BELOW THE SURFACE

March 2024

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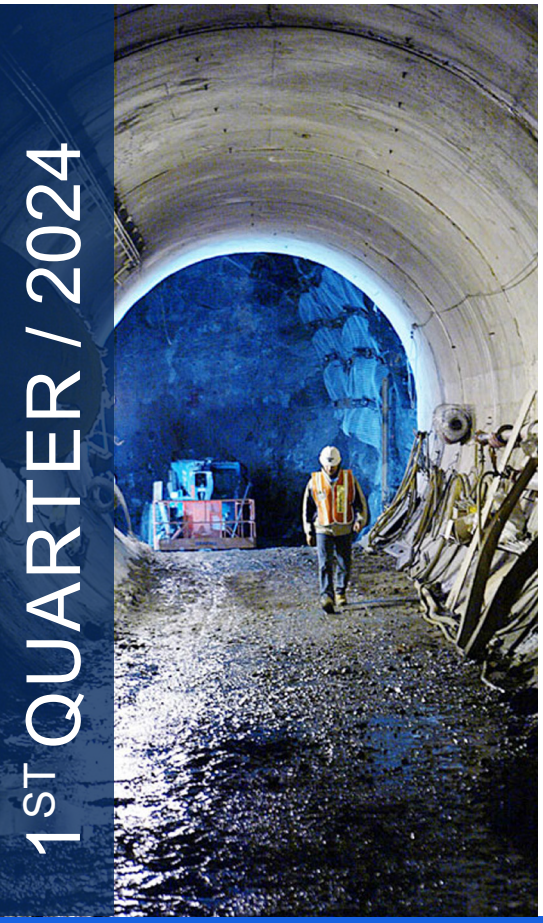

We've Launched a New Look!

We are delighted to begin unveiling our new brand identity for Geocomp and GeoTesting Express (GTX). This marks a significant milestone in our journey of growth and evolution as a company.

In 2022, Geocomp was acquired by Sercel, the world's leading designer and manufacturer of high-tech solutions for subsurface exploration. Sercel is part of CGG Group, a global technology and HPC leader that provides data, products, services, and solutions in Earth science, data science, sensing, and monitoring. This has offered our employees new opportunities and our clients new services to achieve their goals.

With great pride and enthusiasm, we launched our refreshed brand, at a Geocomp hosted reception after the George A. Fox Conferece in New York City in early February.

Our new identity has been meticulously crafted to embody our expertise, innovation, and continuous growth with Sercel. Inspired by geology, this logo weaves subsurface layers and mountainous peaks to showcase the Earth's history and rugged beauty. It's a symbol of resilience, representing our strength, quality, and enduring commitment we bring to our clients.

Our branding journey will culminate in the release of an amazing new website in the coming months. The new website will bring greater clarity to how we can support our clients, the current and new markets we service, and the innovative technologies we now offer in collaboration with Sercel and CGG. We intend to enhance the user experience and showcase Geocomp's unique expertise and the significant impact and value we can bring to your projects.

Stay tuned for forthcoming updates as we integrate our new brand across all facets of our organization!

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Sumner Tunnel Boston, MA Monitoring Project

Geocomp continues to monitor Boston's Sumner Tunnel Rehabilitation Project as the city prepares for a second summer of tunnel closures between East Boston/Logan Airport and downtown. Boston's Sumner Tunnel is approaching its 100th anniversary of carrying road traffic beneath Boston Harbor. During routine tunnel inspections, MassDOT identified several critical safety and structural issues that necessitated a complete rehabilitation, including upgraded life safety and electrical infrastructure as well as a new tunnel crown.

Geocomp is monitoring vibration, noise, and dust levels in two dense urban neighborhoods that the tunnel passes beneath on its approaches to the harbor: Boston's North End and East Boston. Along with sensitive residential neighborhoods, key adjacent landmarks include the Paul Revere house (ca. 1680) - downtown Boston's oldest remaining building, and the North Bennet Street School, which was built directly onto the tunnel portal. Geocomp's *i*SiteCentral® web-based data management platform automatically collects readings from the field sensor networks and displays them to project stakeholders including JF White Construction, Delve Underground, and MassDOT. Continuous automated monitoring allows work to proceed during nights and weekends, helping reduce the overall time needed for tunnel closures while minimizing disturbance to the city's residents, workers, and visitors.

S-scan Subsurface Investigation

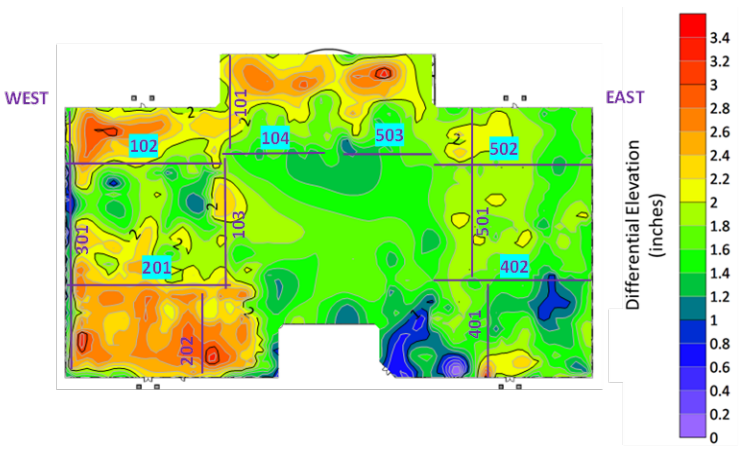
A client came to Geocomp reporting continuous cracking on a concrete slab within an office building. The available geotechnical investigation data collected outside the building wasn't sufficient to establish the cause for the slab cracking. Due to low access within the building interior, geotechnical drilling inside the building wasn't possible. Geocomp was called in to develop an investigation plan that included a floor elevation survey, and an innovative surface wave geophysical survey to complement the geotechnical investigation conducted outside the building perimeter and a limited hand auger investigation conducted inside the building.

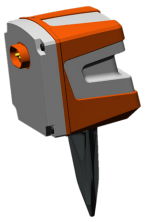
The surface wave geophysical survey used, called S-scan, is a seismic mapping method that has evolved from the oil and gas industry. S-scan is a unique hybrid solution that couples passive seismic interferometry and sparse active stimulations by incorporating micro-electro-mechanical systems, or MEMS, accelerometers, and patented algorithms to accurately characterize near-surface conditions. It can provide more detail within the shallow subsurface, i.e. roughly top 20 ft, as well as allow scanning of deeper subsurface because of its enhanced performance at lower frequencies.

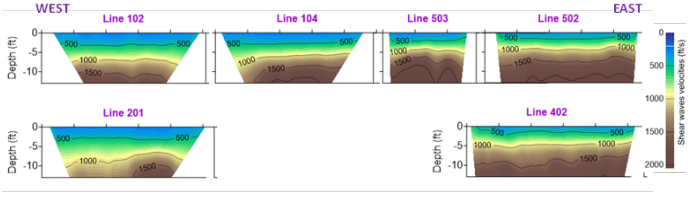
In this forensic investigation, the S-scan system was used with a very dense spacing of nodes, approximately 2-ft spacing, (pictured on the right) placed on top of the slab to provide a high resolution of the upper 10-15 ft of soil. Approximately 1,200 linear ft of geophysical survey lines were surveyed within the building's interior in just one weekend. These survey lines provided continuous subsurface shear wave velocity profile data in both the east-west and north-south directions.

The lab testing of soil collected from invasive exploration outside the building showed the clay had some potential to expand with increases in moisture content, and to creep under constant loads. Because the geophysical survey identified the thicker clay layer became progressively thicker toward the west, this contributed to volume changes in clays with moisture changes, as well as long-term creep to be more pronounced at those areas. The results of the testing and engineering analyses were used to devise a mitigation plan to reduce surface and groundwater percolation toward the foundation, and thereby reduce future movements. The consolidation and creep was concluded to be the primary cause of the cracking.

This case study notes the importance of finding innovative ways to collect subsurface data with minimal disturbance to the existing structures and operations. Geophysical methods can provide a continuous 2D or 3D profile of subgrade properties with depth along an investigated line; they're nondestructive, noninvasive, and relatively quick.







AASHTO re:source Technical Exchange Panel Discussion

GeoTesting Express' Nancy Hubbard, Laboratory Geotechnical Project Manager was a panelist at the AASHTO re:source Technical Exchange in Boston, MA March 18-20th. Nancy was part of the panel "Connecting the Dots: Geotechnical Testing." The focus of the discussion was on four common geotechnical tests and typical findings or issues written up by auditors during routine laboratory assessments. Incremental Consolidation, Direct Shear, UU and CU Triaxial and Hydraulic Conductivity were the tests chosen by the moderators for this discussion. The panel discussion also focused on the testing "do's" and "don'ts" and the reasons behind the test methods as written, and any misconceptions that were brought to light. The conference room was full, a very well-attended session with a lively conversation on the myriad details of these tests. Additional panelists were Walter Flood IV, M.S., P.E., FACI, Assistant Engineer, Flood Testing Laboratories, Inc. and John B. McCarthy, CWI, MSI, Corporate Director of Quality Assurance, ECS Limited. The moderators of the panel were, Michele Bronk, Manager, Laboratory Assessment Program, AASHTO re:source and Jacob Nance, Laboratory Assessor, AASHTO re:source.

Geocomp/GTX Upcoming Events

ASDSO Southeast Regional - Knoxville, TN ~ April 8th

GBA Annual Conference - Anaheim, CA ~ April 18th

USSD Annual Conference - Seattle, WA ~ April 22nd

IFCEE - Dallas, TX ~ May 7th

World of Coal Ash - Grand Rapids, MI ~ May 13th