

DAMS & HYDRO-POWER

WHO WE ARE

BDI is a unique small business established in 1989 that offers expert diagnostic testing, structural monitoring, and nondestructive evaluation services around the world. Our core team is comprised of experts in civil engineering, physics, instrumentation design, and nondestructive testing. Due to the fact that we develop and manufacture instruments, provide expert installation and evaluation services, and also provide safe and secure data management, we are the partner that you can trust.

Having conducted over a thousand successful projects around the world, we measure our success through the satisfaction level of our partners, end users, and stakeholders. We believe that reliable infrastructure can be best realized through collecting and analyzing real-world data.

ACCURATE MEASUREMENTS COUPLED WITH QUALITY ANALYTICAL RESULTS IS THE FOUNDATION UPON WHICH BDI WAS BUILT

We take the safety of our crews and everyone around us seriously. We have a comprehensive safety program to ensure the safety of everyone around our projects:

- + OSHA 10-Hour Hazard Awareness
- OSHA 30-Hour Construction Emphasis
- SPRAT Ropes Access Training
- + USACE 385-1 Training
 - Fall Protection Awareness
- + OSHA Scaffold Competent Person
- + Hand & Power Tool Safety
- + Aerial Work Platform Operator Safety Awareness
- + Traffic Safety Awareness
 - Confined Space Entry
 - First Aid/CPR
- + Breathing Apparatus Fit & Pulmonary Testing
 Various Railroad Safety Awareness Programs
 MSHA Mine Safety
 - Federal Motor Carrier Safety
 - Cleared to Work in ITAR-Rated Facilities

NDE SERVICES

BDI's Nondestructive Evaluation (NDE) Division is equipped with a wide range of specialized technologies for evaluating the in-situ integrity of all types of structural members. Typically, the client will use the test results to identify vulnerabilities, reduce risks, and improve their asset management processes.

BDI relies on several decades of technical expertise to evaluate a wide variety of steel, concrete, FRP, and timber structures. This depth of experience makes us your reliable source for data, analysis, and recommendations for maintaining your infrastructure.

BDI is staffed with a team of world-class engineers and technicians who are ready to respond quickly to obtain the data you need for making the best possible infrastructure management decisions.





- + Ground Penetrating Radar (GPR)
- + Infrared Thermography
- + Impact Echo (IE)
- + Deck Acoustic Response (SounDAR) - Automated IE for concrete surfaces
- + Impulse Response

- + Pulse Velocity Testing
- + Ultrasonic Surface Wave
- + Half-Cell Potential
- + Electrical Resistivity
- + High-Speed Bridge Deck
- + Evaluation
- + Chloride Penetration Testing

GEOPHYSICAL





- + Mapping of Unknown Foundations
- + Spectral Analysis of Surface Waves (SASW)
- + Crosshole Seismic Wave
- + Parallel Seismic Survey
- + Utility Location
- Stiffness Profile Evaluation

- + Ultrasonic Testing
- + Phased Array Ultrasonic **Testing**
- + Magnetic Particle
- + Dve Penetrant
- + Hardness and Fatigue Testing
- + Radiography

ROPE ACCESS SOLUTIONS



To minimize project costs and jobsite disruptions, BDI has developed a highly versatile in-house ropes access team that includes licensed engineers, NDE professionals, and skilled instrumentation technicians. Ropes access training across all of our departments insures access is never a hindrance to providing quality measurements.

TESTING, MONITORING, & ENGINEERING



Our instrumentation services include structural testing and health monitoring (SHM) for all types of river control hydraulic structures including nav-lock gates, dam spillway gates, and fish handling equipment. We design and manufacture the testing equipment we use so that we can customize our hardware and data collection procedures for any given project. We are also integrators for Campbell Scientific, Instantel, Leica, Geokon, and RST—just to name a few. Services Include:

- + Instrumentation Plan Development
- + Diagnostic Testing
- + Structural Health Monitoring
- + Finite Flement Model Calibration



BDI is an authorized reseller for Campbell Scientific, Geokon, and RST and we have more than 30 years of experience with geotechnical instrumentation. We can configure and assemble monitoring systems for recording and storing data to quantify:

- + Slope Stability
- + Pore Water Pressure
- + Vibration Monitoring
- + Soil Pressure
- + Static Pile Testing

DATA (

BDI is proud to provide Platform Interactive, a secure web-based visualization and data management solution for all of your monitoring projects. This interface is designed for anyone who needs to demonstrate awareness and control critical assets. Platform Interactive enables a consistent and near-real-time presentation of complex data collected from any on-site instrument.

- + 24/7/365 phone support
- Simple to use and maintain
- + Custom alerts and notifications
- Advanced graphing utilities



BDI utilizes a variety of nondestructive technologies to evaluate concrete spillways for structural and operational integrity. By combining multiple-frequency GPR techniques with acoustic and infrared methods, we can locate and quantify the effects of potential underlying voids and/or any concrete degradation. When combined with our ropes-access trained crews, BDI can test and evaluate hundreds of thousands of square feet of spillway surfaces in a highly efficient way.

When testing is complete, BDI will summarize the data into a comprehensive report that the owner can use for developing any required rehabilitation plans, as well as for refining longer-term asset management strategies.



One of BDI's very first commercial projects was to collect barge impact data on a Mississippi River miter gate in 1990 for the US Army Corps of Engineers (USACE). Since then, BDI has assisted USACE and other owners in their mission of providing safe water control and navigation support on a national level by performing hundreds of testing, monitoring, and NDE projects on river control structures around the country. To complement our USACE work, BDI has developed strong relationships with many public and private utilities by providing quality testing and monitoring services to assist them in making important asset management decisions.

- + Hydraulics steel structure performance monitoring
- + Trunnion friction measurements in radial gates
- + Lock chamber performance
- + Crack monitoring
- + Measure tension forces in miter gate gudgeons
- + Trunnion anchor rod testing
- + Support counter-weight balancing operations
- + Rotating equipment instrumentation
- + Fitness for service analysis





Cage: 1GYL8
DUNS: 557400785

NAICS: 541330 (primary), 541380, 541990, 334419, 334511, 114515,
334516, 532490
SIZE: Small Business
FAR & AASHTO-Compliant as Prime or Subconsultant

