

General Civil Lab Needs

Item	Approx. Cost
Digital Scales (2)	\$4,000
Laboratory Supplies/Calibrations	\$7,500 annually
Graduate Assistant Fellowship	\$25,000 annually

Asphalt Laboratory

Item	Approx. Cost
Float Test	\$150
Bitumen Solubility Test Set (4)	\$400
Conradson Carbon Residue Apparatus	\$420
Various Penetration Needles	\$500
Cloud and Pour Point Apparatus	\$500
Particle Charge Meter	\$510
Distillation Apparatus for Volatile Distillates	\$540
Reflux Extractor Set	\$700
Dean-Stark Apparatus Water Content Testing	\$750
Emulsified Asphalt Distillation Apparatus	\$750
Asphalt Permeameter, 4"	\$900
Asphalt Permeameter, 6"	\$900
Cleveland OpenCup Flash Tester	\$1,100
Single Softening Point Apparatus (4)	\$1,700
Tag Flash Tester	\$1,800
Vacuum Degassing Oven	\$4,000
Digital Centrifuge Extractor	\$4,140
Saybolt Viscometer Bath	\$6,000
Constant Temperature Bath	\$7,200
Pressure Aging Vessel	\$15,500
Temp Controlled Ductility Testing Machine	\$17,300
Skid Resistance Tester	\$8,000
Accelerated Polishing Machine	\$18,500
Bending Beam Rheometer	\$25,000

Concrete Laboratory

item	Approx. Cost
Concrete Saw for Core Trimming	\$600
J-Ring Test Set	\$700
Static Segregation Test Set	\$710
L-Box Test Set	\$750
V-Funnel Floability Test	\$775
Test Apparatus for Static Young's Modulus	\$1,000
Acme Penetrometer for Concrete Maturity	\$1,120
Concrete Roller Meters	\$2,000
Medium Laboratory Mixer	\$2,600
Concrete Resistivity Meter	\$2,800
Electric Core Drill	\$4,500

Concrete Maturity Meter & Probes	\$5,000
Taber Abrasion Wheel	\$6,500
Sonometer for Resonance Measuring	\$8,200
Environmental Chamber for Shrinkage Testing	\$10,000
Concrete Rheometer	\$12,500
Rapid Chloride Permeability Testing Equipment	\$15,000
Automatic Cylinder End Grinder	\$18,990
Rapid Freeze/Thaw Durability Cabinet	\$23,000
Petrography Laboratory Equipment	\$25,000
Rigid Cracking Frame	\$25,000

Soils Laboratory

Item	Approx. Cost
(2) ASTM 152H hydrometers	\$75
Constant Head Permeability Apparatus (Shelby Tube)	\$350
Additional Sieves	\$500
Modified Proctor Hammers and Molds (3)	\$600
California Bearing Ratio Apparatus(4)	\$2,000
Triaxial Test Apparatus (3 cell automated)	\$3,000
Direct Residual Shear, Digital	\$9,500
Resilient Modulus Load Frame	\$125,000