



Project Title: PDA Testing Halfway River Bridge, Hantsport, Nova Scotia

Client: NSTPW

Project Description:

GEMTEC Limited was retained by the Nova Scotia Department of Transportation and Public Works to conduct dynamic pile testing (PDA) for a new multi-span bridge structure crossing the Halfway River in Hantsport, Nova Scotia. All piles driven for the foundations were 406 mm diameter steel pipe piles with a 12.7 mm wall thickness. The required ULS pile load capacity is 975 kN. Based on the Canadian Highway Bridge Design Code (CAN/CSA-S6-06) a geotechnical resistance factor of 0.5 is appropriate for PDA tested piles. On this basis the ultimate geotechnical resistance required from PDA testing is $975\text{kN} \div 0.5 = 1950\text{ kN}$.

GEMTEC Limited conducted PDA testing on two piles at each of the following foundations between January and June 2008:

- East Pier
- West Pier
- East Abutment
- West Abutment

Finalization criteria were established in the field during PDA monitored driving. CAPWAP analyses were completed on select PDA tested piles.

