



SMITH – EMERY LABORATORIES, INC.

781 E. WASHINGTON BLVD. • LOS ANGELES, CA 90021

PHONE (213) 749-3411 • FAX (213) 749-7232

SCHEDULE OF FEES

Prepared For: City of Hermosa Beach Public Works Department

SOUTHERN CALIFORNIA AREA

July 1, 2019– June 30, 2020



SMITH-EMERY LABORATORIES SCHEDULE OF FEES

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Effective July 1, 2019

Southern California Area

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SMITH-EMERY

Principal

James E. Partridge P.E.-Civil.....President

Professional Staff - SEL

Artedi Cortez P.E., G.E., M.S.G.E. <i>World Open University, S. Dakota</i>	Praful Patel P.E.-Metallurgy, Ph.D, Manchester University, U.K.
Janeth Quintero P.E.,-Civil, B.S.C.E. <i>Javeriana U, Bogotá Colombia</i>	Simon Bittar P.E.-Civil, B.S.C.E, Cal State University, Los Angeles
Robert Rineer P.E. Civil, B.S.C.E., Cal State University, Pomona	Ted Peet P.E-Civil, B.S.C. E, ASNT Level III University of Pittsburgh
Angelito Cabanilla, B.S.C.E., Adamson University, Philippines	Joe Kingston, B.S.C.E., University of Pittsburgh
Will Partridge B.S.M.E University of San Diego, USA	Wilfredo Bote, B.S.C.E, Central Luzon Polytechnic, Philippines
Agerico M. Banzuela, B.S E.M., <i>Mapua Inst. of Tech, Philippines</i>	Ayesha S. Syeda R.E.A., M.S.C.E, Cal State University, Long Beach
William J. Tate Jr AA-Civil, B.S. Pudget Sound College	Idebrando Resurreccion, B.S.C.E., Far Eastern U, Philippines
Gilda Neshvad- chemistry, Ph.D., Essex University, UK	Rafael Cruz, B.S.E.E., University of Santo Tomas, Philippines
Azmat Imam – Chemical Engineering, M.Sc., Ohio University, USA	Lynn Klimasofski – B.Sc., Cal State, Los Angeles
Christian Granada – Chemistry, National University of Colombia	Rick O Parlier – Chemical Engineering, University of California

Office Locations

Main Office:	Los Angeles, CA	(213) 745-5333	• Fax:
	Administration		• (213) 749-7232
	General Lab		• (213) 741-8626
	Environmental		• (213) 746-0744
	Geotechnical		• (213) 746-0744
	Environmental Testing	(213) 745-5312	(213) 745-6372
Branch Offices:	Anaheim, CA	(714) 238-6133	• Fax (714) 238-6144
	Salem, OR	(509) 285-4337	• Fax (509) 285-4355
	Shanghai, China	(86)-138-019-4	• Fax (86) 21-6327-1433
	San Francisco, CA	(415)-642-7326	• Fax (415) 642-7055
	Las Vegas, NV	(702)-840-7666	• Cell (714) 264-6332



Professional Affiliations

International Conference of Building Officials	American Chemical Society.
American Concrete Institute	American Society of Safety Engineers
American Marketing Association	American Welding Society
American National Standards Institute	Association of Environmental and Engineering Geologists
American Society of Civil Engineers	Society of Petroleum Engineers
American Society for Non Destructive Testing	Geological Society of America
American Society for Testing Materials	International Association of Plumbing & Mechanical Officials
Construction Specifications Institute	Structural Engineers Association of Southern California
Society of Fire Protection Engineers	National Society of Professional Engineers
California Geotechnical Engineers Association	American Water Works Association
American Society for Quality	Registrar Accreditation Board

Approvals and Accreditations

American Association of Transportation Officials	National Bureau Regulatory Commission
California Department of Health, Sanitation, and Radiation Dept.	Nuclear Regulatory Commission
Ceramic Tile Institute	United States Navy
City and County of San Francisco	Office of Statewide Health Planning and Development
City of Los Angeles	Division of the State Architect
California Department of Transportation	American Architectural Manufacturers Association
International Accreditation Service	ANSI ASME NQA-1 (Bechtel ASL)
Army Corps of Engineers	Concrete and Cement Reference Laboratory
American Materials Reference Laboratory	Clark County Approved Agency and Laboratory
US Department of State, Overseas Buildings Operations	State Of Florida and Dade County Approved Agency and Laboratory
International Code Conference-Evaluation Service	IAPMO Inspection Agency and Laboratory Recognition
RABQSA/Exemplar Registration and Certification (Int)	ChevRon, Exxon, Shell, and BP, Petroleum Reg. Auditing Agency
California Water Boards ELAP Accreditation	County Sanitation Districts of Los Angeles County
United States Department of Agriculture Soil Permit	

NFPA Committees on Fire Science Technology

Education Section	Building Safety Section, Commercial/Residential
Architect, Engineers and Building Official Section	National Fire Marshals Associate
	Oregon/NFPA Fire chief Association

NFPA International Association of Arson Investigators

Florida State Structural Provisions Committee	LABC Structural Committee
California Title 24 Sub-Committee	LABC Life and Safety Committee

Jurisdictional Approvals - Third Party Quality Assurance Agency and Testing Laboratory

City and County of Salem, Oregon	Los Angeles County, California
City of Corvallis, Oregon	National City, California
City of Ocean Shores, Washington	Oakland, California
City Of Palmdale, California	Portland, Oregon
Clark County, Nevada	City and County of Riverside, California
State Of Florida and Dade County, Florida	San Diego County
City and County of Spokane, Washington	San Jose, California
Emeryville, California	San Mateo, California
Grays Harbor County, Washington	State of Oregon
Honolulu, Hawaii	WABO, Seattle, Washington

OSHA Approvals for Testing

California OSHA	Oregon OHSA
Federal OHSA	Washington OSHA



Charges for Services and Contract Terms

The Charges for Services and General Conditions set forth below will govern the provision of services and will constitute the contract terms between the Client and Smith-Emery Laboratories ("Smith-Emery") unless the Client and Smith-Emery have executed a written contract with respect to such services, in which case the terms and provisions of the written contract shall control.

1. Working Conditions and Hours – Field Services

1.1 Minimum Charges

Show-up -- No work performed -- 2 hours.
4 hour minimum -- 1 to 4 hours work completed before noon.
8 hour minimum -- Work over 4 hours - Any work extending past noon.
NOTE: Less than 24 hour call-out may necessitate premium charges.

1.2 Regular Time

First 8 hours, Monday through Friday, between 6:30am to 4:00pm.

1.3 Time and One-Half

Hours 9 through 12, Monday through Friday.
Hours 1 through 12 Saturday.
Day Shift between 3:00 a.m. and 5:00 a.m.

1.4 Double Time

All hours after 12 Monday through Saturday and all day Sunday.
All holiday hours for in-plant off-site shop inspections.

1.5 Triple Time

Holiday at jobsite. Holidays are: New Year's, Memorial, Presidents, Independence, Labor, Veterans, Thanksgiving, Day after Thanksgiving, and Christmas.

1.6 Travel Time and Mileage

No Travel Time or Mileage within 50-mile radius of our laboratory for Deputy Inspections only. For projects outside the 50-mile radius, special quotations will be made.
Technician time charges may be portal to portal (if necessary to pick up equipment) to closest lab location plus mileage reimbursement.

1.7 Parking

When not furnished, parking will be charged as paid by the SEL representative.

1.8 Subsistence

On remote jobs, subsistence, when not furnished, will be charged by quotation.

1.9 Shift Differential

Second (Swing Shift) -- Eight (8) hours will be charged for first 7½ hours worked. Time worked in excess of 7½ hours will be billed at time and one-half rate.
Third (Graveyard Shift) -- Eight (8) hours will be charged for first 7 hours worked. Time worked in excess of 7 hours will be billed at time and one-half rate.
Northern California Steel Shops -- add 12.5% for Night Shift Differential.

1.10 Completion

SEL representative will remain on job until discharged by competent authority

1.11 Cancellation

No charge if made before 4:00 p.m. of the preceding day. See Minimum Charge.

1.12 3rd Party Billing Software

Customer requests to submit invoice(s) via customers Software will be charged for special billing handling. Charges will show on the invoice as Special Billing Handling at a flat rate of \$45.

1.13 Insurance

Smith-Emery carries all insurance required by law. Additional costs of extra insurance certificates, coinsurance endorsements or additional insurance will be invoiced to the client.



Charges for Services and Contract Terms - Continued

2. Terms of Payment

- 2.1 Upon ordering work from Smith-Emery and in consideration of the extension of credit, Client and Smith-Emery agree as follows:
- a. Invoices for services will be rendered weekly and payments thereof are due upon presentation of invoice.
 - b. Where credit terms have been requested and approved by Smith-Emery, invoice terms will be net fifteen (15) days.
 - c. Client will notify Smith-Emery of any invoice errors or necessary corrections within fifteen (15) days of receipt of invoice; thereafter, client acknowledges invoices shall be deemed to be correct.
 - d. Invoices shall be deemed delinquent if not paid within thirty (30) days from the date of invoice, and will be subject to a late payment charge of 1.5% of the invoice total plus an additional charge of 1.5% of the invoice total for each month for additional credit and collection expense incurred thereby.
 - e. Smith-Emery reserves the right to terminate its Services to Client, with 3-day notice, if all invoices are not paid currently. Upon such termination of Services, the entire amount accrued for all Services performed shall immediately become due and payable. Client waives any and all claims against Smith-Emery, its subsidiaries, affiliates, servants and agents, in connection with termination of work pursuant to this paragraph.
 - f. Should Smith-Emery deem it necessary to refer a past-due account to an attorney or to file suit for collection, Client agrees to pay all actual expenses and costs incurred thereby, including actual attorney's fees and costs. Jurisdiction and venue of all such actions and any other actions arising from this agreement or the provision of services by Smith-Emery shall be in Los Angeles County, State of California.

3. Escalation Clause

- 3.1 The prices quoted below for All Services will change after June 30st each year. On July 1st of each year thereafter, the charges for services set forth in this Schedule of Fees will be adjusted by changes in our general administrative and overhead expenses. These adjusted charges shall become the agreed upon basis for charges by Smith-Emery to Client.

4. Anticipated Costs

- 4.1 Client recognizes and agrees that any "anticipated costs," "budget estimates," or the like that may be prepared by Smith-Emery are **NOT** "guaranteed maximums," "lump sums," or "not-to-exceed totals." Client will be invoiced for all work performed and only for work performed based on Smith-Emery's Working Conditions and Hours as an attachment to their contract.
- 4.2 The Client recognizes that if Shop Steel inspection is listed in the proposal, that unless noted, the inspection is estimated to be performed in only one steel fabrication facility. In addition, it is recognized by the Client that any weekly overtime hours, Saturday or Sunday work, double shift, and/or night shift differential for shop steel inspection is not included in this proposal unless noted.

5. Prevailing Wage

- 5.1 Smith-Emery reserves the right to re-negotiate the hourly wage portion of the project proposal if the project is deemed to be prevailing wage after the proposal is submitted and/or signed.
- 5.2 Wage determinations for PW projects are set by the Department of Labor and become effective July 1st of each year. At that time, the charges for services set forth in this Schedule of Fees will be adjusted by the new determination and changes in our general administrative and overhead expenses. These adjusted charges shall become the agreed upon basis for charges by Smith-Emery to Client.



General Conditions

1. Indemnification

- 11 In the event of any claim against Smith-Emery by any party other than the Client, Client agrees to hold Smith-Emery, including its shareholders, officers, directors, employees, agents and representatives, free and harmless of and from, and to indemnify and defend Smith-Emery against, any and all liability, claims, causes of action, demands, judgments, losses, damages, expenses or costs (including, but not limited to, all costs and fees of litigation) of every kind, nature and description, including, but not limited to, any and all demands arising by reason of injury or death to person or damage to property, real or personal, including loss of use thereof, economic loss or loss or damages otherwise arising directly or indirectly out of the obligations herein undertaken, or out of operations conducted by Client, however caused or alleged to have been caused, even if due to the acts, errors, omissions or negligence, active, affirmative or passive of Smith-Emery, except for such losses or damages arising out of or caused by the sole negligence or willful misconduct of Smith-Emery.

2. Limitation of Liability

- 21 Client and Smith-Emery agree to limit the liability, including but not limited to liability for consequential damages, of Smith-Emery, including its shareholders, officers, directors, employees, agents and representatives for any acts, errors, omissions, breaches of contract, or negligence, active, affirmative, passive, concurrent or sole, on the part of Smith-Emery, arising directly or indirectly from the performance of the professional services under this Agreement, to Client to \$10,000 or an amount equal to Smith-Emery's fee, whichever is greater.
- 22 Client agrees and understands that, in order to provide the professional services requested at the agreed-upon fees, this Agreement does not provide for full liability of Smith-Emery for losses or damages which may arise directly or indirectly under this Agreement. Client further understands that should Client require Smith-Emery to accept exposure to greater liability under this Agreement, Client has the opportunity to negotiate in advance a higher limitation of liability, or to eliminate entirely such limit of liability, but that the higher fees commensurate with this higher risk of liability to Smith-Emery shall be subject to agreement. Client agrees that this provision limiting Smith-Emery's liability cannot be modified, altered, or varied except by a written instrument signed by client and Smith-Emery.
- 23 Client understands and agrees that Smith-Emery is not an insurer; that this Agreement does not provide Client with insurance coverage by Smith-Emery or anyone acting on its behalf; that all fees hereunder are based solely on the value of the professional services to be provided by Smith-Emery; that insurance, if any, shall be obtained by Client at Client's sole expense.

3. Dominant Terms

- 31 The terms and conditions of this Agreement shall take precedence over any terms and conditions which may appear in Client's purchase order, approval or acceptance. Any terms and conditions of Client's purchase order, approval or acceptance which are not identical to the terms and conditions of this Agreement are null and void, are not part of the Agreement between Smith-Emery and Client and are not binding upon Smith-Emery. The terms and conditions of this agreement may not be varied or changed, nor any of its provisions waived, except by written agreement, signed by an authorized representative of Smith-Emery.

PLEASE READ THESE GENERAL CONDITIONS WITH CARE



General Conditions

Schedule of Fees for Inspection Services

The prices quoted below for All Services will change after June 30st each year. On July 1st of each year thereafter, the charges for services set forth in this Schedule of Fees will be adjusted by changes in our general administrative and overhead expenses. These adjusted charges shall become the agreed upon basis for charges by Smith-Emery to Client. Any customized pricing received in a "Project Cost Estimate" shall supersede this document.

Concrete Inspection

1111 Regular Time \$90.00

Steel Shop Visual Inspection

1210 Regular Time By Quote

Grading Inspection

1510 Regular Time \$125.00

Steel Shop Non-Destructive Testing

2210 Regular Time By Quote

Fireproofing Inspection

1314 Regular Time \$90.00

Steel Field Visual Inspection

1314 Regular Time \$90.00

Membrane Inspection

1810 Regular Time \$105.00

Steel Field Non-Destructive Testing

2310 Regular Time \$95.00

Field Technician (ACI/SOILS/AC)

1815 Regular Time \$90.00

Masonry Inspection

3510 Regular Time \$90.00

Wood Framing Inspection

1819 Regular Time \$90.00

CWI /Non-Destructive Inspection

Regular Time \$95.00

- ✓ Subsistence / Per-Diem rate for Steel shop and/or shop non-destructive testing or any other shop inspection out of the state of California and in state greater than 50 miles from Smith Emery shall be invoice is a T&M rate by quote rate.
- ✓ GSA establishes the per diem rates for the lower 48 Continental United States (CONUS), which are the maximum allowances that employees are reimbursed for expenses incurred while on official travel.
- ✓ In accordance with per diem rate for an area are actually three allowances: the lodging allowance, meals allowance and the incidental expense allowance (car rental).
- ✓ Smith Emery shall make travel and/or subsistence payments to each worker to execute the work out of state and in state greater than 50 miles from Smith Emery. All travel and subsistence shall be invoiced to client.



Schedule of Fees for General Field Services

General Field Services

	Activity	Cost
Film Adhesion, ASTM D4541, Regular Time, per hour, 4-hour minimum.....	4474	110.00
Dry Film Thickness, ASTM D6132, Regular Time, per hour, 4-hour minimum	4475	110.00
Adhesion/Cohesion Testing of Spray Applied Fireproofing, Regular Time, per hour, 4-hour minimum.....	3210	110.00
Firestopping Technician, Regular Time, per hour 4-hour minimum	3211	110.00
Batch Plant Technician, Regular Time, per hour, 4-hour minimum.....	3310.....	110.00
Roofing Technician, Regular Time, per hour, 4-hour minimum	3410.....	110.00
Membrane Technician, Regular Time, per hour, 4-hour minimum	3510.....	110.00
Roofing/Waterproofing Technician, Regular Time, per hour, 4-hour minimum.....	3511	110.00
Pull Testing of Post Installed Anchors, Technician, Regular Time, per hour, 4-hour minimum.....	3512	110.00
Torque Testing of Post		
Mixed Concrete, Technician, Regular Time, per hour, 4-hour minimum.....	3610	110.00
Mileage.....	5101	0.80
Special Testing/Inspection Services	4420	By Quote
Structural Investigations of Existing Buildings	3088	By Quote
Corrosion Survey.....	3096	By Quote
Ground Penetrating Radar, per hour, 4-hour minimum	3097.....	180.00
Equipment Delivery and Stand by time, per Hour	3099.....	100.00
Non-Destructive Testing, 4-hour minimum	3061	By Quote
Non-Destructive Testing, Phased Array UT, 4-hour minimum	3062	By Quote

Field Technician Minimums

Regular Hours: Monday through Friday, 6:30am to 4:00pm.

Show-up time, no work performed2-hour minimum charge

Field Service Calls.....4 and 8-hour minimum charge

Field Services Work a minimum of 1 hour per week engineering supervision may be charged

Overtime

Monday through Friday, Over 8 Hours or after 4:00 p.m.; Saturday, 1 to 12 Hours time and one-half

Sundays and Holidays, 1 to 8 Hours..... time and one-half

Monday through Saturday, Over 12 Hours; Sundays and Holidays, Over 8 Hours..... double time

Field Equipment Charges

	Activity	Cost
Skidmore, per day.....	4415	\$ 100.00
Torque Wrench, per day	4413	75.00
Multiplier, per day	4414	30.00
Pull Test Equipment (ram, pump, gage), per day	4464.....	150.00
Dynamometer, per day	4465	75.00
Schmidt Hammer, per day	9704.....	75.00
Ground Penetrating Radar (GPR) (4-hr min) , per hour	3097.....	175.00
Rental Dipstick 2000, per week.....	4825	2,500.00
Flatness Testing, half day	4814	600.00
Flatness Testing, per day	4826	1,200.00
Field Hardness Equipment, per day.....	9117	65.00
Dry Film Thickness Gage, per day	4409.....	65.00
Misc. Equipment Charge	4416	By Quote
Photostress, per day	4419	By Quote
Vibration and Sound Monitoring, per day	4430	By Quote
Concrete Air Meter, Pressure of Volumetric, per day	4431.....	75.00
Concrete Unit Weight Kit, scale, bucket, plate, mallet, and rod, per day	4436.....	75.00
2-inch cube brass embecco molds, each per day	4437.....	75.00
Film Adhesion Equipment, Dollies and Epoxy, per day.....	9127.....	100.00
Strain Gages.....	4467	By Quote
Fall Prevention Equipment, per day	4397	50.00
Mobile Concrete Laboratory	4398.....	280.00
Ultrasonic Testing Equipment, per day	2400.....	50.00
Phased Array Ultrasonic Testing Equipment	2500	By Quote



General Field Services Continued

Concrete Coring Services

Technician and Equipment Concrete (4 and 8 hour minimum), per hour.....	3710	\$150.00
Coring for Overhead / Ceiling coring, (4 hr. minimum), per hour.....	3910	\$ 185.00
Miscellaneous Concrete Coring Prices:		
Patching Slab on Grade Cored Holes with 2500 psi Concrete Patch, each.....	7345	40.00
Scaffolding, per day.....	7348	150.00
Thickness Determination per ASTM C42, each	7346	30.00
Compression Strength Determination (Including sample preparation and capping), each	7347	100.00
Travel Time, per hour (travel time by quote for prevailing wage projects).....	7235	90.00
Mileage, per mile.....	7313	0.80

Asphalt Concrete Coring Services

Technician and Equipment Asphaltic Concrete Cores (4 and 8 hour minimum), per hour	3710	150.00
Alternate Individual Core Prices (all prices are for a four core minimum job):		
Asphaltic Concrete Cores 2", 3" and 4" Diameter (First 6" in depth), each.....	7022	60.00
Asphaltic Concrete Cores 6" and 8" Diameter (first 6" in depth), each.....	7029	60.00
Asphaltic Concrete Cores price per inch after 6" in depth), each	7030	3.50
Miscellaneous Asphaltic Coring Prices:		
Patching of Core Drilled Holes Using Cold Patch Material, each	7031	25.00
Thickness Determination per ASTM C42, each	7032	25.00
Specific Gravity for Determination of Percent Compaction per ASTM D 2726, each.....	7033	35.00
Specific Gravity for Determination of Percent Compaction by paraffin, each	7034	55.00



Schedule of Fees for Laboratory Services

Professional Staff

	Activity	Cost
Registered Professional Engineer, Laboratory, per hour	3011	\$ 205.00
Staff Engineer, per hour.....	3015	155.00
Laboratory Supervisor, regular time, per hour.....	3012	115.00
Test Technicians -- Laboratory, regular time, per hour	3013.....	110.00
Test Technicians -- Away from Lab, Regular Time, per hour.....	3014.....	110.00
Field Testing -Training, regular time, per hour	3009.....	110.00
Submittal Review, per hour	2441	205.00
Steel Shop Management, per hour.....	2442	115.00
Level III Supervisor – ASNT, per hour	2443.....	140.00

Expert Witness Testimony

Court Appearance, per hour, four-hour minimum	9603.....	400.00
Preparation for Court, Consultations, per hour	9605.....	300.00
<i>Plus actual expenses when out-of-town</i>		

Miscellaneous Support Fees

Administrative

Administrative Support.....	4443	5% of Invoice
*Report Charge, per report, per copy	9110	2.75
Final Report Charge.....	9111	By Quote
General Testing-Rush Charges	4812	50%

Special Testing

Miscellaneous Sample Pick-up, per hour.....	5022.....	80.00
Miscellaneous Pick-up, per trip minimum (within 40-mile radius)	5023	150.00
Miscellaneous Pick-up, per trip minimum (more than 40-mile radius)	5028	250.00
Materials Purchased.....	4406	By Quote
Sample Preparation.....	4408	By Quote
Special Test Set-Up (2-techs+1 engineer crew) per hour	4422.....	300.00
Special Testing	4420	By Quote
Sample Disposal	4425	By Quote

Travel Expenses

Subsistence, per day	1103	By Quote
Travel Expense	1106	Cost+25%
Travel Time, per hour	4456	90.00
Mileage, per mile.....	5101	0.80

Outside Services

Concrete Core Cutting	4313	Cost + 25%
Materials Purchased.....	4406	By Quote
Rental of Equipment	4416	Cost + 20%
Outside Laboratory	4417	By Quote
Outside Services	9702	Cost + 25%

Laboratory Hours

Laboratory hours are 7:00AM through 4:00PM, Monday through Friday.

Additional charges will be made for off-hours or weekend testing as follows:

Off-hour Laboratory Operations, per day	5051	1,000
Holiday Laboratory Operations, per day	5052	1,500

*Generally for Compression Testing of Concrete, Base Plate Grout, Masonry Mortar and Grout, as well as Tension and Bend Testing of Reinforcing Steel.



Laboratory Testing-Aggregate

Aggregate Properties

	Activity	Cost
Absorption, Coarse, ASTM C 127, each	7000	\$ 45.00
Fine, ASTM C 128, each	7001	55.00
Hardness Test, ASTM D 1865, each	7557	By Quote
In Lab Rock Coring and Cutting	4312	100.00
Loss On Ignition, ASTM C25.....	7037	By Quote
Percent Flat/Elongated CRD C 119, ASTM D 4791, each.....	7010.....	200.00
Plate Bearing Test, ASTM D 1195, D 1196	7118	By Quote
Petrographic Analysis of Aggregate for Concrete, ASTM C295, each	7024	By Quote
Potential Alkali-Silica Reactivity of Aggregate for Concrete, ASTM C 289, Chemical Method, each	7551	By Quote
Potential Alkali Reactivity of Aggregate for Concrete, ASTM C 1260, Mortar-Bar Method, each.....	7552	By Quote
Potential Alkali Reactivity of Carbonate Rocks for Concrete, ASTM C 586, Rock Cylinder Method, each.....	7565	By Quote
Sodium soundness - Fine, 5 cycles, ASTM C 88, each	7012.....	220.00
Sodium soundness - Fine, 5 cycles, with sample preparation ASTM C 88, each	7046	295.00
Sodium soundness - Coarse, 5 cycles, ASTM C 88, each	7047	230.00
Sodium soundness - Coarse, 5 cycles, with sample preparation ASTM C 88, each	7050	280.00
Magnesium soundness - Fine, 5 cycles, ASTM C 88, each	7048	235.00
Magnesium soundness - Coarse, 5 cycles, ASTM C 88, each	7049	270.00
Specific Gravity, Bulk SSD, Coarse up to 1 ½", ASTM C 127, each	7013	70.00
Specific Gravity, Bulk SSD, Coarse up to 2 ½", ASTM C 127, each	7051	110.00
Specific Gravity, Bulk SSD, Coarse up to 2 ½", Complete ASTM C 127, each	7052	175.00
Specific Gravity, Bulk SSD, Fine, ASTM C 128, each.....	7014.....	80.00
Specific Gravity, Bulk SSD, Coarse, Complete ASTM C 127, each.....	7045	125.00
Specific Gravity, Bulk SSD, Fine, Complete ASTM C 128, each.....	7046.....	135.00
Unconfined Compression Test of Intact Rock, ASTM D2938, each.....	7021	70.00
Unit Weight, ASTM C 29, (No Air Void Determination) each.....	7017.....	70.00
Unit Weight and Air Void Determination – Coarse Aggregates up to 1", ASTM C 29, each.....	7035	200.00
Unit Weight and Air Void Determination – Fine Aggregates, ASTM C 29, each.....	7036	200.00
Unit Weight only – Coarse Aggregates up to 2 ½", ASTM C 29, each.....	7053	125.00
Unit Weight and Air Void Determination – Coarse Aggregates up to 2 ½", ASTM C 29, each.....	7054	225.00

Conformity

Clay Lumps/Friable Particles, ASTM C 142, each.....	7101.....	80.00
Cleanness Value, Calif. 227, 2 ½" x 1 ½" each.....	7055.....	225.00
Cleanness Value, Calif. 227, 1 ½" x 1" each.....	7056.....	150.00
Cleanness Value, Calif. 227, up to 1" each	7004.....	125.00
Durability Index, Calif. 229, Coarse, Method A (Dc) retained #4, each	7005	170.00
Durability Index, Calif. 229, Coarse, Method C and D (Df) fine, each	7006	165.00
Durability Index, Calif. 229, Method B Dc Mod. Lightweight agg, each	7059	175.00
Los Angeles Rattler, up to 1 ½" ASTM C 131, each.....	7008.....	170.00
Los Angeles Rattler, up to 1 ½" with sample preparation ASTM C 131, each	7057	200.00
Los Angeles Rattler, up to 2 ½" ASTM C 535, each.....	7009.....	200.00
Los Angeles Rattler, up to 2 ½" with sample preparation ASTM C 535, each	7058	235.00
Lightweight Aggregate, Coarse, ASTM C 123, each	7007	By Quote
Lightweight Aggregate, Fine, ASTM C 123, each	8514	By Quote
Organic Impurities, ASTM C40	7115.....	50.00
Sand Equivalent (Average of 3) Calif. 217, each	8516.....	90.00
Sand Equivalent (Average of 3) ASTM D 2419, each.....	7123.....	90.00
Sieve Analysis, Coarse, ASTM C 136, Cal Test 202 each up to 1 ½"	7015	125.00
Sieve Analysis, Coarse, ASTM C 136, Cal Test 202 each greater than 1 ½".....	7039	200.00
Sieve Analysis, Fine, ASTM C 136, Cal Test 202, each	7016.....	110.00
Sieve Analysis, Fine and Coarse Combined up to 1 ½", ASTM C 136, Cal Test 202, each	7549	210.00
Staining Materials, ASTM C 641, each	7553	By Quote

A Rush Charge of 100% for same-day results apply to the following tests:

- ASTM C136
- ASTM C29 (Unit Weight only)



Laboratory Testing-Asphalt Concrete

Asphalt Concrete	Activity	Cost
Aggregate Correction for Ignition Oven, each	4117	\$ 50.00
Asphalt Core Density, each	4112	35.00
Centrifuge Kerosene Equivalent.....	4118	150.00
Complete Asphalt Concrete Mix Design, each	4119	By Quote
Extraction, % Asphalt, ASTM D 2172 (Method A, B, or C) or Calif. 310. Excluding Ash Correction, each.....	4110	75.00
Extraction, % Asphalt, Ignition Oven, each	4111	100.00
Gradation on Extracted Sample (Including Wash) Calif. 202, each	4108	100.00
Maximum Density		
Hveem, Lab-mixed - Calif. 366, each.....	4104	175.00
Hveem, Pre-mixed - Calif. 366, each.....	4105	135.00
Marshall, 4-Inch Lab-mixed - ASTM D 1559, each	4106	175.00
Marshall, 4-Inch Pre-mixed - ASTM D 1559, each	4107	125.00
Marshall, 6-Inch Lab-mixed - ASTM D 5581, each	4122	300.00
Marshall, 6-Inch Pre-mixed - ASTM D 5581, each	4123	250.00
Maximum Theoretical Unit Weight (Rice Gravity) ASTM 2041, each.....	4120	175.00
Moisture Content of Asphalt, CT382	7019	35.00
Moisture Vapor Susceptibility	4113	200.00
Penetration ASTM D 5, each.....	4109	60.00
Stability Tests:		
Hveem, Lab-mixed - Calif. 304, each.....	4100	250.00
Hveem, Pre-mixed - Calif. 304, each.....	4101	200.00
Marshall, 4-Inch Lab-mixed - ASTM D 1559, each	4102	250.00
Marshall, 4-Inch Pre -mixed - ASTM D 1559, each	4103	200.00
Marshall, 6-Inch Lab-mixed - ASTM D 5581, each	4124	250.00
Marshall, 6-Inch Pre -mixed - ASTM D 5581, each.....	4125	200.00
Non-Destructive Pavement Deflection Testing using Benkelman Beam.....	4141	By Quote



Laboratory Testing-Calibration Verification Services

Calibration Verification of Skidmore-Wilhelm Device & Torque Wrench	Activity	Cost
Calibration of Skidmore-Wilhelm Device, in Lab up to 110,000 lbs	4403	200.00
Calibration of Skidmore-Wilhelm Device, in Lab up to 115,000 to 200,000 lbs	4126	300.00
Calibration of Torque Wrench by Skidmore-Wilhelm Device, each bolt size (3 required).....	4404	200.00

Calibration Verification of Hydraulic Jacks

Up to 50-tons	4450	225.00
51 to 74-tons	4451	250.00
75 to 99-tons	4452	275.00
100 to 199-tons	4453	325.00
200 to 299-tons	4454	350.00
300 to 500-tons	4466	600.00
Custom Systems	4455	By Quote

Note: Extra-handling charges will be made on any ram or pump too heavy or bulky for one man to lift.

Calibration Verification of Measuring Device

Calibration of Linear Measuring Device, each	4497	By Quote
Calibration of Temperature Measuring Device, each	4498	By Quote
Calibration of Mass Measuring Device, each	4499	By Quote
Calibration of Force Measuring Device, each	4483	By Quote
Calibration of Pressure Measuring Device, each	4484	By Quote
Calibration of Miscellaneous Measuring Device, each.....	4485	By Quote
Calibration of Infrared Temperature Gun, each.....	4486.....	125.00
Calibration of Amp Measuring Device, each	4487.....	125.00
Calibration of Torque Wrench, each (0 to 250 ft-lbs).....	4488.....	175.00
Calibration of Torque Wrench, each(0 to 251 to 600 ft-lbs)	4127.....	250.00
Calibration of Pressure Gage, each (0 to 600 psi)	4128.....	200.00
Calibration of Pressure Gage, each (601 to 5000 psi)	4129.....	300.00



Laboratory Testing- Ceramic Tile and Stone

Minimum Charge of \$375 for any Tile Testing Service Apply

Laboratory Ceramic, Porcelain, and Clay Tile Testing

	Activity	Cost
Lab Technician, per hour.....	3013	110.00

Dimensional

Thickness, 5.50 each (ANSI requires 80)	ASTM C499.....4900.....	500.00
Facial Dim, 5.50 each (ANSI requires 80)	ASTM C499.....4901.....	500.00
Warpage, 7.31 each (80 required).....	ASTM C485.....4902.....	585.00
Wedging, 7.31 each (80 required)	ASTM C502.....4903.....	585.00

Friction

Static Coefficient of Friction (3) per set (Not Modified) (*Withdrawn ASTM).....	ASTM C1028*.....4904	440.00
Coefficient of Friction (3) per set (Modified) (*Withdrawn ASTM)	ASTM C1028*.....4934	440.00
Dynamic Coefficient of Friction (3) per set (Ceramic Only).....	ANSI A137.1.....4935.....	440.00
Dynamic Coefficient of Friction (5) per set (all except Ceramic)	ANSI B101.3.....4960	440.00

Physical

Water Absorption, 65.00 each (5 required)	ASTM C373.....4905.....	395.00
Initial Rate of Absorption, 47.00 each (5 required)	ASTM C373.....4936.....	235.00
Thermal Shock, (5 required) per set	ASTM C484.....4911	365.00
Mohs Hardness (5 required) per set	4923.....	175.00
Length Change (3 required) per set	ASTM C157*Modified.....4980.....	900.00

Strength (ANSI A137.1)

Bond Strength, 92.00 each (shear test) (5 required)	ASTM C482.....4906.....	460.00
Breaking Strength, 30.00 each (10 required)	ASTM C648.....4907.....	285.00
Breaking Load Strength - Flex or Center point.(5 required) per set	ASTM C293.....4981	300.00
Compressive Strength, Modified with Cutting, each	ASTM C67.....4937.....	100.00
Compressive Strength Test , (5 required) per set	ASTM C42*Modified	475.00
Flexural Strength Test , (5 required) per set	ASTM C674*Modified	365.00
Modulus of Rupture, Ceramic 85.00 each (5 required)	ASTM C133.....4916.....	425.00
Impact, (10 required), per set.....	ASTM C368.....4920.....	315.00
Impact, (LA S-601-3), (5 req) per set	ASTM D2444*Modified	440.00
Tensile Tests in Laboratory,	CTI.....4924	By Quote
Veneer Bond Strength, 2-required	ASTM C482 Modified.....4928	By Quote
Shear Tests, (Grout/Thin Set Evaluation; Tile to Tile) 5 minimum	ANSI.....4925	350.00
Shear Tests, (Material Shear), 5 minimum	ANSI.....4926.....	350.00
Water Immersion Processing for Shear Tests, 5 minimum.....	ANSI.....4927.....	350.00
Oven Processing for Shear Tests, 5 minimum.....	ANSI.....4932.....	350.00
Low Temperature Processing for Shear Tests, 5 minimum	ANSI.....4933.....	350.00
Bond Strength, 65.00 each (Glass tile 4 dry 4 wet, 28 Days)	ANSI A 137.2.....4965	520.00

Performance

Abrasive Wear Index, 100.00 each (4 required)	ASTM C501.....4908.....	420.00
Crazing, (5 cycles).....	ASTM C424.....4909	750.00
(Per ANSI Crazing Requirement) per set (65 samples)	ANSI/ASTM C126.....4910	365.00
Glaze Adhesion, each (modified ASTM)	ASTM D4541	90.00
Color Uniformity	ASTM C609.....4912	By Quote
Chemical Resistance (qualitative Only 10% HCL and KOH)	ASTM C650/C126.....4913	365.00
Chemical Resistance (above + Swim Pool Chem).....	ASTM C650/C126.....4961	535.00
Chemical Resistance (Extended ASTM Version).....	ASTM C650/ C126.....4962	1,800
Glaze Permeability, (Ink Coating Inspection)	ASTM C67	185.00



Laboratory Testing- Tile Continued

Minimum Charge of \$375 for any Tile Testing Service Apply

Freeze-Thaw Resistance (10) 50 cycles, per set	ASTM C1026.....	4914	2,995
Additional cycles, per cycle/tile		4915	65.00
Freeze Thaw (10) 50 cycles) 2 -3 months, per set	ASTM C67.....	4985	2,250.00
Moisture Expansion, (5 required)	ASTM C370* Modified.....	4917	630.00
C.T.I. Stain Resistance (8 required) Set.....	CTI T72.....	4921	\$ 158.00
Reflectance Test, each	CTI.....	4922	By Quote
Autoclave (3 required), each.....	CTI.....	4930	350.00
Imperviousness Test, each	ASTM C126.....	4939	90.00
Water Absorption and Saturation Coefficient, 90.00 each (5 required), per set	ASTM C67.....	4952	450.00
Abrasion Test & Skid Coeff. (LA S-601-3) , 4pcs, set	ASTM C2486 and c 1028.....	4986	990.00
Abrasion Test only. (LA S-601-3) , 2pcs, set	ASTM C2486.....	4987	660.00

Floor Systems and Components

Floor Installation Performance Level, Robinsons Floor Test	ASTM C627-76:		
First Panel -- Not Including Tile or Installation.....		4918	1,890.00
Second or More on Same Purchase Order		4919	1260.00

Miscellaneous

Ceramic Tile Material Purchase	CTI.....	4956	By Quote
Ceramic Tile Miscellaneous	CTI.....	4929	By Quote

Mortar Testing

Mortar ANSI Test	ANSI.....	4940	By Quote
Mortar Compression Test, each	ASTM C109.....	4944	65.00
Mortar Miscellaneous Test	CTI.....	4945	By Quote
Mortar Skinning Test, each.....	CTI.....	4941	115.00
Mortar Initial Setting Time, each.....	CTI.....	4942	80.00
Mortar Drop-off Test, each.....	CTI.....	4943	By Quote

Grout Testing

Grout ANSI Test.....	ANSI.....	4950	By Quote
Grout Drop-off Test.....	CTI.....	4953	By Quote
Grout Miscellaneous Test	CTI.....	4955	By Quote
Grout Skinning Test, each	CTI.....	4951	115.00
Grout Compression - 2" cubes, each	C1019.....	4954	65.00

Dimension Stone / Building Stone Testing

Compression Test, (*20 required), per set	ASTM C170.....	4800	\$ 1,060.00
Flex Strength, Cut Samples (*20 required), per set	ASTM C880.....	4801	1,060.00
Flex Strength, Full Size Samples (*20 required), per set (max 40 lbs/ sample)	ASTM C880.....	4931	3,660.00
Modulus/Rupture (*20 required), per set.....	ASTM C99.....	4802	1,060.00

*20 Samples tested as follows: 5 Samples tested Wet, Parallel to the grain
5 Samples tested Wet, Perpendicular to the grain
5 Samples tested Dry, Parallel to the grain
5 Samples tested Dry, Perpendicular to the grain



Laboratory Testing- Tile Continued

Minimum Charge of \$375 for any Tile Testing Service Apply

Water Absorption and Density, (5 required), per set	ASTM C97/C672.....	4804	395.00
Abrasion Resistance, (3 required), per set	ASTM C1353.....	4810.....	460.00
Anchor Pull Test (No deflection measurement), each	ASTM C1354.....	4811.....	135.00
Anchor Pull Test (With deflection measurement), each	ASTM C1354.....	4819.....	235.00
Soundness Test , (5 samples required) , per set	ASTM C88.....	4818.....	470.00
Breaking Load, (5 samples required) , per set	ASTM C67.....	4817.....	350.00

Field Testing ASTM C482

Field Technician, per hour.....	3014	105.00
Ceramic Tile Technician Mileage, per mile	5101.....	0.80
Pick-up Sample - within 40-mile radius from Laboratory, per hour.....	5019	65.00
Field Slip Resistance Test, ASTM C1028, first test (*Withdrawn Standard)....ASTM C1028*	4957	750.00
Field Slip Resistance Test, ASTM C1028, additional test in same area, each..... ASTM 1028*	4958	440.00
Dynamic Coefficient of Friction (installed floor), first test ANSI B101.3	4970.....	750.00
Dynamic Coefficient of Friction (installed floor), additional test in same area, each ANSI B101.3	4964	440.00
Dynamic Coefficient of Friction (ceramic only installed) first test ANSI A137.1	4971	750.00
Dynamic Coefficient of Friction (ceramic only installed) add test in same area, each .. ANSI A137.1	4966	440.00
Field Veneer Bond StrengthASTM C482.....	4959	By Quote



Laboratory Testing-Concrete

Cylinders, Beams & Cores

	Activity	Cost
Compression Test sample prep. and cap., 6" x 12" cylinders, including untested holds, ASTM C 39, each	4300	\$ 40.00
Compression Test sample prep. and cap , 4" x 8" cylinders, including untested holds, ASTM C 39, each	4329	\$ 40.00
Weight per cubic foot of lightweight concrete cylinders, each.....	4303.....	80.00
Flexure Test, 6" x 6" beams, ASTM C 78, each.....	4304.....	90.00
Splitting Tensile, 6" x 12" cylinders, ASTM C 496, each.....	4305.....	70.00
Modulus of Elasticity Test - Static, ASTM C 469, each (includes comp. and Unit weight)	4306	225.00
Thermal Expansion of Concrete, AASHTO T336, each.....	4228.....	400.00
Unit Weight, Absorption, and Voids in Hardened Concrete, ASTM C642, each.....	4227	250.00
Compression Test, 2" - 4" - 6" Cores, ASTM C 42 Including sample preparation and capping, each.....	4311	100.00
In Laboratory Core Cutting, each	4312	65.00
Cylinder Trans. and Processing (within 40-mile radius from Laboratory * Add \$100 for more than 40 mile radius)		
6:30 a.m. to 4:00 p.m., Monday through Friday - per sample.....	5000	20.00
Before 6:30 a.m. and after 4:00 p.m. and Saturday,	5001	30.00
Sunday and Holidays - per sample	5002	35.00
*Minimum Pick-up Charge	5003	150.00
Trans. and Processing of Flexural Test Beams -within 40-mile radius from Laboratory, each	5021	40.00

Forensic Testing

Petrographic Examination, ASTM C856	4319	By Quote
Moisture Vapor Transmission, Calcium Chloride Moisture Kit, Per Location ASTM F1869.....	4459	25.00
Inplace Moisture Content	4457	75.00
Corrosion Potential, Half Cell, ASTM C876	4489	By Quote
Pulse Velocity, ASTM C597	4301	By Quote
Cement Analysis, ASTM C114, each	4473	By Quote

Shrinkage

Length Change (3 bars, 4 readings, up to 90 days), ASTM C 157 Modified.....	4307	400.00
Additional Reading, per set of 3 bars	4308	75.00
Storage over 90 days, per set of 3 bars, per month	4302	75.00
Trans. and Processing /Deliver Shrinkage Molds/Samples-within 40-mile radius from Laboratory, per set	5020	60.00

Mix Design

Mix Design, Determination of Proportions, (3 Business Day Turn Around) each	9500	200.00
Mix Design, Determination of Proportions, (Next Day Turn Around) each.....	9505	250.00
Mix Design, Determination of Proportions, Requiring Same Day Service, each	9501	300.00
Preparation of Special Strength Documentation for Mix Design, per hour	9502	195.00
Amend or Retype Existing Smith-Emery Mix Designs not involving calculations, each	9503	150.00
Review Mix Design prepared by Others, per hour	9504.....	195.00

Laboratory Trial Batch

Laboratory Trial Batch, (includes slump, % air, unit weight, and up to 7-cylinders; ASTM C 192, each	4309	750.00
Laboratory Trial Batch, (including the items above and shrinkage; ASTM C 192, each	4310	800.00
Sampling Material for Laboratory Trial Batches, per hour.....	4315.....	200.00

Gunitite & Shotcrete

Compression, 2", 4", 6" Cores, including, preparation, capping, and trimming ASTM C 42, each.....	4314	100.00
Trans. and Processing Shotcrete Cores-within 40-mile radius from Laboratory	5016	25.00
Trans. and Processing Gunitite Field Sample (within 40-mile radius from Laboratory) less 12x12x6-in., ea.....	5017	60.00
Trans. and Processing Gunitite Field Sample (within 40-mile radius from Laboratory) up to 12x12x12., ea.....	5018	100.00
Trans. and Processing Gunitite Field Sample (within 40-mile radius from Laboratory) 2-foot square min., ea....	5028.....	250.00
ACI 506.2 Core Grading, per core.....	5027	150.00

Lightweight Roof Fill ASTM C 495

Compression Test including capping, and preparation, each.....	4380.....	100.00
Density, each	4381	100.00
Cell-Crete 7-days and 14-days report	4382	75.00



Laboratory Testing-Construction Materials

Roofing Tile

	Activity	Cost
Absorption, each.....	4700	\$ 65.00
Additional/Special Tests.....	4701	By Quote
Breaking Strength per U.B.C., each.....	4702	65.00

Slate

Modulus of Elasticity, ASTM C120, 3 parallel, 3 perpendicular, \$90 each	4805	540.00
Modulus of Rupture, ASTM C120, 3 parallel, 3 perpendicular, \$90 each	4806	540.00
Water Absorption, ASTM C121, 3 parallel, 3 perpendicular, \$40 each	4807	240.00
Weathering, ASTM C217, 3-samples, \$90 each.....	4808.....	310.00

Wire Rope

Wire Rope 0 through 1" diameter, each	4426.....	150.00
Wire Rope 1 through 2" diameter, each	4427	250.00
Wire Rope over 2" diameter, each.....	4428	By Quote

Note: Sockets furnished by client

Epoxy - Cores & Coring

Field Coring Technician and standard equipment, per hour	3710.....	150.00
Shear Test on Epoxied Cores, each	4318.....	100.00
Epoxied Cores Visual Inspection, each	4346.....	100.00
Compression Test, Cylinders, each.....	4316.....	100.00
Compression Test, Cores, each.....	4317	100.00
Pick-up Epoxy Cylinders-within 40-mile radius from Laboratory, per sample	5026	20.00

Fireproofing Tests

Oven Dry Density, per sample.....	4350.....	100.00
Adhesion/Cohesion Testing, per hour, 4-hour minimum.....	4351.....	100.00
Pick-up Fireproofing Samples-within 40-mile radius from Laboratory, per sample	5014	25.00

Glass Fiber Reinforced Concrete

Flexural Strength, without M.O.E. 6 required, \$45.00 each	4320.....	270.00
Flexural Strength with M.O.E., 6 required, \$145.00 each	4321.....	870.00
Density, 3 required, \$50.00 each	4322	150.00
Tensile Strength, 3 required, \$75.00 each	4323.....	225.00
Shear Strength, 3 required, \$75.00 each	4324.....	225.00

Fiber Wrap

Tensile Strength, ASTM D 30391 panel (12"x12"), 5 samples(1 X 10- in), \$170.00 each.....	4326.....	850.00
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Saturation Resin for Fiber Composite

Water Absorption, ASTM D570.....	4340.....	200.00
Compressive Yield Strength, ASTM D695	4341.....	600.00
Flexural Strength, ASTM D790.....	4342.....	750.00
Shore Hardness, ASTM D2240	4343.....	200.00
Tensile Strength and Elongation, ASTM D638	4344.....	750.00
Evaluation per MWD RFQ 704	4345	By Quote



Laboratory Testing-Construction Materials Continued

Structural Lumber

	Activity	Cost
Flexure, ASTM D198	4470	By Quote
Compression, ASTM D198	4471	By Quote
Tension, ASTM D198	4472	By Quote
Torsion, ASTM D198.....	4478	By Quote
Shear, ASTM D198	4476	By Quote

Specialty Grout

Rapid-Hardening Grout, ASTM C928.....	4395	By Quote
Non-Shrink Grout, ASTM C1107.....	4396	By Quote
Time of Setting, ASTM C266, each	4490	By Quote
Sulfate Expansion, ASTM C1012, each	4491	By Quote
Flexural Strength, ASTM C348, each	4492	By Quote
Consistence (Cone Test), ASTM C939, each	4493	By Quote
Bleeding, ASTM C940	4494	By Quote
Total Chloride Ions, ASTM C1152, each	4495	By Quote
Permeability, ASTM C1202, each.....	4496	By Quote
Standard Specification for Mortar for Unit Masonry, ASTM C270	4550	By Quote
Potential Alkali-Silica Reactivity by Mortar Bar Method, ASTM C1260.....	4551	By Quote
Potential Alkali- Silica Reactivity by Accelerated Mortar Bar Method, C1567.....	4552	By Quote
Standard Specification for Plastic (Stucco) Cement	4553	By Quote
Standard Specification for Non-Asbestos Fiber Mat Reinforced Cement Substrate Sheets	4554	By Quote



Laboratory Testing - Curtain Wall Los Angeles and San Francisco

Mock-Up Performance Testing; Testing Bays Available in the Following Sizes:

Test Bays	Height (feet)	Width (feet)
1	100	35
1	45	75
5	34	20
1	30	10
1	20	20

Custom Test Bay Sizes Available by Quote.

Inspection and Testing

	Activity	Cost
Lab Tech Away from Lab	3019	\$ 125.00
Special Curtain Wall Evaluation, per hour		\$ 125.00
Curtain Wall Attachment, per hour		125.00
Exterior Skin from Swing Stage (2 men), per hour		250.00
Caulking, Sealants, Adhesives, per hour		125.00
Coatings, Paint, per hour		By Quote

Field Testing

Field Water Test, AAMA 501.2, (2 men) per hour	8113	250.00
Field Testing of Newly Installed Fenestration System Products, AAMA 502	8114	By Quote
Field Testing of Newly Installed Storefronts, Curtain Walls, and Sloped Glazing Systems, AAMA 503	8115	By Quote
Field Testing of Masonry Walls, ASTM C1601	8116	By Quote
Field Posi Test, ASTM E1186	8133	By Quote
Adhesion Testing SSG ASTM C1401	8134	By Quote
Adhesion Testing ASTM C1521	8135	By Quote
Water Penetration of Masonry ASTM C1601	8136	By Quote
Evaluating Water Leakage in Buildings ASTM E2128	8137	By Quote
Portable Adhesion Testing of Coatings ASTM D4541	8138	By Quote
Field Dynamic Water Penetration AAMA501.1	8139	By Quote

Materials Evaluation

Glass, Granite, Metal Cladding, Caulking, Paint Coatings Adhesive Bond, Chemical Analysis	8112	By Quote
Point Load Testing on Structurally Glazed Glass, ASTM STP1286	8123	By Quote
Lab Testing of Masonry Walls, ASTM E514	8124	By Quote
Stress and Rupture - Stone and Granite	8111	By Quote
Water Testing Leakage Through Masonry ASTM E514	8140	By Quote

Air and Water

Static Water Infiltration, ASTM E 331/1105	8102	By Quote
Static Air Infiltration, ASTM E 283/783	8104	By Quote
Dynamic Water Infiltration	8103	1,800.00
Water Penetration By Cyclic Air Pressure, ASTM E547/E1105	8105	By Quote
Pressure Equalized Rain Screen, AAMA 508	8125	By Quote



Laboratory Testing - Curtain Wall Continued

Special Testing

Structural

Seismic Structural Loading.....	8122	By Quote
Structural Performance ASTM E 330.....	8106	By Quote
Seismic and Wind Induced Interstory Drift, AAMA 501.4	8126	By Quote
Seismic Drift Causing Glass Fallout, AAMA 501.6.....	8127	By Quote
Vertical Interstory Movements, AAMA 501.7	8128	By Quote
Impact and Cycling Testing, AAMA 506.....	8129	By Quote
Concentrated Load Testing (window washer, etc.).....	8109	By Quote

Thermal

AAMA Thermal Testing.....	8110	By Quote
Thermal Performance Test, AAMA 1503.....	8130	By Quote
Thermal Cycling of Exterior Walls, AAMA 501.5	8131	By Quote

Hurricane

Impact Cannon Testing, ASTM E1996/E1886	8132	By Quote
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Multi-Channel Computer Aided Data Acquisition of:

Acceleration.....	4946	By Quote
Vibration.....	4430	By Quote
Movements (0.0001 inch)	4947	By Quote
Pressure	4948	By Quote
Machine Control Movement.....	4468	By Quote
Temperature.....	4469	By Quote
Strain Gauge	4418	By Quote
Stress Analysis.....	4949	By Quote
Cyclic Seismic Testing of Components of Steel Structures, ATC-24, FEMA 350, FEMA 450.....	4439	By Quote



Laboratory Testing-Masonry

Brick ASTM C 67

	Activity	Cost
Compressive Strength including sample preparation and capping, each	4200	\$ 100.00
Modulus of Rupture (flexure) including sampling preparation, each	4201	100.00
Flexural Bond Strength, One set of five joints	4217	300.00
Dimensions, overall, coring, shell and web thickness, per brick	4202	50.00
Coefficient of Friction (slip test), each	4203	185.00
Initial Rate of Absorption, each	4204	45.00
Absorption - 5 hour or 24 hour, set of 3,	4205	150.00
Boil, 1, 2 or 5 hour, set of 3	4206	250.00
Efflorescence, each	4207	130.00
Freeze Thaw (8x8, 4x4), 5 samples, 50 cycles	4222	1,500.00
Pick-up Brick Samples, each	5009	20.00

Solid Concrete Interlocking Paving Units ASTM C 936

	Activity	Cost
Compressive Strength including sample preparation, each	4232	\$ 100.00
Unit Weight, each	4233	100.00

Concrete Block ASTM C 140

Compression, 3 required, \$75.00 each including sample trimming preparation and capping.....	4210	\$225.00
Moisture Content as Received, each.....	4211	75.00
Absorption, 3 required, \$75.00 each.....	4212	225.00
Shrinkage, Modified British, ASTM C 426, 3 required, \$150.00 each.....	4213	450.00
Coupon Cutting, each	4229	50.00
Compression, 4" - 6" - 8" Cores including sample preparation and capping, each	4221	100.00
Complete C140.....	4220	900.00
Transportation and processing Block Samples - within a 40-mile radius of laboratory, each	5010	25.00

Masonry Prisms ASTM C 1314

Compression Test, 8"x16" Grouted Prisms including trimming and capping, each	4218	\$200.00
Compression Test, 12"x24" Grouted Prisms including trimming and capping, each.....	4225	350.00
Compression Test, 16"x32" Grouted Prisms including trimming and capping, each.....	4226	750.00
Compression Test with MOE, Grouted Prisms, each	4223	600.00
Unit Weight, Grouted Prisms, each	4224	100.00
Cutting Prisms, when required (Solid).....	4219	130.00
Cutting Prisms, when required (Not Solid).....	4230	100.00
Cores, Compression, 6" and 8" Diameter, each.....	4208	100.00
Cores, Shear, 6" and 8" Diameter, 2 Faces, per core.....	4209	150.00
Pick-up Prisms 8x8x16-in - within a 40-mile radius of laboratory, each.....	5013	60.00
Pick-up Prisms 12x8x16 and 16x16x16-n - within a 40-mile radius of laboratory, each	4347	75.00

Mortar & Grout UBC Sandard 21-16 & 21-18

Compression, 2" x 4" Masonry Mortar Cylinder including trimming and capping, each	4214	75.00
Compression, 2" Grout Cubes, ASTM C 109 including sample preparation and capping , each	4215	75.00
Compression, non-standard Grout Cubes, ASTM C 109- Modified 109 including sample prep. /cap., each.....	4231	75.00
Compression, 3" x 6" Masonry Grout including sample preparation and capping, each.....	4216	75.00
Transportation and processing Mortar Samples - within a 40-mile radius of laboratory, each.....	5011	25.00
Transportation and processing Grout Samples - within a 40-mile radius of laboratory, each	5012	25.00
Transportation and processing Grout Cubes - within a 40-mile radius of laboratory, each.....	5015	25.00

Un-Reinforced Masonry Building Tests

In-Place Shear (Push) Tests	4809	By Quote
15 Degree Core Shear Tests	4815	By Quote
Wall Anchors.....	4816	By Quote
Flat Jack Testing.....	4827	By Quote



Laboratory Testing-Metallurgical

Professional Staff

	Activity	Cost
Metallurgical Engineer, per hour	6933	\$ 225.00
Metallurgical Technician, per hour.....	6919	125.00

Metallurgical Services

Test CVN at 75°F (Set of 3 specimens).....	6902	168.00
Test CVN at 70°F (Set of 3 specimens).....	6903	204.00
Test CVN at 40°F (Set of 3 specimens).....	6976	222.00
Test CVN at 30°F (Set of 3 specimens).....	6977	228.00
Test CVN at 0°F (Set of 3 specimens).....	6978	237.00
Test CVN at 10°F (Set of 3 specimens).....	6801	276.00
Test CVN at -20°F (Set of 3 specimens)	6979	297.00
Galvanized Coating - Acid Strip Method, per specimen of plate, and wire	6904	200.00
Stucco Netting, ICC Evaluation, per roll	6912	By Quote
Hardness Tests Brinell, Rockwell (Standard or Superficial), excluding specimen preparation if required	6905	95.00
Chemical Analysis – Ferrous Material of solid piece, each.....	6920	185.00
Chemical Analysis – Ferrous Material of filings, each.....	6012	By Quote
Chemical Analysis – Non-Ferrous Material of solid piece, each.....	6980	By Quote
Chemical Analysis – Non-Ferrous Material of filings, each.....	6981	By Quote
Evaluate Carbon Equivalent (C.E), each to include chemical analysis of solid piece	6943	195.00
Evaluate Carbon Equivalent (C.E), each to include chemical analysis of filings	6011	By Quote
Microhardness Survey, (includes metallurgical mount & preparation), each	6017	By Quote
Scanning Electron Microscopy (SEM), and EDS, per Hour (min 1 hr).....	6913	370.00
Scanning Electron Photomicrographs, each (5" x 4")	6915	8.50
Laboratory NDT Testing (UT, MT, PT).....	6112	By Quote
Mileage, per mile.....	5101	0.80
Administrative Surcharge	4443	5% of Invoice

Mechanical Testing

Bend Test – Base material	6900	By Quote
Load Tests (Proof Load, Flexural, Stress-corrosion, etc.)	6907	By Quote
Tensile Test – With Electronic Extensometer, excludes sample cutting and specimen preparation, each.....	6934	90.00
Tensile Test – Square or Round Tube up to 2.00-in. OD, Full size with plugs, ea.....	6939	265.00
Talbot Test – Sample preparation and test per specimen.....	6957	250.00

Fastener Testing

Tensile Test – Anchor Bolts, Studs or Threaded Rods under 100, 000 lbf , tested full-size, each	6948	175.00
Tensile Test – Anchor Bolts, Studs or Threaded Rods 100, 000-120,000 lbf, tested full-size, each	6958	195.00
Tensile Test – Anchor Bolts, Studs or Threaded Rods up to 1.0-in diam. by machined specimens, each.....	6959	195.00
Tensile Test – Anchor Bolts, Studs or Threaded Rods,1.0 - 2.0in diam. by machined specimens, each.....	6013	205.00
Tensile Test – Anchor Bolts, Studs or Threaded Rods over 2.0-in diam. by machined specimens, each.....	6014	235.00
Nut – Hardness and Proof Load test under 100,000 lbf, each.....	6949	38.50
Nut – Hardness and Proof Load test 100,000 – 120,000 lbf, each.....	6960	47.50
Nut – Hardness In Core Method in lieu of proof Load test above 120,000lbf, each.....	6015	95.00
Washer – Not Galvanized - Hardness, each.....	6950	28.00
Nut – Not Galvanized - Hardness, each.....	6982	28.00
Nut Cone Proof Load Test, each.....	6961	By Quote



Laboratory Testing-Metallurgical Continued

Fastener Testing Continued

	Activity	Cost
A325 or A490 – Bolt hardness only, each	6951	\$ 47.50
Bolt A325 or A490 – Wedge Tensile up to 1.0- in diameter, and Hardness, each.....	6952.....	98.00
Bolt A325 or A490 – Wedge Tensile up to 1-1/8- in diameter, and Hardness, each.....	6802	145.00
Bolt A325 or A490 – Wedge Tensile up to 1-1/4- in diameter, and Hardness, each.....	6803	155.00
Bolt A325 or A490 – Wedge Tensile up to 1-3/8- in diameter, and Hardness, each.....	6804	165.00
Bolt A325 or A490 – Wedge Tensile up to 1-1/2- in diameter, and Hardness, each.....	6805	185.00
Bolt A325 or A490 – Tensile test by machined specimens, each	6975	By Quote

Weld Procedure Qualification and Welder Qualification

Welded Fabric Weld shear strength, each sample	6963.....	75.00
Guided Weld Bend Test, excluding specimen preparation, each.....	6927.....	50.00
Age Bend Specimens – 48 Hrs, up to 3 specimens.....	6956.....	140.00
Sample Cut & Perform Weld-Fillet Weld Fracture Test, each	6929.....	160.00
Weld-Fillet Weld Fracture Test In Sheet Steel & Evaluate, each.....	6969.....	130.00
Weld-Macro Etch (Plate)- cut, polish, etch, and evaluate, each	6930	By Quote
Weld-Macro Etch (Rebar # 3 thru # 7) - each	6972.....	138.00
Weld-Macro Etch (Rebar # 8 thru # 10) - each	6113.....	150.00
Weld-Macro Etch (Rebar # 11 thru # 14) - cut, polish, etch, and evaluate, each	6973	152.00
Weld-Macro Etch (Rebar # 18) - cut, polish, etch, and evaluate, each.....	6974.....	215.00
Weld-Radiography	6931	By Quote
Weld Transverse Tensile Test, plate up to 1.0-in thick excluding machining, each.....	6932	85.00
Weld Transverse Tensile Test, plate over 1.0-in thick excluding machining, each.....	6964	205.00
Welded Rebar Transverse Tensile Test, # 3 thru # 7	6965.....	135.00
Welded Rebar Transverse Tensile Test, # 8 thru # 10	6114.....	155.00
Welded Rebar Transverse Tensile Test, # 11 thru # 14	6966.....	185.00
Welded Rebar Transverse Tensile Test, #18	6967.....	460.00
Review Welding Procedure Specification (WPS), each	6921.....	175.00
Prepare Welding Procedure Specification (WPS), each	6922.....	350.00
WPS, PQR Weld Certificate, each.....	6971	130.00

Unless otherwise noted, costs above do not include sample preparation.

Sample Preparation

Sample Cut & Machine Specimen – under 1/2-in, each	6910.....	75.00
Sample Cut & Machine Specimen – 1/2 -inch to 1.0-in, each	6911.....	90.00
Sample Cut & Machine Specimen - 1.0-in to 1 1/2-inch thick, each	6968.....	150.00
Sample Cut & Machine Specimen – over 1 1/2-inch 2.0-in thick, each	6984.....	165.00
Sample Cut & Machine Specimen - over 2.0-in to 2 1/2-inch thick, each	6985.....	185.00
Sample Cut & Machine Specimen - over 2 1/2-inch 3.0-in thick, each	6986.....	195.00
Sample Cut & Machine Specimen - over 3.0-in to 3 1/2-inch thick, each	6987.....	205.00
Sample Cut & Machine Specimen - over 3 1/2-inch thick, each	6988	By Quote
Sample Cut & Machine Charpy V-Notch Specimens (Set of 3 specimens), per set.....	6909	282.00
Machine and V-Notch one set CVN specimens from Alternate Location.....	6941	294.00
Machine and V-Notch one set 3/4 size Specimens	6989	291.00
Machine and V-Notch one set 2/3 size Specimens	6990	294.00
Machine and V-Notch one set 1/2 size Specimens	6991	303.00
Machine and V-Notch one set 1/3 size CVN Specimens.....	6992	315.00
Machine and V-Notch one set 1/4 size CVN Specimens.....	6993	318.00



Laboratory Testing-Metallurgical Continued

Sample Preparation Continued

	Activity	Cost
Rough cut 'K' from full beam section	6994	\$ 60.00
Rough cut 'K' from T beam section	6995	40.00
Rough cut from 'K' section only	6996	30.00
Rough cut from Flange of full beam section	6997	50.00
Rough cut from Flange of T beam section.....	6998	30.00
Rough cut other joint configuration.....	6999	By Quote
Macroetch rough cut sample to locate HAZ, ea.	6111	By Quote
Metallurgical Mount, 1-1/4-in. including preparation without evaluation, each	6914	145.00
Metallurgical Mount, 2.0-in. including preparation without evaluation, each.....	6918	185.00
Add additional piece in mount, each piece	6925	35.00

Administrative Charges

Rush Turnaround, 48 - 72 hours (50% Surcharge)	6935	+ 50% of invoice
Rush Turnaround, 24 - 48 hours (100% Surcharge)	6936	+100% of invoice
Test Report Charge.....	6110	Minimum 65.00
Same day testing + report (200% Surcharge)	6937	+ 200%of invoice
Minimum laboratory charge	6923	150.00
Multiple copies for distribution, copies and mailing, per distributor per copy each.....	6924	4.50
Digital Photographs, photo quality paper, each	9116	8.50
Digital Photographs, photo quality paper, per copy report each.....	6115	4.50
Metallurgical Technician Travel Time, per hour	6116	By Quote
Misc. Equipment Charge	4416	By Quote
Special Test Set-Up (2-techs+1 engineer crew) per hour	4422	300.00
Special Testing	4420	By Quote
Administrative Office Support.....	3075	By Quote
Final Report	9111	By Quote



Laboratory Testing-Plastics & Plumbing

Plastic	Activity	Cost
General		
Weatherometer Test, each	4422	By Quote
Plastic Tensile Tests, each	4425	By Quote
Fixtures		
Plastic Toilet (Water Closet) Seats	4532	By Quote
Plastic Water Closet Bowls and Tanks	4533	By Quote
Plastic Lavatories.....	4534	By Quote
Plastic Urinal Fixtures	4535	By Quote
Plastic Bathtub and Shower units	4536	By Quote
Plastic Sinks.....	4537	By Quote
Prefabricated Plastic Spa Shells.....	4538	By Quote
Pipe		
Polyethylene Plastics Pipe and Fittings Materials	4539	By Quote
General Pipe testing.....	4540	By Quote
Plumbing		
Water Closets		
Water Closets.....	4500	By Quote
Wall Mounted Water Closets.....	4501	By Quote
Water Closets Equipped with a Dual Flushing Device	4502	By Quote
Urinals	4503	By Quote
Faucets		
Lawn and Sediment Faucets	4504	By Quote
Pullout Spout Faucets	4505	By Quote
Shower Heads		
Shower head or Body spray.....	4506	By Quote
High-efficiency Shower head or Body spray.....	4507	By Quote
Hand Shower	4508	By Quote
High-efficiency Hand Shower	4509	By Quote
Flexible Hose		
Flexible Water Connectors	4510	By Quote
Fittings		
Lavatory and Bar Supply Fittings.....	4511	By Quote
Bidet Supply Fitting (with or without a diverter)	4512	By Quote
Kitchen Supply Fitting (Kitchen faucet).....	4513	By Quote
Kitchen and Lavatory Supply Fitting (Faucet) with Side spray Diverter	4514	By Quote
Bath or Shower Supply Fitting	4515	By Quote
Bath or Shower Supply Fitting with Diverter	4516	By Quote
Laundry Tub Supply Fitting	4517	By Quote
Metering or Self Closing Supply Fittings	4518	By Quote



Laboratory Testing-Plastics & Plumbing - Continued

Valves and Controls

Supply stop	4519	By Quote
Kitchen and Lavatory side spray function control	4520	By Quote
Shower head, hand shower, or body spray adjusting mechanisms or function control.....	4521	By Quote
Automatic compensating valve.....	4522	By Quote
Temperature Actuated Mixing Valves for Hot Water Distribution Systems	4523	By Quote
Automatic Temperature Control Mixing Valves	4524	By Quote
Water Temperature Limiting Devices	4525	By Quote
Atmospheric Type Vacuum Breakers.....	4526	By Quote
Hose Connection Vacuum Breakers	4527	By Quote
Backflow Preventers with an Intermediate Atmospheric Vent	4528	By Quote
Reduced Pressure Principle Backflow Preventers and Reduced Pressure Principle Fire Protection Backflow Preventers	4529	By Quote
Double Check Backflow Prevention Assemblies and Double Check Fire Protection Backflow Prevention Assemblies	4530	By Quote

Miscellaneous

Plumbing Water Resistance, each.....	4541	By Quote
Plumbing Water Resistance Cycling Test.....	4542	By Quote
Gel Coat Thickness, each	4543	By Quote



Quality Assurance- 3rd Party Audit

Description	Activity	Cost
Travel time, per hour (Min. may apply)	4456	\$75.00
Qualifying Audit, per hour (8 hr. Minimum).....	4533.....	105.00
Technical Director, per hour (Code Meetings).....	4534.....	135.00
Consulting, per hour (Min. may apply)	4535.....	105.00
Project manager, per hour.....	4536	105.00
Engineer, per hour	4537	158.00
Per Diem, per day	1103	120.00
Per Diem, per day (Out of Country)	1107	By Quote
Consumable/ Expenses	1104	Cost plus 15%
Manual Review, per hour (6 hr. Minimum).....	4539.....	105.00
Audit Report Fees, per hour (\$150.00 Minimum)	4540.....	75.00
Annual Listing Fees, (if Applicable)/ or per Quote/ per product model and or series	3098	1,000.00
Mileage, Per Mile	5101	0.80
CA. Admin Fee.....	4443	5% of Invoice

**Note: 45 days advance notice required for audit cancellation. Audit cancelation Fees apply.
Expenses with applied mark-up and 8 hours Audit prep time if less than 45 days' notice.**



Laboratory Testing-Reinforcement

Reinforcing Steel ASTM A 615/A 706

	Activity	Cost
Tensile Test, No. 3 to 8 Bar, each.....	4600.....	55.00
Bend Test, No. 3 to 8, each.....	4601.....	55.00
Tensile Test with MOE, No. 3 to 8 Bar, each.....	4633.....	175.00
Tensile Test, No. 9 to 11 Bar, each.....	4626.....	80.00
Bend Test, No. 9 to 11 Bar, each.....	4627.....	80.00
Tensile Test with MOE, No. 9 to 11 Bar, each.....	4630.....	250.00
Tensile Test, No. 14 Bar, each.....	4602.....	150.00
Bend Test, No. 14 Bar, each.....	4634.....	150.00
Tensile Test with MOE, No. 14 Bar, each.....	4631.....	300.00
Tensile Test, No. 18 Bar, each.....	4603.....	300.00
Bend Test, No. 18 Bar, each.....	4635.....	300.00
Tensile Test with MOE, No. 18 Bar, each.....	4603.....	400.00
Tensile Test, No. 20 Bar, each.....	4632.....	500.00

High-Strength Steel Bars for Prestressed Concrete ASTM A722, Grade 80

Tensile Test, No. 24 Bar, each.....	4636.....	800.00
Tensile Test, No. 28 Bar, each.....	4637.....	1,000.00
Tensile Test, No. 32 Bar, each.....	4638.....	1,200.00
Chemical Analysis, each.....	4616.....	200.00
Deformation Compliance, each.....	4617.....	80.00
Sampling and Tagging at Fabricators Plant (within 40-mile radius from Laboratory, add \$100 for more than 40-miles)		
6:30 a.m. to 4:00 p.m., Monday through Friday - per sample.....	5005.....	30.00
Before 6:30 a.m. and after 4:00 p.m. and Saturday - per sample.....	5006.....	45.00
Sunday and Holidays - per sample.....	5007.....	45.00
*Minimum Sample Charge, per trip.....	5008.....	150.00
Transportation and Processing Rebar Samples at Jobsite - within 40-mile radius from Laboratory - per sample.....	5024.....	30.00

Reinforcing Steel ASTM A 1035

Tensile Test, each,	4327.....	By Quote
Bend Test, each	4328.....	By Quote

Headed Steel Bars for Concrete Reinforcement ASTM A 970

	Activity	Cost
Tensile Test, No. 11 or smaller, each	4639.....	200.00
Tensile Test, No. 14, each	4640.....	250.00
Tensile Test, No. 18, each	4641.....	400.00

Welded Specimens

Tensile Test, Welded, No. 11 Bar or Smaller, each.....	4604.....	200.00
Tensile Test, Welded, No. 14 Bar, each	4605.....	250.00
Tensile Test, Welded, No. 18 Bar, each	4606.....	400.00
Nick Break, Welded Re-Bar, each.....	4607.....	125.00
Straightening Hoops	4615.....	50.00

Coupled Reinforcement

Tensile Test, Mechanically Spliced Bar, No. 11 Bar or Smaller, each.....	4612.....	200.00
Tensile Test, Mechanically Spliced Bar, No. 14 Bar, each	4613.....	250.00
Tensile Test, Mechanically Spliced Bar, No. 18 Bar, each	4614.....	400.00
CalTrans Mechanical Coupler Slip Test, No. 11 Bar or Smaller, each.....	4623.....	250.00
CalTrans Mechanical Coupler Slip Test, No. 14 Bar, each	4624.....	300.00
CalTrans Mechanical Coupler Slip Test, No. 18 Bar, each	4625.....	500.00
CalTrans Mechanical Coupler Slip Test, No. 20 Bar, each	4625.....	600.00



Post-Tensioning Strand

Tensile Test and Elongation in 24" for Prestress Strand, ASTM A 416, each.....	4609	250.00
Tensile Test and Elongation in 10" for Prestressing Wire, ASTM A 421, each.....	4610	250.00
Modulus of Elasticity (Prestress Strand), each	4611.....	350.00
Transportation and Processing Post Tension Cables - within a 40-mile radius of laboratory, per sample	5025	30.00

Welded Wire Fabric ASTM A 185

Parent Material Tensile, 5 required, \$50.00 each	4618.....	250.00
Weld-Included Tensile, 5 required, \$50.00 each	4619.....	250.00
Shear-Weld Area, 5 required, \$50.00 each	4620.....	250.00
Bend Test, 5 required, \$40.00 each	4621.....	200.00
Mesh Evaluation, ASTM C427	4622	\$575.00



Laboratory Testing-Soil

Soil Properties

	Activity	Cost
California Impact, CAL 216, each.....	7018	\$ 150.00
Classification of Soil for Engineering Purposes, ASTM D2487.....	7136.....	350.00
Moisture Density-Chunk Density, In-Situ, ASTM D2937, each	7555	50.00
Moisture Density-Drive Tube Density, In-Situ, each	7137.....	50.00
Corrosivity: Resistivity, pH, Sulfates, Chlorides, each.....	7020	By Quote
Material Finer - #200 Sieve, ASTM D 1140/C 117, each	7110.....	50.00
Moisture, ASTM D2216, each.....	7111.....	25.00
Moisture (microwave), ASTM D4643, each	7019.....	15.00
Moisture-Density Relations of Soils, ASTM D1557, Method A each.....	7113	135.00
Moisture-Density Relations of Soils, ASTM D1557, Method B or C each	7114	145.00
M/D Curve Rock Correction	7138.....	100.00
Moisture-Density Check Point, each	7135.....	50.00
"R" (Resistance) Value, Lime Treated or Requiring Recombining, each.....	7120	250.00
"R" (Resistance) Value, Calif. 301, ASTM D 2844, each.....	7119.....	225.00
Relative Density (max/min) D 4254, each.....	7534	By Quote
Sieve Analysis of Combined Fine and Coarse, ASTM D-422, each	7124	200.00
Sieve and Hydrometer Analysis, ASTM D 422, each	7109.....	270.00
Sieve Analysis, fines for sieves #4 to #200 ASTM D 422, each	7139	125.00
Specific Gravity for Soils, ASTM D 854, each	7127.....	120.00

Foundation Testing

Atterberg Limits, (LL, PI) ASTM D 4318, each	7100.....	175.00
Atterberg Shrinkage Limit, ASTM D 4318, each	7099.....	150.00
California Bearing Ratio, ASTM D 1883, set.....	7130.....	450.00
Collapse Potential, each.....	7559	By Quote
Consolidation Test, ASTM D 2435, each.....	7102.....	200.00
Consolidation Time/Rate Curves, each.....	7103.....	50.00
Remolding of Samples, each	7104.....	30.00
Direct Shear Test, ASTM D 3080:		
Consolidated, Drained 1 Point, each.....	7107.....	125.00
Consolidated, Undrained 1 Point, each.....	7106.....	100.00
Unconsolidated, Undrained, 1 Point, each.....	7105.....	100.00
Remolding of Samples, each	7104.....	30.00
Expansion Index, UBC-18-2, ASTM D 4829, each.....	7108.....	130.00
Permeability, Constant Head, ASTM D 2434, CAL 220, each	7116	225.00
Permeability, Falling Head, CAL 220, each.....	7117.....	225.00
Triaxial Unconsolidated, Undrained, ASTM D 2850, each.....	7132	By Quote
Unconfined Compression Test, ASTM D 2166, each.....	7129.....	70.00
Unconfined Compression Test with Graph, ASTM D 2166, each.....	7134	120.00

Peat Moss

Loss on Ignition, ASTM D 2974 each	7040.....	75.00
Bulk Specific Gravity, ASTM D 4531, each	7041.....	45.00
Classification, ASTM D 4427, each	7038.....	200.00
pH, ASTM D 2976, each	7043	45.00
Absorption, ASTM D 2980, each	7044.....	20.00

A Rush Charge of 3 to 4 times of the unit cost applies to the following tests for same-day results before 2 pm:

- ASTM D1557, Method A
- ASTM C136
- ASTM C117, ASTM D1140
- ASTM C29 (Unit Weight only)



Laboratory Testing - Structural Testing

Testing Machines

	Activity	Cost
20,000 to 120,000 Pound Machine (Universal), including set-up time, per hour	4400	\$ 240.00
440,000 Pound Machine (Universal), including set-up time, per hour	4401	270.00
600,000 Pound Machine (Compression only), including set-up time, per hour.....	4402	320.00
1,100,000 Pound Machine (Universal), including set-up time, per hour.....	4462	900.00
400,000 Pound Machine (Test mark), including set-up time, per hour.....	4541	320.00
120,000 Pound Machine (Instron), including set-up time, per hour	4501	340.00
450,000 Pound Machine (Instron), including set-up time, per hour	4502	440.00
Special Load Tests Up (2-techs+1 engineer crew), per hour.....	4405.....	500.00
Special Test Set-Up (2-techs+1 engineer crew), per hour	4422.....	450.00

Manhole Cover and Tree Grate Tests, (L.A. City)

Static Loading, 22-inch diameter or smaller, each.....	4423.....	150.00
Static Loading, greater than 22-inches and less than 36-inches in diameter, each up to 400k lbs.....	4557.....	200.00
Static Loading, greater than 36-inches in diameter, each up to 400k lbs.....	4558.....	300.00
Weight of Manhole Samples, each	4424.....	50.00
Cyclic Loading, each (3-5 cycles) up to 22-inches in diameter	4732.....	300.00
Cyclic Loading, each (10 cycles)	4468.....	550.00
Cyclic Loading, each (3-5 cycles)	4730.....	400.00
L.A City S-601, each ASTM D2486	4731.....	850.00

Mechanical Testing Services

Tensile Test -- No Strain Measurement, Yield by Halt of Dial, no report included

Up to 100,000 lb., each.....	4411	75.00
100,001 to 200,000 lb., each.....	4412	100.00
200,001 to 400,000 lb., each.....	4410	250.00
Greater than 400,000 lb., each	4140	450.00
Strain Gauge Testing	4418	By Quote
Special Testing, Load Tests, Flexural, Bend, Impact, Axial, Racking Shear	4420	By Quote
Tensile Test -- Mechanical Non-Printout Extensometer for Strain, each	4432.....	50.00
Tensile Test -- Electronic Extensometer with Recorded Printout, 1 test	4433.....	150.00
Mechanical Bend Test, each.....	4141	75.00
Machining and Preparation of Samples (shop) per hour.....	4142.....	400.00
Monotonic test including strain gauge, each.....	4559.....	375.00

Structural Testing

*General Structural Monotonic Testing

Diaphragm Set-up, per Hour.....	4703	400.00
Diaphragm test, each	4479	3,000.00
Monotonic Shear Wall Set Up, per Hour.....	4704.....	250.00
Monotonic Shear Wall test, each	4556	2,500.00

* General Low Cyclic/ Fatigue Testing - < 1,000 cycles – Components or Assemblies

Cyclic Set-up, per Hour	4705	500.00
Cyclic Shear Wall Test, each.....	4438	3,500.00
Cyclic AC133 or similar Test, each.....	4706	By Quote
Cyclic FM1950 or similar Test, each.....	4707	By Quote

*General High Cyclic/ Fatigue Testing - > 1,000 cycles, up to 0.5 Hz

Cyclic Set-up, per Hour	4143	1,200.00
Cyclic Shear Wall Test, per hour.....	4144	1,500.00



Laboratory Testing - Structural Testing- Continued

* ASTM E72 Test or Similar (Including DAQ) – Walls Up to 15-ft high

ASTM E72 or similar Set-up, per Hour.....	4708.....	275.00
Compression or similar Test, each.....	4709.....	3,000.00
Flexural or similar Test, each	4710.....	2,000.00
Flexural and Compression or similar Test, each.....	4711.....	2,500.00
Static/ Shear or similar Test, each	4712.....	1,800.00

* Permanent Railing Systems, Guards, and Balustrades ASTM E935

Load Test , each.....	4733.....	500.00
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*Note : *Prices subject to change depending of complexity of sample*

* ICC-ES AC166 Test or Similar (including DAQ) – Diaphragm Up to 20-ft by 20-ft

ICC-ES- AC166 or similar Set-up, per Hour.....	4713.....	450.00
Roof Diaphragm or similar Test, each.....	4714.....	3,000.00
Wind Driven Rain or similar Test, each	4715.....	4,000.00
Moment Frame Connection or similar Set-up, per Hour	4560.....	400.00
Moment Frame Connection or similar Test, Each	4555.....	400.00
Component Compression or similar Set-up, per Hour.....	4561.....	350.00
Component Compression or similar Test, each	4440.....	700.00
Component Shear or similar Set-up, per Hour.....	4562.....	400.00
Component Shear or similar Test, each	4441.....	1,000.00
Component Flexural or similar Set-up, per Hour	4563.....	350.00
Component Flexural or similar Test, each	4442.....	700.00
Uniform Load or similar Set-up, per Hour	4564.....	500.00
Uniform Load or similar Test, each	8108.....	1,500.00
Hydrostatic Testing or similar Set-up, per Hour.....	4565.....	500.00
Hydrostatic Testing or similar Test, each	4429.....	1,500.00

Testing for Coatings used in Slip-Critical Bolted Connections

Slip Coefficient Test (RCSC + 5 tests), per set of 3 tests	4570.....	4,250.00
Tension Creep Test (RCSC + 3 tests), per set of 3 tests	4571.....	5,250.00

Geogrid Testing

Connection Testing, NCMA Test Method SRWU-1, each.....	4444.....	350.00
Shear Strength Testing, NCMA Test Method SRWU-1, each.....	4445.....	350.00

Product Evaluation Services

ICC ES Product Evaluation Services.....	4446.....	By Quote
CISCA Product Evaluation Services	4447.....	By Quote
AAMA Product Evaluation Services	4448.....	By Quote
ATC 24, FEMA 350, FEMA 450 Product Evaluation Services	4449.....	By Quote

Product Consulting Services

Code Consulting or similar, per hour.....	3095.....	175.00
ICC ES/IAS Fabricator Quality Assurance Services, per hour.....	3090.....	175.00
Uniform ES and ICC ES Product Consulting Services.....	3091.....	By Quote
IAPMO Product Consulting Services	3092.....	By Quote
AAMA Product Consulting Services.....	3093.....	By Quote
ATC 24, FEMA 350, FEMA 450 Product Consulting Services	3094.....	By Quote
Test Procedure/Protocol Elaboration, per hour.....	4150.....	150.00



Laboratory Testing - Structural Testing- Continued

General Structural Field Testing

Special Sampling at fabrication plant, per hour.....	4151.....	150.00
Special field test setup (2-Techs + 1 Engineer Crew), per hour	4152.....	450.00
Special field load test (2-Techs + 1 Engineer Crew), per hour	4153.....	525.00
Computer DAQ/Amplifiers, per hour	4154.....	120.00
Load Cell or transducer, per hour	4155.....	50.00
Mileage, per mile	5101.....	0.80

*Note : *Prices subject to change depending of complexity of sample*



Geotechnical and Environmental Services

Professional Staff (Geotechnical Engineers, Geologists, Staff Specialist)	Activity	Cost
Senior Professional, per hour.....	7206	185.00
Project Manager, per hour	7205	110.00
Project Professional, per hour.....	7204	120.00
Staff Professional, per hour	7203	115.00
Principal Professional, per hour.....	7202	150.00
Certified Geologist, per hour	7218	By Quote
Senior Principal Professional, per hour	7201	185.00
Expert Witness, per hour	7200	By Quote
Office Support, per hour	7209	35.00
Word Processor, per hour	7219	40.00
Illustrator, per hour	7208	45.00
QSP "Qualified SWPPP Practitioner", per hour.....	7231	120.00

Field Staff

Field Technician, Laboratory and Field with density equipment, Regular Time, per hour	7212	\$ 105.00
Environmental Technician, Regular Time, per hour.....	7240	105.00
CalTrans Certified Technician with density equipment, Regular Time, per hour	7274	105.00
Supervising Technician, Laboratory and Field with density equipment, Regular Time, per hour.....	7214	110.00
Soils Deputy Grading, or ICC Soils Inspector, Regular Time, per hour	7563	125.00

Geotechnical Minimums

Show-up time, no work performed	2-hour minimum charge
Field Service Calls.....	4 and 8-hour minimum charge
Field Soils Work.....	 a minimum of 1 hour per week engineering supervision may be charged

Overtime

Monday through Friday, Over 8 Hours or after 4:00 p.m.; Saturday, 1 to 12 Hours	7222	time and one-half
Sundays and Holidays, 1 to 8 Hours.....	7222	time and one-half
Monday through Saturday, Over 12 Hours; Sundays and Holidays, Over 8 Hours.....	7232	double time

Administrative Charges

Pick-Up/Delivery, per hour (2-hours minimum)	7215	55.00
Mileage, per mile.....	7313	0.75
Travel Time, per hour	7235	55.00
Facsimile, per page	7315	1.00
Reproduction, per page.....	7225	1.50
Report Surcharge, per copy	7317	50.00
Cellular Telephone, per day.....	7319	35.00
Air Express/Over-night Delivery, each	7325	35.00
Contracted Services-Drilling	7300	By Quote
Contracted Services-Testing	7301	By Quote
Contracted Services-Expenses.....	7303	By Quote



Geotechnical and Environmental Services-Continued

Foundation/Geological Investigations

	Activity	Cost
Geotechnical Field Exploration	7308	By Quote
Final Report of Compacted Fill (submitted at end of project, if required)	7305	By Quote
Geotechnical Addendum Report.....	7338	By Quote

Support Equipment Foundation/Geological Investigations

Nuclear Density Gage, per day.....	7327	Field Staff
Sand Cone Kit, per day.....	7328	Field Staff
Soil Sampling:		
Encore Sample Container, per container	7125.....	25.00
Tubes and Rings, per sample	7122.....	15.00

Environmental Investigations and Reports

Site Assessments Phase I	7306	By Quote
Site Assessments Phase II.....	7307	By Quote
*Property Condition Report.....	7323	2,000.00
Tank Removal/Closure Report	7326	By Quote
Groundwater Sampling Report	7329	By Quote
Import/Export Soil Testing	7334	By Quote
Report Preparation.....	7340	By Quote
Health and Safety Plan	7320	\$350.00
Soil Vapor Survey	7321	By Quote
Transaction Screen Report (TSA).....	7350	By Quote
Document Review	7351	By Quote

Sampling Equipment

Sample Jars, each	7335	25.00
Tedlar Bags , each	7336	25.00
Coring, each	7337	75.00
Nylaflow Tubing, each	7339	15.00

Note: * price might be higher depending of the property size/complexity

Support Equipment Environmental

Air Monitoring Equipment, per day	7216.....	125.00
Magnetometer Equipment, per day.....	7309.....	100.00
Water Pump and Generator, per day.....	7311.....	150.00
Water Monitoring Equipment.....	7316.....	50.00

Health Safety Equipment:

Level A, per Person	7227	By Quote
Level B, per Person, per day, plus hourly rate.....	7228	By Quote
Level C, per Person, per day, plus hourly rate.....	7229.....	75.00
Health and Safety Supplies, per day	7217.....	150.00



Laboratory Testing - Chemical

Administrative Charges

	Activity	Cost
Manager, Supervisor, or Consultant, per hour	6409	By Quotation
Chemist, per hour	6406	By Quotation
Clerical Assistant, per hour.....	6432	By Quotation
Calculation Charge	6403	By Quotation
Report Preparation Charge	6418	By Quotation
Sample Preparation.....	6424	By Quotation
Sample Composite, per sample.....	6425	By Quotation
Sample Disposal	6421	By Quotation
Sample Transport, per hour	6427	By Quotation
Shipping Charges.....	6433	By Quotation
Equipment Rental	6435	By Quotation
Photography.....	6420	By Quotation
Standard Report/QC Package	6511	By Quotation
Diskette Surcharge.....	6512	By Quotation
EDF Surcharge	6513	By Quotation
NEESA, Army Corps of Engineers, CLP, Etc., Surcharge.....	6514	By Quotation

Field Sampling

Technician. Per hour.....	6430	By Quotation
Mileage, per mile.....	6415	By Quotation
Automatic Composite Sampler, per 24-hour		

s	6400	By Quotation
Discharge Flow Measurement, each	6412	By Quotation

Supplies

5035 Encore (5g), each	6533	By Quotation
5035 Sampling Tool, each	6435	By Quotation
5035 Easy Draw	6534	By Quotation
Sample Containers.....	6434	By Quotation

Rush Analyses

Rush Surcharge, 72 Hours	6535	By Quotation
Rush Surcharge, 48 Hours	6540	By Quotation
Rush Surcharge, 24 Hours	6530	By Quotation
Rush Surcharge, Same Day	6545	By Quotation



Laboratory Tests – Organic Chemistry

Organic Analyses

	Activity	Cost
EPA 1664 TRPH	6201	By Quotation
EPA 1664 Oil and Grease.....	6236	By Quotation
Oil & Grease, Floatable	6237	By Quotation
EPA 418.1 TRPH	6258	By Quotation
EPA 8015B TPH-Gasoline	6268	By Quotation
EPA 8015B TPH-Diesel	6269	By Quotation
EPA 8015B TPH-Gasoline and Diesel	6267	By Quotation
LUFT – Gasoline and Diesel	6210	By Quotation
EPA 8015B TPH-Hydrocarbon Range	6263	By Quotation
EPA 8015B Methanol/Ethanol	6264	By Quotation
EPA 602 or 8021B BTEX	6202	By Quotation
EPA 8015B/8021B Combination-Gasoline	6203	By Quotation
EPA 624 / 8260B Volatile Organics.....	6250	By Quotation
EPA 524 Volatile Organics	6249	By Quotation
EPA 625 or 8270C Extractable Organics	6216	By Quotation
EPA 608 or 8082 PCBs Water or Soil	6242	By Quotation
EPA 8082 PCBs Oil	6244	By Quotation
EPA 608 or 8081A Chlorinated Pesticides	6206	By Quotation
EPA 608 or 8082 / 8081A PCBs and Pesticides	6243	By Quotation
Flash Point	6218	By Quotation
Petroleum Analysis.....	6246	By Quotation
Identification/Interpretation of Spectrum/Fingerprint.....	6260	By Quotation
EPA 5035 or 5030, 8260B Gasoline and Volatile Organics	6204	By Quotation
EPA 8270 SIM - Polycyclic Aromatic Hydrocarbons (PAHs)	6205	By Quotation
EPA 8260 – Soil Vapor (CHHSL).....	6208	By Quotation
Ambient/Indoor/Outdoor Air	6211	By Quotation

Mobile Laboratory Services

Mobile Lab per 10 hour weekday	6460	By Quotation
Mobile Lab per 10 hour weekend	6465	By Quotation
Mobile Lab hours in excess of 10 hours	6461	By Quotation
Mobilization fee.....	6467	By Quotation
Mobile Lab Standby Time	6439	By Quotation
Mobile Lab Cancellation	6468	By Quotation



Laboratory Tests – Inorganic Chemistry

Inorganic Analyses - Wet Chemistry

	Activity	Cost
Alkalinity.....	6001	By Quotation
Ammonia, Direct	6002	By Quotation
Ammonia, Distillation	6004	By Quotation
Anions (F, Br, Cl, NO ₃ , NO ₂ , SO ₄ , PO ₄)	6003	By Quotation
Biochemical Oxygen Demand (BOD)	6006	By Quotation
Chemical Oxygen Demand (COD).....	6008	By Quotation
Chloride, Argentometric	6012	By Quotation
Chlorine, Residual	6014	By Quotation
Color.....	6016	By Quotation
Conductance	6018	By Quotation
Cyanide, Amenable *(surcharge to Total cyanide).....	6022	By Quotation
Cyanide, Free.....	6024	By Quotation
Cyanide, Total	6028	By Quotation
Cyanide, Reactive.....	6026	By Quotation
Hardness	6050	By Quotation
Mercaptans	6070	By Quotation
Nitrogen, Kjeldahl	6082	By Quotation
Oxygen, Dissolved	6096	By Quotation
pH, Aqueous	6102	By Quotation
pH, Non-aqueous	6100	By Quotation
Parr Oxygen Bomb	6098	By Quotation
Phosphorous	6097	By Quotation
Perchlorate.....	6099	By Quotation
Phenols	6104	By Quotation
Salinity – NaCl	6148	By Quotation
Solids, Total Dissolved.....	6132	By Quotation
Solids, Settleable	6126	By Quotation
Solids, Suspended	6128	By Quotation
Solids, Total.....	6130	By Quotation
Solids, Volatile	6031	By Quotation
Sulfide, Dissolved.....	6138	By Quotation
Sulfide, Reactive.....	6140	By Quotation
Sulfide, Total	6142	By Quotation
Sulfate, Gravimetric.....	6134	By Quotation
Surfactants, MBAS	6150	By Quotation
Thiosulfate.....	6158	By Quotation
Turbidity	6174	By Quotation
Water by Karl Fischer titration	6272	By Quotation
Construction Materials Analysis.....	6020	By Quotation



Laboratory Tests – Inorganic Chemistry Continued

Metals Preparation

	Activity	Cost
Digestion, Aqueous	6030	By Quotation
Digestion, Nonaqueous.....	6032	By Quotation
STLC Extraction.....	6036	By Quotation
EP-Tox.....	6034	By Quotation
TCLP Extraction.....	6154	By Quotation
VOC Extraction ZHE, (STLC and/or TCLP)	6155	By Quotation

Metals Analysis

Calcium Oxide.....	6168	By Quotation
Individual Metals, per element	6072	By Quotation
Low Level Hexavalent Chromium	6073	By Quotation
Hexavalent Chromium.....	6052	By Quotation
Trivalent Chromium	6403	By Quotation
Iron (Ferrous).....	6404	By Quotation
Total Lead.....	6069	By Quotation
Lead in Paint.....	6068	By Quotation

Metals Group Determinations

TTLC CAM Metals	6162	By Quotation
STLC CAM Metals	6160	By Quotation
RCRA Metals	6118	By Quotation
Priority Pollutant Metals.....	6112	By Quotation
Drinking Water Analysis Metals	6067	By Quotation
TAL Metals (23).....	6071	By Quotation

Outside Laboratory Services

Asbestos Analysis.....	6300	By Quotation
Misc. Analyses	6344	By Quotation
1, 4 -Dioxane	6345	By Quotation
EPA 8310 PAHS	6346	By Quotation
EPA 504 EDB.....	6224	By Quotation
Organophosphorus Pesticides	6209	By Quotation
Total Organic Carbon	6254	By Quotation
Biotoxicity, aqueous	6500	By Quotation
Biotoxicity, nonaqueous	6505	By Quotation
Coliform, total	6515	By Quotation
Coliform, fecal.....	6516	By Quotation
EPA 8151A Chlorinated Herbicides.....	6207	By Quotation
Total Organic Carbon	6254	By Quotation

FDA Testing of Lead and Cadmium, Proposition 65

FDA Testing of Lead and Cadmium, Proposition 65	6038	By Quotation
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VOC Testing

EPA 24 – VOC per AQMD	6266	By Quotation
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Administrative Fees

On occasion we are asked to perform administrative services outside of our normal business activity. Under these circumstances, such services will be billed at the rates below. These services will be performed only at the request of the client.

Administrative

Administrative Support.....	4443	5% of Invoice
*Report Charge, per report, per copy	9110	1.75
Final Report	9111	By Quote
General Testing-Rush Charges	4812	50%

*Generally for Compression Testing of Concrete, Base Plate Grout, Masonry Mortar and Grout, as well as Tension and Bend Testing of Reinforcing Steel.

Administrative Services - Laboratories

	Activity	Cost
Administrative Support for Special Projects, Certified Payroll/ Labor Compliance	3074	\$135
Administrative Office Support.....	3075	By Quote
Task Tracking	3076	\$ 65.00
Report Surcharge, per copy	3077	50.00
Report Copy Charge, per sheet.....	3078	2.75
Reproduction, per page.....	3079	1.50
File Retrieval, per file.....	3080	50.00
Insurance, Extra Charges as ordered by Client	3081	By Quote
Processing Certificates, Affidavits, & Notary Services, each.....	3082	25.00
Shipping Charges.....	3084	At Cost
Air Express/Delivery, each.....	3085	Cost + 25%
Contracted Services	3087	Cost + 25%
Minor Report Revision, minimum.....	3089	25.00

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