

Construction Materials Testing

Our construction materials testing (CMT) group approaches each job with a focus on client service and comprehensive project management. The core purpose of this group is to perform quality control (QC) and quality assurance (QA) testing of concrete, asphalt, porous pavement, cast-in-place recycled asphalt, roller-compacted concrete, structural and reinforcing steel, soils, masonry, fireproofing, roofing, floor flatness and other construction materials to ensure compliance with construction specifications and industry standards. This not only includes testing on materials for the above-ground structures, but also testing and observation of earthwork and foundations, such as shallow-bearing footings, drilled piers, driven steel and precast concrete piles, and auger cast piles; the tests performed with firm-owned equipment include Pile Dynamic Analysis (PDA), Pile Integrity Tests (PIT), and Transient Dynamic Analysis (TDA), as well as conventional pile testing using static loading.

Commitment to quality begins with our people, who are trained and certified in their disciplines. Our qualified field representatives are certified by American Concrete Institute (ACI), Post-Tensioning Institute (PTI), American Society for Non-destructive Testing (ASNT), American Welding Society (AWS), Kentucky Transportation Cabinet (KYTC), Tennessee Department of Transportation (TDOT) and Department of Transportation for the states of Ohio (ODOT), Illinois (IDOT), Kansas (KDOT), Missouri (MoDOT), Mississippi (MDOT) and the Arkansas Highway and Transportation Department, International Code Council (ICC), National Concrete Masonry Association (NCMA), and National Institute for Certification of Engineering Technologies (NICET). Professional Engineers who perform PDA, PIT and TDA tests on driven and cast-in-place piles are GRL trained. The CMT groups are led by two managers who collectively bring over 20 years in materials testing experience.



QUALITY

INTEGRITY

RESPONSIVENESS

PARTNERSHIP

OPPORTUNITY

SAFETY

St. Louis, MO | Erlanger, KY | Memphis, TN

Overland Park, KS | Cincinnati, OH | Fairview Heights, IL | Lexington, KY

Dayton, OH | Oxford, MS | Jonesboro, AR

Construction Materials Testing continued

Geotechnology voluntarily participates in a number of certification programs. As a result our laboratories are AASHTO/AMRL, CCRL and U.S. Army Corps of Engineers approved. The QA/QC Program is organized under the guidelines of ASME NQA-1, and all testing is conducted in general accordance with the latest ASTM or AASHTO procedures. The St. Louis facility features one of the largest moist-curing rooms in the Midwest, with 24-hour data recording of environmental conditions and automatic control of humidity and temperature to assure consistent test results. Both compressive and flexural strength specimens are transported from the field to the lab, cured and tested at appropriate intervals, generally 7 and 28 days. The team has played an integral role in successful completion in many landmark construction projects in Kentucky, Ohio, Tennessee, Kansas, Missouri, and Illinois and can also establish mobile testing laboratories to complete materials testing services on construction sites that are distant from our labs.

As a quality assurance/quality control firm, it's our priority to address non-compliance issues as soon as they're identified and to communicate the issue quickly so that the project team can evaluate the situation, make decisions and determine a course of



action promptly. Geotechnology's quality assurance goal is to provide meaningful data to its clients and to prevent the release of documents and reports containing inaccuracies. This is accomplished by staff training in quality assurance principles, statistical techniques and adherence to standard operating procedures; by staff review responsibilities; and by record keeping, corrective action, and document control procedures. Whether non-compliance or other issues arise, it's our code of conduct from field representatives through principals to resolve them with professionalism. Clients can stay informed about testing results and easily access reports with GeoPortSM, our paperless Field Information Management System (FIMS). GeoPort is our new client interface and document repository providing 24/7 access via secure server on any mobile device, laptop or PC. Reports are immediately transmitted to the office by Geotechnology's field staff; the Project Manager then reviews and publishes the documents to our clients.

Whether your project covers a large site or several locations covering several acres or miles, GeoPort organizes reports and with the click of a button you'll be able to look at Daily Reports over the course of the project or focus only on a particular day.

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The firm provide the following construction materials testing and non-destructive testing services:

Concrete Testing – Field Services

- Coring
- Cross-hole sonic logging
- Floor flatness
- Prepare strength specimens
- Plant control – verify/adjust batch weights
- Rebound hammer
- Sample aggregates
- Test batches
- Test slump and air content
- UltraBEAM
- Windsor probe

Soil Testing

- California bearing ratio
- Compaction tests
- Consolidation
- Hydrometer
- Index properties
- Permeability
- Resistivity and pH
- Strength testing
- Swell tests

Concrete Testing – Laboratory Services

- Aggregates
- Compressive strength testing (cylinders, cubes and cores – all sizes)
- Flaw detection
- Flexural strength testing of beams
- Masonry – individual blocks and prisms
- Mix designs

Steel Testing

- Bolt testing (tension/torque)
- Dye penetrant
- Magnetic particle
- Non-destructive testing visual
- Structural and reinforcing steel inspections
- Ultrasonic flaw detection (Phased Array)
- Welder certification

Asphalt Testing

- Bitumen analysis
- Compaction control
- Coring
- Hot bin pulls/gradation
- Ignition/gradation
- Marshall method
- Mix designs
- Superpave technology

Other Testing

- Asbestos and lead-based paint identification/abatement monitoring
- Fireproofing
- Paint thickness
- Plastic pipe, reinforced concrete pipe
- Roofing materials
- Special inspections per IBC

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