

### **Geophysical Services**





#### Firm Background

Established in San Diego in 1986, Ninyo & Moore is one of the largest engineering firms specializing in Geotechnical Engineering, Environmental Engineering and Materials Testing and Inspection Services. Engineering News Record (ENR) recognizes the firm as one of the Top 500 Design Firms in the United States.

Ninyo & Moore has fully equipped and certified in-house testing laboratories that offer full-service field and laboratory services for geotechnical design, and soil and materials testing projects.

#### **Professional Staff**

Ninyo & Moore's staff of 500 certified and registered professionals includes:

- · Geotechnical engineers
- Civil engineers
- Engineering geologists
- Hydrogeologists
- Geophysicists
- Field technicians
- Special inspectors
- · Environmental engineers
- · Environmental scientists
- · Industrial hygienists
- Asbestos consultants
- Safety professionals
- · Indoor environmental consultants
- Microbial consultants
- Lead consultants
- Qualified SWPPP developers/practitioners
- Hazardous waste and regulatory compliance specialists

#### Locations

Ninyo & Moore has offices located in the western United States, including California, Arizona, Nevada, Colorado, Utah, and Texas.

### **Contact Us**

800.427.0401 or nminquiries @ ninyoandmoore.com

Ninyo & Moore has performed numerous geophysical evaluations on behalf of municipalities, public agencies, private owners, insurance companies, and law firms. Our geophysical services provide methods for non-destructive evaluation of subsurface issues, as well as various building components.

# Forensic and Structural Evaluations

- · Detecting voids beneath concrete slabs
- Measuring reinforcing steel spacing and depth in concrete
- · Concrete defect evaluations
- · Rebar condition evaluations
- Changes in soil conditions due to water leaks
- · Presence of soil nails and tie-backs
- Asphalt and concrete pavement thickness

### Geotechnical and Environmental Evaluations

- Vibration monitoring during construction
- · Locating subsurface utilities
- Measuring depth to bedrock
- Evaluation of rippability
- · Delineation of buried channels
- Evaluation of potential scour depth at existing bridge structures
- Evaluation of potential defects in drilled shafts.
- Designation of underground storage tanks and buried drums
- · Evaluation of landfill cells
- Evaluation for presence of undocumented dump sites



**Electromagnetic Mapping** 



**Ground Vibration Monitoring** 



**Crosshole Seismic** 



### **Geophysical Services**

Our geophysical group is highly qualified to perform a full spectrum of geophysical services.



### Ground Penetrating Radar (GPR)

- Abandoned mines, caves, or tunnels
- · Archeological sites/burials
- Bridge deck conditions and reinforcement
- Buried objects metallic or non-metallic
- Concrete thickness/quality
- Rebar/post-tension cable condition and designation
- Shotcrete/gunite thickness/ reinforcement/quality
- Underground storage tank location (UST)
- Utility line location
- Voids location (concrete, soil, rock)



#### Seismic Methods

- · Bedrock depth
- Dynamic moduli
- Faults, fissures, rock fractures, steeply dipping features
- · Poisson's ratio values
- Rippability and relative rock quality
- Seismic site classification (P-wave and S-wave velocity)
- Soft soil zones/poorly compacted fill below hard surface soils



#### Electromagnetic Shallow Mapping

- · Archeological sites/burials
- · Buried debris
- Buried objects metallic or non-metallic
- Contaminant plume delineation
- Underground storage tank location (UST)
- Unexploded ordinance (UXO)
- Utility line location



### Electrical Resistivity Profiling

- Abandoned mines, caves or tunnels
- Buried objects metallic or non-metallic
- Contaminant plume
- Electrical grounding and corrosion studies delineation
- · Groundwater depth
- Landfill boundaries and leachage plumes



### Magnetics (Magnetometer)

- · Buried debris
- Buried objects metallic or non-metallic
- Landfill boundaries and leachage plumes
- Underground storage tank location (UST)
- Unexploded ordinance (UXO)



#### Impact Echo Concrete Testing

- Bridge deck conditions and reinforcement
- Concrete thickness and quality
- Rebar/post-tension cable condition and designation
- Shotcrete/gunite thickness/ reinforcement/quality



## Marine Sub-Bottom Profiling

- Marine sediment investigations
- Water column imaging/gas seepage monitoring
- · Dredging surveys



# Crosshole Sonic Logging

- Deep foundation depths and integrity
- Voids location (concrete, soil, rock)



### Ground Vibration and Blast Monitoring

- · Blast monitoring
- · Construction monitoring
- Site response



### Thermal Soil Resistivity

- Electrical grounding and corrosion studies
- Thermal resistivity values

#### Pile Integrity Testing (Sonic Echo/Impulse Response)

Deep/shallow foundation depths and integrity



#### Unmanned Aerial Vehicle (UAV) Geophysics

- Faults, fissures, rock fractures, steeply dipping features
- Aeromagnetic drone surveys