

New Jerusalem Road Bridge Load Testing



The New Jerusalem Road Bridge is located on a dead end road with only two property owners located on the other side of the bridge.

The bridge was posted with a load limit of 10 tonne but was being used daily by large milk trucks and grain delivery trucks which weighed well over 10 tonnes.

The municipality began the process to replace the bridge with a new one which would be capable of supporting the daily traffic.

A live load test was proposed to determine the real world load carrying capacity of the bridge with the hope to save the structure.

Saving the structure would result in significant cost savings, and save time. The bridge was load tested by Struct-Sure Limited by installing fibre optic stands and fibre optic extensometer.

The result of the load testing should that the bridge was behaving in an elastic manner and that the testing showed that the bridge performed well. The load testing showed that the bridge distributed the load nearly uniformly across the width of the bridge. The load testing revealed that there was very little strain and deflection of the bridge and the bridge returned to its natural condition after the load was removed.

Based on the load testing it was concluded that the bridge could be posted at 25 tonnes, a 2.5 times increase over the original load posting. The new load rating for the bridge would allow the truck traffic to cross the bridge and the Owner now has the peace of mind to know that the bridge is safe. The owner also now knows that the cost of rehabilitating the bridge is a good investment.



