

**PROPOSAL FOR  
ON-CALL GEOTECHNICAL SERVICES**

Prepared for



**THE CITY OF GARDEN GROVE  
11222 ACACIA PARKWAY  
GARDEN GROVE, CALIFORNIA 92842**

**Attention: Mr. Mark Uphus  
Senior Civil Engineer**

Submitted By:

**ASSOCIATED SOILS ENGINEERING, INC.**  
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Signal Hill, California 90755  
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February 2, 2023



**SOILS ENGINEERING, INC.**  
Consulting Geotechnical Engineers

2860 WALNUT AVE. - SIGNAL HILL, CALIF. 90755 - PHONE 562/426-7990 - FAX 562/426-1842

February 2, 2023  
Proposal No. P23-005

**City of Garden Grove**  
11222 Acacia Parkway  
Garden Grove, California 92842

Attention: Mr. Mark Uphus  
Senior Civil Engineer

**Proposal for On-Call Geotechnical Services**  
City of Garden Grove, California

Ladies and Gentlemen:

In response to the Request for Proposal for On-Call Geotechnical Services (RFP), dated January 9, 2023, Associated Soils Engineering, Inc., is pleased to submit the attached Proposal for your consideration.

Associated Soils Engineering, Inc. (ASE) has provided geotechnical and engineering geologic investigation, design, materials testing and construction testing services for nearly four decades in Southern California and can use the vast experience, information and data gathered over the years to provide quick and cost-effective geotechnical solutions to your project. Our in-house laboratory is certified by The State of California Department of Transportation (Caltrans), AASHTO/CCRL and AMRL (Hot Mix Asphalt, Aggregate, Soil, & Portland Cement Concrete), the State of California Division of State Architect (DSA) and the City of Los Angeles. ASE is Certified as a SBE with the City of Long Beach and as a SLBE with the City of Los Angeles.

ASE will provide exemplary engineering and geologic field exploratory and testing services. Our company will be 1) sensitive and responsive to directions from the City of Garden Grove (City) representative, 2) honest, forthright, and clear in billing and invoicing the City, and 3) dependable with respect to the execution of all project tasks.

Associated Soils Engineering, Inc. has carefully assembled a highly qualified team with the expertise, which allows us to offer a broad spectrum of geotechnical engineering, field exploration and laboratory testing services. ASE has the personnel and experience to provide the geotechnical services described in the Scope of Services of the RFP.

Our team has completed numerous projects for various municipalities (including Garden Grove) within southern California. All of these projects were performed in accordance with relevant federal, state and local codes and requirements pertaining to resident engineering design, laboratory testing, construction inspection, and specialty materials inspection and testing.

Associated Soils Engineering, Inc. is qualified to provide any Geotechnical Engineering, Engineering Geology and/or Materials Testing Services that the City may require. A copy of our Professional Fee Schedule for this project is included under separate cover. This Proposal and accompanying Fee Schedule are valid for at least through the end of the 2014 calendar year.

If there are any questions regarding this Statement of Qualifications, or if you desire additional information or clarification, please do not hesitate to call the undersigned at (562) 426-7990.

Respectfully Submitted,

**ASSOCIATED SOILS ENGINEERING, INC.**



Edward C. (Ted) Riddell  
President, Principal Engineering Geologist  
City's Point-of-Contact

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## 1.0 EXECUTIVE SUMMARY

### Overview

The City of Garden Grove is seeking the services of a highly qualified firm having extensive experience in the field of geotechnical observation & testing, laboratory testing and material testing services in conformance with State and Federal laws and regulations. These services would be for “On-Call” services during ongoing and future construction within the City over the next three years.

ASE has the relevant firm experience and licensed team members to perform any geotechnical consulting services necessary in the City. Our staff has a sound understanding of public works and engineering practices, and the ability to translate technical knowledge into project design and comply with related guidelines and regulations. We will provide assurance that materials and workmanship incorporated into each project are in conformance with contract specifications. Therefore, only qualified engineers (RCE, RGE), geologists (PG, CEG) and engineering technicians (Caltrans Certified) using properly calibrated equipment will perform acceptance tests on materials incorporated into the projects.

### Firm's Background Information (Company's History)

The firm of Associated Soils Engineering, Inc. (ASE), a California Corporation, was incorporated in 1974, in the State of California. ASE, headquartered in Signal Hill, California, has been in business for nearly 50 years providing services to many municipalities, school districts, as well as private industry throughout Southern California. These facilities are considered among the best in Southern California providing testing services for many competitors as well as for the in-house clients. **ASE's in-house laboratory has been certified by the State of California Department of Transportation (Caltrans – RSP #31) and accepted by Division of State Architect (DSA) under the Laboratory Evaluation and Acceptance program (LEA 224), as well as AASHTO/CCRL and AMRL (Hot Mix Asphalt, Aggregate, Soil, & Portland Cement Concrete) and the City of Los Angeles.**

Associated Soils Engineering, Inc. has a commitment to provide Geotechnical Engineering and soils and materials testing services with a high degree of professional excellence and proficiency. We strive to offer our clients individual attention and provide innovative solutions at a competitive cost, from our headquarters, located in Signal Hill, California. ASE has provided geotechnical design, material testing, and construction testing services for four decades in Southern California and can use the vast experience, information and data gathered over the years to provide quick and cost-effective geotechnical solutions to your project. ASE currently has 14 employees that work directly out of our headquarters in Signal Hill, California. Our staff includes the following professional technical staff recognized by the

State of California: two Certified Engineering Geologists; one Registered Geotechnical Engineer; one Registered Civil Engineer; and one Engineer-In-Training. Each of our technicians is certified by Caltrans for a variety of field testing. Our business hours are Monday through Friday, 7:00 am to 5:00 pm, but personnel are available 24/7 by previous arrangement. ASE is legally permitted and licensed to conduct business in the State of California for the services offered. ASE is recognized and certified by the City of Long Beach as a Small Business Enterprise (SBE) and the City of Los Angeles as a Small Local Business Enterprise (SLBE).

**2.0 EXPERIENCE**

ASE has worked for many years for the City of Garden Grove performing exactly the types of geotechnical services outlined in the RFP.

The following is a list of various recent and current clients requiring similar services performed. Our clients are our best testimonials, and we encourage the City to call upon them for a reference on our performance.

Project Description	Municipality/Contact Name
Caltrans Highway US 101 – Ventura Shoulder Operations Full Depth Reclamation Design & Construction (Geotechnical Investigation, FDR-C Design (2021) and Observation & Testing During Construction (2021-2022))	Granite Construction 215 Comstock Street Santa Clara, California 52054 Mr. Carlos Ruvalcaba (661) 860-0746
Caltrans Interstate 10 – Beaumont to Cabazon Freeway expansion Full Depth Reclamation Design & Construction (Geotechnical Investigation, FDR-C Design (2020) and Observation & Testing During Construction (2020))	Coffman Specialties 9685 Via Excelencia #200 San Diego, California 92126 Mr. Gus Rios (619) 520-5163
San Marcos Creek District Two Bridges Project Independent Assurance (IA) (Soils, Concrete and Asphalt Testing – Ongoing)	4-Leaf, inc. 2126 Rheem Drive Pleasanton, California 94588 Mr. Roger Cross (310) 889-5924
Street and Utility Replacement/Rehabilitation – Various Projects - Ongoing (Investigation, Design, Soils, Concrete and Asphalt Testing)	City of Bellflower 16600 Civic Center Drive Bellflower, California 90706 Mr. Jerry Stock (562) 804-1424

Project Description	Municipality/Contact Name
Citywide Pavement Design and Street Rehabilitation Projects - Ongoing (Investigation, Soils, Concrete and Asphalt Testing)	City of Lakewood, California 5050 N. Clark Avenue Lakewood, California 90712 Mr. Max Withrow (562) 866-9771
Citywide Pavement Design and Street Rehabilitation Projects - Ongoing (Investigation, Soils, Concrete and Asphalt Testing)	City of Culver City Public Works Department 9770 Culver Boulevard Culver City, California 92842 Mr. Hong Wang (310) 253-5619
Utility Rehabilitation Projects - Ongoing (Soils Testing)	Crescenta Valley Water District 2700 Foothill Blvd. La Crescenta, California 91214 Mr. David Gould (818) 248-3925

Local, State & CBC Standards Experience

ASE has performed geotechnical investigations, observation and testing, laboratory testing, special inspections and material testing services in conformance with local, State (CalTrans, DSA, OSHPD & CBC) and Federal laws and regulations for dozens of municipalities throughout southern California. Our management personnel maintain membership in many professional organizations to stay up to date with Standard of Care issues and the latest advances in their relevant fields. These Professional Societies include, but are not limited to: California Geotechnical Engineers Association, American Society of Civil Engineers, Asphalt Pavement Association, Association of Engineering Geologists and Geological Society of America.

**3.0 PERSONNEL**

Executive, Project Management, & Accounting

The following key personnel have been assigned to assist the City with any upcoming projects. Our proposed team has the technical expertise and experience that exceeds the minimum requirements outlined in the RFP. ASE’s current number of personnel totals 14 employees.

Associated Soils Engineering, Inc. has assembled a very experienced team based entirely out of our Signal Hill, California office. The team will be led by Principal-in-Charge, and Corona del Mar resident, **Edward C. (Ted) Riddell, P.G., C.E.G.**, with support from **Lawrence J.D. Chang, P.E., G.E.** Both are experienced in field investigation, engineering and geological analysis, and construction management with relevant projects.



Other key personnel include **John Whitney, P.G., C.E.G., Senior Project Geologist**; **Torin Ng, E.I.T., Project Engineer**. Our **Laboratory Manager, Donald Zike** has 45 years experience with our company. Our **Accounting Department** is headed by **Chrystal Lim** who has over 10 years of accounting experience and over 4 years with our company.

A brief summary of qualifications and relevant experience of key personnel identified is provided in the following pages. Copies of their detailed resumes are located in the attached Appendix B.

**Project Billing**

ASE promises to be honest, forthright, and clear in billing and invoicing. A copy of our current Professional Fee Schedule is enclosed in Appendix A. ASE will maintain the same rates throughout the first year of the contract and through at least the end of the 2019 calendar year.

**Key Personnel**

The following key personnel have been assigned to assist the City with any potential projects. Copies of the detailed resumes of the key personnel can be found in Appendix B.

<b>Name</b>	<b>Office</b>	<b>Years Practicing</b>	<b>Project Responsibility</b>
<b><i>Edward C. (Ted) Riddell, P.G., C.E.G</i></b>	<b><i>ASE</i></b>	<b><i>37</i></b>	<b><i>President, Principal Geologist Principal-in-Charge</i></b>
Lawrence J.D. Chang, R.C.E.	ASE	35	Senior Project Engineer
John Whitney, P.G., C.E.G	ASE	36	Senior Project Geologist
Donald Zike	ASE	45	Laboratory Manager
Torin Ng, E.I.T.	ASE	4	Project Engineer
Craig Weatherholt	ASE	36	Senior Engineering Technician
Phoc Nguyen	ASE	21	Senior Engineering Technician
John Curtis	ASE	15	Senior Engineering Technician

**Technical Management**

Mr. Riddell, Project Manager or his designated Engineer/Geologist will attend all pre-construction and construction meetings. He will provide guidance and recommendations to the field staff. The Engineering Technician will implement all of the decisions made during the construction meetings. The field compaction procedures will be evaluated and recommendations made where appropriate. Guidance will be provided for the implementation of cost effective construction methods for achieving project milestones. ASE is typically able to staff any project within the City with a minimum 24 hour notice.





*Preliminary Geotechnical Investigations & Testing*

Associated Soils Engineering, Inc. provides preliminary subsurface investigations both as part of geotechnical engineering projects and as individual engineering geologic projects. These studies include assessments of geologic hazards such as landsliding and faulting, liquefaction, settlement, slope stability, excavation characteristics of rock units, and geologic characteristics of subsurface conditions, including downslope soil creep and subsidence.

Prior to start of construction, our field engineer will walk the construction site to obtain a personal knowledge of the work and verify that construction conforms to approved documents. He will inspect all work before it is covered or closed in as other construction work. ASE will provide specific services based on each specific project, if selected to serve the City. The following is a general description of our methodology for the range of services that we provide for typical projects and minimally incorporates the Scope of Services presented in the RFP:

- Supervision of all work by a registered Geotechnical Engineer and/or a Certified Engineering Geologist (depending on the work envisioned by the proposal).
- All soil technicians shall be certified by Caltrans for federal or state funded project.
- Perform subsurface exploration and analysis, including in-place moisture and density tests, laboratory maximum density and optimum moisture tests, sieve analysis, R-value determination, direct shear tests, consolidation or collapse tests, and other required tests.
- Review of existing geotechnical/geologic maps, reports and any other available related documents.
- Review project plans and specifications through the design process, with consideration of geotechnical issues such as materials testing and suitability.
- Provide geotechnical evaluation and recommendations on, including, but not limited to, grading, earthwork, settlement, surface and subsurface drainage, foundation/column/slab design, slope stability, pavement design, trench backfill, retaining wall design, environmental concerns, removal of unsuitable materials, etc.
- Investigate and analyze existing pavement conditions using pavement coring and soil borings and sampling. Pavement corings and soil and structural pavement sections to be considered for the project. ASE will record the pavement and base thicknesses of each coring and record in-situ soil type, weight, moisture content, relative compaction, etc., at a minimum 2 feet (2') and 5 feet (5') depth, or as recommended by the Geotechnical Engineer supervising the investigation. Boring logs shall be prepared and presented in a report along with all test results and recommendations for replacement

structural section, overlay thickness, and/or rehabilitative repair strategy. Consideration for the effect of any overlay recommendations upon the existing street profile, cross section and or highway drainage shall be addressed.

- Prepare and submit final geotechnical reports and logs of exploratory borings and results of laboratory testing.
- Prepare and submit scale plans showing locations and identifications of the borings and other required geotechnical information.
- Provide geotechnical support for full-depth reclamation process using the outline attached to the RFP for the Block Cracking Mitigation Procedure.
- Maintain proper safety practices and procedures, especially when working street and intersections.
- Prepare and perform all in-place/laboratory tests, sampling, and reports in accordance with Caltrans, FHWA and other applicable agency procedures, policies, regulations, requirements, and formats.
- Perform all duties in a manner that promotes the cost-effective execution and progress of construction on construction projects.
- Provide clear invoices with project name, number, purchase order number, date, limits and work performed.
- Notify Underground Service Alert prior to the start of any subsurface exploration work. The Consultant shall submit a traffic control plan to the City for review and obtain a permit to operate and conduct explorations within the public right-of-way.
- Obtain all necessary permits to enter and perform investigations on private properties from property owners, as required by the City.
- Provide asphalt batch plant inspection involving observation, testing and analysis for asphalt being delivered to Garden Grove jobs. ASE shall verify mix design aggregate gradation, determine binder content and stability values with written report within 48 hours.
- Alert project engineer immediately upon finding test results that fail to comply with material or testing requirements included in the project contract documents.
- Provide observation, documentation and recommendations for the processing of in-place cement treated base via full-depth reclamation. Any matters of concern will be promptly brought to the attention of the project engineer.

Additionally, ASE can provide office and field assistance during bidding and construction periods, if the need for such assistance arises. Associated Soils Engineering, Inc. (ASE) specializes in the application of engineering services to all aspects of various geotechnical evaluations.

#### Seismic Studies

Members of our staff and consultants team have performed Alquist-Priolo Special Seismic Zone studies for many of the faults in Southern California. These studies enable projects to be designed to accommodate and mitigate the presence of active and potentially active faults on numerous sites, which results in maximum utilization of land while incorporating seismic safety.

These studies provide seismic design criteria for many facilities including high-rise buildings, hospitals, dams, projects on ground susceptible to liquefaction and projects located on or adjacent to faults. The results of the seismic studies normally yields recommendations for mitigating earthquake hazards.

#### Evaluation of Excavation

Our engineering technician shall inspect and evaluate excavation of trenches and/or subgrade during any proposed improvements. When warranted, inspections will be supplemented by our Engineering Geologist or Professional Engineer. The objective of the inspection is to ensure that the excavation for the proposed structure has exposed competent material at the bottom. If excavation results in exposure of saturated, incompetent material at the bottom, proper remediation measures will be recommended. The sides of the excavation will be inspected for any seeping water. During field observation, a technician will observe maximum permissible length of open trench, maximum and minimum width of trench, and safe access to trenches, removal and replacement of surface improvements (curbs, sidewalk, driveways, AC pavements etc.) dewatering operations, and bracing excavation.

#### Evaluation of Imported Earth Material to be Used as Fill

The assigned engineering technician will collect samples of the proposed fill material and take them to the soils laboratory. Appropriate soil classification tests will be performed to determine whether the fill material meets project specifications. He/she will observe the condition of the imported materials. The presence of rocks, broken concrete, or other solid material that is larger than the specified dimension (generally 4 inches) shall be brought to the knowledge of the contractor for its replacement. The contractor shall be requested to break the clods or hard lumps of earth materials greater than the required dimension before compacting the material in fill.

*Evaluation of Compaction Procedures*

The technician shall also evaluate the compaction procedure of backfill of any excavations to ensure that the project specifications have been followed. He/she shall inspect to determine whether the fill material is being placed in horizontal layers and is compatible to the type of compacting equipment. The compactors used for achieving the right degree of relative compaction may be sheepsfoot rollers, pneumatic-tired rollers, or any other mechanical equipment, compatible to the type of fill materials used for backfilling operations. The field technician will also inspect the moisture content of the fill material in order to ensure that the specified relative compaction is achievable with the inspected moisture content.

*Testing of Compaction, Moisture Content, etc.*

Our technician shall conduct compaction tests by Sand Cone Testing Method (ASTM D1556) and Nuclear Method (CAL 216/231, ASTM D 2922) to determine the relative compaction. Generally, a minimum of one compaction test will be conducted at every 300 feet of trench or lane of roadway, and backfill at 2 feet deep intervals depending upon the type of structure.

During the progress of our work, our engineering technician will prepare daily field reports. A copy of these reports will be submitted to the construction manager/resident engineer on a daily basis. The report will include a written summary of the day's activities, a summary of all field-testing performed, and a listing of outstanding failing tests which have not been reworked/retested. In addition, the location of all field density tests taken during the project will be plotted on a set of plans that is maintained by the field technicians on the site. The construction manager will be notified of any concrete breaking results which do not meet the required strength within 24 hours.

Testing time and the associated fees can be minimized by proficient and timely work by the Contractor and by coordination of the Project Manager with the Project Director, City Inspector, County Inspector and our team's Engineers and Technicians. When a larger number of tests are scheduled at one time, greater efficiency can be achieved, resulting in lower overall fees.

ASE assumes and expects that it is the contractor's responsibility to abide by all laws and regulations (CAL-OSHA) in providing for a safe workplace for site personnel. This includes, but is not limited to, providing shoring or other protective means necessary to allow our soils technician to safely perform the required work.

### Special Inspection Services

Special Inspections will be conducted by our inspector to the satisfaction of District officials. Our special inspectors are qualified in Hot Mix Asphalt (HMA), structural steel, structural welding, structural masonry, batch plant inspection, rebar placement, epoxy anchors or dowel testing and piles installation operations. ASE will observe the work assigned for conformance to the approved design drawings and specifications. Our special inspectors will prepare inspection reports and submit to the City's representative. He/she will notify the Contractor of any discrepancy for correction. A final report, signed by the Engineer, stating the work is performed in conformance with the project specifications shall be submitted to the appropriate manager in charge.

### Laboratory Testing

ASE's engineering technician will collect representative soil samples used for fill and backfill; and conduct laboratory testing to determine soil classification, maximum density and optimum moisture content, sand equivalent, and classification of aggregate base materials and bituminous paving mixtures to ensure compliance with the contract specifications and standards. Additionally, ASE has the personnel and experience to provide the laboratory testing and reporting services to comply with the Block Cracking Mitigation Procedure developed by the City and presented as an attachment to the RFP. **ASE's in-house laboratory has been accepted by the State of California Department of Transportation (Caltrans) and Division of State Architect (DSA) under the Laboratory Evaluation and Acceptance program (LEA 224), as well as AASHTO/CCRL and AMRL (Hot Mix Asphalt, Aggregate, Soil, & Portland Cement Concrete) and the City of Los Angeles.**

Our laboratory meets with applicable ASTM and Caltrans procedures. Some of the Laboratory tests offered include:

- Maximum Density-Optimum Moisture Determinations
- Consolidation Tests
- Direct Shear Tests
- Expansion Index Tests
- Sulfate Content Tests
- Atterberg Limits Determinations
- Sand Equivalent Tests
- R-Value Tests
- Sieve Analyses
- Hydrometer Analyses
- Specific Gravity Tests
- Permeability Tests
- Materials Testing

- Concrete Compression Testing
- CBR Test
- Asphalt Concrete Mix Design by Marshall or Stabilometer Method
- Field Density for Compacted Mix
- Extraction of Bituminous Materials
- Ignition Oven Determination of Various Types of Asphalt Binder Contents

#### Report Preparation

At the completion of our services for a given project, ASE will prepare a report that will summarize all of the work performed on the project. The report will include our observations during construction, results of our field and laboratory testing, and a conclusion as to the project's compliance with the contract plans and specifications. Four (4) copies of the final summary report containing full records and documentation of the geotechnical and field testing work performed will be provided.

#### Subcontractors

In the course of Geotechnical Investigations, ASE would often need to hire subcontractors for the boring excavations as well as for traffic control. Drilling companies often utilized by ASE include Choice Drilling, Inc., Martini Drilling, Inc. and Hamilton Drilling, Inc. for hollow stem auger drill rigs and Al-Roy Drilling, Inc. for bucket auger drill rigs. Traffic Control plans and onsite services are generally subcontracted to E-Nor Innovations, Inc. Occasionally it is desired to test soils for contamination. ASE utilizes Advanced Technology Laboratories (ELAP No. 1838) for lab testing and SCS Engineers Environmental Consultants if any environmental recommendations are needed.

#### **4.0 FIRM RESOURCES / CAPABILITIES**

ASE is uniquely qualified to provide the geotechnical services outlined in the RFP to the City of Garden Grove. Our team of Engineers and Geologists has over one hundred combined years of experience in all manner of geotechnical engineering, engineering geologic and material testing services. Within the last ten years ASE has provided geotechnical and material testing services on hundreds of municipal projects.

#### Current Workload

Currently, ASE has on-going and incoming projects of various workloads. ASE is capable of completing these tasks, as well as any incoming City tasks. ASE responds to our client's needs with planning and assigning a management team tailored to meet the specific requirements and deadlines of each project. To accomplish this goal, a project manager is assigned during proposal preparation, will be responsible for the day-to-day project activities and for planning, coordinating, scheduling, and meeting budget requirements. ASE has a commitment to

provide geotechnical Engineering services with a high degree of professional excellence and proficiency. ASE anticipates over the next 6 to 12 months expanding our personnel, as necessary, to accommodate any increase in workload due to incoming projects from the City.

**Insurance**

ASE maintains in full force and effect, insurance policies covering General Liability, Automobile Liability, Professional Liability and Worker's Compensation.

**Contact Information**

<b>Name of Proposed Project Manager</b>	Edward C. (Ted) Riddell
<b>Name of Firm</b>	Associated Soils Engineering, Inc.
<b>Address</b>	2860 Walnut Avenue Signal Hill, California 90755
<b>Office Phone No</b>	(562) 426-7990
<b>FAX No</b>	(562) 426-1842
<b>Email</b>	<a href="mailto:ted@associatedsoils.com">ted@associatedsoils.com</a>

**Corporate Information**

<b>Legal Name of Firm</b>	Associated Soils Engineering, Inc.
<b>Legal Entity</b>	California Corporation
<b>Federal Tax ID No</b>	95-2896496
<b>Company Owner</b>	Edward C. (Ted) Riddell

**APPENDIX A**

**PROFESSIONAL FEE SCHEDULE**





**JANUARY 2023 FEE SCHEDULE**

**ENGINEERING & TECHNICAL SERVICES (Rate per Test)**

Principal Engineer/Geologist	\$ 200.00	Certified Pile Inspector (Drilled/Driven/Tieback)	\$ 130.00
Project Engineer/ Geologist	\$ 180.00	Registered Deputy Inspector (ICC, DSA, Cities, Counties etc.)	\$ 125.00
Staff Engineer/Geologist	\$ 160.00	Registered Deputy Grading Inspector (ICC, Cities, Counties etc.)	\$ 120.00
Supervising Technician (Lab/Field)	\$ 130.00	Laboratory Technician	\$ 95.00
Field Technician	\$ 95.00	Technical Typist	\$ 90.00
Field Technician/Deputy Inspector (Prevailing Wage)	\$ 145.00	Technical Illustrator	\$ 90.00
Field Support Services	\$ 90.00	Field/Lab Assistant	\$ 90.00
Office Services	\$ 90.00	Expert Witness (Preparation & Court – 4 hr. min.)	\$ 650.00
Soil-Cement Mix Design and Testing	Quote (min. \$3,500)		

**LABORATORY TESTING & CORING SERVICES (Rate Per Test)**

<u>Classification &amp; Index Tests</u>		<u>Compaction &amp; R-Value Tests</u>	
Sand Equivalent (Cal 217 or ASTM D2419)	\$ 95.00	Max Density/Opt. Moisture ASTM D1557 (Method A and B)	\$ 210.00
Atterberg Limit (LL&PL per ASTM D4318-D84)	\$ 200.00	Max Density/Opt. Moisture ASTM D1557 (Method C)	\$ 240.00
Shrinkage Factors (ASTM D427)	\$ 150.00	Max Density/Opt. Moisture California 216	\$ 210.00
Sieve Analysis including Hydro (ASTM D422)	\$ 185.00	R-Value Natural Soil (Cal 301 or ASTM 2844)	\$ 325.00
Sieve Analysis – retained 200 mesh	\$ 120.00	R-Value Cement or Lime treated Soil (Cal 301 or ASTM 2844)	\$ 350.00
200 Wash	\$ 75.00	R-Value Aggregate Base (Cal 301 or ASTM 2844)	\$ 350.00
Moisture Content (ASTM D2216)	\$ 40.00	CBR (ASTM D1883) - Soil	\$ 370.00
Moisture Content & Dry Density – Ring (D2937)	\$ 60.00	CBR – Base	\$ 450.00
Moisture Content Dry Density – Shelby Tube	\$ 60.00		
Specific Gravity – Soil	\$ 180.00	<u>Consolidation &amp; Expansion Tests</u>	
		Consolidation ASTM D2435 (Method A)	\$ 220.00
		Consolidation ASTM D2435 (Method B)	\$ 380.00
		Time Rate per Load Increment	\$ 65.00
		Expansion Index (2.5" Diameter Specimen)	\$ 145.00
		Expansion Index (4.0" Diameter Specimen)	\$ 165.00
		Single Load Swell or Collapse Test	\$ 150.00
		<u>Asphalt Concrete Tests</u>	
		Mix Design by Marshall or Stabilometer Method	Quote
		Field Density for Compacted Mix (Cal 308) ≤ 4" diameter each	\$ 75.00
		> 4" diameter each	\$ 85.00
		Thickness of Compacted Mix	\$ 50.00
		Theoretical Max. Sp. Gravity & Density of Bituminous Mixtures (ASTM D 2071)	\$ 210.00
		Extraction of Bitumen Mat., % Oil in mix (ASTM D2172, Meth. A)	\$ 190.00
		Maximum Density Determination (Cal 304, 2 pt. Avg.)	\$ 230.00
		Stability Value (Cal 366) - 3 Points	\$ 330.00
		Extraction of Bitumen Material by Ignition Method	\$ 260.00
		<u>Aggregate &amp; Base Course Tests</u>	
		Durability of Aggregate (Cal 229)	\$ 320.00
		Sieve Analysis, Fines Only (ASTM C136)	\$ 120.00
		Sieve Analysis, Fines & Coarse (ASTM C136 or (Cal 202)	\$ 170.00
		Cleaness Value CTM 227	\$ 165.00
		Sp. Gravity, Fine aggregate incl. % Absorption (ASTM C128)	\$ 180.00
		Sp. Gravity, Coarse Aggregate incl. % Absorption (ASTM C127)	\$ 160.00
		Abrasion Resistance-LA Rattler, 100-500 rev. (ASTM C131)	\$ 290.00

**Strength Tests**

Direct Shear UU (1 point)	\$ 120.00
Direct Shear UU (3 points)	\$ 225.00
Direct Shear CD (3 points)	\$ 260.00
Unconfined Compression	\$ 290.00
Residual Shear (3 Shear)	\$ 280.00

**Soil Chemistry Tests**

Sulfates	\$ 95.00
Chlorides	\$ 95.00
Ph	\$ 95.00
Resistivity	\$ 120.00
Corrosivity Suite (So <sub>4</sub> , Cl, pH, Resistivity)	\$ 340.00

**Diamond Coring**

2" to 6" Diameter	\$ 90.00
8" to 9" Diameter	\$ 100.00
Hourly Charge Portal-to-Portal/Standby Time	\$ 200.00
Minimum Charge	\$ 380.00

**Compression Tests**

Compression Test 6"x12" Cylinders incl Hold (ASTM C39) each w/ cert.	\$ 30.00
Compression Test, 2", 4" and 6" Cores (ASTM C42) each	\$ 80.00
Mortar Compression each	\$ 45.00
Grout Prism Compression each	\$ 60.00
Masonry Prisms (set of 4)	\$ 200.00
Shotcrete Panel (incl. coring, capping and breaking up to 4 cores)	\$ 350.00

**BASIS OF CHARGES**

**Regular Hours:** Monday to Friday-7:00 AM to 4:00 PM

**Overtime Hours:** 1.5 times regular rate over 8 hours per day, night shifts and Saturdays. 2 times regular rate on Sundays, Holidays and work days over 12 hours.

**Minimum Charge:** 2-hour minimum for show-up if not cancelled two (2) hours prior to arrival. 4-hour minimum if inspection is greater than four (4) hours.  
Charges for all field work will be computed on a portal-to-portal basis and all portal-to-portal technician mileage is billed at **\$0.80/per mile**. Field work will be billed on a time and material basis unless quoted otherwise.

**Advance Notification:** A **minimum 24-hour lead time**, excluding week-ends and public holidays, is required from the Client for any field or laboratory services requested.  
On **prevailing wage projects**, client must provide correct project DIR number when initiates the request for service. In compliance with CA DIR law, client also needs to provide **72-hour advance notice** when scheduling for field service.

**Laboratory Tests:** Laboratory test rates listed above exclude time and material cost of obtaining the samples. Outside equipment/services, if applicable, will be billed based on ASE's cost plus 15%. **Rush laboratory tests** will require client's written approval for laboratory technician overtime rates.

**Signature:** If client's site supervisor is not on site to sign the Daily Reports prepared by ASE's technicians/deputy inspectors prior to their departure from site, ASE's technicians/deputy inspectors have been instructed to write "not on site" on all such reports. The content and chargeable time presented on such reports will be considered acceptable to Client UNLESS prior arrangement of acknowledging such reports is made by the client and agreed to by ASE. If ASE's technicians/deputy inspectors are requested by the client to wait/find a signator (including going to another site and/or returning at another time), the client will be charged for the time rendered by ASE's technicians/deputy inspectors at our regular hourly rates.

Engineering reports (up to 5 copies) shall be billed on a time and material basis with a **minimum charge of \$600.00**. Additional copies will be furnished at a cost of \$0.75 per page, plus \$20.00 for binding. Any plan/report that requires the signing/stamping of a CA-registered Civil Engineer or Geotechnical Engineer will be billed a minimum of one hour of the current Principal Engineer rate.

Fees charged are for professional and technical services and are due upon presentation. If not paid within thirty (30) days of invoice, they are considered past due and a finance charge of 1½% per month will be added to the unpaid balance (18% annual rate).

**APPENDIX B**

**RESUMES OF KEY PERSONNEL**



**EDWARD (TED) RIDDELL, P.G., C.E.G**  
**PRESIDENT, PRINCIPAL GEOLOGIST**

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**EDUCATION**

B.A., Geological sciences, University of California, Santa Barbara, California, 1985

**PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS**

Professional Geologist, California, # 5657  
Certified Engineering Geologist, California, # 1775

**QUALIFICATIONS AND EXPERIENCE**

Mr. Riddell has over 35 years of experience in all phases of geotechnical projects. He has managed or worked on projects for public and private sectors including planning, geologic mapping, coordinating, conducting and writing of preliminary investigations, supervision, direction of field personnel and site inspections during grading to final drafting and report writing of completed projects.

Representative geotechnical projects that have been directed or managed by Mr. Riddell include:

- **City of Santa Fe Springs, Los Angeles County, California** – Project Manager/Engineering Geologist for Pavement Rehabilitation/Reconstruction of 10 Commercial/Light Industrial Streets, existing pavement evaluation & recommendations for rehabilitation or replacement, visual evaluation of pavements, coordinate AC coring and soil borings, analyze laboratory data, preparation of report including evaluation of subgrade soils, pavement overlays and new pavement sections.
- **City of Garden Grove, Orange County, California** – Project Manager/Engineering Geologist for Pavement Rehabilitation/Reconstruction of 8 City Streets varying from local residential streets to collectors and arterials, existing pavement evaluation & recommendations for rehabilitation or replacement, visual evaluation of pavements, coordinate AC coring and soil borings, analyze laboratory data, preparation of report including evaluation of subgrade soils, pavement overlays and new pavement sections.
- **City of Seal Beach, Orange County, California** – Project Manager/Engineering Geologist for Pavement Rehabilitation/Reconstruction of Beverly Manor Drive, existing pavement evaluation & recommendations for Full Depth Reclamation (FDR), coordinate AC coring and soil borings, analyze laboratory data, preparation of report including evaluation of subgrade soils, pavement overlays and new pavement sections, followed by management of the operations of the geotechnical personnel (field & Lab) during the reclamation and new pavement overlay for the project.
- **La Habra, Orange County, California** - As project geologist, Mr. Riddell performed a geotechnical investigation for a 400+ acre master planned residential/golf community on a former oil field, followed by management of the operations of the geotechnical personnel during the rough grading of the project. Duties during grading included field geologic mapping, large ancient landslide complex removals and stabilization, slope stability analyses, in-grading recommendations for remedial grading, and preparation of geotechnical reports and geologic maps.

**PROFESSIONAL HISTORY**

President, Principal Engineering Geologist, Associated Soils Engineering, Inc., Signal Hill, California  
Staff and Project Geologist, GeoSoils, Inc., Santa Ana, California

**PROFESSIONAL SOCIETIES**

Association of Engineering Geologists  
California Geotechnical Engineers Association  
Asphalt Pavement Association



**LAWRENCE J.D. CHANG, P.E.**  
**VICE PRESIDENT - SENIOR ENGINEER (CA RCE 67987, RGE 2881)**

**EDUCATION**

PhD. Candidate Geotechnical Engineering, Nanyang Technological University, Singapore, 1997  
M.S. Geotechnical Engineering, University of California, Davis, 1988  
B.S. Civil Engineering, Chung Yuan Christian University, Taiwan, 1983

**QUALIFICATIONS AND EXPERIENCE**

- **Associated Soils Engineering, Inc. (ASE), Signal Hill, CA** – Supervision and management of soils and materials testing laboratory; implementation and enforcement of QC policy; review and certification of QC & QA testing and inspection documents; field inspection, certification and evaluation; roadway pavement design. Management/involvement of extensive public works projects such as City of Cerritos Roadway Rehabilitation Project, City of Hawthorne Municipal Airport Roadway Rehabilitation, Fed Ex-LA Hub Pavement Rehabilitation, City of Bellflower Municipal Improvement Project, Rowland Water District Capital Improvement Project.
- **Testing Engineers, Santa Ana** – Co-ordination & supervision of project implementation & budget, geotechnical site investigation, engineering analysis & report writing presentation and negotiation of project proposals and contracts with clients. Management/involvement of projects such as Ynez Bridge Widening in Temecula, Santa Clarita Medical Building in Santa Clarita, Marion Knotts Studio/Athletic Field/Parking Structure/Student Residence at Chapman University in Orange, Saugus High School in Santa Clarita, The Crossing Church in Costa Mesa, Fed Ex Ground- L A Hub Pavement Rehabilitation in Los Angeles, Harbor Blvd. Rehabilitation in La Habra, Sewer Main Replacement in Canyon Lake, First American Capital Development in Santa Ana, and Gym Expansion at Biola University in La Mirada.
- **Synergy World Group Ltd., Taiwan** – Overall project co-ordination, administrative, personnel and budgetary responsibility of geotechnical and geo-environmental projects in Malaysia and Greater China. Initiation, compilation, presentation and negotiation of project proposals or contracts for residential, commercial, industrial and infrastructure projects. Geotechnical & geo-environmental value engineering study & appraisal. Participation of projects such as TAIPEI 100 Building, Taiwan High-Speed Railroad Project, and North-South Highway Slope Stabilization in Malaysia.
- **RoyalHub Pte. Ltd., Singapore** – Infrastructure project proposals and planning for government agencies. Township planning & construction in China incorporating advanced geotechnical and geo-environmental engineering features. R&D project leader in re-utilization of recycled industrial wastes for geotechnical application.
- **Shin Hwa Cheong Development. Co. Pte. Ltd, Singapore** – Overall in charge of planning, design, and construction phases of various commercial and residential projects in Singapore, Malaysia and China. Development of innovative construction method in deep excavation in very soft clay.
- **Professional Service Industries, Inc., San Diego** – Participation as project engineer in projects such as Denver International Airport, Orange County Juvenile Court and Detention Facility, Camp Pendleton Marine Corp Base, hospitals in Azusa and Thousand Oaks, Hesperia High School in Riverside, golf resort in Rancho Mirage, New Civic Center in Escondido, and San Francisco International Airport Expansion.
- **American Engineering Lab., Inc. San Diego** – Participation of on-site drilling, sampling and logging, pile driving inspection (both land and marine based), caisson drilling inspection, fill earth compaction testing, laboratory testing result analysis and geotechnical investigation report writing, groundwater percolation sampling & monitoring.

**JOHN R. WHITNEY, P.G., C.E.G**  
**SENIOR PROJECT GEOLOGIST**

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**EDUCATION**

B.S., Geology, California Lutheran University  
Post-Graduate Studies, California State University, Los Angeles

**PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS**

Professional Geologist, California, #6661  
Certified Engineering Geologist, California, #1929

**QUALIFICATIONS AND EXPERIENCE**

Mr. Whitney, a registered engineering geologist with over 22 years of professional geotechnical experience, specializes in geotechnical investigations, construction observation and structural distress investigations. He has worked on or managed a wide range of geotechnical projects involving private and public sector clients in Ventura, Los Angeles, Orange, San Bernardino, Riverside, and San Diego Counties. Projects have included residential and commercial development, water tanks, earth dams, and distressed ground stabilization. Mr. Whitney is regularly involved in development projects from early conceptual stages through final construction stages.

- As soils technician and field, staff and project geologist, observed and tested fill placement, performed geologic observations, provided remedial grading recommendations, managed field personnel, directed materials testing/inspections, and prepared final geotechnical reports. Projects have included residential development, commercial buildings, schools and dams. Many of these projects have involved earthwork in excess of one million cubic yards each.
- As field, staff and project geologist, managed and performed preliminary geotechnical investigations designed to identify and develop mitigation recommendations for landslides, earthquake faulting, liquefaction, ground settlement, high groundwater tables, and other geologic hazards. The work performed included geologic field mapping, aerial photograph analysis, exploratory excavations (borings and trenches), and geophysical remote sensing; interpretation of field data collected; and the preparation of reports, geologic maps and cross sections. The above work has been performed for single-family residential, large residential tract developments, commercial buildings, schools, hospitals, and public works projects.

**JOHN R. WHITNEY, R.G., C.E.G**  
**SENIOR PROJECT GEOLOGIST**

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**QUALIFICATIONS AND EXPERIENCE (continued)**

- Performed slope distress investigations, including surficial failures and landslides, to determine cause and recommendations for repair.
- Performed structural distress investigations for residential and commercial buildings to determine cause of distress and recommendations for repair.

**PROFESSIONAL HISTORY**

Senior Project Geologist, Associated Soils Engineering, Inc., Signal Hill  
Associate Geologist, Petra Geotechnical, Inc., San Diego and Costa Mesa  
Soils Technician, Staff and Project Geologist, GeoSoils, Inc., Santa Ana

**PROFESSIONAL SOCIETIES**

Association of Engineering Geologists  
South Coast Geologic Society  
San Diego Association of Geologists



**TORIN NG, EIT**  
**STAFF ENGINEER**

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**EDUCATION**

B.S., Civil Engineering, California State University Long Beach, California, 2019

**PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS**

Engineer in Training, California, # 165999

**QUALIFICATIONS AND EXPERIENCE**

Mr. Ng has experience in all phases of geotechnical projects. He has managed or worked on projects for public and private sectors including planning, coordinating, conducting and writing of preliminary investigations, field exploration, laboratory testing, engineering analysis, geological and seismic hazard assessment, supervision, direction of field personnel and site inspections during grading to final drafting and report writing of completed projects. Laboratory coordination, documentation, certification.

Representative geotechnical projects that Mr. Ng has participated in include:

- **Beaumont/Cabazon, Riverside County, California** – Staff Engineer/Field Technician for Pavement Rehabilitation/Reconstruction of Interstate 10 medians from 10/60 interchange to the 10/111 interchange. Soils classification, testing and evaluation of subgrade and pulverized material during preliminary mix design phase. Development, implementation and enforcement of QC policy for FDR-C operations; review and certification of QC & QA testing and inspection documents; field inspection, certification and evaluation; coordinate soil borings, analyze laboratory data, preparation of report including evaluation of production pulverized/mixed FDR-C material. Coordinate/compile/analyze field QC data from production for presentation to Caltrans.
- **Littlerock Area, Los Angeles County, California** – Field Technician for Cement Stabilized Soil (CSS) VECP of State Route 138 expansion from 10/60 interchange to the 10/111 interchange. Soils sampling, classification, testing and evaluation of in-situ basement material. QC field inspection/testing, certification and evaluation; analyze laboratory data, preparation of report including evaluation of field sampled CSS material. Coordinate/compile/analyze field QC data.
- **City of Garden Grove, Orange County, California** – Staff Engineer/Field Technician for Pavement Rehabilitation/Reconstruction of various neighborhood streets, QA/QC inspections/documentation for AC pulverization, CTB/CSPB operations, HMA paving, laboratory testing, engineering analysis
- **Pasadena, Los Angeles County, California** – Staff Engineer for soils investigation for proposed Fire Station Seismic Retrofit. Coordinate drilling crew for soil sampling, soils classification, testing, analyze laboratory data, preparation of report including foundation recommendations and seismicity.

**PROFESSIONAL HISTORY**

Staff Engineer, Associated Soils Engineering, Inc., Signal Hill, California

**DONALD ZIKE**  
**LABORATORY MANAGER**

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**EDUCATION**

Lakewood High School – 1976  
Long Beach City College – General Studies (2 ½ Years)

**PROFESSIONAL CERTIFICATIONS**

Caltrans Accreditation	DSA Acceptance (LEA)
AMRL Accreditation	CCRL Accreditation
CCRL & AMRL Proficiency Sample Programs	ACI Concrete Strength Tech
Caltrans Reference Sampling Program	Asphalt Pavement Association

**PROFESSIONAL EXPERIENCE**

<b>1977 to Present</b>	Associated Soils Engineering, Inc.
<b>1985 to Present</b>	<u>Laboratory Supervisor:</u> Oversees and performs the physical testing of soils and aggregates for use in designing structural elements for building purposes, asphaltic concrete, PCC; (Pacific Coast Concrete), and ballast material. Responsible for training laboratory technicians in performance of laboratory tests, and keeping up with Caltrans, CCRL and AMRL accreditations.
<b>1978 to 1985</b>	<u>Laboratory Technician:</u> Perform physical testing of soils and aggregates as directed by the Laboratory Supervisor. Train in duties of field compaction control technician and asphaltic concrete batch plant inspection and quality control.
<b>1977 to 1978</b>	<u>Draftsman:</u> Perform all drafting duties – Plot Plans, Consolidation and Sieve Analysis Graphs, Slope Stability Sections. Minor clerical duties. Train in duties of Laboratory Technician



**CRAIG WEATHERHOLT**  
**SENIOR FIELD TECHNICIAN**

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**PROFESSIONAL CERTIFICATIONS**

CAL OSHA 40hr. Certified  
Nuclear Gauge Certified  
Caltrans Certified  
ACI Certified  
City of Irvine – Asphalt Certified

**PROFESSIONAL EXPERIENCE**

- 1996 – Present**     **Associated Soils Engineering, In.**  
2860 Walnut Avenue  
Signal Hill, California 90755  
**Senior Soils Field Technician** – Primary job duties - Soil backfill observation and compaction testing (Nuclear Certified), footing inspection, pile inspection, lagging and shoring inspection, asphalt plant inspection, asphalt laydown inspection, commercial grading, utility trench and street compaction testing, Haz Mat certified (40 hour Hazwoper), in-lab soil testing, concrete and slump testing, ACI certified for concrete sampling and testing, SNSF metrolink UP/SP trained.
- 1991 – 1996**     During this time out of necessity I helped with the care of my daughter who has special needs. To help with expenses, worked part-time with several companies listed below:  
**Robert's Construction Co.** – Primary job duties – general labor.  
**Joe Logan Trucking** – Primary job duties – loading & unloading trucks.  
**Green Meadows Farm Productions** – Primary job duties – tour guide.
- 1987 – 1990**     **Geo Soils, Inc.**  
6634 Valjean Avenue  
Van Nuys, California 91406  
**Senior Soils Technician** – Primary job duties – Fill control, compaction testing, hillside grading, report preparation, certified nuclear gauge operator, site inspections for drilling access, footing, caisson, wall and drain inspections.
- 1979 – 1986**     **Soils & Geology, Inc. (Formerly Triad Foundation Engineering)**  
City of Industry, California  
**Laboratory Manager** – Primary job duties – Delegated and distributed work to assistants, scheduled testing, responsible for program completion, logged all paper, ran R-Values, consolidation and shear tests, classified boring samples, took moisture and density calculations.  
**Laboratory and Field Technician** – Primary job duties – Fill control and density test (sand cone), concrete sampling – slump test and compression testing, mortar, grout, cinderblock and other core samples, maximum density and expansion indexes, sieves and mechanical analysis, permeability tests and liquid limit, sand equivalent test and specific gravity's.