream had to be completed during the Oregon Department of Fish and Wildlife's in-stream work period that ran from July 15 to Sept. 15. The stream itself had to be diverted through culverts to minimize the chance of sediment getting into the stream during excavation and rip-rapping of the stream banks.

A temporary bridge was installed to provide equipment access to both sides of the stream (equipment couldn't be run over the old bridge for fear of it collapsing and falling into the stream).

The project eventually required the use of two track hoes, a bulldozer, a vibratory compactor, a number of dump trucks, two cranes and a pile driver. Above each bank of the stream, four steel-beam pilings were driven into the earth to a depth of 15 to 20 feet, which calculates to around nine feet below the streambed.

Concrete abutments were poured on top of the pilings to support the four new concrete beams that make up the new bridge running surface. These beams were then bolted together with long-threaded rods.

The final stage was to pour the concrete side bump rails and wing walls and install the gate. Also included in the project was construction and rocking of a new all-weather access road from Logsden Road to the new bridge.

Tribal Natural Resources staff then spread grass seed and laid straw on all disturbed soil to prevent sediment from eroding into the creek.

The new low-maintenance bridge is a nice improvement to the Tribe's hatchery property and a good investment for generations to come. Future plans include reopening and rocking the road into the property on the far side of the creek.

Top left: The old bridge has debris caught underneath it.

Top right: Steel beam pilings are driven 20 feet into the ground to help support the bridge.

Bottom left: The stream is diverted into culverts to protect water quality.

Bottom right: Concrete bridge beams are lowered into place.