AMENDMENT NO. 1 TO
AGREEMENT FOR SERVICES

This Amendment No. 1 ("Amendment") to the Agreement for Services is made and entered into effective the 18th day of May, 2026 by and between the CITY OF LA HABRA, a Municipal Corporation ("CITY"), and TWINING, INC. (hereinafter "CONSULTANT"). CITY and CONSULTANT are sometimes hereinafter individually referred to as "Party" and or collectively referred to as the "Parties."

A. Recitals.

(i) CITY and CONSULTANT entered into a Professional Services Agreement ("Agreement") effective July 1, 2021 through which CONSULTANT has been providing professional services as more fully explained in the Scope of Services attached to the Agreement as Exhibit "A".

(ii) The Parties now seek to amend the Agreement to extend the term of the Agreement to June 30, 2027.

(iii) All legal prerequisites to the making of this Amendment have occurred.

NOW, THEREFORE, in consideration of the mutual covenants and conditions set forth herein, the Parties agree as follows:

B. Amendment to Agreement.

1. Section 1.2 of the Agreement is hereby amended to read as follows:

The term of this Agreement shall begin on July 1, 2021 and continue until completion of the work on June 30, 2027 and its final acceptance by the CITY, or until such time as it is terminated pursuant to the provisions of this Agreement. Effective July 1, 2026, the rates for services shall be those set forth in Exhibit B to this Amendment No. 1.

2. Except as specifically modified herein, all of the terms, conditions and provisions of the Agreement shall remain in full force and effect.

3. The Agreement, all amendments together with this Amendment No. 1 and all Exhibits attached thereto, constitutes the entire Agreement between the Parties and supersedes all prior negotiations, arrangements, representations, and understandings, if any, made by or between the Parties with respect to the subject matter hereof. No amendment or other modification of the Agreement, as modified by this Amendment No. 1 shall be binding unless executed in writing by both Parties hereto, or their respective successors, assigns, or grantees.

4. Each of the undersigned represents and warrants that he or she is duly authorized to execute and deliver this Amendment No. 1 and that such execution is binding upon the entity for which he or she is executing this document.

IN WITNESS WHEREOF, the Parties have caused Amendment No. 1 to the Agreement for Services to be executed as of the day and year first above written.

CONSULTANT

By: _____
Paul Soltis
Twining, Inc.

CITY OF LA HABRA

By: _____
Jim Sadro, City Manager

ATTEST:

By: _____
Rhonda J. Barone, CMC, City Clerk

APPROVED AS TO FORM:

By: _____
Keith F. Collins, City Attorney

EXHIBIT A

AGREEMENT FOR SERVICES

This Agreement is made and entered into this 1st day of July, 2021, by and between **THE CITY OF LA HABRA**, (hereinafter referred to as the **"CITY")**, and Twining Inc., (hereinafter referred to as the **"CONSULTANT").**

RECITALS

WHEREAS, **CITY** requires professional services for On Call Geotechnical Investigation and Material Testing; and,

WHEREAS, the **CONSULTANT** represents that it is qualified and experienced to provide such services; and

NOW, THEREFORE, for and in consideration of the mutual promises, covenants and conditions herein contained, **CITY** and **CONSULTANT** hereby agree as follows:

ARTICLE I
SCOPE OF SERVICES; TERM

1.1 General Scope of Services.

A. **CITY** hereby engages **CONSULTANT**, and **CONSULTANT** hereby accepts such engagement, to perform the various services set forth in Exhibit "A" (the documents contained in Exhibit "A" shall be hereinafter referred to as the "Scope of Work").

B. All professional services to be provided by **CONSULTANT** pursuant to this Agreement shall be provided by personnel experienced in their respective fields and in a manner consistent with the standards of care, diligence, and skill ordinarily exercised by professional consultants in similar circumstances in accordance with sound professional practices.

C. Warranty: **CONSULTANT** warrants that it shall perform the professional services required by this Agreement in compliance with the federal and California laws related to minimum hours and wages, including but not limited to, 40 U.S.C.A. §§ 3141, et seq., California Labor Code, §§ 1171, et seq. and California Labor Code, §§ 6300, et seq.; fair employment practices, including but not limited to, 29 U.S.C. 651, et seq.; and fair employment, including but not limited to, 29 U.S.C. 201, et seq., The California Fair Employment and Housing Act California Government Code, §§ 12900, et seq., Title VI of the Civil Rights Act of 1964, as amended, 49 CFR 21 through appendix H and 23 CFR 710.405 (b); and all other federal, state and local laws and ordinances applicable to the work required under this Agreement.

D. Non-exclusive Agreement. **CONSULTANT** acknowledges that CITY may enter into agreements similar to this Agreement with other consultants.

1.2 Term.

The term of this Agreement shall begin on July 1, 2021 and continue until June 30, 2026 or until completion of the work and its final acceptance by the **CITY**; or, until such time as it is terminated pursuant to the provisions in Article V of this Agreement.

ARTICLE II
RESPONSIBILITIES OF CONSULTANT

2.1 Control and Payment of Subordinates.

CITY retains **CONSULTANT** as an independent contractor and not an employee of **CITY**. All personnel to be utilized by **CONSULTANT** in the performance of this Agreement shall at all times be under **CONSULTANT'S** exclusive direction and control. **CONSULTANT** shall pay all wages, salaries, and other amounts due such personnel in connection with their performance of services under this Agreement and as required by law. **CONSULTANT** shall be responsible for all reports and obligations with respect to such personnel, including, but not limited to social security taxes, income tax withholding, unemployment insurance, and workers' compensation insurance.

2.2 Conformance to Applicable Requirements.

All services provided by **CONSULTANT** shall be subject to the approval of the **CITY**.

2.3 Standard of Care; Licenses.

All professional services to be provided by **CONSULTANT** pursuant to this Agreement shall be provided by personnel experienced in their respective fields and in a manner consistent with the standards of care, diligence and skill ordinarily exercised by professional consultants in similar circumstances in accordance with sound professional practices. **CONSULTANT** represents and warrants to **CITY** that it has all licenses, permits, qualifications and approvals that are legally required to practice its profession and to provide the services hereunder. **CONSULTANT** further represents and warrants that it shall keep in effect all such licenses, permit, and other approvals during the term of this Agreement.

2.4 Project Representatives.

The City Manager or his designee shall be the Project Representative of **CITY** for purposes of this Agreement and may issue all consents, approvals, directives and agreement on behalf of **CITY**, called for by this Agreement except as otherwise expressly provided in this Agreement. Project representative shall coordinate all phases of this project and shall be available to **CITY** at all reasonable times.

2.5 Accounting Records.

CONSULTANT shall maintain complete and accurate records with respect to costs and expenses incurred in the performance of this Agreement. All such records shall be clearly identifiable as being associated with this Agreement. **CONSULTANT** shall allow an authorized representative of **CITY**, during normal business hours, to examine, audit, and make transcripts of copies of such records. **CONSULTANT** shall allow **CITY** to inspect all work, data, documents, proceedings, and activities related to this Agreement for a period of three (3) years from the date of final payment (or completion of work) under this Agreement.

ARTICLE III
COMPENSATION

3.1 Compensation.

Except as provided in this section, **CONSULTANT** shall receive compensation for all Services rendered under this Agreement at the rates set forth in the Schedule of Hourly Billing Rates attached hereto as Exhibit "B", and incorporated herein by reference. Total compensation shall not exceed $75,000 per year, without written approval of **CITY'S** Project Representative. **CONSULTANT** shall not receive compensation for any services provided outside the Scope of Work unless such additional services (hereinafter "Extra Work") are approved in writing by **CITY** or its appointed representative prior to **CONSULTANT** performing the "Extra Work".

3.2 Payment of Compensation.

CONSULTANT shall provide **CITY** an itemized monthly statement which indicates work completed, hours of service rendered and units of supplies provided to the Project by **CONSULTANT,** from July 1, 2021, or the start of the subsequent billing periods, as appropriate, through the date of the statement. **CITY** shall make any payment due within forty-five (45) days after approval of the invoice by **CITY**.

3.3 Extra Work.

At any time during the term of this Agreement, **CITY** may request that **CONSULTANT** perform Extra Work. As used herein, "Extra Work" means any work which is determined by **CITY** to be necessary for the proper completion of the Project, but which the parties did not reasonably anticipate would be necessary at the execution of this Agreement. **CONSULTANT** shall not perform Extra Work until receiving prior written authorization from **CITY'S** Project Representative. It is specifically understood and agreed that oral requests and/or approvals of "Extra Work" shall be barred and are unenforceable.

3.4 Amendment of Scope of Work.

CITY shall have the right to amend the Scope of Work within the Agreement by written notification to the **CONSULTANT**. In such event, the compensation and time of performance shall be subject to renegotiation upon written demand of either party to the Agreement. Failure of **CONSULTANT** to secure **CITY'S** written authorization for "Extra Work" or changed work shall constitute a waiver of any and all right to adjustment in the contract price or time due, whether by

way of compensation, restitution, quantum meruit, etc. for work done without the appropriate **CITY** authorization.

3.5 Reimbursement for Expenses

CONSULTANT shall not be reimbursed for any expenses unless prior written authorization is obtained from **CITY**.

ARTICLE IV
INSURANCE

4.1 Insurance Requirements.

The **CITY** reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances. If the existing policies do not meet the Insurance Requirements set forth herein, **CONSULTANT** agrees to amend, supplement or endorse the policies to do so.

Without limiting the indemnity provisions of the Contract, the **CONSULTANT** shall procure and maintain in full force and effect during the term of the Contract, the following policies of insurance.

4.2 Minimum Scope of Insurance.

(a) **Commercial General Liability (CGL)** which affords coverage at least as broad as Insurance Services Office "occurrence" form CG 00 01, including products and completed operations, property damage, bodily injury, and personal & advertising injury with limits no less than $2,000,000 per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.

(b) **Automobile Liability Insurance** with coverage at least as broad as Insurance Services Office Form CA 0001 covering "Any Auto" (Symbol 1) with limit no less than $1,000,000 each accident for bodily injury and property damage.

(c) **Workers' Compensation** as required by the State of California with statutory limits, and Employer's Liability Insurance with a limit of not less than $1,000,000 per accident for bodily injury or disease.

(d) **Professional Liability** with limit of not less than $1,000,000 each claim and $2,000,000 aggregate. Covered Professional Services shall specifically include all work to be performed under the contract and delete any exclusion that may potentially affect the work to be performed.

If the **CONSULTANT** maintains broader coverage and/or higher limits than the minimums shown above, the **CITY** requires and shall be entitled to the broader coverage and/or higher limits maintained by the **CONSULTANT**.

4.3 Endorsements.

Insurance policies shall not be in compliance if they include any limiting provision or endorsement that has not been submitted to the **CITY** for approval. The insurance policies shall contain or be endorsed to contain, the following provisions:

(a) Commercial General Liability

(1) **Additional Insured:** The City, its elected officials, officers, employees, volunteers, boards, agents and representatives shall be additional insureds with regard to liability and defense of suits or claims arising out of the work or operations performed by or on behalf of the Consultant including materials, parts or equipment furnished in connection with such work or operations. Additional Insured Endorsements shall not:

1. Be limited to "Ongoing Operations"
2. Exclude "Contractual Liability"
3. Restrict coverage to the "Sole" liability of contractor
4. Exclude "Third-Party-Over Actions"
5. Contain any other exclusion contrary to the Contract

Additional Insured Endorsements shall be at least as broad as ISO Form(s) CG 20 10 11 85; or CG 2010 and CG 20 37.

(2) **Primary Insurance:** This insurance shall be primary and any other insurance whether primary, excess, umbrella or contingent insurance, including deductible, or self-insurance available to the insureds added by endorsement shall be in excess of and shall not contribute with this insurance. Coverage shall be at least as broad as ISO CG 20 01 04 13.

(b) Auto Liability

(1) **Additional Insured:** The City, its elected officials, officers, employees, volunteers, boards, agents and representatives shall be additional insureds with regard to liability and defense of suits or

claims arising out of the work or operations performed by or on behalf of the Consultant

(2) **Primary Insurance**: This insurance shall be primary and any other insurance whether primary, excess, umbrella or contingent insurance, including deductible, or self-insurance available to the insureds added by endorsement shall be in excess of and shall not contribute with this insurance.

(c) Workers' Compensation

(1) **Waiver of Subrogation:** A waiver of subrogation stating that the insurer waives all rights of subrogation against the indemnified parties.

4.4 Insurance Obligations of Consultant.

The Insurance obligations under this agreement shall be: (1) all the Insurance coverage and/or limits carried by or available to the **CONSULTANT**; or (2) the minimum Insurance coverage requirements and/or limits shown in this agreement; whichever is greater. Any insurance proceeds in excess of or broader than the minimum required coverage and/or minimum required limits, which are applicable to a given loss, shall be available to the **CITY**. No representation is made that the minimum Insurance requirements of this agreement are sufficient to cover the obligations of the **CONSULTANT** under this agreement.

4.5 Notice of Cancellation.

Required insurance policies shall not be cancelled or the coverage reduced until a thirty (30) day written notice of cancellation has been served upon the **CITY** except ten (10) days shall be allowed for non-payment of premium.

4.6 Waiver of Subrogation.

Required insurance coverages shall not prohibit **CONSULTANT** from waiving the right of subrogation prior to a loss. **CONSULTANT** shall waive all rights of subrogation against the indemnified parties and Policies shall contain or be endorsed to contain such a provision. This provision applies regardless of whether the **CITY** has received a waiver of subrogation endorsement from the insurer.

4.7 Evidence of Insurance.

All policies, endorsements, certificates, and/or binders shall be subject to approval by the **CITY** as to form and content. These requirements are subject to amendment or waiver only if so approved in writing by the **CITY**. The **CITY** reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.

The certificates and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf. At least fifteen (15 days) prior to the expiration of any such policy, evidence of insurance showing that such insurance coverage has been renewed or extended shall be filed with the **CITY**. If such coverage is cancelled or reduced, **CONSULTANT** shall, within ten (10) days after receipt of written notice of such cancellation or reduction of coverage, file with the **CITY** evidence of insurance showing that the required insurance has been reinstated or has been provided through another insurance company or companies.

4.8 Deductible or Self-Insured Retention.

Any deductible or self-insured retention must be approved in writing by the **CITY** and shall protect the indemnified parties in the same manner and to the same extent as they would have been protected had the policy or policies not contained a deductible or self-insured retention. The **CITY** may require the **CONSULTANT** to purchase coverage with a lower retention or provide proof of ability to pay losses and related investigations, claim administration and defense expenses within the retention.

4.9 Contractual Liability.

The coverage provided shall apply to the obligations assumed by the **CONSULTANT** under the indemnity provisions of this contract.

4.10 Failure to Maintain Coverage.

CONSULTANT agrees to suspend and cease all operations hereunder during such period of time as the required insurance coverage is not in effect and evidence of insurance has not been furnished to the **CITY**. The **CITY** shall have the right to withhold any payment due until **CONSULTANT** has fully complied with the insurance provisions of this Contract.

In the event that the **CONSULTANT'S** operations are suspended for failure to maintain required insurance coverage, the **CONSULTANT** shall not be entitled to an extension of time for completion of the Work because of production lost during suspension.

4.11 Acceptability of Insurers.

Each such policy shall be from a company or companies with a current A.M. Best's rating of no less than A:VII and authorized to do business in the State of California, or otherwise allowed to place insurance through surplus line brokers under applicable provisions of the California Insurance Code or any federal law. Any other rating must be approved in writing by the **CITY**.

4.12 Claims Made Policies.

If coverage is written on a claims-made basis, the retroactive date on such insurance and all subsequent insurance shall coincide or precede the effective date of the initial **CONSULTANT'S**

Contract with the **CITY** and continuous coverage shall be maintained or an extended reporting period shall be exercised for a period of at least five (5) years from termination or expiration of this Contract.

4.13 Insurance for Subcontractors.

CONSULTANT shall be responsible for causing Subcontractors to purchase the same types and limits of insurance in compliance with the terms of this Contract/Agreement, including adding the **CITY** as an Additional Insured, providing Primary and Non-Contributory coverage and Waiver of Subrogation to the Subcontractor's policies. The Commercial General Liability Additional Insured Endorsement shall be on a form at least as broad as CG 20 38 04 13.

4.14 Additional Insurance.

Further, **CONSULTANT** shall obtain any additional kinds and amounts of insurance which, in its own judgment, may be necessary for the proper protection of any of its officers', employees', or authorized sub-consultants' own actions during the performance of this Agreement.

ARTICLE V
TERMINATION AND INDEMNIFICATION

5.1 Notice of Termination.

CITY may terminate the whole or any part of this Agreement at any time and without cause by giving seven (7) days written notice to **CONSULTANT** of such termination, and specifying the effective date thereof. **CONSULTANT** shall discontinue all services affected by such termination within seven (7) days of receipt of such notice, unless otherwise instructed by **CITY** in writing. **CONSULTANT** shall not terminate this Agreement except for cause.

5.2 Termination Without Cause.

If **CITY** terminates this Agreement without cause, **CONSULTANT** shall be paid for services performed through the date of termination, upon receipt of written documentation of said services by **CITY**. Such payment shall include a pro-rated amount of profit, if applicable, but no amount shall be paid for anticipated profit on unperformed services.

5.2 Termination for Cause.

Should **CONSULTANT** default in the performance of any covenance, condition, or agreement contained in this Agreement and the default is not cured within thirty (30) days after written notice of the default is served on **CONSULTANT** by **CITY** then **CITY,** in addition to any other remedies at law or equity, may terminate this Agreement. **CONSULTANT** shall be compensated for services which have been completed and accepted by CITY. **CONSULTANT**

shall be liable to **CITY** for any reasonable additional costs incurred to correct or cure unsatisfactory work performed by **CONSULTANT** which, at **CITY'S** discretion, must be revised, in part or in whole, to complete the Project.

5.4 Procurement of Similar Services.

In the event this Agreement is terminated as provided by this Article, with or without cause, in whole or in part, **CITY** may procure, any and all services as may be necessary to complete the Project.

5.5 Work Product.

In the event of termination of this Agreement, all finished or unfinished design, development and construction documents, data studies, drawings, maps and reports prepared by **CONSULTANT** shall be delivered to the **CITY** within seven (7) days of **CONSULTANT**'s receipt of termination notice, and at no additional cost to **CITY**. Any use of uncompleted documents without specific written authorization from **CONSULTANT** shall be at **CITY**'s sole risk and without liability or legal expense to **CONSULTANT**.

5.6 Indemnification and Hold Harmless.

These Indemnification provisions are independent of and shall not in any way be limited by the Insurance Requirements of this Agreement. CITY approval of the Insurance contracts required by this Agreement does not in any way relieve the CONSULTANT from liability under this section.

Notwithstanding the existence of insurance coverage required of **CONSULTANT** pursuant to this contract, **CONSULTANT** shall save, keep defend, indemnify, hold free and harmless **CITY**, its officers, officials, employees, agents and volunteers from and against any and all damages to property or injuries to or death of any person or persons, and shall defend, indemnify, save and hold harmless **CITY**, its officers, officials, employees, agents and volunteers from any and all claims, demands, suits, actions or proceedings of any kind or nature, including, but not by way of limitation, all civil claims, workers' compensation claims, and all other claims resulting from or arising out of the acts, errors or omissions of **CONSULTANT,** its employees and/or authorized sub-consultants, whether intentional or negligent, in the performance of this Agreement.

ARTICLE VI
GENERAL PROVISIONS

6.1 Notices.

All notices and written communications sent by one party to the other shall be personally delivered or sent by registered or certified U.S. Mail postage prepaid, return receipt requested to

the following addresses indicated below:

IF TO CITY: Christopher L. Johansen, P.E.
ENGINEERING DIVISION
CITY OF LA HABRA
110 E. La Habra Blvd.
La Habra, Ca. 90631

TO CONSULTANT: Paul Soltis, Vice Pres. Geotech Operations
Twining, Inc.
2883 E. Spring St. Suite 300
Long Beach, CA 90806

The effective date of any notice or written communications sent by one party to the other shall be the date received if by personal service, or 48 hours after deposit in the U.S. Mail as reflected by the official U.S. postmark.

6.2 Entire Agreement.

This Agreement contains the entire Agreement of the parties with respect to the subject matter hereof, and supersedes all prior negotiations, understandings, or agreement whether verbal or written, concerning the same subject matter. This Agreement may be modified only by a writing signed by both parties.

6.3 Successors and Assigns.

This Agreement shall be binding on the successors and assigns of the parties. This Agreement may not be sold, transferred or assigned by either party, or by operation of law, to any other person or persons or business entity, without the other party's written permission. Any such sale, transfer or assignment, or attempted sale, transfer or assignment without written permission, may be deemed by the other party to constitute a voluntary termination of this Agreement and this Agreement shall thereafter be deemed terminated and void.

6.4 Subcontracts.

CONSULTANT shall not subcontract any portion of the work required by this Agreement without prior written approval of **CITY**. All approved subcontracts, if any, shall be accomplished by a written instrument. Such instrument shall contain an expressed assumption by the subcontractor of all conditions and terms and covenants contained in this Agreement.

6.5 Equal Opportunity Employment.

CONSULTANT represents that it is an equal opportunity employer and shall not discriminate either directly or indirectly against an employee or applicant for employment with **CONSULTANT** on the basis of race, color, religion, national origin, ancestry, sexual preference, sex or age. **CONSULTANT** shall also take affirmative steps to ensure that applicants are

employed and employees are treated during employment without regard to race, color, religion, national origin, ancestry, sexual preference, sex, age, or other prohibited grounds.

6.6 Attorney's Fees.

If either party commences a legal action against the other party arising out of or in connection with this Agreement, the prevailing party in such litigation shall be entitled to have and recover reasonable attorney's fees and costs of suits.

6.7 Governing Law.

This Agreement shall be governed by and construed with the laws of the State of California. Any Action to enforce the terms of this Agreement or for the breach thereof shall be brought and tried in the County of Orange.

6.8 Time of Essence.

Time is of the essence for each and every provision of this Agreement.

6.9 Right to Employ Other Consultants.

CITY reserves the right to employ other consultants in connection with this Project.

6.10 Covenant Against Contingent Fees.

CONSULTANT warrants that he/she/it has not employed or retained any company or person, other than a bona fide employee working with **CONSULTANT,** to solicit or secure this Agreement, and that he/she/it has not paid or agreed to pay any company or person, other than a bona fide employee, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, **CITY** shall have the right to annul this Agreement without liability or, in its discretion to deduct from **CONSULTANT'S** compensation provided under this Agreement, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

6.11 Conflict of Interest.

CONSULTANT covenants that he/she/it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of its Services hereunder. **CONSULTANT** further covenants that in the performance of this Agreement, no person having any such conflict of interest shall be employed by **CONSULTANT**.

6.12 Statement of Economic Interest.

If **CITY** determines **CONSULTANT** comes within the definition of **CONSULTANT** under the Political Reform Act (Government Code §87100 et. seq.), **CONSULTANT** shall

complete and file and shall require any other person doing work under this Agreement, to complete and file a "Statement of Economic Interest" with the City Clerk of the **CITY** disclosing **CONSULTANT** and/or such other person's financial interests.

6.13 No Waiver of Breach; Time.

No waiver of any provision of this Agreement shall be effective unless in writing and signed by a duly authorized representative of the party against whom enforcement of a waiver is sought referring expressly to this Paragraph. The waiver of any right or remedy in respect to any occurrence or event shall not be deemed a waiver of any right or remedy in respect to any other occurrence or event, nor shall any waiver constitute a continuing waiver.

6.14 Third Party Beneficiaries.

Nothing contained in this Agreement shall be construed to create and the parties do not intend to create any rights in third parties.

6.15 Taxes.

CONSULTANT agrees to file tax returns and pay all applicable taxes on amounts paid pursuant to this Agreement and shall be solely liable and responsible to pay such taxes and other obligations, including, but not limited to, state and federal income and FICA taxes. **CONSULTANT** agrees to indemnify and hold **CITY** harmless from any liability which it may incur to the United States or to the State of California as a consequence of **CONSULTANT'S** failure to pay, when due, all such taxes and obligations.

6.16 Compliance With Law.

CONSULTANT shall comply with applicable federal, state and local laws, rules and regulations affecting the **CONSULTANT** and his/her/its work hereunder.

6.17 Title to Documents.

Title to all plans, specifications, maps, estimates, reports, manuscripts, drawings, descriptions and other final work products compiled by **CONSULTANT** under the Agreement shall be vested in **CITY**, none of which shall be used in any manner whatsoever, by any person, firm, corporation, or agency without the expressed written consent of **CITY**. Basic survey notes and sketches, charts, computations, and other data prepared or obtained under the Agreement shall be made available, upon request, to **CITY** without restriction or limitations on their use. **CONSULTANT** may retain copies of the above described information but agrees not to disclose or discuss any information gathered, discussed or generated in any way through this Agreement without the written permission of **CITY** during the term of this Agreement or until ninety (90) days after receipt of final payment from **CITY**.

6.18 Validity.

The validity in whole or in part of any provision of this Agreement shall not void or affect

the validity of any other provisions of this Agreement.

6.19 Headings.

Section and subsection headings are not to be considered part of this Agreement, are included solely for convenience, and are not intended to modify or explain or to be a full or accurate description of the content thereof.

6.20 Counterparts.

This Agreement may be executed in one or more counterparts by the parties hereto. All counterparts shall be construed together and shall constitute one agreement.

6.21 Corporate Authority.

The persons executing this Agreement on behalf of the Parties hereto warrant that they are duly authorized to execute this Agreement on behalf of said Parties and that by doing so, the Parties hereto are formally bound to the provision of this Agreement.

6.22 Confidentiality.

All findings, reports, information and exhibits prepared or assembled by **CONSULTANT** in connection with the performance of its professional services pursuant to this Agreement are confidential and **CONSULTANT** agrees that they shall not be made available to any individual or organization without the prior consent of **CITY**. All findings, reports, information and exhibits shall become the property of **CITY**.

6.23 Responsibility for Errors.

CONSULTANT shall be responsible for its own work and results under this Agreement, and shall not be responsible for any work by **CITY** performed prior to the date of this Agreement or for any other acts or omissions directly attributable to **CITY**. **CONSULTANT**, when requested, shall furnish clarification and/or explanation as may be required by **CITY** regarding any services rendered under this Agreement at no additional cost to **CITY**. In the event that an error or omission attributable to **CONSULTANT** occurs, then **CONSULTANT** shall, at no cost to **CITY**, provide all necessary design drawings, estimates and other **CONSULTANT** professional services, as authorized by this Agreement necessary to rectify and correct the matter to the sole satisfaction of **CITY** and to participate in any meeting required with regard to the correction.

6.24 Independent Contractor.

The parties hereto acknowledge and agree that the relationship between **CITY** and **CONSULTANT** is one of principal and independent contractor and no other. Nothing contained in this Agreement shall create or be construed as creating a partnership, a joint venture, employment relations, or any other relationship except as set forth between the parties. The parties

specifically acknowledge and agree that **CONSULTANT** is not a partner with **CITY**, whether general or limited, and no activities of **CITY** or **CONSULTANT** or statements made by **CITY** or **CONSULTANT** shall be interpreted by any of the parties hereto as establishing any type of business relationship other than an independent contractor relationship.

NOTE: In the event the **CONSULTANT'S** personal services are required, the following shall apply:

This Agreement is made on the express condition and understanding that Paul Soltis, RCE, GE 's personal services are a substantial inducement to **CITY** for entering into this Agreement. If for any reason Paul Soltis, RCE, GE should no longer be the responsible manager for **CONSULTANT,** this Agreement shall be subject to immediate termination on written notice from **CITY.**

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed the date and year first above written.

CITY OF LA HABRA:

JIM SADRO, CITY MANAGER

APPROVED AS TO FORM:

CITY ATTORNEY

ATTEST:

LAURIE SWINDELL, CMC, CITY CLERK

2/24/2022

TWINING, INC.:

28 July 2021

EXHIBIT "A"
SCOPE OF WORK AND SCHEDULE OF PERFORMANCE

City of La Habra

On-Call Geotechnical Investigation and Material Testing for Public Works Projects

TWINING
GEOTECHNICAL

Cover Letter

TWINING
GEOTECHNICAL

2883 East Spring Street, Suite 300
Long Beach CA 90806

Tel 562.426.3355
Fax 562.426.6424

May 17, 2021
Proposal No. 21-0901

Mr. Christopher Johansen
City of La Habra
Engineering Division
110 East La Habra Boulevard
La Habra, CA 90631

SUBJECT: **Proposal to Provide On-Call Geotechncial Investigation and Material Testing for Public Works Projects**

Dear Mr. Johansen:

Twining Geotechnical (Twining), a California S Corporation headquartered at 2883 East Spring Street, Suite 300, Long Beach CA 90806, is pleased to present this proposal to provide on-call geotechnical investigation and material testing services to the City of La Habra (City) for Public Works Projects. Having previously provided related services in support of many similar-sized cities throughout Southern California, we greatly anticipate the prospect of being added to your community's qualified bidders list.

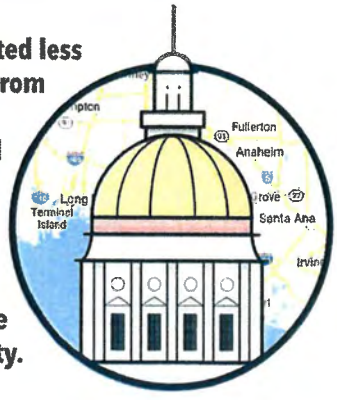
Why Twining

Introduction of Firm and Professional Qualifications

Twining has been setting standards for over 120 years. We employ materials engineers and experts who have a true understanding of construction materials and their application in the field. We leverage this understanding to improve existing regulations and author new guidelines. By collaborating with regulatory agencies, our team members are able to bring about change that benefits both contractors and owners.

- Familiarity with the City Twining has served your City for years providing geotechnical engineering, material testing, and inspection services which are similar to the services within this contact. Since 2015, our firm has participated on projects such as various years of the Alley Area Rehabilitation project, and Esteli Park Restroom Building Assessment. Our history within the City, extensive knowledge of the area, and deep understanding of the community assure a seamless integration between our team and the City.
- Creative Alternative Pavement Design The City's CIP comes from various funding sources, such as federal-aid funding. Twining understands the importance of ensuring these dollars are being allocated most efficiently is paramount. The proper structural section design for flexible pavement as well as the asphalt concrete mixture type is crucial to its performance and longevity. Poor design can result in early failures, substandard performance, and repairs that quickly become costly. We are committed to helping agencies design and implement the most appropriate, cost-effective, durable pavement solutions. We have demonstrated this commitment by

Twining is located less than 25 miles from the City. This ensures a rapid response to your projects, and work performed by members of the local community.



investing in technical experts and lab capabilities that specialize in asphalt and concrete pavement design. Dr. Amir Ghavibazoo, our team's pavement engineer and scientist, will help the City rest assured your dollars are being well spent, as well as offer pavement design alternatives to ensure the most efficient use of the City's resources. We have delivered award-winning, challenging, and unusual pavement design projects that address a myriad of objectives from pavement service life to sustainability, and budgetary restraints. This includes rubberized HMA, which recycles rubber from used tires, full depth reclamation (FDR) of pavements, which recycles existing asphalt and base materials into new pavement, and Superpave, which is a comprehensive system for the design of mixtures that are adapted to the unique performance requirements dictated by the traffic, climate, and structural section.

» **Geotechnical Engineering Expertise with a State-of-the-Art Laboratory** Our state-of-the-art geotechnical engineering laboratory is geared to provide fast, reliable test results. Our geotechnical laboratory technicians understand the need to turn around testing needed during construction very quickly to mitigate delays during grading. It is common to turn around construction-related test results for proposed import soils and engineered fill within 24 hours (sometimes less) to meet the fast-paced needs of a grading operation. We subscribe to the most stringent laboratory certification requirements in the industry and are accredited by agencies, including Caltrans, American Association of State Highway and Transportation Officials, and the Army Corps of Engineers.

Firm Information

Legal Name: Twining, Inc. | Year Established: 1898 | Structure: California S Corporation

Contact Information

Name: Paul Soltis, PE, GE | Address: 2883 East Spring Street, Suite 300, Long Beach, CA 90806 | Phone: 562.426.3355

We would like to thank the City for inviting us to present our qualifications. Our expereince with your City, experience in public works on-call engineering, ability to provide cost-saving pavement design solutions, and nearby full-service geotechnical laboratory qualify us as a clear choice for your upcoming projects. Should you have any questions related to our qualifications, please contact me by phone at 562.426.3355 or by email at psoltis@twininginc.com.

Sincerely,

Paul Soltis, RCE 56140, GE 2606
Engineering Manager/Principal Geotechnical Engneer
Twining Vice President, Geotechnical Operations
(Authorized to negotiate on behalf of the firm)

Amir Ghavibazoo, PhD
Pavement Engineer
Director of Asphalt Engineering &
Pavement Design

Firm Qualifications

FIRM HISTORY

Twining's legacy dates back more than 100 years. What started as a family business in 1898 has evolved into one of California's largest service providers of geotechnical, materials testing, and construction inspection services. Highly regarded by state and local agencies, developers, contractors, consultants, and industry for providing high-quality services that are reliable, timely, and compliant, Twining has been a central part of some of California's most regionally significant construction projects. We employ some of the industry's most well-known construction experts who perform research as well as consult with regulatory agencies to shape the future of construction standard practices.

Twining is a full-service engineering and quality control company with unmatched technical expertise. As detailed below, our services span from QA/QC, materials testing, and inspection, to highly technical capabilities in applied engineering and integrated disciplines. With laboratories throughout California and more than 150 inspectors, we are unequaled in our core competencies to work on vertical as well as horizontal construction projects:

- Geotechnical engineering
- Asphalt pavement quality assurance services
- Asphalt pavement design and materials evaluations
- Soils and materials testing and inspection
- Specialty testing
- Mobile laboratory services
- Roofing and waterproofing consultation and inspection
- Applied engineering and research
- Forensic evaluation
- Stormwater management

Twining has developed a strong reputation by providing sound engineering, testing, and inspection services on every project we undertake. We earned this reputation knowing that the true measure of our performance rests in the satisfaction of our clients. We approach each project with the understanding that we are evaluated on the safety and durability of the structures and pavements we test and inspect.

Twining has the unparalleled ability to service even the most complex projects from inception through completion. Starting with the initial subsurface investigation and continuing through the inspection and laboratory testing required during construction, we have the engineering staff, experienced inspectors, and state-of-the-art laboratory facilities to meet all of your project needs.

This experience, along with our proven project management system, results in a seamless flow of communication during the entire scope of your projects and provides you with a single point of contact to ensure that all of your project needs are met.

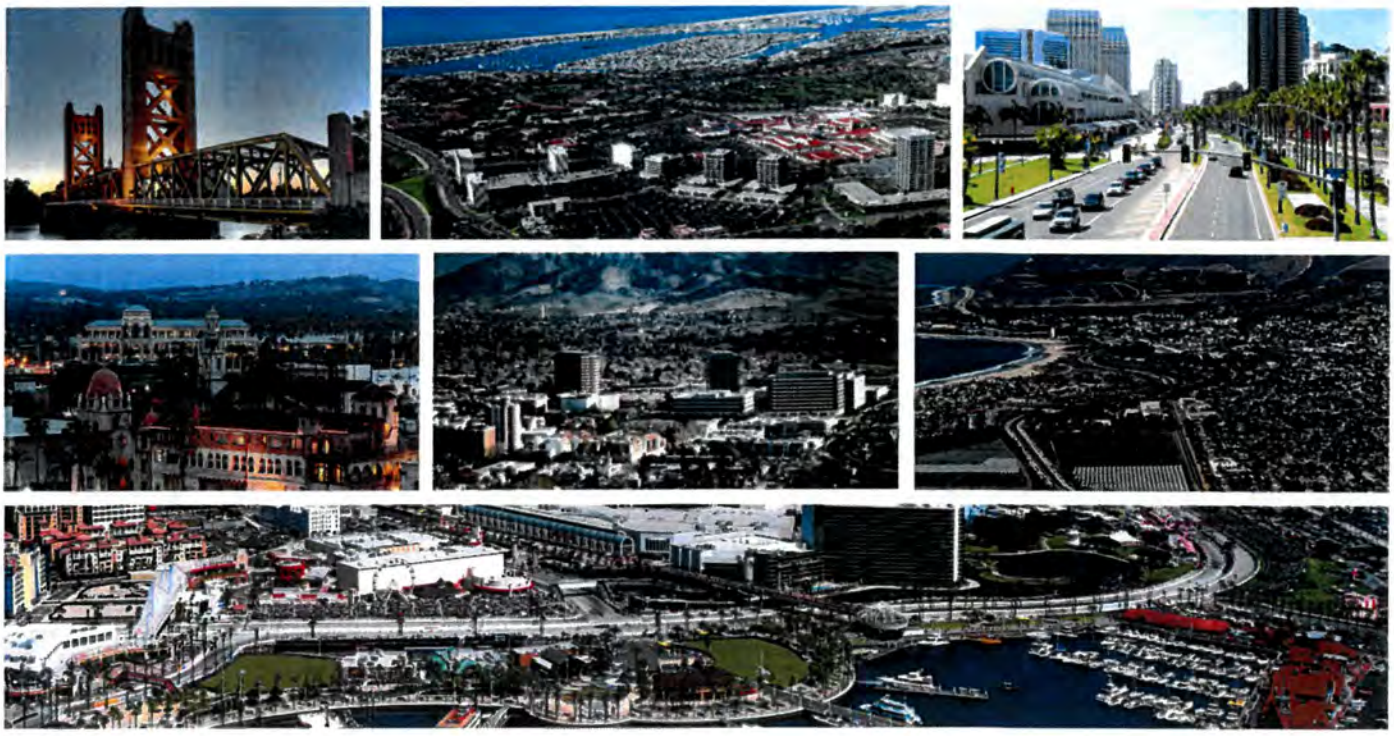
WHERE WE ARE

Twining, Inc. Headquarters

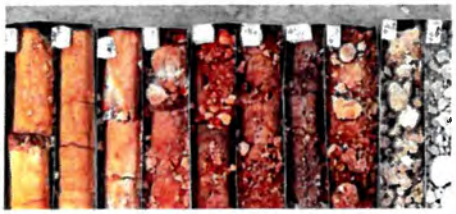
2883 East Spring Street, Suite 300
Long Beach, CA 90806
562.426.3355 *office*

www.twininginc.com

IRVINE, LONG BEACH, SAN DIEGO, RIVERSIDE, VENTURA, SACRAMENTO, CONCORD



GEOTECHNICAL ENGINEERING



Geotechnical Investigation

Twining's geotechnical engineers, geologists, and technicians bring their finest professional skills and practical experience to each project. Our staff includes licensed professional geotechnical engineers (GE), certified engineering geologists (CEG), and civil engineers (PE). We have extensive experience meeting the special needs of stringent agencies, including the Division of the State Architect (DSA), Office of Statewide Health Planning and Development (OSHPD), and the City of San Diego. Additionally, our professionals have vast experience in completing subsurface investigations involving geotechnical analysis, and providing design recommendations to meet the needs across the full spectrum of project types, from high-rise developments and hospitals, to freeway retaining walls. Typical field investigation methods include small- and large-diameter borings, cone penetration testing, down-hole logging, installation of monitoring wells, and trenching for geological/seismological hazards and fault investigations. Our vast construction experience allows us to incorporate time- and cost-effective recommendations that can be practically implemented. Our team of professionals offers advanced analytical methods such as finite element analysis and specialized software to help establish performance criteria for new projects.

Geotechnical Observation

When the need for geotechnical engineering construction support arises, Twining is well qualified to provide comprehensive services for all types of projects. We staff all geotechnical activities with a project engineer to review project plans and specifications to ensure proper execution of the project requirements. We also staff projects in this scope with experienced field technicians, who are well versed in applicable standards and ensure all work is done in accordance with the appropriate guidelines. We provide comprehensive daily reports to our clients that outline discrepancies and non-conformance with respect to project requirements for quick identification and resolution. Our team of registered engineers regularly review testing results during the project. They provide necessary information to the field technicians directly and follow up with "draft" results for review and approval.

Our engineers will periodically visit the job site along with the field technician to ensure testing and observation requirements are being met and that the client is satisfied with Twining's performance. We also provide a final geotechnical report that summarizes the work done during construction, including all test results and a statement regarding compliance with the project geotechnical requirements and all applicable codes.

Laboratory Testing

Twining maintains a network of state-of-the-art laboratories throughout California. In addition to our San Diego location, we maintain additional, fully-accredited facilities in Sacramento, Ventura, Concord, Riverside, and Long Beach along with a fleet of mobile laboratories that allow us to conveniently service projects throughout the state.

Our fully-accredited geotechnical engineering laboratories are equipped to perform the standard tests needed in geotechnical engineering evaluations, including,but not limited to, the following:

- In situ density and moisture content
- Atterberg limits
- Sieve analysis
- Maximum dry density
- Direct shear
- Consolidation
- Expansion index
- Sand equivalent
- Cleanness value
- Soundness
- R-Value

INFRASTRUCTURE CONSTRUCTION EXPERTISE

With California's fiscal situation, aging infrastructure, and continued urban growth, our cities and counties are faced with unique challenges. Never has it been more critical to maximize the value of each public works dollar spent on capital improvement than today. The quality assurance programs that Twining has established for public agencies throughout the state emphasize the most cost-effective practices utilizing industry best practices. Whether it is a major water/wastewater project, bridge or roadway improvement, underground utility work, airport improvement, or goods movement project, Twining has the requisite expertise and capabilities to effectively establish and maintain a quality assurance program that is in strict compliance with the local assistance procedures manual (LAPM) as well as state and federal mandates.

Twining provides the following services for local agencies:

- Initial engineering design and evaluation
- Specification development and review
- Materials review and verification for acceptance
- Public works inspection
- Source inspection
- Acceptance laboratory testing and evaluation
- Federal compliance
- Final quality assurance report and project closeout

Twining's involvement with the most cutting edge materials technologies enables us to assist project teams with the evaluation of construction products and determining their suitability for use. Twining has assisted construction managers, structural design engineers, and owners in developing high-strength concrete mixes utilizing low carbon emission materials, recycled asphalt pavement structural designs, and various other cementitious, geotechnical, and asphalt pavement materials that are sustainable utilizing renewable materials.

Twining is uniquely positioned to provide quality assurance programs from start to finish. Through our partnerships with Caltrans and various universities, we have knowledge of proven technological advances in construction that we can pass on to our clients and incorporate into their projects as appropriate. We routinely contribute to the American Public Works Association by presenting technical sessions related to some of the newest technological advances. Whether it involves rapid strength concrete, warm mix asphalt, high volume fly ash mixes to reduce greenhouse gasses, or 100% recycled materials, Twining can provide the proper solution for your project.

INNOVATIVE PAVEMENT DESIGN SOLUTION

Twining's experts have been providing pavement engineering and materials evaluation services on flexible pavement projects for decades. Our highly specialized and dedicated team of experts provides comprehensive pavement engineering services that utilize the newest pavement rehabilitation technologies to effectively deliver our clients the service life they expect of their pavements at a construction cost that may be less than traditional methods.

Twining is closely involved with hot mix asphalt industry associations and government agencies that keep our engineers on the pulse of new and upcoming technologies. While we have a comprehensive understanding of traditional methods and designs, we do not automatically suggest the same textbook solutions to all of our clients. We individualize our recommendations to include new flexible pavement materials that can be used most effectively and economically. Whether it is a highly-traveled arterial roadway that requires high stability in intersections to prevent pavement rutting or a residential collector that the residents expect to be as quiet as possible, Twining has the solution.

Twining routinely assesses current pavement conditions and identifies the causes of pavement distress. Using the Falling Weight Deflectometer (FWD), coring, ground penetrating radar (GPR), and dynamic cone penetrometer testing, we are able to assess subgrade conditions and determine the load-carrying capacity of in-place pavement. Our efforts can determine the remaining service life of pavement and identify options for rehabilitation. Supported by Twining's sophisticated laboratories, our expert staff has a deep knowledge of asphalt concrete mixtures. We routinely test and inspect hot mix asphalt designs consisting of the following materials:

- Polymer Modified Binders
- Rubberized Hot Mix Asphalt
- Warm Mix Asphalt Research and Development
- Hot Mix Asphalt Using High Amounts of Recycled Asphalt Concrete
- FAA Marshall designs
- Superpave Designs

We also perform production quality and strength and mix for:

- Asphalt Content
- Gradation
- Stability
- Hamburg Wheel Track
- Project Specific Volumetrics

The proper structural section design for flexible pavement as well as the asphalt concrete mixture type is crucial to its performance and longevity. Poor design can result in early failures, substandard performance and repairs that quickly become costly.

We are committed to helping agencies ensure the design and implement of their pavement projects meets relevant specifications for their jurisdiction . Our extensive experience providing quality assurance and quality control services in the field gives us unique insight and allows us to provide correction recommendations that can be implemented and are reliable should the need arise.

Twining professionals are members of the American Public Works Association, the Asphalt Pavement Association, the Rubber Pavements Association, the National Asphalt Pavement Association, and the Caltrans expert task group on flexible pavements. They have vast knowledge of hot mix asphalt materials and the constraints during production, as well as experience managing comprehensive quality assurance and quality control programs.

PAVEMENT TREATMENT AND MAINTENANCE

Twining and its engineers and specialists have been involved with the design, development, quality assurance, and performance evaluation of asphalt pavements for over 20 years. The firm has partnered with Caltrans in the evaluation of the rubber pavements pilot warranty program conducted back in 2001 and has consulted with scores of California municipalities on their annual ARHM overlay program since 1998. Our team has in-depth experience with the following pavement treatment types:

Preventative Maintenance

- Fog Seal
- Chip Seal (Rap Chips)
- Scrub Seals
- Slurry Seals
- Microsurfacing
- Cape Seals
- Bonded Wearing Course
- Micromilling
- Asphalt Rubber Hot Mix-Gap Graded (ARHHM-GG)
- Overlays
- Prep-Work (Digouts)

Rehabilitation

- Cold In-Place Recycling
- Cold Central Plant Recycling

Reconstruction

- Full-Depth Reclamation
- Lime Stabilization

Pavement Maintenance Capabilities

- Pavement Evaluation and Design Services for Pavements
- Falling Weight Deflection Testing, Geotechnical Pavement Engineering, and Analysis
- Project Specification Development and Pavement Repair Plan Preparation
- Pre-Construction Bid Assistance with Technical RFIs
- Submittal Review, Quality Assurance Acceptance, and Technical Quality Review
- Pavement Placement Inspection during Construction
- Binder Plant Inspection to Verify Reaction Times, Use of Crumb Rubber, Temperatures, Gradations, Etc.
- Placement Compaction Testing
- Laboratory Materials And Performance Predictive Testing

Pavement Evaluation & Design

Twining offers Pavement Management System (PMS) consulting and performs a variety of engineering support functions including pavement evaluation and design, geophysical surveys, and subsurface utility engineering. We have extensive experience in both network- and project-level pavement analysis and design, as well as materials testing and the selection of appropriate pavement types and treatments for different pavement structures under various conditions. Twining provides an integrated team of consultants with special expertise in all aspects of pavement management who partner with our clients to provide individualized solutions specific to their needs.

Our services include:

- Pavement Condition and Pavement Evaluation Reports
- Pavement Management Systems
- Street Evaluation Services
- Pavement Materials Engineering
- Inspection and Testing Services
- Construction Consulting Services
- Research and Development

Our experienced team uses pavement evaluation techniques that include visual surveys and destructive (invasive) testing along with a variety of nondestructive testing alternatives such as detection testing and profile measurement. We also employ GPR, which is used in highway inspection to provide information on pavement structure and layer thickness. Our surveys can detect various forms of pavement deterioration, voids, and regions of excessive subsurface moisture.

Project Experience

CITY OF FULLERTON

On-Call Engineering Services

Owner Name
» City of Fullerton

Reference
» David Grantham
» p: 714.738.6853
» e: dgrantham@cityoffullerton.com
» a: 3030 West Commonwealth Avenue Fullerton, CA 92832

Start Date
» 2013

Completion Date
» Ongoing

Since 2013, Twining has provided testing, inspection, and engineering services to the City of Fullerton in support of the Public Works Department. Our firm has been selected by the City to participate on multiple, consecutive on-call contracts. Twining's assurance testing and inspection actives under these contracts ensures project are constructed in compliance with Caltrans Standard Specifications and the Project Special Provisions, the City's approved Quality Assurance Program, and Caltrans Construction Manual.

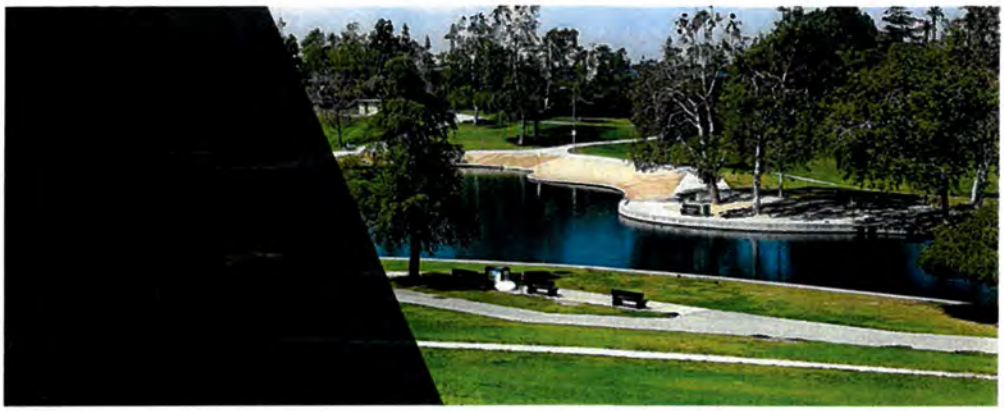
In addition, our geotechnical services provided to the City have included numerous geotechnical investigations for a wide range of community roadwork paving construction projects, as well as various roadway design projects.

Projects completed in the last five years under our contract with the City have included the following:

» 2020 Las Palmas Drive Water Facility Pavement Rehabilitation
» 2020 Brookhurst Street. Improvement Mix Design
» 2019 Loma Alta Pavement Rehabilitation Recommendation
» 2019 Multiple Street Evaluation
» 2019 Victoria Drive Infrastructure Improvement
» 2017 Loma Alta Pavement Rehabilitation Recommendation

CITY OF LA MIRADA

On-Call Consulting Services



Owner Name
» City of La Mirada

Reference
» Eric Villagracia
» p: 562.902.2373
» e: evillagracia@cityoflamirada.org
» a: 15515 Phoebe Avenue
La Mirada, CA 90638

Start Date
» 2017

Completion Date
» Ongoing

The voters of the City of La Mirada, in 2012, approved Measure I, in the face of decreased funding at the State level, paired with an ever-increasing list of necessary infrastructure projects. Additional factors that led the City to consider the ballot initiative were the dissolution of the City's redevelopment agency and the national economic downturn. Funds from measure are earmarked specifically for infrastructure improvements, including reconstruction of damaged sidewalk, curb and gutter, upgrades to or addition of ADA ramps, pavement rehabilitation, storm drain reconstruction or rehabilitation and traffic signal upgrades or replacement. Through these improvements, the City of La Mirada is making an investment in its future, providing improved and safer neighborhood streets for its residents.

The City is in the process of implementing a substantial amount of infrastructure reconstruction, repair, and replacement work throughout the City. This work will be funded by a variety of sources, including local, state, and federal grants as well as funds from Measure I.

Twining was selected to provide on-call consulting services for construction inspection and geotechnical engineering services. Projects completed in the last five years under our contract with the City have included the following:

» 2021 Capital Improvements Phase 6
» 2019 Slurry Seal
» 2019 Capital Improvements Phase 5
» 2018 Leffington Road Rehabilitation

CITY OF PASADENA

Orange Grove Boulevard Resurfacing

Owner Name
» City of Pasadena

Reference
» Giuseppe Canzonieri, PE
» p: 323.260.4703
» e: gcanzonieri@koacorp.com
» a: 1100 Corporate Center Drive, Suite 201, Monterey Park, CA 91754

Start Date
» 2020

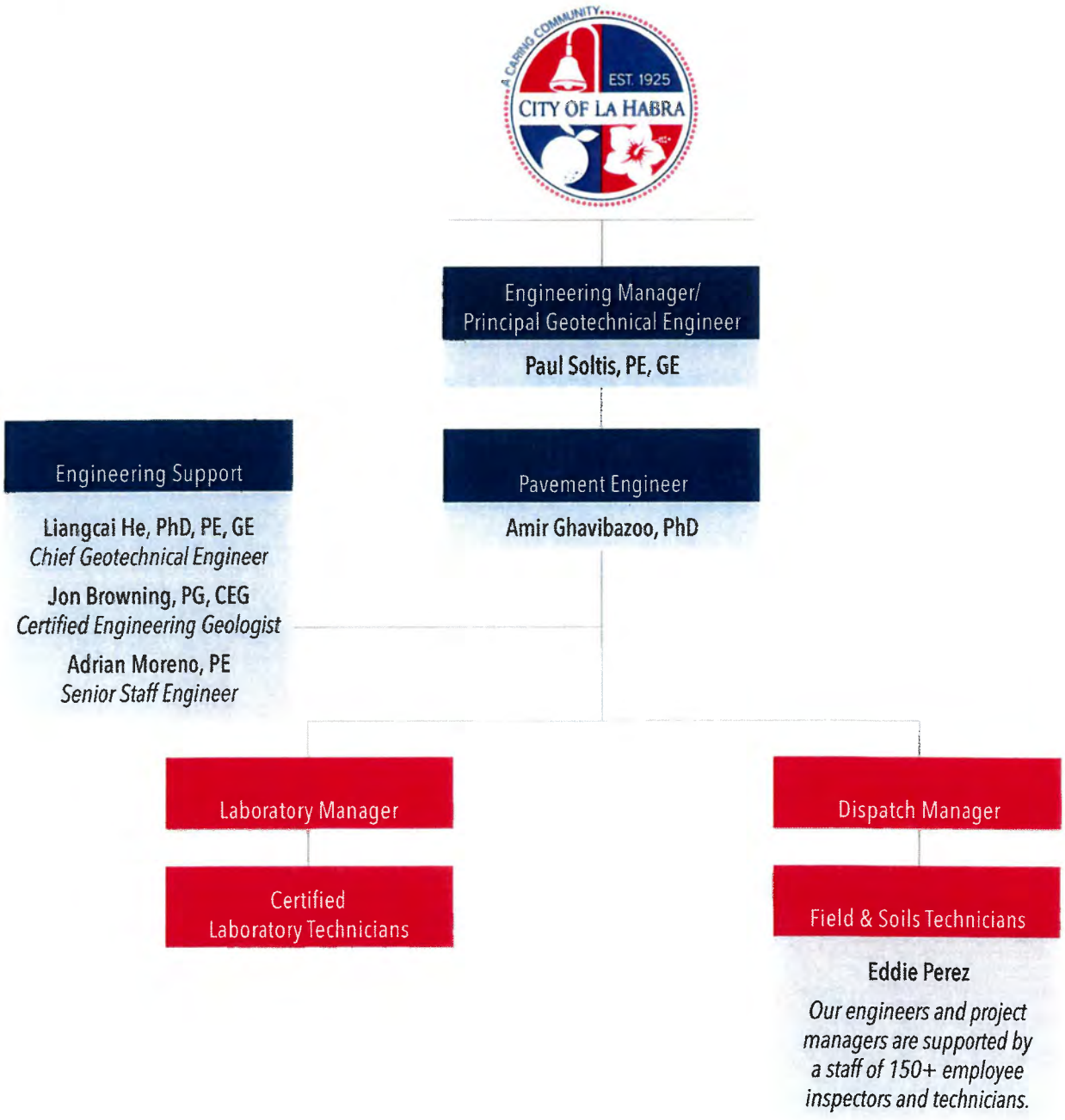
Completion Date
» 2021

This project involves reconstruction damaged concrete curb and gutter, driveway aprons, cross gutters, access ramps, aside from road asphalt pavement resurfacing of Orange Grove Boulevard, from Lincoln Avenue to Sierra Madre Villa Avenue. The project included two phases, with the first phase involving concrete replacement work and the second phase of work involving asphalt pavement resurfacing.

Twining performed geotechnical engineering and material testing and inspection services. Our scope of services induced soil inspection and testing, asphalt concrete construction inspection and testing of aggregate gradation, asphalt content, lab compacted density, and hveem stability, as well as provided project management services and final QA documentation.

Project Team

STAFF ORGANIZATION CHART



PAUL SOLTIS

PE, GE, Engineering Manager/Principal Geotechnical Engineer

Professional Summary

Paul Soltis, PE, GE, brings more than 29 years of technical expertise to Twining. His experience includes geotechnical investigations and analyses of roads, bridges, highways, and other California infrastructure projects. His focus is on interaction with agencies during development of construction documents and afterward to assist them in achieving the most appropriate soil conditions for their projects. Paul has extensive on-call contract management experience and the proven ability to simultaneously maintain and manage multiple projects. Paul is responsible for the technical oversight of Twining's geotechnical engineering projects and management of the firm's geotechnical personnel.

Relevant Experience

Overview

» Years' Experience: 1992 – Present

Education

» MS, Geotechnical Engineering, University of Colorado, Boulder

» BS, Civil Engineering, California Polytechnic State University, San Luis Obispo

Professional Memberships / Registrations

» Professional Engineer, Civil, CA, PE 56140

» Registered Geotechnical Engineer, CA, GE 2606

City of La Habra, Esteli Park Building Assesment

Constructed around 1975, the restroom/concession building includes concrete masonry unit (CMU) blocks walls with a concrete slab-on-grade floor. The building is supported shallow concrete spread footings that are 16 inches wide and 18 inches below grade. The structure experienced cracks located in the east and west CMU walls of the building, as well as a large crack on the west side of the building. To evaluate the cause of the damage and to determine if there are repairs that are warranted, Twining performed an geotechnical assessment investigation for the City. Twining reviewed background information and performed site reconnaissance, coordinated and performed field exploration, performed a structural engineering visual assessment, provided geotechnical laboratory testing, conducted engineering evaluation, and prepared a report. Paul served as project executive and oversaw all of the geotechnical team's efforts.

City of Long Beach, On-Call Engineering Services

Twining is contracted to provide certified testing and inspection services and geotechnical design on an on-call basis for public works infrastructure and facility-related improvement projects. Contract-wide, Paul serves as the principal in charge, providing geotechnical engineering design oversight.

» A recent project completed under this on-call was the 2020 Percolation Testing for Municipal Urban Stormwater Treatment project. Twining provided an evaluation of the subgrade soils to determine their infiltration characteristics at anticipated infiltration locations adjacent to the future LB-MUST water treatment plant.

City of Fullerton, Loma Alta Pavement Rehabilitation

The City was looking for alternative options to rehabilitate/reconstruct the Loma Alta area. In 2019, Twining performed geotechnical laboratory tests on selected soil samples obtained from the borings in order to aid in the soil classification and evaluate the engineering properties of the subgrade soils. Twining then provided a pavement design that gave cost-effective options for conventional reconstruction. Paul served as the project executive.

AMIR GHAVIBAZOO

PhD, Pavement Engineer

Professional Summary

Dr. Amir Ghavibazoo is Twining's Director of Asphalt Engineering and Pavement Design. He directs and works on pavement design, highway design, engineering specifications, and consulting services. He works closely with cities and government agencies to develop unique and specialized mix designs, pavement inspections, and pavement design solutions. He will service as the project manager and single point of contact the for the delivery all Twining's services under this on-call.

Relevant Experience

Overview

» Years' Experience: 2014 – Present

Education

» PhD, Civil and Environmental Engineering, North Dakota State University

» MS, Railways Engineering, Iran University of Science and Technology, Tehran, Iran

» BS, Industrial Engineering, University of Technology, Tehran, Iran

City of La Habra, Alley Area 4 Rehabilitation

The project consisted of rehabilitation of a rectangular section of alley adjacent to South Valencia Street between La Habra Boulevard and East 3rd Avenue. Twining coordinate and performed a field exploration, perform geotechnical laboratory testing of in-situ moisture and density, Atterberg limits and grain-size analysis, expansion index testing, maximum density and optimum moisture content, resistance value (R-value), and corrosivity testing (pH, sulfate, chloride and resistivity). Additionally, Twining conducted a engineering analyses and prepare geotechnical reports. Amir served as the Pavement Engineer and Project Manager. He conducted engineering analysis, prepared a pavement evaluation, and recommendations.

City of La Habra, Alley Area 5 Rehabilitation

Twining provided asphalt concrete pavement coring, identification of sub-surface conditions, and geotechnical engineering recommendations and pavement structural design recommendations for the improvement for the Alley Area 5 road sections for the City. Testing services included R-value, in-place density and moisture, maximum density and optimum moisture, Atterberg limits/plasticity index, and #200 wash for soil classification. Amir served as project manager and pavement technical expoert, assuring the quality of the job that was being delivered to the City.

City of La Habra, Alley Area 6 Rehabilitation

Twining provided asphalt concrete pavement coring, identification of sub-surface conditions, and geotechnical engineering recommendations and pavement structural design recommendations for the improvement for the Alley Area 5 road sections for the City. Testing services included R-value, in-place density and moisture, maximum density and optimum moisture, Atterberg limits/plasticity index, and #200 wash for soil classification. Amir served as the Pavement Engineer and Project Manager. He conducted engineering analysis, prepared a pavement evaluation, and recommendations.

LIANGCAI HE

PhD, PE, GE, Chief Geotechnical Engineer

Professional Summary

Dr. Liangcai He, PE, GE, brings over 29 years of experience to Twining. Liangcai has extensive knowledge of earthquake engineering, soil-structure interaction, field investigations, earthwork and foundation design, retaining walls, seepage and groundwater modeling, embankment dams and levees, slope stability, and preparation of technical reports. His responsibilities have included project planning and management, proposals, cost estimates, field investigation, laboratory testing, engineering analyses, report preparation, plan review, and construction monitoring. His analytical skills include traditional engineering analyses and advanced numerical modeling.

Relevant Experience

Overview

» Years' Experience: 1992 – Present

Education

» PhD, Structural Engineering with an emphasis in Geotechnical Engineering, University of California, San Diego

» MS, Civil and Structural Engineering with an emphasis in Geotechnical Engineering, Nanyang Technological University, Singapore

» BS, Hydraulic and Hydropower Engineering, Tsinghua University, China

Professional Memberships / Registrations

» Professional Engineer, Civil, CA, PE 73280

» Registered Geotechnical Engineer, CA, GE 3033

City of Glendale, View Crest Road Slope Repair

Several locations along View Crest Road are showing signs of pavement distress and potential slope stability issues. Signs of pavement distress include longitudinal pavement cracks, vertical pavement separation, and deformed guardrails leaning toward downslope along the entire road. In 2020, Twining provided geotechnical engineering evaluation for the pavement and the slope. Our scope included reviewing background information and site reconnaissance; performing geologic mapping; coordinating and performing field exploration; performing geotechnical laboratory testing; conducting engineering analyses; and preparing a geotechnical report. Liangcai served as the registered geotechnical engineer.

City of Long Beach, Retaining Wall Failure at Corner of 1st & Alboni

The City of Long Beach Public Work sought to set up K-Rails along First Street and North Alboni Place to reduce traffic-induced loads on a failed retaining wall. In 2019, Twining provided a geotechnical study of the compromised retaining wall and recommended a minimum K-Rail setback. Liangcai served as the project manager.

City of San Diego, As-Needed Geotechnical Services

Twining was awarded the contract to serve the City of San Diego with geotechnical services on an on-call basis. The scope of services for projects under this as-needed agreement includes geotechnical and soil investigation, subsurface evaluation, laboratory testing, and corrosion surveys for various sewer and water line replacements throughout the City. Liangcai is overseeing all of Twining's efforts as the registered geotechnical engineer and will draft the final investigation report.

» A recent project completed under this on-call was the 2020 15GT28 Sewer and AC Water Group 1034. Twining provided a geotechnical investigation of existing subsurface conditions and recommendations for construction on the project which sought to replaced 2.87 miles of existing sewer mains .

JON BROWNING

PG, CEG, Certified Engineering Geologist

Professional Summary

Jon Browning, PG, CEG, brings more than 14 years of experience in the engineering geology and environmental consulting industry. His professional experience includes geologic feasibility studies, site characterization, seismic site assessments, engineering design, and construction phases of numerous mining, civil, and land development projects. His expertise lies in developing subsurface geotechnical exploration strategies for fault trench and landslide investigations, geologic field mapping, executing and managing large field investigation projects, directing subcontractors, consulting with client, and preparing technical reports.

Relevant Experience

Overview

» Years' Experience: 2007 – Present

Education

» BA, Geography with emphasis in environmental and natural resources and Geology Minor, San Diego State University, San Diego

» GIS, Certificate, Mesa College, San Diego

Professional Memberships / Registrations

» Professional Geologist, CA, 9012

» Certified Engineering Geologist, CA, 2385

City of Glendale, View Crest Road Slope Repair

Several locations along View Crest Road are showing signs of pavement distress and potential slope stability issues. Signs of pavement distress include longitudinal pavement cracks, vertical pavement separation, and deformed guardrails leaning toward downslope along the entire road. Twining provided geotechnical engineering evaluation for the pavement and the slope. Our scope included reviewing background information and site reconnaissance; performing geologic mapping; coordinating and performing field exploration; performing geotechnical laboratory testing; conducting engineering analyses; and preparing a geotechnical report. Jon served as an engineering geologist and oversaw the geological site mapping, geotechnical drilling, and assisted in writing the final soils report on this project which was completed in 2020.

SANDAG, South Bay Bus Rapid Transit, Segment 1A

This $16.9 million project was completed in 2020 and consisted of the construction of a six-mile, dedicated bus rapid transit guideway along East Palomar Street in the City of Chula Vista. Twining providing quality control material testing and inspection of asphalt and soils. Jon served as an assistant project manager by providing oversight of inspector soils compaction daily field reports, during the replacement of project underground utility lines.

Anaheim UHSD, Ball Junior High

The project consisted of adding a new marquis structure to the front of the school, building new shade structures, and making pavement improvements. Twining provided geotechnical investigation services that encompassed reviewing site background information, coordinating and performing field exploration, performing geotechnical laboratory testing, providing the results of the geotechnical analyses. Jon served as the certified engineering geologist and oversaw the subsurface investigation of existing parking lot to provide geotechnical recommendation for pavement design.

ADRIAN MORENO

PE, Senior Staff Engineer

Professional Summary

Adrian Moreno, PE, brings over eight years of technical expertise to Twining. He excels at geotechnical engineering functions at any project stage, from the management of subsurface investigations, laboratory testing programs, and the preparation of geotechnical and foundation recommendation reports during the design phase, to the management of quality assurance testing and inspection programs during the construction phase of projects.

Relevant Experience

Overview

» Years' Experience: 2013 – Present

Education

» BS, Civil Engineering, California Polytechnic State University, Pomona

Professional Memberships / Registrations

» Professional Engineer, Civil, CA, PE 87057

City of Buena Park, Larwin Park

The project consisted of the planned remodel and installation of new playground equipment, new restrooms, and landscaping at the park. Twining performed a geotechnical investigation in 2016 to evaluate the site soil, perform percolation testing, lab testing, and provided recommendations for the construction. Adrian served as a senior project engineer.

City of Long Beach, Shoemaker Bridge Replacement

Shoemaker Bridge is an extension of Shoreline Drive in Long Beach that traverses the Los Angeles River. Adrian is serving as a staff engineer during the design of the bridge, and performs sampling and analysis and prepares reports. The scope of work includes drilling several deep borings and cone penetration tests (CPT), up to 200 feet deep, in the river using an amphibious carrier with drill rig and CPT device. Samples and information from the borings and CPTs will be used to develop deep foundation recommendations for support of abutments and the bridge span over the river. Additional borings and CPTs on the land side will be performed to develop geotechnical recommendations for retaining walls and new pavements.

City of Huntington Beach, Beach Boulevard and Ellis Avenue Sewer Replacement

The sewer replacement project, located on Beach Boulevard and Ellis Avenue in the City of Huntington Beach, was installed at depths up to 15 feet below the existing grade. Trenching and shoring was done during construction of the proposed sewer line. Twining provided geotechnical design recommendations and then soils testing during construction. Adrian served as a senior staff engineer. His responsibilities included field and testing oversight.

EDDIE PEREZ

Field Technician

Professional Summary

Eddie Perez brings over 10 years of technical expertise as a public works field technician and construction and quality assurance manager. He serves as the City's eyes and ears on public works construction, routinely attending construction progress meeting with City officials and the contractors. He reviews and insures adherence to construction plans and project specifications. His experience encompasses all aspects of public works construction with special emphasis on roadway projects. He is intimately familiar with Caltrans and Green Book Standards and serves as an extension of City resources.

Relevant Experience

Overview

» Years' Experience: 2011 – Present

Current Licenses Held

» ACI Concrete Field Testing Technician Grade I

» Nuclear Density Gauge Operator

» Caltrans Certifications 125

» OSHA 10-Hour Construction Health & Safety

City of Thousand Oaks, Annual Overlay Program

The City of Thousand Oaks is responsible for maintaining approximately 380 miles of streets and is a leader in exploring the use of innovative pavements with emphasis towards utilizing recycled crumb rubber in asphalt concrete pavements. Since 2010, the City has engaged the services of Twining to assist in review and revision of the community's pavement rehabilitation specifications, perform materials design studies, implement quality assurance programs, perform construction inspection and testing, and perform pavement destructive testing and assist with pavement deflection testing for future pavement designs. Eddie serves as the City's lead public works inspector, and takes on the role of attending construction progress meetings with City officials and the contractor(s). He reviews and ensures adherence to construction plans and project specifications. Eddie reviews inspector's daily field reports, enforces traffic control requirements, performs scheduling of field/plant inspection, coordinates material sampling/testing, collects all load tix/invoices and verifies and logs all bid quantities.

City of Moreno Valley, Perris Boulevard Widening

This project consisted of widening Perris Boulevard and street improvements in Moreno Valley. Our team provided geotechnical observations, material submittal review, and materials testing as needed on the project. Eddie served inspectors for this project. His daily duties consisted of coordinating with City and agency personnel, keeping daily field notes, material quality control, sampling and laboratory testing.

City of Chino, Riverside Drive Storm Drain

This project consisted of the Riverside Drive storm drain and signal modification at Riverside Drive and Monte Vista Avenue. Our team provided materials testing for this project. Eddie served as a public works inspector and performed soils testing.

Project Approach and Quality Assurance Procudeures

PROJECT APPROACH

After reviewing the RFP, we understand that this on-call contract may include projects that require asphalt concrete, portland cement concrete, base rock, and pipe materials for street, sidewalk, curb, gutter, and pipeline construction. In our years of experience with similar on-call contracts, we've developed a streamlined approach to providing the services you require for this contract. Our project management approach is as follows, while our approach to geotechnical investigations, geotechnical testing, and materials testing can be found on the following pages.

Project Management Approach

We have designatedPaul Soltis, PE, GE, as the Engineering Manager for all projects under this on-call contract. Paul will be utilizing our advanced project management approach, which focuses on communication with the City at every turn. This approach focuses on communication with the entire project team, including the City, and any engineering firms required for each project. We have sustained longevity as a company by evolving with project demands, which is highlighted by our project management approach.

Paul will work with the City to avoid cost overruns, and will work to provide you with cost savings wherever he can, providing recommendations to the City's project manager, during regular meetings.

Paul will take responsibility to provide any feedback you request and respond to any project requirements. This includes, all administrative queries related to budget, invoicing, scheduling, and project logistics. He reviews all inspection reports and test results prior to distribution within a one week turnaround, and reviews monthly invoices for accuracy and thoroughness prior to submittal.

Design-Related Geotechnical Engineering Services

When the need for geotechnical design-related services arises throughout this contract, we will provide you with a detailed proposal for execution of the specific project requirements. Based on our understanding of the potential projects, we anticipate the need for the following general scope of services that are related to design support (i.e., geotechnical site investigations).

- Task 1 – Review Background Information
- Task 2 – Coordinate and Perform Field Exploration
- Task 3 – Perform Geotechnical Laboratory Testing
- Task 4 – Perform Engineering Analyses
- Task 5 – Prepare a Geotechnical Report

The remainder of this section provides a description of each of the above tasks and our approach to complete the tasks.

Task 1 – Review Background Information

Our geotechnical team will review available geotechnical investigation reports and any other geotechnical information prepared for the site and provided to us by you, if available. We will also review available published and unpublished geologic literature contained in our files, including publications prepared by the California Geological Survey (CGS) and the United States Geological Survey (USGS). This task will help evaluate the existing site conditions so that field exploration program can be most efficiently executed while obtaining the necessary data to provide specific geotechnical engineering recommendations.

Task 2 – Coordinate and Perform Field Exploration

Before starting our exploration program, we will conduct a field reconnaissance and mark the locations of our planned subsurface explorations. We meet with your representative to review the locations in the field to help mitigate the potential to encounter buried objects or utilities. As required by law, we will notify Underground Service Alert (USA) of the proposed subsurface exploration locations at least 48 hours prior to drilling so that conflicts between the proposed locations and publicly-owned underground utilities can be identified. As directed by your representative, we will also utilize Geovision to further verify utility locations. Our field exploration may consist of truck-mounted drilling, hand augering, machine-excavated test pits, or combination of these efforts depending on specific project requirements. Additionally, we can provide Ground Penetrating Radar (GPR) and Cone Penetration Testing (CPT) as needed.

The field exploration programs will be supervised by a geotechnical engineer, or geologist, who will log the subsurface conditions encountered and obtain driven and bulk samples for laboratory observation and testing. Drive samples are typically collected at approximately 5-foot intervals within the borings using either a Standard Penetration Test (SPT) sampler or California Modified sampler. Twining conducts drilling and sampling in general accordance with applicable American Society of Testing and Materials (ASTM) standards. At the completion of the drilling, we will transport the soil samples to our laboratory. Immediately upon completion of drilling and sampling, the borings are backfilled with soil cuttings derived from the borings, or backfill may be performed using grout and/or bentonite chips as needed. Upon completion of the exploration, the locations will be patched and repaired so that the original site conditions are restored to your satisfaction.

With the implementation of storm water requirements on most projects in Southern California, we can perform percolation tests for the purpose of estimating the infiltration rate of the on-site soils, if needed.

Percolation testing is performed in general accordance with the appropriate local procedures. If such services are needed, we will work with the civil engineer to ensure these needs are met and the best system of containing storm water on the site is implemented.

Task 3 – Perform Geotechnical Laboratory Testing

Samples obtained from the exploratory borings are transported to our Long Beach laboratory for observation and testing. Laboratory tests are performed on selected samples obtained from the borings to aid in the classification and to evaluate the engineering properties of the subsurface soils. Typically, the laboratory tests include some or all of the following, depending on project needs:

- Moisture and density
- Soil classification testing including #200 wash sieve and Atterberg limits
- Direct shear
- Consolidation
- Expansion index
- R-Value and CBR
- Corrosivity
- Permeability
- Maximum dry density-optimum moisture content

The exact quantities and types of tests depend on the material types encountered during our subsurface exploration and the specific project requirements.

Task 4 – Conduct Engineering Analyses

The results of our field exploration and geotechnical laboratory tests are evaluated and engineering analyses are performed in order to provide geotechnical recommendations for the design and construction of the proposed project. Typically, the following engineering analyses are performed in support of geotechnical design-related projects:

- Evaluation of general subsurface conditions and description of types, distribution, and engineering characteristics of subsurface materials at the site

Our team then executes a Field Exploration Program. Our recommendations for field exploration are based on the type of project and existing conditions of the site.

Our team performs geotechnical engineering laboratory testing and engineering analyses. Our project manager and project engineers develop a geotechnical engineering laboratory test program that is customized for each project based on project needs and the subsurface conditions encountered during the field exploration program.

Preparation of Report for Submittal to the Project Team:
We strive to prepare reports that are clear and concise. As needed, we present you with a draft version of our completed report for review and comment by the project team so that recommendations can be "fine-tuned" if needed.

Post-Report Consultation: Based upon our experience on construction projects with several strict governing agencies, we are able to identify the common areas of confusion that potentially lead to obstacles during construction and propose to work with the City to develop plans and specifications. Our geotechnical engineer carefully reviews all aspects of the design and report cost, resource and time saving recommendations to the City based on his expert findings. During the course of the construction process, he is available to key design and construction team members to answer questions or make suggestions as needed.

Construction-Related Geotechnical Engineering Services

When the need for geotechnical construction-related services arises throughout this contract, we will review the project plans and specifications and the project geotechnical report in detail to prepare a cost estimate of the anticipated services for each specific project. If the geotechnical report is prepared by others, we will review the report and provide a letter stating that Twining will assume the responsibility of geotechnical engineer of record for construction and accept and be responsible for the recommendations provided in the report. Twining has successfully executed numerous projects in this role.

Our typical approach to a construction-related project where we provide geotechnical services includes the involvement of the responsible Twining engineer at the beginning, middle and end of the project. This involvement has proven to be invaluable on most projects for the following reasons: (i) pre-grade meeting with your representative and the grading contractor will bring to light any questions or ambiguities about the grading requirements prior to the start of grading so that delays related to geotechnical issues are mitigated; (ii) questions that arise during grading and foundation construction regarding changed conditions are addressed promptly and efficiently in the field by our engineer; and (iii) periodic oversight by the engineer consisting of review of daily field reports and site visits ensures accuracy of the work being done and expedites the final report process.

In general, we will provide the following services during construction as it relates to geotechnical engineering:

- The engineer will review project plans and specifications with field technician to ensure proper execution of the project requirements;
- The field technician will perform continuous observation and testing of fill placement as required by the California Building Code and provide a daily report to the City that outlines the work done and any discrepancies or non-conformance with respect to project requirements so that they can be tracked and resolved efficiently;
- The field technician will collect samples of soil being used or proposed for use as fill so that appropriate laboratory testing can be performed (maximum dry density/optimum moisture content relationships, expansion index, soil classification, sand equivalent, R-value testing, CBR, etc.);
- The engineer will review laboratory testing results and provide necessary information to field technician directly and follow up with "draft" results to the City for review and approval;
- The field technician and engineer will periodically meet at the site to ensure testing and observation requirements are being met; and

» The engineer and support staff will prepare a final geotechnical report that summarizes the work done during construction, including all test results and a statement regarding compliance with the project geotechnical requirements and all applicable federal, state and county codes.

Construction Materials Testing and Special Inspection

The following is our approach and methodology for managing materials testing and special inspection tasks in support of the City, as well as our outline of the sequential activities that will be undertaken to complete the tasks required for special inspections and materials testing services:

» We receive a formal request for services from your designated representative, briefly describing the scope, size, and services required. A set of plans, specifications, will be made available to review prior to and during the course of the project.

» Upon dispatch request from your representative, the appropriate inspector with the required certifications is assigned to the project. The technicians and inspectors are available within 24 hours of the representative's request and often can be provided with even less prior notification.

» The project technician/inspector performs appropriate testing or inspection and logs location of each test or item inspected. When required, samples are obtained from construction materials for further lab testing.

» The technician/inspector logs his daily testing, inspection, and sampling and provides a copy of his daily report to your representative for his signature. The daily report also contains a log of his hours covering the duties performed that day.

» If a material type (e.g. ready-mixed concrete) requires plant inspection, both the plant and field technicians would communicate directly with your representative regarding batched quantities, time of shipment, total yards at the plant, plant break downs, and all pertinent daily activities.

» Daily field and shop reports are reviewed by the project manager along with all laboratory test results and distributed weekly to the project team. A log of all tests and inspections is kept by the project manager that also includes tracking and resolution of any non-compliant items.

We will provide all necessary closeout documents at project completion.

Budget and Schedule Monitoring

We provide budget monitoring and tracking on all projects. This includes financial progress reports, as well as specification review for code requirements vs the project specified scope items for each project. We alert clients immediately if retests are necessary, or if there are any budgetary concerns. We understand that invoice management is a critical internal process on which we place great importance. We value our communication throughout this on-call contract and seek to deliver a seamless and accurate approach to invoicing and compensation management. We employ strict internal quality control measures to ensure your satisfaction.

In order to ensure our scope and budget are comprehensive and the estimated cost can be achieved for each project, the assigned project manager, and lead inspector assigned to the project conduct an initial kick-off meeting in order to review the plans and specification and ensure that our team has thorough understanding of the project requirements. In addition to this internal meeting, Twining will request to be included in the initial project site meeting with the City, design team, general contractor, and construction manager to established clear lines of communication and critical project protocols.

The project manager is in constant communication with the project team in order to accurately track budgets and most importantly identify and communicate non-compliance issues, and ensure these issues are resolved and documented in a timely manner.

Experience with Caltrans LAPM and Federal Funding

Twining has been and is currently working on many federally-funded projects for municipal agencies in southern California. Their team is exceptionally well versed in working with the LAPM, which municipal agencies use to regulate quality assurance/quality control services on federally-funded projects.

Twining has developed a reputation for giving our clients peace of mind by following applicable regulations and maintaining accurate and audit-proof project documentation. Over the past several years, Twining has developed outstanding working relationships with Ventura, Los Angeles, and Inland Empire agency clients, implementing projects similar to the City's, and delivered more than 300 Caltrans projects statewide and dozens of federally-funded projects in California.

Recent federally-funded projects include:

- City of Simi Valley, West Los Angeles Avenue Widening
- City of Simi Valley, FY 2019-20 Minor Street Rehabilitation
- City of Simi Valley, FY 2018-19 Annual Minor Street Rehabilitation
- City of Santa Clarita, Newhall Ranch Road Bridge Widening
- City of Santa Clarita, 2018-19 Annual Overlay Project NO. M0128
- County of Ventura, Yerba Buena Road South Resurfacing
- County of Ventura, Bike Lane Projects (Rice Road, Casitas Vista Road, Potrero Road, Sespe Street, and Pasadena Avenue)
- County of Santa Barbara, Isla Vista Sidewalk Improvement Project
- City of Pasadena, Orange Grove Blvd Resurfacing
- City of Moreno Valley, Various Street Rehabilitation
- City of Westmoreland, North Center Street Pavement Rehabilitation

QUALITY ASSURANCE PROCEDURES

In accordance with our accreditation by multiple agencies, we maintain stringent internal quality control and quality assurance procedures. These procedures are recorded in the series of documents described below.

The quality of our internal procedures is essential to ensure the quality of service is consistent throughout this contract. Our firm has an established reputation for reliability in the area of quality control.

As required by ASTM E329 and our IAS (International Accreditation Service) certification, we maintain written quality control procedures for all laboratory and field operations. These documents include our Field Procedures Manual and our Laboratory Quality Control Manual. All aspects of operational procedures, test methods, reporting requirements, and personnel training, discipline, and control are addressed. These manuals are available for review at your convenience.

We are re-certified biannually by Caltrans and by the Cement and Concrete Reference Laboratory (CCRL, a unit of NIST) and the AASHTO Materials Reference Laboratory (AMRL) and have successfully completed a recent inspection. This extremely intensive evaluation of every aspect of our test procedures for construction materials, and assures clients of the integrity and accuracy of our testing procedures and results.

We also maintains a rigorous auditing schedule of our test procedures under the direction of Materials Scientist, Dr. Boris Stein. This unique program comprises annual verification that the latest Caltrans and ASTM standards are being utilized, that technicians are made aware of any changes in such standards, that proper methods are being followed by technicians, that machine calibrations are up to date, and that proper reporting procedures are followed.

Quality Assurance Manual Addressing Inspection Procedures

This document has been prepared to specify required and accepted inspection practices for our company. It includes a description of our Inspector Performance Audit Program along with sample inspector evaluation reports. It addresses required employee qualifications and best practices for inspection of the following construction materials and activities: welding, high strength bolting, reinforced concrete, structural masonry, pre-stressed inspection, and batch plant inspection. Appendix A contains special instructions related to concrete slump, Appendix B addresses verbal approval of changes to design drawings based on verbal direction from the engineer of record, and Appendix C contains the aforementioned inspector evaluation report.

Quality Assurance Manual Addressing Nondestructive Testing

This document establishes the minimum requirements for the control and administration of training, examination, and certification of personnel conducting NDT using ultrasonic, magnetic particle, and liquid penetrant methods.

Quality Assurance Manual Addressing the Physical Laboratory

This document addresses the quality assurance procedures related to our physical laboratory and addresses the topics of:

- Quality Control Organization
  - Organization
  - Lines of Communication
  - Flow Diagram of Activities
  - Using Subcontractors
  - Using Outside Support and Supplies
  - Proficiency Sampling Programs
  - Document Control
  - Review of Requests and Contracts

- Quality Control Procedures
  - Sampling
  - Sample Transfer
  - Sample Receiving
  - Specimen Preparation
  - Specimen Testing
  - Test Result Reporting
  - Disposition of Tested Specimens
  - Control of Nonconforming Testing, Technical Complaints and Handling Corrective Measures
  - Control and Maintenance of Documents of External Origin (Standards, Codes, etc.)
  - Approved Signatories
- Personnel
  - Personnel Qualifications
  - Personnel Selection
  - Personnel Training
- Personnel Certification
- Test Equipment
  - Test Equipment Control
  - Test Equipment Calibration and Maintenance
  - Test Equipment Selection
  - Test Equipment Operation
  - Index of Test Equipment (Long Beach)
  - Index of Test Equipment (Relocated to Long Beach)
  - Index of Test Equipment (San Diego)
  - Index of Test Equipment (Riverside)
  - Consumable Materials
- References
  - General References
  - Index of References – General Testing
  - Special Testing Utilizing Non-Standard Procedures
- Calibration Procedures
  - Slump Cone
  - Unit Weight Measure
  - Unit Weight Scales
  - Air Content Pressure Meter
  - Single Use Cylinder Molds
  - Compression/Universal Testing Machines
- Internal Audit and Review
- Testing Environment
  - Environment of Testing Facilities
  - Curing of Cement Based Materials
  - Handling of Powdered Materials
  - Aggregates Testing
  - Vibration and Shock Protection
  - Housekeeping of Laboratory Testing Areas
- Standard Forms
- Procedures for Calculations for Uncertainty in Measurement
- Sample Calculations for Uncertainty in Measurement for Rockwell Hardness Testing

In addition to these documents, we also maintain a current library of all relevant test methods used in each area of testing we undertake.

Our quality assurance manuals are available to you upon request.

Consulting Service Agreement

CONSULTING SERVICE AGREEMENT

Twining has reviewed the City's Standard Consulting Service Agreement (Exhibit G) and can comply with this agreement as written. s

Thank you for your consideration.

TWINING
GEOTECHNICAL

EXHIBIT "B"
COMPENSATION RATES AND CHARGES

PROPOSAL SHEET

Schedule of Fees 2020 - 2021

NOTE: Rates will be adjusted annually each July 1st to reflect increased costs.

Personnel Rates: Per Hour Unless Otherwise Noted

Task Code	Engineering and Consulting Personnel	Rate
10026	Senior Principal Advisor/Consultant	$ 310.00
10001	Principal Engineer/Geologist	$ 210.00
10017	Metallurgical Engineer	$ 320.00
70000	Registered Geotechnical Engineer	$ 200.00
10010	Technical Advisor	$ 200.00
10011	Material Scientist, Welding/NDT Consultant	$ 210.00
70003	Registered Geologist/Certified Engineering Geologist	$ 195.00
10003	Senior Engineer/Geologist	$ 180.00
10009	Registered Civil Engineer	$ 175.00
60003	Roofing/Waterproofing Consultant	$ 200.00
10013	Project Engineer/Manager	$ 170.00
30000	Quality Control Manager	$ 160.00
10005	Senior Staff Engineer/Geologist	$ 155.00
10007	Staff Engineer/Geologist	$ 150.00
10015	Quality Control Administrator	$ 140.00
10019	Metallurgical Technician	$ 115.00
90001	CADD Operator/Draftsperson	$ 102.00
70107	Field Supervisor	$ 135.00
91030	Safety Supervisor	$ 135.00
20000	Laboratory Manager	$ 120.00
98000	Laboratory Technician	$ 95.00
90005	Expert Witness Testimony	$ 550.00
91010	Qualified SWPPP Developer	$ 155.00
91000	Qualified SWPPP Practitioner	$ 140.00
30001	Vibration Engineer	$ 180.00

NOTE:Hourly rate multiplier for participating in legal procedures is 1.75 times.

Task Code	Field Inspection Personnel	Rate
10101	Concrete/Reinforced Steel Inspector	$ 118.00
10103	Prestressed/Post Tensioned Inspector	$ 118.00
10105	Concrete ICC Inspector	$ 118.00
10109	Drilled-In-Anchor Inspector	$ 118.00
10111	Gunite/Shotcrete Inspector	$ 118.00
10113	Masonry Inspector	$ 118.00
10201	Structural Steel/Welding Inspector	$ 118.00
10203	AWS Certified Welding Inspector	$ 118.00
10207	Fireproofing Inspector	$ 118.00
10501	Lead Inspector	$ 121.00
10115	Firestop Special Inspector - IFC Premier	$ 135.00
10117	Firestop Special Inspector - IQP	$ 180.00
70109	L.A. Deputy Grading Inspector	$ 125.00
75001	Asphalt Field and Plant Inspector/Technician	$ 118.00
70103	Pile Driving Inspector	$ 118.00
70101	Soils Technician	$ 118.00
10107	Concrete Quality Control (ACI/Caltrans Technician)	$ 118.00
10122	Wood Framing Inspector	$ 118.00
60001	Roofing/Waterproofing Inspector	$ 125.00
10515	Mechanical Inspector	$ 150.00
10519	Electrical Inspector	$ 150.00
10521	Plumbing Inspector	$ 150.00
10523	Building Inspector	$ 150.00
30002	Vibration Monitoring Technician	$ 118.00
50003	Field Engineering Technician	$ 123.00

NOTE:Hourly rate multiplier for participating in legal procedures is 1.75 times.

Task Code	Shop Inspection Personnel	Rate
10301	Structural Steel Fabrication Inspector	$ 118.00
10309	Batch Plant Quality Control Technician/Inspector	$ 118.00
10325	Glue-Laminated Fabrication Inspector	Quotation
10328	Pre-Cast Concrete/Pipe Fabrication Inspector	$ 118.00

Task Code	Nondestructive Testing Personnel	Rate
10401	NDE Ultrasonic Testing Technician	$ 123.00
10403	NDE Magnetic Particle Testing Technician	$ 123.00
10405	NDE Dye Penetrant Testing Technician	$ 123.00
10305	Combination NDE Technician/Welding Inspector	$ 123.00
10409	Radiographic Testing (crew of 2)	$ 325.00
10020	NDE Engineer	$ 190.00

Task Code	Equipment Usage (Daily Unless Otherwise Noted)	Rate
95318	Skidmore	$ 40.00
95309	Torque Wrench, Small	$ 15.00
95312	Torque Wrench, Large	$ 25.00
95315	Torque Multiplier	$ 40.00
95321	Air Meter	$ 20.00
95324	Brass Mold	$ 20.00
95343	Nuclear Gauge (Per Hour)	$ 10.00
95333	Pull Test Equipment	$ 60.00
95348	Concrete/Asphalt Coring Equipment	$ 600.00
95327	Pachometer	$ 55.00
95336	Floor Flatness (Dipstick)	$ 50.00
95330	Schmidt Hammer	$ 30.00
95341	Vapor Emission Test Kits	$ 30.00
95342	Relative Humidity Probe	$ 60.00
95339	UPV (Ultrasonic Pulse Velocity) Meter	$ 350.00
95351	Fireproofing Adhesion/Cohesion (Per Test)	$ 35.00
95300	A Scan Ultrasonic Equipment and Consumables	$ 75.00
95303	Magnetic Particle Equipment and Consumables	$ 40.00
95306	Liquid Penetrant Consumables	$ 35.00
95307	Phased Array Ultrasonic Equipment (Per Hour)	$ 60.00
95347	Ground Penetrating Radar	$ 300.00
95345	Impact Echo	$ 350.00
95362	Ultrasonic Tomography	$ 450.00
95349	Inertial Profiler (Per Hour)	Quotation
95357	Project Dedicated Vehicle	$ 110.00
95364	Roller Compacted Concrete Vibrating Hammer/Tampling Plate	$ 70.00
95367	Half-cell Potential Equipment Set	$ 350.00
95368	Concrete Electrical Resistivity Meter	$ 160.00
95369	Field Hardness (Steel)	$ 100.00
95370	Coating Thickness Gauge	$ 100.00
95373	Wood Curing Box (Per Box)	$ 500.00
95371	Temperature Control Curing Box (Per Month)	$ 450.00
95372	Temperature Matching Curing Box (Per Month)	$ 520.00

Task Code	Specimen Pick-Up	Rate
20102	Standard Sample: Concrete Cylinders (Each)	$ 25.00
20101	Standard Sample: Mortar/Grout Cubes and Cores, Fireproofing, Rebar, and Epoxy Prisms (Each)	$ 25.00
20103/ 20104	Oversize Sample: Masonry Prisms, Shotcrete Panels, Flexural Beams (Each)	$ 60.00
20107	Technician for Specimen Pick-Up Not Listed Above (Per Hour, 2-Hour Minimum)	$ 95.00
20109	Technician for Specimen Pick-Up Before 5:00 a.m. or After 5:00 p.m. Monday thru Friday, or All Day Saturday (Per Hour, 2-Hour Minimum Plus Mileage)	$ 120.00

Task Code	Jobsite Trailer, Mobile or On-site Laboratory	Rate
95360	Mobile laboratory for rapid strength concrete (per shift not exceeding 12 hours) All others by quotation	$ 500.00

Task Code	Concrete Tests (Field Made Specimens)	Rate
20201	6" x 12" Cylinder: Compression Strength (ASTM C39)	$ 38.00
20202	4" x 8" Cylinder: Compression Strength (ASTM C39)	$ 33.00
20203	Density of Structural Lightweight Concrete Equilibrium or Oven Dry Method (ASTM C567)	$ 80.00
20205	Core Compression including Trimming (ASTM C42)	$ 65.00
20207	6" x 6" x 18" Flexural Beams Not Exceeding Referenced Size (ASTM C78, C293 or CTM 523)	$ 90.00
20209	Splitting Tensile Strength (ASTM C496)	$ 90.00
20211	Modulus of Elasticity Test (ASTM C469)	$ 280.00
80003	Rapid Chloride Permeability Test: Cylinders or Cores (ASTM C1202)	$ 500.00
80005	Density, Absorption, and Voids in Hardened Concrete (ASTM C642)	$ 500.00

Task Code	Concrete Tests (Field Made Specimens), Continued	Rate
40005	Flexural Toughness (ASTM C1609, Formerly ASTM C1018)	$ 800.00
40008	Double Punch Strength of Fiber Reinforced Concrete	$ 500.00
40009	Coefficient of Thermal Expansion of Concrete (CRD 39, AASHTO T336)	$ 550.00

Task Code	Concrete Specimen Preparation	Rate
20151	Sawing of Specimens (Each)	$ 35.00
20157	Coring of Specimens in Lab (Each)	$ 35.00
20159	Grinding of Concrete Below 6000 psi Strength (Each)	$ 50.00
20160	Grinding of Concrete 6000 psi Strength and Above (Each)	$ 75.00

Task Code	Laboratory Trial Batch: Concrete, Cement and Mortar	Rate
30217	Compression Test Cylinders Made and Tested in Laboratory (ASTM C192, C39)	$ 55.00
30219	6" x 6" x 18" Flexural Beams Made and Tested in Laboratory (ASTM C192, C78)	$ 95.00
30223	Splitting Tensile Strength Cylinders Made and Tested in Laboratory (ASTM C192, C496)	$ 110.00
30225	Modulus of Elasticity Test Cylinders Made and Tested in Laboratory (ASTM C192, C469)	$ 275.00
30227	Density of Structural Lightweight Concrete Made in the Laboratory, Equilibrium or Oven Dry Method (ASTM C567)	$ 100.00
30201	Laboratory Trial Batch (ASTM C192)	$ 500.00
30203	Laboratory Trial Batch: Packaged Dry Concrete Including Verification of Slump, Air Content, Plastic Unit Weight, Six Cylinders for Compressive Strength (ASTM C387 and C192)	$ 950.00
30205	Drying Shrinkage Up to 28 Days: Three 3" x 3" or 4" x 4" Bars, Five Readings up to 28 Dry Days (ASTM C157)	$ 490.00
30230	Additional Reading, Per Set of Three Bars	$ 45.00
30231	Storage over Ninety (90) Days, Per Set of Three Bars, Per Month	$ 30.00
30207	Setting Time Up to 7 Hours (ASTM C403)	$ 150.00
30209	Bleeding (ASTM C232)	$ 150.00
30229	Concrete Restrained Expansion (ASTM C878)	$ 550.00
30211	Mix, Make and Test Mortar or Grout Specimens for Compressive Strength: Set of 6 (ASTM C878)	$ 500.00
20263	Non-Shrink Grout: Height Change after Final Set (ASTM C1090)	$ 500.00
20265	Non-Shrink Grout: Height Change at Early Age (ASTM C827)	$ 800.00
30232	Cracking Resistance, Set of Three Rings, Laboratory Trial Batching, Test Until Cracking or up to 28 Days (ASTM 1581)	$ 5,000.00
30233	Evaluation of Pre-Packaged Masonry Mortars (ASTM C270)	$ 1,100.00
30234	Creep (ASTM C512) (One Age of Loading, 12 Months Duration of Testing)	$ 8,000.00

Task Code	Chemical Analysis and Petrographic Examination of Concrete	Rate
80123	Chemical Analysis for Acid Soluble Chlorides (ASTM C1152) (Includes sample prep)	$ 250.00
80193	Chloride Diffusion Coefficient of Cementitious Mixtures by Bulk Diffusion (ASTM C1556)	$ 2,500.00
80129	Petrographic Examination of Hardened Concrete, Level II (ASTM 856) (Comprehensive)	
	Each, One Sample	$ 2,400.00
	Each, Two or More Samples	$ 2,100.00

Task Code	Physical and Chemical Analysis of Cement	Rate
80195	Physical Testing and Chemical Analysis of Portland Cement per Standard Requirements (ASTM C150)	$ 1,200.00
80100	Chemical Analysis of Portland Cement per Standard Requirements (ASTM C150)	$ 650.00
80103	Physical Testing of Portland Cement per Standard Requirements (ASTM C150)	$ 650.00
80194	Physical Testing of Type K Cement, Mortar Expansion (ASTM C806)	$ 650.00
80106	Partial Analysis or Specific Physical Tests	Quotation
80110	Sulfates Resistance of Hydraulic Cement (ASTM C1012), 6 months	$ 2,500.00
80111	Sulfates Resistance of Hydraulic Cement (ASTM C1012), 12 months	$ 2,700.00

Task Code	Physical and Chemical Analysis of Fly Ash	Rate
80140	Chemical Analysis of Fly Ash per Standard Requirements (ASTM C618)	$ 650.00
80143	Physical Testing of Fly Ash per Standard Requirements (ASTM C618)	$ 650.00
80146	Partial Analysis or Specific Physical Tests	Quotation
80147	Chemical Analysis and Physical Testing of Fly Ash per Standard Requirements (ASTM C1618)	$ 1,200.00

Task Code	Physical Testing of Chemical Admixtures for Concrete	Rate
80196	Qualification of Admixture per ASTM C494	Quotation

Task Code	Soils and Aggregate Tests	Rate
30500	Abrasion: LA Rattler (ASTM C131)	$ 200.00
30505	Abrasion: LA Rattler (ASTM C535)	$ 210.00
70301	Atterberg Limits/Plasticity Index (ASTM D4318, CTM 204)	$ 160.00
70303	California Bearing Ratio Excluding Maximum Density (ASTM D1883): Soil	$ 550.00
70304	California Bearing Ratio Excluding Maximum Density (ASTM D1883): Cement-Treated Soil	$ 650.00
70344	Cement-Treated Soil/Base Mix Design: Includes three trial cement contents with three unconfined compressive strength specimens per cement content	$ 3,500.00
70305	Chloride and Sulfate Content (CTM 417, CTM 422)	$ 175.00
30403	Clay Lumps and Friable Particles (ASTM C142)	$ 200.00
30321	Cleanness Value: 1" x #4 (CTM 227)	$ 175.00
30322	Cleanness Value: 1.5" x .75" (CTM 227)	$ 275.00
70393	Collapse Potential/Index (ASTM D5333)	$ 225.00
70396	Compressive Strength of Molded Soil-Cement Cylinders (ASTM D1633)	$ 105.00
70309	Consolidation Test: Full Cycle (ASTM 2435, CTM 219)	$ 195.00
70311	Consolidation Test: Time Rate per Load Increment (ASTM D2435, CTM 219)	$ 45.00
70313	Corrosivity Series: Sulfate, Cl, pH, Resistivity (CTM 643, 417, and 422)	$ 245.00
70315	Crushed/Fractured Particles (ASTM D5821, CTM 205)	$ 175.00
70317	Direct Shear Test: Remolded and/or Residual (ASTM D3080)	$ 245.00
70319	Direct Shear Test: Undisturbed - Slow [CD] (ASTM D3080)	$ 225.00
70321	Direct Shear Test: Undisturbed - Fast [CU] (ASTM D3080)	$ 195.00
70378	Durability Index: Per Method - A,B,C, or D (ASTM D3744, CTM 229)	$ 210.00
70325	Expansion Index (ASTM D4829, UBC 18-2)	$ 170.00
75004	Fine Aggregate Angularity (ASTM C1252, CTM 234, AASHTO T304)	$ 190.00
30507	Flat and Elongated Particle (ASTM D4791)	$ 240.00
30508	Flat or Elongated Particle (ASTM D4791)	$ 210.00
70331	Maximum Density: Methods A/B/C (ASTM D1557, D698, CTM 216)	$ 190.00
70333	Maximum Density: Check Point (ASTM D1557, D698)	$ 65.00
70335	Maximum Density: AASHTO C [Modified] (AASHTO T-180)	$ 195.00
70336	Maximum Index Density: Vibratory Table (ASTM D4253)	$ 345.00
70337	Moisture Content (ASTM D2216, CTM 226)	$ 25.00
70339	Moisture and Density: Ring Sample (ASTM D2937)	$ 30.00
70341	Moisture and Density: Shelby Tube Sample (ASTM D2937)	$ 40.00
70340	Moisture-Density Relations of Soil-Cement Mixtures Premixed in the Field (ASTM D558)	$ 275.00
70342	Moisture-Density Relations of Soil-Cement Mixtures Mixed in the Lab (ASTM D558)	$ 350.00
30401	Organic Impurities (ASTM C40, CTM 213)	$ 90.00
70343	Permeability (ASTM D5084)	Quotation
80001	Potential Reactivity: Chemical Method (ASTM C289 - Discontinued Method)	$ 525.00
70394	Potential Reactivity: Mortar Bar Expansion Method, 14-Day Exposure (ASTM C1260)	$ 825.00
70391	Potential Reactivity: Mortar Bar Expansion Method, 28-Day Exposure (ASTM C1260)	$ 875.00
70398	Potential Reactivity: Concrete Bar Expansion Method (ASTM C1293), 12 month	$ 2,700.00
70399	Potential Reactivity: Concrete Bar Expansion Method (ASTM C1293), 24 month	$ 2,900.00

Task Code	Soils and Aggregate Tests, Continued	Rate
70397	Potential Reactivity of Aggregate Combination, non-standard method; 14-Day Exposure, Mortar (after ASTM C1567)	$ 950.00
70392	Potential Reactivity of Aggregate Combination, non-standard method; 28-Day Exposure, Mortar (after ASTM C1567)	$ 1,000.00
70345	R-Value: Soil (ASTM 2844, CTM 301)	$ 440.00
70347	R-Value: Aggregate Base (ASTM D2844, CTM 301)	$ 490.00
70349	Sand Equivalent (ASTM D2419, CTM 217)	$ 125.00
70351	Sieve #200 Wash Only (ASTM D1140, CTM 202)	$ 90.00
70353	Sieve with Hydrometer: 3/4" Gravel to Clay (ASTM D422, D7928, CTM 203)	$ 250.00
70355	Sieve with Hydrometer: Sand to Clay (ASTM D422, D7928, CTM 203)	$ 240.00
70357	Sieve Analysis Including Wash (ASTM C136, CTM 202)	$ 150.00
70359	Sieve Analysis Without Wash (ASTM C136, CTM 202)	$ 120.00
70360	Sieve Analysis: Split Sieve (ASTM C136, CTM 202)	$ 240.00
70361	Sieve Analysis Without Wash: With Cobbles (ASTM C136, CTM 202)	$ 235.00
70363	Soundness: Sodium or Magnesium Sulfate, 5 Cycles (ASTM C88)	$ 450.00
70365	Specific Gravity and Absorption: Coarse (ASTM C127, CTM 206)	$ 100.00
70367	Specific Gravity and Absorption: Fine (ASTM C128, CTM 207)	$ 165.00
70369	Swell/Settlement Potential: One Dimensional (ASTM D4546)	$ 150.00
70371	Triaxial	Quotation
70373	Unconfined Compression (ASTM D2166, CTM 221)	$ 190.00
30317	Unit Weight Per Cubic Foot (ASTM C29, CTM 212)	$ 125.00
30319	Voids in Aggregate with Known Specific Gravity (ASTM C29, CTM 212)	$ 125.00
30411	Lightweight Particles: Coarse, with Two Solutions (ASTM C123)	$ 410.00
30412	Lightweight Particles: Fine, with One Solution (ASTM C123)	$ 205.00

Task Code	Asphalt Concrete Tests	Rate
75031	HMA Mixing and Preparation	$ 125.00
75032	HMA Mixing and Preparation with Aggregate Treatment	$ 175.00
75033	Bulk Specific Gravity of Compacted Sample or Core: SSD (ASTM D2726, CTM 308C)	$ 55.00
75036	Bulk Specific Gravity of Compacted Sample or Core: Parafin Coated (ASTM D1188 and CTM 308A)	$ 80.00
75040	Emulsion Residue, Evaporation (ASTM D244)	$ 160.00
75024	Extraction: % Bitumen (ASTM D6307, CTM 382)	$ 160.00
75027	Extraction: % Bitumen and Gradation (ASTM D5444, D6307, CTM 202, 382)	$ 215.00
75028	Extraction: % Bitumen, Correction Factor (ASTM D6307, CTM 382)	$ 350.00
75030	Chemical Extraction: % Bitumen and Sieve Analysis (ASTM D2172 Method A or B, ASTM D5444)	$ 245.00
75042	Lab Tested Maximum Density: Hveem, 3 briquettes (ASTM D1561, D1188, CTM 304, 308)	$ 215.00
75057	Hveem Stabilometer Test, Premixed, 3 briquettes (ASTM D1560, D1561, CTM 304, 366)	$ 215.00
75048	Lab Tested Maximum Density: Marshall, 3 briquettes (ASTM D6926, D2726)	$ 210.00
75049	Lab Tested Maximum Density: Marshall 6" Specimen, 3 briquettes (ASTM D5581, D2726)	$ 215.00
75050	Lab Tested Maximum Density: Superpave Gyratory Compacted Briquette, SSD, 1 briquette (ASTM D6925, D2726)	$ 80.00
75052	Lab Tested Maximum Density: Superpave Gyratory Compacted Briquette, Parafin, 1 briquette (ASTM D1188, D6925)	$ 90.00
75051	Maximum Theoretical Specific Gravity [RICE] (ASTM D2041, CTM 309)	$ 160.00
75066	Marshall Stability and Flow, Cored Sample, each (ASTM D5927)	$ 80.00
75069	Marshall Stability and Flow, Premixed, 3 briquettes (ASTM D6926, D6927)	$ 230.00
75106	Marshall Stability and Flow, Gyratory Compacted Specimen Pre-Mixed, 3 briquettes (ASTM D5581, D6925)	$ 230.00
75107	Marshall Stability and Flow 6" Specimen, Premixed, 3 briquettes (ASTM D5581)	$ 230.00
75063	Moisture Content (CTM 370)	$ 85.00

Task Code	Asphalt Concrete Tests, Continued	Rate
75005	Wet Track Abrasion Test (ASTM D3910)	$ 165.00
75093	Hveem Mix Design (Excluding Aggregate Quality Tests)	$ 3,400.00
75096	Hveem Mix Design, with RAP (Excluding Aggregate Quality Tests, RAP Qualification)	$ 3,800.00
75099	Hveem Mix Design, with Lime (Excluding Aggregate Quality Tests)	$ 3,800.00
75094	Hveem Mix Design Caltrans Untreated Mix (Including Aggregate Quality Tests)	$ 4,650.00
75095	Hveem Mix Design Caltrans Lime Treated Mix (Including Aggregate Quality Tests)	$ 4,650.00
75084	Marshall Mix Design (Excluding Aggregate Quality Tests)	$ 3,400.00
75087	Marshall Mix Design with RAP (Excluding Aggregate Quality Tests)	$ 3,800.00
75090	Marshall Mix Design with Lime (Excluding Aggregate Quality Tests)	$ 3,800.00
75083	Open Grade Asphalt Concrete Mix Design (ASTM D7064, CTM 368)	$ 1,700.00
75109	Superpave Mix Design (Excluding Aggregate Quality Tests)	$ 4,900.00
75113	Superpave Mix Design, with RAP (Excluding Aggregate Quality Tests)	$ 6,500.00
75075	Effect of Moisture on Asphalt Paving Mixtures, Pre-Mixed (ASTM D4867, AASHTO T283)	$ 1,000.00
75111	Hamburg Wheel Track Test, 20,000 passes, 4 briquettes (AASHTO T324)	$ 1,100.00
75039	Raveling Test of Cold Mixed Emulsified Asphalt (ASTM D7196)	$ 200.00
75067	Marshall Stability, wet set, 3 replicates (AASHTO T245)	$ 350.00
75068	Marshall Stability, dry set, 3 replicates (AASHTO T245)	$ 300.00
75070	Cold Recycled Asphalt Mix Design: 2 gradings each, 3 emulsion content (Caltrans LP-8)	$ 10,500.00
75114	Superpave Mix Design, with Rubber (Excluding Aggregate Quality Tests)	$ 6,600.00
75115	Superpave Mix Design, with Additives (Excluding Aggregate Quality Tests)	$ 5,790.00

Task Code	Brick Masonry Tests, ASTM C67	Rate
20301	Modulus of Rupture: Flexural	$ 90.00
20303	Compression Strength	$ 55.00
20305	Absorption: 5 Hour or 24 Hour	$ 60.00
20307	Absorption (Boil): 1, 2 or 5 Hours	$ 90.00
20309	Initial Rate of Absorption	$ 50.00
20311	Efflorescence	$ 70.00
20313	Cores: Compression	$ 65.00
20315	Shear Test on Brick Cores: 2 Faces	$ 90.00

Task Code	Concrete Block, ASTM C140	Rate
20321	Compression	$ 85.00
20323	Absorption/Moisture Content/Oven Dry Density	$ 85.00
20327	Linear Shrinkage (ASTM C426)	$ 225.00
20335	Web and Face Shell Measurements	$ 45.00
20329	Tension Test	$ 155.00
20331	Core Compression	$ 65.00
20333	Shear Test of Masonry Cores: 2 Faces	$ 90.00
20339	Efflorescence Tests	$ 70.00

Task Code	Masonry Prisms, ASTM C1314	Rate
20341	Compression Test: Composite Masonry Prisms Up To 8" x 16"	$ 190.00
20343	Compression Test: Composite Masonry Prisms Larger Than 8" x 16"	$ 250.00
20346	Prism Cord Modulus of Elasticity	$ 540.00
20347	Prism Cord Modulus of Elasticity with Transverse Strain (for double-wythe specimen)	$ 665.00

Task Code	Mortar and Grout	Rate
20351	Compression: 2" x 4" Mortar Cylinders (ASTM C780)	$ 55.00
20353	Compression: 3" x 3" x 6" Grout Prisms, Includes Trimming (ASTM C1019)	$ 40.00
20355	Compression: 2" Cubes (ASTM C109)	$ 55.00
20357	Compression: Cores (ASTM C42)	$ 65.00

Task Code	Masonry Specimen Preparation	Rate
20155	Cutting of Cubes or Prisms	$ 65.00

Task Code	Fireproofing Tests	Rate
20401	Oven Dry Density (ASTM E605)	$ 70.00

Task Code	Gunite and Shotcrete Tests	Rate
20361	Core Compression Including Trimming (ASTM C42)	$ 65.00
20365	Compression: Cubes (Includes Saw Cutting)	$ 65.00

Task Code	Concrete Roof Fill: Gypsum, Vermiculite, Perlite, Lightweight Insulating Concrete, Etc.	Rate
20371	Compression Test (ASTM C495 and C472)	$ 55.00
20373	Air Dry Density (ASTM C472)	$ 40.00
20379	Oven Dry Density (ASTM C495)	$ 65.00

Task Code	Reinforcing Steel, ASTM A615, A706	Rate
20501	Tensile Test: # 11 or Smaller	$ 60.00
20503	Bend Test: # 11 or Smaller	$ 55.00
20504	Bend Test #14 or #18	$ 350.00
20505	Tensile Test: # 14	$ 240.00
20507	Tensile Test: # 18	$ 340.00

Task Code	Reinforcing Steel - Welded or Coupled Specimens	Rate
20521	Tensile Test: Welded/Coupled #11 and Smaller	$ 70.00
20523	Tensile Test: Welded/Coupled #14	$ 250.00
20525	Tensile Test: Welded/Coupled #18	$ 375.00
20529	Weld: Macroetch	$ 75.00
20531	Slippage Test - Caltrans (CTM 670)	$ 200.00
20532	Tensile Test: Welded Hoops #11 and Smaller	$ 145.00

Task Code	Metal and Steel Testing	Rate
20601	Tensile Strength: Up to 100K Pounds (Each)	$ 65.00
20603	Tensile Strength: Up to 200K Pounds (Each)	$ 75.00
20605	Tensile Strength: Up to 300K Pounds (Each)	$ 90.00
20607	Tensile Strength: Up to 400K Pounds (Each)	$ 140.00
20609	Tensile Strength: 400K to 600K Pounds (Each)	$ 350.00
20611	Tensile Strength: Stress-Strain Percent Offset	$ 175.00
20545	Weld: Macroetch	$ 75.00
20547	Weld: Fracture	$ 40.00
20615	Bend Test	$ 55.00
20617	Flattening Test	$ 70.00
20619	Hardness Test (ASTM E18)	$ 80.00
20630	Bolt: Axial Tensile Test (Up to 7/8" diameter)	$ 50.00
20631	Bolt: Wedge Tensile Test (Up to 7/8" diameter)	$ 65.00
20632	Bolt: Axial Tensile Test (Greater than 7/8" up to 1" diameter)	$ 70.00
20633	Bolt: Wedge Tensile Test (Greater than 7/8" up to 1" diameter)	$ 90.00
20634	Bolt: Axial Tensile Test (Greater than 1" diameter)	Quotation
20635	Bolt: Wedge Tensile Test (Greater than 1" diameter)	Quotation
20636	Bolt: Proof Load Test (Up to 7/8")	$ 75.00
20637	Bolt: Proof Load Test (Greater than 7/8" up to 1" diameter)	$ 95.00
20638	Bolt: Proof Load Test (Greater than 1")	Quotation
20639	Nut: Proof Load Test (Up to 7/8")	$ 55.00
20640	Nut: Proof Load Test (Greater than 7/8" up to 1" diameter)	$ 75.00
20641	Nut: Proof Load Test (Greater than 1")	Quotation

Task Code	Chemical Testing of Metal and Steel	Rate
80170	Steel Chemical Analysis	$ 160.00
80173	Weight of Galvanized Coating (ASTM A90)	$ 75.00
80176	Epoxy Coating Thickness	$ 80.00

Task Code	Machining and Preparation of Tensile and Bend Sample: Carbon Steel	Rate
20751	Machinist: Initial Preparation from Mock-up, Etc. (Per Hour)	$ 95.00
20753	Sawcut to Overall Width (Per 0.5" Thickness or Fraction Thereof)	$ 50.00
		$ 55.00
20755	Machine to Test Configuration: Milled Specimens	$ 70.00
20757	Machine to Test Configuration: Turned Specimens (Per 0.5" Thickness or Fraction Thereof)	$ 135.00
20759	Prepare Subsize Specimens (Per 0.5" Thickness or Fraction Thereof)	$ 85.00

Task Code	Charpy Impact	Rate
20621	Charpy Impact Ambient Temperature	$ 90.00
20623	Charpy Impact Reduced Temperature	$ 110.00

Task Code	Machining of Charpy Samples: Carbon Steel	Rate
20780	Cutting and Milling (Per 0.5" or Fraction Thereof)	$ 80.00
20783	Final Machining to Sample Configuration	$ 90.00

Task Code	Prestressing Wires and Tendons, (ASTM A416)	Rate
20701	Stress-Strain Analysis: Wire or Strands (Including Chart and Percent Offset)	$ 180.00
20703	Tensile Test Only	$ 135.00
20705	Tendons	Quotation

Task Code	Polymer Matrix Composite Materials (Fiberwrap)	Rate
20706	Tensile Strength – Set of 5 Specimens/batch/ direction (ASTM D3039)	$ 1,350.00
20707	Tensile Strength – Additional Specimens (ASTM D3039)	$ 250.00
20708	Heating Chamber Time – Per 24 hr period	$ 95.00

Task Code	Calibration Services and Universal Machine Usage	Rate
20801	Calibration/Verification Services	Quotation
20803	Universal Test Machine Usage (Per Hour)	$ 350.00

Ceramic Tile Testing Division	Rate

The Ceramic Tile Institute of America (CTIOA) and Twining worked together to advance and develop technology designed to enhance the quality of materials and workmanship in the ceramic tile industry. A separate schedule of fees for these services is available upon request.

Cyclic and Fatigue Testing Programs on Special Products/Parts	Quotation
Engineering and Technical supports/Design of Prototypes and Special Test Set-Up	Quotation
Fastener/Coupling Full Testing Program Per New Regulations: Tension, Tension/Bend, Shear, Double Shear, & Compressions	Quotation
Fiberglass/Composite Materials Field Testing Program (ASTM D1143 D1242, D2584, D4065, D4476, D4923, D7901, D7921, and D732)	Quotation
Field Testing of Structures and Structural Elements	Quotation
In-Place Shear Testing	Quotation
Materials and/or Product Evaluation Per Specifications	Quotation
Structural Dynamic Testing and Durability Analysis	Quotation

General Conditions

NOTE: Field inspection work conditions are established by contract with Operating Engineers, Local 12.
NOTE: A minimum of 24 hours notice is required for testing and inspection services.
NOTE: For projects subject to a Project Labor Agreement (PLA), if terms/conditions of the PLA are more restrictive those terms/conditions will apply.
NOTE: Rates will be adjusted annually each July 1st to reflect increased costs.

Administrative Fees

All administrative costs including report distribution and Twining ConstructionHive system are billed at the following percentage of the monthly invoice total: 4%
Note that hard copies of reports will be sent only to governing jurisdictions that mandate them. All other parties will receive reports electronically. The administrative fee above will receive reports electronically. The administrative fee above will be increased by 1% if additional hard copies of reports are requested.

Minimum Charges (Inspection and Technician Personnel Only - Other Personnel Charged on Portal to Portal Basis)

2-Hour Minimum: Inspector arrives at jobsite, no work to perform.
4-Hour Minimum: 1 to 4 hours of inspection
8-Hour Minimum: Over 4 to 8 hours of inspection

Regular Time

The first 8 hours worked Monday through Friday between 5:00 a.m. and 5:00 p.m.

Time and One-Half (All Types of Inspection)

All shifts will be billed based on the time and date of their start. Any increment past 8 hours through 12 hours worked Monday through Friday and the first 12 hours on Saturday. Time and one-half will also be charged for the first four hours before 5:00 a.m. and after 5:00 p.m.

Double Time (All Types of Inspection)

All shifts will be billed based on the time and date of their start. After the first 12 hours worked Monday through Saturday, all day Sunday, holidays, and the first Saturday following the first Friday in June and December. After the first four hours worked before 5:00 a.m. and after 5:00 p.m. Holidays are New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving, the day after Thanksgiving and Christmas Day.

Meal Period

When personnel are required by their duties to work more than five consecutive hours without a one-half hour uninterrupted meal period, one half hour at double time rate will be charged in addition to any applicable overtime for actual hours worked.

Shift Differential (Applies to Regularly Scheduled Shifts Only)

A $1.00 per hour shift differential premium will be charged for all inspection hours that fall outside of the 5:00 a.m. to 5:00 p.m. time period. Twining will require 48-hour notice along with the General Contractors approved shift letter prior to beginning a shift that will include hours falling outside this time period. Should this notice not be provided, all work performed on that shift will be billed at the applicable overtime or double time rate.

If three shifts per day are required, the first shift will be billed at the standard rate. The second shift shall be billed in accordance with the previous paragraph.
The third shift shall be billed at 8 hours for the first 6 1/2 hours worked and appropriate overtime or double time for all hours thereafter.

Travel Time and Mileage

For projects outside a 50-mile radius from the nearest Twining facility, $0.70 per excess mile to and from the project will be charged for inspectors and technicians.
Other than small tools, whenever project related equipment is required to be transported to and from the project site, time and mileage for inspectors and field technicians will be billed on a portal to portal basis. For all projects, $0.70 per mile rate and applicable travel time will be charged portal to portal for engineers, consultants, supervisors, and laboratory technicians from the laboratory to the project site and return.

For work locations located 100 miles or more from Twining, travel time will be charged at the relevant rate for inspectors and technicians in addition to a subsistence allowance.

Weekend Sample Pick-Ups

In order to be in strict conformance with testing standards, it may be required that weekend pick-ups be performed (e.g. concrete specimens cast on Friday must be picked up on weekend in order to be in conformance with ASTM C31 requiring specimens to be moved to their final curing location within 48 hours of casting.) Applicable charges for weekend work will apply when this is required. Should these charges not be authorized, Twining will not be liable for any negative consequences.

Reimbursable Expenses

Parking, air fare, car rental, food and lodging, etc. will be charged at cost plus 20% per processed invoice, unless provided by client.

Project Specific Documents

Costs presented assume that client will provide project specific documents (plans, specifications, submittals, RFIs, etc.) for all inspection personnel. Should project specific documents be provided electronically through a "for fee" service, the client will be responsible for providing access and paying any fees for the service.

Project Site Facilities

Prices quoted assume that initial curing facilities for test samples that comply with relevant test standards and project requirements are provided by others. In addition, prices quoted assume that work/desk space for inspection staff are provided by others. Additional costs will apply should Twining be required to provide such facilities.

Subsistence

Subsistence on remote jobs will be charged per quotation.

Laboratory Testing Hours

Please note that laboratory testing will be billed on an hourly basis for non-standard tests. If testing is required to be performed on Saturdays, Sundays, holidays, or before 5:30 a.m. or after 4:00 p.m. on weekdays, an additional hourly charge with a minimum of one hour will be applied for the laboratory technician. 1.5 x regular test rate will be charged for rush testing.

Charges for Subcontracted Services

Material sent to outside laboratory for testing:	Cost plus 20%
Material sent to outside fabricator or machine shop:	Cost plus 20%
Glu-Lam beam inspection:	Cost plus 20%
Other subcontractors:	Cost plus 20%
Project exclusive equipment purchase:	Cost plus 20%

General Conditions, continued

Limit of Liability
Client agrees to limit Twining's aggregate liability to all entities for alleged or actual errors and omissions in the performance of its professional services under this agreement to $50,000.00 or the fees actually paid to Twining, whichever amount is greater. Higher limits may be available by quotation.

Certified Payroll
Certified payroll will be provided, upon request, at an additional charge of $150.00/month. Fee applies to every month that certified payroll must be submitted regardless of whether or not services were provided for any given month.

Final Reports Required by Jurisdiction
If a final report or affidavit is required, we must first review all inspection and testing reports and clear up any unresolved issues on these reports. These issues will typically require approval by the engineer or architect of record. This process can take several weeks or just a day, depending on the number and complexity of the issues. Cost for final reports will be billed hourly.

Terms of Payment
Fees charged are for professional and technical services and are due upon presentation. If not paid within 30 days from date of invoice, they are considered past due and the maximum legal finance charge will be added to the unpaid balance.

A 3% fee will be applied for payments processed by credit card.

All invoice errors or necessary corrections shall be brought to the attention of Twining within 15 days of receipt of invoice. Thereafter, customer acknowledges invoices are correct and valid. Twining reserves the right to terminate its services to a customer without notice if all invoices are not current. Upon such termination of services, the entire amount accrued for all services performed shall immediately become due and payable. Customer waives any and all claims against Twining, its subsidiaries, affiliates, servants and agents for termination of work on account of these terms.

In the event of any litigation arising from or related to any agreement to provide services whether verbal or written, the prevailing party shall be entitled to recover from the non-prevailing party all reasonable costs incurred, including staff time, court costs, attorney's fees and all other related expenses in such litigation. Additionally, in the event of a non-adjudicative settlement of litigation between the parties or a resolution of dispute by arbitration, that same process shall determine the prevailing party.

Hold Specimens
All held specimens submitted by the client are charged at the same applicable test rate whether tested or not.

Specimen Disposal
Specimens will be discarded after testing unless Twining has been notified prior to testing that the customer wishes to retrieve the specimens or storage arrangements are made.

Oversize Specimens
An extra charge will be made when test specimens require more than one person to handle because of size or weight.

Elevated Work Platforms
In the event an elevated work platform is required to safely complete our inspections, the client must provide safe access, including a trained and certified operator, to Twining inspection and testing personnel.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 2/3/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER AssuredPartners Design Professionals Insurance Services, LLC 3697 Mt. Diablo Blvd Suite 230 Lafayette CA 94549 License#: 6003745	**CONTACT NAME:** Cheryl Boden **PHONE (A/C, No, Ext):** 714-427-6810 **FAX (A/C, No):** 714-427-6818 **E-MAIL ADDRESS:** cheryl.boden@assuredpartners.com
INSURED Twining, Inc. PO BOX 47 Long Beach CA 90801 TWININC-01	**INSURER(S) AFFORDING COVERAGE** — **NAIC #** **INSURER A :** Great Midwest Insurance Company — 18694 **INSURER B :** Travelers Property Casualty Company of America — 25674 **INSURER C :** Starstone National Insurance Company — 25496 **INSURER D :** **INSURER E :** **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** 1024984966 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
B	X **COMMERCIAL GENERAL LIABILITY** CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY [X] PRO-JECT [ ] LOC OTHER:	Y	Y	630-1E077052	2/1/2022	2/1/2023	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG $	$ 1,000,000 $ 300,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
B	**AUTOMOBILE LIABILITY** X ANY AUTO OWNED AUTOS ONLY / SCHEDULED AUTOS X HIRED AUTOS ONLY / X NON-OWNED AUTOS ONLY	Y	Y	810-4L111617	2/1/2022	2/1/2023	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) $	$ 1,000,000 $ $ $ $
B	X **UMBRELLA LIAB** X OCCUR **EXCESS LIAB** CLAIMS-MADE DED RETENTION $	Y	Y	CUP-0J750759	2/1/2022	2/1/2023	EACH OCCURRENCE AGGREGATE $	$ 2,000,000 $ 2,000,000 $
C	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** Y/N ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [ ] N/A **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below		Y	T10190480	2/1/2022	2/1/2023	X PER STATUTE / OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
A	Professional Liability Claims Made			AE-GM-0000066-02	2/1/2022	2/1/2023	$2,000,000 $2,000,000	per claim annl. aggr.

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Umbrella policy is a follow-form to underlying General Liability/Auto Liability/Employers Liability.
Re: Proposal #21-0901, City of La Habra On-Call Geotechnical Investigation & Materials Testing. The City of La Habra, its elected officials, officers, employees, volunteers, boards, agents and representatives are named as an additional insured as respects general and automobile liability as required per written contract or agreement. General Liability is Primary/Non-Contributory per policy form wording. Auto Liability is Primary per policy form wording. Insurance coverage includes waiver of subrogation per the attached endorsement(s). ***Umbrella policy is a follow-form to underlying General Liability/Auto Liability/Employers Liability***

CERTIFICATE HOLDER

The City of La Habra
Attn: Lydia Ramirez
110 E. La Habra Blvd.
La Habra CA 90631

CANCELLATION 30 Day Notice of Cancellation

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

OTHER INSURANCE – ADDITIONAL INSUREDS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

PROVISIONS

COMMERCIAL GENERAL LIABILITY CONDITIONS (Section **IV**), Paragraph **4.** (**Other Insurance**), is amended as follows:

1. The following is added to Paragraph **a. Primary Insurance:**

   However, if you specifically agree in a written contract or written agreement that the insurance provided to an additional insured under this Coverage Part must apply on a primary basis, or a primary and non-contributory basis, this insurance is primary to other insurance that is available to such additional insured which covers such additional insured as a named insured, and we will not share with that other insurance, provided that:

   a. The "bodily injury" or "property damage" for which coverage is sought occurs; and

   b. The "personal injury" or "advertising injury" for which coverage is sought arises out of an offense committed

   subsequent to the signing and execution of that contract or agreement by you.

2. The first Subparagraph **(2)** of Paragraph **b. Excess Insurance** regarding any other primary insurance available to you is deleted.

3. The following is added to Paragraph **b. Excess Insurance**, as an additional subparagraph under Subparagraph **(1)**:

   That is available to the insured when the insured is added as an additional insured under any other policy, including any umbrella or excess policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

BLANKET ADDITIONAL INSURED – AUTOMATIC STATUS IF REQUIRED BY WRITTEN CONTRACT (CONTRACTORS)

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

The following is added to **SECTION II – WHO IS AN INSURED**:

Any person or organization that:

a. You agree in a written contract or agreement to include as an additional insured on this Coverage Part; and

b. Has not been added as an additional insured for the same project by attachment of an endorsement under this Coverage Part which includes such person or organization in the endorsement's schedule;

is an insured, but:

a. Only with respect to liability for "bodily injury" or "property damage" that occurs, or for "personal injury" caused by an offense that is committed, subsequent to the signing of that contract or agreement and while that part of the contract or agreement is in effect; and

b. Only as described in Paragraph **(1)**, **(2)** or **(3)** below, whichever applies:

(1) If the written contract or agreement specifically requires you to provide additional insured coverage to that person or organization by the use of:

(a) The Additional Insured – Owners, Lessees or Contractors – (Form B) endorsement CG 20 10 11 85; or

(b) Either or both of the following: the Additional Insured – Owners, Lessees or Contractors – Scheduled Person Or Organization endorsement CG 20 10 10 01, or the Additional Insured – Owners, Lessees or Contractors – Completed Operations endorsement CG 20 37 10 01;

the person or organization is an additional insured only if the injury or damage arises out of "your work" to which the written contract or agreement applies;

(2) If the written contract or agreement specifically requires you to provide additional insured coverage to that person or organization by the use of:

(a) The Additional Insured – Owners, Lessees or Contractors – Scheduled Person or Organization endorsement CG 20 10 07 04 or CG 20 10 04 13, the Additional Insured – Owners, Lessees or Contractors – Completed Operations endorsement CG 20 37 07 04 or CG 20 37 04 13, or both of such endorsements with either of those edition dates; or

(b) Either or both of the following: the Additional Insured – Owners, Lessees or Contractors – Scheduled Person Or Organization endorsement CG 20 10, or the Additional Insured – Owners, Lessees or Contractors – Completed Operations endorsement CG 20 37, without an edition date of such endorsement specified;

the person or organization is an additional insured only if the injury or damage is caused, in whole or in part, by acts or omissions of you or your subcontractor in the performance of "your work" to which the written contract or agreement applies; or

(3) If neither Paragraph **(1)** nor **(2)** above applies:

(a) The person or organization is an additional insured only if, and to the extent that, the injury or damage is caused by acts or omissions of you or your subcontractor in the performance of "your work" to which the written contract or agreement applies; and

(b) Such person or organization does not qualify as an additional insured with respect to the independent acts or omissions of such person or organization.

The insurance provided to such additional insured is subject to the following provisions:

a. If the Limits of Insurance of this Coverage Part shown in the Declarations exceed the minimum limits required by the written contract or agreement, the insurance provided to the additional insured will be limited to such minimum required limits. For the purposes of determining whether

this limitation applies, the minimum limits required by the written contract or agreement will be considered to include the minimum limits of any Umbrella or Excess liability coverage required for the additional insured by that written contract or agreement. This provision will not increase the limits of insurance described in Section **III** – Limits Of Insurance.

b. The insurance provided to such additional insured does not apply to:

(1) Any "bodily injury", "property damage" or "personal injury" arising out of the providing, or failure to provide, any professional architectural, engineering or surveying services, including:

(a) The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders or change orders, or the preparing, approving, or failing to prepare or approve, drawings and specifications; and

(b) Supervisory, inspection, architectural or engineering activities.

(2) Any "bodily injury" or "property damage" caused by "your work" and included in the "products-completed operations hazard" unless the written contract or agreement specifically requires you to provide such coverage for that additional insured during the policy period.

c. The additional insured must comply with the following duties:

(1) Give us written notice as soon as practicable of an "occurrence" or an offense which may result in a claim. To the extent possible, such notice should include:

(a) How, when and where the "occurrence" or offense took place;

(b) The names and addresses of any injured persons and witnesses; and

(c) The nature and location of any injury or damage arising out of the "occurrence" or offense.

(2) If a claim is made or "suit" is brought against the additional insured:

(a) Immediately record the specifics of the claim or "suit" and the date received; and

(b) Notify us as soon as practicable and see to it that we receive written notice of the claim or "suit" as soon as practicable.

(3) Immediately send us copies of all legal papers received in connection with the claim or "suit", cooperate with us in the investigation or settlement of the claim or defense against the "suit", and otherwise comply with all policy conditions.

(4) Tender the defense and indemnity of any claim or "suit" to any provider of other insurance which would cover such additional insured for a loss we cover. However, this condition does not affect whether the insurance provided to such additional insured is primary to other insurance available to such additional insured which covers that person or organization as a named insured as described in Paragraph **4.**, Other Insurance, of Section **IV** – Commercial General Liability Conditions.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

BUSINESS AUTO EXTENSION ENDORSEMENT

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM

GENERAL DESCRIPTION OF COVERAGE – This endorsement broadens coverage. However, coverage for any injury, damage or medical expenses described in any of the provisions of this endorsement may be excluded or limited by another endorsement to the Coverage Part, and these coverage broadening provisions do not apply to the extent that coverage is excluded or limited by such an endorsement. The following listing is a general coverage description only. Limitations and exclusions may apply to these coverages. Read all the provisions of this endorsement and the rest of your policy carefully to determine rights, duties, and what is and is not covered.

PROVISIONS

A. BROAD FORM NAMED INSURED

The following is added to Paragraph **A.1.**, **Who Is An Insured**, of **SECTION II – COVERED AUTOS LIABILITY COVERAGE**:

Any organization you newly acquire or form during the policy period over which you maintain 50% or more ownership interest and that is not separately insured for Business Auto Coverage. Coverage under this provision is afforded only until the 180th day after you acquire or form the organization or the end of the policy period, whichever is earlier.

B. BLANKET ADDITIONAL INSURED

The following is added to Paragraph **c.** in **A.1.**, **Who Is An Insured**, of **SECTION II – COVERED AUTOS LIABILITY COVERAGE**:

Any person or organization who is required under a written contract or agreement between you and that person or organization, that is signed and executed by you before the "bodily injury" or "property damage" occurs and that is in effect during the policy period, to be named as an additional insured is an "insured" for Covered Autos Liability Coverage, but only for damages to which this insurance applies and only to the extent that person or organization qualifies as an "insured" under the Who Is An Insured provision contained in Section **II**.

C. EMPLOYEE HIRED AUTO

1. The following is added to Paragraph **A.1.**, **Who Is An Insured**, of **SECTION II – COVERED AUTOS LIABILITY COVERAGE**:

   An "employee" of yours is an "insured" while operating an "auto" hired or rented under a contract or agreement in an "employee's" name, with your permission, while performing duties related to the conduct of your business.

2. The following replaces Paragraph **b.** in **B.5.**, **Other Insurance**, of **SECTION IV – BUSINESS AUTO CONDITIONS**:

   b. For Hired Auto Physical Damage Coverage, the following are deemed to be covered "autos" you own:

   (1) Any covered "auto" you lease, hire, rent or borrow; and

   (2) Any covered "auto" hired or rented by your "employee" under a contract in an "employee's" name, with your

permission, while performing duties related to the conduct of your business.

However, any "auto" that is leased, hired, rented or borrowed with a driver is not a covered "auto".

D. EMPLOYEES AS INSURED

The following is added to Paragraph **A.1.**, **Who Is An Insured**, of **SECTION II – COVERED AUTOS LIABILITY COVERAGE**:

Any "employee" of yours is an "insured" while using a covered "auto" you don't own, hire or borrow in your business or your personal affairs.

E. SUPPLEMENTARY PAYMENTS – INCREASED LIMITS

1. The following replaces Paragraph **A.2.a.(2)**, of **SECTION II – COVERED AUTOS LIABILITY COVERAGE**:

   (2) Up to $3,000 for cost of bail bonds (including bonds for related traffic law violations) required because of an "accident" we cover. We do not have to furnish these bonds.

2. The following replaces Paragraph **A.2.a.(4)**, of **SECTION II – COVERED AUTOS LIABILITY COVERAGE**:

   (4) All reasonable expenses incurred by the "insured" at our request, including actual loss of earnings up to $500 a day because of time off from work.

F. HIRED AUTO – LIMITED WORLDWIDE COVERAGE – INDEMNITY BASIS

The following replaces Subparagraph **(5)** in Paragraph **B.7.**, **Policy Period, Coverage Territory**, of **SECTION IV – BUSINESS AUTO CONDITIONS**:

(5) Anywhere in the world, except any country or jurisdiction while any trade sanction, embargo, or similar regulation imposed by the United States of America applies to and prohibits the transaction of business with or within such country or jurisdiction, for Covered Autos Liability Coverage for any covered "auto" that you lease, hire, rent or borrow without a driver for a period of 30 days or less and that is not an "auto" you lease, hire, rent or borrow from any of your "employees", partners (if you are a partnership), members (if you are a limited liability company) or members of their households.

(a) With respect to any claim made or "suit" brought outside the United States of America, the territories and possessions of the United States of America, Puerto Rico and Canada:

(i) You must arrange to defend the "insured" against, and investigate or settle any such claim or "suit" and keep us advised of all proceedings and actions.

(ii) Neither you nor any other involved "insured" will make any settlement without our consent.

(iii) We may, at our discretion, participate in defending the "insured" against, or in the settlement of, any claim or "suit".

(iv) We will reimburse the "insured" for sums that the "insured" legally must pay as damages because of "bodily injury" or "property damage" to which this insurance applies, that the "insured" pays with our consent, but only up to the limit described in Paragraph **C.**, Limits Of Insurance, of SECTION II – COVERED AUTOS LIABILITY COVERAGE.

(v) We will reimburse the "insured" for the reasonable expenses incurred with our consent for your investigation of such claims and your defense of the "insured" against any such "suit", but only up to and included within the limit described in Paragraph **C.**, Limits Of Insurance, of SECTION II – COVERED AUTOS LIABILITY COVERAGE, and not in addition to such limit. Our duty to make such payments ends when we have used up the applicable limit of insurance in payments for damages, settlements or defense expenses.

(b) This insurance is excess over any valid and collectible other insurance available to the "insured" whether primary, excess, contingent or on any other basis.

(c) This insurance is not a substitute for required or compulsory insurance in any country outside the United States, its territories and possessions, Puerto Rico and Canada.

You agree to maintain all required or compulsory insurance in any such country up to the minimum limits required by local law. Your failure to comply with compulsory insurance requirements will not invalidate the coverage afforded by this policy, but we will only be liable to the same extent we would have been liable had you complied with the compulsory insurance requirements.

(d) It is understood that we are not an admitted or authorized insurer outside the United States of America, its territories and possessions, Puerto Rico and Canada. We assume no responsibility for the furnishing of certificates of insurance, or for compliance in any way with the laws of other countries relating to insurance.

G. WAIVER OF DEDUCTIBLE – GLASS

The following is added to Paragraph **D., Deductible**, of **SECTION III – PHYSICAL DAMAGE COVERAGE**:

No deductible for a covered "auto" will apply to glass damage if the glass is repaired rather than replaced.

H. HIRED AUTO PHYSICAL DAMAGE – LOSS OF USE – INCREASED LIMIT

The following replaces the last sentence of Paragraph **A.4.b., Loss Of Use Expenses**, of **SECTION III – PHYSICAL DAMAGE COVERAGE**:

However, the most we will pay for any expenses for loss of use is $65 per day, to a maximum of $750 for any one "accident".

I. PHYSICAL DAMAGE – TRANSPORTATION EXPENSES – INCREASED LIMIT

The following replaces the first sentence in Paragraph **A.4.a., Transportation Expenses**, of **SECTION III – PHYSICAL DAMAGE COVERAGE**:

We will pay up to $50 per day to a maximum of $1,500 for temporary transportation expense incurred by you because of the total theft of a covered "auto" of the private passenger type.

J. PERSONAL PROPERTY

The following is added to Paragraph **A.4., Coverage Extensions**, of **SECTION III – PHYSICAL DAMAGE COVERAGE**:

Personal Property

We will pay up to $400 for "loss" to wearing apparel and other personal property which is:

(1) Owned by an "insured"; and

(2) In or on your covered "auto".

This coverage applies only in the event of a total theft of your covered "auto".

No deductibles apply to this Personal Property coverage.

K. AIRBAGS

The following is added to Paragraph **B.3., Exclusions**, of **SECTION III – PHYSICAL DAMAGE COVERAGE**:

Exclusion **3.a.** does not apply to "loss" to one or more airbags in a covered "auto" you own that inflate due to a cause other than a cause of "loss" set forth in Paragraphs **A.1.b.** and **A.1.c.**, but only:

a. If that "auto" is a covered "auto" for Comprehensive Coverage under this policy;

b. The airbags are not covered under any warranty; and

c. The airbags were not intentionally inflated.

We will pay up to a maximum of $1,000 for any one "loss".

L. NOTICE AND KNOWLEDGE OF ACCIDENT OR LOSS

The following is added to Paragraph **A.2.a.**, of **SECTION IV – BUSINESS AUTO CONDITIONS**:

Your duty to give us or our authorized representative prompt notice of the "accident" or "loss" applies only when the "accident" or "loss" is known to:

(a) You (if you are an individual);

(b) A partner (if you are a partnership);

(c) A member (if you are a limited liability company);

(d) An executive officer, director or insurance manager (if you are a corporation or other organization); or

(e) Any "employee" authorized by you to give notice of the "accident" or "loss".

M. BLANKET WAIVER OF SUBROGATION

The following replaces Paragraph **A.5., Transfer Of Rights Of Recovery Against Others To Us**, of **SECTION IV – BUSINESS AUTO CONDITIONS** :

5. Transfer Of Rights Of Recovery Against Others To Us

We waive any right of recovery we may have against any person or organization to the extent required of you by a written contract signed and executed prior to any "accident" or "loss", provided that the "accident" or "loss" arises out of operations contemplated by

such contract. The waiver applies only to the person or organization designated in such contract.

N. UNINTENTIONAL ERRORS OR OMISSIONS

The following is added to Paragraph **B.2., Concealment, Misrepresentation, Or Fraud**, of **SECTION IV – BUSINESS AUTO CONDITIONS**:

The unintentional omission of, or unintentional error in, any information given by you shall not prejudice your rights under this insurance. However this provision does not affect our right to collect additional premium or exercise our right of cancellation or non-renewal.

COMMERCIAL GENERAL LIABILITY

POLICY NUMBER: 630-1E077052 ISSUED DATE: 2/3/2022

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name of Person or Organization:

Any person or organization that you agree in a written contract

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

The TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US Condition (Section IV-COMMERCIAL GENERAL LIABILITY CONDITIONS) is amended by the addition of the following:

We waive any right of recovery we may have against the person or organization shown in the Schedule above because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "products-completed operations hazards." This waiver applies only to the person or organization shown in the Schedule above.

POLICY NUMBER: P-630-1E077052

COMMERCIAL GENERAL LIABILITY ISSUE DATE: 02-01-22

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

TOTAL AGGREGATE LIMIT AND DESIGNATED PROJECT AND LOCATION AGGREGATE LIMITS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE – LIMITS OF INSURANCE AND DESIGNATED PROJECTS AND LOCATIONS

LIMITS OF INSURANCE

Total Aggregate Limit (Other Than Products-Completed Operations)	$ 41,000,000
Designated Project Aggregate Limit (Other Than Products-Completed Operations)	$ 2,000,000
Designated Location Aggregate Limit (Other Than Products-Completed Operations)	$ 2,000,000
General Aggregate Limit (Other Than Products-Completed Operations)	$ 2,000,000

Designated Projects: EACH "PROJECT" FOR WHICH YOU HAVE AGREED, IN A WRITTEN CONTRACT WHICH IS IN EFFECT DURING THIS POLICY PERIOD, TO PROVIDE A SEPARATE GENERAL AGGREGATE LIMIT, PROVIDED THAT THE CONTRACT IS SIGNED AND EXECUTED BY YOU BEFORE THE "BODILY INJURY" OR "PROPERTY DAMAGE" OCCURS.

Designated Locations: EACH PREMISES OWNED BY OR RENTED TO YOU.

PROVISIONS

1. The General Aggregate Limit (Other Than Products-Completed Operations) shown in the Declarations is replaced by the Limits of Insurance shown in the Schedule – Limits Of Insurance And Designated Projects And Locations.

2. The following replaces Paragraph **1.** of **SECTION III – LIMITS OF INSURANCE**:

   1. The Limits of Insurance shown in the Declarations or the Schedule – Limits Of Insurance And Designated Projects And Locations, whichever apply, and the rules below fix the most we will pay regardless of the number of:

   a. Insureds;

   b. Claims made or "suits" brought;

   c. Persons or organizations making claims or bringing "suits"; or

   d. "Projects" or "locations".

3. The following replaces Paragraph **2.** of **SECTION III – LIMITS OF INSURANCE**:

   2. a. The Total Aggregate Limit shown in the Schedule – Limits Of Insurance And Designated Projects And Locations is the most we will pay for the sum of all amounts under the Designated Project Aggregate Limit, all amounts under the Designated Location Aggregate Limit and all amounts under the General Aggregate Limit. This includes:

(1) Damages under Coverage **A**, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard";

(2) Damages under Coverage **B**; and

(3) Medical expenses under Coverage **C**.

b. Subject to the Total Aggregate Limit described in Paragraph **2.a.** above, the Designated Project Aggregate Limit shown in the Schedule – Limits Of Insurance And Designated Projects And Locations applies and is further subject to all of the following provisions:

(1) The Designated Project Aggregate Limit is the most we will pay for the sum of:

(a) Damages under Coverage **A** because of "bodily injury" and "property damage" caused by "occurrences"; and

(b) Medical expenses under Coverage **C** for "bodily injury" caused by accidents;

that can be attributed only to operations at a single "project".

(2) The Designated Project Aggregate Limit applies separately to each "project".

(3) The Designated Project Aggregate Limit does not apply to damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard". Instead, the Products-Completed Operations Aggregate Limit described in Paragraph **3.** below applies to such damages.

(4) The Designated Project Aggregate Limit does not apply to damages under Coverage **B**. Instead, the General Aggregate Limit described in Paragraph **2.d.** below applies to such damages.

(5) Any payments made for damages or medical expenses to which the Designated Project Aggregate Limit applies will reduce:

(a) The Total Aggregate Limit; and

(b) The Designated Project Aggregate Limit for the applicable "project".

Such payments will not reduce the General Aggregate Limit described in Paragraph **2.d.** below, the Designated Project Aggregate Limit for any other "project" or the Designated Location Aggregate Limit.

c. Subject to the Total Aggregate Limit described in Paragraph **2.a.** above, the Designated Location Aggregate Limit shown in the Schedule – Limits Of Insurance And Designated Projects And Locations applies and is further subject to all of the following provisions:

(1) The Designated Location Aggregate Limit is the most we will pay for the sum of:

(a) Damages under Coverage **A** because of "bodily injury" and "property damage" caused by "occurrences"; and

(b) Medical expenses under Coverage **C** for "bodily injury" caused by accidents;

that can be attributed only to operations at a single "location".

(2) The Designated Location Aggregate Limit applies separately to each "location".

(3) The Designated Location Aggregate Limit does not apply to damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard". Instead, the Products-Completed Operations Aggregate Limit described in Paragraph **3.** below applies to such damages.

(4) The Designated Location Aggregate Limit does not apply to damages under Coverage **B**. Instead, the General Aggregate Limit described in Paragraph **2.d.** below applies to such damages.

(5) Any payments made for damages or medical expenses to which the Designated Location Aggregate Limit applies will reduce:

(a) The Total Aggregate Limit; and

(b) The Designated Location Aggregate Limit for the applicable "location".

Such payments will not reduce the General Aggregate Limit described in Paragraph **2.d.** below, the Designated Project Aggregate Limit or the Designated Location Aggregate Limit for any other "location".

d. Subject to the Total Aggregate Limit described in Paragraph **2.a.** above, the General Aggregate Limit shown in the Schedule – Limits Of Insurance And Designated Projects And Locations applies and is further subject to all of the following provisions:

(1) The General Aggregate Limit is the most we will pay for the sum of:

(a) Damages under Coverage **A** because of "bodily injury" and "property damage" caused by "occurrences", and medical expenses under Coverage **C** for "bodily injury" caused by accidents, that cannot be attributed only to operations at a single "project" or a single "location"; and

(b) Damages under Coverage **B**.

(2) The General Aggregate Limit does not apply to damages for "bodily injury" or "property damage" included in the "products-completed operations hazard". Instead, the Products-Completed Operations Aggregate Limit described in Paragraph **3.** below applies to such damages.

(3) Any payments made for damages or medical expenses to which the General Aggregate Limit applies will reduce:

(a) The Total Aggregate Limit; and

(b) The General Aggregate Limit.

Such payments will not reduce the Designated Project Aggregate Limit for any "project" or the Designated Location Aggregate Limit for any "location".

4. The following replaces Paragraph **3.** of **SECTION III – LIMITS OF INSURANCE**:

3. The Products-Completed Operations Aggregate Limit shown in the Declarations is the most we will pay under Coverage **A** for damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard". Any payments made for such damages will not reduce the Total Aggregate Limit, the General Aggregate Limit, the Designated Project Aggregate Limit for any "project" or the Designated Location Aggregate Limit for any "location".

5. The following is added to the **DEFINITIONS** Section, but only for purposes of the Designated Location and Designated Project shown in the Schedule – Limits Of Insurance And Designated Projects And Locations:

"Location" means any designated location shown in the Schedule – Limits Of Insurance And Designated Projects And Locations that is owned by or rented to you. For the purposes of determining the applicable aggregate limit of insurance, each "location" that includes a premises involving the same or connecting lots, or premises whose connection is interrupted only by a street, roadway or waterway, or by a right-of-way of a railroad, will be considered a single "location".

"Project" means any designated project shown in the Schedule – Limits Of Insurance And Designated Projects And Locations that is away from premises owned by or rented to you and at which you are performing operations pursuant to a contract or agreement. For the purposes of determining the applicable aggregate limit of insurance, each "project" that includes a premises involving the same or connecting lots, or premises whose connection is interrupted only by a street, roadway or waterway, or by a right-of-way of a railroad, will be considered a single "project".

COMMERCIAL AUTO

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

BLANKET ADDITIONAL INSURED – PRIMARY AND NON-CONTRIBUTORY WITH OTHER INSURANCE

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM

PROVISIONS

1. The following is added to Paragraph **A.1.c., Who Is An Insured**, of **SECTION II – COVERED AUTOS LIABILITY COVERAGE**:

   This includes any person or organization who you are required under a written contract or agreement between you and that person or organization, that is signed by you before the "bodily injury" or "property damage" occurs and that is in effect during the policy period, to name as an additional insured for Covered Autos Liability Coverage, but only for damages to which this insurance applies and only to the extent of that person's or organization's liability for the conduct of another "insured".

2. The following is added to Paragraph **B.5., Other Insurance** of **SECTION IV – BUSINESS AUTO CONDITIONS**:

   Regardless of the provisions of paragraph a. and paragraph **d.** of this part **5. Other Insurance,** this insurance is primary to and non-contributory with applicable other insurance under which an additional insured person or organization is the first named insured when the written contract or agreement between you and that person or organization, that is signed by you before the "bodily injury" or "property damage" occurs and that is in effect during the policy period, requires this insurance to be primary and non-contributory.

Workers' Compensation and Employers' Liability Insurance Policy
Waiver of Our Right to Recover From Others Endorsement - California
WC 04 03 06

If the following information is not complete, refer to the appropriate Schedule attached to the policy.

Insured: Twining, Inc.

Policy Number T10190480

Producer: Dealey, Renton & Associates

Effective Date 2/1/2022

Schedule

Person or Organization
The City of La Habra
Attn: Lydia Ramirez
110 E. La Habra Blvd.
La Habra CA 90631

Job Description

Additional Premium %

We have the right to recover our payments from anyone liable for an injury- covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

You must maintain payroll records accurately segregating the remuneration of your employees while engaged in the work described in the Schedule.

The additional premium for this endorsement shall be the percentage, as shown in the Schedule applicable to this endorsement, of the California workers' compensation premium otherwise due on such remuneration.

Authorized Representative

EXHIBIT B

TWINING

4811 Airport Plaza Dr.,
Suite 220,
Long Beach, CA 90815

Tel 562.426.3355
Fax 562.426.6424

March 30, 2026

Ms. Allie Walsten
City of La Habra
Engineering Division
110 E. La Habra Boulevard
La Habra, CA 90631

Subject: Request for One-Year Extension of On-Call Geotechnical Investigation and Material Testing Agreement

Dear Ms. Walsten:

Twining, Inc. appreciates the opportunity to continue providing on-call geotechnical investigation and material testing services to the City of La Habra.

Pursuant to the City's request, Twining hereby requests a one-year extension of the current On-Call Geotechnical Investigation and Material Testing Agreement, which is scheduled to expire on June 30, 2026. Twining proposes that the agreement be extended for an additional one-year term from July 1, 2026 through June 30, 2027. The current agreement term runs through June 30, 2026, and compensation is based on the attached schedule of hourly billing rates.

As part of this extension, Twining requests that the attached updated fee schedule be incorporated into the agreement for the extension term. Except for the updated fee schedule, all other terms, conditions, and provisions of the existing agreement shall remain unchanged and in full force and effect.

We appreciate the City's continued confidence in Twining and look forward to supporting the City of La Habra on upcoming public works projects. Please let us know if you would like us to prepare this in any specific City format or if any additional documentation is needed.

Sincerely,

TWNING, INC.

Amir Ghavibazoo, Ph.D, MBA

Director of Infrastructure

Attachment: Updated Fee Schedule

Schedule of Fees 2022 - 2023

NOTE: Rates will be adjusted annually each July 1st to reflect increased costs.

Personnel Rates: Per Hour Unless Otherwise Noted

Task Code	Engineering and Consulting Personnel	Rate
10026	Senior Principal Advisor/Consultant	$ 350.00
10001	Principal Engineer/Geologist	$ 250.00
10017	Metallurgical Engineer	$ 360.00
70000	Registered Geotechnical Engineer	$ 245.00
10010	Technical Advisor	$ 240.00
10011	Material Scientist, Welding/NDT Consultant	$ 250.00
70003	Registered Geologist/Certified Engineering Geologist	$ 245.00
10003	Senior Engineer/Geologist	$ 220.00
10009	Registered Civil Engineer	$ 215.00
60003	Roofing/Waterproofing Consultant	$ 240.00
10013	Project Engineer/Manager	$ 210.00
30000	Quality Control Manager	$ 200.00
10005	Senior Staff Engineer/Geologist	$ 195.00
10007	Staff Engineer/Geologist	$ 190.00
10015	Quality Control Administrator	$ 180.00
10019	Metallurgical Technician	$ 155.00
90001	CADD Operator/Draftsperson	$ 142.00
95103	Office Support/Clerical	$ 100.00
70107	Field Supervisor	$ 175.00
91030	Safety Supervisor	$ 175.00
20000	Laboratory Manager	$ 160.00
98000	Laboratory Technician	$ 135.00
90005	Expert Witness Testimony	$ 590.00
91010	Qualified SWPPP Developer	$ 195.00
91000	Qualified SWPPP Practitioner	$ 180.00
30001	Vibration Engineer	$ 220.00

Task Code	Field Inspection Personnel	Rate
10101	Concrete/Reinforced Steel Inspector	$ 129.00
10103	Prestressed/Post Tensioned Inspector	$ 129.00
10105	Concrete ICC Inspector	$ 129.00
10109	Drilled-In-Anchor Inspector	$ 129.00
10111	Gunite/Shotcrete Inspector	$ 129.00
10113	Masonry Inspector	$ 129.00
10201	Structural Steel/Welding Inspector	$ 129.00
10203	AWS Certified Welding Inspector	$ 129.00
10207	Fireproofing Inspector	$ 129.00
10501	Lead Inspector	$ 132.00
10115	Firestop Special Inspector - IFC Premier	$ 146.00
10117	Firestop Special Inspector - IQP	$ 191.00
70109	L.A. Deputy Grading Inspector	$ 134.00
75001	Asphalt Field and Plant Inspector/Technician	$ 129.00
70103	Pile Driving Inspector	$ 129.00
70101	Soils Technician	$ 129.00
10107	Concrete Quality Control (ACI/Caltrans Technician)	$ 129.00
10122	Wood Framing Inspector	$ 129.00
60001	Roofing/Waterproofing Inspector	$ 136.00
10500	Public Works Inspector	$ 146.00
10515	Mechanical Inspector	$ 154.00
10519	Electrical Inspector	$ 154.00
10521	Plumbing Inspector	$ 154.00
10523	Building Inspector	$ 154.00
30002	Vibration Monitoring Technician	$ 149.00
50003	Field Engineering Technician	$ 129.00

Task Code	Shop Inspection Personnel	Rate
10301	Structural Steel Fabrication Inspector	$ 129.00
10309	Batch Plant Quality Control Technician/Inspector	$ 129.00
10325	Glue-Laminated Fabrication Inspector	Quotation
10328	Pre-Cast Concrete/Pipe Fabrication Inspector	$ 129.00

Task Code	Nondestructive Testing Personnel	Rate
10401	NDE Ultrasonic Testing Technician	$ 135.00
10403	NDE Magnetic Particle Testing Technician	$ 135.00
10405	NDE Dye Penetrant Testing Technician	$ 135.00
10305	Combination NDE Technician/Welding Inspector	$ 135.00
10409	Radiographic Testing (Crew of 2)	$ 360.00
10020	NDE Engineer	$ 230.00

Task Code	Equipment Usage (Daily Unless Otherwise Noted)	Rate
95318	Skidmore	$ 44.00
95309	Torque Wrench, Small	$ 17.00
95312	Torque Wrench, Large	$ 28.00
95315	Torque Multiplier	$ 44.00
95321	Air Meter	$ 22.00
95322	Unit Weight Bucket	$ 33.00
95323	Field Concrete Scale	$ 33.00
95324	Brass Mold	$ 22.00

Task Code	Equipment Usage (Daily Unless Otherwise Noted), Continued	Rate
95343	Nuclear Gauge (Per Hour)	$ 11.00
95319	Sand Cone Density Test Equipment	$ 55.00
95333	Pull Test Equipment	$ 66.00
95348	Concrete/Asphalt Coring Equipment	$ 660.00
95327	Pachometer	$ 61.00
95336	Floor Flatness (Dipstick)	$ 55.00
95330	Schmidt Hammer	$ 33.00
95341	Vapor Emission Test Kits	$ 33.00
95342	Relative Humidity Probe	$ 66.00
95339	UPV (Ultrasonic Pulse Velocity) Meter	$ 385.00
95351	Fireproofing Adhesion/Cohesion (Per Test)	$ 39.00
95300	A Scan Ultrasonic Equipment and Consumables	$ 83.00
95303	Magnetic Particle Equipment and Consumables	$ 44.00
95306	Liquid Penetrant Consumables	$ 39.00
95307	Phased Array Ultrasonic Equipment (Per Hour)	$ 66.00
95347	Ground Penetrating Radar	$ 330.00
95345	Impact Echo	$ 385.00
95362	Ultrasonic Tomography	$ 495.00
95349	Inertial Profiler (Per Hour)	Quotation
95357	Project Dedicated Vehicle	$ 150.00
95364	Roller Compacted Concrete Vibrating Hammer/Tampling Plate	$ 77.00
95367	Half-Cell Potential Equipment Set	$ 385.00
95368	Concrete Electrical Resistivity Meter	$ 176.00
95369	Field Hardness (Steel)	$ 110.00
95370	Coating Thickness Gauge	$ 110.00
95373	Wood Curing Box (One-Time Fee/Per Box)	$ 650.00
95371	Temperature Control Curing Box (Per Month)	$ 500.00
95372	Temperature Matching Curing Box (Per Month)	$ 570.00

Task Code	Specimen Pick-Up	Rate
20102	Standard Sample: Concrete Cylinders (Each)	$ 30.00
20101	Standard Sample: Mortar/Grout Cubes and Cores, Fireproofing, Rebar, and Epoxy Prisms (Each)	$ 30.00
20103	Oversize Sample: Masonry Prisms and Shotcrete Panels (Each)	$ 80.00
20104	Oversize Sample: Flexural Beams (Each)	
20107	Technician for Specimen Pick-Up Not Listed Above (Per Hour, 2-Hour Minimum)	$ 110.00
20109	Technician for Specimen Pick-Up Before 5:00 a.m. or After 5:00 p.m. Monday thru Friday, or All Day Saturday (Per Hour, 2-Hour Minimum Plus Mileage)	$ 165.00

Task Code	Jobsite Trailer, Mobile or On-site Laboratory	Rate
95360	Mobile Laboratory for Rapid Strength Concrete (Per Shift Not Exceeding 12 Hours) All Others by Quotation	$ 600.00

Task Code	Concrete Tests (Field Made Specimens)	Rate
20201	6" x 12" Cylinder: Compression Strength (ASTM C39)	$ 42.00
20202	4" x 8" Cylinder: Compression Strength (ASTM C39)	$ 37.00
20203	Density of Structural Lightweight Concrete Equilibrium Oven Dry Method (ASTM C567)	$ 90.00
20205	Core Compression including Trimming (ASTM C42)	$ 80.00
20207	6" x 6" x 18" Flexural Beams Not Exceeding Referenced Size (ASTM C78, C293 or CTM 523)	$ 110.00
20209	Splitting Tensile Strength (ASTM C496)	$ 100.00
20211	Modulus of Elasticity Test (ASTM C469)	$ 300.00
80003	Rapid Chloride Permeability Test: Cylinders or Cores (ASTM C1202)	$ 550.00
80006	Density, Absorption, and Voids in Hardened Concrete (ASTM C642)	$ 550.00
40005	Flexural Toughness (ASTM C1609, Formerly ASTM C1018)	$ 850.00
40007	Flexural Toughness (ASTM C1550)	$ 500.00
40006	Double Punch Strength of Fiber Reinforced Concrete	$ 550.00
40009	Coefficient of Thermal Expansion of Concrete (CRD 39, AASHTO T336)	$ 600.00
40012	Bulk Electrical Resistivity (ASTM C1876)	$ 150.00

Task Code	Concrete Specimen Preparation	Rate
20151	Sawing of Specimens (Each)	$ 45.00
20157	Coring of Specimens in Lab (Each)	$ 45.00
20159	Grinding of Concrete Below 6000 psi Strength (Each)	$ 65.00
20160	Grinding of Concrete 6000 psi Strength and Above (Each)	$ 95.00

Task Code	Laboratory Trial Batch: Concrete, Cement and Mortar	Rate
30216	Compression Test 4"x8" Cylinders Made and Tested in Laboratory (ASTM C192, C35)	$ 55.00
30217	Compression Test 6"x12" Cylinders Made and Tested in Laboratory (ASTM C192, C35)	$ 65.00

TWINING

Task Code	Laboratory Trial Batch: Concrete, Cement and Mortar, Continued		Rate
30219	6" x 6" x 18" Flexural Beams Made and Tested in Laboratory (ASTM C192, C78)	$	125.00
30223	Splitting Tensile Strength Cylinders Made and Tested in Laboratory (ASTM C192, C496)	$	125.00
30225	Modulus of Elasticity Test Cylinders Made and Tested in Laboratory (ASTM C192, C469)	$	315.00
30227	Density of Structural Lightweight Concrete Made in the Laboratory, Equilibrium or Oven Dry Method (ASTM C567)	$	110.00
30237	Bulk Electrical Resistivity (ASTM C1876)	$	165.00
30201	Laboratory Trial Batch (ASTM C192/Lab Procedure Performance)	$	525.00
30203	Concrete Mixture Design for Preconsruction Evaluation and Backup Data Development	$	300.00
30205	Drying Shrinkage Up to 28 Days: Three 3" x 3" or 4" x 4" Bars, Five Readings Up to 28 Dry Days (ASTM C157)	$	500.00
30230	Additional Reading, Per Set of Three Bars	$	50.00
30231	Storage over Ninety (90) Days, Per Set of Three Bars, Per Month	$	40.00
30207	Setting Time Up to 7 Hours (ASTM C403)	$	180.00
30209	Bleeding (ASTM C232)	$	150.00
30229	Concrete Restrained Expansion (ASTM C878)	$	650.00
20263	Non-Shrink Grout: Height Change after Final Set (ASTM C1090)	$	550.00
20265	Non-Shrink Grout: Height Change at Early Age (ASTM C827)	$	800.00
30232	Cracking Resistance, Set of Three Rings, Laboratory Trial Batching, Test Until Cracking or Up to 28 Days (ASTM 1581)	$	5,750.00
30233	Evaluation of Pre-Packaged Masonry Mortars (ASTM C270)	$	1,200.00
30234	Creep (ASTM C512) (One Age of Loading, 12 Months Duration of Testing)	$	8,000.00

Task Code	Chemical Analysis and Petrographic Examination of Concrete		Rate
80123	Chemical Analysis for Acid Soluble Chlorides (ASTM C1152) (includes sample prep)	$	125.00
80126	Chemical Analysis for Water Soluble Chlorides (ASTM C1218) (includes sample prep)	$	150.00
80193	Chloride Diffusion Coefficient of Cementitious Mixtures by Bulk Diffusion (ASTM C1556)	$	2,600.00
80129	Petrographic Examination of Hardened Concrete, Level II (ASTM 856) (Comprehensive)		
	Each, One Sample	$	2,400.00
	Each, Two or More Samples	$	2,100.00

Task Code	Physical and Chemical Analysis of Cement		Rate
80195	Physical Testing and Chemical Analysis of Portland Cement per Standard Requirements (ASTM C150)	$	1,350.00
80100	Chemical Analysis of Portland Cement per Standard Requirements (ASTM C150)	$	700.00
80103	Physical Testing of Portland Cement per Standard Requirements (ASTM C150)	$	700.00
80194	Physical Testing of Type K Cement, Mortar Expansion (ASTM C806)	$	700.00
80106	Partial Analysis or Specific Physical Tests		Quotation
80110	Sulfates Resistance of Hydraulic Cement (ASTM C1012), 6 Months	$	2,700.00
80111	Sulfates Resistance of Hydraulic Cement (ASTM C1012), 12 months	$	3,000.00

Task Code	Physical and Chemical Analysis of Fly Ash		Rate
80140	Chemical Analysis of Fly Ash per Standard Requirements (ASTM C618)	$	700.00
80143	Physical Testing of Fly Ash per Standard Requirements (ASTM C618)	$	700.00
80146	Partial Analysis or Specific Physical Tests		Quotation
80147	Chemical Analysis and Physical Testing of Fly Ash per Standard Requirements (ASTM C1618)	$	1,350.00
80149	Type 1L Cement (ASTM C595; Excludes Special Properties)	$	1,350.00

Task Code	Physical Testing of Chemical Admixtures for Concrete	Rate
80196	Qualification of Admixture (ASTM C494)	Quotation

Task Code	Soils and Aggregate Tests		Rate
30503	Abrasion: LA Rattler (ASTM C131)	$	200.00
30505	Abrasion: LA Rattler (ASTM C535)	$	210.00
70301	Atterberg Limits/Plasticity Index (ASTM D4318, CTM 204)	$	160.00
70303	California Bearing Ratio Excluding Maximum Density (ASTM D1883): Soil	$	550.00
70304	California Bearing Ratio Excluding Maximum Density (ASTM D1883): Cement-Treated Soil	$	650.00
70344	Cement-Treated Soil/Base Mix Design: Includes Three Trial Cement Contents with Three Unconfined Compressive Strength Specimens per Cement Content	$	3,500.00
70305	Chloride and Sulfate Content (CTM 417, CTM 422)	$	175.00
30403	Clay Lumps and Friable Particles (ASTM C142)	$	200.00
30321	Cleanness Value: 1" x #4 (CTM 227)	$	175.00
30322	Cleanness Value: 1.5" x .75" (CTM 227)	$	275.00
70393	Collapse Potential/Index (ASTM D5333)	$	225.00
70396	Compressive Strength of Molded Soil-Cement Cylinders (ASTM D1633)	$	105.00
70309	Consolidation Test: Full Cycle (ASTM 2435, CTM 219)	$	195.00
70311	Consolidation Test: Time Rate per Load Increment (ASTM D2435, CTM 219)	$	45.00
70313	Corrosivity Series: Sulfate, Cl, pH, Resistivity (CTM 643, 417, and 422)	$	245.00
70315	Crushed/Fractured Particles (ASTM D5821, CTM 205)	$	175.00
70317	Direct Shear Test: Remolded and/or Residual (ASTM D3080)	$	245.00
70319	Direct Shear Test: Undisturbed - Slow [CD] (ASTM D3080)	$	225.00
70321	Direct Shear Test: Undisturbed - Fast [CU] (ASTM D3080)	$	195.00
70378	Durability Index: Per Method - A,B,C, or D (ASTM D3744, CTM 229)	$	210.00
70325	Expansion Index (ASTM D4829, UBC 18-2)	$	170.00
75004	Fine Aggregate Angularity (ASTM C1252, CTM 234, AASHTO T304)	$	190.00
30507	Flat and Elongated Particle (ASTM D4791)	$	240.00
30508	Flat or Elongated Particle (ASTM D4791)	$	210.00
70331	Maximum Density: Methods A/B/C (ASTM D1557, D698, CTM 216)	$	190.00
70333	Maximum Density: Check Point (ASTM D1557, D698)	$	65.00
70335	Maximum Density: AASHTO C [Modified] (AASHTO T-180)	$	195.00
70336	Maximum Index Density: Vibratory Table (ASTM D4253)	$	345.00
70337	Moisture Content (ASTM D2216, CTM 226)	$	25.00
70339	Moisture and Density: Ring Sample (ASTM D2937)	$	30.00
70341	Moisture and Density: Shelby Tube Sample (ASTM D2937)	$	40.00
70340	Moisture-Density Relations of Soil-Cement Mixtures Premixed in the Field (ASTM D558)	$	275.00
70342	Moisture-Density Relations of Soil-Cement Mixtures Mixed in the Lab (ASTM D558)	$	350.00
30401	Organic Impurities (ASTM C40, CTM 213)	$	90.00
70343	Permeability (ASTM D5084)		Quotation
80001	Potential Reactivity: Chemical Method (ASTM C289 - Discontinued Method)	$	650.00
70394	Potential Reactivity: Mortar Bar Expansion Method, 14-Day Exposure (ASTM C1260)	$	900.00
70391	Potential Reactivity: Mortar Bar Expansion Method, 28-Day Exposure (ASTM C1260)	$	950.00
70398	Potential Reactivity: Concrete Bar Expansion Method (ASTM C1293), 12 month	$	2,700.00
70399	Potential Reactivity: Concrete Bar Expansion Method (ASTM C1293), 24 month	$	2,900.00
70397	Potential Reactivity of Aggregate Combination, Non-Standard Method; 14-Day Exposure, Mortar (After ASTM C1567)	$	1,050.00
70392	Potential Reactivity of Aggregate Combination, Non-Standard Method; 28-Day Exposure, Mortar (Sfter ASTM C1567)	$	1,100.00
70345	R-Value: Soil (ASTM 2844, CTM 301)	$	440.00
70347	R-Value: Aggregate Base (ASTM D2844, CTM 301)	$	490.00
70349	Sand Equivalent (ASTM D2419, CTM 217)	$	125.00
70351	Sieve #200 Wash Only (ASTM D1140, CTM 202)	$	90.00
70353	Sieve with Hydrometer: 3/4" Gravel to Clay (ASTM D422, D7928, CTM 203)	$	250.00
70355	Sieve with Hydrometer: Sand to Clay (ASTM D422, D7928, CTM 203)	$	240.00
70357	Sieve Analysis Including Wash (ASTM C136, CTM 202)	$	150.00
70359	Sieve Analysis Without Wash (ASTM C136, CTM 202)	$	120.00
70360	Sieve Analysis: Split Sieve (ASTM C136, CTM 202)	$	240.00
70361	Sieve Analysis Without Wash: With Cobbles (ASTM C136, CTM 202)	$	235.00
70363	Soundness: Sodium or Magnesium Sulfate, 5 Cycles (ASTM C88)	$	450.00
70365	Specific Gravity and Absorption: Coarse (ASTM C127, CTM 206)	$	100.00
70367	Specific Gravity and Absorption: Fine (ASTM C128, CTM 207)	$	165.00
70369	Swell/Settlement Potential: One Dimensional (ASTM D4546)	$	150.00
70371	Triaxial		Quotation
70373	Unconfined Compression (ASTM D2166, CTM 221)	$	190.00
30317	Unit Weight Per Cubic Foot (ASTM C29, CTM 212)	$	125.00
30319	Voids in Aggregate with Known Specific Gravity (ASTM C29, CTM 212)	$	125.00
30411	Lightweight Particles: Coarse, with Two Solutions (ASTM C123)	$	450.00
30412	Lightweight Particles: Fine, with One Solution (ASTM C123)	$	225.00

Task Code	Asphalt Concrete Tests		Rate
75031	HMA Mixing and Preparation	$	129.00
75032	HMA Mixing and Preparation with Aggregate Treatment	$	181.00
75033	Bulk Specific Gravity of Compacted Sample or Core: SSD (ASTM D2726, CTM 308C)	$	57.00
75036	Bulk Specific Gravity of Compacted Sample or Core: Parafin Coated (ASTM D1188 and CTM 308A)	$	83.00
75040	Emulsion Residue, Evaporation (ASTM D244)	$	165.00
75024	Extraction: % Bitumen (ASTM D6307, CTM 382)	$	165.00
75027	Extraction: % Bitumen and Gradation (ASTM D5444, D6307, CTM 202, 382)	$	222.00
75028	Extraction: % Bitumen, Correction Factor (ASTM D6307, CTM 382)	$	361.00

Task Code	Asphalt Concrete Tests, Continued		Rate
75030	Chemical Extraction: % Bitumen and Sieve Analysis (ASTM D2172 Method A or B, ASTM D5444)	$	253.00
75042	Lab Tested Maximum Density: Hveem, 3 briquettes (ASTM D1561, D1188, CTM 304, 308)	$	222.00
75057	Hveem Stabilometer Test, Premixed, 3 briquettes (ASTM D1560, D1561, CTM 304, 366)	$	222.00
75048	Lab Tested Maximum Density: Marshall, 3 Briquettes (ASTM D6926, D2726)	$	217.00
75049	Lab Tested Maximum Density: Marshall 6" Specimen, 3 Briquettes (ASTM D5581, D2726)	$	222.00
75050	Lab Tested Maximum Density: Superpave Gyratory Compacted Briquette, SSD, 1 Briquette (ASTM D6925, D2726)	$	83.00
75052	Lab Tested Maximum Density: Superpave Gyratory Compacted Briquette, Parafin, 1 Briquette (ASTM D1188, D6925)	$	93.00
75051	Maximum Theoretical Specific Gravity [RICE] (ASTM D2041, CTM 309)	$	165.00
75066	Marshall Stability and Flow, Cored Sample, Each (ASTM D6927)	$	83.00
75069	Marshall Stability and Flow, Premixed, 3 Briquettes (ASTM D6926, D6927)	$	237.00
75106	Marshall Stability and Flow, Gyratory Compacted Specimen Pre-Mixed, 3 Briquettes (ASTM D5581, D6925)	$	237.00
75107	Marshall Stability and Flow 6" Specimen, Premixed, 3 Briquettes (ASTM D5581)	$	237.00
75063	Moisture Content (CTM 370)	$	88.00
75005	Wet Track Abrasion Test (ASTM D3910)	$	170.00
75093	Hveem Mix Design (Excluding Aggregate Quality Tests)	$	5,356.00
75096	Hveem Mix Design, with RAP (Excluding Aggregate Quality Tests, RAP Qualification)	$	5,815.00
75099	Hveem Mix Design, with Lime (Excluding Aggregate Quality Tests)	$	9,180.00
75094	Hveem Mix Design Caltrans Untreated Mix (Including Aggregate Quality Tests)	$	6,386.00
75095	Hveem Mix Design Caltrans Lime Treated Mix (Including Aggregate Quality Tests)	$	7,416.00
75084	Marshall Mix Design (Excluding Aggregate Quality Tests)	$	5,356.00
75087	Marshall Mix Design with RAP (Excluding Aggregate Quality Tests)	$	5,815.00
75090	Marshall Mix Design with Lime (Excluding Aggregate Quality Tests)	$	6,386.00
75083	Open Grade Asphalt Concrete Mix Design (ASTM D7064, CTM 368)	$	3,090.00
75109	Superpave Mix Design (Excluding Aggregate Quality Tests)	$	10,918.00
75113	Superpave Mix Design, with RAP (Excluding Aggregate Quality Tests)	$	11,536.00
75114	Superpave Mix Design, with Rubber (Excluding Aggregate Quality Tests)	$	11,536.00
75115	Superpave Mix Design, with Additives (Excluding Aggregate Quality Tests)	$	11,845.00
75075	Effect of Moisture on Asphalt Paving Mixtures, Pre-Mixed (ASTM D4867, AASHTO T283)	$	1,030.00
75111	Hamburg Wheel Track Test, 20,000 Passes, 4 Briquettes (AASHTO T324)	$	1,133.00
75039	Raveling Test of Cold Mixed Emulsified Asphalt (ASTM D7196)	$	206.00
75067	Marshall Stability, Wet Set, 3 Replicates (AASHTO T245)	$	361.00
75068	Marshall Stability, Dry Set, 3 Replicates (AASHTO T245)	$	309.00
75070	Cold Recycled Asphalt Mix Design: 2 Gradings Each, 3 Emulsion Content (Caltrans LP-8)	$	10,815.00

Task Code	Brick Masonry Tests, ASTM C67		Rate
20301	Modulus of Rupture: Flexural	$	100.00
20303	Compression Strength	$	65.00
20305	Absorption: 5 Hour or 24 Hour	$	70.00
20307	Absorption (Boil): 1, 2 or 5 Hours	$	100.00
20309	Initial Rate of Absorption	$	60.00
20311	Efflorescence	$	80.00
20313	Cores: Compression	$	75.00
20315	Shear Test on Brick Cores: 2 Faces	$	100.00

Task Code	Concrete Block, ASTM C140		Rate
20321	Compression	$	90.00
20323	Absorption/Moisture Content/Oven Dry Density	$	90.00
20327	Linear Shrinkage (ASTM C426)	$	250.00
20335	Web and Face Shell Measurements	$	50.00
20329	Tension Test	$	160.00
20331	Core Compression	$	80.00
20333	Shear Test of Masonry Cores: 2 Faces	$	95.00
20339	Efflorescence Tests	$	75.00

Task Code	Masonry Prisms, ASTM C1314		Rate
20341	Compression Test: Composite Masonry Prisms Up to 8" x 16"	$	195.00
20343	Compression Test: Composite Masonry Prisms Up to 8" x 16"	$	260.00
20346	Prism Cord Modulus of Elasticity	$	600.00
20347	Prism Cord Modulus of Elasticity with Transverse Strain (for Double-Wythe Specimen)	$	685.00

Task Code	Mortar and Grout		Rate
20351	Compression: 2" x 4" Mortar Cylinders (ASTM C780)	$	57.00
20353	Compression: 3" x 3" x 6" Grout Prisms, Includes Trimming (ASTM C1019)	$	42.00
20355	Compression: 2" Cubes (ASTM C109)	$	57.00
20357	Compression: Cores Includes Trimming (ASTM C42)	$	77.00

Task Code	Masonry Specimen Preparation		Rate
20155	Cutting of Cubes or Prisms	$	80.00

Task Code	Fireproofing Tests		Rate
20401	Oven Dry Density (ASTM E605)	$	72.00

Task Code	Gunite and Shotcrete Tests		Rate
20361	Core Compression Including Trimming (ASTM C42)	$	80.00
20365	Compression: Cubes (Includes Saw Cutting)	$	98.00

Task Code	Concrete Roof Fill: Gypsum, Vermiculite, Perlite, Lightweight Insulating Concrete, Etc.		Rate
20371	Compression Test (ASTM C495 and C472)	$	70.00
20373	Air Dry Density (ASTM C472)	$	55.00
20379	Oven Dry Density (ASTM C495)	$	80.00

Task Code	Reinforcing Steel, ASTM A615, A706		Rate
20501	Tensile Test: # 11 or Smaller	$	70.00
20503	Bend Test: # 11 or Smaller	$	65.00
20504	Bend Test #14 or #18	$	385.00
20505	Tensile Test: # 14	$	270.00
20507	Tensile Test: # 18	$	370.00

Task Code	Reinforcing Steel - Welded or Coupled Specimens		Rate
20521	Tensile Test: Welded/Coupled #11 and Smaller	$	80.00
20523	Tensile Test: Welded/Coupled #14	$	280.00
20525	Tensile Test: Welded/Coupled #18	$	395.00
20529	Weld: Macroetch	$	90.00
20531	Slippage Test - Caltrans (CTM 670)	$	200.00
20532	Tensile Test: Welded Hoops #11 and Smaller	$	150.00

Task Code	Metal and Steel Testing		Rate
20601	Tensile Strength: Up to 100K Pounds (Each)	$	75.00
20603	Tensile Strength: Up to 200K Pounds (Each)	$	85.00
20605	Tensile Strength: Up to 300K Pounds (Each)	$	110.00
20607	Tensile Strength: Up to 400K Pounds (Each)	$	160.00
20609	Tensile Strength: 400K to 600K Pounds (Each)	$	385.00
20611	Tensile Strength: Stress-Strain Percent Offset	$	225.00
20545	Weld: Macroetch	$	90.00
20547	Weld: Fracture	$	45.00
20615	Bend Test	$	70.00
20617	Flattening Test	$	70.00
20619	Hardness Test (ASTM E18)	$	80.00
20630	Bolt: Axial Tensile Test (Up to 7/8" diameter)	$	65.00
20631	Bolt: Wedge Tensile Test (Up to 7/8" diameter)	$	80.00
20632	Bolt: Axial Tensile Test (Greater than 7/8" Up to 1" diameter)	$	85.00
20633	Bolt: Wedge Tensile Test (Greater than 7/8" Up to 1" diameter)	$	105.00
20634	Bolt: Axial Tensile Test (Greater than 1" diameter)	$	125.00
20635	Bolt: Wedge Tensile Test (Greater than 1" diameter)	$	135.00
20636	Bolt: Proof Load Test (Up to 7/8")	$	90.00
20637	Bolt: Proof Load Test (Greater than 7/8" Up to 1" diameter)	$	110.00
20638	Bolt: Proof Load Test (Greater than 1")	$	130.00
20639	Nut: Proof Load Test (Up to 7/8")	$	70.00
20640	Nut: Proof Load Test (Greater than 7/8" Up to 1" diameter)	$	90.00
20641	Nut: Proof Load Test (Greater than 1")	$	100.00

Task Code	Chemical Testing of Metal and Steel		Rate
80170	Steel Chemical Analysis		Quotation
80173	Weight of Galvanized Coating (ASTM A90)	$	85.00
80176	Epoxy Coating Thickness	$	95.00
80177	Coating Thickness	$	90.00

Task Code	Machining and Preparation of Tensile and Bend Sample: Carbon Steel		Rate
20751	Machinist: Initial Preparation from Mock-Up, Etc. (Per Hour)	$	125.00
20753	Sawcut to Overall Width (Per 0.5" Thickness or Fraction Thereof)	$	60.00
20755	Machine to Test Configuration: Milled Specimens	$	85.00
20757	Machine to Test Configuration: Turned Specimens (Per 0.5" Thickness or Fraction Thereof)	$	155.00
20759	Prepare Subsize Specimens (Per 0.5" Thickness or Fraction Thereof)	$	105.00

Task Code	Charpy Impact		Rate
20621	Charpy Impact Ambient Temperature	$	95.00
20623	Charpy Impact Reduced Temperature	$	125.00

Task Code	Machining of Charpy Samples: Carbon Steel		Rate
20780	Cutting and Milling (Per 0.5" or Fraction Thereof)	$	85.00
20783	Final Machining to Sample Configuration	$	105.00

Task Code	Prestressing Wires and Tendons, (ASTM A416)		Rate
20701	Stress-Strain Analysis: Wire or Strands (Including Chart and Percent Offset)	$	240.00
20703	Tensile Test Only	$	180.00
20705	Tendons		Quotation

Task Code	Polymer Matrix Composite Materials (Fiberwrap)		Rate
20706	Tensile Strength – Set of 5 Specimens/Batch/Direction (ASTM D3039)	$	1,350.00
20707	Tensile Strength – Additional Specimens (ASTM D3039) (ASTM D3039)	$	250.00
20708	Heating Chamber Time – Per 24 hr period	$	95.00

Task Code	Calibration Services and Universal Machine Usage		Rate
20801	Calibration/Verification Services		Quotation
20803	Universal Test Machine Usage (Per Hour)	$	450.00

Ceramic Tile Testing Division	Rate
The Ceramic Tile Institute of America (CTIOA) and Twining worked together to advance and develop technology designed to enhance the quality of materials and workmanship in the ceramic tile industry. A separate schedule of fees for these services is available upon request.	
Cylic and Fatigue Testing Programs on Special Products/Parts	Quotation
Engineering and Technical supports/Design of Prototypes and Special Test Set-Up	Quotation
Fastener/Coupling Full Testing Program Per New Regulations: Tension, Tension/Bend, Shear, Double Shear, 8 Compressions	Quotation
Fiberglass/Composite Materials Field Testing Program (ASTM D1143 D1242, D2584, D4065, D4476, D4923, D7901, D7921, and D732)	Quotation
Field Testing of Structures and Structural Elements	Quotation
In-Place Shear Testing	Quotation
Materials and/or Product Evaluation Per Specifications	Quotation
Structural Dynamic Testing and Durability Analysis	Quotation

General Conditions

NOTE: Field inspection work conditions are established by contract with Operating Engineers, Local 12.
NOTE: A minimum of 24 hours notice is required for testing and inspection services.
NOTE: For projects subject to a Project Labor Agreement (PLA), if the terms and conditions of the PLA are more restrictive than those listed below, PLA terms and conditions will apply.
NOTE: Rates will be adjusted annually each July 1st to reflect increased costs.

Administrative Fees

All administrative costs including report distribution and Twining ConstructionHive system are billed at the following percentage of the monthly invoice total: 4%
Note that hard copies of reports will be sent only to governing jurisdictions that mandate them. All other parties will receive reports electronically. The administrative fee above will receive reports electronically. The administrative fee above will be increased by 1% if additional hard copies of reports are requested.

Minimum Charges (Inspection and Technician Personnel Only - Other Personnel Charged on Portal to Portal Basis)

2-Hour Minimum: Inspector arrives at jobsite, no work to perform.
4-Hour Minimum: 1 to 4 hours of inspection
8-Hour Minimum: Over 4 to 8 hours of inspection

Regular Time (All Types of Inspection and also All Non-Exempt Employees)

The first 8 hours worked Monday through Friday between 5:00 a.m. and 5:00 p.m. except as noted otherwise below.

Time and One-Half (All Types of Inspection and also All Non-Exempt Employees)

All shifts will be billed based on the time and date of their start. Any increment past 8 hours through 12 hours worked Monday through Friday and the first 12 hours on Saturday. Time and one-half will also be charged for the first four hours before 5:00 a.m. and after 5:00 p.m.

Double Time (All Types of Inspection and also All Non-Exempt Employees)

All shifts will be billed based on the time and date of their start. After the first 12 hours worked Monday through Saturday, all day Sunday, and holidays. After the first four hours worked before 5:00 a.m. and after 5:00 p.m. Holidays are New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving, the day after Thanksgiving, and Christmas Day.

Meal Period

When personnel are required by their duties to work more than five consecutive hours without a one-half hour uninterrupted meal period, one half hour at double time rate will be charged in baddition to any applicable overtime for actual hours worked.

Shift Differential (Applies to Regularly Scheduled Shifts Only)

A $1.00 per hour shift differential premium will be charged for all inspection hours that fall outside of the 5:00 a.m. to 5:00 p.m. time period. Twining will require 48-hour notice along with the General Contractors approved shift letter prior to beginning a shift that will include hours falling outside this time period. Should this notice not be provided, all work performed on that shift will be billed at the applicable overtime or double time rate.

If three shifts per day are required, the first shift will be billed at the standard rate. The second shift shall be billed in accordance with the previous paragraph. The third shift shall be billed at 8 hours for the first 6 1/2 hours worked and appropriate overtime or double time for all hours thereafter.

Travel Time and Mileage

For projects outside a 50-mile radius from the nearest Twining facility, per excess mile to and from the project will be charged for inspectors and technicians. Other than small tools, whenever project related equipment is required to be transported to and from the project site, time and mileage for inspectors and field technicians will be billed on a portal to portal basis. For all projects, current IRS mileage rate per mile and applicable travel time will be charged portal to portal for engineers, consultants, supervisors, and laboratory technicians from the laboratory to the project site and return.

For work locations located 100 miles or more from Twining, travel time will be charged at the relevant rate for inspectors and technicians in addition to a subsistence allowance as detailed below.

Weekend Sample Pick-Ups

In order to be in strict conformance with testing standards, it may be required that weekend pick-ups be performed (e.g. concrete specimens cast on Friday must be picked up on weekend in order to be in conformance with ASTM C31 requiring specimens to be moved to their final curing location within 48 hours of casting.) Applicable charges for weekend work will apply when this is required. Should these charges not be authorized, Twining will not be liable for any negative consequences.

Reimbursable Expenses

Parking, air fare, car rental, food, lodging and project specific software/applications (e.g. PlanGrid, Procore, etc.) will be charged at cost plus 20% per processed invoice, unless provided by client.

General Conditions, Continued

Project Specific Documents

Costs presented assume that client will provide project specific documents (plans, specifications, submittals, RFIs, etc.) for all inspection personnel. Should project specific documents be provided electronically through a "for fee" service, the client will be responsible for providing access and paying any fees for the service.

Project Site Facilities

Prices quoted assume that initial curing facilities for test samples that comply with relevant test standards and project requirements are provided by others. In addition, prices quoted assume that work/desk space for inspection staff are provided by others. Additional costs, provided by quotation, will apply should Twining be required to provide such facilities.

Subsistence

Subsistence on remote jobs will be charged per quotation.

Laboratory Testing Hours and Expedited Testing

Please note that laboratory testing will be billed on an hourly basis for non-standard tests. If testing is required to be performed on Saturdays, Sundays, holidays, or before 5:30 a.m. or after 4:00 p.m. on weekdays, an additional hourly charge, at the applicable regular, overtime or doubletime rate, with a minimum of one hour will be applied for the laboratory technician. For rush testing a 50% surcharge in addition to the regular test rate will apply.

Charges for Subcontracted Services

Material sent to outside laboratory for testing:	Cost plus 20%
Material sent to outside fabricator or machine shop:	Cost plus 20%
Glu-Lam beam inspection:	Cost plus 20%
Other subcontractors:	Cost plus 20%
Project exclusive equipment purchase:	Cost plus 20%

Limit of Liability

Client agrees to limit Twining's aggregate liability to all entities for alleged or actual errors and omissions in the performance of its professional services under this agreement to $50,000.00 or the fees actually paid to Twining, whichever amount is greater. Higher limits may be available by quotation.

Certified Payroll

Certified payroll will be provided, upon request, at an additional charge of $150.00/month. Fee applies to every month that certified payroll must be submitted regardless of whether or not services were provided for any given month.

Final Reports Required by Jurisdiction

If a final report or affidavit is required, we must first review all inspection and testing reports and clear up any unresolved issues on these reports. These issues will typically require approval by the engineer or architect of record. This process can take several weeks or just a day, depending on the number and complexity of the issues. Cost for final reports will be billed hourly.

Terms of Payment

Fees charged are for professional and technical services and are due upon presentation. If not paid within 30 days from date of invoice, they are considered past due and the maximum legal finance charge will be added to the unpaid balance.

In addition, should the client require that invoices be submitted through a web based or electronic system, the client will be responsible for all costs associated with the use of the system.

A 3% fee will be applied for payments processed by credit card.

All invoice errors or necessary corrections shall be brought to the attention of Twining within 15 days of receipt of invoice. Thereafter, customer acknowledges invoices are correct and valid. Twining reserves the right to terminate its services to a customer without notice if all invoices are not current. Upon such termination of services, the entire amount accrued for all services performed shall immediately become due and payable. Customer waives any and all claims against Twining, its subsidiaries, affiliates, servants, and agents for termination of work on account of these terms.

In the event of any litigation arising from or related to any agreement to provide services whether verbal or written, the prevailing party shall be entitled to recover from the non-prevailing party all reasonable costs incurred, including staff time, court costs, attorney's fees and all other related expenses in such litigation. Additionally, in the event of a non-adjudicative settlement of litigation between the parties or a resolution of dispute by arbitration, that same process shall determine the prevailing party.

Hold Specimens

All "hold" specimens are charged at the applicable test rate whether tested or not.

Specimen Sampling and Disposal

Twining samples materials used in construction in accordance with standard practices, methods, codes, and relevant project requirements. Representativeness of sampling and same accuracy of testing are subject to the same probabilistic and precision limitations as governing standards, codes and project technical provisions.

Should samples be provided by others Twining cannot warrant or guarantee that material is representative of material that is or will be used in actual construction of the project.

Specimens will be discarded after testing unless Twining has been notified prior to testing that the customer wishes to retrieve the specimens or storage arrangements are made. Costs for storage will be by quotation.

Oversize Specimens

An extra charge will be made when test specimens require more than one person to handle because of size or weight.

Elevated Work Platforms

In the event an elevated work platform is required to safely complete our work, the client must provide safe access for Twining personnel for all required inspection, testing, sampling, etc. including a trained and certified operator or qualified inspector as applicable. Twining will not be responsible for signing waivers associated with providing such access. Should Twining be required to supply an elevated work platform, we will contract with a qualified vendor and the markups shown above will apply.