

## SOIL CLASSIFICATION FOR SEISMIC EFFECTS COMPARISON BETWEEN MASW AND DOWN HOLE TEST

**Project:** Seismic classification of soils, comparison of different seismic techniques in complex terrain

(sands and gravels with cemented layers cemented). Comparative analysis between MASW and down-hole method

**Site:** Giaveno (Turin Italy)

**The purpose of the survey:** The survey was conducted in accordance with Italian rule DM 14/01/2008, with the objective of defining the stiffness profile down to 30 m depth for the definition of the parameter VS30.

**Results:** The comparison between the two stiffness profiles shows a similar behavior, both with regard of the VS30 value (628 m/s for MASW test and 710 m/s for DH test) and both for what concerns the trend of the stiffness profile.

The presence of cemented gravel layer (between 14 and 25 m, as revealed by the drilling for the DH test) is seen on both the profiles, with  $V_p > 800$  m/s.

The comparison demonstrates that the MASW survey can be – in many cases and for seismic classification – a valid alternative to the DH test

