

GHERG Equipment Inventory

Notation

- Geotechnical and geomechanical: GT
- Hydrological and hydrogeological: HT
- Geophysical: GP
- Soil physical and (geo)chemical analytics: PC
- Miscellaneous: M

LABORATORY EQUIPMENT	GT	HT	GP	PC	M
Fully automated dynamic and static triaxial testing system (x2)	✓				
Large scale constant stiffness direct shear system	✓				
Fully automated direct shear test apparatus (x3)	✓				
Ring shear test apparatus	✓				
Oedometers:	✓				
<ul style="list-style-type: none"> • 2x fully automated 1D consolidation machine • 3x standard 1D consolidation machine 					
Hydraulic conductivity (permeability) apparatus:	✓	✓		✓	
<ul style="list-style-type: none"> • Flexible wall (triaxial) permeability test (x16) • Constant and falling head permeability test 					
Vane shear apparatus	✓				
Atterberg limits apparatus (liquid and plastic limits, shrinkage)	✓				
Automatic compactors (standard, modified and CBR compaction)	✓				
Particle density and water absorption testing apparatus	✓				
Electromechanical sieve shaker and sets of standard sieves	✓				
Hydrometer	✓				
Slake durability apparatus	✓				
Pressure extractor		✓		✓	
Tensiometer (pF-meter) (x3)		✓		✓	
Dissolved oxygen meter				✓	
pH meter				✓	
EC meter				✓	
Advanced pressure volume controller	✓	✓			
Hall Effect local strain transducers	✓				
Load cells, LVDTs, pressure cells and pore water pressure transducers					✓
Camera equipped with time lapse photo capturing software for particle image velocity (PIV) analysis					✓

LABORATORY EQUIPMENT	GT	HT	GP	PC	M
Frames equipped with dial gauges (x12)					✓
Developed apparatus with 12 cells for long term consolidation					✓
Cool room					✓
Drying ovens					✓
High temperature furnace					✓
Hot plate					✓
Balances (x5) equipped with auto data logging capability					✓
Ultrasonic bath					✓
Mechanical mixer		✓		✓	
Comparator (profile projector)					✓
Rock and soil crushers/grinders (x2)					✓
Cutting tools (bandsaw, chainsaw, drop saw)					✓
Diamond drill (coring) machine					✓
Hydraulic jacks					✓
Sample extruder					✓
Brown coal dryer					✓
Water deioniser					✓
FIELD EQUIPMENT	GT	HT	GP	PC	M
Seismic equipment: <ul style="list-style-type: none"> • Multichannel analysis of surface waves (MASW) testing • Crosshole testing 			✓		
Hood infiltrometer	✓	✓		✓	
Permeability packer	✓	✓		✓	
Borehole camera	✓	✓			
Multiscale seepage gauge	✓	✓			
Water level loggers		✓		✓	
Water temperature loggers		✓		✓	
Drill cutters					✓
Sample extruder					✓