Nondestructive Testing (NDT) and Nondestructive Evaluation (NDE)

Nondestructive Evaluation (NDE) is a relatively new and inexpensive way to determine the extent of damage or defective construction. Its use in civil engineering is analogous to the use of indirect sounding methods in medical examinations. Recent advances in testing techniques, equipment, and software have brought reliability and industry-wide acceptance to this discipline.

Nondestructive testing (NDT) can provide detailed information not obtainable from visual inspection or invasive sampling alone. This information is particularly beneficial in evaluating large concrete structures such as dams, bridges and tall structures. The NDT data collected can be stored as a baseline for future studies, a useful resource in developing maintenance programs.

CTLGroup is a leader in designing and refining sophisticated NDE methods such as Impulse Response, Ultrasonic Tomography, Impact-Echo and Impulse Radar. Our engineers have tested and proved these developments on sites throughout the world, and thus have stayed in the vanguard of the nondestructive evaluation industry.

The most complete investigation of structural problems is achieved through a careful mix of visual inspection, NDE and minimally intrusive material sampling. Properly managed, this approach often costs less than a more traditional investigation while more clearly defining the problem. CTLGroup has the versatility, depth of knowledge, and breadth of experience to carry this out effectively. CTLGroup nondestructive testing services have many applications. Some of the most common include:

Subsurface Characterization

- Locating tanks, utilities, and cavities
- Assessing foundation condition, pile length, and retaining wall depth

Floor Slabs + Pavements

- Evaluating concrete quality, slab thickness, and support
- Locating dowel bars, subsurface voids, and internal delamination

Concrete Structures

- Locating embedded steel and assessing corrosion
- Identifying concrete defects in thick and heavily reinforced concrete
- Monitoring and analyzing vibration

Masonry Structures

- Evaluating presence of reinforcing bards and grout in CMU walls
- Assessing in-situ stresses

(847) 965–7500 CTLGroup.com