AGENDA REPORT

CITY OF SAN CLEMENTE

CITY COUNCIL MEETING

910 Calle Negocio
2nd Floor
San Clemente, California
www.san-clemente.org

Meeting Date: September 14, 2023 Agenda Item: 7M

Department: Public Works
Prepared By Shawn Ryan, Senior Civil Engineer

Subject:
CONSIDERATION OF A RESOLUTION AWARDING A PROFESSIONAL CONSULTANT SERVICES AGREEMENT TO TRUSSELL TECHNOLOGIES, INC. FOR ENGINEERING CONSULTING SERVICES IN CONNECTION WITH THE AERATION BLOWER IMPROVEMENT PROJECT AND AUTHORIZING THE CITY MANAGER TO EXECUTE THE AGREEMENT

Fiscal Impact:
The proposed agreement in the amount of $149,735 is within the approved project budget of $200,000 from the Sewer Fund Depreciation Reserve, Account No. 054-476-45300-000-10206.

Summary:
The City Council is being asked to consider a Professional Consultant Services Agreement (PCSA) for an engineering consultant to evaluate various demands and the appropriate size of a replacement blower, provide final drawings and specifications for bidding and construction, engineering support services during construction, construction management services, and inspection/observation services for the Aeration Blower Improvements Project.

Background:
The WRP's Aeration Blowers provide oxygen for plant biology as part of the secondary wastewater treatment process. Two of the City's three blowers were replaced several years ago. The third blower, which is currently non-operational, has reached its useful life and is in need of replacement. This project will include an evaluation of the airflow demands and the appropriate size of the replacement blower, primary flow equalization, evaluation and/or upgrade of the existing pipelines, valves, and controls to achieve constant airflow to the aeration basin diffusers utilizing the current dissolved oxygen controls.

Discussion:
The City initiated requests for proposal (RFP) in May 2023 for this agreement. Proposals were solicited via the Planet Bids website. Following the end of the solicitation on June 12, 2023, the City received a total of three (3) proposals from qualified firms. Staff is not aware of a local company that could perform this work.

City staff reviewed the submittals at length and determined that Trussell Technologies, Inc. (with a principal place of business in California in the City of Pasadena) provided the best approach for the Aeration Blower Project. Costs for the submitted proposals ranged from $149,735 to $257,039. The selected consultant's cost was $149,735. Trussell Technologies, Inc. is very

familiar with the City of San Clemente's WRP, and staff believes that they will provide excellent services for Aeration Blower Improvement Project.

Council Options:

- Adopt Resolution No. 23-102, awarding a Professional Consultant Services Agreement to Trussell Technologies, Inc., and authorizing the City Manager to execute the agreement in an amount not to exceed $149,735.

- Adopt Resolution No. 23-102, with modifications.

- Do not adopt Resolution No. 23-102.

- Continue the item and direct staff to provide additional information.

Environmental Review/Analysis:

The work to be performed under this Professional Consultant Services Agreement is not a "project" under the California Environmental Quality Act.

Recommended Actions:

Staff Recommendation

Adopt Resolution 23-102, which would:

1. Award a Professional Consultant Services Agreement to Trussell Technologies, Inc. for engineering consulting services in connection with the Aeration Blower Improvement Project; and

2. Authorize the City Manager to execute the agreement in an amount not to exceed $149,735.

Attachment:

1. Resolution 23-102
2. Professional Consultant Services Agreement with Trussell Technologies, Inc.

Notification:

All bidders.

RESOLUTION NO. 23-102

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SAN CLEMENTE, CALIFORNIA, AWARDING A PROFESSIONAL CONSULTANT SERVICES AGREEMENT TO TRUSSELL TECHNOLOGIES, INC. FOR ENGINEERING CONSULTING SERVICES IN CONNECTION WITH THE AERATION BLOWER IMPROVEMENT PROJECT, AND AUTHORIZING THE CITY MANAGER TO EXECUTE THE AGREEMENT IN AN AMOUNT NOT TO EXCEED $149,735

WHEREAS, on May 23, 2023, the Engineering Division solicited proposals from qualified firms to provide engineering consulting services for the Aeration Blower Improvement Project; and

WHEREAS, on June 12, 2023 the City of San Clemente received three proposals from qualified firms; and

WHEREAS, City staff reviewed the submitted proposals and determined Trussell Technologies, Inc. provided the best approach for the Aeration Blower Improvement Project and its price proposal was fair and reasonable.

NOW, THEREFORE, The City Council of the City of San Clemente does hereby find, determine and resolve as follows:

Section 1. Recitals. The above recitals are considered findings by the City Council and incorporated into the body of this resolution.

Section 2. A Professional Consulting Services Agreement is hereby awarded to Trussell Technologies, Inc. for the Aeration Blower Improvement Project.

Section 3. The City Manager is authorized and directed to execute an agreement with Trussell Technologies, Inc. for an amount not to exceed $149,735 in a form substantially similar to that presented to City Council on September 14, 2023.

Section 4. The City Clerk shall certify to the passage and adoption of this resolution and enter it into the book of original resolutions.

PASSED AND ADOPTED this _____ day of _____, 2023.

ATTEST:

_____
City Clerk of the City of
San Clemente, California

_____
Mayor of the City of San
Clemente, California

STATE OF CALIFORNIA)
COUNTY OF ORANGE) §
CITY OF SAN CLEMENTE)

I, LAURA CAMPAGNOLO, City Clerk of the City of San Clemente, California, do hereby certify that Resolution No. 23-102 was adopted at a regular meeting of the City Council of the City of San Clemente held on the _____ day of _____, _____, by the following vote:

AYES:

NOES:

ABSENT:

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the City of San Clemente, California, this _____ day of _____, _____.

_____
CITY CLERK of the City of
San Clemente, California

Approved as to form:

_____
Elizabeth A. Mitchell, City Attorney

CITY OF SAN CLEMENTE

PROFESSIONAL CONSULTANT SERVICES AGREEMENT

1. PARTIES AND DATE.

This Agreement is made and entered into this _____ day of _____, 2023, by and between the City of San Clemente, a municipal corporation, organized under the laws of the State of California, with its principal place of business at 910 Calle Negocio , San Clemente, California, 92673 ("City") and **Trussell Technologies, Inc.**, **a California corporation**, with its principal place of business at **224 N Fair Oaks Avenue, FL 2, Pasadena, CA 91103** ("Consultant"). City and Consultant are sometimes individually referred to herein as "Party" and collectively as "Parties."

2. RECITALS.

2.1 Consultant.

Consultant desires to perform and assume responsibility for the provision of certain professional **engineering** consulting services required by the City on the terms and conditions set forth in this Agreement. Consultant represents that it is experienced in providing professional **engineering** consulting services to public clients, is licensed in the State of California, if applicable, and is familiar with the plans of City.

2.2 Project.

City desires to engage Consultant to render such professional **engineering** consulting services for the **AERATION BLOWER IMPROVEMENTS** project ("Project") as set forth in this Agreement.

3. TERMS.

3.1 Scope of Services and Term.

3.1.1 General Scope of Services. Consultant promises and agrees to furnish to the City all labor, materials, tools, equipment, services, and incidental and customary work necessary to fully and adequately supply the professional **Engineering** consulting services necessary for the Project ("Services"). The Services are more particularly described in Exhibit "A" attached hereto and incorporated herein by reference. All Services shall be subject to, and performed in accordance with, this Agreement, the exhibits attached hereto and incorporated herein by reference, and all applicable local, state and federal laws, rules and regulations.

3.1.2 Term. The term of this Agreement shall be from **October 16, 2023** until the services are complete to the satisfaction of the City, unless earlier terminated as provided herein**.**

3.2 Responsibilities of Consultant.

3.2.1 Independent Contractor; Control and Payment of Subordinates. The Services shall be performed by Consultant or under its supervision. Consultant will determine the means, methods and details of performing the Services subject to the requirements of this Agreement. City retains Consultant on an independent contractor basis and not as an employee. Consultant retains the right to perform similar or different services for others during the term of

this Agreement. Any additional personnel performing the Services under this Agreement on behalf of Consultant shall also not be employees of City and shall at all times be under Consultant's exclusive direction and control. Neither City, nor any of its officials, officers, directors, employees or agents shall have control over the conduct of Consultant or any of Consultant's officers, employees, or agents, except as set forth in this Agreement. Consultant shall pay all wages, salaries, and other amounts due such personnel in connection with their performance of Services under this Agreement and as required by law. Consultant shall be responsible for all reports and obligations respecting such additional personnel, including, but not limited to: social security taxes, income tax withholding, unemployment insurance, disability insurance, and workers' compensation insurance.

3.2.2 Schedule of Services. Consultant shall perform the Services expeditiously, within the term of this Agreement, and in accordance with the Schedule of Services set forth in Exhibit "B" attached hereto and incorporated herein by reference. Consultant represents that it has the professional and technical personnel required to perform the Services in conformance with such conditions. In order to facilitate Consultant's conformance with the Schedule, City shall respond to Consultant's submittals in a timely manner. Upon request of City, Consultant shall provide a more detailed schedule of anticipated performance to meet the Schedule of Services.

3.2.3 Endorsement on PS&E/ Other Data. Consultant shall sign all plans, specifications, estimates (PS&E) and engineering data furnished by Consultant, and where appropriate will indicate Consultant’s authorized signature and professional registration number.

3.2.4 Conformance to Applicable Requirements. All work prepared by Consultant shall be subject to the approval of City.

3.2.5 Substitution of Key Personnel. Consultant has represented to City that certain key personnel will perform and coordinate the Services under this Agreement. Should one or more of such personnel become unavailable, Consultant may substitute other personnel of at least equal competence upon written approval of City. In the event that City and Consultant cannot agree as to the substitution of key personnel, City shall be entitled to terminate this Agreement for cause. As discussed below, any personnel who fail or refuse to perform the Services in a manner acceptable to the City, or who are determined by the City to be uncooperative, incompetent, a threat to the adequate or timely completion of the Project or a threat to the safety of persons or property, shall be promptly removed from the Project by the Consultant at the request of the City. The key personnel for performance of this Agreement are as follows: **Brett Faulkner, Biological Treatment Lead**.

3.2.6 City's Representative. The City hereby designates **Shawn Ryan, Senior Civil Engineer**, or his/her designee, to act as its representative in all matters pertaining to the administration and performance of this Agreement ("City's Representative"). City's Representative shall have the power to act on behalf of the City for review and approval of all products submitted by Consultant but not the authority to enlarge the Scope of Work or change the total compensation due to Consultant under this Agreement. The City Manager shall be authorized to act on City's behalf and to execute all necessary documents which enlarge the Scope of Work or change the Consultant's total compensation subject to the provisions contained in Section 3.3 of this Agreement. Consultant shall not accept direction or orders from any person other than the City Manager, City's Representative or his/her designee.

3.2.7 Consultant's Representative. Consultant hereby designates **R. Shane Trussell, Chief Executive Officer**, or his/her designee, to act as its representative for the performance of this Agreement ("Consultant's Representative"). Consultant's Representative

shall have full authority to represent and act on behalf of the Consultant for all purposes under this Agreement. The Consultant's Representative shall supervise and direct the Services, using his/her best skill and attention, and shall be responsible for all means, methods, techniques, sequences, and procedures and for the satisfactory coordination of all portions of the Services under this Agreement.

3.2.8 Coordination of Services. Consultant agrees to work closely with City staff in the performance of Services and shall be available to City's staff, consultants and other staff at all reasonable times.

3.2.9 Standard of Care; Performance of Employees. Consultant shall perform all Services under this Agreement in a skillful and competent manner, consistent with the standards generally recognized as being employed by professionals in the same discipline in the State of California. Consultant represents and maintains that it is skilled in the professional calling necessary to perform the Services. Consultant warrants that all employees and subconsultants shall have sufficient skill and experience to perform the Services assigned to them. Finally, Consultant represents that it, its employees and subconsultants have all licenses, permits, qualifications and approvals of whatever nature that are legally required to perform the Services, and that such licenses and approvals shall be maintained throughout the term of this Agreement. As provided for in the indemnification provisions of this Agreement, Consultant shall perform, at its own cost and expense and without reimbursement from the City, any services necessary to correct errors or omissions which are caused by the Consultant's failure to comply with the standard of care provided for herein. Any employee of the Consultant or its sub-consultants who is determined by the City to be uncooperative, incompetent, a threat to the adequate or timely completion of the Project, a threat to the safety of persons or property, or any employee who fails or refuses to perform the Services in a manner acceptable to the City, shall be promptly removed from the Project by the Consultant and shall not be re-employed to perform any of the Services or to work on the Project.

3.2.10 Laws and Regulations. Consultant shall keep itself fully informed of and in compliance with all local, state and federal laws, rules and regulations in any manner affecting the performance of the Project or the Services, including all Cal/OSHA requirements, and shall give all notices required by law. Consultant shall be liable for all violations of such laws and regulations in connection with Services. If Consultant performs any work knowing it to be contrary to such laws, rules and regulations, Consultant shall be solely responsible for all costs arising therefrom. Consultant shall defend, indemnify and hold City, its officials, directors, officers, employees, agents, and volunteers free and harmless, pursuant to the indemnification provisions of this Agreement, from any claim or liability arising out of any failure or alleged failure to comply with such laws, rules or regulations.

3.2.11 Safety. Consultant shall execute and maintain its work so as to avoid injury or damage to any person or property. In carrying out its Services, the Consultant shall at all times be in compliance with all applicable local, state and federal laws, rules and regulations, and shall exercise all necessary precautions for the safety of employees appropriate to the nature of the work and the conditions under which the work is to be performed. Safety precautions, where applicable, shall include, but shall not be limited to: (A) adequate life protection and lifesaving equipment and procedures; (B) instructions in accident prevention for all employees and subconsultants, such as safe walkways, scaffolds, fall protection ladders, bridges, gang planks, confined space procedures, trenching and shoring, equipment and other safety devices, equipment and wearing apparel as are necessary or lawfully required to prevent accidents or injuries; and (C) adequate facilities for the proper inspection and maintenance of all safety measures.

3.2.12 Insurance. Consultant agrees to procure and maintain, at Consultant's expense all insurance specified in Exhibit "C" attached hereto and by this reference incorporated herein. Consultant shall require all subconsultants to carry the same policies and limits of insurance that the Consultant is required to maintain, unless otherwise approved in writing by the City.

3.3 Fees and Payments.

3.3.1 Compensation. Consultant shall receive compensation, including authorized reimbursements, for all Services rendered under this Agreement at the rates set forth in Exhibit "D" attached hereto and incorporated herein by reference. The total compensation shall not exceed **one hundred forty-nine thousand, seven hundred thirty-five** (**$149,735**) without written approval of the City Council or City Manager as applicable. Extra Work may be authorized, as described below, and if authorized, will be compensated at the rates and manner set forth in this Agreement.

3.3.2 Payment of Compensation. Consultant shall submit to City a monthly invoice which indicates work completed and hours of Services rendered by Consultant. The invoice shall describe the amount of Services provided since the initial commencement date, or since the start of the subsequent billing periods, as appropriate, through the date of the invoice. City shall, within 30 days of receiving such invoice, review the invoice and pay all non-disputed and approved charges thereon. If the City disputes any of Consultant's fees, the City shall give written notice to Consultant within thirty (30) days of receipt of an invoice of any disputed fees set forth therein.

3.3.3 Reimbursement for Expenses. Consultant shall not be reimbursed for any expenses unless authorized in writing in advance by City, or included in Exhibit "D" of this Agreement.

3.3.4 Extra Work. At any time during the term of this Agreement, City may request that Consultant perform Extra Work. As used herein, "Extra Work" means any work which is determined by City to be necessary for the proper completion of the Project, but which the Parties did not reasonably anticipate would be necessary at the execution of this Agreement. Consultant shall not perform, nor be compensated for, Extra Work without written authorization from the City.

3.3.5 Rate Increases. In the event that this Agreement is renewed pursuant to Section 3.1.2, the rate set forth in Exhibit "D" may be adjusted each year at the time of renewal as set forth in Exhibit "D."

3.3.6 Labor Code Requirements.

3.3.6.1 Prevailing Wages. Consultant is aware of the requirements of California Labor Code Section 1720, et seq., and 1770, et seq., as well as California Code of Regulations, Title 8, Section 16000, et seq., ("Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on "public works" and "maintenance" projects. **If** the Services are being performed as part of an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and **Since** the total compensation is $1,000 or more, Consultant agrees to fully comply with such Prevailing Wage Laws. Consultant shall make copies of the prevailing rates of per diem wages for each craft, classification or type of worker needed to execute the Services available to interested parties upon request, and shall post copies at the Consultant's principal place of business and at the

project site. Consultant shall defend, indemnify and hold the City, its officials, officers, employees, agents, and volunteers free and harmless from any claim or liability arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

3.3.6.2 Registration. If the Services are being performed as part of an applicable "public works" or "maintenance" project, in addition to the foregoing, then pursuant to Labor Code sections 1725.5 and 1771.1, the Consultant and all subconsultants must be registered with the Department of Industrial Relations ("DIR"). Consultant shall maintain registration for the duration of the project and require the same of any subconsultants. This project may also be subject to compliance monitoring and enforcement by the DIR. It shall be Consultant's sole responsibility to comply with all applicable registration and labor compliance requirements, including the submission of payroll records directly to the DIR. Notwithstanding the foregoing, the contractor registration requirements mandated by Labor Code sections 1725.5 and 1771.1 shall not apply to Services performed on a public works project that is exempt pursuant to the small project exemption specified in Labor Code sections 1725.5 and 1771.1.

3.4 Accounting Records.

3.4.1 Maintenance and Inspection. Consultant shall maintain complete and accurate records with respect to all costs and expenses incurred under this Agreement. All such records shall be clearly identifiable. Consultant shall allow a representative of City during normal business hours to examine, audit, and make transcripts or copies of such records and any other documents created pursuant to this Agreement. Consultant shall allow inspection of all work, data, documents, proceedings, and activities related to the Agreement for a period of four (4) years from the date of final payment under this Agreement.

3.5 General Provisions.

3.5.1 Termination of Agreement.

3.5.1.1 Grounds for Termination. City may, by written notice to Consultant, terminate the whole or any part of this Agreement at any time, with or without cause, by giving written notice to Consultant of such termination, and specifying the effective date thereof, at least seven (7) days before the effective date of such termination. Upon termination, Consultant shall be compensated only for those services which have been adequately rendered to City, and Consultant shall be entitled to no further compensation. Consultant may not terminate this Agreement except for cause.

3.5.1.2 Effect of Termination. If this Agreement is terminated as provided herein, City may require Consultant to provide all finished or unfinished Documents and Data and other information of any kind prepared by Consultant in connection with the performance of Services under this Agreement. Consultant shall be required to provide such document and other information within fifteen (15) days of the request.

3.5.1.3 Additional Services. In the event this Agreement is terminated in whole or in part as provided herein, City may procure, upon such terms and in such manner as it may determine appropriate, services similar to those terminated.

3.5.2 Delivery of Notices. All notices permitted or required under this Agreement shall be given to the respective parties at the following address, or at such other address as the respective parties may provide in writing for this purpose:

Consultant: **Trussell Technologies, Inc.**
224 Fair Oaks Avenue, FL 2
Pasadena, California 91103
ATTN: **Shane R. Trussell, Chief Executive Officer**

City: City of San Clemente
910 Calle Negocio
San Clemente, CA 92673
ATTN: **Shawn Ryan, Senior Civil Engineer**

Such notice shall be deemed made when personally delivered or when mailed, forty-eight (48) hours after deposit in the U.S. Mail, first class postage prepaid and addressed to the party at its applicable address. Actual notice shall be deemed adequate notice on the date actual notice occurred, regardless of the method of service.

3.5.3 Ownership of Materials and Confidentiality.

3.5.3.1 Documents & Data; Licensing of Intellectual Property. This Agreement creates a non-exclusive and perpetual license for City to copy, use, modify, reuse, or sublicense any and all copyrights, designs, and other intellectual property embodied in plans, specifications, studies, drawings, estimates, and other documents or works of authorship fixed in any tangible medium of expression, including but not limited to, physical drawings or data magnetically or otherwise recorded on computer diskettes, which are prepared or caused to be prepared by Consultant under this Agreement ("Documents & Data"). Consultant shall require all subconsultants to agree in writing that City is granted a non-exclusive and perpetual license for any Documents & Data the subconsultant prepares under this Agreement. Consultant represents and warrants that Consultant has the legal right to license any and all Documents & Data. Consultant makes no such representation and warranty in regard to Documents & Data which were prepared by design professionals other than Consultant or provided to Consultant by the City. City shall not be limited in any way in its use of the Documents & Data at any time, provided that any such use not within the purposes intended by this Agreement shall be at City's sole risk.

3.5.3.2 Confidentiality. All ideas, memoranda, specifications, plans, procedures, drawings, descriptions, computer program data, input record data, written information, and other Documents & Data either created by or provided to Consultant in connection with the performance of this Agreement shall be held confidential by Consultant. Such materials shall not, without the prior written consent of City, be used by Consultant for any purposes other than the performance of the Services. Nor shall such materials be disclosed to any person or entity not connected with the performance of the Services or the Project. Nothing furnished to Consultant which is otherwise known to Consultant or is generally known, or has become known, to the related industry shall be deemed confidential. Consultant shall not use City's name or insignia, photographs of the Project, or any publicity pertaining to the Services or the Project in any magazine, trade paper, newspaper, television or radio production or other similar medium without the prior written consent of City.

3.5.3.3 Confidential Information. The City shall refrain from releasing Consultant's proprietary information ("Proprietary Information") unless the City's legal counsel determines that the release of the Proprietary Information is required by the California Public Records Act or other applicable state or federal law, or order of a court of competent jurisdiction, in which case the City shall notify Consultant of its intention to release Proprietary Information. Consultant shall have five (5) working days after receipt of the Release Notice to give City written notice of Consultant's objection to the City's release of Proprietary Information. Consultant shall

indemnify, defend and hold harmless the City, and its officers, directors, employees, and agents from and against all liability, loss, cost or expense (including attorney's fees) arising out of a legal action brought to compel the release of Proprietary Information. City shall not release the Proprietary Information after receipt of the Objection Notice unless either: (1) Consultant fails to fully indemnify, defend (with City's choice of legal counsel), and hold City harmless from any legal action brought to compel such release; and/or (2) a final and non-appealable order by a court of competent jurisdiction requires that City release such information.

3.5.4 Cooperation; Further Acts. The Parties shall fully cooperate with one another, and shall take any additional acts or sign any additional documents as may be necessary, appropriate or convenient to attain the purposes of this Agreement.

3.5.5 Attorney's Fees. If either party commences an action against the other party, either legal, administrative or otherwise, arising out of or in connection with this Agreement, the prevailing party in such litigation shall be entitled to have and recover from the losing party reasonable attorney's fees and all other costs of such action.

3.5.6 Indemnification.

3.5.6.1 To the fullest extent permitted by law, Consultant shall defend (with counsel of City's choosing), indemnify and hold the City, its directors, officials, officers, employees, volunteers and agents free and harmless from any and all claims, demands, causes of action, costs, expenses, liability, loss, damage or injury of any kind, in law or equity, to property or persons, including wrongful death, in any manner arising out of, pertaining to, or incident to any alleged acts, errors or omissions, or willful misconduct of Consultant, its officials, officers, employees, subcontractors, consultants or agents in connection with the performance of the Consultant's Services, the Project or this Agreement, including without limitation the payment of all damages, expert witness fees and attorney's fees and other related costs and expenses. Consultant's obligation to indemnify shall not be restricted to insurance proceeds, if any, received by Consultant, the City, its officials, officers, employees, agents, or volunteers.

3.5.6.2 If Consultant's obligation to defend, indemnify, and/or hold harmless arises out of Consultant's performance as a "design professional" (as that term is defined under Civil Code section 2782.8), then, and only to the extent required by Civil Code section 2782.8, which is fully incorporated herein, Consultant's indemnification obligation shall be limited to claims that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the Consultant, and, upon Consultant obtaining a final adjudication by a court of competent jurisdiction, Consultant's liability for such claim, including the cost to defend, shall not exceed the Consultant's proportionate percentage of fault.

3.5.7 Entire Agreement. This Agreement contains the entire Agreement of the parties with respect to the subject matter hereof, and supersedes all prior negotiations, understandings or agreements. This Agreement may only be modified by a writing signed by both parties.

3.5.8 Governing Law. This Agreement shall be governed by the laws of the State of California. Venue shall be in Orange County.

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

3.5.10 City's Right to Employ Other Consultants. City reserves right to employ

other consultants in connection with this Project.

3.5.11 Successors and Assigns. This Agreement shall be binding on the successors and assigns of the parties.

3.5.12 Assignment or Transfer. Consultant shall not assign, hypothecate, or transfer, either directly or by operation of law, this Agreement or any interest herein without the prior written consent of the City. Any attempt to do so shall be null and void, and any assignees, hypothecates or transferees shall acquire no right or interest by reason of such attempted assignment, hypothecation or transfer.

3.5.13 Construction; References; Captions. Since the Parties or their agents have participated fully in the preparation of this Agreement, the language of this Agreement shall be construed simply, according to its fair meaning, and not strictly for or against any Party. Any term referencing time, days or period for performance shall be deemed calendar days and not work days. All references to Consultant include all personnel, employees, agents, and subconsultants of Consultant, except as otherwise specified in this Agreement. All references to City include its elected officials, officers, employees, agents, and volunteers except as otherwise specified in this Agreement. The captions of the various articles and paragraphs are for convenience and ease of reference only, and do not define, limit, augment, or describe the scope, content, or intent of this Agreement.

3.5.14 Amendment; Modification. No supplement, modification, or amendment of this Agreement shall be binding unless executed in writing and signed by both Parties.

3.5.15 Waiver. No waiver of any default shall constitute a waiver of any other default or breach, whether of the same or other covenant or condition. No waiver, benefit, privilege, or service voluntarily given or performed by a Party shall give the other Party any contractual rights by custom, estoppel, or otherwise.

3.5.16 No Third-Party Beneficiaries. There are no intended third party beneficiaries of any right or obligation assumed by the Parties.

3.5.17 Invalidity; Severability. If any portion of this Agreement is declared invalid, illegal, or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions shall continue in full force and effect.

3.5.18 Prohibited Interests. Consultant maintains and warrants that it has not employed nor retained any company or person, other than a bona fide employee working solely for Consultant, to solicit or secure this Agreement. Further, Consultant warrants that it has not paid nor has it agreed to pay any company or person, other than a bona fide employee working solely for Consultant, any fee, commission, percentage, brokerage fee, gift or other consideration contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, City shall have the right to rescind this Agreement without liability. For the term of this Agreement, no member, officer or employee of City, during the term of his or her service with City, shall have any direct interest in this Agreement, or obtain any present or anticipated material benefit arising therefrom.

3.5.19 Equal Opportunity Employment. Consultant represents that it is an equal opportunity employer and it shall not discriminate against any subconsultant, employee or applicant for employment because of race, religion, color, national origin, handicap, ancestry, sex or age. Such non-discrimination shall include, but not be limited to, all activities related to

initial employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination. Consultant shall also comply with all relevant provisions of City's Minority Business Enterprise program, Affirmative Action Plan or other related programs or guidelines currently in effect or hereinafter enacted.

3.5.20 Labor Certification. By its signature hereunder, Consultant certifies that it is aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for Worker's Compensation or to undertake self-insurance in accordance with the provisions of that Code, and agrees to comply with such provisions before commencing the performance of the Services.

3.5.21 Authority to Enter Agreement. Consultant has all requisite power and authority to conduct its business and to execute, deliver, and perform the Agreement. Each Party warrants that the individuals who have signed this Agreement have the legal power, right, and authority to make this Agreement and bind each respective Party.

3.5.22 Counterparts/Electronic Signatures. This Agreement may be signed in counterparts, each of which shall constitute an original. This Agreement may be signed electronically with the same force and effect as an original ink signature.

3.6 Subcontracting.

3.6.1 Prior Approval Required. Consultant shall not subcontract any portion of the work required by this Agreement, except as expressly stated herein, without prior written approval of City. Subcontracts, if any, shall contain a provision making them subject to all provisions stipulated in this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed on the respective dates set forth opposite of their signatures.

CITY OF SAN CLEMENTE

By:_____
Andy Hall, City Manager

Dated: _____, 2023

ATTEST:

_____
CITY CLERK of the City of
San Clemente, California

APPROVED AS TO FORM:

_____
Elizabeth A. Mitchell, City Attorney

APPROVED AS TO AVAILABILITY OF FUNDING:

_____
Finance Authorization

Trussell Technologies, Inc., a California corporation
("CONSULTANT")

By: _____
R. Shane Trussell, Chief Executive Officer

Dated: _____, 2023

By: _____
C. Bryan Trussell, Secretary

Dated: _____, 2023

EXHIBIT "A"

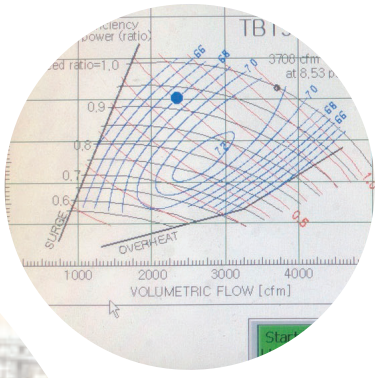
SCOPE OF SERVICES

Consultant shall perform the following services ("Services"):

Trussell

Aeration Blower Improvements, Project No. 10206

June 5, 2023



PREPARED FOR

CITY OF SAN CLEMENTE CALIFORNIA

June 5, 2023

Mr. Shawn Ryan, Senior Civil Engineer
City of San Clemente
910 Calle Negocio, Suite 100
San Clemente, CA 92673

Re: Request for Proposal–Aeration Blower Improvements

Dear Shawn,

Trussell Technologies, Inc. (Trussell) is pleased to submit the enclosed proposal in response to the City of San Clemente (City) request for proposal to provide Aeration Blower Improvements, dated May 17, 2023. Our team is particularly well-suited to support the City in assessing and implementing aeration blower improvements, as we previously evaluated the performance and airflow rates of the existing blowers at the San Clemente Water Reclamation Plant (CSWRP) during our 2020 CSWRP Efficiency Study. We recommended replacement of the Lamson aeration blower as a priority for the City, at the time.

Our team will start the aeration blower improvement project by evaluating SCWRP aeration needs for both current and future operations, using recent operational data in combination with biological modeling. We will evaluate operational conditions for the replacement blower to identify the most robust and efficient solution. We will engage established blower manufacturers to identify options and performance metrics to select the most compatible fit for SCWRP. Our design will define a robust and efficient blower that can be successfully integrated to the existing SCWRP aeration system. Throughout this process, our team will work closely with City staff to ensure any concerns with various operating conditions are addressed in the design. Once the contractor and equipment vendor are selected, we will continue to provide support and act as a liaison to the City to help minimize risk to the City.

To provide the analysis, design, and support the City needs for implementing the requested aeration blower improvements, we have assembled a highly qualified team with expertise in biological treatment modeling and optimization, as well as experience in technical design for a variety of wastewater treatment applications. I will serve as the Technical Advisor for the project and assure that quality is maintained in all of the project deliverables. **Brett Faulkner**, Trussell's Biological Treatment Lead, will be the Technical Lead Engineer and key contact responsible for all communications with the City. **Fernanda Bacaro** is Trussell's Biological Treatment Specialist and will support the development of the basis of design with data analysis, biological modeling, and identification of associated design criteria. **Rodrigo Tackaert** will support the final design with development of technical specifications and design drawings.

The project will be managed from Trussell's San Diego office by Brett Faulkner:

Brett Faulkner, P.E.
380 Stevens Ave, Suite 212
Solana Beach, CA 92075
brettf@trusselltech.com
858-232-2874

We are ready to get to work with the City on this project. We have reviewed the Professional Services Agreement and accept all provisions. A copy of our insurance certificate is provided in Appendix A. Our proposed fee for the project will be valid for a period of at least 90 days. Please let me know of any questions.

Sincerely,

Shane Trussell, Ph.D., P.E., BCEE
President

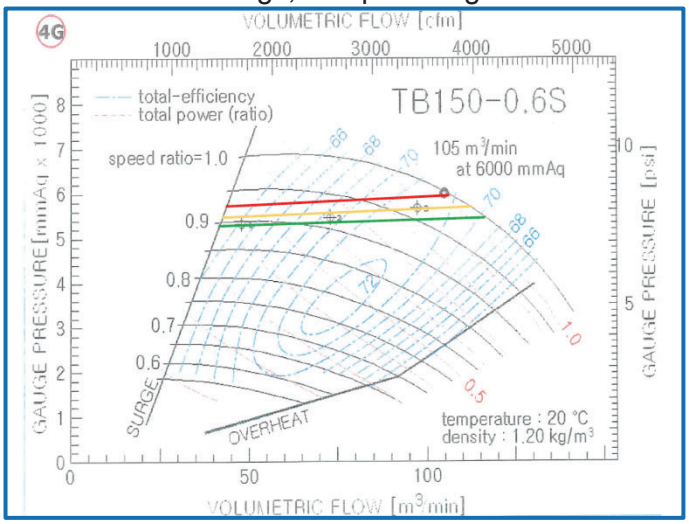
SECTION I: BACKGROUND AND APPROACH

Trussell Technologies Inc. (Trussell) has prepared this proposal in response to the City of San Clemente (City) request for proposal for the Aeration Blower Improvements Project (No. 10206).

Project Understanding

Our team understands that the City is seeking engineering support services for improving aeration reliability at the San Clemente Water Reclamation Plant (SCWRP) by replacing a non-operational Lampson blower and addressing both improved energy efficiency and redundancy needs for the secondary process. We understand that the City would like to use the current dissolved oxygen controls, but improve the aeration process performance by assuring oxygen demands for the biological treatment process are met. Our team is fully prepared to work with the City to review process data and site information to identify an appropriate blower that is compatible with the two existing Aerzen blowers at the SCWRP and will also reduce power costs.

We commend the City for establishing a robust procurement process that will allow for selection of an efficient blower and continuous oversight through the design and construction phases to ensure that it is integrated appropriately at SCWRP. Our team has served in this role for multiple projects of varying scales – including the secondary process upgrade design for the Meadowlark Water Reclamation Facility (5 MGD) and City of Ventura's membrane bioreactor conversion project (12 MGD). The foundation of the project will be the preliminary design report, where we will identify design criteria, an equipment layout, and estimates for capital, utility, and on-going operations costs related to the identified blower and appurtenances. Using this basis, we will then develop 60% and 90% level design plans and specifications, as well as a final set of plans, specifications, and a Class 3 cost estimate for use in bidding and construction. Trussell will remain engaged in the project through the bidding and construction process, supporting the City in interfacing with the bidders, reviewing submittals, fielding information requests, attending construction meetings, and providing other as-needed design-related support.

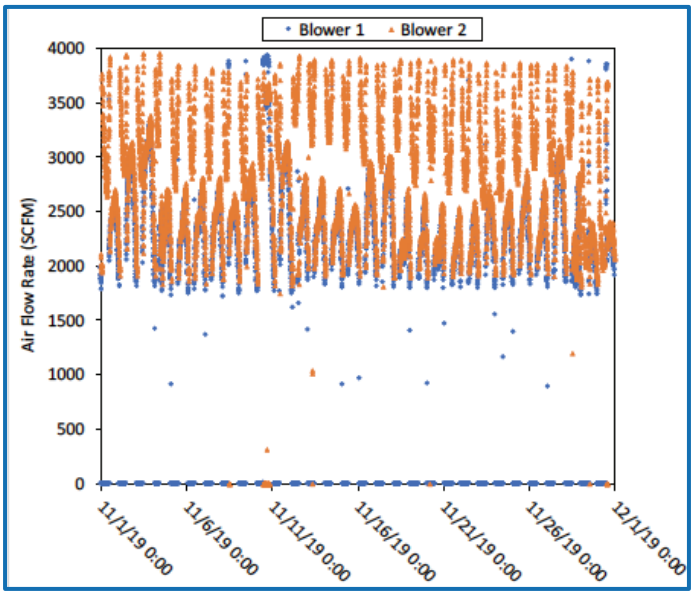


Performance curve for SCWRP Aerzen blowers

Trussell is very familiar with the SCWRP, having completed a 2020 Efficiency Study to develop capital improvements and operational recommendations for the facility. As part of the efficiency study, our team developed a model of the biological wastewater treatment at SCWRP using GPS-X software. In addition, we identified the need to replace the Lamson aeration blower, evaluated the operations of the existing Aerzan blowers, and provided preliminary recommendations based on operational and water quality data at the time. More recently, we are currently supporting the City with design services for a new membrane filtration (MF) and reverse osmosis (RO) treatment system at SCWRP. The new MF/RO system will allow the City to maximize water recycling from SCWRP. Similar to the

current project, the MF/RO project involves preliminary design, detailed design, as well as support through bidding and construction.

Approach



Historical blower air flow rates (November 2019)

Our team is poised to hit the ground running on the aeration blower improvement project at SCWRP. We will build on our familiarity with the SCWRP and understanding of its treatment process controls, prior preliminary assessment of aeration needs, and previously developed biological treatment model to streamline the preliminary design evaluation. Using recent operational data, we will recalibrate our existing model of SCWRP biological treatment to evaluate the airflow demands under current operations, as well as with primary flow equalization scenarios. As part of the 2020 Efficiency Study at SCWRP, Trussell recommended further evaluation of adding primary flow equalization. By equalizing the flow ahead of the secondary process, the diurnal fluctuations in air flow observed in the figure above are expected to be minimized, which would also impact the blower sizing and efficiency. The current evaluation will thus include identification of blower performance criteria, efficiency, costs, and sizing with and without primary equalization at SCWRP. In addition, we will identify any required changes to the pipelines, valves, and controls.

Considering the City's desire to maintain redundancy of the secondary aeration process and the potential to extend the life of the two existing Aerzen blowers, Trussell will identify and assess various replacement options, including the following three scenarios:

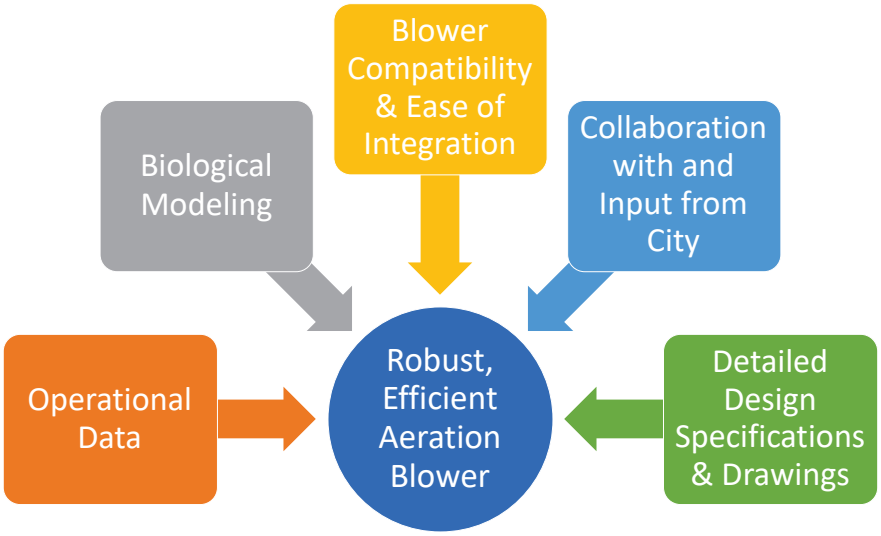
1. The replacement blower is the primary operating equipment and the two existing blowers provide redundancy (configuration: 1 duty + 2 standby).
2. The replacement blower is one of two standby units (configuration: 1 duty + 2 standby).
3. The replacement blower is the sole standby unit with the two existing blowers as the default duty units (configuration: 2 duty + 1 standby).

Integration and compatibility of the new blower with the existing blower system will be a key consideration for this project as flexibility to run any combination of blowers and avoiding blower surges and/or overload is critical for overall system reliability.

SECTION II: METHODOLOGIES

Trussell and the City will benefit from our existing understanding of the SCWRP and long-term working relationships with the City's operations staff. As referenced in the prior section, Trussell will rely on the use of recent operational data in combination with biological modeling to evaluate aeration needs for both current and future operations. Trussell will evaluate operational conditions

for the replacement blower to identify the most robust and efficient solution. We will work with established blower manufacturers to identify options and performance metrics to select the most compatible fit for SCWRP. Trussell will work closely with City staff to ensure any concerns with various operating conditions are addressed in the design. Furthermore, close collaboration through the design process will help minimize risk for the City. Our methodology will ensure the replacement is a robust and efficient addition that can be successfully integrated to the aeration system. A schematic summarizing the methodologies Trussell will employ for the project is provided below.



SECTION III: WORK PLAN

Trussell is committed to working with the City on all aspects of the blower improvement project – from identification of airflow demands to final design and through construction – to ensure the appropriate blower is selected, seamlessly installed, and properly integrated with the existing treatment. To accomplish the aeration improvements, our work plan is presented in sequential order of the tasks that capture our team's approach to the project.

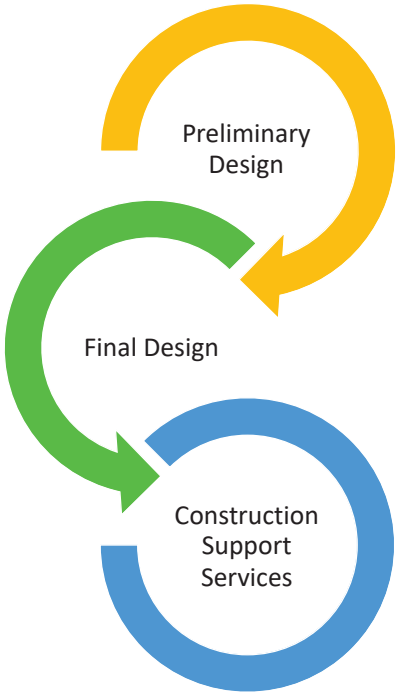
Task 1 Preliminary Design

The basis of design will be developed in two phases. First, we will review water quality and operational data reflecting recent operating conditions to allow for updating our existing model of biological treatment at SCWRP. We will evaluate airflow demand and blower sizing with and without primary equalization to evaluate additional opportunities for efficiency, building on Trussell's prior SCWRP efficiency study. The foundation of the project will be the preliminary design report, where we will identify design criteria, an equipment layout, and estimates for capital, utility, and on-going operations costs related to the identified blower and appurtenances.

This will include an identification of associated mechanical, electrical, telemetry or other engineering elements.

Deliverables

- Preliminary Design Report
- Capital, Utility, and Operational Cost Estimates



Task 2 Final Design

The final design will leverage the outcomes from the preliminary design to develop technical specifications and drawings. Trussell will first develop 60% design documents, which will include technical specifications and drawings for the replacement aeration blower and electrical. It is assumed that the City will provide typical front end specifications (e.g., general requirements) that will be tailored to the specifics of the project. A Class 3 OPCC will be developed to enable the City to budget appropriately for the blower replacement work. The design will proceed through an iterative process, where feedback from the City and blower suppliers will be incorporated to produce 90% documents and a subsequent final design package.

Deliverables

- Class 3 Cost Estimate
- Design Plans and Specifications at 60% and 90% Completion
- Final Design Plans for Bidding and Construction

Task 3 Construction Support Services

Once the design is finalized, Trussell will remain involved through the bidding and construction phases of the project. Trussell will play an active role in supporting the City by responding to questions and clarifications from qualified bidders. Once a design engineering firm or equipment vendor is selected for the project, Trussell will support the City in responding to requests for information (up to 15) and by reviewing shop-drawing submittals (up to 20). At least one Trussell project team member will attend all construction meetings. Once construction is complete for the blower installation, Trussell will update the design drawings for as-builts and provide the City with the final record drawings.

Deliverables

- Clarifications, details, and additional calculations for modifications to original design (up to 15 requests for information)
- Markups to shop drawing submittals (up to 20)
- Final record drawings

SECTION IV: PROJECT ORGANIZATION AND STAFFING

This section presents a brief background on Trussell, the organization of our project team, along with the qualifications and responsibilities of all key project team members.

Our Company

Trussell is an environmental engineering firm passionate about developing the best process and water quality solutions. This passion motivates us to tackle complex water challenges with the latest in practice and science. We have earned a reputation for finding cost-effective, practical, and simple solutions to challenging projects.

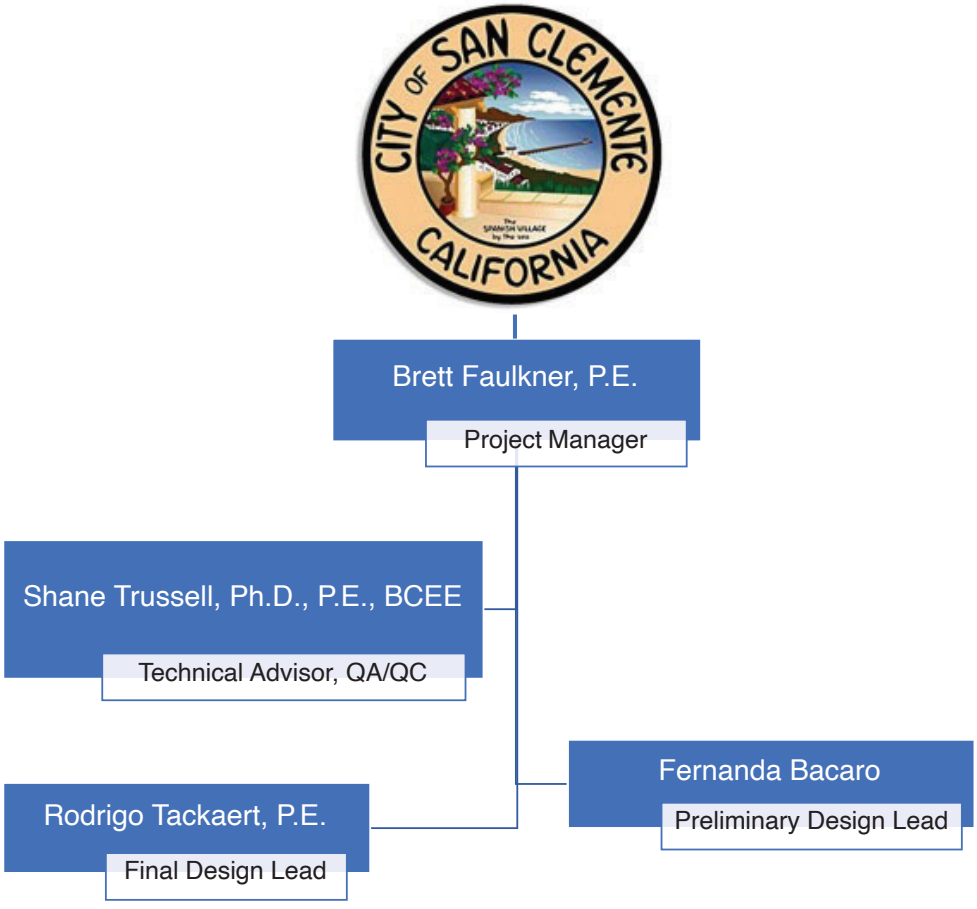
Office Locations	Oakland, CA Pasadena, CA San Diego, CA
Years in Business	20 (founded in 2003)
Employees	20 CA Professional Engineers 9 Ph.D.s 7 Board Certified Environment Engineers 5 WW/AWT Certified Operator

Founded in 2003, Trussell is composed of 36 energetic, highly trained engineers engaged in a range of projects, including the evaluation, design, and permitting of processes for drinking water, water reclamation, potable reuse, and wastewater. Together, we take projects from concept through implementation using experience, applied research and treatability expertise, proven regulatory insight, cutting-edge treatment system design, and real-world operational knowledge. Our reputable team will use innovation to deliver high-quality services that reduce project costs and improve reliability. Trussell operates in the nexus between practice and science, with 9 staff members holding a Ph.D., 20 California-registered professional engineers, and five certified Wastewater and Advanced Water Treatment (AWT) operators. We have successfully completed projects throughout the State of California for a variety of municipal agencies and have unparalleled expertise in solving treatment issues by providing innovative, yet simple solutions.

Key Personnel

Our San Diego-based project team is grounded in the fundamentals of biological treatment and has worked with numerous Southern California utilities of all sizes to optimize treatment, identify more efficient operations, and support the implementation of identified upgrades from preliminary design through construction. **Brett Faulkner**, Trussell's Biological Treatment Lead, will be the Project Manager and key contact responsible for all communications with the City. Brett has extensive experience in wastewater treatment, working with utilities of all sizes throughout Southern California. Brett was also the lead for Trussell's 2020 Efficiency Study with the City.

Shane Trussell, Trussell's President, will serve as the Technical Advisor for the project. Shane will provide operational and technical support to the City and serve as the quality assurance and quality control (QA/QC) Advisor, where he will provide a technical review of all project deliverables. **Fernanda Bacaro** is Trussell's Biological Treatment Specialist and will support the development of the basis of design with data analysis, biological modeling, and identification of associated design criteria. Fernanda has extensive experience with the modeling software GPS-X. **Rodrigo Tackaert** will support the final design with development of technical specifications and design drawings. Rodrigo will leverage his design experience and familiarity with the SCWRP facilities through his involvement in the current MF/RO treatment design. The organization chart below establishes the management and control structure to achieve the goals and objectives of the project. A summary of each team member's expected contribution to the project is also provided, indicating total number of hours by task and approximate availability for the duration of the project. Resumes of each project team member can be found in Appendix B.



Contribution Schedule

Key Personnel	Number of Hours Committed by Task			% Availability for Aeration Blower Improvements
	Preliminary Design	Final Design	Construction Support Services	
Brett Faulkner, P.E. Project Manager	62	76	50	10%
Shane Trussell, Ph.D., P.E., BCEE Technical Advisor, QA/QC	14	18	6	2%
Fernanda Bacaro Preliminary Design Lead	136	72	8	10%
Rodrigo Tackaert, P.E. Final Design Lead	2	160	66	12%

SECTION V: RELATED EXPERIENCE

Listed in this section are relevant project examples to give additional insight into how we can help the City. Each of the five projects includes a reference that can be contacted.

Project Experience

CLIENT
Vallecitos Water District

PROJECT
Title: Meadowlark Secondary and Tertiary Evaluations and Design
Date: 2015-2021

REFERENCE
Matt Weise
Wastewater Treatment Plant Supervisor
201 Vallecitos De Oro
San Marcos, CA 92069
(760) 744-0460 ext. 411

KEY PERSONNEL & RESPONSIBILITIES
Shane Trussell, Technical Advisor
- Project Management, Technical and Operational Support

Brett Faulkner, Project Manager and Design Lead
- Data Analysis, Operational Support, Biological Modeling, Design Documents, Inspection and Engineering Services During Construction

Rodrigo Tackaert, Project Engineer
- Data Analysis, Preliminary Design/Evaluations

GENERAL WORK PERFORMED

The Vallecitos Water District (VWD) owns and operates the Meadowlark Water Reclamation Facility (MWRF), which is capable of treating up to 5 MGD of wastewater to produce recycled water for local customers. Since 2010, Trussell has worked with the VWD on an assortment of projects including operational support/optimization, filter media design and replacement, coliform evaluation, disinfection system design, secondary process optimization, nutrient removal assessment, and secondary process preliminary and final design.

In 2017, Trussell completed an evaluation and preliminary design that assessed the viability, benefits, and cost associated with retrofitting the existing aeration basins at the MWRF with biological selectors. Anticipated operational and treatment benefits associated with the selectors include biological phosphorus removal and reductions in sludge bulking and chemical coagulant dosing for tertiary filtration. The design included the creation of anaerobic selector zones at the beginning of each aeration basin using non-structural baffles; a compressed gas system was selected to provide mixing with minimal oxygen transfer. Another component of the upgrade was the aeration equipment: the unreliable existing panels were recommended for replacement because they were no longer supplied by the manufacturer. Replacement fine bubble diffusers were selected. In 2019 Trussell developed design documents (i.e., specifications and drawings) for the diffusers, mixing system, and non-structural baffle retrofits. Finally, Trussell retained the services of Ewing Construction Services to create a Level 2 Opinion of Probable Construction Cost, so the Vallecitos Water District could secure an appropriate budget for the project and gauge bid submittals. Trussell assisted VWD with review of bid submittals from contractors and provided engineering services during construction to ensure the design specifications and performance requirements were met.

In 2015, Trussell designed replacement granular media for the MWRF's filters, developed the technical specifications, and provided construction and operations support during the media replacement. Historically, high doses of coagulant were relied upon to meet Title 22 filter effluent turbidity limits. Trussell identified that the filter media was inadequately sized for effective turbidity removal, so a finer media consisting of sand and anthracite was selected. The media was sized to lower turbidity by achieving fluidization and stratification with the existing backwash rates. Upon determining the preferred media design, Trussell provided technical specifications that described the media and requirements for proper testing and installation. Trussell also performed sieve analyses on the replacement media prior to installation to ensure that it met the design specifications. Trussell provided technical support throughout the installation process by inspecting the underdrains, removing fines, and providing media installation procedures. The new media has reduced coagulant use by 95% and dramatically improved recycled water quality.

CLIENT

Rancho California Water District (Upper District)

PROJECT

Title: Santa Rosa Water Reclamation Facility Aeration Evaluation
Date: 2015-2018

REFERENCE

Robert Avera, P.E.
Principal Engineer
42135 Winchester Rd.
Temecula, CA 92590
(951) 296-6900 ext. 6982

KEY PERSONNEL & RESPONSIBILITIES

Shane Trussell, Project Manager
- Project Management, Technical and Operational Support

Brett Faulkner, Project Engineer
- Data Analysis, Operational Support, Biological Modeling

GENERAL WORK PERFORMED

Rancho California Water District (RCWD) owns and operates the Santa Rosa Water Reclamation Facility (SRWRF) in Murrieta, California. The SRWRF had sequencing batch reactors (SBR) that utilized jet aeration to treat approximately 2.8 MGD. Trussell Technologies Inc. (Trussell) used the wastewater modeling software GPS-X to evaluate the efficiency of the existing jet aeration equipment and estimate potential cost savings if the SBR jet aeration equipment were to be replaced. The evaluation showed potential for significant savings, improved process performance, and a substantial increase in treatment capacity from upgrading the aeration equipment to fine bubble diffusers, new blowers, and implementing DO control. Trussell procured equipment recommendations and cost estimates from three competing manufacturers for blower and fine bubble aeration equipment upgrades.

Trussell was retained by RCWD in an owner's rep role to oversee the design and construction of the recommended aeration upgrade. Trussell performed revised modeling for peak conditions to determine required airflow and the appropriate blower sizing criteria that resulted in efficient operation at current conditions and handling of peak design loads in the future. Construction was completed in 2022 and a recent evaluation performed by Trussell showed over 30% energy savings from the upgrades and improved effluent water quality.

CLIENT

Kennedy Jenks/City of San Buenaventura

PROJECT

Title: Ventura Water Reclamation Facility MBR/UV Project
Date: 2022-Present

REFERENCE

Linda Sumansky
VenturaWaterPure Program Director
336 Sanjon Road
Ventura, CA 93002

KEY PERSONNEL

Shane Trussell, Project Manager
- Project Management, Technical Support

Brett Faulkner, Project Engineer
- Data Analysis, Biological Modeling, Biological Process Design

Fernanda Bacaro, Project Engineer
- Data Analysis, Biological Modeling

GENERAL WORK PERFORMED

The City of San Buenaventura (City) selected Kennedy Jenks and Trussell to develop the design for the upgrade and expansion of its existing Ventura Water Reclamation Facility (VWRF) to include improved biological nutrient removal (BNR) basins, membrane bioreactors (MBR), and ultraviolet (UV) disinfection. Trussell is the process design lead on the project for the BNR, MBR, and UV processes. Trussell analyzed historical plant operating data to develop biological models of the facility improvements which served as the basis for basin sizing, blower sizing, aeration grid coverage, and chemical use for denitrification to

achieve stringent effluent nitrate criteria. Additional sampling is also being conducted on the existing primary effluent and centrate to better characterize the inputs and assumptions of the model (e.g., fractionations) and optimize the model and resulting biological design, as needed. Trussell is currently leading efforts for pre-selection of the MBR and UV equipment and will continue to lead the process design through the 30%, 60%, 90% and final design submittals.

CLIENT
San Elijo Joint Powers Authority

PROJECT
Title: San Elijo Water Reclamation Facility Operations Plan, Operational Support, Secondary Improvements, and Recycled Water Expansion
Date: 2008-Present

REFERENCE
Mike Thornton
General Manager
2695 Manchester Avenue
Cardiff-by-the-Sea, CA 92007
(760) 753-6203

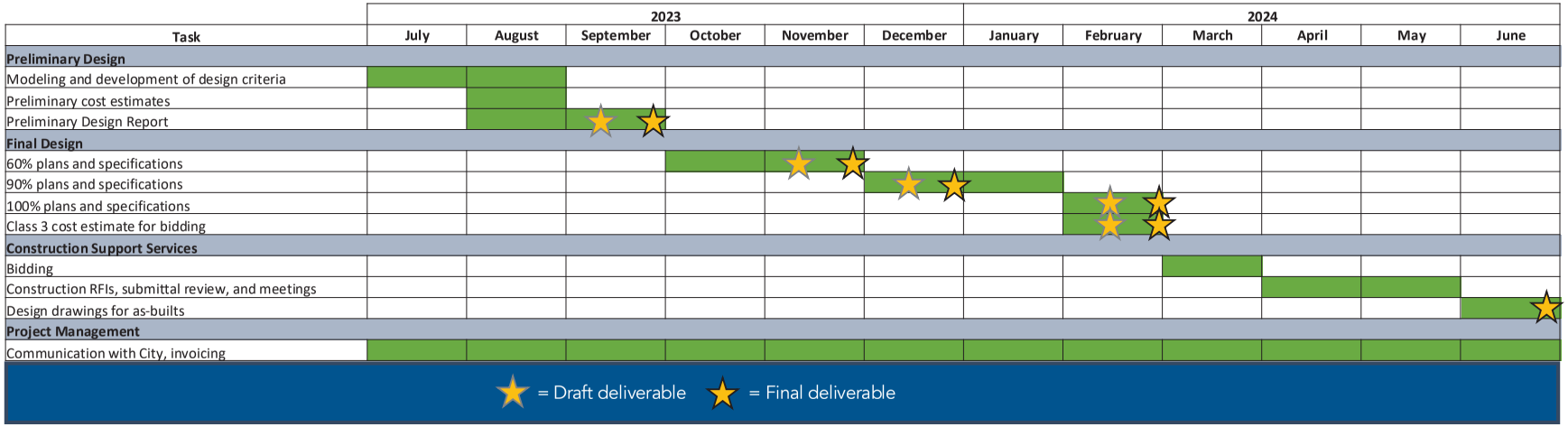
KEY PERSONNEL
Shane Trussell, Project Manager
- Project Management, Technical Support

Brett Faulkner, Project Engineer
- Operational Support, Biological Modeling

GENERAL WORK PERFORMED
Since 2008, Trussell has worked with the San Elijo Joint Powers Authority (SEJPA) on an array of projects related to secondary process optimization, recycled water expansion design, tracer and disinfection studies, instrumentation trials and integration, reverse osmosis membrane procurement/installation, and potable reuse planning.
Trussell develop an operations plan in 2011 that established operational guidelines to optimize treatment at the San Elijo Water Reclamation Facility (SEWRF). Over two years of daily plant data and industry standards were analyzed to establish guidelines for operations staff to efficiently operate and manage the treatment plant. These guidelines have eliminated guesswork, minimized operational expenses, and improved process performance. Since implementing Trussell's operations plan, the SEJPA has reduced filter aid (i.e., alum and polymer) usage by over 95%, eliminated return activated sludge (RAS) chlorination, and optimized the non-nitrifying biological process such that the secondary effluent has turbidity < 3 NTU year-round. Three subsequent updates have incorporated additional review of process data and refined operational guidelines to further optimize the facility's performance and ensure it reflects the latest practices.
In 2018, Trussell oversaw a trial of online instrumentation to enhance secondary process controls at the SEWRF. Trussell provided technical assistance and guidance while the SEJPA tested online ammonia and nitrate analyzers and real-time controls. Trussell analyzed the data and provided the SEJPA with optimized parameters and new operational targets. Additionally, the SEJPA now has more dynamic control strategies that Trussell incorporated into the most recent update to the operations plan in 2020.
In 2022, Trussell conducted a capital improvement planning evaluation that developed four phases of facility upgrades that will allow SEJPA to pursue potable reuse. The planned upgrades include 1) secondary treatment upgrades to fully nitrify, 2) replacement of granular media filters with membrane filtration, 3) potable reuse, 4) potable reuse expansion.

SECTION VI: PROJECT SCHEDULE

The proposed project schedule is summarized by task below, assuming notice to proceed by July 1, 2023. Deliverables are identified by yellow stars. All dates and time frames are subject to change based on input from the City, vendors, and other construction constraints.



SECTION VII: COST DATA

Our proposed fee is summarized by task, with expected hours for each project team member, in the table below. Team members are identified by name, classification, and hourly rate. The costs associated with 'subs' represent a subcontracted electrical engineer who will complete the electrical portions of the technical specifications and design drawings. This individual will be identified once our team has been contracted for the project. The not-to-exceed total cost of $149,735 for the project is provided on the bottom line of the table and will be valid for a period of at least 90 days.

Task	Project Team Member	Shane Trussell	Brett Faulkner	Rodrigo Tackaert	Fernanda Bacaro	Total Hrs	Total Cost	Subs	ODCs*	*Total Cost **
	Job Classification	Principal Eng III	Supervising Eng. II	Senior Eng. III	Senior Eng. II					
	Hourly Billing Rate	$ 330	$ 255	$ 220	$ 210					
	PRELIMINARY DESIGN	8	42	2	136	188	$42,350	$0	$500	$42,875
1	Identify engineering requirements for project		4		8	12	$2,700			$2,700
1	Review existing technical information and process data		8		32	40	$8,760			$8,760
1	Provide modeling for aeration basin airflow demands	2	8		40	50	$11,100			$11,100
1	Identify proposed blower performance criteria and sizing	2	12		32	46	$10,440			$10,440
1	Provide capital, utility, and operational cost estimates	2	8		20	30	$6,900			$6,900
1	Conduct information and progress meetings with City staff	2	2	2	4	10	$2,450		$500	$2,975
	FINAL DESIGN	12	52	148	28	240	$55,660	$20,000	$0	$75,660
2	Prepare 60% plans and specifications	4	24	80	16	124	$28,400	$15,000		$43,400
2	Prepare 90% plans and specifications	2	12	32	4	50	$11,600	$3,000		$14,600
2	Prepare 100% plans and specifications	2	8	16	4	30	$7,060	$2,000		$9,060
2	Provide a Class 3 cost estimate for bidding purposes	4	8	20	4	36	$8,600			$8,600
	CONSTRUCTION SUPPORT SERVICES	4	30	58	4	96	$22,570	$0	$1,400	$24,040
3	Attend pre-bid meeting	2	2	2		6	$1,610		$200	$1,820
3	Attend construction meetings		8	8		16	$3,800		$200	$4,010
3	Review submittals & respond to RFIs	2	8	16		26	$6,220			$6,220
3	Provide engineering support through construction		8	16		24	$5,560		$500	$6,085
3	Update design drawings for As-Builts		4	16	4	24	$5,380		$500	$5,905
4	PROJECT MANAGEMENT	2	12	8	8	30	$7,160	$0	$0	$7,160
4	Budget tracking, invoicing, and monthly reporting	2	12	8	8	30	$7,160			$7,160
TOTAL		**26**	**136**	**216**	**176**	**554**	**$127,740**	**$20,000**	**$1,900**	**$149,735**

*Cost includes 5% markup on ODCs.

SECTION VIII: STATEMENT OF COMPLIANCE

Trussell Technologies declares that this proposal is in strict compliance with the Request for Proposal. Furthermore, no exceptions are proposed to the document.

SECTION IX: OTHER INFORMATION

The proposed project is a combined effort wherein Trussell is the lead participant with a subcontractor for electrical design. Once the contract is awarded, Trussell will secure an electrical engineer to complete the related electrical specifications and drawings for the blower design.

APPENDIX A: INSURANCE

Trussell carries professional liability insurance that is consistent with the requirements of the City's Professional Services Agreement. A copy of the Certificate of Liability Insurance is provided on the next page.

TRUSTEC-03 SMITHKI

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 11/18/2022

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

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

PRODUCER License # 0E67768
IOA Insurance Services
130 Vantis
Suite 250
Aliso Viejo, CA 92656

CONTACT NAME: Molly Johansing
PHONE (A/C, No, Ext): (626) 243-9135 52303 FAX (A/C, No): (626) 568-2886
E-MAIL ADDRESS: Molly.Johansing@ioausa.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Continental Casualty Company	20443
INSURER B : National Fire Insurance Co of Hartford	20478
INSURER C : Transportation Insurance Company	20494
INSURER D : American Casualty Company of Reading, Pennsylvania	20427
INSURER E : Evanston Insurance Company	35378
INSURER F :	

INSURED
Trussell Technologies, Inc.
224 N Fair Oaks Ave, Floor 2
Pasadena, CA 91103

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

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

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY			B4031167437	11/15/2022	11/15/2023	EACH OCCURRENCE	$ 2,000,000
	CLAIMS-MADE X OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 300,000
							MED EXP (Any one person)	$ 10,000
							PERSONAL & ADV INJURY	$ 2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 4,000,000
	X POLICY PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$ 4,000,000
	OTHER:						Pollution Agg	$ 4,000,000
B	AUTOMOBILE LIABILITY			BUA4031167454	11/15/2022	11/15/2023	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	X ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
C	X UMBRELLA LIAB X OCCUR			B6014227764	11/15/2022	11/15/2023	EACH OCCURRENCE	$ 4,000,000
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$ 4,000,000
	DED X RETENTION $ 10,000							$
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N	N / A		WC431167504	11/15/2022	11/15/2023	X PER STATUTE OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)						E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000
E	Professional Liab.			MKLV5ENV103874	11/15/2022	11/15/2023	Per Claim	2,000,000
E	Professional Liab.			MKLV5ENV103874	11/15/2022	11/15/2023	Aggregate	4,000,000

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

CERTIFICATE HOLDER

Evidence of Insurance

CANCELLATION

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

AUTHORIZED REPRESENTATIVE

APPENDIX B: RESUMES

Brett Faulkner, P.E.

EDUCATION
- M.S., Environmental Engineering, San Diego State University
- B.S., Civil Engineering, University of Colorado

REGISTRATION
- Civil Engineer, State of California – No. 87912

CERTIFICATION
- Grade III Wastewater Treatment Plant Operator—Certificate Number 41525

SUMMARY
Brett Faulkner is a registered professional engineer in the state of California with over thirteen years of experience from numerous wastewater, recycled water, and potable reuse projects. Mr. Faulkner's expertise is in water and wastewater treatment processes with an emphasis on process design and optimization. Mr. Faulkner also operated the City of San Diego's Pure Water Demonstration Facility (PWDF) as a certified Grade 3 wastewater operator in the State of California for over 2 years. The PWDF has a production capacity of 1 MGD and includes ozone, biologically activated carbon filtration, membrane filtration, reverse osmosis, and UV advanced oxidation. Mr. Faulkner is skilled in GPS-X, a dynamic wastewater simulation modeling software, and has utilized biological modeling to assist in the evaluation, optimization, and/or sizing of biological treatment processes at more than 10 facilities ranging from 3 to 300 MGD. Mr. Faulkner currently provides routine operational support and/or as-needed engineering services to 5 wastewater agencies.

PROJECT EXPERIENCE

Rancho California Water District

Title: SRWRF Aeration Evaluation and Blower Replacment

Date: 2015-2018, 2023

Rancho California Water District (RCWD) owns and operates the Santa Rosa Water Reclamation Facility (SRWRF) in Murrieta, California. Trussell Technologies Inc. (Trussell) used the wastewater modeling software GPS-X to evaluate the efficiency of the jet aeration equipment and estimate potential cost savings if the aeration equipment were to be replaced. The evaluation showed potential for significant savings, improved process performance, and a substantial increase in treatment capacity from upgrading the aeration equipment to fine bubble diffusers, new blowers, and implementing DO control. Trussell procured equipment recommendations and cost estimates from three competing manufacturers for blower and fine bubble aeration equipment upgrades. Trussell was retained by RCWD in an owner's rep role to oversee the design. Trussell performed revised modeling for peak conditions to determine required airflow and the appropriate blower sizing criteria that resulted in efficient operation at current conditions and handling of peak design loads in the future. Construction was completed in 2022 and a recent evaluation performed by Trussell showed over 30% energy savings from the upgrades and improved effluent water quality.

Role: *Project Engineer*

San Elijo Joint Powers Authorities

Title: Process Optimization Plan and As Needed Assistance

Date: 2008-Present

San Elijo Joint Powers Authority (SEJPA) owns and operates the San Elijo Water Reclamation Facility (SEWRF) in Cardiff By the Sea, California and produces up to 3 MGD of recycled water. Trussell Technologies worked with SEJPA to develop an operations plan for the whole facility to improve treatment, eliminate guesswork, and minimize the operating cost of the SEWRF. Our staff also provided the SEJPA with the conceptual design for their 0.5 MGD MF/RO demineralization facility that has been operating since 2013. Trussell Technologies has also provided ongoing technical support and recommendations for the MF and RO operation and maintenance procedures. Our recommendations to MF and RO operations ensured that membrane processes operate stably and are able to rebound in performance quickly

during any challenging water quality events. The biological part of the operations plan resulted in more consistent and effective biological treatment that produces non-nitrified secondary effluent typically below 3 NTU, and improvements to the chemical dosing and feed logic that have reduced alum and polymer use by over 95%. The operations plan has been updated every few years to reflect current plant performance and operating practices. The most recent version of the operations plan was updated in 2020. Trussell also provides as needed engineering services to assist operations and provide guidance and support.
Role: *Project Engineer*

Vallecitos Water District
Title: Aeration Basin Improvement Design
Date: 2018-2021
Trussell completed an evaluation and preliminary design that assessed the viability, benefits, and cost associated with retrofitting the existing aeration basins at the Meadowlark Water Reclamation Facility (MWRF) with biological selectors. There are anticipated operational and treatment benefits associated with the selectors, including biological phosphorus removal and reductions in sludge bulking and chemical coagulant dosing for tertiary filtration. The anaerobic selector zones at the beginning of each aeration basin were created using non-structural baffles; a compressed gas system provides mixing with minimal oxygen transfer. Another component of the upgrade is the aeration equipment: the unreliable existing panels were replaced because they are no longer supplied by the manufacturer. New fine bubble diffusers were installed. Trussell also assisted with the procurement of nitrate and TSS probes to provide real-time process control and monitoring of the activated sludge process. Brett lead the production of final design documents (i.e., specifications and drawings) that were developed for the diffusers, mixing system, and non-structural baffles. Finally, Trussell provided engineering services during construction, which included responding to RFIs, reviewing submittals, inspecting installation, and coordinating equipment testing and startup.
Role: *Project Manager, Design Lead*

City of Santa Barbara
Title: Engineering Services for Membrane Filtration Facility
Date: 2016-present
In the winter of 2015, the City of Santa Barbara commissioned a 3-mgd tertiary facility to produce recycled water using membrane filtration (MF). After experiencing issues with MF production, the City retained the services of Trussell to help ensure that recycled water requirements can be reliably achieved. Trussell has been working to analyze and track wastewater process parameters at the El Estero Wastewater Treatment Plant and has been engaged in process operations in order to best manage the feedwater quality supplying the MF system. Trussell has also been involved in the optimization of MF system cleaning procedures and has led discussions between the City and the MF system supplier to implement modifications and improvements to the MF system. Trussell continues to be involved in routine operational support for the facility where process optimization and implemented modifications have led to the reliable achievement of MF production requirements. Routine support is provided through an as needed engineering services contract and includes monthly analysis of all process and water quality data and calls with operations staff to discuss the treatment performance and determine operational recommendations.
Role: *Project Engineer*

City of San Diego Water Planning Department
Title: Implementation of Extended Testing of Advanced Water Purification Facility (AWPF)
Date: 2013-2015
Mr. Faulkner operated and conducted testing of additional advanced treatment barriers specific to potable reuse using the City's 1 MGD Pure Water Demonstration Facility. The project team built upon a National Water Research Institute (NWRI) Panel's recommendations for treatment and monitoring needs associated with potable reuse. Ozone and biologically activated carbon (BAC), applied upstream of MF/UF and RO, was investigated as a means of providing additional disinfection credits for virus and protozoa, removing contaminants of emerging concern (CECs), and potentially reducing organic fouling of the membrane systems. Mr. Faulkner was the lead operator for the extended testing project, performed the majority of maintenance and repairs for the facility, and was available on-call to address and troubleshoot any operational issues through the duration of the project.
Role: *Project Engineer/Operator*

Shane Trussell, Ph.D., P.E., BCEE

EDUCATION

- Ph.D. Civil and Environmental Engineering, *University of California, Berkeley*
- M.S., Civil and Environmental Engineering, *University of California, Los Angeles*
- B.S., Chemical Engineering, *University of California, Riverside*

REGISTRATION

- Civil Engineer, State of California-No. 66887

CERTIFICATIONS

- Board Certified Environmental Engineer, American Academy of Environmental Engineers – No. 11-10042
  Specialty: Water Supply & Wastewater

SUMMARY

R. Shane Trussell is the President and Chief Executive Officer of Trussell Technologies, Inc. Dr. Trussell is a registered Civil Engineer in the State of California with more than 20 years of hands-on experience with the processes used to treat water, wastewater, and potable reuse. Dr. Trussell has extensive involvement in numerous potable reuse projects throughout the state, ranging from feasibility studies and pilot testing to design and regulatory permitting. Dr. Trussell led two major research efforts funded by the WateReuse Research Foundation (now Water Research Foundation): WRRF 11-02 (Equivalency of Advanced Treatment Trains for Potable Reuse) and WRRF 14-12 (Demonstrating Redundancy and Monitoring to Achieve Reliable Potable Reuse), with a combined project budget total of $3.4 million, to advance the implementation of potable reuse in California. Recently, the State Water Board selected Dr. Trussell to co-lead a state-funded project to evaluate strategies for dealing with peaks of chemical contaminants. The State Board is now using the findings from this research to develop statewide regulations for DPR. Dr. Trussell is an industry leader in potable reuse and developing water supplies, leading innovative, effective engineering and research projects throughout California.

PROJECT EXPERIENCE

City of Buenaventura / Kennedy Jenks

Ventura Water Reclamation Facility MBR/UV Project

Date: 2022-present

The City of San Buenaventura (City) selected Kennedy Jenks and Trussell to develop the design for the upgrade and expansion of its existing Ventura Water Reclamation Facility (VWRF) to include improved biological nutrient removal (BNR) basins, membrane bioreactors (MBR), and ultraviolet (UV) disinfection. Trussell is the process design lead on the project for the BNR, MBR, and UV processes. Trussell analyzed historical plant operating data to develop biological models of the facility improvements which served as the basis for basin sizing, blower sizing, aeration grid coverage, and chemical use for denitrification to achieve stringent effluent nitrate criteria. Additional sampling is also being conducted on the existing primary effluent and centrate to better characterize the inputs and assumptions of the model (e.g., fractionations) and optimize the model and resulting biological design, as needed. Trussell is currently leading efforts for pre-selection of the MBR and UV equipment and will continue to lead the process design through the 30%, 60%, 90% and final design submittals.
Role: *Project Manager*

Vallecitos Water District

Aeration Basin Improvement Design

Year: 2018 - 2021

Trussell completed an evaluation and preliminary design that assessed the viability, benefits, and cost associated with retrofitting the existing aeration basins at the Meadowlark Water Reclamation Facility (MWRF) with biological selectors. To do this, biological modeling was performed. Anticipated

operational and treatment benefits associated with the selectors include biological phosphorus removal and reductions in sludge bulking and chemical coagulant dosing for the tertiary filters. The anaerobic selector zones at the beginning of each aeration basin were created using non-structural baffles; a compressed gas system provides mixing with minimal oxygen transfer. Another component of the upgrade was the aeration equipment: the previous panels were replaced because they were unreliable and no longer supplied by the manufacturer. New fine bubble diffusers were also installed. Trussell assisted with the procurement of nitrate and total suspended solids probes to provide real-time process control and monitoring of the activated sludge process. In addition, Trussell developed final design documents (i.e., specifications and drawings) for the diffusers, mixing system, and non-structural baffles. During construction, Trussell provided engineering services including responding to requests for information, reviewing submittals, inspecting installation, and coordinating equipment testing and startup.
Role: *Technical Advisor*

City of San Diego/Stantec

Title: Pure Water San Diego Program
Year: 2015-present

Trussell is part of a consulting team including Stantec (formerly MWH) and Brown and Caldwell, and working with the City of San Diego to implement the Pure Water Program. The goal of the Pure Water Program is to develop a 30-mgd capacity potable reuse water purification facility that is operational by 2025, and with a long term goal of having one-third of San Diego's drinking water supply (approximately 83 mgd) be purified potable reuse water. Trussell is currently supporting this effort with regulatory guidance for permitting potable reuse facilities for source water augmentation, predesign of the North City Advanced Water Purification Facility (NCAWPF) for two treatment train options, and pre-qualification and pre-selection testing for major equipment capital purchases including the microfiltration/ultrafiltration (MF/UF), reverse osmosis (RO), and ultraviolet light/advanced oxidation process (UV/AOP) systems. Dr. Trussell is leading the regulatory effort, including interfacing with the independent project advisory panel and working with experts and the City to develop a sound strategy for permitting the future facilities.
Role: *Project Manager*

San Elijo Joint Powers Authority

San Elijo Water Reclamation Facility Operations Plan, Operational Support, Secondary Improvements, and Recycled Water Expansion
Year: 2008-present

Since 2008, Trussell has worked with the San Elijo Joint Powers Authority (SEJPA) on an array of projects related to secondary process optimization, recycled water expansion design, tracer and disinfection studies, instrumentation trials and integration, reverse osmosis membrane procurement/installation, and potable reuse planning. Trussell develop an operations plan in 2011 that established operational guidelines to optimize treatment at the San Elijo Water Reclamation Facility (SEWRF). Over two years of daily plant data and industry standards were analyzed to establish guidelines for operations staff to efficiently operate and manage the treatment plant. Three subsequent updates have incorporated additional review of process data and refined operational guidelines to further optimize the facility's performance and ensure it reflects the latest practices. Additional efforts include support for a trial of online instrumentation to enhance secondary process controls at the SEWRFand a capital improvement planning evaluation that developed four phases of facility upgrades that will allow SEJPA to pursue potable reuse. The planned upgrades include 1) secondary treatment upgrades to fully nitrify, 2) replacement of granular media filters with membrane filtration, 3) potable reuse, 4) potable reuse expansion.
Role: *Project Manager*

Fernanda Baccaro

EDUCATION

•B.S.E, Environmental Engineering, *Sao Paulo State University (UNESP), Rio Claro, SP, Brazil 2016*
•M.S., Civil & Environmental Engineering, *University of Nevada Las Vegas (UNLV) 2018*

SUMMARY

Fernanda Baccaro has a B.S. in Environmental Engineering from the Sao Paulo State University, Brazil and a M.S. in Civil and Environmental Engineering from the University of Nevada, Las Vegas. Her master's thesis was focused on alternative potable reuse treatment processes such as ozone and biofiltration. She operated a pilot-scale ozone biofiltration system to assess its feasibility towards bulk organic matter removal and disinfection by-products (NDMA specifically) mitigation, including upon final chloramination. Her work also included the use of microbiology and molecular biology techniques to understand NDMA abatement during biofiltration. At Trussell, Mrs. Baccaro worked on many field- and laboratory-based projects, where she performed several laboratory analyses for water quality, simulated bench- and small-scale treatment processes, and operated an advanced treatment plant for potable reuse. Currently, her work is mostly focused on biological wastewater treatment processes and water reuse.

PROJECT EXPERIENCE

Ventura Water Reclamation Facility
MBR and UV Disinfection Project
Year: 2022 – current
The Ventura Water Reclamation Facility (VWRF) is looking to upgrade their facility and include membrane bioreactors (MBRs) as the seondary treatment process and UV disinfection to replace its chlorine process. Mrs. Baccaro has been involved in the design of the secondary treatment process, using modeling softwares to size the biological system as well as the air system and predict chemical consumption. The results of the moeling will dictate the design of the future new secondary treatment at the facility.
Role: *Project Engineer*

Hyperion Water Reclamation Plant
Year: 2022 – current
The Hyperion Water Reclamation Plant (HWRP) is planning to add potable reuse to its portfolio and reuse all of its future wastewater effluent by 2035. Trussell has been contracted by the Los Angeles Sanitation anf Environment (LASAN) to perform a series of projects for HWRP.
A pilot-scale membrane bioreactor (MBR) plant will be istalled at HWRP to test different membrane products and understand the pathogen removal dynamics by the MBRs. Mrs. Baccaro was involved in the planning of the microbiological tests and procedures for this phase of HWRP's reuse plan. She has also been involved in the preliminary design of the proposed reuse facilitites for both direct potable reuse (DPR) and indirect potable reuse (IPR), particularly in the post treatment processes.
Trussell has also been part of the team contracted by LASAN to investigate possible sources of odor at HWRP that led to complaints by the dwellers nearby the facility. As part of this investigation, Trussell is performing analysis of the treatment processes at HWRP and evaluating their performances. Trussell will propose strategies to improve HWRP's treatment processes that could lead to less odor formation at the plant and consequently, less odor compalints.
Role: *Project Engineer*

Metropolitan Water District of Southern California
Regional Recycled Water Advanced Purification Center
Year: 2019 – 2021
Metropolitan Water District of Southern California (MWD), in collaboration with Los Angeles County Sanitation District (LACSD), is looking for drought-proof water supplies in the Great Los Angeles Area. Trussell has been chosen to lead operation and testing efforts for an initial demonstration plant with a 0.5 million gallon per day (mgd) capacity.

Once built, the future full-scale Pure Water Southern California (PWSC) will be the largest recycled water plant in the world, with a 160mgd capacity. The processes employed at the PWSC demonstration facility include tertiary membrane bioreactors (tMBRs) in nitrification mode, reverse osmosis (RO), and ultraviolet light coupled with advanced oxidation processes (UV/AOP). Due to the uniqueness of these processes and given that current regulations in California are inexistent for these processes, this project's success will dictate the development of regulatory requirements for MBRs in water reuse projects in the State. Mrs. Baccaro's responsibilities in this project were (1) the daily operations of the demonstration plant, (2) supporting the testing and monitoring efforts, (3) supporting preventive maintenance of major equipment, (4) supporting data management and analysis.
Role: *Project Engineer/Operator*

Terminal Island Water Reclamation Plant
Indirect Potable Reuse Full Advanced Treatment Demonstration
Year: August 2018 – 2019, 2021
This innovative advanced water purification project is the first in the world to use sodium hypochlorite as the oxidant for ultraviolet irradiation coupled with advanced oxidation processes (UV/AOP). The unique characteristics of the water at Terminal Island Water Reclamation Plant (TIWRP) along with the potency of hypochlorite as an oxidant culminated in the plant exceeding limits for bromate. Trussell was hired to conduct bench- and full-scale experiments to understand bromate formation in the UV/AOP process as well as to solve the bromate issue. During the field studies, other peculiarities were noticed by the team regarding water quality and operations, and further improvements were suggested for overall better treatment performance.
Mrs. Baccaro, along with other team members, performed several bench- and field-scale tests and analyzed the data generated along with operational data for this troubleshooting.
TIWRP final water is bought by different clients, therefore, the stabilization process post advanced treatment had to be carefully revised to fulfill the needs of the different clients while complying with current regulations. Mrs. Baccaro analyzed the water quality data, pre and post stabilization treatment, and helped TIWRP make decisions for their end use consumer satisfaction.
In 2020, TIWRP hired Trussell to support optimization of their secondary treatment aiming better ammonia removal, which impacts their full advanced treatment processes. Mrs. Baccaro supported data management and analysis.
Role: *Project Engineer*

Donald C. Tillman Water Reclamation Plant
Recycled Water Purification Pilot
Year: 2018 – 2019
The City of LA is looking for alternative and reliable water supplies. The Los Angeles Sanitation & Environment (LASAN) Donald C. Tillman Water Reclamation Plant (DCTWRP) constructed a potable reuse pilot employing several different treatment technologies to purify reclaimed water. The pilot received tertiary effluent and consisted of ozone and biological activated carbon (BAC), membrane filtration (MF), reverse osmosis (RO), ultraviolet light (UV) and soil aquifer treatment (SAT), in different configurations.
Several bench- and pilot-scale tets were performed in order to address an array of current potable reuse challenges. Some of these tests were (i) preformed chloramines to mitigate bromate formation upon ozonation; (ii) collimated beam testing to replicate UV photolysis of contaminants of emerging concern (CECs); (iii) rapid small-scale column testing (RSSCT) to quickly analyze granular activated carbon (GAC) breaktrough of organics such as total organic carbon (TOC) and per- and polyfluoroalkyl substances (PFAS) to predict full-scale breaktrough; among others.
Mrs. Baccaro has been involved also in the analysis of the plant's processes performances and on the optimization of the processes.
Role: *Project Engineer*

Rodrigo A. Tackaert, P.E

EDUCATION

- M.Sc., Environmental Engineering, Technical University of Munich
- B.S., Chemical Engineering, University of California, San Diego

REGISTRATION

• Civil Engineer, State of California – No. 90651

CERTIFICATION

• State of California Grade III Wastewater Operator – No. 43566
•CA-NV AWWA Grade V Advanced Water Treatment Operator – No. 153

SUMMARY

Rodrigo Tackaert is a registered Civil Engineer in the State of California, a certified Grade III Wastewater Operator, and certified Grade V Advanced Water Treatment Operator, with seven years of experience. He holds a B.S. in Chemical Engineering from the University of California at San Diego and a M.Sc. in Environmental Engineering from the Technical University of Munich, Germany. Mr. Tackaert has been engaged in the design of multiple recycled water and potable reuse projects as well as optimization of monitoring strategies, evaluation of treatment train performance, and execution of pilot testing for product pre-qualification. He has vast experience with membrane treatment processess, including MF and RO. Mr. Tackaert incorporates his operational expertise to provide utilities with designs that serves the intended function while keeping the operator experience in mind.

PROJECT EXPERIENCE

City of San Diego Pure Water Program
Title: Implementation of up to 83 MGD of Potable Reuse by 2035
Year: 2015 – present
Pure Water San Diego is the City's 20-year program to provide a safe, secure and sustainable local drinking water supply for San Diego. This project builds upon 10+ years of operation and testing of the 1.0 MGD Pure Water Demonstration Facility (PWDF) located at North City Water Reclamation Plant. The facility employs full-advanced treatment train (MF, RO, UV/AOP) with a pre-treatment process consisting of ozone and biologically active carbon (BAC). Trussell Technologies is partnered with Brown and Caldwell and Stantec to develop design of the full-scale AWP facilities for Phase 1 and Phase 2 of the program. Mr. Tackaert has been involved with multiple aspects of the program, including design and procurement of the 42 MGD MF system and operation and maintenance of the 1.0 MGD PWDF. He is also involved with the design of the MF and RO systems for the small-scale facility being constructed to inform the Phase 2 full-scale facility.
Role: *Project engineer*

City of San Diego South Bay Water Reclamation Plant
Title: Design of MF/RO System
Year: 2022 – present
South Bay Water Reclamation Plant (SBWRP) is a 15 MGD capacity facility that produces recycled water for local customers. Trussell Technologies is performing a design-bid-build project of a MF/RO system that will replace the existing trailer mounted Electrodialysis Reversal (EDR) units for

demineralization purposes. Mr. Tackaert is serving as the MF/RO design lead to provide a MF/RO system that will bring ease of operation to City staff and that reliably meets its treatment goals.
Role: *Project Engineer*

City of San Clemente Water Reclamation Plant

Title: Engineering and Design Services for Recycled Water Quality Improvement
Year: 2022 – present
The City of San Clemente Water Reclamation Plant (CSCWRP) operates a facility with a tertiary effluent capacity of 5 million gallons per day (MGD). This plant is responsible for producing recycled water to meet the needs of local customers who have specific effluent limitations. As part of a design-bid-build project, Trussell Technologies has been appointed as the process lead subconsultant. Trussell Technologies is tasked with designing a 1.2 MGD product MF/RO system. This system will function as a side-stream tertiary treatment system, working alongside the existing infrastructure, in order to reduce the overall level of total dissolved solids (TDS) in the recycled water. The primary objective is to ensure that the water meets the specific requirements and standards of the City while reliably achieving the established treatment goals. Leading the process design and implementation of the MF/RO system is Mr. Tackaert. His role is to develop a system that aligns with the City's standards, adheres to regulatory guidelines, and consistently delivers the desired treatment outcomes.
Role: *Project Engineer*

Padre Dam Municipal Water District

Title: East County Advanced Water Purification Program
Year: 2014 - present
Padre Dam and its partners established the East County Joint Powers Authority (JPA) to undertake the East County Advanced Water Purification Program. This Program will use state-of-the-art technology to purify East San Diego County's recycled water to produce up to 30 percent of East County's drinking water supply. Trussell Technologies has been part of the Program since 2014, with the design and operational support of the 100,000 gpd demonstration facility to demonstrate treatment effectiveness and support development of the 11.5 MGD full-scale AWPF consisting of MF/RO and UV/AOP. Trussell continues to provide technical support related to regulatory support and permitting. Mr. Tackaert was also project engineer of a study that evaluated high recovery for the reverse osmosis system conducted at the demonstration facility. The findings from the study informed the RO technology and recovery for the design of the future full-scale AWPF.
Role: *Project Engineer*

Carmel Area Wastewater District

Title: Membrane Filtration and Reverse Osmosis Operational Support
Year: 2018 – present
Trussell Technologies documents MF and RO process performance, analyzes data independently, and aids CAWD in implementing improvements for increased recycled water production capacity and process reliability. Trussell offers technical recommendations through review of MF and RO data, water quality, maintenance.
Role: *Project engineer*

EXHIBIT "B"
SCHEDULE OF SERVICES

Consultant shall perform the Services according to the following schedule:

SECTION VI: PROJECT SCHEDULE

The proposed project schedule is summarized by task below, assuming notice to proceed by July 1, 2023. Deliverables are identified by yellow stars. All dates and time frames are subject to change based on input from the City, vendors, and other construction constraints.

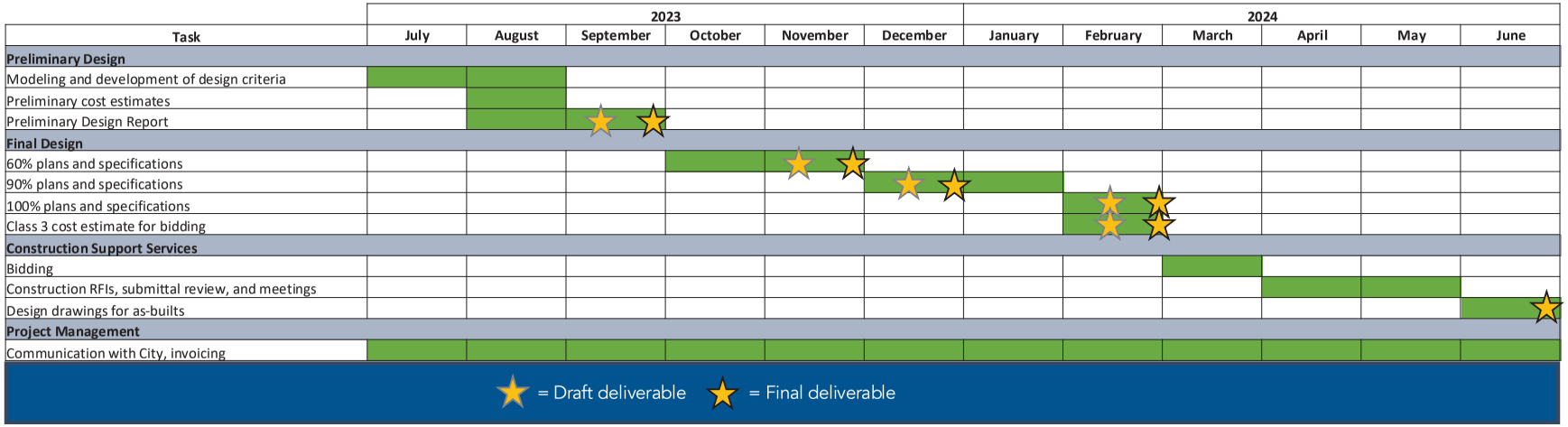


EXHIBIT "C"

INSURANCE REQUIREMENTS

3.2.12 Insurance.

3.2.12.1 Time for Compliance. Consultant shall not commence work under this Agreement until it has provided evidence satisfactory to the City that it has secured all insurance required under this section. In addition, Consultant shall not allow any subconsultant to commence work on any subcontract until it has provided evidence satisfactory to the City that the subconsultant has secured all insurance required under this section.

3.2.12.2 Types of Insurance Required. As a condition precedent to the effectiveness of this Agreement for work to be performed hereunder, and without limiting the indemnity provisions of the Agreement, the Consultant, in partial performance of its obligations under such Agreement, shall procure and maintain in full force and effect during the term of the Agreement the following policies of insurance. If the existing policies do not meet the insurance requirements set forth herein, Consultant agrees to amend, supplement or endorse the policies to do so.

(A) Commercial General Liability: Commercial General Liability Insurance which affords coverage at least as broad as Insurance Services Office "occurrence" form CG 0001, or the exact equivalent, with limits of not less than $1,000,000 per occurrence and no less than $2,000,000 in the general aggregate. Defense costs shall be paid in addition to the limits. The policy shall contain no endorsements or provisions (1) limiting coverage for contractual liability; (2) excluding coverage for claims or suits by one insured against another (cross-liability); or (3) containing any other exclusion(s) contrary to the terms or purposes of this Agreement.

(B) Automobile Liability Insurance: Automobile Liability Insurance with coverage at least as broad as Insurance Services Office Form CA 0001 covering "Any Auto" (Symbol 1), or the exact equivalent, covering bodily injury and property damage for all activities with limits of not less than $1,000,000 combined limit for each occurrence.

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

(D) Professional Liability (Errors & Omissions): Professional Liability insurance or Errors & Omissions insurance appropriate to Consultant's profession with limits of not less than $1,000,000 per claim. Covered professional services shall specifically include all work to be performed under the Agreement and delete any exclusions that may potentially affect the work to be performed (for example, any exclusions relating to lead, asbestos, pollution, testing, underground storage tanks, laboratory analysis, soil work, etc.). If coverage is written on a claims-made basis, the retroactive date shall precede the effective date of the initial Agreement and continuous coverage will be maintained or an extended reporting period will be exercised for a period of at least three (3) years from termination or expiration of this Agreement.

3.2.12.3 Insurance Endorsements. Required insurance policies shall contain the following provisions, or Consultant shall provide endorsements on forms approved by the City to add the following provisions to the insurance policies:

(A) Commercial General Liability:

(1) Additional Insured: The City, its officials, officers, employees, agents, and volunteers shall be additional insureds with regard to liability and defense of suits or claims arising out of the performance of the Agreement.

Additional Insured Endorsements shall not (1) be restricted to "ongoing operations"; (2) exclude "contractual liability"; (3) restrict coverage to "sole" liability of Consultant; or (4) contain any other exclusions contrary to the terms or purposes of this Agreement. For all policies of Commercial General Liability insurance, Consultant shall provide endorsements in the form of ISO CG 20 10 10 01 (or endorsements providing the exact same coverage) to effectuate this requirement.

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

(B) Automobile Liability:

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

3.2.12.4 Professional Liability (Errors & Omissions):

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

(B) Contractual Liability Exclusion Deleted: This insurance shall include contractual liability applicable to this Agreement. The policy must “pay on behalf of” the insured and include a provision establishing the insurer’s duty to defend.

3.2.12.5 Workers' Compensation:

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

3.2.12.6 Primary and Non-Contributing Insurance. All policies of Commercial General Liability and Automobile Liability insurance shall be primary and any other insurance, deductible, or self-insurance maintained by the City, its officials, officers, employees, agents, or volunteers shall not contribute with this primary insurance. Policies shall contain or be endorsed to contain such provisions.

3.2.12.7 Waiver of Subrogation. All policies of Commercial General Liability and Automobile Liability insurance shall specifically allow Consultant or others providing insurance evidence in compliance with these specifications to waive their right of recovery prior to a loss. Consultant hereby waives its own right of recovery against the City, its officials, officers, employees, agents, and volunteers, and shall require similar written express waivers and insurance clauses from each of its subconsultants.

3.2.12.8 Deductibles and Self-Insured Retentions. Any deductible or self-insured retention greater than $5,000 must be approved in writing by the City and shall protect the City, its officials, officers, employees, agents, and volunteers in the same manner and to the same extent as they would have been protected had the policy or policies not contained a deductible or self-insured retention.

3.2.12.9 Evidence of Insurance. The Consultant, concurrently with the execution of the Agreement, and as a condition precedent to the effectiveness thereof, shall deliver either certified copies of the required policies, or original certificates on forms approved by the City, together with all endorsements affecting each policy. Required insurance policies shall not be in compliance if they include any limiting provision or endorsement that has not been submitted to the City for approval. The certificates and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf. At least fifteen (15 days) prior to the expiration of any such policy, evidence of insurance showing that such insurance coverage has been renewed or extended shall be filed with the City. If such coverage is cancelled or reduced and not replaced immediately so as to avoid a lapse in the required coverage, Consultant shall, within ten (10) days after receipt of written notice of such cancellation or reduction of coverage, file with the City evidence of insurance showing that the required insurance has been reinstated or has been provided through another insurance company or companies.

3.2.12.10 Failure to Maintain Coverage. In the event any policy of insurance required under this Agreement does not comply with these specifications or is canceled and not replaced immediately so as to avoid a lapse in the required coverage, City has the right but not the duty to obtain the insurance it deems necessary and any premium paid by City will be promptly reimbursed by Consultant or City will withhold amounts sufficient to pay premium from Consultant payments. In the alternative, City may cancel this Agreement effective upon notice.

3.2.12.11 Acceptability of Insurers. Each such policy shall be from a company or companies with a current A.M. Best's rating of no less than A- VII and authorized to transact business of insurance in the State of California, or otherwise allowed to place insurance through surplus line brokers under applicable provisions of the California Insurance Code or any federal law.

3.2.12.12 Enforcement of Agreement Provisions (non estoppel). Consultant acknowledges and agrees that actual or alleged failure on the part of the City to inform Consultant of non-compliance with any requirement imposes no additional obligation on the City nor does it waive any rights hereunder.

3.2.12.13 Requirements Not Limiting. Requirement of specific coverage or minimum limits contained in this Appendix are not intended as a limitation on coverage, limits, or other requirement, or a waiver of any coverage normally provided by any insurance.

3.2.12.14 Insurance for Subconsultants. Consultant shall include all subconsultants engaged in any work for Consultant relating to this Agreement as additional insureds under the Consultant's policies, or the Consultant shall be responsible for causing subconsultants to purchase the appropriate insurance in compliance with the terms of these Insurance Requirements, including adding the City, its officials, officers, employees, agents, and volunteers as additional insureds to the subconsultant's policies. All policies of Commercial General Liability insurance provided by Consultant’s subconsultants performing work relating to this Agreement shall be endorsed to name the City, its officials, officers, employees, agents and

volunteers as additional insureds using endorsement form ISO CG 20 38 04 13 or an endorsement providing equivalent coverage. Consultant shall not allow any subconsultant to commence work on any subcontract relating to this Agreement until it has received satisfactory evidence of subconsultant's compliance with all insurance requirements under this Agreement, to the extent applicable. The Consultant shall provide satisfactory evidence of compliance with this section upon request of the City.

EXHIBIT "D"

COMPENSATION

In complete compensation for Consultant's Services under this Agreement, City shall pay Consultant the following hourly rates for services actually performed:

Total compensation under this Agreement shall not exceed one hundred forty-nine thousand, seven hundred thirty-five ($149,735) as the guaranteed maximum price for the Consultant to complete the Services to the City's satisfaction.

There are no reimbursable expenses under this Agreement.

SECTION VII: COST DATA

Our proposed fee is summarized by task, with expected hours for each project team member, in the table below. Team members are identified by name, classification, and hourly rate. The costs associated with 'subs' represent a subcontracted electrical engineer who will complete the electrical portions of the technical specifications and design drawings. This individual will be identified once our team has been contracted for the project. The not-to-exceed total cost of $149,735 for the project is provided on the bottom line of the table and will be valid for a period of at least 90 days.

Task	Project Team Member	Shane Trussell	Brett Faulkner	Rodrigo Tackaert	Fernanda Bacaro	Total Hrs	Total Cost	Subs	ODCs*	*Total Cost **
	Job Classification	Principal Eng III	Supervising Eng. II	Senior Eng. III	Senior Eng. II					
	Hourly Billing Rate	$ 330	$ 255	$ 220	$ 210					
	PRELIMINARY DESIGN	8	42	2	136	188	$42,350	$0	$500	$42,875
1	Identify engineering requirements for project		4		8	12	$2,700			$2,700
1	Review existing technical information and process data		8		32	40	$8,760			$8,760
1	Provide modeling for aeration basin airflow demands	2	8		40	50	$11,100			$11,100
1	Identify proposed blower performance criteria and sizing	2	12		32	46	$10,440			$10,440
1	Provide capital, utility, and operational cost estimates	2	8		20	30	$6,900			$6,900
1	Conduct information and progress meetings with City staff	2	2	2	4	10	$2,450		$500	$2,975
	FINAL DESIGN	12	52	148	28	240	$55,660	$20,000	$0	$75,660
2	Prepare 60% plans and specifications	4	24	80	16	124	$28,400	$15,000		$43,400
2	Prepare 90% plans and specifications	2	12	32	4	50	$11,600	$3,000		$14,600
2	Prepare 100% plans and specifications	2	8	16	4	30	$7,060	$2,000		$9,060
2	Provide a Class 3 cost estimate for bidding purposes	4	8	20	4	36	$8,600			$8,600
	CONSTRUCTION SUPPORT SERVICES	4	30	58	4	96	$22,570	$0	$1,400	$24,040
3	Attend pre-bid meeting	2	2	2		6	$1,610		$200	$1,820
3	Attend construction meetings		8	8		16	$3,800		$200	$4,010
3	Review submittals & respond to RFIs	2	8	16		26	$6,220			$6,220
3	Provide engineering support through construction		8	16		24	$5,560		$500	$6,085
3	Update design drawings for As-Builts		4	16	4	24	$5,380		$500	$5,905
4	PROJECT MANAGEMENT	2	12	8	8	30	$7,160	$0	$0	$7,160
4	Budget tracking, invoicing, and monthly reporting	2	12	8	8	30	$7,160			$7,160
TOTAL		**26**	**136**	**216**	**176**	**554**	**$127,740**	**$20,000**	**$1,900**	**$149,735**

*Cost includes 5% markup on ODCs.

WORKER'S COMPENSATION INSURANCE CERTIFICATION

WORKERS' COMPENSATION DECLARATION

I hereby affirm under penalty of perjury one of the following declarations:

***(ONE OF THE BOXES BELOW MUST BE CHECKED*)**

☐ I have and will maintain a certificate of consent from the California Labor Commission to self-insure for workers' compensation, as provided for by Section 3700 of the Labor Code, for the performance of the work to be performed under this contract.

☐ I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work to be performed under this contract. My workers' compensation insurance carrier and policy number are:

Carrier_____

Policy Number_____

☐ I certify that, in the performance of the work under this Agreement, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and I hereby agree to indemnify, defend, and hold harmless the City of San Clemente and all of its officials, employees, and agents from and against any and all claims, liabilities, and losses relating to personal injury or death, economic losses, and property damage arising out of my failure to provide such worker's compensation insurance. I further agree that, if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

WARNING: FAILURE TO SECURE WORKERS' COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS ($100,000), IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

Dated: _____, 20____

Trussell Technologies, Inc., a California corporation
("CONSULTANT")

By: R. Shane Trussell

It's Chief Executive Officer

224 N Fair Oaks Avenue, FL 2
Pasadena, CA 91103