



## Geotechnical Engineering

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AE&T Geotechnical consultants provide their clients with expert soil characteristics, engineering strength evaluation and foundations recommendations. The geotechnical engineers provide soil analyses and recommendations as highlighted below:

- **SOIL BORINGS**
- **LABORATORY TESTING**
- **REPORT**

### Project Planning

Assess the scope and cost of project alternatives for the Project Study Report, including literature searches, field reconnaissance, geologic mapping and subsurface exploration, laboratory tests and geotechnical analyses.

### Project Design

Design recommendations for various projects including cell towers, buildings, bridges, transportation structures, roads and pavements, embankments, fill and cut slope design, expansive and soft soil treatment, groundwater control, seismic stability and potential liquefaction, retaining walls, alternative earth retaining structures, overhead signs, sound walls, pipe jacking, changeable message signs, landslide repair, and culvert foundations.

### *Special applications include:*

**Field Exploration:** Dutch Cone & Dynamic Cone Test, Vane Test, Seismic Refraction and Electrical Resistivity Test, Field Permeability, Nuclear Density & Pile Load Test

**Design of Foundations for compressibility of soils under dynamic Loads**

**Finite Element applications in Geotechnical Engineering**

**Design and Installation of Buried Pipes**

**Deep Foundations (Piles & Caissons): Design, Load Test and Quality Control**

**Bridge Foundation Design**

**Design of Earth Retaining Structures, Stability Analysis, Reinforced Earth Walls, Slurry Trench Walls and Anchored Bulkheads**

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