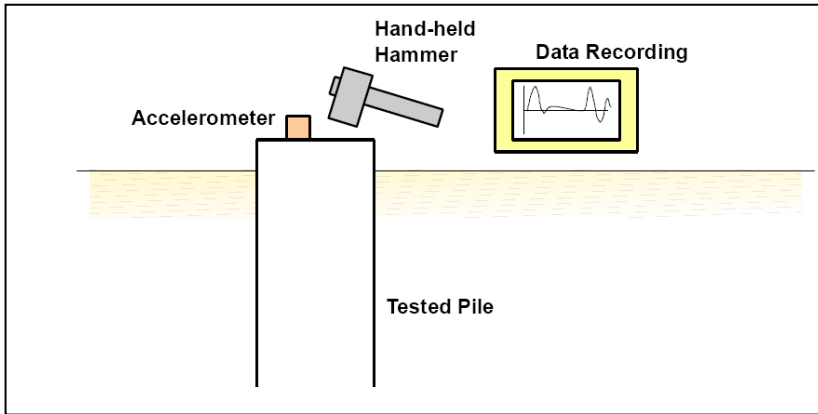


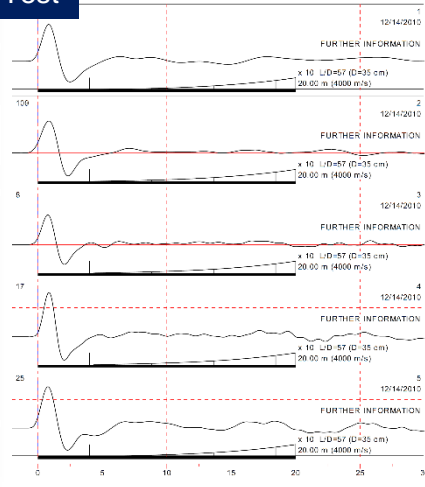
## Schematic of Pile Integrity Test



Low strain integrity test, also known as pile integrity test, is a non-destructive in-situ testing to evaluate the pile integrity, pile dimensions, continuity and the consistency of the pile material. This test is quick and cheap to conduct method.

Low strain integrity test is carried out in accordance with ASTM D5882 by Pulse Echo Method. The impact hammer, the accelerometer and the data recording system are required in this test.

## Field Test



First of all, the surface of pile head is prepared by removing dirt and debris, and making it smooth and dry. It should be noted that, sufficient area is required for installation of accelerometer and for hitting with impact hammer. The accelerometer is attached firmly to the selected smooth area with the bonding material away from the edge of the pile head. The hammer is positioned at maximum distance of 300 mm from the accelerometer. Then the apparatus for the recording the data is set up and the test is carried out by hitting the pile head with hammer until we obtain suitable reading. The compression wave generated from the hammer travels through the length of pile and gets reflected back when it encounters any defect or when it reaches pile toe. The velocity of the wave propagation and the conducted are recorded in the computer. The suitable records among the several records of each pile are averaged and applied the necessary amplification for evaluation of the pile integrity. A velocity-depth graph, which is used to determine the pile integrity, is generated for each test pile.

## Results

