OFFICE OF THE CITY ATTORNEY
CHARLES PARKIN, City Attorney
411 West Ocean Boulevard, 9th Floor
Long Beach, CA 90802-4664

AGREEMENT

36324

THIS AGREEMENT is made and entered, as of August 3, 2022, for reference purposes only, pursuant to a minute order adopted by the City Council of the City of Long Beach at its meeting on August 2, 2022, by and between ARCADIS U.S., INC., a Delaware corporation ("Consultant"), with a place of business at 445 S. Figueroa Street, Suite 3650, Los Angeles, California 90071, and the CITY OF LONG BEACH, a municipal corporation ("City").

WHEREAS, City requires specialized services requiring unique skills to be performed in connection with construction management and inspection services for the Belmont Beach and Aquatics Center Project ("Project"); and

WHEREAS, City has selected Consultant in accordance with City's administrative procedures and City has determined that Consultant and its employees are qualified, licensed, if so required, and experienced in performing these specialized services; and

WHEREAS, City desires to have Consultant perform these specialized services, and Consultant is willing and able to do so on the terms and conditions in this Agreement;

NOW, THEREFORE, in consideration of the mutual terms, covenants, and conditions in this Agreement, the parties agree as follows:

1. SCOPE OF WORK OR SERVICES.

A. Consultant shall furnish specialized services more particularly described in Exhibit "A", attached to this Agreement and incorporated by this reference, in accordance with the standards of the profession, and City shall pay for these services in the manner described below, in a not to exceed amount of Six Million Five Hundred Five Thousand Dollars ($6,505,000) with a ten percent (10%) contingency in the amount of Six Hundred Fifty Thousand Five Hundred Dollars ($650,500) for a total not to exceed agreement amount of Seven Million One

Hundred Fifty-Five Thousand Five Hundred Dollars ($7,155,500), at the rates or charges shown in Exhibit "B".

B. The City's obligation to pay the sum stated above for any one fiscal year shall be contingent upon the City Council of the City appropriating the necessary funds for such payment by the City in each fiscal year during the term of this Agreement. For the purposes of this Section, a fiscal year commences on October 1 of the year and continues through September 30 of the following year. In the event that the City Council of the City fails to appropriate the necessary funds for any fiscal year, then, and in that event, the Agreement will terminate at no additional cost or obligation to the City.

C. Consultant may select the time and place of performance for these services; provided, however, that access to City documents, records and the like, if needed by Consultant, shall be available only during City's normal business hours and provided that milestones for performance, if any, are met.

D. Consultant has requested to receive regular payments. City shall pay Consultant in due course of payments following receipt from Consultant and approval by City of invoices showing the services or task performed, the time expended (if billing is hourly), and the name of the Project. Consultant shall certify on the invoices that Consultant has performed the services in full conformance with this Agreement and is entitled to receive payment. Each invoice shall be accompanied by a progress report indicating the progress to date of services performed and covered by the invoice, including a brief statement of any Project problems and potential causes of delay in performance, and listing those services that are projected for performance by Consultant during the next invoice cycle. Where billing is done and payment is made on an hourly basis, the parties acknowledge that this arrangement is either customary practice for Consultant's profession, industry or business, or is necessary to satisfy audit and legal requirements which may arise due to the fact that City is a municipality.

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E. Consultant represents that Consultant has obtained all necessary information on conditions and circumstances that may affect its performance and has conducted site visits, if necessary.

F. CAUTION: Consultant shall not begin work until this Agreement has been signed by both parties and until Consultant's evidence of insurance has been delivered to and approved by City.

2. TERM. The term of this Agreement shall commence at midnight on August 14, 2022, and shall terminate at 11:59 p.m. on August 13, 2024, unless sooner terminated as provided in this Agreement, or unless the services or the Project is completed sooner. The term may be extended for three (3) additional one-year periods, at the discretion of the City Manager and upon execution of a mutually agreeable amendment to the Agreement.

3. COORDINATION AND ORGANIZATION.

A. Consultant shall coordinate its performance with City's representative, if any, named in Exhibit "C", attached to this Agreement and incorporated by this reference. Consultant shall advise and inform City's representative of the work in progress on the Project in sufficient detail so as to assist City's representative in making presentations and in holding meetings on the Project. City shall furnish to Consultant information or materials, if any, described in Exhibit "D", attached to this Agreement and incorporated by this reference, and shall perform any other tasks described in the Exhibit.

B. The parties acknowledge that a substantial inducement to City for entering this Agreement was and is the reputation and skill of Consultant's key employee, named in Exhibit "E" attached to this Agreement and incorporated by this reference. City shall have the right to approve any person proposed by Consultant to replace that key employee.

4. INDEPENDENT CONTRACTOR. In performing its services, Consultant is and shall act as an independent contractor and not an employee,

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representative or agent of City. Consultant shall have control of Consultant's work and the manner in which it is performed. Consultant shall be free to contract for similar services to be performed for others during this Agreement; provided, however, that Consultant acts in accordance with Section 9 and Section 11 of this Agreement. Consultant acknowledges and agrees that (a) City will not withhold taxes of any kind from Consultant's compensation; (b) City will not secure workers' compensation or pay unemployment insurance to, for or on Consultant's behalf; and (c) City will not provide and Consultant is not entitled to any of the usual and customary rights, benefits or privileges of City employees. Consultant expressly warrants that neither Consultant nor any of Consultant's employees or agents shall represent themselves to be employees or agents of City.

5. INSURANCE.

A. As a condition precedent to the effectiveness of this Agreement, Consultant shall procure and maintain at Consultant's expense for the duration of this Agreement from an insurance company that is admitted to write insurance in the State of California or that has a rating of or equivalent to an A:VIII by A.M. Best and Company the following insurance:

i. Commercial general liability insurance equivalent in coverage scope to ISO CG 00 01 10 93 naming the City of Long Beach and its officials, employees, and agents as additional insureds on a form equivalent in coverage scope to ISO CG 20 10 11 85 from and against claims, demands, causes of action, expenses, costs, or liability for injury to or death of persons, or damage to or loss of property arising out of activities or work performed by or on behalf of the Consultant in an amount not less than One Million Dollars (US $1,000,000) per occurrence and Two Million Dollars (US $2,000,000) in general aggregate,

ii. Workers' compensation coverage as required by the Labor Code of the State of California and Employer's liability insurance with minimum limits of One Million Dollars (US $1,000,000) per accident or

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occupational illness. The policy shall be endorsed with a waiver of the insurer's right of subrogation against the City of Long Beach and its officials, employees, and agents,

iii. Commercial automobile liability insurance equivalent in coverage scope to ISO CA 00 01 06 92 in an amount not less than Five Hundred Thousand Dollars (US $500,000) combined single limit (CSL) covering Symbol 1 ("any auto"), and

iv. Professional liability or errors and omissions liability insurance in an amount not less than One Million Dollars ($1,000,000) per claim and in aggregate covering the engineering, planning, or other professional services provided pursuant to this Agreement.

B. Any self-insurance program or self-insurance retention must be approved separately in writing by City and shall protect the City of Long Beach and its officials, employees, and agents in the same manner and to the same extent as they would have been protected had the policy or policies not contained retention provisions. Such insurance policy shall be endorsed to state that coverage shall not be suspended, voided, or canceled by either party except after twenty (20) days prior written notice to City, and shall be primary and not contributing to any other insurance or self-insurance maintained by City.

C. Any subcontractors which Consultant may use in the performance of this Agreement shall be required to indemnify the City to the same extent as the Consultant and to maintain insurance in compliance with the provisions of this section.

D. Consultant shall deliver to City certificates of insurance and original endorsements for approval as to sufficiency and form prior to the start of performance hereunder. The certificates and endorsements for each insurance policy shall contain the original signature of a person authorized by that insurer to bind coverage on its behalf. "Claims-made" policies are not acceptable unless City

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Risk Manager determines that "Occurrence" policies are not available in the market for the risk being insured. In a "Claims-made" policy is accepted, it must provide for an extended reporting period of not less than three (3) years. Such insurance as required herein shall not be deemed to limit Consultant's liability relating to performance under this Agreement. City reserves the right to require complete certified copies of all said policies at any time. Any modification or waiver of the insurance requirements herein shall be made only with the approval of City Risk Manager. The procuring of insurance shall not be construed as a limitation on liability or as full performance of the indemnification provisions of this Agreement.

6. ASSIGNMENT AND SUBCONTRACTING. This Agreement contemplates the personal services of Consultant and Consultant's employees, and the parties acknowledge that a substantial inducement to City for entering this Agreement was and is the professional reputation and competence of Consultant and Consultant's employees. Consultant shall not assign its rights or delegate its duties under this Agreement, or any interest in this Agreement, or any portion of it, without the prior approval of City, except that Consultant may with the prior approval of the City Manager of City, assign any moneys due or to become due Consultant under this Agreement. Any attempted assignment or delegation shall be void, and any assignee or delegate shall acquire no right or interest by reason of an attempted assignment or delegation. Furthermore, Consultant shall not subcontract any portion of its performance without the prior approval of the City Manager or designee, or substitute an approved subconsultant or contractor without approval prior to the substitution. Nothing stated in this Section shall prevent Consultant from employing as many employees as Consultant deems necessary for performance of this Agreement.

7. CONFLICT OF INTEREST. Consultant, by executing this Agreement, certifies that, at the time Consultant executes this Agreement and for its duration, Consultant does not and will not perform services for any other client which would create a conflict, whether monetary or otherwise, as between the interests of City and the interests

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of that other client. Consultant further certifies that Consultant does not now have and shall not acquire any interest, direct or indirect, in the area covered by this Agreement or any other source of income, interest in real property or investment which would be affected in any manner or degree by the performance of Consultant's services hereunder. And, Consultant shall obtain similar certifications from Consultant's employees, subconsultants and contractors.

8. MATERIALS. Consultant shall furnish all labor and supervision, supplies, materials, tools, machinery, equipment, appliances, transportation and services necessary to or used in the performance of Consultant's obligations under this Agreement, except as stated in Exhibit "D".

9. OWNERSHIP OF DATA. All materials, information and data prepared, developed or assembled by Consultant or furnished to Consultant in connection with this Agreement, including but not limited to documents, estimates, calculations, studies, maps, graphs, charts, computer disks, computer source documentation, samples, models, reports, summaries, drawings, designs, notes, plans, information, material and memorandum ("Data") shall be the exclusive property of City. Data shall be given to City, in a format identified by City, and City shall have the unrestricted right to use and disclose the Data in any manner and for any purpose without payment of further compensation to Consultant. Copies of Data may be retained by Consultant but Consultant warrants that Data shall not be made available to any person or entity for use without the prior approval of City. This warranty shall survive termination of this Agreement for five (5) years.

10. TERMINATION. Either party shall have the right to terminate this Agreement for any reason or no reason at any time by giving fifteen (15) calendar days prior written notice to the other party. In the event of termination under this Section, City shall pay Consultant for services satisfactorily performed and costs incurred up to the effective date of termination for which Consultant has not been previously paid. The procedures for payment in Section 1.B. with regard to invoices shall apply. On the effective date of termination, Consultant shall deliver to City all Data developed or accumulated in

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the performance of this Agreement, whether in draft or final form, or in process. And, Consultant acknowledges and agrees that City's obligation to make final payment is conditioned on Consultant's delivery of the Data to City.

11. CONFIDENTIALITY. Consultant shall keep all Data confidential and shall not disclose the Data or use the Data directly or indirectly, other than in the course of performing its services, during the term of this Agreement and for five (5) years following expiration or termination of this Agreement. In addition, Consultant shall keep confidential all information, whether written, oral or visual, obtained by any means whatsoever in the course of performing its services for the same period of time. Consultant shall not disclose any or all of the Data to any third party, or use it for Consultant's own benefit or the benefit of others except for the purpose of this Agreement.

12. BREACH OF CONFIDENTIALITY. Consultant shall not be liable for a breach of confidentiality with respect to Data that: (a) Consultant demonstrates Consultant knew prior to the time City disclosed it; or (b) is or becomes publicly available without breach of this Agreement by Consultant; or (c) a third party who has a right to disclose does so to Consultant without restrictions on further disclosure; or (d) must be disclosed pursuant to subpoena or court order.

13. ADDITIONAL COSTS AND REDESIGN.

A. Any costs incurred by City due to Consultant's failure to meet the standards required by the scope of work or Consultant's failure to perform fully the tasks described in the scope of work which, in either case, causes City to request that Consultant perform again all or part of the Scope of Work shall be at the sole cost of Consultant and City shall not pay any additional compensation to Consultant for its re-performance.

B. If the Project involves construction and the scope of work requires Consultant to prepare plans and specifications with an estimate of the cost of construction, then Consultant may be required to modify the plans and specifications, any construction documents relating to the plans and specifications,

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and Consultant's estimate, at no cost to City, when the lowest bid for construction received by City exceeds by more than ten percent (10%) Consultant's estimate. This modification shall be submitted in a timely fashion to allow City to receive new bids within four (4) months after the date on which the original plans and specifications were submitted by Consultant.

14. AMENDMENT. This Agreement, including all Exhibits, shall not be amended, nor any provision or breach waived, except in writing signed by the parties which expressly refers to this Agreement.

15. LAW. This Agreement shall be construed in accordance with the laws of the State of California, and the venue for any legal actions brought by any party with respect to this Agreement shall be the County of Los Angeles, State of California for state actions and the Central District of California for any federal actions. Consultant shall cause all work performed in connection with construction of the Project to be performed in compliance with (1) all applicable laws, ordinances, rules and regulations of federal, state, county or municipal governments or agencies (including, without limitation, all applicable federal and state labor standards, including the prevailing wage provisions of sections 1770 *et seq.* of the California Labor Code); and (2) all directions, rules and regulations of any fire marshal, health officer, building inspector, or other officer of every governmental agency now having or hereafter acquiring jurisdiction.

16. WORK DAY. Consultant shall comply with Sections 1810 through 1815 of the California Labor Code regarding hours of work. Consultant shall forfeit, as a penalty to City, the sum of Twenty-Five Dollars ($25) for each worker employed by Consultant or any subcontractor for each calendar day such worker is required or permitted to work more than eight (8) hours unless that worker receives compensation in accordance with Section 1815.

17. LABOR COMPLIANCE. Consultant is advised that this work constitutes a public work subject to California Labor Code Division 2, Part 7, Chapter 1, Articles 1-5, §§1720-1861. Pursuant to Labor Code Section 1771.1, Consultant or

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subcontractors shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public contract Code, or engage in the performance of any contract for public work, as defined in the California Labor Code, unless currently registered and qualified to perform public work pursuant to Section 1725.5. Contract (or associated subcontracts) shall not be entered into without proof of the Consultant's (or subcontractor's) current registration to perform public work pursuant to Section 1725.5. All work conducted in support of this public work is subject to compliance monitoring and enforcement by the Department of Industrial Relations. Consultant will abide by all applicable apprenticeship requirements in the California Labor Code Section 1777.5 and will be responsible for subcontractor apprenticeship compliance to the same.

18. PREVAILING WAGE RATES. Consultant is directed to pay the general rate of per diem wages for each craft, classification, or type of worker needed to execute the contract (prevailing wage rates). Copies of the current prevailing rate of per diem wages are on file at its principal office (Labor Compliance Division, 411 W. Ocean Boulevard, 6th Floor, Long Beach, California, 90802), and shall be made available to any interested party upon request. Consultant is required to post a copy of the determination of the director of the prevailing rate of per diem wages and other posting required by law at each job site. Pursuant to Labor Code Section 1775, Consultant shall forfeit, as a penalty to the City, up to Two Hundred Dollars ($200) for each laborer, worker or mechanic employed for each calendar day, or portion thereof, that such laborer, worker or mechanic is paid less than the prevailing wage rates for any work done by Consultant, or any subcontractor, under this Contract. The difference between the prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate shall be paid to each worker by the Consultant or subcontractor.

19. CERTIFIED PAYROLL RECORDS.

A. Pursuant to the provisions of Labor Code Section 1776, Consultant shall keep and shall cause each subcontractor performing any portion of

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the work under this Contract to keep an accurate payroll record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by Consultant or subcontractor in connection with the work. Consultant shall maintain all other payroll records as identified in Labor Code Section 1812 and as defined by Title 8 California Code of Regulation Section 16000. Payroll records for Consultant and all subcontractors shall be available for inspection at all reasonable hours at the principal office of Consultant and provided to the City or its authorized Labor Compliance representative within ten (10) days of request. Consultant's failure to furnish such records to City or City's authorized Labor Compliance representative in the manner provided herein for notices shall entitle City to withhold the penalty prescribed by law from progress payments due to Consultant.

B. Consultant shall submit to the City certified payroll records for Consultant and all subcontractors performing any portion of the work under this Contract on a monthly basis. Certified payroll records for Consultant and all subcontractors shall be maintained during the course of the work and shall be kept by Consultant for up to three (3) years after completion of the work.

C. The foregoing is in addition to, and not in lieu of, any other requirements or obligations established and imposed by any department of the City with regard to submission and retention of certified payroll records for Consultant and subcontractors.

20. PROJECT LABOR AGREEMENT. This Project is covered by a Citywide Project Labor Agreement ("PLA") entered into by the City of Long Beach with the Los Angeles/Orange Counties Building and Construction Trades Council and the signatory Craft Unions. The PLA contains a local hiring goal of 40%, calculated based on total hours worked. The local hire provision requires best efforts to utilize qualified workers residing in first tier zip codes (which include all of the City of Long Beach), then in second tier zip

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codes (which reflect the Gateway Cities), and finally in Los Angeles and Orange Counties. However, if Project work is funded in full or in part by State of California Tideland funds, then the local hire provision requires best efforts to utilize qualified workers residing within the Counties of Los Angeles or Orange. Consultant shall complete and deliver to City the form ("Letter of Assent") attached hereto as Exhibit "F" and incorporated by reference, to comply with the PLA. Consultant agrees to work with the City and its selected Independent Jobs Coordinator, if applicable, to promote the local hiring goals and objectives of the PLA.

21. ENTIRE AGREEMENT. This Agreement, including all Exhibits, constitutes the entire understanding between the parties and supersedes all other agreements, oral or written, with respect to the subject matter in this Agreement.

22. INDEMNITY.

A. Consultant shall indemnify, protect and hold harmless City, its Boards, Commissions, and their officials, employees and agents ("Indemnified Parties"), from and against any and all liability, claims, demands, damage, loss, obligations, causes of action, proceedings, awards, fines, judgments, penalties, costs and expenses, arising or alleged to have arisen, in whole or in part, out of or in connection with (1) Consultant's breach or failure to comply with any of its obligations contained in this Agreement, including any obligations arising from the Project's compliance with or failure to comply with applicable laws, including all applicable federal and state labor requirements including, without limitation, the requirements of California Labor Code section 1770 *et seq.* or (2) negligent or willful acts, errors, omissions or misrepresentations committed by Consultant, its officers, employees, agents, subcontractors, or anyone under Consultant's control, in the performance of work or services under this Agreement (collectively "Claims" or individually "Claim").

B. In addition to Consultant's duty to indemnify, Consultant shall have a separate and wholly independent duty to defend Indemnified Parties at Consultant's expense by legal counsel approved by City, from and against all

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Claims, and shall continue this defense until the Claims are resolved, whether by settlement, judgment or otherwise. No finding or judgment of negligence, fault, breach, or the like on the part of Consultant shall be required for the duty to defend to arise. City shall notify Consultant of any Claim, shall tender the defense of the Claim to Consultant, and shall assist Consultant, as may be reasonably requested, in the defense.

C. If a court of competent jurisdiction determines that a Claim was caused by the sole negligence or willful misconduct of Indemnified Parties, Consultant's costs of defense and indemnity shall be (1) reimbursed in full if the court determines sole negligence by the Indemnified Parties, or (2) reduced by the percentage of willful misconduct attributed by the court to the Indemnified Parties.

D. The provisions of this Section shall survive the expiration or termination of this Agreement.

23. AMBIGUITY. In the event of any conflict or ambiguity between this Agreement and any Exhibit, the provisions of this Agreement shall govern.

24. FORCE MAJEURE. If any party fails to perform its obligations because of strikes, lockouts, labor disputes, embargoes, acts of God, inability to obtain labor or materials or reasonable substitutes for labor materials, governmental restrictions, governmental regulations, governmental controls, judicial orders, enemy or hostile governmental action, pandemic, civil commotion, fire or other casualty, or other causes beyond the reasonable control of the party obligated to perform, then that party's performance will be excused for a period equal to the period of such cause for failure to perform.

25. NONDISCRIMINATION.

A. In connection with performance of this Agreement and subject to applicable rules and regulations, Consultant shall not discriminate against any employee or applicant for employment because of race, religion, national origin, color, age, sex, sexual orientation, gender identity, AIDS, HIV status, handicap or

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disability. Consultant shall ensure that applicants are employed, and that employees are treated during their employment, without regard to these bases. These actions shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

B. It is the policy of City to encourage the participation of Disadvantaged, Minority and Women-Owned Business Enterprises in City's procurement process, and Consultant agrees to use its best efforts to carry out this policy in its use of subconsultants and contractors to the fullest extent consistent with the efficient performance of this Agreement. Consultant may rely on written representations by subconsultants and contractors regarding their status. Consultant shall report to City in May and in December or, in the case of short-term agreements, prior to invoicing for final payment, the names of all subconsultants and contractors hired by Consultant for this Project and information on whether or not they are a Disadvantaged, Minority or Women-Owned Business Enterprise, as defined in Section 8 of the Small Business Act (15 U.S.C. Sec. 637).

26. EQUAL BENEFITS ORDINANCE. Unless otherwise exempted in accordance with the provisions of the Ordinance, this Agreement is subject to the applicable provisions of the Equal Benefits Ordinance (EBO), section 2.73 et seq. of the Long Beach Municipal Code, as amended from time to time.

A. During the performance of this Agreement, the Consultant certifies and represents that the Consultant will comply with the EBO. The Consultant agrees to post the following statement in conspicuous places at its place of business available to employees and applicants for employment:

"During the performance of a contract with the City of Long Beach, the Consultant will provide equal benefits to employees with spouses and its employees with domestic partners. Additional information about the City of

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Long Beach's Equal Benefits Ordinance may be obtained from the City of Long Beach Business Services Division at 562-570-6200."

B. The failure of the Consultant to comply with the EBO will be deemed to be a material breach of the Agreement by the City.

C. If the Consultant fails to comply with the EBO, the City may cancel, terminate or suspend the Agreement, in whole or in part, and monies due or to become due under the Agreement may be retained by the City. The City may also pursue any and all other remedies at law or in equity for any breach.

D. Failure to comply with the EBO may be used as evidence against the Consultant in actions taken pursuant to the provisions of Long Beach Municipal Code 2.93 et seq., Consultant Responsibility.

E. If the City determines that the Consultant has set up or used its contracting entity for the purpose of evading the intent of the EBO, the City may terminate the Agreement on behalf of the City. Violation of this provision may be used as evidence against the Consultant in actions taken pursuant to the provisions of Long Beach Municipal Code Section 2.93 et seq., Consultant Responsibility.

27. NOTICES. Any notice or approval required by this Agreement shall be in writing and personally delivered or deposited in the U.S. Postal Service, first class, postage prepaid, addressed to Consultant at the address first stated above, and to City at 411 West Ocean Boulevard, Long Beach, California 90802, Attn: City Manager, with a copy to the City Engineer at the same address. Notice of change of address shall be given in the same manner as stated for other notices. Notice shall be deemed given on the date deposited in the mail or on the date personal delivery is made, whichever occurs first.

28. COPYRIGHTS AND PATENT RIGHTS.

A. Consultant shall place the following copyright protection on all Data: © City of Long Beach, California ____, inserting the appropriate year.

B. City reserves the exclusive right to seek and obtain a patent or copyright registration on any Data or other result arising from Consultant's

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performance of this Agreement. By executing this Agreement, Consultant assigns any ownership interest Consultant may have in the Data to City.

C. Consultant warrants that the Data does not violate or infringe any patent, copyright, trade secret or other proprietary right of any other party. Consultant agrees to and shall protect, defend, indemnify and hold City, its officials and employees harmless from any and all claims, demands, damages, loss, liability, causes of action, costs or expenses (including reasonable attorney's fees) whether or not reduced to judgment, arising from any breach or alleged breach of this warranty.

29. COVENANT AGAINST CONTINGENT FEES. Consultant warrants that Consultant has not employed or retained any entity or person to solicit or obtain this Agreement and that Consultant has not paid or agreed to pay any entity or person any fee, commission or other monies based on or from the award of this Agreement. If Consultant breaches this warranty, City shall have the right to terminate this Agreement immediately notwithstanding the provisions of Section 10 or, in its discretion, to deduct from payments due under this Agreement or otherwise recover the full amount of the fee, commission or other monies.

30. WAIVER. The acceptance of any services or the payment of any money by City shall not operate as a waiver of any provision of this Agreement or of any right to damages or indemnity stated in this Agreement. The waiver of any breach of this Agreement shall not constitute a waiver of any other or subsequent breach of this Agreement.

31. CONTINUATION. Termination or expiration of this Agreement shall not affect rights or liabilities of the parties which accrued pursuant to the Sections titled "Ownership of Data", "Confidentiality", "Breach of Confidentiality", "Law", "Certified Payroll Records", "Indemnity", and "Audit" prior to termination or expiration of this Agreement.

32. TAX REPORTING. As required by federal and state law, City is obligated to and will report the payment of compensation to Consultant on Form 1099-

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Misc. Consultant shall be solely responsible for payment of all federal and state taxes resulting from payments under this Agreement. Consultant shall submit Consultant's Employer Identification Number (EIN), or Consultant's Social Security Number if Consultant does not have an EIN, in writing to City's Accounts Payable, Department of Financial Management. Consultant acknowledges and agrees that City has no obligation to pay Consultant until Consultant provides one of these numbers.

33. ADVERTISING. Consultant shall not use the name of City, its officials or employees in any advertising or solicitation for business or as a reference, without the prior approval of the City Manager or designee.

34. AUDIT. City shall have the right at all reasonable times during the term of this Agreement and for a period of five (5) years after termination or expiration of this Agreement to examine, audit, inspect, review, extract information from and copy all books, records, accounts and other documents of Consultant relating to this Agreement.

35. THIRD PARTY BENEFICIARY. This Agreement is not intended or designed to or entered for the purpose of creating any benefit or right for any person or entity of any kind that is not a party to this Agreement.

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IN WITNESS WHEREOF, the parties have caused this document to be duly executed with all formalities required by law as of the date first stated above.

ARCADIS U.S., INC., a Delaware corporation

15 AUGUST, 2022

By _____
Name GAVIN HOULDIN
Title SVP - OPERATIONS DIRECTOR

15 August, 2022

By _____
Name Bruce T. Risley
Title Senior Vice President

"Consultant"

CITY OF LONG BEACH, a municipal corporation

August 17, 2022

By _____
City Manager

"City"

This Agreement is approved as to form on AUGUST 17, 2022.

CHARLES PARKIN, City Attorney

By _____
Deputy

EXECUTED PURSUANT TO SECTION 301 OF CITY CHARTER.

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EXHIBIT "A"

SCOPE OF WORK

EXHIBIT 'A'
SCOPE OF SERVICES

1 Scope of Services

1.1 Description of Services

PHASE 1: PRECONSTRUCTION PHASE SERVICES

Biddability and Constructability Reviews

Upon receipt of an NTP for Preconstruction Phase Services, the Consultant shall conduct Biddability / Constructability (B/C) reviews of the construction bid documents at the 50% and 90% construction documents submittal stages. A progress review of the review reports shall be reviewed with the City within 2 weeks of the NTP. The final review reports shall be submitted within four (4) weeks of receipt of construction documents for consideration and implementation with the Project architect/engineer.

The Consultant shall review the plans for biddability and constructability and identify potential value engineering solutions, ambiguities, conflicts and/or omissions apparent during its review. The bid documents and technical specifications must also be reviewed for potential duplication/overlap of clauses, conflicts, proper placement of critical requirements within the order, and precedence of documents. The CM shall also recommend key contract provisions to provide the necessary controls and remedies for the City to maintain a proactive approach to the Project.

The constructability/biddability review shall include the following:

- Project Phasing:
    - Review phasing plans and make recommendations for revisions, corrections and prepare narrative accompaniment for project specifications.
    - If applicable, propose recommended separate bid line item(s) and/or bid work breakdown structure to identify the adequacy of the bidders' intent to facilitate the necessary phasing requirements.
    - If appropriate, recommend separate sub-milestones (with separately calculated liquidated damages attached) to ensure

that the phases are properly carried out to ensure the continuous and unobstructed use of critical existing operations.

- Project Scoping:
    - Check for clear identification of project limits.
- Utility and substructure conflicts/coordination check:
    - Conduct field recon and check available pothole data (as applicable) and as-built underground and overhead utility information against the proposed design and assist the design team in resolving any apparent resulting conflicts.
    - Compare plan notes with standard and special revisions to eliminate and/or remove any conflicts/overlapping requirements.
- Check quantities:
    - Utilize electronic ACAD 2018/19, REVIT 2022.1.1, CorelDraw 2019, and Illustrator plan/model files plans to perform clash/overlay analysis of various design discipline plans to identify apparent conflicts and recommend solutions.
    - Check construction notes and proposed improvements against bid items and bid item descriptions and identify and coordinate resolution of apparent inconsistencies and/or gaps with the design team.
    - Compare proposed removals with proposed improvements and existing field conditions.
    - Recommend special provisions/language for project-specific and proven public contract remedies.
    - Recommend order and precedence revisions and/or standard specification modification, as applicable.
    - Recommend bid item allowances, alternates, and minimum performance requirements for contractor deferred design items, e.g., detailed traffic control phases, tree protection plan, pedestrian safety measures, public relations activities, SWPPP/NOI development, and processing, etc.

- Compile a comprehensive "preliminary required submittal log" for inclusion in the bid documents:
    - Establish the work breakdown structure for submittal processing, utilizing the Specifications CSI divisions basis;

  - Clearly identify all "deferred submittals" enumerated in the plans and specifications that will require Contractor design-build solutions as well as plan check review and approval by the City's Planning and Building Department;
  - List apparent required administrative, contract compliance, quality assurance, product data, shop drawings, certificates of compliance, warranty, operations and maintenance instructions and manuals, and any other apparent item that is required for submittal, as enumerated in all bid documents; and
  - Include a qualifying statement that the "preliminary required submittal log" is not intended to be exhaustive, and the Contractor is responsible for processing all required submittals.
- Assist the Project Management team with establishing bid evaluation criteria and preparing the Request for Bid documents.

Peer Opinions of Probable Cost and Time

Develop and submit peer cost estimates and Critical Path Method (CPM) Schedules based on the 50% and 90% Construction Documents Design Submittals, concurrent with the B/C reviews detailed above.

- Cost estimates shall be based on a comprehensive quantity takeoff, current material, and labor costs and shall account for all elements necessary to complete the project's construction.
- The estimate shall be broken down in a format consistent with the Design Team's cost breakdown to facilitate efficient comparison between estimates.
- A detailed CPM schedule to establish a reliable basis for an opinion of probable construction time shall be submitted.

Each peer review shall be accompanied by a narrative report that summarizes the overall cost and time findings, lists the differences from the Project estimates, and identifies potential alternatives and recommendations to resolve identified differences.

Preconstruction Phase Services Meetings:

- Coordinate and conduct a kickoff meeting for Preconstruction Phase services upon receipt of the requisite NTP.

- Coordinate and facilitate plan review meetings in conjunction with each B/C review.
- Participate in design review, permit plan check coordination, and other Project related meetings on an as-needed basis.

PHASE 2: CONSTRUCTION PHASE SERVICES

Implementation of Construction phase services will be authorized under a separate NTP upon identification and appropriation of gap funds necessary to complete the Project. The Consultant will coordinate and facilitate a Construction Phase services kickoff meeting upon receipt of this NTP.

Construction phase services will include Bid Phase Assistance, Contract Award and Execution Support and Construction Management and Inspection Services as detailed below.

Bid Phase Assistance

- Coordinate with the Department of Public Works to establish advertising dates and arrange pre-bid meetings and bid opening dates.
- Assist with coordinating Bid advertisement in appropriate publications and online contractor bid announcement services.
- Directly contact prequalified contractors to encourage and confirm their participation in the bid.
- Participate in Pre-Bid meetings to assist with answering bidder questions.
- As necessary, assist with coordination with the City and other affected agencies / agencies having jurisdiction.
- Assist with public relations/public outreach activities as needed.
- Assist with the development of responses to bidder questions during the bidding period.
- Conduct reference checks on the low bidder and listed subcontractors.
- Check state licenses of bidder and sub bidders.
- Review insurance and bonds for compliance with Contract Documents.
- Compile bid analysis:

- Tabulate all bids with a detailed breakdown with comparison to latest construction estimate;
- Identify apparent unbalancing within bids;
- Identify apparent missing items;
- Assist with addressing minor omissions or administrative issues as approved by the City; and
- Repeat the above steps for the next bidder if as-bid numerically low bidder appears to be unresponsive or unresponsible.

- Assist with compiling recommendations to award to the successful bidder.
  - Make recommendations for confirmation of the lowest responsive and responsible bidder with a detailed basis, particularly if the as-bid numerically low bidder is not recommended.
  - Assist in preparation of staff reports for City Council contract awards.

Contract Award / Execution Support

- Attend the City Council meeting for the award of the Construction Contract.
- Assist with coordinating Contractor documentation requirements to support execution of the Contract.
- Assist with expediting Contract Execution by the parties.

Construction Management and Inspection

- <u>General Construction Management:</u>
  - Establish the Construction Manager (CM) as the primary contact and construction project team leader.
  - Provide overall coordination and management of quality assurance, coordination and collaboration with project stakeholders, monitoring and confirmation of safe practices, budget and schedule management, project expediting and claims avoidance, contract administration, and monitoring and coordination of mitigations monitoring requirements.
- <u>Protocol and decorum:</u>

- Establish and maintain a professional and collaborative decorum for interactions with the Contractor and all stakeholders;
- Establish Communications protocol from the Contractor to and from the CM with appropriate "spoke and wheel" work and communication flows necessary for Project efficiency;
- Coordinate all Project issues with the Public Works Project Manager; and
- Ensure all contractual matters shall require City approval.

- Project Safety:
  - Establish safety as a top priority for all project stakeholders, monitor project work and adjacent areas for unsafe conditions, promptly require corrective measures to be addressed by the Contractor in compliance with the contract documents, and report such issues and corrective measures taken to the City.
  - Implement safety protocols such that the Contractor maintains primary responsibility and liability for the construction site, construction personnel, and public safety.
  - Traffic and Public Safety Measure Management and Coordination, including, but not limited to:
    - Monitor and document the proper implementation of the traffic control and public safety measure plans by the Contractor and require corrections and diligent maintenance when required;
    - Coordinate review of any traffic control plans required to address special situations and monitor the Contractor's compliance with the Traffic Handling Plans, the CA Manual on Uniform Traffic Control Devices (CA MUTCD), or as otherwise provided for in the specifications;
    - Address and coordinate apparent conflicts with the adjacent or nearby Myrtha (East) pool project, as applicable, including but not limited to by requiring the Contractor to clearly correlate traffic control and public safety measures phasing in the CPM schedule work breakdown structure;

- Ensure particular attention is paid to maintaining safe and efficient public access to and operation of the existing Myrtha pool; and
- Ensure that traffic control and public safety measures are a standard discussion and coordination item at weekly progress meetings.

- Construction Site Public Relations:
  - The Department of Public Works will maintain the lead role for Project Public Relations.
  - The CM shall act as the City's liaison to local businesses and residents with concerns related to the project's construction.
  - All inquiries received on-site shall be logged and coordinated with the Public Works Project Manager with the goal of addressing issues quickly and efficiently at the lowest level possible.
- Project Construction Phase Meetings:
  - Coordinate and conduct the construction phase meetings, including notification to the Contractor, utility agencies, and other stakeholders.
  - Compile and distribute meeting agendas and minutes in Procore and via email with exported PDF documents.
  - Coordinate the agenda in advance of the meeting with the City Project Manager.
  - Conduct an Initial Schedule Review Conference to provide:
    - Introductions of key personnel;
    - Confirm contract time and completion date, full utilization of Contract Time;
    - Review of Working Day definition and holiday schedule;
    - Review and provide comment on the preliminary CPM schedule;
    - Confirm integration of utility coordination activities into the schedule;
    - Identify long lead and any substitution and/or equal items;

- Identify key inspection sign-off milestones to be included in the CPM Schedule;
- Review requirements for the Contractor's detailed four-week look-ahead schedule;
- Facilitates questions and answers, period; and
- Review action item assignments.

o Conduct a Preconstruction Conference that shall include at minimum the following items:

- Introductions of key personnel;
- City responsibilities;
- Discussion of Project team experience and key roles, lessons learned from similar projects;
- Safety;
- Project overview;
- Confirmation of fully executed contract documents and NTP;
- Identification of common overall project goals;
- Chain of communication and key contacts;
- Public relations;
- Project scope;
- Critical design elements;
- Protocol for jurisdictional agencies and the Contractor;
- The Contractor's process for orienting and mobilizing subcontractors to the Project;
- Documentation and tracking control protocols and processes;
- Change order procedures, scope, schedule and cost change administration, notification requirements, and controls;
- Submittal and Request for Information (RFI) process;
- Inspection and testing – including review of call-out requirements and deputy/special and testing requirements;
- Survey for consistency with the design and QA survey role and procedures;
- Progress payment procedures;
- PLA and labor compliance requirements, procedures, and timelines;
- Permit requirements from State/Federal agencies and local MMRPs;
- Rights-of-way, easements, and special access considerations;
- Mitigations monitoring and permit special condition items;
- Placement of signs Project construction signage;

- The Contractor's initial detailed four-week look-ahead schedule;
- Questions and answers; and
- Action item assignments.

- Conduct construction progress / coordination meetings:
  - The following meetings will be held on-site and/or virtually, as required:
    - Periodic project team/stakeholder meetings to focus on the following:
      - Progress during the period;
      - Major decisions made;
      - Planned vs. actual schedule;
      - Upcoming work schedule;
      - Current or unresolved problems;
      - Anticipated or pending change orders;
      - Impacts of problems or change orders on schedule and budget;
      - Discussion of new goals;
      - Planned vs. actual budget analysis; and
      - Scheduled concurrent with a weekly meeting to save time and cost.
    - Weekly Progress Meetings – with typical agenda to include:
      - Carryover / recurring items from the Preconstruction Meeting;
      - The Contractor's updated four-week look-ahead schedule;
      - Progress and major decisions during the last week;
      - Update of unresolved items from previous meetings;
      - Pay application update / look ahead; and
      - Status of submittals and change orders.
    - Special, Ad Hoc meetings to discuss important/urgent issues requiring detailed discussion or review of plans and specifications.

- <u>Office Engineering, Project / Documents Control:</u>

- Provide office engineering / Projects and Documents staff as part of CMIS services, including:
  - Attend / scribe project meetings/ prepare meeting minutes;
  - Prepare a Weekly Statement of Working Days (WSWD) to summarize the construction progress, time of completion, delays, and time extensions, and submit it to the Contractor and the City on a weekly basis;
  - Track/log preliminary notices, stop notices, releases, and project correspondence;
  - Administer submittals and RFIs;
  - Provide quality control of inspection reports;
  - Assist with Prevailing Wage / PLA compliance matters;
  - Provide change management documentation maintenance;
  - Assist with the review and analysis of schedule updates, RFIs, submittals, and cost estimates;
  - Assist with scheduling and cost control and monitoring; and
  - Undertake other duties as assigned by the CM

- Document Tracking System:
  - This project will utilize Procore's (www.procore.com) project management and collaboration system for key project documentation (the Procore account for this Project will be administered by others).
    - Applicable team members of this project will be invited to and are required to create a Procore username (email) and password if they do not already have one
    - Consultant will be expected to obtain drawings, sketches, RFIs, meeting minutes, coordination drawings, change information, etc. via this application
    - Notify subconsultants as relevant items are added. Regularly check and review updated documents as they are added

- Applicable Consultant team members shall complete a free, one-hour training certification course located at: http://learn.procore.com/procore-certification-subcontractor within (2) two weeks following contract execution.
- There will be no cost to the Consultant for the use of Procore.
- It is recommended that mobile iOS or Android devices with the Procore App installed be provided to at least one individual on-site to provide real-time access to current posted drawings, specifications, RFIs, submittals, project documents, as well as any deficient observations or punch list items. Providing mobile access will improve all parties' communication, efficiency, and productivity.

- Maintain complete and current project files at the job site or at a location agreeable to the City and ensure the project files are always available to the City. These files will consist of the contract, correspondence relating to or modifying the contract, proposal requests, clarifications, permits, logs, reports, RFIs, field orders, change orders, claims inspection reports, and test reports.
- Implement a detailed file indexing system for all project hard files. All hard copy documentation shall be mirrored in the electronic Project file system.
- The table below illustrates the minimum document tracking system to be implemented:

Item	Method	Frequency
Correspondence	Procore, Outlook, Speed Memos, Formal Letters, or equal	Daily/Continuous/As needed
Project Documentation	Procore	Daily/Continuous
Submittals	Procore	Daily, as required
RFIs	Procore	Daily, as required
Progress Payments	Excel, or equal	Measurements – daily. Quantity Measurement Report – Monthly
Inspection Reports	Adobe Fillable Forms, Procore, or equal	Daily

EXHIBIT 'A'
SCOPE OF SERVICES

Item	Method	Frequency
Weekly Statements of Working Days	Excel, or equal	Weekly
SWPPP/BMP Compliance	Excel or equal	Weekly
Public Relations Inquiries	Log – Excel or equal	Daily, as required
Photo and Video	Procore, or equal	Video Pre-project, Photos Daily
Progress Reports	Word, Publisher, or equal	Monthly and as required
Project Contacts	Procore and Outlook	Daily
Project Calendar	Outlook	Daily
Meetings	Procore, virtual platform as applicable- Zoom or equal	Weekly and as required

- Submittal Processing:
  - Establish a proactive submittals management process to include uploading the "preliminary required submittals log" from the contract documents into Procore.
  - Require the Contractor to utilize the Submittals established by the log for the basis of submittal numbering and transmittal.
  - Coordinate with the Contractor throughout the Project to update the required submittals log as necessary.
  - Administer and expedite Project submittals.
  - Receive all contractor submittals and review them for completeness and general conformance with the contract documents prior to involving other Project team members.
  - Counsel the Contractor to perform required submittal quality control prior to transmittal as applicable.
  - Process all submittals once a submittal is determined to be complete. All substitution / "or equal" requests, product data, certificates of compliance, shop drawings, samples, and other submittals received

from the Contractor shall be reviewed expeditiously, with routing to the City and the Architect as applicable.

- Track and expedite submittals to ensure timely response and to avoid claims for delay.
- Closely monitor submittal content and review comments to identify potential impacts to quality, cost, or schedule, and recommend alternatives and/or solutions.

- Materials Control:
  - Establish a material receiving process on-site such that all material deliveries are accompanied by proper delivery documentation satisfactory to confirm all products comply with the plans and specifications, approved submittals, and bear the requisite certificate of compliance for source and product type.
  - Flag as unacceptable materials delivered to the site lacking proper documentation and do not allow unacceptable materials to be incorporated into the Work until proper documentation is provided and verified.
- Schedule Review:
  - Review the Contractor's submitted scheduler's qualifications, baseline construction schedule, including activity sequences and duration, schedule of submittals and schedule of delivery for products with long lead-times. Evaluate the baseline project schedule for the following:
    - Consistency with the contract schedule (completion within and utilization of the entire contract time);
    - Accurate start dates, completion dates, other dates detailed in the contract;
    - Identify apparent missing activities;
    - Proper inclusion of allowances for inclement weather or other issues as stipulated in the specifications;
    - Sufficient detail, including, but not limited to, submittal process and procurement and lead time requirements;
    - Sequence of construction and correct schedule logic;

- Identification of the critical path and project float;
- Run P6 Check Scheduler to check proper logic, constraints, durations, etc.;
- Proper project calendar implementation;
- Identify apparent redundant activities and relationships;
- Check proper use of constraints; and
- Check activity codes for conflicts

- The schedule shall not be recommended for approval as the baseline until all discrepancies are resolved.

- Schedule Control:
  - During the progress of construction, compare the contractor's monthly schedule updates to the baseline schedule and any approved time extensions, note any shortcomings, and monitor and track corrections by the contractor to keep the project schedule on track.
  - Run P6 Check Schedule and Claim Digger on schedule updates and time impact analyses and review for the parameters checked in the CPM baseline review and identify changes since the prior schedule update.
  - Require, receive, and review weekly, four-week look-ahead schedules from the Contractor.
  - Present the 4-week look-ahead schedule at the weekly construction progress meetings to coordinate the detailed activities anticipated over the next month.
  - Negotiate time extensions, only for purported delays that are accompanied by properly compiled time impact analyses that appear to have merit.
- Requests For Information (RFIs):
  - Upon receipt, review, distribute, and respond to each RFI as required.
  - Handle RFIs clearly covered by the contract documents expeditiously, minimizing the involvement of other Project team members when appropriate.

- Distribute and expedite RFIs that require design team or City consideration.
- Identify potential impacts to cost or time that may result due to issues identified in RFIs, with recommended alternatives or solutions to mitigate the potential impacts.
- Indicate merit determination in RFI responses as appropriate.

- Problem Solutions:
  - Proactively anticipate and expeditiously resolve field problems.
  - Process issues with the appropriate sense of urgency as applicable to each issue for the best interests of the Project.
  - Present issues to the City with suggested alternatives, cost and schedule impacts and recommended solutions.
  - Expeditiously coordinate the implementation of the alternative/solution that suits the best interests of the Project, and that is approved by the City.
  - Expeditiously communicate with the City, design consultants, and the Contractor and/or other project stakeholders, as applicable, to identify conflicts, construction problems, coordination issues and obtain the needed action and response to submittals, RFIs, and supplemental design documents.
- Interpretation and Technical Assistance:
  - Coordinate and expedite issues between the contractor, design team, and City to clarify any questions for interpretation of the construction documents.
  - Process timely, firm, and fair determinations to minimize cost and time impacts to the Project
- Written Instructions:
  - Do not rely on verbal communications for key Project or contractual issues.
  - Issue written instructions (via email, Procore, transmittal letter, field speed memo, or other written method) to the Contractor regarding

routine matters and/or follow-up of verbal instructions as necessary to properly document project issues.

- Progress Payment Processing:
  - Using Procore's Cost Module provided by the city, establish a cost control system based on the Contractor's schedule of values, approved change orders, and the contract amount to monitor progress costs.
  - Monthly cost reports will be submitted to the City, along with the Consultant's pay application recommendation.
  - Schedule of Values/Measurement and Payment
    - Contractor performance and associated monthly payments will be based on a resource and cost-loaded schedule and schedule of values which may be expressed as lump sum, unit price, allowance, or combination thereof.
    - Review quantity of work to be paid for any item for which a unit price is fixed in the Contract Documents and based on actual number of units completed.
    - Review Lump Sum work satisfactorily completed on a percentage of completion basis up to the Contractor's percentage of completion of the Work or item identified in the Schedule of Values.
    - Assist the City with processing of Allowance Work following established change order procedures to determine costs, with supporting documentation as provided by the contractor, and a written authorization to proceed.
  - Review the payment applications submitted by the Contractor and determine whether the amount requested reflects the progress of the Contractor's work.
  - Appropriate adjustments to each payment application will be required by the Contractor.
  - Identify and implement quantity measurement methodology specification language to obtain the most efficient and accurate field measurements during construction. The CMIS Team will verify

and track all deliveries, to check and record Bills of Lading and other methods to record what has been delivered to the project site, to verify and ensure that the contractor is properly storing and protecting materials, and to have a methodology for ensuring that pay applications for materials delivered/stored/installed accurately reflect the actual amounts so the city is not paying for items that aren't there or work that has not been completed. A detailed verification count of every object delivered is not required.

- When the payment application is acceptable, and all required backup documentation is verified, the Consultant shall recommend the payment application for approval and processing by the City, along with all supporting documentation.

- Cashflow Management:
  - Diligently monitor and track preliminary notices, conditional and unconditional releases for each payment.
  - Maintain a detailed log of preliminary notices and require conditional and unconditional releases from the contractor for all first-tier subcontractors and any-tier subcontractors that submit a preliminary notice.
  - Should any stop notices be received, coordinate proactively with the Contractor to address the release of the stop notice and coordinate with the City's Project Manager to withhold 150 percent (150%) of the stop notice amount from progress and/or retention payments until the proper unconditional release is documented.
- Change Management:
  - Establish, implement, and coordinate systems for consideration, negotiation, processing, and implementation of change orders.
  - For each issue which is identified as a potential change to the design, scope, cost, or contract, generate a uniquely numbered potential change order (PCO) number.
  - Coordinate with the City's Project Manager for determination of whether each purported change issue is of merit.

- When merit is confirmed, negotiate the scope and cost for the most efficient, cost and quality appropriate solution with the Contractor and City. Confirm that appropriate and fair credits for work deleted because of the change are included.
- Maintain a trend log, listing potential changes as identified, either formally or informally.
- Prepare independent cost estimates, as required, for negotiation and confirmation of fair pricing on contract change orders.
- Upon approval by the City, prepare, log and process change orders for full execution, and administer their implementation.
- Once fully executed, expedite, and review the timely completion of the work and coordinate inclusion of the change order in the appropriate payment application.

• Claims Resolution:

- Assist the City with claims filed by the Contractor and/or subcontractors in accordance with the guidelines set forth by the general specifications and the standard specifications, as needed.

• Site web camera monitoring and time-lapse video presentation:

- Deploy and maintain up to four (4) site web cameras for real-time monitoring of construction operations and progress.
- Provide real-time access to site webcam and photos to Project team members as directed by the City.
- Provide a time-lapse video compilation/ presentation of construction progress, with musical accompaniment, at the completion of the Project.

• Photographs:

- Work with Inspection staff to prepare and maintain an electronic photo journal documenting the construction progress.
- Photos shall be taken before construction begins, during construction, and upon completion of the Project.

• LEED certification management and commissioning:

- Act as the City's LEED v4.0 certification manager and enhanced commissioning agent (CxA).
- Implement requisite management and tracking systems for full LEED certification and enhanced commissioning compliance documentation.
- Utilize a cloud-based system available to the Project team to track the achievement of LEED credits and enhanced commissioning progress.

- Utility Coordination:
  - Assist the Contractor in dealing with utility owners to coordinate and expedite temporary and permanent utility installations, utility relocations utility access structure adjustments, and observation of utilities needing protection.
- Monthly CM progress reports:
  - Cooperatively develop, with the City's Project Manager, the format and content for progress reports required during the construction of the Project.
  - Progress reports shall be compiled and submitted monthly after each Contractor pay application is processed and shall include the following information:
    - A summarized report of construction activities, including significant events and accomplished goals;
    - A summary of any public relations contacts and/or issues;
    - Construction observation reports;
    - Description of progress with photos to enhance the descriptions;
    - Description of equipment used;
    - Comparison of actual vs. planned progress, in narrative form and bar graph form;
    - The latest detailed four-week look ahead schedule as submitted by the Contractor and reviewed by the Consultant and appropriate stakeholders;

- Identification and discussion of current problems or pending change orders and actions taken or planned to resolve such issues;
- A discussion of new short- and long-term goals for the project;
- A comparison of actual vs. planned budget expenditures;
- A master trend log detailing potential and approved changes;

Report of progress payments made to date and invoices in process including tracking of any withholds and any penalties assessed by any of the PLA Consultants or Labor Compliance consultants;

- PLA and Labor compliance reports for the Contractor and subcontractor employees;
- A QA/QC status section; and
- An analysis of change order impacts or potential problems on schedule and budget.

- National Pollutant Discharge Elimination System (NPDES) Compliance:
  - Work with the inspection staff to monitor and document all provisions of the certified Storm Water Pollution Prevention Plan (SWPPP) and/or other requisite requirements set forth in the specifications.
  - SWPPP requirements shall be regularly monitored for proper deployment and maintenance of required Best Management Practices (BMPs).
  - Confirm receipt and review the required inspection and other reports submitted by the Contractor's Qualified SWPPP Practitioner (QSP).
  - Any deficiencies noted will be addressed with the Contractor for immediate remedy.
  - Upon a weather report of expecting rain, implement the actions prescribed in the certified SWPPP. A site walk will be conducted to ensure that SWPPP measures are in place and well maintained.

- Assist with expediting the Notice of intent (NOI), Periodic and Annual Reports, and other SWPPP stipulated requirements and the Notice of Termination (NOT) as applicable.

- Quality Assurance:

  Collaboratively develop with the City's Project team and implement a Project-specific quality assurance plan.

  - Work with the inspection team to coordinate laboratory, job site, and offsite/source inspection and testing of construction materials and required observations per the QAP, construction documents, construction codes, and Jurisdictional Agencies.
  - Perform and/or coordinate QA/QC activities daily and review activities as they happen, such that QA/QC procedures are followed, and deficiencies are resolved in a timely and efficient manner.
  - Work with the inspection team to monitor testing services, track documentation, and continuously document and log testing results.
  - When necessary, coordinate, monitor, and document that the Contractor implements corrective measures. Re-inspect the corrected work to verify acceptable completion.
  - The following are the minimum QA requirements:
    - Inspection:
      - Conduct full-time general inspection during all construction activities;
      - Closely monitor and document the requirements for construction personnel and health safety on the project;
      - Do not allow apparent unsafe situations to go unchecked and/or unremedied;
      - Immediately coordinate with the Contractor's safety representative and CM to make necessary adjustments prior to resumption of activities;
      - Monitor the Contractor's implementation of approved vehicular traffic controls and pedestrian safety measures; drive/walk routes with active detours and/or lane closures daily to confirm or require correction in compliance with

approved traffic/pedestrian safety control plans, Watch Manual, MUTCD and/or Caltrans Traffic Control Manual, as applicable;
- Take daily photographs to document traffic controls at start and end of shift.
- Participation at project meetings;
- General oversight of quality in the constructed product, coordination of special, deputy inspections and testing, coordination of required permit inspections by the agency having jurisdiction;
- Document approval of materials and workmanship that meet the contract requirements in coordination with the authority of the consulting engineer, Architect, building inspector, fire inspector, deputy inspector, or other authorized representative or regulatory authorities having jurisdiction;
- Review items requiring corrective action with the contractor and the City;
- Develop and maintain a contemporaneous punch list of items and monitor corrections made;
- Coordinate inspection activities with other jurisdictions if applicable;
- Issue field correction notices;
- Monitor proper installation and maintenance of NPDES/SWPPP BMPs, in coordination with Contractor's QSP and City NPDES Officer / Inspector;
- Assist in the review of submittals required by the specifications;
- Assist with responses to Contractor RFIs;
- Verify grades, staking, and marks set by the contractor for structures;
- Coordinate and provide assistance and direction to specialty/deputy inspectors and technicians performing inspections and material tests;
- Closely monitor testing results and require the contractor to take corrective actions if results are unsatisfactory;
- Measure and track quantities of satisfactorily completed improvements;
- Review and make recommendations for the processing of payment requests;

EXHIBIT 'A'
SCOPE OF SERVICES

- Assist with the consideration, negotiation, processing of change orders, and documentation of the proper implementation of change order items into the work and as-built plans;

  > Daily Extra Work Reports:
    > Inspectors shall verify and sign Contractor's daily extra work reports documenting force account (time and materials) work, if applicable;
    > Verify only appropriate worker classifications necessary for approved time and materials work is included on extra work reports; and
    > Any inappropriate workforce and/or equipment charges shall be promptly rejected and removed from extra work reports.
- Prepare daily inspection reports (daily activity report, weekly statement of working days) including photographs;
    > The format and content of the daily report shall be coordinated prior to the start of construction in collaboration with the City's Project Manager;
    > Compile daily observation reports documenting the contractor's workforce, material and equipment used, a summary of construction activities, field problems, disputes or claims, resolutions of issues, and directions given to the Contractor; and
    > Completed daily reports will be transmitted to the City's Project Manager on a weekly basis.
- Maintain comprehensive photo documentation of general project progress and key views, as well as photos to aid in documenting key Project issues and/or areas of concern, all in addition to photos included in daily reports;
- Perform inspection for line and grade, earthwork, grading, excavation, backfilling of utility trenches, asphalt paving, concrete formwork reinforcement, and other related work;
- Coordinate with and document the Landscape Architect's review and approval of materials for all landscape features on the project (plant/tree selection, product submittal and sample reviews, irrigation installation inspection and

coverage test, planting soil preparations, proper installation and plantings and maintenance);
- Assist the construction site public relations, including but not limited to documenting and assisting with responses to public inquiries;

- Monitor, and document compliance with working hours, noise levels, dust mitigation, and housekeeping requirements;
- Assist city with monitoring and coordination of mitigations monitoring requirements. City will manage the 'mitigation' deliverables to the Authority Having Jurisdiction (AHJ) before construction and during construction as required. The city will take the lead in all communications with the AHJs;
- Assist with the preparation of the Project punch list at substantial completion, and conduct follow-up inspections to confirm completion of corrections; and
- Confirm (regularly and as a condition of processing monthly payment applications) that accurate red-lined as-built plans and specifications are being maintained, preferably on the Procore system and mirrored on the field construction set.

- Provide the following Specialty and Deputy inspection, soils, and materials testing:

  - All required Specialty and/or Deputy inspections, soils, and materials testing as stipulated by the plans and specifications and building code
  - Specialty inspection for all building envelope water intrusion protection systems (roofing, air/water barriers, curtain walls/storefront, ETFE canopies, etc.)
  - Specialty inspection for corrosion resistance and protection
  - Specialty inspection for the installation of Myrtha Pools

- QA Surveying – establish and maintain overall survey controls, spot check the Contractor's construction staking, monument establishment, preservation and/or replacement, determine and confirm critical facility dimensions and stipulated constraints.

- **Close-out coordination and documentation**:

- Enforce the provisions of the specifications to require and expedite the Contractor to submit well-coordinated operations and maintenance manuals, warranties and guarantees, bonds, extra stock and/or other items required by the contract documents such that a timely close-out of the project is implemented.
- Perform closeout duties, including final organization and submittal of project files both to the City and to Building & Safety, including testing reports, special inspection reports, affidavits for final approval, and assist with the filing of the notice of completion and release of retention.
- Video record Operations and Maintenance Training Sessions and submit videos to the City for future use.

- Pre-final Inspection:
  - Coordinate with appropriate project stakeholders, perform the final job walk and prepare the punch list (deficiency list).
  - Coordinate, expedite, and observe the completion of required corrections.
- Final Inspection:
  - Confirm satisfactory completion of all punch list items before coordinating the final inspection walk with Project stakeholders.
  - Recommend project acceptance and processing of the Notice of Completion once the City concurs with acceptance.
  - Upon completion of the punch list and final sign-off by all project stakeholders, recommend the Contractor's final progress payment request for approval and prepare the final progress payment report for submission to the City.
- **Delivery of As-Builts and Close-out Documents:**
  - Review the Contractor's as-built updates in conjunction with monthly pay application reviews.
  - Identify missing updates, and require the Contractor to keep as-built records up to date throughout the project as required by the specifications.
  - Review and compare the Contractor's submittal of "as-constructed" conditions with all other related Project documentation.

- Resolve apparent discrepancies from known and/or otherwise documented as-built conditions.
- Submit completed "as-constructed" plans to the City.

- Post Construction Support:
  - Assist the City with resolution of post-construction issues, including, but not limited to, user department inquiries and issues, resolution of stop notices or notices from the labor commissioner as required.
  - Assist the City with filing of the Notice of Completion and make recommendation for release of retention after the 35-day lien period.

EXHIBIT "B"

RATES

ARCADIS Design & Cr for natural & built assets

Belmont Beach & Aquatics Center Project

TASK/ACTIVITY	Core Team Sub-Total	As-Needed Team Sub-Total	Optional Team Sub-Total	TOTAL HOURS	TOTAL COSTS
PHASE 1: PRECONSTRUCTION SERVICES	**CORE TEAM**	**TECH TEAM**	**OPT SVC**		
CM Admnistration	$ 76,936	$ -	$ -	328	$ 76,936
Bid & Constructability Review #1 - 50% CD's	$ 64,957	$ 142,293	$ -	1,412	$ 207,250
Peer Cost Estimate #1	$ 29,546	$ -	$ -	154	$ 29,546
Peer CPM Schedule #1	$ 33,259	$ -	$ -	174	$ 33,259
	$ -	$ -	$ -	0	$ -
Bid & Constructability Review #2 - 90% CD's	$ 80,542	$ 159,893	$ -	1,392	$ 240,436
Peer Cost Estimate #2	$ 12,837	$ -	$ -	64	$ 12,837
Peer CPM Schedule #2	$ 14,693	$ -	$ -	74	$ 14,693
	$ -	$ -	$ -	0	$ -
Develop Prelim. Submittal Log	$ 2,037	$ -	$ -	8	$ 2,037
Develop Site and Project Specific Contract Provisions	$ 3,055	$ 3,225	$ 8,126	60	$ 14,407
Develop adjustments to Phasing Plans w/narrative	$ 3,904	$ -	$ -	16	$ 3,904
Perform Utility/Infrastructure Field Recon	$ 3,904	$ 1,400	$ -	24	$ 5,305
Develop Schedule of Values Specification	$ 2,037	$ -	$ -	8	$ 2,037
Perform BIM Clash/Overlay Analysis of Plans	$ 2,037	$ -	$ -	8	$ 2,037
Recom. Bid Item Allowances/Alternates/Performance	$ 3,904	$ 1,400	$ 8,126	56	$ 13,431
Total Hours Phase 1 - Preconstruction Services	1,598	2,116	64	3,778	
Total Costs for Phase 1	$ 333,650	$ 308,213	$ 16,253		$ 658,115
PHASE 2: CONSTRUCTION PHASE SERVICES	**CORE TEAM**	**AS-NEEDED' TECHNICAL RESOURCES**			
CM Administration	$ 52,515	$ 13,707	$ -	316	$ 66,221
Bid Phase Assistance	$ -	$ -	$ -	0	$ -
- Bid Marketing to Contractors	$ 13,580	$ -	$ -	60	$ 13,580
- Pre-bid meetings	$ 12,646	$ -	$ -	56	$ 12,646
- Assist w/ Response to Bidder Questions	$ 14,810	$ 2,313	$ -	76	$ 17,123
- Conduct Validation of Bidder Responses	$ 20,921	$ -	$ -	88	$ 20,921
- Make Written Recom. of Lowest/Respon. Bidder	$ 6,058	$ -	$ -	26	$ 6,058
- Prepare/Conduct/Doc. Preconstruction Conf.	$ 22,321	$ 2,313	$ -	108	$ 24,634
	$ -	$ -			
Contract Award/Execution Support	$ 6,843	$ -	$ -	30	$ 6,843
CMIS	$ -	$ -			
CMIS Services Construction Duration	$ -				
- Construction Management & Project Controls	$ 1,848,512	$ 209,057	$ 73,321	10,712	$ 2,130,890
- Document Control-Procore	$ 97,603	$ -	$ -	560	$ 97,603
- Submittals & RFI's	$ 106,939	$ -	$ -	600	$ 106,939
- Meeting Minutes	$ 117,336	$ -	$ -	680	$ 117,336
- Scheduling	$ 210,907	$ -	$ -	1,160	$ 210,907
- Cost Estimating	$ 114,683	$ -	$ -	620	$ 114,683
- LEED v.4.0 Certification Management	$ 29,069	$ -	$ -	160	$ 29,069
- General Project Inspection	$ 578,136	$ -	$ -	4,638	$ 578,136
- Deputy Inspection	$ 86,606	$ -	$ -	616	$ 86,606
- Geotechnical Inspection/Testing	$ 86,606	$ -	$ -	616	$ 86,606
- Materials Testing	$ 86,606	$ -	$ -	616	$ 86,606
- QA Surveying	$ 84,697	$ -	$ -	596	$ 84,697
-PLA Jobs Coordination	$ 24,401	$ -	$ -	140	$ 24,401
- Closeout Services					
- Const. Management & Project Controls	$ 365,798	$ -	$ 9,972	2,090	$ 375,771
- General Project Inspection	$ 99,937	$ -	$ -	570	$ 99,937
- Deputy Inspection	$ 17,823	$ -	$ -	100	$ 17,823
- Geotechnical Inspection	$ 17,823	$ -	$ -	100	$ 17,823
- Materials Testing	$ 17,823	$ -	$ -	100	$ 17,823
- QA Surveying	$ 26,735	$ -	$ -	150	$ 26,735
- LEED v.4.0 Certification Management	$ 24,401	$ -	$ -	140	$ 24,401
Total Hrs Phase 2 - Construction Services	23,872	1,516	336	25,724	
Total Cost for Phase 2	$ 4,192,133	$ 227,389	$ 83,293		$ 4,502,815
CMIS Subconsultants					
- Cannon Staff (QA Surveyor)				Lump-Sum, NTE	$ 241,570
- Glumac (LEED Cert/Commissioning)				Lump-Sum, NTE	$ 94,675
- Casamar (PLA Jobs Coordinator)				Lump-Sum, NTE	$ 31,521
- MultiVista (Webcams & Photo Documentation)				Lump-Sum, NTE	$ 130,503
- Aquatic D.G. Staff (Pool Speciality Peer Review)				Lump-Sum, NTE	$ 29,560
- Smith-Emery (Deputy/Special Inspect & Testing)				Lump-Sum, NTE	$ 673,831
- Value Engineering Team (Arcadis)				Lump-Sum, NTE	$ 63,200
Total Hours Phase 2 - Construction Phase Services	23,872	1,516	336	25,724	
Total costs for Phase 2	$ 4,192,133	$ 227,389	$ 83,293		$ 1,264,860
Total Phase 1 and Phase 2 Hours	25,470			29,502	
Total Phase 1 and Phase 2 Costs	$ 4,525,782	$ 68,780	$ 99,546		$ 6,425,791

Reimbursable ODCs:	$ 79,209
Total Fees:	$ 6,505,000

ARCADIS Design & Consultancy for natural and built assets

Belmont Beach & Aquatics Center Project

	Name	Position	Company	Type	Bill Rate
Core Team Members	Bruce Risley	CMIS Contract Project Mgr / PIC	ARCADIS	Hourly	$ 291.75
	Rick Shirley	Construction Manager	ARCADIS	Hourly	$ 233.40
	Jason Gardiner	Inspector of Record	SMITH-EMERY	Hourly	$ 122.50
	David Lee	Project Controls Officer	ARCADIS	Hourly	$ 175.05
	Andrew Dick	Scheduler	ARCADIS	Hourly	$ 185.66
	Praveen Lata	Estimator	ARCADIS	Hourly	$ 185.66
	Jayden Jimenez	Project Engineer	ARCADIS	Hourly	$ 153.83
"As-Needed" Technical Resources	Dave Anderson	Preconstruction / QC Mgr	ARCADIS	Hourly	$ 254.62
	Fausto Silva-C.R. Architectural	Constructability Reviewer	ARCADIS	Hourly	$ 220.00
	TBD - C.R. Civil	Constructability Reviewer	ARCADIS	Hourly	$ 220.00
	Matt Lotycz - C.R. Structural	Constructability Reviewer	ARCADIS	Hourly	$ 220.00
	Quyen Tu - C.R. Mechanical/Plumbing	Constructability Reviewer	ARCADIS	Hourly	$ 220.00
	Scott Walowsky - C.R. Electrical	Constructability Reviewer	ARCADIS	Hourly	$ 220.00
	Quyen Tu - C.R. Fire Protection	Constructability Reviewer	ARCADIS	Hourly	$ 220.00
	Bobbi Robertson - C.R. Support	Constructability Reviewer	ARCADIS	Hourly	$ 90.00
	Sagrario Cross	Project Admin Assistant	ARCADIS	Hourly	$ 100.79
	Flint Smith	Safety	ARCADIS	Hourly	$ 183.54
	Talitha Crain	Environmental Mitigation Mgr	ARCADIS	Hourly	$ 201.57
	Marylene Laugier-Diamond	Environmental Specialists	ARCADIS	Hourly	$ 175.05
	Bim/Clash Detection Staff	Bim/Clash Detection	ARCADIS	Hourly	$ 95.00
	VE Team - Lump Sum	Value Engineering	ARCADIS	Lump Sum, NTE	$ 63,200
Opt. Svc	Joe Seibold	Claims Resolution	ARCADIS	Hourly	$ 344.79
	Lisa Jones	Claims Analyst	ARCADIS	Hourly	$ 199.45

Assumptions:

1. The rates herein and fee above are based on a 38 month CMIS delivery schedule, as detailed below.
   - Preconstruction Phase: 4 months
   - Construction Phase: 30 months
   - Post Construction Phase: 4 months

Exclusions:

1. Field office facilities, furniture and equipment
2. Partnering workshop

Cannon

Cannon Rate Schedule

Arcadis U.S., Inc. – Belmont Beach Aquatic Center

Name	Job Title	Hourly Rate
Chad Engelskirger	Director of Survey	$200
Aaron Tillmanns	Project Manager	$178
Robert Pearigen	Survey Technician V	$157
Marcia Bohac	Survey Assistant	$99
Paul Seroka, Williams Baega	2-Man Field Crew Prevailing Wage	$305

16842 Von Karman Avenue, Suite 150, Irvine, CA 92606
T 949.753.8111
CannonCorp.us

220409

GLUMAC
A TETRA TECH COMPANY

STANDARD HOURLY BILLING RATES

CLASSIFICATION	RATE/HR.
COMMISSIONING SERVICES	
Vice President	$250
Project Manager	$205 - $235
Commissioning Specialist	$175 - $235
Commissioning Technician	$150 - $185
Commissioning Coordinator	$125
ENGINEERING DESIGN	
President	$475
Vice President	$250 - $350
Project Manager	$205 - $250
Project Engineer	$205 - $250
Designer	$150 - $200
BIM	$135 - $200
CAD	$115 - $150

CLASSIFICATION	RATE/HR.
SUSTAINABILITY CONSULTING	
Integrated Design / LEED Consulting	$150 - $230
Energy Analysis	$150 - $235
CFD Analysis	$150 - $250
Lighting Design	$150 - $235
Technology Integration Design	$175 - $235
PROJECT ADMINISTRATION	
Project Coordinator	$175
Project Administrator	$150
Project Assistant	$100
Construction Management	$175 - $225

REIMBURSABLE EXPENSES	
Drawing Plots, & Prints (Color/Bind)	At cost (prevailing printer rates)
Travel, Lodging, Transportation	At Cost
Printing, Reproduction, Photography	At Cost
Mileage	At prevailing IRS Rate/Mile
All Fees and Expenses are charged at cost	

Effective January 2022

Casamar Group, LLC

Project, Resource & Compliance Management

Casamar Group Standard Rates	
Position / Job Title	Billable
	2022-2024
Principal, Civil Engineer, PE, QSP , PLA Administrator	$198.92
Sr. Labor/PLA Compliance Officer	$176.55
SWPPP QSD Compliance, Civil Engineer/Construction Manager	$149.66
Senior Contracts Document Control / Data Analytics & Configuration, Outreach Analyst	$105.62
Contracts Document Control / Data / Outreach / Labor Analyst	$85.77
Administration Support - Document Control Analyst	$61.27
Reimbursables (ODC's) at Cost	
Mileage at $0.58 (or current Caltrans rate)	

23335 Alamos Ln., Newhall, CA 91321
Phone: (661) 254-2373 - Fax: (661) 253-0549 – www.casamargroup.com

Angelview LLC (dba Multivista)
1730 E. Holly Ave. Suite 730, El Segundo, CA 90245
t: (310)306-6578

Subconsultant Hourly Rate Schedule

Labor Category	Hourly Rate $/hr
Laser Scan Documentation Specialist	$175
UAV Pilot	$150
Measurable Images / 3D Immersive Documentation Specialist	$100
Photography/360 Photo Documentation Specialist	$75
Webcam Installation Specialist	$75
Accounting	$75
Project Management	$75
Accounting	$75
Office Administration	$50

In-House Non-Labor Services	Billing Rate $/Unit
Photography/360 Photo Hosting Service	$125/visit
Laser Scan Hosting Service	$125/visit
Measurable Image / 3D Immersive Hosting Service	$125/visit
RTC-360 Laser Scan Device	$125/hour
UAV Equipment	$100/hour
Measurable Images / 3D Immersive Equipment	$100/hour
Webcam Hosting	$600/month
Webcam Equipment Rental	$300/month

AQUATIC
DESIGN GROUP

30 June 2022

RE: Aquatic Design Group Hourly Rates

To Whom This May Concern:

As requested, below are the billable hourly rates for Aquatic Design Group.

Hourly Rates:
Compensation for basic and additional services (when requested and authorized in advance by Arcadis and the City of Long Beach) shall be provided in conformance with the following hourly rates:

.1	Principal.....	$ 215.00 per hour
.2	Project Architect / Engineer.....	$ 195.00 " "
.3	Project Manager.....	$ 175.00 " "
.4	Designer.....	$ 135.00 " "
.5	Clerical.....	$ 80.00 " "

We are more than happy to provide additional information, as requested.

Thank you,

AQUATIC DESIGN GROUP, INC.

Scott Palmer
Director of Marketing

2226 Faraday Ave. Carlsbad, CA 92008
800.938.0542 \ aquaticdesigngroup.com

Charges for Services and Contract Terms

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

1. Working Conditions And Hours – Field Services

1.1 Minimum Charges

- Show-up -- No work performed -- 2 hours.
- 4 hour minimum -- 1 to 4 hours.
- 8 hour minimum -- Work over 4 hours.
- Billable minimum one hour staff engineer, per week.

*NOTE: Less than 24 hour call-out may necessitate premium charges.

1.2 Regular Time

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

1.3 Time And One-Half

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

1.4 Double Time

- All hours after 12 Monday through Saturday and all day Sunday.
- All holiday hours for in-plant off-site shop inspections.
- Holidays are: New Year's, Memorial, Presidents, Independence, Labor, Veterans, Thanksgiving, Day after Thanksgiving, and Christmas.

1.5 Travel Time And Mileage

- No Travel Time or Mileage within 50-mile radius of our laboratory. For projects outside the 50-mile radius, special quotations will be made.
- Travel Time may be charged from portal to portal (if necessary to pick up/drop off equipment) to closest Smith-Emery location with mileage reimbursement. Internal Revenue Service (IRS) mileage rates- http://www.irs.gov/Tax-Professionals/Standard-Mileage-Ratesmade.

1.6 Parking

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

1.7 Subsistence

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

1.8 Shift Differential

- Second (Swing Shift) -- Eight (8) hours will be charged for first 7½ hours worked. Time worked in excess of 7½ hours will be billed at time and one-half rate.
- Third (Graveyard Shift) -- Eight (8) hours will be charged for first 6.5 hours worked. Time worked in excess of 6.5 hours will be billed at time and one-half rate.
- Northern California Steel Shops -- add 12.5% for Night Shift Differential.

Charges for Services and Contract Terms (continued)

1.9 Completion

- SEL representative will remain on job until discharged by competent authority.

1.10 Cancellation

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

1.11 3rd Party Billing Software

- Customer requests to submit invoice(s) via customers Software will be charged for special billing handling. Charges will show on the invoice as Special Billing Handling at a flat rate of $145 per month.

1.12 Insurance

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

1 Inspection Services - Non-Prevailing Rates

CODE		COST
	Geotechnical Consulting/Testing	
2016	Grading Inspection	
	Preliminary Investigations	By Quote
	Foundation Recommendations	By Quote
	Environmental Assessment Studies	By Quote
	On-Site Testing (Compaction)	$115
7212	Field Technician w/ Nuclear Gauge	$115
2401	**Reinforced Concrete Inspection**	$120
	Drilled-In-Anchors	
	Reinforcing Steel Placement	
	Reinforcing Steel Material ID	
	Concrete Placement	
	Precast Plant Inspection	
	Gunite/Shotcrete	
	Prestressed/Post-Tension	
	Fiberwrap	
3310	Batch Plant Inspection	
2402	**Masonry Inspection**	$120.00
	Retaining Walls	
	Structural Walls	
	Stair Shaft	
	Veneer	
	Grouting	
	Repointing	
2405	**Steel Shop - Visual Inspection**	By Quote
	Visual	
	Material I.D	
	Welder Qualification	
	WPS Review	
2406	**Steel NDT - Shop**	By Quote
	Ultrasonic	
	Magnetic Particle	
	Dye Penetrant	
2403	**Steel Field-Visual Inspection**	$120
	Field Welding & Bolting	
	Material ID	
	Welder Qualification Review	
	Weld Procedure Qualification	
2404	**Steel NDT - Field**	$125
	Ultrasonic	
	Magnetic Particle	
	Dye Penetrant	
3511	**Waterproofing Inspection**	$125
	Material I.D, Laydown, Sampling	
	Warranty Inspection	

CODE		COST
1815	**Shear Diaphragms**	$120
	Shear Nailing Inspection	
	Hold-Down Hardware, Include Dowels	
2407	**Fireproofing/Firestop Inspection**	$120
	Fireproofing Technician / Sampling	
	Thickness Evaluation / Adhesion	
	Fire Stop System Installation Inspection	
3410	**Roofing Inspection**	$120
	Material I.D.	
	Laydown	
	Material Sampling	
1815	**Finishing Inspection**	$120
	Drywall Fastening	
	Electrical	
	H.V.A.C.	
	Plumbing	
	Fire Sprinkler	
	Waterproofing	
	Ceramic Tile	
	Curtain Wall	
	Miscellaneous Finishing	By Quote
	Radiography	
	Radiographic Technician	
	Level II with Helper & Field Film	
	Processing Equipment *per hour*	By Quote

1a Inspection Services - Prevailing Wage Rates

CODE		COST
	Geotechnical Consulting/Testing	
2016	Grading Inspection	
	Preliminary Investigations	By Quote
	Foundation Recommendations	By Quote
	Environmental Assessment Studies	By Quote
	On-Site Testing (Compaction)	$150
7212	Field Technician w/ Nuclear Gauge	$155
2401	**Reinforced Concrete Inspection**	$155
	Drilled-In-Anchors	
	Reinforcing Steel Placement	
	Reinforcing Steel Material ID	
	Concrete Placement	
	Precast Plant Inspection	
	Gunite/Shotcrete	
	Prestressed/Post-Tension	
	Fiberwrap	
3310	Batch Plant Inspection	
2402	**Masonry Inspection**	$155
	Retaining Walls	
	Structural Walls	
	Stair Shaft	
	Veneer	
	Grouting	
	Repointing	
2405	**Steel Shop - Visual Inspection**	By Quote
	Visual	
	Material I.D	
	Welder Qualification	
	WPS Review	
2406	**Steel NDT - Shop**	By Quote
	Ultrasonic	
	Magnetic Particle	
	Dye Penetrant	
2403	**Steel Field-Visual Inspection**	$155
	Field Welding & Bolting	
	Material ID	
	Welder Qualification Review	
	Weld Procedure Qualification	
2404	**Steel NDT - Field**	$160
2310	Ultrasonic	
2311	Magnetic Particle	
2312	Dye Penetrant	
3511	**Waterproofing Inspection**	$160
	Material I.D, Laydown, Sampling	
	Warranty Inspection	

CODE		COST
1815	**Shear Diaphragms**	$155
	Shear Nailing Inspection	
	Hold-Down Hardware, Include Dowels	
2407	**Fireproofing/Firestop Inspection**	$155
	Fireproofing Technician / Sampling	
	Thickness Evaluation / Adhesion	
	Fire Stop System Installation Inspection	
3410	**Roofing Inspection**	$160
	Material I.D.	
	Laydown	
	Material Sampling	
1815	**Finishing Inspection**	$160
	Drywall Fastening	
	Electrical	
	H.V.A.C.	
	Plumbing	
	Fire Sprinkler	
	Waterproofing	
	Ceramic Tile	
	Curtain Wall	
	Miscellaneous Finishing	By Quote
	Radiography	
	Radiographic Technician	
	Level II with Helper & Field Film	
	Processing Equipment *per hour*	By Quote

2 General Field Services

CODE		COST
4474	Film Adhesion *ASTM D4541-Regular Time, per hour*	$110
4475	Dry Film Thickness *ASTM D6132 - Regular Time, per hour*	$110
3210	Adhesion/Cohesion Testing of Spray Applied Fireproofing *Regular Time, per hour*	By Quote
3211	Firestopping Technician *Regular Time, per hour*	$110
3310	Batch Plant Technician *Regular Time, per hour*	$110
3410	Roofing Technician *Regular Time, per hour*	$110
3510	Membrane Technician *Regular Time, per hour*	$110
3511	Roofing/Waterproofing Technician *Regular Time, per hour*	By Quote
3512	Pull Testing of Post Installed Anchors, Technician *Regular Time, per hour*	$110
3610	Mixed Concrete, Technician *Regular Time, per hour, 4-hour minimum*	$110
4420	Special Testing	By Quote
3088	Structural Investigations of Existing Buildings	By Quote
3096	Corrosion Survey	By Quote
3097	Ground Penetrating Radar *Per hour*	$180
5101	Mileage	$.80
3099	Equipment Delivery and Stand by time *Per hour*	$100
3061	Non-Destructive Testing	By Quote
3061	Non-Destructive Testing, Phased Array UT	By Quote

Field Equipment Charges Activity Cost

4415	Skidmore *per day*	$100
4413	Torque Wrench *per day*	$75
4414	Multiplier *per day*	$30
4464	Pull Test Equipment (ram, pump, gage) *per day*	$150
4465	Dynamometer *per day*	$75
9704	Schmidt Hammer *per day*	$75
3097	Ground Penetrating Radar (GPR) *per hour (4-hr min)*	$180
4814	Flatness Equiptment Charge *half day*	$600
4826	Flatness Equiptment Charge *per day*	$1200
9117	Field Hardness Equipment *per day*	$65

CODE		COST
4409	Dry Film Thickness Gage *per day*	$65
4416	Misc. Equipment Charge	By Quote
4419	Photostress *per day*	By Quote
4430	Vibration and Sound Monitoring *per day*	By Quote
4431	Concrete Air Meter, Pressure of Volumetric *per day*	$75
4436	Concrete Unit Weight Kit, scale, bucket, plate, mallet, and rod *per day*	$75
4437	2-inch cube brass embecco molds *each - per day*	$75
9217	Film Adhesion Equipment, Dollies and Epoxy *per day*	$100
4467	Strain Gages	By Quote
4397	Fall Prevention Equipment *per day*	$50
4398	Mobile Concrete Laboratory	$500
2400	Ultrasonic Testing Equipment *per day*	$50
2500	Phased Array Ultrasonic Testing Equipment	By Quote
2501	Hi-Rail UT Vehicle *includes two technicians - per day*	$9000
2502	Hi-Rail UT Vehicle Mobilization	By Quote
2503	Ultrasonic by Electromagnetic Induction *per hour*	$150

** **Note** - all equiptment is required to be operated by one of our tained technicians/inspectors. Additional charges are applied for our SE technical inspector's time.*

Concrete Coring Services

3710	Technician and Equipment Concrete *(4 and 8 hour minimum) - per hour*	$150
3910	Coring for Overhead / Ceiling coring *(4 hr. minimum) - per hour*	$185
	Miscellaneous Concrete Coring Prices:	
7345	Patching Slab on Grade Cored Holes with 2500 psi Concrete Patch *each*	$40
7348	Scaffolding *per day*	$150
7346	Thickness Determination *per ASTM C42*	$30
7347	Compression Strength Determination (Including sample preparation and capping) *each*	$100
7325	Travel Time, per hour (travel time by quote for prevailing wage projects)	$90
7313	Mileage, per mile	$.80

2 General Field Services (continued)

CODE		COST
Asphalt Concrete Coring Services		
3710	Technician and Equipment Asphaltic Concrete Cores *(4 and 8 hour minimum)*	$150
	Alternate Individual Core Prices *(all prices are for a four core minimum job):*	
7022	Asphaltic Concrete Cores 2", 3" and 4" Diameter *(First 6" in depth) each*	$60
7029	Asphaltic Concrete Cores 6" and 8" Diameter *(First 6" in depth) each*	$60
7030	Asphaltic Concrete Cores *per inch after 6" in depth) each*	$25
	Miscellaneous Ashphaltic Coring Prices	
7031	Patching of Core Drilled Holes Using Cold Patch Material *each*	$3.50
7032	Thickness Determination *per ASTM C42 - each*	$25
7033	Specific Gravity for Determination of Percent Compaction *per ASTM D 2726 - each*	$35
7034	Specific Gravity for Determination of Percent Compaction *by paraffin - each*	$55

CODE	COST

3 Laboratory Services

CODE		COST
Professional Staff		
3011	Registered Professional Engineer, Laboratory *per hour*	$215
3015	Staff Engineer *per hour*	$200
3012	Laboratory Supervisor, regular time *per hour*	$115
3013	Test Technicians -- Laboratory *regular time - per hour*	$110
3014	Test Technicians -- Away from Lab, *Regular Time - per hour*	$110
3009	Field Testing -Training, regular time *per hour*	$110
2441	Submittal Review *per hour*	$215
2442	Steel Shop Management, *per hour*	$115
2443	Level III Supervisor – ASNT *per hour*	$140
Expert Witness Testimony		
9603	Court Appearance, *per hour - four-hour minimum*	$420
9605	Preparation for Court, Consultations *per hour*	$320
	Plus actual expenses when out-of-town	
Administrative		
4443	Administrative Support	7% Invoice
9110	*Report Charge *per report, per copy*	$2.75
9111	Final Report Charge	By Quote
4812	General Testing-Rush Charges	50%
Special Testing		
5022	Miscellaneous Sample Pick-up *per hour*	$80
5023	Miscellaneous Pick-up *per trip minimum (within 40-mile radius)*	$150
5028	Miscellaneous Pick-up, per trip minimum *(more than 40-mile radius)*	$250
4406	Materials Purchased	By Quote
4408	Sample Preparation	By Quote
4422	Special Test Set-Up (2-techs+1 engineer crew) *per hour*	$300
4420	Special Testing	By Quote
4425	Sample Disposal	By Quote
Travel Expenses		
1103	Subsistence *per day*	By Quote
1106	Travel Expense	Cost + 25%
4456	Travel Time *per hour*	$90
5101	Mileage *per mile*	$.80

CODE		COST
Outside Services		
4313	Concrete Core Cutting	Cost + 25%
4406	Materials Purchased	By Quote
4416	Rental of Equipment	Cost + 20%
4417	Outside Laboratory	By Quote
9702	Outside Services	Cost + 25%
Laboratory Hours		
5051	Off-hour Laboratory Operations *per day*	$1,000
5052	Holiday and Sunday Laboratory Operations *per day*	$1,500

Laboratory hours are 7:00am - 4:00pm, Monday through Friday. Additional charges will be made for off-hours or weekend testing as follows:

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

4 Aggregate

CODE		COST
7000	Absorption, Coarse, *ASTM C 127 - each*	$45
7001	Absorption, Fine *ASTM C 128 - each*	$55
7557	Hardness Test *ASTM D 1865 - each*	By Quote
4132	In Lab Rock Coring and Cutting	By Quote
7037	Loss On Ignition *ASTM C25*	$100
7010	Percent Flat/Elongated *CRD C 119, ASTM D 4791 - each*	$200
7118	Plate Bearing Test *ASTM D 1195, D 1196*	By Quote
7024	Petrographic Analysis of Aggregate for Concrete *ASTM C295 -each*	By Quote
7551	Potential Alkali-Silica Reactivity of Aggregate for Concrete *ASTM C 289, Chemical Method - each*	$350
7552	Potential Alkali Reactivity of Aggregate for Concrete, *ASTM C 1260, Mortar-Bar Method - each*	By Quote
7565	Potential Alkali Reactivity of Carbonate Rocks for Concrete, *ASTM C 586, Rock Cylinder Method - each*	By Quote
7012	Sodium soundness - Fine, 5 cycles *ASTM C 88 - each*	$220
7046	Sodium soundness - Fine, 5 cycles, with sample preparation *ASTM C 88 - each*	$295
7047	Sodium soundness - Coarse, 5 cycles *ASTM C 88 - each*	$230
7050	Sodium soundness - Coarse, 5 cycles, with sample preparation *ASTM C 88 - each*	$280
7048	Magnesium soundness - Fine, 5 cycles, *ASTM C 88 - each*	$235
7049	Magnesium soundness - Coarse, 5 cycles *ASTM C 88 - each*	$270
7013	Specific Gravity, Bulk SSD, Coarse up to 1 ½" *ASTM C 127 - each*	$70
7051	Specific Gravity, Bulk SSD, Coarse up to 2 ½" *ASTM C 127 - each*	$110
7052	Specific Gravity, Bulk SSD, Coarse up to 2 ½", Complete *ASTM C 127 - each*	$175
7014	Specific Gravity, Bulk SSD, Fine *ASTM C 128 - each*	$80
7045	Specific Gravity, Bulk SSD, Coarse, Complete *ASTM C 127 - each*	$125
7060	Specific Gravity, Bulk SSD, Fine, Complete *ASTM C 128 - each*	$135

CODE		COST
7021	Unconfined Compression Test of Intact Rock *ASTM D2938 - each*	$70
7017	Unit Weight, ASTM C 29, (No Air Void Determination) *each*	$70
7035	Unit Weight and Air Void Determination – Coarse Aggregates up to 1", *ASTM C 29 - each*	$200
7036	Unit Weight and Air Void Determination – Fine Aggregates, *ASTM C 29 - each*	$200
7053	Unit Weight only–Coarse Aggregates up to 2 ½", *ASTM C 29 - each*	$125
7054	Unit Weight and Air Void Determination – Coarse Aggregates up to 2 ½", *ASTM C 29 - each*	$225

Conformity

7101	Clay Lumps/Friable Particles, *ASTM C 142 - each*	$80
7055	Cleanness Value, Calif. 227, 2 ½" x 1 ½" *each*	$225
7056	Cleanness Value, Calif. 227, 1 ½" x 1" *each*	$150
7004	Cleanness Value, Calif. 227, up to 1" *each*	$125
7005	Durability Index, Calif. 229, Coarse, Method A (Dc) retained #4 *each*	$170
7006	Durability Index, Calif. 229, Coarse, Method C and D (Df) fine *each*	$165
7059	Durability Index, Calif. 229, Method B Dc Mod. Lightweight agg *each*	$175
7008	Los Angeles Rattler, up to1 ½" *ASTM C 131 - each*	$170
7009	Los Angeles Rattler, up to 2 ½" *ASTM C 535 - each*	$235
7057	Los Angeles Rattler, up to1 ½" with sample preparation *ASTM C 131 - each*	$200
7058	Los Angeles Rattler, up to 2 ½" with sample preparation *ASTM C 535 - each*	$235
7007	Lightweight Aggregate, Coarse, *ASTM C 123 - each*	$850+
8514	Lightweight Aggregate, Fine *ASTM C 123 - each*	$700+
7115	Organic Impurities *ASTM C40*	$50
8516	Sand Equivalent (Average of 3) Calif. 217 *each*	$90

4 Aggregate (continued)

CODE		COST
7123	Sand Equivalent (Average of 3) *ASTM D 2419 - each*	$90
7015	Sieve Analysis, Coarse, 136, Cal Test 202 each up to 1 ½" *ASTM C*	$125
7039	Sieve Analysis, Coarse, 136, Cal Test 202 each greater that 1 ½". *ASTM C*	$200
7016	Sieve Analysis, Fine, Cal Test 202 *ASTM C 136 - each*	$110
7549	Sieve Analysis, Fine and Coarse Combined up to 1 ½", Cal Test 202 *ASTM C 136 - each*	$210
7553	Staining Materials *ASTM C 641 - each*	$300+

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

ASTM C29
(Unit Weight only)

CODE	COST

5 Asphalt Concrete

CODE		COST
4117	Aggregate Correction for Ignition Oven *each*	$50
4112	Asphalt Core Density *each*	$35
4118	Centrifuge Kerosene Equivalent	$150
4119	Complete Asphalt Concrete Mix Design	By Quote
4110	Extraction, % Asphalt (Method A, B, or C) or Calif. 310. Excluding Ash Correction *ASTM D 2172 - each*	$75
4111	Extraction, % Asphalt, Ignition Oven *each*	$100
4108	Gradation on Extracted Sample (Including Wash) Calif. 202 *each*	$100
Maximum Density		
4104	Hveem, Lab-mixed - Calif. 366 *each*	$175
4105	Hveem, Pre-mixed - Calif. 366 *each*	$135
4106	Marshall, 4-Inch Lab-mixed *ASTM D 1559 - each*	$175
4107	Marshall, 4-Inch Pre-mixed *ASTM D 1559 - each*	$125
4122	Marshall, 6-Inch Lab-mixed *ASTM D 5581 - each*	$300
4123	Marshall, 6-Inch Pre-mixed - *ASTM D 5581 - each*	$250
4120	Maximum Theoretical Unit Weight (Rice Gravity) *ASTM 2041 - each*	$175
7019	Moisture Content of Asphalt, CT382	$35
4113	Moisture Vapor Susceptibility	$200
4109	Penetration ASTM D 5 *each*	$60
Stability Tests		
4100	Hveem, Lab-mixed - Calif. 304 *each*	$250
4101	Hveem, Pre-mixed - Calif. 304 *each*	$200
4102	Marshall, 4-Inch Lab-mixed *ASTM D 1559 - each*	$250
4103	Marshall, 4-Inch Pre -mixed *ASTM D 1559 - each*	$200
4124	Marshall, 6-Inch Lab-mixed *ASTM D 5581 - each*	$250
4125	Marshall, 6-Inch Pre -mixed *ASTM D 5581 - each*	$200
4141	Non-Destructive Pavement Deflection Testing using Benkelman Beam	By Quote

CODE	COST

6 Calibration Verification Services

CODE		COST
Calibration Verification of Skidmore-Wilhelm Device & Torque Wrench		
4403	Calibration of Skidmore-Wilhelm Device *In Lab - up to 110,000 lbs*	$250
4126	Calibration of Skidmore-Wilhelm Device *In Lab - up to 115,000 to 200,000 lbs*	$300
4404	Calibration of Torque Wrench by Skidmore-Wilhelm Device *each bolt size (3 required)*	$250
Calibration Verification of Hydraulic Jacks		
4450	Up to 50-tons	$275
4451	51 to 74-tons	$300
4452	75 to 99-tons	$325
4453	100 to 199-tons	$400
4454	200 to 299-tons	$400
4466	300 to 500-tons	$650
4455	Custom Systems	By Quote
Note: Extra-handling charges will be made on any ram or pump too heavy or bulky for one man to lift.		
Calibration Verification Of Measuring Device		
4497	Calibration of Linear Measuring Device *each*	By Quote
4498	Calibration of Temperature Measuring Device *each*	By Quote
4499	Calibration of Mass Measuring Device *each*	By Quote
4483	Calibration of Force Measuring Device *each*	By Quote
4484	Calibration of Pressure Measuring Device *each*	By Quote
4485	Calibration of Miscellaneous Measuring Device *each*	By Quote
4486	Calibration of Infrared Temperature Gun *each*	$225
4487	Calibration of Amp Measuring Device *each*	$225
4888	Calibration of Torque Wrench *(0 to 250 ft-lbs) each*	$250
4127	Calibration of Torque Wrench *(0 to 251 to 600 ft-lbs) each*	$300
4128	Calibration of Pressure Gage *(0 to 600 psi) - each*	$250
4129	Calibration of Pressure Gage *(601 to 5000 psi) - each*	$350

CODE	COST

7 Ceramic Tile & Stone

CODE		COST
	Minimum Charge of $375 for any Tile Testing Service Apply	
	Laboratory Ceramic, Porcelain, and Clay Tile Testing	
3013	Lab Technician *per hour*	$110
	Dimensional	
4900	Thickness, 5.50 (ANSI requires 80) *ASTM C499 - each*	$500
4901	Facial Dim, 5.50 *(ANSI requires 80 ASTM C499) - each*	$500
4902	Warpage, 7.31 (80 required) *ASTM C485 - each*	$585
4903	Wedging, 7.31 *(80 required)ASTM C502 - each*	$585
	Friction	
4904	Static Coefficient of Friction (3)(Not Modified) (*Withdrawn ASTM) *ASTM C1028 - per set*	$440
4934	Coefficient of Friction (3) (Modified) (*Withdrawn ASTM) *ASTM C1028 - per set*	$440
4935	Dynamic Coefficient of Friction (3) (Ceramic Only)ANSI A137.1 *per set*	$440
4960	Dynamic Coefficient of Friction (5) (all except Ceramic) ANSI B101.3 *per set*	$440
	Physical	
4905	Water Absorption *ASTM C373 - (5 required) $65.00 each*	$395
4936	Initial Rate of Absorption *ASTM C373 - (5 required) 47.00 each*	$235
4911	Thermal Shock *ASTM C484 (5 required) per set*	$365
4923	Mohs Hardness (5 required) *per set*	$175
4980	Length Change - Modified *ASTM C157 - (3 required) per set*	$900
	Strength (ANSI A137.1)	
4906	Bond Strength, (shear test) *ASTM C482 (5 required) $92.00 each*	$460
4907	Breaking Strength, 30.00 (10 required) *ASTM C648 - each*	$285
4981	Breaking Load Strength - Flex or Center point *(5 required) ASTM C293 - per set*	$300
4937	Compressive Strength, Modified with Cutting *ASTM C67 - each*	$100
4982	Compressive Strength Test, *Modified *ASTM C42 - (5 required) per set*	$475
4983	Flexural Strength Test*Modified *ASTM C674 - (5 required) per set*	$365

CODE		COST
4916	Modulus of Rupture, Ceramic *ASTM C133 - (5 required) 85.00 each*	$425
4920	Impact *ASTM C368 - (10 required) - per set*	$315
4984	Impact, (LA S-601-3), *Modified *ASTM D2444 - (5 required)per set*	$440
4924	Tensile Tests in Laboratory, CTI	$375+
4928	Veneer Bond Strength, 2-required *ASTM C482 Modified*	$375+
4925	Shear Tests, (Grout/Thin Set Evaluation; Tile to Tile) *5 minimum ANSI*	$350
4926	Shear Tests, (Material Shear) *5 minimum ANSI*	$350
4927	Water Immersion Processing for Shear Tests, 5 minimum ANSI	$350
4932	Oven Processing for Shear Tests, 5 minimum ANSI	$350
4933	Low Temperature Processing for Shear Tests, 5 minimum ANSI	$350
4965	Bond Strength (Glass tile 4 dry 4 wet, 28 Days) *ANSI A 137.2 - 65.00 each*	$520
	Performance	
4908	Abrasive Wear Index *ASTM C501 (4 required) 100.00 each*	$420
4909	Crazing *(5 cycles) ASTM C424*	$750
4910	(Per ANSI Crazing Requirement) *ANSI/ASTM C126 per set (65 samples)*	$365
4938	Glaze Adhesion (modified ASTM) *ASTM D4541 - each*	$90
4912	Color Uniformity *ASTM C609*	$1,200+
4913	Chemical Resistance (qualitative Only 10% HCL and KOH) *ASTM C650/ C126*	$365
4961	Chemical Resistance (above + Swim Pool Chem) *ASTM C650/ C126*	$535
4962	Chemical Resistance (Extended ASTM Version) *ASTM C650/ C126*	$1,800
4963	Glaze Permeability, (Ink Coating Inspection) *ASTM C67*	$185
4914	Freeze-Thaw Resistance (10) 50 cycles *per set ASTM C1026*	$2,995
4915	Additional cycles, per cycle/tile	$65
4985	Freeze Thaw (10) 50 cycles) *2 -3 months, per set ASTM C67*	$2,250
4917	Moisture Expansion, (5 required) *ASTM C370* Modified*	$630
4921	C.T.I. Stain Resistance *(8 required) Set CTI T72*	$158

7 Ceramic Tile & Stone (continued)

CODE		COST
4930	Autoclave (3 required), CTI *each*	$350

Minimum Charge of $375 for any Tile Testing Service Apply

4939	Imperviousness Test *ASTM C126 - each*	$90
4952	Water Absorption and Saturation Coefficient *per set 90.00 each (5 required), ASTM C67*	$450
4986	Abrasion Test & Skid Coeff. (LA S-601-3) *set ASTM C2486 and c 1028 - 4pcs*	$990
4987	Abrasion Test only. (LA S-601-3) *ASTM C2486 - 2pcs - set*	$660

Floor Systems and Components

Floor Installation Performance Level, Robinsons Floor Test ASTM C627-76:

4918	First Panel -- Not Including Tile or Installation	$1,890
4919	Second or More on Same Purchase Order	$1,260

Miscellaneous

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

Mortar Testing

4940	Mortar ANSI Test ANSI	$2,200+
4944	Mortar Compression Test *ASTM C109 - each*	$65
4945	Mortar Miscellaneous Test CTI	By Quote
4941	Mortar Skinning Test, CTI *each*	$115
4942	Mortar Initial Setting Time, CTI *each*	$80
4943	Mortar Drop-off Test, CTI *each*	By Quote

Grout Testing

4950	Grout ANSI Test ANSI	By Quote
4953	Grout Drop-off Test CTI	By Quote
4955	Grout Miscellaneous Test CTI	By Quote
4951	Grout Skinning Test, CTI *each*	$115
4954	Grout Compression - 2" cubes *C1019 - each*	$65

Dimension Stone / Building Stone Testing

4800	Compression Test, (*20 required), ASTM C170 *per set*	$1,060
4801	Flex Strength, Cut Samples (*20 required), ASTM C880 *per set*	$1,060
4931	Flex Strength, Full Size Samples (*20 required), (max 40 lbs/ sample) *ASTM C880 - per set*	$3660
4802	Modulus/Rupture (*20 required) *per set ASTM C99*	$1,060

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

4804	Water Absorption and Density, (5 required) *ASTM C97/ C672 - per set*	$395
4810	Abrasion Resistance, (3 required) *ASTM C1353 - per set*	$460
4811	Anchor Pull Test (No deflection measurement) *ASTM C1354 - each*	$135
4819	Anchor Pull Test (With deflection measurement) *ASTM C1354 - each*	$235
4818	Soundness Test , (5 samples required) ASTM C88 *per set*	$470
4817	Breaking Load, (5 samples required) *ASTM C67 - per set*	$350

Field Testing ASTM C482

3014	Field Technician *per hour*	$105
5101	Ceramic Tile Technician Mileage *per mile*	.80
5019	Pick-up Sample - within 40-mile radius from Laboratory, *per hour*	$65
4957	Field Slip Resistance Test, ASTM C1028, first test (*Withdrawn Standard) *ASTM C1028*	$750
4958	Field Slip Resistance Test, ASTM C1028, additional test in same area *each ASTM 1028*	$440
4970	Dynamic Coefficient of Friction (installed floor) *first test ANSI B101.3*	$750
4964	Dynamic Coefficient of Friction (installed floor), additional test in same area *ANSI B101.3 each*	$440
4971	Dynamic Coefficient of Friction (ceramic only installed) first test *ANSI A137.1*	$750
4966	Dynamic Coefficient of Friction (ceramic only installed) add test in same area *ANSI A137.1 each*	$440
4959	Field Veneer Bond Strength *ASTM C482*	$1,800+

8 Concrete

CODE		COST
4300	Compression Test sample prep. and cap, 6" x 12" cylinders, including untested holds *ASTM C 39 - each*	$45
4329	Compression Test sample prep. and cap, 4" x 8" cylinders, including untested holds *ASTM C 39 - each*	$45
4308	Weight per cubic foot of lightweight concrete cylinders *each*	$100
4304	Flexure Test, 6" x 6" beams, *ASTM C 78 - each*	$125
4305	Splitting Tensile, 6" x 12" cylinders *ASTM C 496 - each*	$100
4306	Modulus of Elasticity Test - Static *ASTM C 469 (includes comp. and Unit weight) each*	$275
4228	Thermal Expansion of Concrete *AASHTO T336 each*	$600
4227	Unit Weight, Absorption, and Voids in Hardened Concrete *ASTM C642 - each*	$350
4311	Compression Test, 2" - 4" - 6" Cores, Including sample preparation and capping *ASTM C 42 - each*	$125
4312	In Laboratory Core Cutting *each*	$70
5000	Pickup & Processing Cylinders *6:30 a.m. to 4:00 p.m., Monday - Friday (per sample)*	$20
5001	Pickup & Processing Cylinders *Before 6:30 am and after 4:00 pm & Saturday*	$35
5002	Pickup & Processing *Sunday & Holidays (per sample)*	$40
5003	*Minimum Pick-up Charge	$200
5021	Trans. and Processing of Flexural Test Beams -within 40-mile radius from Laboratory *each*	$45
Forensic Testing		
4319	Petrographic Examination *ASTM C856*	$2,800 +
4459	Moisture Vapor Transmission, Calcium Chloride Moisture Kit *Per Location ASTM F1869*	$25
4457	Inplace Moisture Content	$75
4489	Corrosion Potential, Half Cell *ASTM C876*	$500 +
4301	Pulse Velocity, ASTM C597	By Quote
4473	Cement Analysis *ASTM C114 - each*	$800 +
Shrinkage		
4307	Length Change (3 bars, 4 readings, up to 90 days), Modified *ASTM C 157*	$400
4308	Additional Reading *per set of 3 bars*	$75
4302	Storage over 90 days *per set of 3 bars, per month*	$75
5020	Trans. and Processing /Deliver Shrinkage Molds/Samples-within 40-mile radius from Laboratory *per set*	$60
Mix Design		
9500	Mix Design, Determination of Proportions *(3 Business Day Turn Around) each*	$250
9505	Mix Design, Determination of Proportions *(Next day turnround) each*	$230
9501	Mix Design, Determination of Proportions *(Same Day Turn Service) each*	$350
9502	Preparation of Special Strength Documentation for Mix Design *per hour*	$350
9503	Amend or Retype Existing Smith-Emery Mix Designs *(not involving calculations) each*	$200
9504	Review Mix Design prepared by Others *per hour*	$220
Labratory Trial Batch		
4309	Laboratory Trial Batch, (includes slump, % air, unit weight, and up to 7-cylinders *ASTM C 192 - each*	$900
4310	Laboratory Trial Batch, (including the items above and shrinkage *ASTM C 192 - each*	$1,100
4315	Sampling Material for Laboratory Trial Batches *per hour*	$200
Guinite & Shotcrete		
4314	Compression, 2", 4", 6" Cores, including, preparation, capping, and trimming *ASTM C 42 each*	$125
5016	Trans. and Processing Shotcrete Cores-within 40-mile radius from Laboratory	$25
5017	Trans. and Processing Gunite Field Sample (within 40-mile radius from Laboratory) less 12x12x6-in. *each*	$60
5018	Trans. and Processing Gunite Field Sample (within 40-mile radius from Laboratory) up to 12x12x12. *each*	$100

8 Concrete (continued)

CODE		COST
5028	Trans. and Processing Gunite Field Sample (within 40-mile radius from Laboratory) 2-feet square min. *each*	$250
5027	ACI 506.2 Core Grading *per core*	$175
	Lightweight Roof Fill ASTM C495	
4380	Compression Test including capping, and preparation, *each*	$100
4381	Density *each*	$100
4382	Cell-Crete 7-days and 14-days report	$75

CODE	COST

9 Construction Materials

CODE		COST
Roofing Tile		
4700	Absorption *each*	$65
4701	Additional/Special Tests	By Quote
4702	Breaking Strength per U.B.C. *each*	$65
Slate		
4805	Modulus of Elasticity, 3 parallel, 3 perpendicular *ASTM C120 - $90 each*	$540
4806	Modulus of Rupture, 3 parallel, 3 perpendicular *ASTM C120 - $90 each*	$540
4807	Water Absorption, 3 parallel, 3 perpendicular *ASTM C121 - $40 each*	$240
4808	Weathering, 3-samples *ASTM C217 - $90 each*	$310
Wire Rope		
4426	Wire Rope 0 through 1" diameter *each*	$250
4427	Wire Rope 1 through 2" diameter *each*	$350
4428	Wire Rope over 2" diameter *each* *Note: Sockets furnished by client*	$450+
Epoxy - Cores & Coring		
3710	Field Coring Technician and standard equipment *per hour*	$150
4318	Shear Test on Epoxied Cores *each*	$125
4346	Epoxied Cores Visual Inspection *each*	$125
4316	Compression Test, Cylinders *each*	$125
4317	Compression Test, Cores *each*	$125
5026	Pick-up Epoxy Cylinders-within 40-mile radius from Laboratory *per sample*	$30
Fireproofing Tests		
4350	Oven Dry Density *per sample*	$125
4351	Adhesion/Cohesion Testing *per hour, 4-hour minimum*	$100
5014	Pick-up Fireproofing Samples-within 40-mile radius from Laboratory *per sample*	$25
Glass Fiber Reinforced Concrete		
4320	Flexural Strength, without M.O.E. *(6 required) $45.00 each*	$270
4321	Flexural Strength with M.O.E. *6 required - $145.00 each*	$870
4322	Density, 3 required *$50.00 each*	$150
4323	Tensile Strength, 3 required *$75.00 each*	$225
4324	Shear Strength, 3 required *$75.00 each*	$225
Fiber Wrap		
4326	Tensile Strength, panel (12"x12"), 5 samples(1 X 10- in) *ASTM D 30391 - $170.00 each*	$875
Saturation Resin for Fiber Composite		
4340	Water Absorption *ASTM D570*	$250
4341	Compressive Yield Strength *ASTM D695*	$650
4342	Flexural Strength, ASTM D790	$750
4343	Shore Hardness, ASTM D2240	$250
4344	Tensile Strength and Elongation *ASTM D638*	$750
4345	Evaluation *per MWD RFQ 704*	By Quote
Structual Lumbar		
4470	Flexure *ASTM D198*	By Quote
4471	Compression *ASTM D198*	By Quote
4472	Tension *ASTM D198*	By Quote
4478	Torsion *ASTM D198*	By Quote
4476	Shear *ASTM D198*	By Quote
Specialty Grout		
4395	Rapid-Hardening Grout *ASTM C928*	By Quote
4396	Non-Shrink Grout *ASTM C1107*	By Quote
4490	Time of Setting *ASTM C266 - each*	$250
4491	Sulfate Expansion *ASTM C1012 - each*	$700+
4492	Flexural Strength *ASTM C348 - each*	$600+
4493	Consistence (Cone Test) *ASTM C939 - each*	$250
4494	Bleeding *ASTM C940 - each*	$700+
4495	Total Chloride Ions *ASTM C1152 - each*	By Quote
4496	Permeability *ASTM C1202 - each*	By Quote
4550	Standard Specification for Mortar for Unit Masonry *ASTM C270*	$700+

9 Construction Materials (continued)

CODE		COST
4551	Potential Alkali-Silica Reactivity by Mortar Bar Method *ASTM C1260*	$700+
4552	Potential Alkali- Silica Reactivity by Accelerated Mortar Bar Method *C1567*	$700+
4553	Standard Specification for Plastic (Stucco) Cement	By Quote
4554	Standard Specification for Non-Asbestos Fiber Mat Reinforced Cement Substrate Sheets	By Quote

CODE	COST

10 Curtain Wall

(Los Angeles & San Francisco)

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

Custom Test Bay Sizes Available by Quote.

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

CODE		COST
Inspection & Testing		
3019	Lab Tech Away from Lab	$125
3019	Special Curtain Wall Evaluation *per hour*	$125
3019	Curtain Wall Attachment *per hour*	$125
3019	Exterior Skin from Swing Stage *(2 men) per hour*	$250
3019	Caulking, Sealants, Adhesives *per hour*	$125
3019	Coatings, Paint *per hour*	$175
Field Testing		
8113	Field Water Test *AAMA 501.2, (2 men) per hour*	$250
8114	Field Testing of Newly Installed Fenestration System Products *AAMA 502*	$250
8115	Field Testing of Newly Installed Storefronts, Curtain Walls, and Sloped Glazing Systems *AAMA 503*	$250
8116	Field Testing of Masonry Walls, *ASTM C1601*	$250
8133	Field Posi Test *ASTM E1186*	$175
8134	Adhesion Testing SSG *ASTM C1401*	$175
8135	Adhesion Testing *ASTM C1521*	$250
8136	Water Penetration of Masonry *ASTM C1601*	$250
8137	Evaluating Water Leakage in Buildings *ASTM E2128*	By Quote
8138	Portable Adhesion Testing of Coatings *ASTM D4541*	By Quote
8139	Field Dynamic Water Penetration *AAMA501.1*	By Quote
Materials Evaluation		
8112	Glass, Granite, Metal Cladding, Caulking, Paint Coatings Adhesive Bond, Chemical Analysis	By Quote
8123	Point Load Testing on Structurally Glazed Glass *ASTM STP1286*	By Quote
8124	Lab Testing of Masonry Walls *ASTM E514*	By Quote
8111	Stress and Rupture - Stone and Granite	By Quote
8140	Water Testing Leakage Through Masonry *ASTM E514*	By Quote

CODE		COST
Air and Water		
8102	Static Water Infiltration (Field) *ASTM E 331/1105*	$250
8150	Static Water Infiltration (Lab) *ASTM E 331/1105*	$450
8104	Static Air Infiltration (Field) *ASTM E 283/783*	$250
8151	Static Water Infiltration (Lab) *ASTM E 283/783*	$850
8103	Dynamic Water Infiltration	$1,800
8105	Water Penetration By Cyclic Air Pressure (Field) *ASTM E547/E1105*	$250
8152	Water Penetration By Cyclic Air Pressure (Lab) *ASTM 2547/E1105*	$450
8125	Pressure Equalized Rain Screen (Field) *AAMA 508*	$250
8153	Pressure Equalized Rain Screen (Lab) *AAMA 508*	$450
8154	Electronic Leak Detection *ASTM D 8231, Per Hour*	$175
8155	Electronic Leak Detection *Equipment Charge - Per Day*	$100
Structural		
8122	Seismic Structural Loading	$1,000
8106	Structural Performance *ASTM E 330*	$500
8126	Seismic and Wind Induced Interstory Drift *AAMA 501.4*	$1,000
8127	Seismic Drift Causing Glass Fallout *AAMA 501.6*	$15,000
8128	Vertical Interstory Movements *AAMA 501.7*	$1,000
8129	Impact and Cycling Testing *AAMA 506*	$1,000
8109	Concentrated Load Testing *(window washer, etc.)*	$500
8156	Missle Impact Test *ASTM E 1886/1996*	$5000
Thermal		
8110	AAMA Thermal Testing	By Quote
8130	Thermal Performance Test *AAMA 1503*	By Quote
8131	Thermal Cycling of Exterior Walls *AAMA 501.5*	$8500
4948	Pressure	By Quote
Hurricaine		
8132	Impact Cannon Testing *ASTM E1996/E1886*	By Quote

10 Curtain Wall (continued)

CODE		COST
Multi-Channel Computer Aided Data Acquisition of: ——		
4946	Acceleration	By Quote
4430	Vibration	By Quote
4947	Movements (0.0001 inch)	By Quote
4468	Machine Control Movement	By Quote
4469	Temperature	By Quote
4418	Strain Gauge	By Quote
4949	Stress Analysis	By Quote
4439	Cyclic Seismic Testing of Components of Steel Structures *ATC-24, FEMA 350, FEMA 450*	By Quote

CODE	COST

11 Masonry

CODE		COST
Brick ASTM C 67		
4200	Compressive Strength including sample preparation and capping *Each*	$125
4201	Modulus of Rupture (flexure) including sampling preparation *Each*	$125
4217	Flexural Bond Strength	$300
4205	One set of five joints	$50
4202	Dimensions, overall, coring, shell and web thickness *per brick*	$50
4203	Coefficient of Friction (slip test) *Each*	$185
4204	Initial Rate of Absorption, *each*	$45
4205	Absorption - 5 hour or 24 hour *Set Of Three*	$150
4206	Boil, 1, 2 or 5 hour *Set Of Three*	$250
4207	Efflorescence *Each*	$150
4222	Freeze Thaw (8x8, 4x4), 5 samples, 50 cycles	$1,500
5009	Pick-up Brick Samples *Each*	$20
Solid Concrete Interlocking Paving Units ASTM C 936		
4232	Compressive Strength including sample preparation *Each*	$125
4233	Unit Weight *each*	$125
Concrete Block ASTM C 140		
4210	Compression, including sample trimming preparation and capping *3 required, $75.00 each*	$270
4211	Moisture Content as Received *Each*	$90
4211	Absorption *3 required - $75 Each*	$270
4213	Shrinkage, Modified British *ASTM C 426, 3 required - $150.00 each*	$525
4229	Coupon Cutting *Each*	$50
4221	Compression, 4" - 6" - 8" Cores including sample preparation and capping *Each*	$125
4220	Complete C140	$1,300
5110	Transportation and processing Block Samples - inside 40mi radius of laboratory *each*	$25

CODE		COST
Masonry Prisms ASTM C 1314		
4218	Compression Test, 8"x16" Grouted Prisms including trimming and capping	$225
4225	Compression Test, 12"x24" Grouted Prisms including trimming and capping *each*	$375
4226	Compression Test, 16"x32" Grouted Prisms including trimming and capping	$775
4223	Compression Test with MOE, Grouted Prisms	$625
4224	Unit Weight, Grouted Prisms *Each*	$100
4219	Cutting Prisms, when required (Solid)	$130
4230	Cutting Prisms, when required (Not Solid)	$100
4208	Cores, Compression, 6" and 8" Diameter *each*	$125
4209	Cores, Shear, 6" and 8" Diameter, 2 Faces *per core*	$175
4347	Pick-up Prisms 12x8x16 and 16x16x16-n - within a 40-mile radius of laboratory *Each*	$75
5013	Pick-up Prisms 8x8x16-in - within a 40-mile radius of laboratory *Each*	$60
Mortar & Grout UBC Sandard 21-16 & 21-18		
4214	Compression, 2" x 4" Masonry Mortar Cylinder including trimming and capping *Each*	$100
4215	Compression, 2" Grout Cubes, including sample preparation and capping *ASTM C 109 - Each*	$100
4231	Compression, non-standard Grout Cubes Modified 109 including sample prep. /cap *ASTM C 109 - each*	$100
4216	Compression, 3" x 6" Masonry Grout including sample preparation and capping *each*	$100
5011	Transportation and processing Mortar Samples - inside 40mi radius of laboratory *each*	$25
5012	Transportation and processing Grout Samples -inside 40mi radius of laboratory *each*	$25
5015	Transportation and processing Grout Cubes - inside 40mi radius of laboratory *each*	$25
Un-Reinforced Masonry Building Tests		
4089	In-Place Shear (Push) Tests	By Quote
4815	15 Degree Core Shear Tests	By Quote
4827	Flat Jack Testing	By Quote
4816	Wall Anchors	By Quote

12 Metallurgical

CODE		COST
6933	Metallurgical Engineer *per hour*	$225
6919	Metallurgical Technician *per hour*	$125
Metallurgical Services		
6902	Test CVN at 75°F *(Set of 3 specimens)*	$175
6903	Test CVN at 70°F *(Set of 3 specimens)*	$220
6976	Test CVN at 40°F *(Set of 3 specimens)*	$240
6977	Test CVN at 30°F *(Set of 3 specimens)*	$240
6978	Test CVN at 0°F *(Set of 3 specimens)*	$290
6801	Test CVN at 10°F *(Set of 3 specimens)*	$240
6979	Test CVN at -20°F *(Set of 3 specimens)*	$315
6904	Galvanized Coating - Acid Strip Method *per specimen of plate, and wire*	$200
6912	Stucco Netting, ICC Evaluation *per roll*	By Quote
6905	Hardness Tests Brinell, Rockwell (Standard or Superficial), excluding specimen preparation if required	$110
6920	Chemical Analysis - Ferrous Material of solid piece *each*	$185
6012	Chemical Analysis - Ferrous Material of filings *each*	By Quote
6980	Chemical Analysis - Non-Ferrous Material of solid piece *each*	By Quote
6981	Chemical Analysis - Non-Ferrous Material of filings *each*	By Quote
6943	Evaluate Carbon Equivalent (C.E), each to include chemical analysis of solid piece	$195
6011	Evaluate Carbon Equivalent (C.E), each to include chemical analysis of filings	By Quote
6017	Microhardness Survey, (includes metallurgical mount & preparation) *each*	By Quote
6913	Scanning Electron Microscopy (SEM), and EDS, *per Hour (min 1 hr)*	$370
6915	Scanning Electron Photomicrographs *each (5" x 4")*	$8.50
6112	Laboratory NDT Testing (UT, MT, PT)	By Quote
5101	Mileage *per mile*	$0.80
4443	Administrative Surcharge	7% Of Invoice

CODE		COST
Mechanical Testing		
6900	Bend Test - Base material	By Quote
6907	Load Tests (Proof Load, Flexural, Stress-corrosion, etc.)	By Quote
6934	Tensile Test - With Electronic Extensometer, excludes sample cutting and specimen preparation *each*	$100
6939	Tensile Test - Square or Round Tube, Full size with plugs *up to 2.00-in. OD - each*	$265
6957	Talbot Test - Sample preparation and test *per specimen*	$250
Fastener Testing		
6948	Tensile Test - Anchor Bolts, Studs or Threaded Rods under 100, 000 lbf , tested full-size *each*	$175
6958	Tensile Test - Anchor Bolts, Studs or Threaded Rods 100, 000-120,000 lbf, tested full-size *each*	$195
6959	Tensile Test - Anchor Bolts, Studs or Threaded Rods up to 1.0-in diam. by machined specimens *each*	$195
6013	Tensile Test - Anchor Bolts, Studs or Threaded Rods,1.0 - 2.0in diam. by machined specimens *each*	$210
6014	Tensile Test - Anchor Bolts, Studs or Threaded Rods over 2.0-in diam. by machined specimens *each*	$235
6949	Nut - Hardness and Proof Load test *under 100,000 lbf - each*	$42
6960	Nut - Hardness and Proof Load test *100,000 - 120,000 lbf - each*	$55
6015	Nut - Hardness In Core Method in lieu of proof Load test *above 120,000lbf - each*	$120
6950	Washer - Not Galvanized - Hardness *each*	$30
6961	Nut Cone Proof Load Test *each*	By Quote
Fastener Testing Continued Activity Cost		
6951	A325 or A490 - Bolt hardness only *each*	$105
6592	Bolt A325 or A490 - Wedge Tensile, and Hardness *each*	$100
6802	Bolt A325 or A490 - Wedge Tensile up to 1-1/8- in diameter, and Hardness *each*	$150

12 Metallurgical (continued)

CODE		COST
6810	F593C SS Screws (Tensile, Proof Laud, Hardness)	$200+
6811	F594C SS Nuts (Hardness + Proof Load)	$200+
6803	Bolt A325 or A490 – Wedge Tensile up to 1-1/4- in diameter, and Hardness *each*	$155
6804	Bolt A325 or A490 – Wedge Tensile up to 1-3/8- in diameter, and Hardness *each*	$165
6805	Bolt A325 or A490 – Wedge Tensile up to 1-1/2- in diameter, and Hardness *each*	$185
6975	Bolt A325 or A490 – Tensile test by machined specimens *each*	By Quote

Weld Procedure Qualification and Welder Qualification–

6963	Welded Fabric Weld shear strength *each sample*	$75
6927	Guided Weld Bend Test, excluding specimen preparation *each*	$50
6956	Age Bend Specimens – 48 Hrs *up to 3 specimens*	$140
6929	Sample Cut & Perform Weld-Fillet Weld Fracture Test *each*	$175
6969	Weld-Fillet Weld Fracture Test In Sheet Steel & Evaluate *each*	$140
6930	Weld-Macro Etch (Plate)- cut, polish, etch, and evaluate *each*	By Quote
6972	Weld-Macro Etch *(Rebar # 3 thru # 7) - each*	$145
6113	Weld-Macro Etch *(Rebar # 8 thru # 10) - each*	$160
6973	Weld-Macro Etch - cut, polish, etch, and evaluate *(Rebar # 11 thru # 14)each*	$170
6974	Weld-Macro Etch - cut, polish, etch, and evaluate *(Rebar # 18) - each*	$250
6931	Weld-Radiography	By Quote
6932	Weld Transverse Tensile Test, plate up to 1.0-in thick excluding machining *each*	$100
6964	Weld Transverse Tensile Test, plate over 1.0-in thick excluding machining *each*	$215
6965	Welded Rebar Transverse Tensile Test, # 3 thru # 7	$135
6114	Welded Rebar Transverse Tensile Test, # 8 thru # 10	$155
6966	Welded Rebar Transverse Tensile Test, # 11 thru # 14	$185
6967	Welded Rebar Transverse Tensile Test, #18	$500
6921	Review Welding Procedure Specification (WPS) *each*	$175
6922	Prepare Welding Procedure Specification (WPS) *each*	$350
6971	WPS, PQR Weld Certificate *each*	$135

Unless otherwise noted, costs above do not include sample preparations

Sample Preparation

6806	Customized Sample Machining	By Quote
6910	Sample Cut & Machine Specimen – under ½-in *each*	$75
6911	Sample Cut & Machine Specimen – ½ -inch to 1.0-in *each*	$100
6968	Sample Cut & Machine Specimen - 1.0-in to 1½-in-inch thick, *each*	$160
6984	Sample Cut & Machine Specimen – over 1½-in-inch 2.0-in thick *each*	$180
6985	Sample Cut & Machine Specimen - over 2.0-in to 2½-in-inch thick, each *each*	$200
6986	Sample Cut & Machine Specimen - over 2½-in-inch 3.0-in thick, each *each*	$215
6987	Sample Cut & Machine Specimen - over 3.0-in to 3½-in-inch thick, each *each*	$250
6988	Sample Cut & Machine Specimen - over 3½-in-inch thick, each *each*	By Quote
6909	Sample Cut & Machine Charpy V-Notch Specimens (Set of 3 specimens) *per set*	$310
6941	Machine and V-Notch one set CVN specimens from Alternate Location	$330
6989	Machine and V-Notch one set 3/4 size Specimens	$300
6990	Machine and V-Notch one set 2/3 size Specimens	$300

12 Metallurgical (continued)

CODE		COST
6991	Machine and V-Notch one set 1/2 size Specimens	$315
6992	Machine and V-Notch one set 1/3 size CVN Specimens	$320
6993	Machine and V-Notch one set 1/4 size CVN Specimens	$320
6994	Rough cut 'K' from full beam section	$75
6995	Rough cut 'K' from T beam section	$75
6996	Rough cut from 'K' section only	$75
6997	Rough cut from Flange of full beam section	$75
6998	Rough cut from Flange of T beam section	$75
6999	Rough cut other joint configuration	By Quote
6111	Macroetch rough cut sample to locate HAZ *each*	By Quote
6914	Metallurgical Mount, 1-1/4-in. including preparation without evaluation *each*	$145
6918	Metallurgical Mount, 2.0-in. including preparation without evaluation *each*	$185
6925	Add additional piece in mount *each piece*	$35

Administrative Charges

6935	Rush Turnaround, 48 - 72 hours *(50% Surcharge)*	+ 50% Invoice
6936	Rush Turnaround, 24 - 48 hours *(50% Surcharge)*	+100% Invoice
6110	Test Report Charge	$65 Min
6937	Same day testing + report *(200% Surcharge)*	+200% Invoice
6923	Minimum laboratory charge	$150
6924	Multiple copies for distribution, copies and mailing *per distributor per copy each*	$4.50
9116	Digital Photographs, photo quality paper *each*	$8.50
6115	Digital Photographs, photo quality paper *per copy report each*	$4.50
6116	Metallurgical Technician Travel Time *per hour*	By Quote
4422	Special Test Set-Up (2-techs+1 engineer crew) *per hour*	$300
3075	Administrative Office Support	By Quote
4416	Misc. Equipment Charge	By Quote
4420	Special Testing	By Quote
9111	Final Report	By Quote

CODE	COST

13 Plastics & Plumbing

CODE		COST
4422	Weatherometer Test *each*	By Quote
4425	Plastic Tensile Tests *each*	By Quote
Fixtures		
4532	Plastic Toilet (Water Closet) Seats	By Quote
4533	Plastic Water Closet Bowls and Tanks	By Quote
4354	Plastic Lavatories	By Quote
4535	Plastic Urinal Fixtures	By Quote
4536	Plastic Bathtub and Shower units	By Quote
4537	Plastic Sinks	By Quote
4538	Prefabricated Plastic Spa Shells	By Quote
Pipe		
4539	Polyethylene Plastics Pipe and Fittings Materials	By Quote
4540	General Pipe testing	By Quote
Plumbing Water Closets		
4500	Water Closets	By Quote
4501	Wall Mounted Water Closets	By Quote
4502	Water Closets Equipped with a Dual Flushing Device	By Quote
4503	Urinals	By Quote
Faucets		
4504	Lawn and Sediment Faucets	By Quote
4505	Pullout Spout Faucets	By Quote
Shower Heads		
4506	Shower head or Body spray	By Quote
4507	High-efficiency Shower head or Body spray	By Quote
4508	Hand Shower	By Quote
4509	High-efficiency Hand Shower	By Quote
Flexible Hose		
4510	Flexible Water Connectors	By Quote
Fittings		
4511	Lavatory and Bar Supply Fittings	By Quote
4512	Bidet Supply Fitting (with or without a diverter)	By Quote
4513	Kitchen Supply Fitting (Kitchen faucet)	By Quote
4514	Kitchen and Lavatory Supply Fitting (Faucet) with Side spray Diverter	By Quote
4515	Bath or Shower Supply Fitting	By Quote
4516	Bath or Shower Supply Fitting with Diverter	By Quote
4517	Laundry Tub Supply Fitting	By Quote
4518	Metering or Self Closing Supply Fittings	By Quote
Valves and Controls		
4519	Supply Stop	By Quote
4520	Kitchen and Lavatory side spray function control	By Quote
4521	Shower head, hand shower, or body spray adjusting mechanisms or function control	By Quote
4519	Supply stop	By Quote
4522	Automatic compensating valve	By Quote
4523	Temperature Actuated Mixing Valves for Hot Water Distribution Systems	By Quote
4524	Automatic Temperature Control Mixing Valves	By Quote
4525	Water Temperature Limiting Devices	By Quote
4526	Atmospheric Type Vacuum Breakers	By Quote
4527	Hose Connection Vacuum Breakers	By Quote
4528	Backflow Preventers with an Intermediate Atmospheric Vent	By Quote
4529	Pressure Principle Fire Protection Backflow Preventers	By Quote
4530	Check Fire Protection Backflow Prevention Assemblies	By Quote
Miscellaneous		
4541	Plumbing Water Resistance *each*	By Quote
4542	Plumbing Water Resistance Cycling Test	By Quote
4543	Gel Coat Thickness *each*	By Quote

14 Quality Assurance - 3rd Party Audit

CODE		COST
4456	Travel time, per hour *(Min. may apply)*	$75
4533	Surveillance - Standard Audits *per hour - 8hr minimum, plus report & expenses*	$105
4520	Approved Fabricator Surveillance audits *per hour - 8 hr. Minimum, plus report & expenses*	$105
4521	Qualifying Fab shop Compliance certificate *per activity*	$330
4522	Virtual Audits-certified, (all-types) *(average 3 days plus reporting)*	By Quote
4523	Virtual Audit Certification letter or certificate to Municipalities/ Accreditation bodies *per letter*	$300
4533	Qualifying Audit, *per hour (8 hr. Minimum)*	$105
4534	Technical Director *per hour (Code Meetings)*	$135
4535	Consulting, per hour *(Min. may apply)*	$105
4536	Project manager *per hour*	$105
4537	Engineer *per hour*	$158
1103	Per Diem *(per day)*	$120
1107	Per Diem *per day (Out of Country)*	By Quote
1104	Consumable/ Expenses	Cost +15%
4539	Quality Systems Manual Reviews *per hour - 8 hr minimum*	$105
4539	Manual Review, *per hour (6 hr. Minimum)*	$105
4540	Audit Report Fees, *per hour ($150.00 Minimum)*	$75
3098	Annual Listing Fees *(if Applicable)/ or per Quote/ per product model and or series*	$1,000
5101	Mileage *Per Mile*	$.80
4443	CA. Admin Fee	7% Of Invoice

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

CODE	COST

15 Reinforcement

CODE		COST
Reinforcing Steel ASTM A 615/A 706 Activity Cost		
4600	Tensile Test, No. 3 to 8 Bar *each*	$60
4601	Bend Test, No. 3 to 8 *each*	$60
4633	Tensile Test with MOE, No. 3 to 8 Bar *each*	$200
4626	Tensile Test, No. 9 to 11 Bar *each*	$85
4627	Bend Test, No. 9 to 11 Bar *each*	$85
4630	Tensile Test with MOE, No. 9 to 11 Bar *each*	$275
4602	Tensile Test, No. 14 Bar *each*	$175
4634	Bend Test, No. 14 Bar *each*	$175
4631	Tensile Test with MOE, No. 14 Bar *each*	$325
4603	Tensile Test, No. 18 Bar *each*	$325
4635	Bend Test, No. 18 Bar *each*	$325
4603	Tensile Test with MOE, No. 18 Bar *each*	$425
4632	Tensile Test, No. 20 Bar *each*	$525
High-Strength Steel Bars for Prestressed Concrete		
ASTM A722, Grade 80		
4636	Tensile Test, No. 24 Bar *each*	$800
4637	Tensile Test, No. 28 Bar *each*	$1,000
4638	Tensile Test, No. 32 Bar *each*	$1,200
4616	Chemical Analysis, *each*	$200
4617	Deformation Compliance *each*	$85
Sampling and Tagging at Fabricators Plant (within 40-mile radius from Laboratory, add $100 for more than 40-miles)		
5005	6:30 a.m. to 4:00 p.m., Monday through Friday *per sample*	$30
5006	Before 6:30 a.m. and after 4:00 p.m. and Saturday *per sample*	$45
5007	Sunday and Holidays *per sample*	$45
5008	*Minimum Sample Charge *per trip*	$200
5024	Transportation and Processing Rebar Samples at Jobsite - inside 40mi radius of laboratory *per sample*	$30

CODE		COST
Reinforcing Steel ASTM A 1035		
4327	Tensile Test *each*	$350+
4328	Bend Test *each*	$350+
Headed Steel Bars for Concrete Reinforcement		
ASTM A 970		
4639	Tensile Test, No. 11 or smaller *each*	$225
4640	Tensile Test, No. 14 *each*	$275
4641	Tensile Test, No. 18 *each*	$425
Welded Specimens		
4604	Tensile Test, Welded, No. 11 Bar or Smaller *each*	$225
4605	Tensile Test, Welded, No. 14 Bar *each*	$275
4606	Tensile Test, Welded, No. 18 Bar *each*	$425
4607	Nick Break, Welded Re-Bar *each*	$125
4615	Straightening Hoops	$50
Coupled Reinforcement		
4612	Tensile Test, Mechanically Spliced Bar, No. 11 Bar or Smaller *each*	$225
4613	Tensile Test, Mechanically Spliced Bar, No. 14 Bar *each*	$275
4614	Tensile Test, Mechanically Spliced Bar, No. 18 Bar *each*	$425
4623	CalTrans Mechanical Coupler Slip Test, No. 11 Bar or Smaller *each*	$275
4624	CalTrans Mechanical Coupler Slip Test, No. 14 Bar *each*	$325
4625	CalTrans Mechanical Coupler Slip Test, No. 18 Bar *each*	$525
4625	CalTrans Mechanical Coupler Slip Test, No. 20 Bar *each*	$625
Post-Tensioning Strand		
4609	Tensile Test and Elongation in 24" for Prestress Strand, ASTM A 416 *each*	$275
4610	Tensile Test and Elongation in 10" for Prestressing Wire, ASTM A 421 *each*	$275

15 Reinforcement (continued)

CODE		COST
4611	Modulus of Elasticity (Prestress Strand) *each*	$375
5025	Transportation and Processing Post Tension Cables - within a 40-mile radius of laboratory *per sample*	$30

Welded Wire Fabric ASTM A 185

4618	Shear-Weld Area, 5 required *$50 each*	$250
4619	Parent Material Tensile, 5 required *$50 each*	$250
4620	Bend Test, 5 required *$50 each*	$250
4621	Weld-Included Tensile, 5 required *$40 each*	$200
4622	Mesh Evaluation, ASTM C427	$575

CODE	COST

16 Soil

CODE		COST
Soil Properties		
7018	California Impact, CAL 216 *each*	$150
7136	Classification of Soil for Engineering Purposes *ASTM D2487*	$350
7555	Moisture Density-Chunk Density, In-Situ *ASTM D2937 - each*	$50
7137	Moisture Density-Drive Tube Density, In-Situ *each*	$50
7020	Corrosivity: Resistivity, pH, Sulfates, Chlorides *each*	By Quote
7110	Material Finer - #200 Sieve *ASTM D 1140/C 117 - each*	$50
7140	Material finer than #200 Sieve *Fine & Course - ASTM D1140, each*	$100
7141	Material finer than #200 Sieve *Fine only - ASTM C117, each*	$50
7142	Material finer than #200 Sieve *Fine & Course up to 1/2" - ASTM C117, each*	$100
7111	Moisture *ASTM D2216 - each*	$25
7019	Moisture (microwave) *ASTM D4643 - each*	$15
7113	Moisture-Density Relations of Soils *ASTM D1557, Method A - each*	$135
7114	Moisture-Density Relations of Soils *ASTM D1557, Method B or C - each*	$145
7138	M/D Curve Rock Correction	$100
7135	Moisture-Density Check Point *each*	$50
7120	"R" (Resistance) Value, Lime Treated or Requiring Recombining *each*	$250
7119	"R" (Resistance) Value, Calif. 301 *ASTM D 2844 - each*	$225
7534	Relative Density (max/min) *D 4254 - each*	By Quote
7124	Sieve Analysis of Combined Fine and Coarse *ASTM D-422 - each*	$200
7109	Sieve and Hydrometer Analysis, *ASTM D 422 - each*	$270
7139	Sieve Analysis, fines for sieves #4 to #200 *ASTM D 422 - each*	$125
7127	Specific Gravity for Soils *ASTM D 854 - each*	$120
7143	Particle Size Distribution (Gradiation) *Fine Only, ASTM D6913, each*	$175
7144	Particle Size Distribution (Gradiation) *Fine & Course, ASTM D6913, each*	$225

CODE		COST
Foundation Testing		
7100	Atterberg Limits, (LL, PI) *ASTM D 4318 - each*	$175
7099	Atterberg Shrinkage Limit *ASTM D 4318 - each*	$150
7130	California Bearing Ratio *ASTM D 1883 - each*	$550
7145	California Bearing Ratio *With re-test ASTM D 1883, per set*	$700
7559	Collapse Potential *each*	By Quote
7102	Consolidation Test *ASTM D 2435 - each*	$200
7103	Consolidation Time/Rate Curves *each*	$50
7104	Remolding of Samples *each*	$30
Direct Shear Test, ASTM D 3080:		
7107	Consolidated, Drained 1 Point *each*	$125
7106	Consolidated, Undrained 1 Point *each*	$100
7105	Unconsolidated, Undrained, 1 Point *each*	$100
7104	Remolding of Samples *each*	$30
7108	Expansion Index, UBC-18-2 *ASTM D 4829 - each*	$140
7116	Permeability, Constant Head *ASTM D 2434, CAL 220 - each*	$225
7117	Permeability, Falling Head *CAL 220 - each*	$225
7132	Triaxial Unconsolidated, Undrained *ASTM D 2850 - each*	By Quote
7129	Unconfined Compression Test *ASTM D 2166 - each*	$70
7134	Unconfined Compression Test with Graph, *ASTM D 2166 - each*	$120
Peat Moss		
7040	Loss on Ignition *ASTM D 2974 - each*	$75
7041	Bulk Specific Gravity *ASTM D 4531 - each*	$45
7038	Classification *ASTM D 4427 - each*	$200
7043	pH *ASTM D 2976 - each*	$45
7044	Absorption *ASTM D 2980 - each*	$20

Extra charge of 150% of the unit cost will be applied for tests requested within 24 hrs, and 300% for test requested same day if the ASTM allows for the following test:

ASTM D1557, Method A — *ASTM C117, ASTM D1140*

ASTM C136 — *ASTM C29 (Unit Weight only)*

17 Structural Testing

CODE		COST
4400	20,000 to 120,000 Pound Machine (Universal), including set-up time *per hour*	$240
4401	440,000 Pound Machine (Universal), including set-up time *per hour*	$270
4402	600,000 Pound Machine (Compression only), including set-up time *per hour*	$320
4462	1,100,000 Pound Machine (Universal), including set-up time *per hour*	$900
4541	400,000 Pound Machine (Test mark), including set-up time *per hour*	$320
4501	120,000 Pound Machine (Instron), including set-up time *per hour*	$340
4502	450,000 Pound Machine (Instron), including set-up time *per hour*	$440
4405	Special Load Tests Up (2-techs+1 engineer crew) *per hour*	$500
4422	Special Test Set-Up (2-techs+1 engineer crew) *per hour*	$450

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

4423	Static Loading, 22-inch diameter or smaller *each*	$150
4557	Static Loading, greater than 22-inches and less than 36-inches in diameter *each up to 400k lbs*	$200
4558	Static Loading, greater than 36-inches in diameter *each up to 400k lbs*	$300
4424	Weight of Manhole Samples *each*	$50
4732	Cyclic Loading - (3-5 cycles) up to 22-inches in diameter *each*	$300
4468	Cyclic Loading - (10 cycles) *each*	$550
4730	Cyclic Loading (3-5 cycles)	$400
4731	L.A City S-601 - ASTM D2486 *each*	$850

Mechanical Testing Services

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

4411	Up to 100,000 lb. *each*	$75
4412	100,001 to 200,000 lb. *each*	$100
4410	200,001 to 400,000 lb. *each*	$250
4140	Greater than 400,000 lb. *each*	$450
4418	Strain Gauge Testing	$375+
4420	Special Testing, Load Tests, Flexural, Bend, Impact, Axial, Racking Shear	$8,000+
4432	Tensile Test -- Mechanical Non-Printout Extensometer for Strain *each*	$150
4433	Tensile Test -- Electronic Extensometer with Recorded Printout *1 Test*	$225
4141	Mechanical Bend Test *each*	$75
4142	Machining and Preparation of Samples (shop) *per hour*	$400
4559	Monotonic test including strain gauge *each*	$1200+

Structural Testing

General Structural Monotonic Testing

4703	Diaphragm Set-up *per hour*	$500
4479	Diaphragm test *each*	$3,000
4704	Monotonic Shear Wall Set Up *per hour*	$350
4556	Monotonic Shear Wall test *each*	$2,500

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

4438	Cyclic Shear Wall Test *each*	$3,500
4705	Cyclic Set-up *per hour*	$500
4706	Cyclic AC133 or similar Test *each*	By Quote
4707	Cyclic FM1950 or similar Test *each*	By Quote

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

4143	Cyclic Set-up *per hour*	$1,200
4144	Cyclic Shear Wall Test *per hour*	$1,500

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

4708	ASTM E72 or similar Set-up *Per Hour*	$275
4709	Compression or similar Test *Each*	$3,000

17 Structural Testing (continued)

CODE		COST
4710	Flexural or similar Test *Each*	$2,000
4711	Flexural and Compression or similar Test *Each*	$2,500
4712	Static/ Shear or similar Test *Each*	$1,800
4733	Permanent Railing Systems, Guards, and Balustrades ASTM E935 Load Test *Each*	$500
	*Note : *Prices subject to change depending of complexity of sample*	
	ICC-ES AC166 Test or Similar (including DAQ) - Diaphragm Up to 20-ft by 20-ft	
4713	ICC-ES- AC166 or similar Set-up *Per Hour*	$450
4714	Roof Diaphragm or similar Test *Each*	$3,000+
4715	Wind Driven Rain or similar Test *each*	$4,000+
4560	Moment Frame Connection or similar Set-up *per hour*	$400
4555	Moment Frame Connection or similar Test *each*	$400+
4561	Component Compression or similar Set-up *per hour*	$350
4440	Component Compression or similar Test *each*	$700+
4562	Component Shear, or Similar Setup *per hour*	$400
4441	Component Shear or similar Test *each*	$1,000+
4563	Component Flexural or similar Set-up *per hour*	$350
4442	Component Flexural or similar Test *each*	$700+
4564	Uniform Load or similar Set-up *per hour*	$500
8108	Uniform Load or similar Test *each*	$1,500+
4565	Hydrostatic Testing or similar Set-up *per hour*	$500
4429	Hydrostatic Testing or similar Test *each*	$1,500+
	Testing for Coatings used in Slip-Critical Bolted Connections	
4570	Slip Coefficient Test (RCSC + 5 tests) *per set of 3 tests*	$4,250
4571	Tension Creep Test (RCSC + 3 tests) *per set of 3 tests*	$5,250

CODE		COST
	Geogrid Testing	
4444	Connection Testing, NCMA Test Method SRWU-1 *each*	$350+
4445	Shear Strength Testing, NCMA Test Method SRWU-I *each*	$350+
	Product Evaluation Services	
4446	ICC ES Product Evaluation Services	By Quote
4447	CISCA Product Evaluation Services	By Quote
4448	AAMA Product Evaluation Services	By Quote
4449	ATC 24, FEMA 350, FEMA 450 Product Evaluation Services	By Quote
	Product Consulting Services	
3095	Code Consulting or similar *per hour*	$175
3090	ICC ES/IAS Fabricator Quality Assurance Services *per hour*	$175
3091	Uniform ES and ICC ES Product Consulting Services	By Quote
3092	IAPMO Product Consulting Services	By Quote
3093	AAMA Product Consulting Services	By Quote
3094	ATC 24, FEMA 350, FEMA 450 Product Consulting Services	By Quote
4150	Test Procedure/Protocol Elaboration *per hour*	$150
	General Structural Field Testing	
4151	Special Sampling at fabrication plant *per hour*	$150
4152	Special field test setup (2-Techs + 1 Engineer Crew) *per hour*	$450
4153	Special field load test (2-Techs + 1 Engineer Crew) *per hour*	$525
4154	Computer DAQ/Amplifiers *per hour*	$120
4155	Load Cell or transducer *Note : *Prices subject to change depending of complexity of sample*	$50
5101	Mileage *per hour*	$.80

18 Geotechnical & Environmental Services

CODE		COST
Professional Staff (Geotechnical Engineers, Geologists, Staff Specialist) Activity Cost		
7206	Senior Professional *per hour*	$185
7205	Project Manager *per hour*	$110
7204	Project Professional *per hour*	$120
7203	Staff Professional *per hour*	$115
7202	Principal Professional *per hour*	$150
7218	Certified Geologist *per hour*	$120
7201	Senior Principal Professional *per hour*	$185
7200	Expert Witness *per hour*	By Quote
7209	Office Support *per hour*	$35
7219	Word Processor *per hour*	$40
7208	Illustrator *per hour*	$45
7231	QSP "Qualified SWPPP Practitioner" *per hour*	$120
7234	Geotechnical Technician *Regular time -per hour*	$110
Field Staff		
7212	Field Technician, Laboratory and Field with density equipment, Regular Time *per hour*	$105
7240	Environmental Technician, Regular Time *per hour*	$105
7274	CalTrans Certified Technician with density equipment, Regular Time *per hour*	$105
7214	Supervising Technician, Laboratory and Field with density equipment, Regular Time *per hour*	$110
7563	Soils Deputy Grading, or ICC Soils Inspector, Regular Time *per hour*	$125

Geotechnical Minimums

Show-up time, no work performed - 2-hour minimum charge

Field Service Calls 4 and 8-hour minimum charge

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

CODE		COST
Overtime		
7222	Monday through Friday, Over 8 Hours or after 4:00 p.m.; Saturday, 1 to 12 Hours	1.5x Time
7222	Sundays and Holidays, 1 to 8 Hours	1.5x Time
7232	Monday through Saturday, Over 12 Hours; Sundays and Holidays, Over 8 Hours	2x Time
Administrative Charges		
7215	Pick-Up/Delivery *per hour (2-hours minimum)*	$55
7313	Mileage *per mile*	$.75
7235	Travel Time *per hour*	$55
7315	Facsimile *per page*	$1
7225	Reproduction *per page*	$1.50
7317	Report Surcharge *per copy*	$50
7319	Cellular Telephone *per day*	$35
7325	Air Express/Over-night Delivery *each*	$35
7300	Contracted Services-Drilling	By Quote
7301	Contracted Services-Testing	By Quote
7303	Contracted Services-Expenses	By Quote
7302	Contracted Services Soul Vapor Wells Instillation	By Quote
Foundation/Geological Investigations		
7308	Geotechnical Field Exploration	By Quote
7305	Final Report of Compacted Fill *(submitted at end of project, if required)*	By Quote
7338	Geotechnical Addendum Report	By Quote
Support Equipment Foundation/Geological Investigations		
7327	Nuclear Density Gage, *per day*	Field Staff
7328	Sand Cone Kit *per day*	Field Staff
7125	Soil Sampling - Encore Sample Container *per container*	$25
7122	Tubes and Rings *per sample*	$15
Environmental Investigations & Reports		
7306	Site Assessments Phase I *(ASTM E 1527-13)*	By Quote
7307	Site Assessments Phase II *(ASTM E 1903-19)*	By Quote
7323	*Property Condition Report *(ASTM E 2018-08)*	By Quote
7326	Tank Removal/Closure Report	By Quote
7329	Groundwater Sampling Report	By Quote
7334	Import/Export Soil Testing	By Quote
7340	Report Preparation	By Quote
7320	Health and Safety Plan	By Quote
7321	Soil Vapor Survey	By Quote
7350	Transaction Screen Report (TSA) *(ASTM E 1528-14)*	By Quote

18 Geotechnical & Environmental (continued)

CODE		COST
7351	Document Review	By Quote
Sampling Equipment		
7335	Sample Jars *each*	$25
7336	Tedlar Bags *each*	$25
7337	Coring *each*	$75
7339	Nylaflow Tubing *each*	$15
7349	Encore Sampler *each*	$25
*Note: * price might be higher depending of the property size/complexity*		
Support Equipment Environmental		
7216	Air Monitoring Equipment *per day*	$125
7309	Magnetometer Equipment *per day*	$100
7311	Water Pump and Generator *per day*	$150
7316	Water Monitoring Equipment	$50
Health Safety Equipment:		
7227	Level A *per person*	By Quote
7228	Level B *per person, per day, plus hourly rate*	By Quote
7229	Level C *per person, per day, plus hourly rate*	$75
7217	Health and Safety Supplies *per day*	$150

CODE	COST

18 Chemical Services

CODE		COST
Chemical		
6409	Manager, Supervisor, or Consultant *per hour*	By Quote
6406	Chemist *per hour*	By Quote
6432	Clerical Assistant *per hour*	By Quote
6403	Calculation Charge	By Quote
6418	Report Preparation Charge	By Quote
6424	Sample Preparation	By Quote
6425	Sample Composite *per sample*	By Quote
6421	Sample Disposal	By Quote
6427	Sample Transport *per hour*	By Quote
6433	Shipping Charges	By Quote
6435	Equipment Rental	By Quote
6420	Photography	By Quote
6511	Standard Report/QC Package	By Quote
6512	Diskette Surcharge	By Quote
6513	EDF Surcharge	By Quote
6514	NEESA, Army Corps of Engineers, CLP, Etc., Surcharge	By Quote
Field Sampling		
6430	Technician *per hour*	By Quote
6415	Mileage *per mile*	By Quote
6400	Automatic Composite Sampler *per 24-hour*	By Quote
6412	Discharge Flow Measurement *each*	By Quote
Supplies		
6533	5035 Encore (5g) *each*	By Quote
6435	5035 Sampling Tool *each*	By Quote
6534	5035 Easy Draw	By Quote
6434	Sample Containers	By Quote
Rush Analyses		
6535	Rush Surcharge, 72 Hours	By Quote
6540	Rush Surcharge, 48 Hours	By Quote
6530	Rush Surcharge, 24 Hours	By Quote
6545	Rush Surcharge, Same Day	By Quote

19a Organic Analyses

CODE		COST
Organic Chemistry		
6201	EPA 1664 TRPH	By Quote
6236	EPA 1664 Oil and Grease	By Quote
6237	Oil & Grease, Floatable	By Quote
6258	EPA 418.1 TRPH	By Quote
6268	EPA 8015B TPH-Gasoline	By Quote
6269	EPA 8015B TPH-Diesel	By Quote
6267	EPA 8015B TPH-Gasoline and Diesel	By Quote
6210	LUFT – Gasoline and Diesel	By Quote
6263	EPA 8015B TPH-Hydrocarbon Range	By Quote
6264	EPA 8015B Methanol/Ethanol	By Quote
6202	EPA 602 or 8021B BTEX	By Quote
6203	EPA 8015B/8021B Combination-Gasoline	By Quote
6250	EPA 624 / 8260B Volatile Organics	By Quote
6249	EPA 524 Volatile Organics	By Quote
6216	EPA 625 or 8270C Extractable Organics	By Quote
6242	EPA 608 or 8082 PCBs Water or Soil	By Quote
6244	EPA 8082 PCBs Oil	By Quote
6206	EPA 608 or 8081A Chlorinated Pesticides	By Quote
6243	EPA 608 or 8082 / 8081A PCBs and Pesticides	By Quote
6218	Flash Point	By Quote
6246	Petroleum Analysis	By Quote
6260	Identification/Interpretation of Spectrum/Fingerprint.	By Quote
6204	EPA 5035 or 5030, 8260B Gasoline and Volatile Organics	By Quote
6205	EPA 8270 SIM - Polycyclic Aromatic Hydrocarbons (PAHs)	By Quote
6208	EPA 8260 – Soil Vapor (CHHSL)	By Quote
6211	Ambient/Indoor/Outdoor Air	By Quote
Mobile Laboratory Services		
6460	Mobile Lab per 10 hour weekday	By Quote
6465	Mobile Lab *per 10 hour weekend*	By Quote
6461	Mobile Lab hours *in excess of 10 hours*	By Quote
6467	Mobilization fee	By Quote
6439	Mobile Lab Standby Time	By Quote
6468	Mobile Lab Cancellation	By Quote

19b Inorganic Analysis (chemical continued)

CODE		COST
6001	Alkalinity	By Quote
6002	Ammonia, Direct	By Quote
6004	Ammonia, Distillation	By Quote
6003	Anions (F, Br, Cl, NO3, NO2, SO4, PO4)	By Quote
6006	Biochemical Oxygen Demand (BOD)	By Quote
6008	Chemical Oxygen Demand (COD)	By Quote
6012	Chloride, Argentometric	By Quote
6014	Chlorine, Residual	By Quote
6016	Color	By Quote
6018	Conductance	By Quote
6022	Cyanide, Amenable *(surcharge to Total cyanide)*	By Quote
6024	Cyanide, Free	By Quote
6028	Cyanide, Total	By Quote
6026	Cyanide, Reactive	By Quote
6050	Hardness	By Quote
6070	Mercaptans	By Quote
6082	Nitrogen, Kjeldahl	By Quote
6096	Oxygen, Dissolved	By Quote
6012	pH, Aqueous	By Quote
6100	pH, Non-aqueous	By Quote
6098	Parr Oxygen Bomb	By Quote
6097	Phosphorous	By Quote
6099	Perchlorate	By Quote
6104	Phenols	By Quote
6148	Salinity - NaCl	By Quote
6132	Solids, Total Dissolved	By Quote
6126	Solids, Settleable	By Quote
6128	Solids, Suspended	By Quote
6130	Solids, Total	By Quote
6131	Solids, Volatile	By Quote
6138	Sulfide, Dissolved	By Quote
6140	Sulfide, Reactive	By Quote
6142	Sulfide, Total	By Quote
6134	Sulfate, Gravimetric	By Quote
6150	Surfactants, MBAS	By Quote
6158	Thiosulfate	By Quote
6174	Turbidity	By Quote
6272	Water by Karl Fischer titration	By Quote
Metals Preparation		
6020	Construction Materials Analysis	By Quote
6030	Digestion, Aqueous	By Quote
6032	Digestion, Nonaqueous	By Quote
6036	STLC Extraction.	By Quote
6034	EP-Tox	By Quote
6154	TCLP Extraction	By Quote
6155	VOC Extraction ZHE, (STLC and/or TCLP)	By Quote
Metals Analysis		
6168	Calcium Oxide	By Quote
6072	Individual Metals, per element	By Quote

CODE		COST
6073	Low Level Hexavalent Chromium	By Quote
6052	Hexavalent Chromium	By Quote
6043	Trivalent Chromium	By Quote
6404	Iron (Ferrous)	By Quote
6069	Total Lead	By Quote
6068	Lead in Paint	By Quote
Metals Group Determinations		
6162	TTLC CAM Metals	By Quote
6160	STLC CAM Metals	By Quote
6118	RCRA Metals	By Quote
6112	Priority Pollutant Metals	By Quote
6067	Drinking Water Analysis Metals	By Quote
6071	TAL Metals (23)	By Quote
Outside Laboratory Services		
6300	Asbestos Analysis.	By Quote
6344	Misc. Analyses	By Quote
6345	1, 4 -Dioxane	By Quote
6346	EPA 8310 PAHS	By Quote
6224	EPA 504 EDB	By Quote
6209	Organophosphorus Pesticides	By Quote
6254	Total Organic Carbon	By Quote
6500	Coliform, fecal	By Quote
6505	Biotoxicity, aqueous	By Quote
6515	Biotoxicity, nonaqueous	By Quote
6516	Coliform, total	By Quote
6207	EPA 8151A Chlorinated Herbicides	By Quote
6254	Total Organic Carbon	By Quote
FDA Testing of Lead and Cadmium, Proposition 65		
6038	FDA Testing of Lead and Cadmium, Proposition 65	By Quote
VOC Testing		
6266	EPA 24 - VOC per AQMD	By Quote

20 Administrative Fees

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

CODE		COST
4443	Administrative Support	7% Of Invoice
9110	*Report Charge *(per report, per copy)*	$1.75
9111	Final Report	By Quote
4812	General Testing *(Rush Charges)*	50-100%
3074	Administrative Support for Special Projects, Certified Payroll/ Labor Compliance	$135
3075	Administrative Office Support	By Quote
3076	Task Tracking	$65
3077	Report Surcharge *(per copy)*	$50
3079	Report Copy Charge *(per sheet)*	$2.75
3079	Reproduction *(per page)*	$1.50
3080	File Retrievel *(per file)*	$50
3082	Processing Certificates, Affidavits, & Notary Services *(each)*	At Cost
3081	Insurance, Extra Charges as ordered by Client	By Quote
3084	Shipping Charges	At Cost
3085	Air Express/Delivery *(each)*	Cost
3087	Contracted Services	Cost
3089	Minor Report Revision *(minimum)*	$25

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

CODE		COST

EXHIBIT "C"

City's Contact

Charlene Angsuco, Project Management Officer
562/570-5733
Charlene.Angsuco@LongBeach.Gov

EXHIBIT "D"

Materials/Information Furnished: None

EXHIBIT "E"

Contractor's Key Employee

Bruce Risley, RA/CCM
(213) 949-3016
bruce.risley@arcadis.com

EXHIBIT "F"

Letter of Assent

LETTER OF ASSENT

To be signed by all contractors awarded work covered by the City of Long Beach Project Labor Agreement prior to commencing work.

[Contractor's Letterhead]
PLA Administrator
City of Long Beach
1234 address
City, state, zip code
Attn: _____

Re: Project Labor Agreement - Letter of Assent

Dear Sir:

This is to confirm that [name of company] agrees to be party to and bound by the City of Long Beach Project Labor Agreement No. 35891 effective May 6, 2021, as such Agreement may, from time to time, be amended by the negotiating parties or interpreted pursuant to its terms. Such obligation to be a party and bound by this Agreement shall extend to all work covered by the agreement undertaken by this Company on the project and this Company shall require all of its contractors and subcontractors of whatever tier to be similarly bound for all work within the scope of the Agreement by signing and furnishing to you an identical letter of assent prior to their commencement of work.

Sincerely.

[Name of Construction Company]

By: [_____] Name and Title of Authorized Executive

[Copies of this letter must be submitted to the PLA Administrator and to the Trades Council Consistent with Article 2, Section 2.6 (b).]