G-I Organizational **Member News**

Pile Dynamics, Inc. Develops Breakthrough Test for Concrete Foundations

A new solution for integrity evaluation of concrete foundations has been developed by the **Pile Dynamics (PDI)** - Foundation & Geotechnical Engineering, LLC (FGE) partnership: the Thermal Integrity Profiler (TIP). TIP uses the heat generated by curing cement (hydration energy) to assess the quality of cast- in-place concrete foundations such as drilled shafts, bored piles, augered cast-in-place, continuous flight auger piles, and drilled displacement piles. Because temperatures within the concrete foundation are dependent on its diameter and distance to the center of the shaft, TIP measurements may be used to estimate the actual shape of the shaft including the previously difficult to determine thickness of concrete cover.

The Thermal Integrity Profiler, which is based on research conducted at the University of South Florida and originally implemented by FGE, assesses the concrete quality of the entire cross-section and along the entire length of the foundation. Test results are available as early as 12 hours after concrete is poured, allowing construction to continue.