

22 FUTURE OF UNDERGROUND
CONSTRUCTION MONITORING

42 GEO IT REVOLUTION:
INTELLIGENT COMPACTION

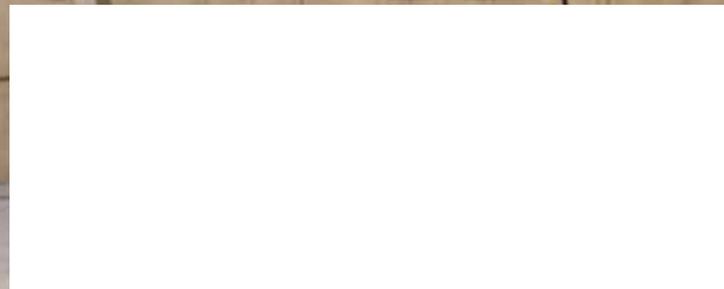
50 INNOVATIONS IN
AUTOMATED MONITORING

56 IMPROVING UNDERGROUND
CONSTRUCTION QUALITY

GEOSTRATA

SEPTEMBER // OCTOBER 2014

PERFORMANCE MONITORING OF GEOTECHNICAL STRUCTURES



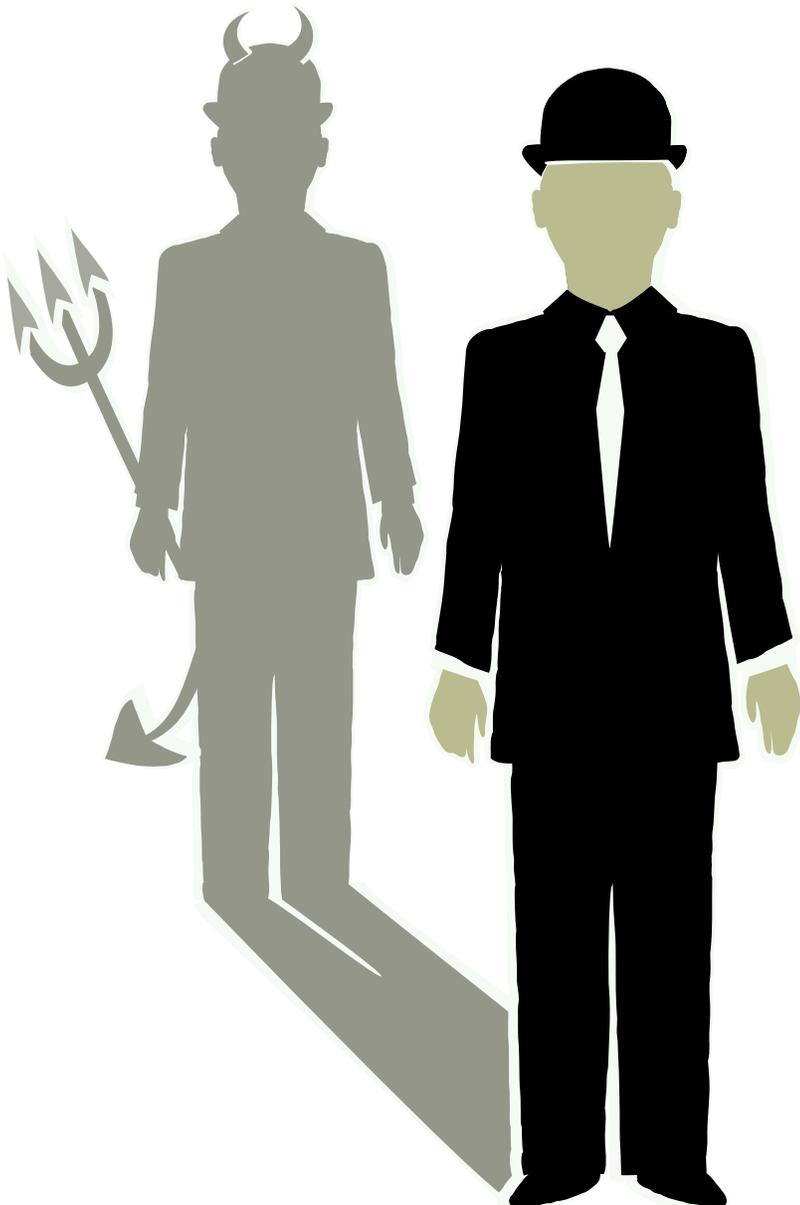
Proudly published by the Geo-Institute of ASCE





Practice Management: Don't Learn the Hard Way

By John P. Bachner



To what extent do you need to vet a first-time client before you accept its commission? To the maximum extent possible, because – unlike most clients and client representatives – you are personally liable for the services you provide, and that liability can outlive both your employer and you.

I realize that thousands of geoprofessionals are quickly bored by the risk-confrontation/business-optimization issues tackled by GBA; for them, technical developments are the only thing. But you cannot apply technical developments in a vacuum. Typically, someone has to pay for them – a client – and that someone will apply them because they generate benefits the client wants to receive. And when that happens, welcome to the world of professional practice, where success – if not survival – depends on knowledge of business and risk confrontation, because the world of professional practice can get really weird. Consider this case....

The head of a three-person civil-engineering firm contacted a well-established GBA-Member Firm about providing specialty-engineering services for the rehabilitation of several county-airport aircraft

Cross Hole Sonic Logging

by the Foundation Testing Experts

hangars. The civil engineer needed help to redesign several hangar doors: The original designer failed to consider the properties of the soil beneath the doors, resulting in sill movement and jammed doors. The Member Firm's project manager developed a \$40,000 proposal to develop a remediation plan for the hangar doors and conduct a geotechnical-engineering study for two new hangars.

The project proceeded smoothly and, in short order, the GBA Member Firm's project manager and the civil-engineering firm's CEO presented hangar-door remediation deliverables to the airport manager. The airport manager said he would add a few notes to the documents and return them to the civil engineer in about two weeks. The civil engineer would then furnish the drawings to the Member Firm's project manager, who would seal them and return them to the civil engineer. The civil engineer would then be obligated to issue final payment to the Member Firm, per their contract.

Two weeks turned into two months, but the civil engineer remained positive. He said the airport manager had given a back burner to final approval and payment because of other priorities. The project manager, reassured, completed work on the two new hangars and sent his deliverables to the civil engineer.

One month later, the Member Firm's principal in charge of accounts receivable contacted the civil engineer. He heard the same story the project manager heard and he, too, gave the civil engineer the benefit of the doubt. One month later, the principal called again. This time the civil engineer said that any additional discussion would have to occur on an attorney-to-attorney basis... and the civil engineer's attorney was his son! The principal spoke with the son later in the day. "Stop harassing my client," the attorney/son said. "I will only speak with your attorney."

Taken aback, the principal spoke with the airport manager, only to learn that the airport authority had paid the civil engineer several months before. The

GRL Engineers employ the best CSL technology to assess the integrity of drilled shafts.



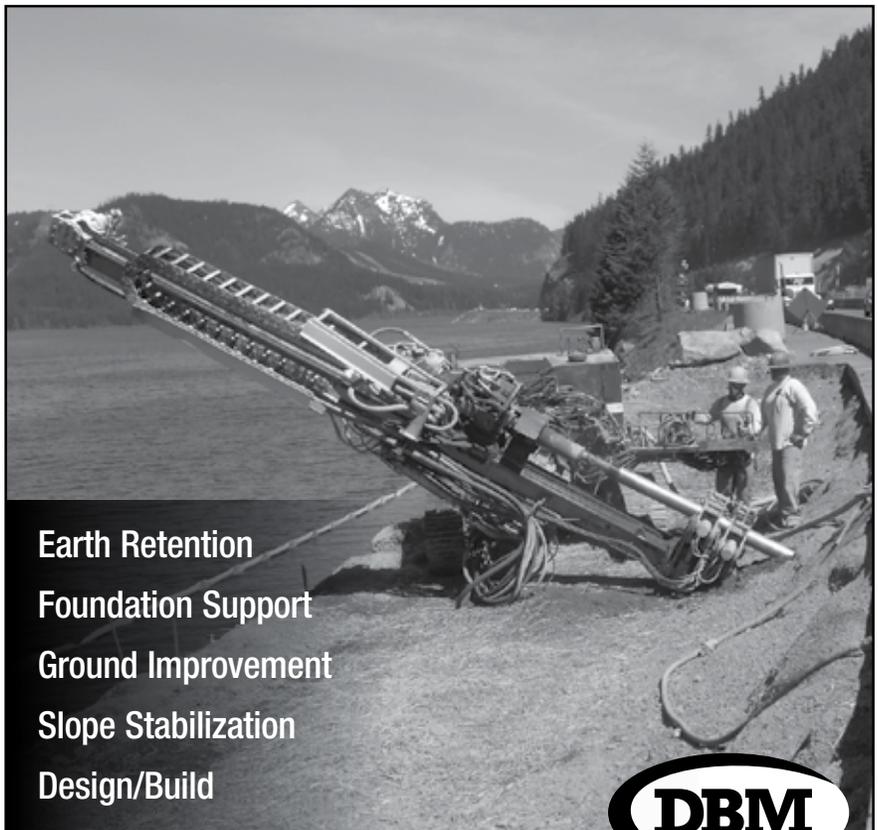
Quick response...results you can trust



Central Office.....	216.831.6131	Louisiana.....	985.640.7961
California.....	323.441.0965	North Carolina.....	704.593.0992
Colorado.....	303.666.6127	Ohio.....	216.831.6131
Florida.....	407.826.9539	Pennsylvania.....	610.459.0278
Illinois.....	847.221.2750	Washington.....	425.381.9690

www.GRLengineers.com/CSL

info@GRLengineers.com



Earth Retention
Foundation Support
Ground Improvement
Slope Stabilization
Design/Build



800-562-8460 WWW.DBMCONTRACTORS.COM

Donald B. Murphy Contractors, Inc.

airport manager added that he was surprised when he saw the civil engineer's seal on the Member Firm's drawings. The next day, the Member Firm filed a small-claims lawsuit against the civil engineer.

Neither the defendant nor his counsel attended the first hearing. At the second hearing, the civil engineer's attorney/son said he did not have enough time to assemble the relevant documents. The judge set another hearing date. The day before that hearing, the attorney/son called the principal to say the civil engineer would pay 90% of the amount due the following week if only the principal would agree to delay the hearing. The principal agreed immediately and called the attorney/son the next day to read to him a document setting forth the settlement agreement. When the principal got to the settlement amount, the attorney/son said, "You misunderstood. The

Welcome to the world of professional practice, where success – if not survival – depends on knowledge of business and risk confrontation, because the world of professional practice can get really weird...

agreement was for a 90 percent discount, not payment of 90%."

Infuriated, the principal nonetheless attended the third hearing. The judge gave the civil engineer 30 days to furnish financial records, and then set the next hearing date.

The principal contacted the Member Firm's attorney, who quickly prepared for the fourth hearing. There, unimpressed by the civil engineer's perjured

testimony, the attorney-arbitrators the judge had assigned gave the Member Firm everything it asked for.

Another matter was coming to a head at the same time.

During the course of litigation, the Member Firm's principal petitioned the state engineering-licensure board to take action against the civil engineer for illegally sealing the project manager's drawings for the sole purpose of committing fraud. The licensure board's response? Pretty meek: It merely reprimanded the civil engineer, telling him, in essence, "Don't do that again."

Three weeks later, the attorney/son called the principal. His father, the civil engineer, had died suddenly, and he was preparing to sue the Member Firm for wrongful death. He said his father – who was found guilty of nothing – was killed by the stress of the hearings and by appearances before the licensure board.

What would you have done were you in the shoes of the GBA-Member Firm's leaders? If you don't know, you need to learn, because – as I said – there's a lot more to geoprofessional practice than technical issues. **ES**

► **JOHN P. BACHNER** is the executive vice president of the Geoprofessional Business Association (GBA), a not-for-profit association of geoprofessional firms; i.e., firms that provide geotechnical, geologic, environmental, construction-materials engineering and testing (CoMET), and related professional services (en.wikipedia.org/wiki/Geoprosessions). GBA develops programs, services, and materials to help its members and their clients confront risk and optimize performance. Contact john@geoprofessional.org

Fully Automated Borehole Shear Test

- Select test depth, set up test, push the start button
- No hand cranking, no eyeballing gauges, no personal bias
- Plots stress-vs.-deflection, picks off failure points, plots failure envelope
- Calculates drained c , ϕ , and R^2 : 1 hour, 1 envelope; repeat at different depths

www.handygeotech.com
Handy Geotechnical Instruments, Inc.
 Madrid, Iowa 50156 U. S. A.