Piles driven 211 feet ...

...total height gained: 17 inches

Elusive bottom slows rail bridge

Story and photos by Borys Lenko

Since last July, a 10-man construction crew from the Canadian National Railways has been installing a new railway trestle across the Holland River, on the boundry of Simcoe county and the Region of York.

The new steel trestle will extend 275 feet across the river and sit 16 to 17 inches higher than the wooden bridge which the railroad is presently using.

The old timber bridge dates back to the days of the Grand Truck Railroad, and the first records the CN have date back to 1891.

This is the fourth time the 249-foot bridge has been under repair. It was reconstructed in 1905, 1935 and 1952.

The reason for the new bridge is the added weight the trains are now carrying. Also, with the new "ballasted deck" which will be installed on the bridge, the ride over will be improved, with less vibration and less noise.

A ballasted deck, according to CN officials, holds the track ties on a bed of crushed rocks.

The project is taking longer than was first anticipated because of the steel support piles have to imbedded on solid footings. So soupy was the river muck, some of the H-shaped piles have been driven down to the 211-foot level before hitting something firm enough to offer support.

A CN spokesman stated that the first soil tests proved to be false in some areas of the river.

When the new single track trestle is completed, the bridge will have 11 spans, each 25 feet long, centered on four steel piles.

The CN representative said the support piles are usually made of cement but, because of the river's soil conditions, they had to use steel.

The crew installing the bridge consists of specialists in the field. They form a section of the CN engineering department, "the Bridge and Building section."

The supervisory members of the crew stem from all parts of Ontario. The foreman, E. Hall, is from Belleville and his assistant, Harvey Cleaveley, is from Ottawa.

Driving the support piles into the river bottom is a long process and the most the crew have embedded in one day is three.

To get one of the piles into the river bed takes about half an hour of straight pounding from the pile driver, which hammers the beams with 11 tons of pressure. The piston which does the actual pounding weights 2,300 pounds.

Even with the 11 tons of pressure being hammered on the end of a pile, in some parts of the river it has taken up to 55 blows before the pile has been rammed one foot farther into the ground.

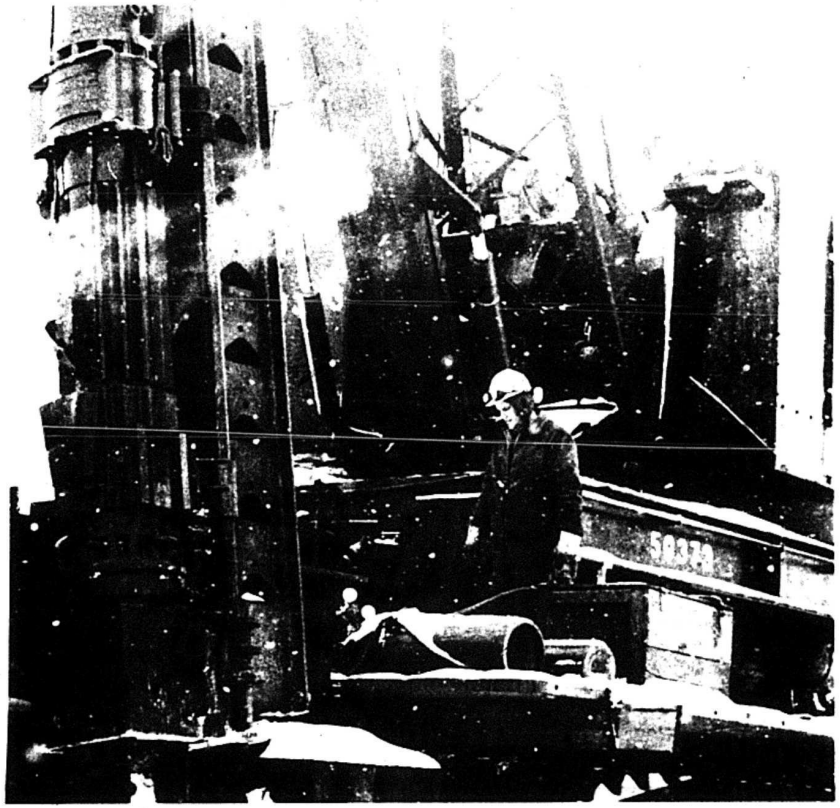
The single track trestle is apparently common in Canada, and no mishaps have occurred on them.

Two passenger trains use the bridge, the Super Continental from Toronto to Vancouver and a passenger train from Toronto to North Bay on weekends.

The unscheduled freight trains may come at anytime. However, when two trains approach the bridge at the same time one has to back up and wait for the other to pass.

The estimated cost of the new bridge is well over $1 million, with the crew working in all weather conditions except in very severe storms.

However, at this pace, the Canadian National is confident the new bridge will be completed sometime in the early spring.



CN pile driver exerts 11 tons of pressure with every blow

Pat Murphy helps attach a shoe plate to crane.