AGREEMENT FOR SERVICES OF INDEPENDENT CONTRACTOR

THIS AGREEMENT (hereafter Agreement) is made by and between the County of Santa Barbara, a political subdivision of the State of California (hereafter COUNTY) and Sterns, Conrad, and Schmidt, Consulting Engineers, Inc. dba SCS Field Services with an address at 5412 Bolsa Avenue, Suite D, Huntington Beach, California, 92649 (hereafter CONTRACTOR) wherein CONTRACTOR agrees to provide and COUNTY agrees to accept the services specified herein.

WHEREAS, CONTRACTOR represents that it is specially trained, skilled, experienced, and competent to perform the special services required by COUNTY and COUNTY desires to retain the services of CONTRACTOR pursuant to the terms, covenants, and conditions herein set forth;

NOW, THEREFORE, in consideration of the mutual covenants and conditions contained herein, the parties agree as follows:

1. DESIGNATED REPRESENTATIVE

Jeanette Gonzales-Knight, PE at phone number 805-882-3627 is the representative of COUNTY and will administer this Agreement for and on behalf of COUNTY. Galen S. Petoyan at phone number 562-426-9544 is the authorized representative for CONTRACTOR. Changes in designated representatives shall be made only after advance written notice to the other party.

2. NOTICES

Any notice or consent required or permitted to be given under this Agreement shall be given to the respective parties in writing, by personal delivery or facsimile, or with postage prepaid by first class mail, registered or certified mail, or express courier service, as follows:

To COUNTY: Jeanette Gonzales-Knight, Santa Barbara County Public Works, Resource Recovery and Waste Management Division, 130 E. Victoria Street, Suite 100, Santa Barbara, CA 93101, 805-882-3600

To CONTRACTOR: Galen S. Petoyan, SCS Field Services, 5412 Bolsa Avenue, Suite D, Huntington Beach, California, 92649, 562-426-9544

or at such other address or to such other person that the parties may from time to time designate in accordance with this Notices section. If sent by first class mail, notices and consents under this section shall be deemed to be received five (5) days following their deposit in the U.S. mail. This Notices section shall not be construed as meaning that either party agrees to service of process except as required by applicable law.

3. SCOPE OF SERVICES

CONTRACTOR agrees to provide services to COUNTY in accordance with EXHIBIT A attached hereto and incorporated herein by reference.

4. TERM

CONTRACTOR shall commence performance on May 19, 2020 and end performance upon completion, but no later than June 30, 2021 unless otherwise directed by COUNTY or unless earlier terminated.

5. COMPENSATION OF CONTRACTOR

In full consideration for CONTRACTOR's services, CONTRACTOR shall be paid for performance under this Agreement in accordance with the terms of EXHIBIT B attached hereto and incorporated herein by reference. Billing shall be made by invoice, which shall include the contract number assigned by COUNTY and which is delivered to the address given in Section 2 NOTICES above following completion of the increments identified on EXHIBIT B. Unless otherwise specified on EXHIBIT B, payment shall be net thirty (30) days from presentation of invoice.

6. **INDEPENDENT CONTRACTOR**

It is mutually understood and agreed that CONTRACTOR (including any and all of its officers, agents, and employees), shall perform all of its services under this Agreement as an independent contractor as to COUNTY and not as an officer, agent, servant, employee, joint venturer, partner, or associate of COUNTY. Furthermore, COUNTY shall have no right to control, supervise, or direct the manner or method by which CONTRACTOR shall perform its work and function. However, COUNTY shall retain the right to administer this Agreement so as to verify that CONTRACTOR is performing its obligations in accordance with the terms and conditions hereof. CONTRACTOR understands and acknowledges that it shall not be entitled to any of the benefits of a COUNTY employee, including but not limited to vacation, sick leave, administrative leave, health insurance, disability insurance, retirement, unemployment insurance, workers' compensation and protection of tenure. CONTRACTOR shall be solely liable and responsible for providing to, or on behalf of, its employees all legally-required employee benefits. In addition, CONTRACTOR shall be solely responsible and save COUNTY harmless from all matters relating to payment of CONTRACTOR's employees, including compliance with Social Security withholding and all other regulations governing such matters. It is acknowledged that during the term of this Agreement, CONTRACTOR may be providing services to others unrelated to the COUNTY or to this Agreement.

7. **STANDARD OF PERFORMANCE**

CONTRACTOR represents that it has the skills, expertise, and licenses/permits necessary to perform the services required under this Agreement. Accordingly, CONTRACTOR shall perform all such services in the manner and according to the standards observed by a competent practitioner of the same profession in which CONTRACTOR is engaged. All products of whatsoever nature, which CONTRACTOR delivers to COUNTY pursuant to this Agreement, shall be prepared in a first class and workmanlike manner and shall conform to the standards of quality normally observed by a person practicing in CONTRACTOR's profession. CONTRACTOR shall correct or revise any errors or omissions, at COUNTY'S request without additional compensation. Permits and/or licenses shall be obtained and maintained by CONTRACTOR without additional compensation.

8. **DEBARMENT AND SUSPENSION**

CONTRACTOR certifies to COUNTY that it and its employees and principals are not debarred, suspended, or otherwise excluded from or ineligible for, participation in federal, state, or county government contracts. CONTRACTOR certifies that it shall not contract with a subcontractor that is so debarred or suspended.

9. **TAXES**

CONTRACTOR shall pay all taxes, levies, duties, and assessments of every nature due in connection with any work under this Agreement and shall make any and all payroll deductions required by law. COUNTY shall not be responsible for paying any taxes on CONTRACTOR's behalf, and should COUNTY be required to do so by state, federal, or local taxing agencies, CONTRACTOR agrees to promptly reimburse COUNTY for the full value of such paid taxes plus interest and penalty, if any. These taxes shall include, but not be limited to, the following: FICA (Social Security), unemployment insurance contributions, income tax, disability insurance, and workers' compensation insurance.

10. **CONFLICT OF INTEREST**

CONTRACTOR covenants that CONTRACTOR presently has no employment or interest and shall not acquire any employment or interest, direct or indirect, including any interest in any business, property, or source of income, which would conflict in any manner or degree with the performance of services required to be performed under this Agreement. CONTRACTOR further covenants that in the performance of this Agreement, no person having any such interest shall be employed by CONTRACTOR. CONTRACTOR must promptly disclose to COUNTY, in writing, any potential conflict of interest. COUNTY retains the right to waive a conflict of interest disclosed by CONTRACTOR if COUNTY determines it to be immaterial, and such waiver is only effective if provided by COUNTY to CONTRACTOR in writing.

11. **OWNERSHIP OF DOCUMENTS AND INTELLECTUAL PROPERTY**

COUNTY shall be the owner of the following items incidental to this Agreement upon production, whether or not completed: all data collected, all documents of any type whatsoever, all photos, designs, sound or audiovisual recordings, software code, inventions, technologies, and other materials developed pursuant to this Agreement, and any material necessary for the practical use of such items, from the time of collection and/or production whether or not performance under this Agreement is completed or terminated prior to completion. CONTRACTOR shall not release any of such items to other parties except after prior written approval of COUNTY.

Unless otherwise specified in Exhibit A, and except for third party licensed technology, CONTRACTOR hereby assigns to COUNTY all copyright, patent, and other intellectual property and proprietary rights to all data, documents, reports, photos, designs, sound or audiovisual recordings, software code, inventions, technologies, and other materials prepared or provided by CONTRACTOR pursuant to this Agreement (collectively referred to as "Copyrightable Works and Inventions"). COUNTY shall have the unrestricted authority to copy, adapt, perform, display, publish, disclose, distribute, create derivative works from, and otherwise use in whole or in part, any Copyrightable Works and Inventions. CONTRACTOR agrees to take such actions and execute and deliver such documents as may be needed to validate, protect and confirm the rights and assignments provided hereunder. CONTRACTOR warrants that any Copyrightable Works and Inventions and other items provided under this Agreement will not infringe upon any intellectual property or proprietary rights of any third party. CONTRACTOR at its own expense shall defend, indemnify, and hold harmless COUNTY against any claim that any Copyrightable Works or Inventions or other items provided by CONTRACTOR hereunder infringe upon intellectual or other proprietary rights of a third party, and CONTRACTOR shall pay any damages, costs, settlement amounts, and fees (including attorneys' fees) that may be incurred by COUNTY in connection with any such claims. This Ownership of Documents and Intellectual Property provision shall survive expiration or termination of this Agreement.

12. NO PUBLICITY OR ENDORSEMENT

CONTRACTOR shall not use COUNTY's name or logo or any variation of such name or logo in any publicity, advertising or promotional materials. CONTRACTOR shall not use COUNTY's name or logo in any manner that would give the appearance that the COUNTY is endorsing CONTRACTOR. CONTRACTOR shall not in any way contract on behalf of or in the name of COUNTY. CONTRACTOR shall not release any informational pamphlets, notices, press releases, research reports, or similar public notices concerning the COUNTY or its projects, without obtaining the prior written approval of COUNTY.

13. **COUNTY PROPERTY AND INFORMATION**

All of COUNTY's property, documents, and information provided for CONTRACTOR's use in connection with the services shall remain COUNTY's property, and CONTRACTOR shall return any such items whenever requested by COUNTY and whenever required according to the Termination section of this Agreement. CONTRACTOR may use such items only in connection with providing the services. CONTRACTOR shall not disseminate any COUNTY property, documents, or information without COUNTY's prior written consent.

14. **RECORDS, AUDIT, AND REVIEW**

CONTRACTOR shall keep such business records pursuant to this Agreement as would be kept by a reasonably prudent practitioner of CONTRACTOR's profession and shall maintain such records for at least four (4) years following the termination of this Agreement. All accounting records shall be kept in accordance with generally accepted accounting principles. COUNTY shall have the right to audit and review all such documents and records at any time during CONTRACTOR's regular business hours or upon reasonable notice. In addition, if this Agreement exceeds ten thousand dollars ($10,000.00), CONTRACTOR shall be subject to the examination and audit of the California State Auditor, at the request of the COUNTY or as part of any audit of the COUNTY, for a period of three (3) years after final payment under the Agreement (Cal. Govt. Code Section 8546.7). CONTRACTOR shall participate in any audits and reviews, whether by COUNTY or the State, at no charge to COUNTY.

If federal, state or COUNTY audit exceptions are made relating to this Agreement, CONTRACTOR shall reimburse all costs incurred by federal, state, and/or COUNTY governments associated with defending against the audit exceptions or performing any audits or follow-up audits, including but not limited to: audit fees, court costs, attorneys' fees based upon a reasonable hourly amount for attorneys in the community, travel costs, penalty assessments and all other costs of whatever nature. Immediately upon notification from COUNTY, CONTRACTOR shall reimburse the amount of the audit exceptions and any other related costs directly to COUNTY as specified by COUNTY in the notification.

15. **INDEMNIFICATION AND INSURANCE**

CONTRACTOR agrees to the indemnification and insurance provisions as set forth in EXHIBIT C attached hereto and incorporated herein by reference.

16. **NONDISCRIMINATION**

COUNTY hereby notifies CONTRACTOR that COUNTY's Unlawful Discrimination Ordinance (Article XIII of Chapter 2 of the Santa Barbara County Code) applies to this Agreement and is incorporated herein by this reference with the same force and effect as if the ordinance were specifically set out herein and CONTRACTOR agrees to comply with said ordinance.

17. **NONEXCLUSIVE AGREEMENT**

CONTRACTOR understands that this is not an exclusive Agreement and that COUNTY shall have the right to negotiate with and enter into contracts with others providing the same or similar services as those provided by CONTRACTOR as the COUNTY desires.

18. **NON-ASSIGNMENT**

CONTRACTOR shall not assign, transfer or subcontract this Agreement or any of its rights or obligations under this Agreement without the prior written consent of COUNTY and any attempt to so assign, subcontract or transfer without such consent shall be void and without legal effect and shall constitute grounds for termination.

19. **TERMINATION**

A. By COUNTY. COUNTY may, by written notice to CONTRACTOR, terminate this Agreement in whole or in part at any time, whether for COUNTY's convenience, for nonappropriation of funds, or because of the failure of CONTRACTOR to fulfill the obligations herein.

1. **For Convenience**. COUNTY may terminate this Agreement in whole or in part upon thirty (30) days written notice. During the thirty (30) day period, CONTRACTOR shall, as directed by COUNTY, wind down and cease its services as quickly and efficiently as reasonably possible, without performing

unnecessary services or activities and by minimizing negative effects on COUNTY from such winding down and cessation of services.

2. **For Nonappropriation of Funds**. Notwithstanding any other provision of this Agreement, in the event that no funds or insufficient funds are appropriated or budgeted by federal, state or COUNTY governments, or funds are not otherwise available for payments in the fiscal year(s) covered by the term of this Agreement, then COUNTY will notify CONTRACTOR of such occurrence and COUNTY may terminate or suspend this Agreement in whole or in part, with or without a prior notice period. Subsequent to termination of this Agreement under this provision, COUNTY shall have no obligation to make payments with regard to the remainder of the term.

3. **For Cause**. Should CONTRACTOR default in the performance of this Agreement or materially breach any of its provisions, COUNTY may, at COUNTY's sole option, terminate or suspend this Agreement in whole or in part by written notice. Upon receipt of notice, CONTRACTOR shall immediately discontinue all services affected (unless the notice directs otherwise) and notify COUNTY as to the status of its performance. The date of termination shall be the date the notice is received by CONTRACTOR, unless the notice directs otherwise.

B. By CONTRACTOR. Should COUNTY fail to pay CONTRACTOR all or any part of the payment set forth in EXHIBIT B, CONTRACTOR may, at CONTRACTOR's option terminate this Agreement if such failure is not remedied by COUNTY within thirty (30) days of written notice to COUNTY of such late payment.

C. Upon termination, CONTRACTOR shall deliver to COUNTY all data, estimates, graphs, summaries, reports, and all other property, records, documents or papers as may have been accumulated or produced by CONTRACTOR in performing this Agreement, whether completed or in process, except such items as COUNTY may, by written permission, permit CONTRACTOR to retain. Notwithstanding any other payment provision of this Agreement, COUNTY shall pay CONTRACTOR for satisfactory services performed to the date of termination to include a prorated amount of compensation due hereunder less payments, if any, previously made. In no event shall CONTRACTOR be paid an amount in excess of the full price under this Agreement nor for profit on unperformed portions of service. CONTRACTOR shall furnish to COUNTY such financial information as in the judgment of COUNTY is necessary to determine the reasonable value of the services rendered by CONTRACTOR. In the event of a dispute as to the reasonable value of the services rendered by CONTRACTOR, the decision of COUNTY shall be final. The foregoing is cumulative and shall not affect any right or remedy which COUNTY may have in law or equity.

20. **SECTION HEADINGS**

The headings of the several sections, and any Table of Contents appended hereto, shall be solely for convenience of reference and shall not affect the meaning, construction or effect hereof.

21. **SEVERABILITY**

If any one or more of the provisions contained herein shall for any reason be held to be invalid, illegal or unenforceable in any respect, then such provision or provisions shall be deemed severable from the remaining provisions hereof, and such invalidity, illegality or unenforceability shall not affect any other provision hereof, and this Agreement shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein.

22. **REMEDIES NOT EXCLUSIVE**

No remedy herein conferred upon or reserved to COUNTY is intended to be exclusive of any other remedy or remedies, and each and every such remedy, to the extent permitted by law, shall be cumulative and in addition to any other remedy given hereunder or now or hereafter existing at law or in equity or otherwise.

23. **TIME IS OF THE ESSENCE**

Time is of the essence in this Agreement and each covenant and term is a condition herein.

24. **NO WAIVER OF DEFAULT**

No delay or omission of a party to exercise any right or power arising upon the occurrence of any event of default shall impair any such right or power or shall be construed to be a waiver of any such default or an acquiescence therein; and every power and remedy given by this Agreement to a party shall be exercised from time to time and as often as may be deemed expedient in the sole discretion of a party.

25. **ENTIRE AGREEMENT AND AMENDMENT**

In conjunction with the matters considered herein, this Agreement contains the entire understanding and agreement of the parties and there have been no promises, representations, agreements, warranties or undertakings by any of the parties, either oral or written, of any character or nature hereafter binding except as set forth herein. This Agreement may be altered, amended or modified only by an instrument in writing, executed by the parties to this Agreement and by no other means. Each party waives their future right to claim, contest or assert that this Agreement was modified, canceled, superseded, or changed by any oral agreements, course of conduct, waiver or estoppel.

26. **SUCCESSORS AND ASSIGNS**

All representations, covenants and warranties set forth in this Agreement, by or on behalf of, or for the benefit of any or all of the parties hereto, shall be binding upon and inure to the benefit of such party, its successors and assigns.

27. **COMPLIANCE WITH LAW**

CONTRACTOR shall, at its sole cost and expense, comply with all County, State and Federal ordinances and statutes now in force or which may hereafter be in force with regard to this Agreement. The judgment of any court of competent jurisdiction, or the admission of CONTRACTOR in any action or proceeding against CONTRACTOR, whether COUNTY is a party thereto or not, that CONTRACTOR has violated any such ordinance or statute, shall be conclusive of that fact as between CONTRACTOR and COUNTY.

28. **CALIFORNIA LAW AND JURISDICTION**

This Agreement shall be governed by the laws of the State of California. Any litigation regarding this Agreement or its contents shall be filed in the County of Santa Barbara, if in state court, or in the federal district court nearest to Santa Barbara County, if in federal court.

29. **EXECUTION OF COUNTERPARTS**

This Agreement may be executed in any number of counterparts and each of such counterparts shall for all purposes be deemed to be an original; and all such counterparts, or as many of them as the parties shall preserve undestroyed, shall together constitute one and the same instrument.

30. **AUTHORITY**

All signatories and parties to this Agreement warrant and represent that they have the power and authority to enter into this Agreement in the names, titles and capacities herein stated and on behalf of any entities, persons, or firms represented or purported to be represented by such entity(ies), person(s), or firm(s) and that all formal requirements necessary or required by any state and/or federal law in order to enter into this Agreement have been fully complied with. Furthermore, by entering into this Agreement, CONTRACTOR hereby warrants that it shall not

have breached the terms or conditions of any other contract or agreement to which CONTRACTOR is obligated, which breach would have a material effect hereon.

31. **SURVIVAL**

All provisions of this Agreement which by their nature are intended to survive the termination or expiration of this Agreement shall survive such termination or expiration.

32. **PRECEDENCE**

In the event of conflict between the provisions contained in the numbered sections of this Agreement and the provisions contained in the Exhibits, the provisions of the Exhibits shall prevail over those in the numbered sections.

Agreement for Services of Independent Contractor between the County of Santa Barbara and SCS Field Services.

IN WITNESS WHEREOF, the parties have executed this Agreement to be effective on the date executed by COUNTY.

ATTEST:

Mona Miyasato
County Executive Officer
Clerk of the Board

By: _____
Deputy Clerk

COUNTY OF SANTA BARBARA:

By: _____
Gregg Hart, Chair
Board of Supervisors

Date: _____

RECOMMENDED FOR APPROVAL:

Public Works Department

By: _____
Scott D. McGolpin
Director of Public Works

CONTRACTOR:

SCS Field Services

By: _____
Authorized Representative

Name: _____

Title: _____

APPROVED AS TO FORM:

Michael C. Ghizzoni
County Counsel

By: _____
Deputy County Counsel

APPROVED AS TO ACCOUNTING FORM:

Betsy M. Schaffer, CPA
Auditor-Controller

By: _____
Deputy

APPROVED AS TO FORM:

Ray Aromatorio
Risk Manager

By: _____

EXHIBIT A

STATEMENT OF WORK

Contractor shall provide professional services as set forth in the Contractor's proposal dated March 24, 2020 included as Attachment A-1, herein incorporated by reference.

Phillip Carrillo shall be the individual personally responsible for providing services hereunder. CONTRACTOR may not substitute other persons without the prior written approval of COUNTY's designated representative.

Suspension for Convenience. COUNTY's designated representative may, without cause, order CONTRACTOR in writing to suspend, delay, or interrupt the services under this Agreement in whole or in part for up to 30 days. COUNTY shall incur no liability for suspension under this provision and suspension shall not constitute a breach of this Agreement.

Supervisory Control Data Acquisition (SCADA) System for Tajiguas Landfill

Santa Barbara County Public Works
Resource Recovery and Waste Management Division
130 East Victoria Street, Suite 100
Santa Barbara, CA 93101
805-882-3600

SCS FIELD SERVICES

Proposal Number 070018220 | March 24, 2020

5412 Bolsa Ave, Suite D
Huntington Beach, CA 92649
714-989-5233

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Section Page

Appendices

1 ORGANIZATIONAL INFORMATION

Firm's Legal Name	Stearns, Conrad and Schmidt, Consulting Engineers, Inc., dba SCS Field Services
Local Address	5412 Bolsa Ave, Suite D Huntington Beach, CA 92649
Telephone:	Local Office: (714) 989-5233
SCS Contact:	Galen S. Petoyan, *Senior Vice President*
Corporate Address	3900 Kilroy Airport Way, Suite 100 Long Beach, CA 90806-6816
Telephone:	(562) 426-9544
Fax:	(562) 492-6210
Email:	gpetoyan@scsfieldservices.com

SCS was incorporated in the State of Virginia in 1972.

KEY PERSONNEL

To accomplish the related tasks detailed in our Scope of Work (see Section III), we will assign Mr. Philip Carrillo to manage this project. Mr. Carrillo is active in developing and refining SCSeTools (described below) and their applications at landfills throughout the United States. Mr. John Gerbac, our Lead PLC Programmer, will provide the installation and programing. Mr. Gerbac has participated in the installation and repair of data networks, assisted in software, hardware, and communications systems installations, and has academic training in technical management and applied science in electronics. We are certain these individuals can offer the County the most sophisticated data management services available. Their resumes are shown below.

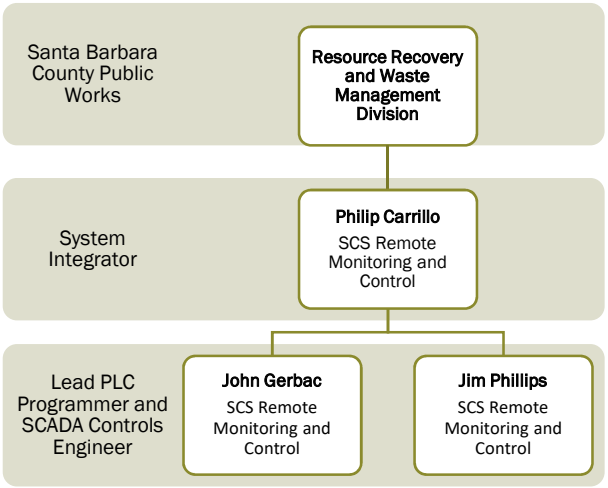
Name and Title:	Philip Carrillo, Systems Integrator
Current Firm:	SCS Field Services; Remote Monitoring and Controls (RMC)
Position on Project Team:	*National RMC Director*
Employment History:	SCS Field Services, 2009 to Present
Education:	BS, Applied Computing
Registrations/Licenses:	IA Certified Integrator

Name and Title:	John Gerbac, Developer
Current Firm:	SCS Field Services; Remote Monitoring and Controls (RMC)
Position on Project Team:	*Developer*
Employment History:	SCS Field Services, 2019 to Present
Education:	BA, Business Information Systems
Registrations/Licenses:	IA Certified Integrator

Name and Title:	Jim Phillips, Project Manager
Current Firm:	SCS Field Services; Remote Monitoring and Controls (RMC)
Position on Project Team:	*Regional Manager*
Employment History:	SCS Field Services, 2020 to Present
Education:	BS, Electrical Engineer
Registrations/Licenses:	IA Ignition Integrator

TEAM ORGANIZATIONAL STRUCTURE

The proposed Project Team Organization is presented here. The Organization Chart delineates anticipated lines of communication and authority, roles, and responsibilities.



The SCS Team organizational structure revolves around qualified and competent team members. A single point of contact for the County, with direct access to the entire Project Team, offers a greater level of innovation and faster response times. SCS will apply our knowledge and expertise to the project, beginning with an analysis of existing systems and requirements. We will then work together to design and implement the most cost-effective and reliable solution.

Mr. Philip Carrillo will serve as the Project Manager/System Integrator and will be the County's main point of contact. Mr. Gerbac and Mr. Phillips will leverage their extensive knowledge and

understanding of SCADA, and will apply industry integration standards, principles, and techniques as Lead Programmer and SCADA Controls Engineer. Resumes for the Project Team are located in Appendix A.

2 QUALIFICATIONS AND EXPERIENCE

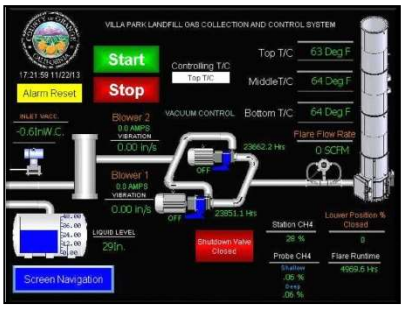
SCS is one of the oldest and largest privately held environmental service firms in the United States, and is a recognized world leader in the fields of solid waste engineering, specializing in landfill gas (LFG). The firm was founded in 1970 and employs nearly 800 professional and support staff located in 68 offices throughout the nation. SCS Field Services, a specialized division of SCS Engineers, has constructed several hundred LFG management systems, and currently operates, maintains, and/or monitors more than 400 systems throughout North America. SCS Technology Services, a business unit of SCS Engineers, manages SCSeTools™, and designs and brings to market state-of-the-art hardware and custom applications that optimize data management efficiencies.

SCS has successfully conducted over 100 SCADA System field assessments to determine the cause of systems failures, and has a proven track record of successful implementation of cost-effective solutions. Our success is grounded in initially accurately assessing the needs of the SCADA System and proposing a plan that meets these requirements. Preparation of our findings in a clear and concise report is critical: it enables the Owner to ensure that all requirements of the system are met. Once a plan, or basis of design, is outlined, the work of the design may commence. We typically provide specifications for each control panel, the instrumentation, HMIs, IO List, and instrument list. Radio and other configurations are detailed in the drawings. We have found it imperative to focus on the interfaces between systems: interfaces between vendor control panels and equipment to ensure that the design in the field works. We research and show the terminal-to-terminal connections to the basis of design equipment and instrumentation. We know that a successful project relies on providing detailed information to electricians and field techs to make them successful. This is much different than providing a vague outline of terminal connection in our design, which relies on electricians and field techs to sleuth out and cobble together solutions as is so often the norm in I&C designs.

Each of our Cloud SCADA projects required careful planning and phasing to ensure the SCADA system would support the old (existing) equipment and systems, then run the old system in parallel with the new systems, and finally the cutover to the new equipment and systems in a fashion required by our client. Similar evaluations, recommendations, development of SCADA system plans and specifications, and construction support services have been provided by SCS for many other systems.

PROJECT PROFILES

We have included descriptions of several Cloud SCADA projects, completed within the past 5 years, which demonstrate our ability to provide services similar to those being requested by the County. The photo is a screen shot of the Cloud SCADA system at the Villa Park Landfill in Orange County, CA.



Carbon Station Expansion, Real-time Remote Monitoring and Cloud SCADA System, Barstow Landfill, CA (2014). SCS designed and installed a remote

monitoring and Cloud SCADA system for monitoring of the LFG carbon station; this included SCADA control system design specifications for the existing carbon station with communication between the existing equipment. Key features of the monitoring system allow remote monitoring via internet and smart phones, notification of alarm conditions, data logging, and capability to view data in tabular form or graphical form, and remotely restart the station. Personnel: Philip Carrillo, Project Manager; John Gerbac, Controls Specialist.

Salinas Valley Solid Waste Authority, Monterey, CA (2014). SCS designed and installed a remote monitoring and Cloud SCADA system for monitoring of three treatment systems; this included SCADA control system design specifications for the existing systems with communication between the existing equipment. Key features of the monitoring system allow remote monitoring via internet and smart phones, notification of alarm conditions, data logging, and capability to view data in tabular form or graphical form, and remote control of the stations. Personnel: Philip Carrillo, Project Manager; John Gerbac, Lead PLC Programmer.

Buena Vista Flare Station, Santa Cruz, CA (2015). SCS designed and installed a remote monitoring and Cloud SCADA system for monitoring of flare station; this included SCADA control system design specifications for the existing systems with communication between the existing equipment. Key features of the monitoring system allow remote monitoring via internet and smart phones, notification of alarm conditions, data logging, and capability to view data in tabular form or graphical form, and remote control of the stations. Personnel: Philip Carrillo, Project Manager; John Gerbac, Lead PLC Programmer.

Palo Alto Flare Station, Palo Alto, CA (2015). SCS designed and installed a remote monitoring and Cloud SCADA system for monitoring of flare station; this included SCADA control system design specifications for the existing systems with communication between the existing equipment. Key features of the monitoring system allow remote monitoring via internet and smart phones, notification of alarm conditions, data logging, and capability to view data in tabular form or graphical form, and remote control of the stations. Personnel: Philip Carrillo, Project Manager; John Gerbac, Lead PLC Programmer.

City of Fresno, CA (2014). SCS managed, purchased, designed, and installed a Master Wonder Ware SCADA system at the City of Fresno High-Btu Waste Water Treatment Plant that consisted of HMI and Data Logger Servers. SCS also integrated gas analyzers, flow meters, pumps, compressors, vacuum sensors, valves, and multiple existing waste flares. Personnel: Philip Carrillo, Project Manager; John Gerbac, Lead PLC Programmer.

Leachate Management System SCADA, Prince William County Landfill, Manassas, VA (2009 to 2012). SCS specified a leachate monitoring system to remotely monitor operation of several leachate pump stations. The monitoring system is provided with a data acquisition unit, wireless transmission and reception, digital conversion, cellular modem, Ethernet communication and tied into the existing mechanical and electrical monitoring system at the landfill. It included software to retrieve data from the data acquisition system, provide automatic backup and storage of data, remotely view real time operational data, and email alarm conditions.

Flare Control Modifications, Millersville Landfill, Millersville MD (2013 to Present). Among other landfill engineering assignments, SCS has evaluated the control system for two flares that combust excess LFG not needed by the onsite LFGE plant. SCS is preparing construction plans and specifications for control system modifications to provide fully automatic operation of both flares, a

SCADA system with remote monitoring and data collection, and a vacuum flow control system to provide steady vacuum to the LFG wellfield.

Flare Station Expansion, Brown Station Road Landfill, Upper Marlboro, MD (2007 to Present). SCS prepared construction drawings and specifications to expand the existing flare station with a new 3,000-scfm enclosed flare; this includes SCADA control system design specifications for the new flare with communication between the new and existing control systems. SCS Field Services is currently installing the new flare and control system, and SCS Engineers will provide SCADA system technical support.

Remote Monitoring and Data Logging System, Frederick County Landfill, Winchester, VA (2005 to 2010). SCS designed and installed a remote monitoring and data logging system for monitoring LFGE engines, LFG compressor skid, and gas analyzer. Key features of the monitoring system allow remote monitoring via internet and Android smart phones, notification of alarm conditions, data logging, and capability to view data in tabular form or graphical form, and calibration status of gas analyzer.

Flare Station Expansion, Remote Monitoring and Data Logging System, Leichner Landfill, WA (2014). SCS designed and installed a remote monitoring and data logging system for monitoring of the LFG flare station; this included SCADA control system design specifications for the existing flare with communication between the existing equipment. Key features of the monitoring system allow remote monitoring via internet and smart phones, notification of alarm conditions, data logging, and capability to view data in tabular form or graphical form, and remotely restart the station. Personnel: Philip Carrillo, Project Manager; John Gerbac, Controls Specialist.

Waste Management, Sugar Creek, MI (2015). SCS provided field assessment of the Wonder Ware SCADA system at the Rumble High-Energy Plant to determine causes of system failure in associated interfacing with multiple PLC's manufactures. SCS successfully installed Kepware Communications platform to comminute with the multiple PLC manufacturers and restored the system to operation. Personnel: Philip Carrillo, Project Manager; John Gerbac, Lead PLC Programmer.

REFERENCES

Pete Ligorria
Public Works Engineer II
County of San Bernardino
Solid Waste Management
Department of Public Works
825 East Third Street, Room 207
San Bernardino, CA 92415-0835
(909) 386-8778

Michael Davis
Leichner Landfill Project Manager
Clark County Department of Environmental Services
PO Box 9810
1300 Franklin Street
Vancouver, WA 98666-9810
(360) 397-2121, ext. 4920

Michael Silva
Field Operations Supervisor
Salinas Valley Solid Waste Authority
PO Box 2159
Salinas, CA 93902
128 Sun Street-Suite 101
Salinas, CA 93901
(831) 809-0336 (Mobile)

DEBARMENT OR OTHER DISQUALIFICATION

SCS has no debarment or other disqualification as a vendor for any federal, state, or local entities to disclose.

3 PROJECT APPROACH AND WORK SCHEDULE

SCS leverages hardware, software, and wireless technology to streamline the operations, maintenance, and data monitoring from the field. SCS will utilize the tools as described below to service the County's Cloud SCADA systems.

PROJECT AND WORK ORDER MANAGEMENT

Project Team Management. The Project Manager, Mr. Carrillo, will organize, manage, and coordinate work with the County to ensure efficient accomplishments of tasks, as assigned by the County. The Project Manager will produce a Project Management Plan, outlining schedule (see below), processes, methods, and tools to be used to perform the work, including a quality assurance/quality control plan.

SCADA Team Staffing Plan. A Staffing Plan will be developed outlining how staff members will be assigned to specific issues and tasks when assistance has been requested by the County. The

Staffing Plan will include the Project Manager/System Integrator and PLC Programmer, and will also include the names of backup staff in the event the primary person is not available.

Project Tracking. Utilization of SCS's Central Desktop (CD) allows SCS Project Managers to share information and track progress with SCS staff and all parties designated by the County in real time. Progress reports including active work orders, status of work, progress to date, percentage of work complete, project budget spent to date, remaining budget to date, descriptions of difficulties encountered during the reporting period, action items and proposed activities for the next reporting period will be maintained on CD and submitted to the County Project Representative on a monthly basis.

Project Meetings. A project kick-off meeting will be held with the County project team to discuss project goals, project scope and project schedule. Thereafter, teleconference project meetings will be held via WebEx, or similar, twice per month, at a time TBD, with the County Project Representative, SCS, and other appropriate staff.

ADDESSING CUSTOMER OBJECTIVES

1. High Availability SCADA and Telemetry Systems / Radio Network / Ignition SCADA System

a) Per Customer Scope: "High Availability SCADA and Telemetry Systems: COSB seeks a high availability system. Hardware, software, networking, and data should be designed to withstand power failures, network outages, hardware failures, and data corruption with as little downtime and data loss as possible. "

b) Notes:
   i. The project's terrain consists of various elevation hills, wherein 'High Availability' radio communication is expected.
   ii. Line-of-Sight from the master radio to most networked radio locations is not available except to Tank #2.
   iii. The customer has requested a 'mesh' radio network using the Banner DX80 radio multi-hop series, with the master radio located at the hill-top trailer.
   iv. The DX80 system uses a 'star' topology, however, with the multi-hop features, a 'mesh' topology can be made.

c) Design/Equipment/Functionality
   i. Radio Master Station/Gateway:
      - 1x Banner radio, as master, with DX83 Modbus-Ethernet Bridge
      - 1x 120 Degree Sector Type or Yagi Antenna, pointed to Tank #2 (due to location, this is recommended instead of Omni type).
   ii. Network Radios:
      - 16x Banner DX80ER9M-H, with external omni antenna (radio electronics to be mounted within local panel).
   iii. Initial on-site radio configurations, all mounting hardware, 8 ft antenna pole at each site included.
   iv. Cloud-Hosted, Windows Server 2019 with I.A. Ignition SCADA, and MS-SQL.

d) Assumptions / Out-Of-Scope
   i. This proposal assumes a reliability factor of greater than 90% uptime is achievable with the proposed hardware, software, and cloud hosted Ignition system. It also assumes the communication availability is limited to proper

maintenance, manufactured devices, electrical terminations, area power supplied by others, weather conditions, like available sun for solar power, lightning, and fog, which affects radio communications, etc. Also, this proposal assumes hardware failures may happen in the future, wherein, the PLC equipment proposed (c), should store sufficient process data, for a limited time, until power, communications and /or other failed hardware can be restored.

ii. The radios, proposed within (c), include a 2dB antenna and will be located at well and tank locations. Depending on initial radio signal strength, these radios may require either a different antenna type, a higher mounted antenna, or an additional radio repeater station – all out-of-scope, unless customer agrees to a radio survey performed prior to radio equipment purchase and installation.

e) Out-of-Scope Options

i. If the main control room's cellular unit and cell tower, is optionally located at the existing work trailer, which is currently on a top ridge 2000 ft to the east of LFGTS, then to achieve a redundant 'mesh' radio network, an alternant path, from the master radio to the tank/wells should be created. This may include one or more solar-powered radio repeater stations, to be located on the southern ridge.

ii. A radio site-survey should be performed to determine radio signal quality, redundancy, optimal master radio location, and optimal antenna type/gain/settings per location.

iii. If radio signal is insufficient and if cellular signal is available at pump/well locations, then a cell+radio device can be used in place of the radio-only device.

2. Standards Based Design, Configuration and Implementation

a) Per Customer Scope: "Standards Based Design, Configuration, and Implementation: COSB seeks a system that reduces proprietary and custom design, configuration, and implementation. COSB should be able to continue the ongoing operation and support of the system utilizing a variety of qualified contractors, hardware suppliers, and other support activities in the event any contractor or supplier becomes unavailable. Design and implementation should conform to industry standards recognized by qualified industry professionals. Implementation at each site should be consistent using structured programming and configuration standards. "

b) Notes:

i. The project's existing PLCs are Unitronics, and a non-functioning 'DirectLogix' PLC in The Tank #1 area.

ii. The GF Signet 9950 exists in some well and pump panels. These devices monitor the flow and totalize the flow data.

iii. The GrundFos Drive CU300 exists in pump panels.

c) Design/Equipment/Functionality

i. For existing PLC's, Tank #1 area, and Tank #4 area, SCS will re-use these PLC's with the addition of remote I/O devices. A new radio and interface will be added. This will enable the scada system to monitor and control all systems in the local area, including the Leachate tanks, and the Vessels 1 and 2. SCS will purchase and install all required panels, conduit, and hardware for the new remote I/O systems, and re-configure the existing PLC's.

ii. For wells and tanks that require new PLC's, SCS will add the newer model Unitronics PLC's – UniStream 10.4. These new PLC's were selected due to their flexible I/O add-on modules, Ethernet and add-on RS485 ports. The RS485 ports

are required to interface with existing GrundFos Drives and the GF Signet 9950 transmitters. Each existing and new Signet 9950 will be upgraded with a Modbus module. SCS will purchase, install and configure the new PLC's, the GrundFos drive interface, the GF Signet 9950's, and the GF 9950 Modbus modules.

d) Assumptions / Out-of-Scope
   i. It is assumed, the level sensors at Tank #1, AND Tank #4 are either existing or will be added by customer, hence out-of-scope.
   ii. It is assumed, the GrundFos Drives and all other pump drives are either existing or will be added by customer, hence out-of-scope.

e) System Design Options
   i. For all areas except Tank 1, and LFGTS, we propose to add PLC's to the other field units, i.e. pump stations, tanks, etc., without HMI's. The field HMIs are redundant since the entire SCADA system will be available on either a smart phone or any internet accessible device. Furthermore, the costs of adding an HMI includes adding a 24 inch square Polycarbonate cabinet, together will add approximately $4,500 for each location. Including labor, around $60,000 would be saved by not including the HMIs. One portable HMI, a.k.a. 'tablet with SIM card' has been added to section 5 Costs of Service.
   ii. Provided sufficient cellular signal exists, an additional $16K savings will be realized with the base station located at the LFGTS, instead of the hill-top trailer.

3. Integration of Third Party Software

a) Per Customer Scope: "Capable of Integration with Other Data Applications: COSB seeks a system that can integrate with other applications through well-documented application programming interfaces using common programming languages and web services. Systems where integration capabilities are desired include ESRI ArcGIS, MS Office applications (Access, Excel) and other commonly used platforms. In addition, the COSB would like to be able to develop custom reports utilizing common tools such as Microsoft Excel. "

b) Notes:
   i. The SCADA software, IA Ignition, utilizes Python extensively.
   ii. The SCADA software, IA Ignition has built-in reporting capabilities.
   iii. SCS can configure Ignition reports as required.
   iv. SCS can configure Python within Ignition to interface with other applications, i.e. SQL, ESRI, ArcGIS, Access, and Excel.

c) Assumptions / Out of Scope:
   SCS will provide a new quote, upon request, for third party integration, since specific third party integration requirements are not detailed within this RFP.

4. Cybersecurity and Framework

a) Per Customer Scope: "Cybersecurity Framework for Industrial Control Systems: The project should be designed and implemented with best practices and defined frameworks like the NIST Cybersecurity Framework for Industrial Control Systems. "

b) Design / Equipment / Functionality
   i. SCS will follow the NIST guidelines
   ii. SCS will utilize security measures such as:
      - AWS encryption and security

- IA Ignition encryption and user role security
- Banner Radio 256 bit encryption
- MS Server 2019 security policies

5. Minimize Life-Cycle Costs

a) Per Customer Scope: "Minimize Lifecycle Costs: The project should be designed to minimize the cost of ongoing lifecycles of hardware and software components. "
b) Design / Equipment / Functionality
   i. The PLC equipment, recommended, utilizes a modular design. Modular designs are capable of additions and replacements at minimum costs and downtime.

6. User Interface

a) Per Customer Scope: "User Interface: Intuitive and graphical user interface, including programming capabilities. COSB staff should have the ability to adjust parameters as needed."
b) Design / Equipment / Functionality
   i. The IA Ignition software and the Unitronics software will include easy to follow graphics for adjustments of all setpoints.

SCADA DESIGN AND TECHNICAL ASSISTANCE

Control Systems. SCS will design real-time data monitoring, control, and Ignition Cloud SCADA Human Machine Interface. Historical database will be configured to record all the client specified monitoring points.

SCADA Electrical Control. SCS will provide the following services associated with SCADA electrical control systems: (1) design of logic sequences to be executed when certain "trigger events" occur; (2) electrical services during installation of both low- and high-voltage instrumentation, RTUs stations, high- and low-voltage motors and starters, pumps, sensors and meters, and planned replacement of electrical equipment; (3) instruction and guidance as needed; (4) work with County field personnel to safely restore/isolate equipment for maintenance and various activities; (5) analyze power system conditions and engineer/implement corrective actions; (6) provide information and services to the County for scheduling, outage reporting, and accounting for energy and supplementary services; (6) provide technical expertise and experience with electrical transmission, distribution, and generation systems in gas operations or similar environments (e.g., power generation, high-voltage distribution systems, substations, equipment/end-device protection, and power quality); (7) provide technical expertise and experience with power system SCADA-type equipment, Automatic Generation Control (AGC), Energy Management System (EMS), and power scheduling programs; (8) provide technical expertise and experience with protective relays, circuit re-closers, power and distribution transformers, synchronous machines, medium-voltage switchgear and MCC, large medium-voltage motors, high-voltage substations, and transmission and distribution lines; (9) quickly and accurately organize and analyze data and apply sound reasoning and judgment in developing appropriate solutions to operate the system under normal and emergency conditions; (10) supply working knowledge of the National Electrical Code (NEC) and the International Electrical Code (IEC); and (11) provide effective communication skills and demonstrated ability to influence and implement programs.

SYSTEMS INTEGRATION

SCS will provide the programming necessary to combine all RTU/PLC elements into a single SCADA system. We will design maps and diagrams that provide important situational awareness in an emergency.

SCS will provide programming and design changes, as needed; these changes could include adding or removing tags from the RTU/PLC. This will include changing code and logic in the PLC.

SCADA SYSTEMS INSTALLATION, STARTUP, COMMISSIONING AND TRAINING

SCS will provide the County with technical assistance with installation, startup, commissioning, and training. These services include providing technical assistance for the installation of all controls in a phased manner to allow continuing operation. This includes system automation to monitor remote equipment, operational status, and automatic control.

Field Services. SCS will install all controls in a phased manner to allow continuing operation to remote sensors, RTU/PLCs, and other field installed/ remote monitoring devices and equipment. SCS will provide proper coding, including device codes and tags needed for new or altered hardware that will be installed or altered: (1) as built drawings, sketches, wiring diagrams, device code, tag and script changes, that were altered during installation; (2) all programming changes will be delivered in electronic format. A document file detailing what was changed in the program will be transmitted at the same time as the electronic program file; (3) all new tags will conform to Solid Waste pre-defined naming convention; (4) any code changes or design changes will be updated into SWD existing Operation and Maintenance Plan with logic ladder schematics.

PROGRAMMING/CONFIGURATION

PLC Logic Programming. SCS programmers will write programs with ladder logic, function block diagrams, structured text and instructional lists, and use the IEC 61131 international standard for PLC programming of Unitronics PLC/HMI and Inductive Automation's Ignition SCADA software.

SCS will update software and apply bug fixes and enhancements on the PLCs and Cloud SCADA servers on an as-needed basis. We will also update configurations within an existing SCADA implementation on an as-needed basis.

SCADA MANAGEMENT

Collecting, storing, and analyzing operational and compliance data is expensive because it is time-consuming and sometimes dangerous to collect. Ignition SCADA was designed based on SCS's decades of field experience and compliance management. As discussed below, these tools reduce the amount of time it takes to capture data, and alert operators in real-time when readings are outside of safety ranges. With Ignition SCADA, professionals can locate and address issues immediately, thus contributing to a safer and cleaner environment. Operators and business owners appreciate earlier issue detection and minimizing potentially unsafe conditions while maximizing profitability and productivity in the field. All technology at SCS is developed based on our clients' needs, our long operations and maintenance field experience, and our in-depth knowledge of regulatory compliance. To design and build a superior product, we believe there is no substitute for hands-on experience.

Intelligent Dashboards. Interactive dashboards provide access to large amounts of data, but in meaningful and informative displays. A critical component of managing sites is a quick and thorough understanding of the processes and flows on the site. The data forms an intelligent comprehensive view that visualizes the site, helping you assimilate the information and react faster.

Integrated Geographic Site Maps. These maps are powerful tools for non-monitored data collection points. They filter data collection points for specific parameters. Color-coded range maps highlight user-defined conditions or open compliance exceedances.

Enhanced Trending Charts. These provide perspective and understanding to data over time. Whether plotting multiple parameters for a single point or multiple points for a single parameter, SCS's charting tools provide insights to data in new and customized formats.

Report Library. A substantial and growing library of purposeful reports to improve operational and compliance efficiencies. Dedicated reports are designed to remove the necessity for users to export, analyze and format raw data, allowing users to compile and submit regulatory grade reports with the click of a button.

TROUBLESHOOTING

Our Team will provide the County with troubleshooting problems with the Cloud SCADA system that includes timely software updates for application software, communications routers, and peripherals. SCS will be available 24/7 and will respond to the County's request for non-routine and out-of-scope services during normal business hours within one (1) hour and be able to have appropriate staff on site whenever necessary within four (4) hours. SCS will respond to the County's request for non-routine and out-of-scope services outside of normal business hours within four (4) hours, and will be able to have appropriate staff on site whenever necessary within eight (8) hours, including weekends and holidays.

PROJECT SCHEDULE

Assuming the project is approved by the Board by April 1, 2020, SCS will complete the project by July 15, 2020, excluding travel and labor shortages. Details of the proposed schedule are as follows:

Assumed Priorities

1. LFGTS / Tank 4 Area with Radio Base Station
    a. Local Tank and Pump Control via radio network
2. Tank 1 Area
    a. Local Tank and Pump Control via radio network
3. Remainder of site tank, pump, etc.
4. AWS-Cloud / IA Ignition
    a. Remote Tank and Pump Control via internet/cellular
    b. Reporting, Data Storage

Project Schedule

1. Finalize and Document Designs
    a. Radio Networks
    b. Sensors and Instruments

c. Area conduit
d. Area electrical, panel, and remote I/O

2. Procurement
3. Conduit, Instrument, and Panel Installation
4. Initial Radio installation and signal testing
5. LFGTS and Tank 4 Area
   a. Remote I/O installation
   b. Sensor and Instruments configuration
   c. Radio Testing
   d. Local Unitronics programming
   e. Local Ignition programming
6. Tank 1 Area
   a. Same as #5
7. Remainder of site areas
   a. Same as #5
8. AWS-Cloud / Remote IA Ignition / UniTronics programming
9. Documentation / On-site Training

Task		Weeks from Notice to Proceed														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Finalize and Document Designs															
2	Procurement															
3	Conduit, Instrument, and Panel Installation															
4	Initial Radio installation and signal testing															
5	LFGTS and Tank 4 Area															
6	Tank 1 Area															
7	Remainder of site areas / Final Radio configurations															
8	AWS-Cloud / Remote IA Ignition															
9	Documentation / On-site Training / Final Commissioning															

4 SCOPE OF WORK

COMMUNICATION WITH RADIO OR OTHER DEVICES

All RTUs and PLCs will utilize Banner Multi-Hop Wireless Radio hardware. The Banner 900 MHz RF module features two times the throughput and 20 times less current draw than the previous XSC module, making it ideal for landfill sensor applications.

EXISTING FIELD HARDWARE

SCS will utilize existing field hardware, such as existing PLCS, mounting back panels, conduits, and enclosures, to be cost effective on material and labor.

SYSTEM DESIGN

The system design of the SCS Cloud SCADA system for monitoring is highly expandable to hundreds of monitoring points, and can encompass other County sites in the future. Like most Cloud SCADA systems, the design consists of RTUs, Hubs, SQL Cloud Data Base, and an HTML 5 Human Machine Interface. The RTU or PLCs units will communicate to the Base Hub over the Banner 900 MHz wireless bridge. The Hub is composed of Cradle Point 4G Cell modem, Banner 900 MHz radio, single-board microprocessor, and SQL lite data base that will communicate with the Cloud SQL server data base. The Hub will securely stream second-by-second data to the Cloud Based Microsoft SQL server database that also hosts the Ignition SCADA Humans Machine Interface.

CELLULAR NETWORK

Cellular networks are widely used in the environmental industry for data and information exchange. Based on the individual Cellular Network site surveys conducted on January 9, 2020, SCS will purchase, program, and install one Cradle Point COR IBR650LPE-VZ 4G Cellar Network Modem for Internet Connectivity. SCS estimates that a 10 GB data plan will serve each site monthly data usage, but understands that monthly charges will only be calculated depending on the total MB data required.

WIRING AND FIELD MODIFICATIONS OF CONTROLS

SCS will provide the following services associated with wiring and Field Modification of electrical control systems: (1) design of logic sequences to be executed when certain “trigger events” occur; (2) electrical services during installation of both low- and high-voltage instrumentation, troubleshooting electrical issues in RTUs controllers, high- and low-voltage motors and starters, pumps, compressors, sensors and meters, and planned replacement of electrical equipment; (3) work with County field personnel to safely restore/isolate equipment for maintenance and various activities; (4) analyze power system conditions and engineer/implement corrective actions; (5) provide information and services to the County for scheduling, outage reporting, and accounting for energy and supplementary services; (6) provide technical expertise and experience with electrical transmission, distribution, and generation systems in gas operations or similar environments (e.g., power generation, high-voltage distribution systems, substations, equipment/end-device protection, and power quality); (7) provide technical expertise and experience with power system SCADA-type equipment, Automatic Generation Control (AGC), Energy Management System (EMS), and power scheduling programs; (8) provide technical expertise and experience with protective relays, circuit re-closers, power and distribution transformers, synchronous machines, medium-voltage switchgear

and MCC, large medium-voltage motors, high-voltage substations, and transmission and distribution lines; (9) quickly and accurately organize and analyze data and apply sound reasoning and judgment in developing appropriate solutions to operate the system under normal and emergency conditions; (10) supply working knowledge of the National Electrical Code (NEC) and the International Electrical Code (IEC); and (11) provide effective communication skills and demonstrated ability to influence and implement programs.

WEB PLATFORM

SCS's Ignition SCADA web platform is easy to connect to, no matter where you are located. The SCS Cloud SCADA will run on any modern web browser. Key features of the SCS web platform are real-time remote monitoring via internet and smart phones, notification of alarm conditions, data logging, and capability to view data in tabular form or graphical form, and remotely control the various systems.

INITIAL TESTING, CALIBRATION AND INTEGRATION

SCS will provide the County with Initial startup testing, calibration, and integration of the Cloud SCADA network upon completion of the installation. These services include providing the installation of all controls in a phased manner to allow continuing operation. SCS will verify all remote I/O and operational status are working correctly after installation at each site.

O&M DOCUMENTATION AND TRAINING

SCS will provide proper coding, including device codes and tags needed for new or altered hardware that will be installed or altered: (1) as-built drawings, sketches, wiring diagrams, device code, tag and script changes that were altered during installation; (2) all programming changes will be delivered in electronic format. A document file detailing what was changed in the program will be transmitted at the same time as the electronic program file; (3) all new tags will conform to Solid Waste pre-defined naming convention; (4) any code changes or design changes will be updated into the Operation and Maintenance Documents with logic ladder schematics.

SCS will provide the following documentation as part of this proposed system:

- Fully annotated Programmable Logic Controller (PLC) code in native and PDF format.
- Fully annotated Supervisory Control and Data Acquisition (SCADA) code in native and PDF format.
- Input/Output (I/O) checkout lists.
- Equipment manuals and specifications.
- Programming software.

SUPPORT

SCS will provide the County with a 2-year warranty and services of all hardware and software products, including web hosting for one (1) year. Our Team will provide the County full support with the Cloud SCADA system that includes timely software updates for application software, communications, and peripherals. SCS will be available 24/7 and will respond to the County's request for non-routine/out-of-scope services during normal business hours within two (2) hours, and will be able to have appropriate staff on site within eight (8) hours. SCS will respond to the County's

request for non-routine/out-of-scope services outside of normal business hours within four (4) hours, and will be able to have appropriate staff on site within sixteen (16) hours, including weekends and holidays.

5 COST OF SERVICE

We will perform the services described in the previous sections for a Lump Sum fee of $386,485 for Option A or Lump Sum fee of $373,243 for Option B. Itemization and breakdown of project option costs are shown below.

Hardware, Software, CAD, and Installation Costs

Option A, Base Station @ Trailer

Area	Costs
LFGTS, Tank #4 and Leachate	93,401
Tank #1 and LCRS #1	24,559
LCRS #5	9,695
LCRS #2 Liner Drain	8,890
LCRS #3 HWDS	9,602
ICSP Pumps	9,365
LCRS-4 DW3-1	7,011
LCRS-4 DW3-2	8,092
LCRS-4 DW4-2	8,092
LCRS-4 DW4-3	8,092
Tank #2	10,594
Tank #3	10,594
ICSP Tank	10,831
LCRS3 Tank	10,831
WW3 Monterey Well	14,679
WW5 TVQ well	14,679
Radio Base Station @ Trailer	54,243
IA Ignition Pro License	20,100
MS-SQL Basic License	2,000
Subtotal	335,350

Option B, Base Station @ LFGTS

Area	Costs
LFGTS, Tank #4 and Leachate	93,401
Tank #1 and LCRS #1	24,559
LCRS #5	9,695
LCRS #2 Liner Drain	8,890
LCRS #3 HWDS	9,602
ICSP Pumps	9,365
LCRS-4 DW3-1	7,011
LCRS-4 DW3-2	8,092
LCRS-4 DW4-2	8,092
LCRS-4 DW4-3	8,092
Tank #2	10,594
Tank #3	10,594
ICSP Tank	10,831
LCRS3 Tank	10,831
WW3 Monterey Well	14,679
WW5 TVQ well	14,679
Radio Base Station @ LFGTS	42,205
IA Ignition Pro License	20,100
MS-SQL Basic License	2,000
Subtotal	323,312

Training and Documentation Services

Description	Unit	Qty	Cost	Tax (8.75%)	Shipping (10%)	Total
On-Site Training incl. Hotels, Per Diem, Travel.	Day	5	$1,300.00	--	--	$6,500.00
Coordination/ Administration	Hour	15	$100.00	--	--	$1,500.00
Documentation and Reproduction	Each	1	$87.00	$7.61	$9.46	$105.00
Subtotal						$8,105.00

Ongoing Costs for 1-Year Term (required for products, services and maintenance)

Description	Unit	Qty	Cost	Tax (8.75%)	Total
Annual Verizon Cell Data	Each	1	$1,260.00	$110.25	$1,370.25
Annual SCS Maintenance and Support	Each	1	$3,000.00	$262.50	$3,262.50
Annual Amazon Cloud Services	Each	1	$3,000.00	$262.50	$3,262.50
Subtotal					$7,895.25

Option A (Base Station @ Trailer) Grand Total

Description	Unit	Qty	Total
Hardware, Software, CAD, and Installation Costs	LS	1	$335,350.00
Training and Documentation Services	LS	1	$8,105 .00
Ongoing Costs over 1-Year Term	LS	1	$7,895.25
Option A Total			$351,350.25
10% Contingency			$35,135
Option A Grand Total			**$386,485.25**

Option B (Base Station @ LFGTS) Grand Total

Description	Unit	Qty	Total
Hardware, Software, CAD, and Installation Costs	LS	1	$323,312.00
Training and Documentation Services	LS	1	$8,105.00
Ongoing Costs over 1-Year Term	LS	1	$7,895.25
Option B Total			$339,312.25
10% Contingency			$33,931
Option B Grand Total			**$373,243.25**

Additional Contingency

Description	Unit	Qty	Cost	Tax (8.75%)	Total
Annual Verizon Cell Data	Year	1	$1,260.00	$0.00	$1,260.00
Annual SCS Maintenance and Support	Year	1	$3,000.00	$0.00	$3,000.00
Annual Amazon Cloud Services	Year	1	$3,000.00	$0.00	$3,000.00
Unitronics HMI 24" cabinet, power supply, labor, per diem	Each	1	$4,500.00	$393.75	$4,893.75
Radio Repeater Station Banner radio, 24" cabinet, power supply, Solar panel & batteries, labor, per diem	Each	1	$6,000.00	$525.00	$6,525.00

6 INSURANCE

SCS will provide evidence of insurance upon project award.

Appendix A

Project Team Resumes

PHILIP CARRILLO, NATIONAL RMC DIRECTOR

Phil Carrillo

Education

BS – Applied Computing, California State University, Monterey Bay, 2001
Remote Pilot License, Federal Aviation Authority – Small UAS Rule (Part 107)

Specialty Certifications

40 Hour OSHA Hazwoper
8 Hour OSHA Hazwoper

Professional Registrations & Affiliations

Engineers Without Borders

Professional Experience

Mr. Carrillo is a Systems Integrator in SCS's Remote Monitoring and Control business unit, with 19 years of experience—the past 9 with SCS—in solid waste and landfill gas (LFG) management, including remote monitoring, Supervisory Control and Data Acquisition (SCADA), control systems, and the operation and maintenance (O&M) of LFG collection and treatment systems (LFGCCSs). He has managed all aspects of LFGCCSs, including wellfields and flares, and LFG-to-energy (LFGE) controls, design, O&M, and construction management. His unique combination of field operations management experience and control systems technical expertise adds tremendous value to any SCS team assigned to an OM&M project.

Mr. Carrillo has designed over 50 remote monitoring and SCADA systems that had comprehensive control logic (Programmable Logic Controllers [PLCs]) and Human Machine Interface (HMI) capabilities. He understands the complex issues that must be addressed to optimize LFG system performance and to maintain regulatory compliance. He has performed, installed, and repaired LFG control systems, and has been responsible for implementing upgrades to computer and communication systems vital to compliance management. This has included troubleshooting system components, coordinating with field technical personnel, interfacing with vendors and landfill operations personnel, ordering materials and equipment, and overseeing LFGCCS repairs and upgrades.

State-of-the-Art O&M Data Management Technologies

Mr. Carrillo leads development of SCS's pioneering suite of state-of-the-art hardware and custom applications benefiting clients in their efforts to optimize data management efficiencies. Instrumental in designing SCS Remote Monitoring and Control®, a proprietary, user-friendly, secured web-based data management application brought to market in 2011, this technology quickly became the industry standard for LFG data management and is currently utilized at over 50 landfills across the United States. The SCS Remote Monitoring and Control application supports SCS's internal Compliance Audit Program, which was developed specifically to validate data and verify regulatory compliance of environmental control facilities operated by SCS. Our internal Compliance Audit Program reviews data acquisition procedures, instrument calibration, data permit compliance, regulatory-required follow-up testing and remediation, testing schedules, and reporting.

In recent years, Mr. Carrillo has collaborated with SCS Field Services Senior Vice President Galen Petoyan and other SCS senior technical staff, including Ken Brynda, to develop and bring to market further advances in data management technology: SCS Remote Monitoring and Control® (RMC), SCSeToolsTM, and SCS MobileToolsTM.

SCS RMC automates the collection of data at a site and electronically transmits the data to SCSeTools, an online application platform for collecting, monitoring, viewing, charting, graphing, and managing data from a variety of sites in a variety of industries. SCS MobileTools is an electronic replacement for the labor-intensive task of completing, reading, and correcting hand-written forms. SCS MobileTools is compatible with a wide range of devices that use the Android and Apple operating platforms.

Project Experience

SCADA and Control System Upgrades, San Bernardino County Landfills, San Bernardino County, CA. Mr. Carrillo provided design and engineering for SCADA and Control System upgrades at the San Timoteo, Milliken, Colton, Victorville, Yucaipa, Barstow, Heaps Peak, and Mid-Valley Sanitary Landfills. Work included design and programming of the PLC and HMI devices.

LFG System O&M, Heaps Peak Sanitary Landfill, San Bernardino County, CA. Mr. Carrillo acted as an on-site field technician for routine and non-routine LFGCCS O&M for a period of more than 2 years. Work included troubleshooting and repair of system malfunctions, making adjustments in the field to ensure the facility remained in regulatory compliance, responding to emergency call-outs, and interacting with equipment vendors.

Landfill Well Construction Study, Milliken Sanitary Landfill, San Bernardino County, CA. Mr. Carrillo coordinated well drilling, probe installation, and LFG monitoring in support of a pilot testing program investigating the effectiveness of three different well drilling techniques. During the testing program, three 24-inch-diameter extraction wells were installed with a conventional auger drill rig. In addition, three 8-inch-diameter extraction wells were installed with an air rotary drill rig, and one 7-7/8-inch-diameter steel casing well was driven directly into waste. The results of the pilot testing program were summarized in a technical paper presented to the Solid Waste Association of North America (SWANA).

LFG Well Installation, Milliken and Mid-Valley Sanitary Landfills, San Bernardino County, CA. Mr. Carrillo provided engineering and field support during well and probe installations in support of an LFGCCS O&M program. Work included scheduling and coordinating with field and drilling crews, managing and directing field activities, coordinating with office staff, logging gas wells, and ensuring that projects were completed on schedule.

Construction Management, Waterman Landfill, San Bernardino, CA. Mr. Carrillo provided construction management during installation of a granular activated carbon treatment system.

Construction Management, Olinda Alpha Landfill, Orange County, CA. Mr. Carrillo provided construction management during installation of an 18-inch below-grade LFG header.

LFG Reporting Programs. Mr. Carrillo oversaw compilation of monthly LFG OM&M reports for multiple municipal solid waste landfills in California and Arizona. These reports discuss sampling procedures, provide monitoring data, and summarize activities undertaken during routine monitoring and maintenance of LFG probes, extraction wells, and flare stations. Responsibilities have included review of monitoring data, technical quality control, completeness review, and oversight of report production for the following sites:

- 19th Avenue Landfill, Phoenix, AZ.
- 27th Avenue Landfill, Phoenix, AZ.
- Glendale Landfill, Glendale, AZ.
- Skunk Creek Landfill, Phoenix, AZ.
- Orange County Integrated Waste Management Department, Central Region Landfills (three landfills).
- Orange County Integrated Waste Management Department, North Region Landfills (three landfills).
- Orange County Integrated Waste Management Department, South Region Landfills (six landfills).
- San Bernardino County Landfills (nine landfills).

JOHN J. GERBAC

Education

B.A. – Business Information Systems, Ashford University

Professional Licenses and Certifications

Inductive Automation Ignition Gold 7.9 Certified
Inductive Automation Ignition Gold 8.0 Certified
Certified Scrum Master

Awards

Inductive Automation Ignition Firebrand Award Winner – September 2019

Professional Experience

Mr. Gerbac is a Developer for SCS RMC (Remote Monitoring and Controls). He is a Premier SCADA/MES Engineer who has designed, developed, and integrated MES, SCADA, SPC, and various other application solutions in numerous industries including landfill gas (LFG), manufacturing, building automation, food & beverage, and mining. Taking a consultative approach to systems integration, he works with organizations to make sure business needs are fulfilled within a project and helps to identify opportunities for improvement. Mr. Gerbac takes customer satisfaction seriously and aims to always exceed expectations. Notable projects that Mr. Gerbac has been involved in are described below.

San Bernardino County, CA, San Timoteo Landfill. Developed edge of network supervisory control and data acquisition (SCADA) application on Ignition Edge that stores and forwards key datapoints to a centralized server for reporting and monitoring remotely. Commissioned centralized server and developed a SCADA application on Ignition 8 Perspective with HMI, live monitoring, control, data trending, reporting, and data export capabilities. Developed a Google integration module that autonomously reads, parses, and imports field report data from reports uploaded into Google Drive.

Rogue Disposal, OR, Dry Creek Landfill. Upgraded a remote monitoring system for an LFG blower / flare station from Ignition 7.8 to Ignition 8.0 and added in functionality to monitor and control a new blower skid, chiller skid, and sump pump. The system allows the client to remotely view their control system, record data, and transmit detailed alarm messages.

Confidential Client, OH, TN, IA, MA, OK, and MX. Project managed, designed, and developed a manufacturing execution system (MES) on Ignition 7.9 for a large appliance manufacturer with a read/write integration with their existing enterprise resource planning (ERP) system. Created a custom solution that is otherwise unavailable in the manufacturing systems market that enabled the client to produce accurate manufacturing schedules on their mixed-model lines and publish finished units into ERP. Designed and developed an inventory count consumer that published material usage to ERP at the appropriate stock locations to create real-time inventory monitoring. This enabled the design and development of tugger (automated material delivery robots) routes to replenish material stock using just-in-time (JIT) methodology.

Confidential Client, Thailand. Project managed and lead a team of engineers in the development of a SCADA/MES system on Ignition 7.9 for a vegetable oil manufacturing/refining plant that integrated with the client existing ERP system. The system allowed for remote monitoring and control of operations and

manufacturing schedule, overall equipment effectiveness (OEE) analysis, and statistical process control (SPC) to ensure product quality.

Confidential Client, IL. Designed and developed an employee training/tracking system on Ignition 7.9 to maintain regulated/required training documents for client's internal employees/contractors. The system monitors training expiration dates and sends out alerts to supervisors of upcoming training needs and allows a user to import scanned training certificates for storage.

Confidential Client, WI. Acquired a partially developed SCADA/MES system on Ignition 7.9 from a previous integration firm and managed the project redevelopment, completion, and upgrades. The system allowed for partially automated manufacturing line scheduling driven by requirements from the customers ERP through the import of production orders in sequence and allowed a line supervisor to override sequence manually by placing an order in an "on-deck" position. The system included an HMI for each respective manufacturing line which allowed remote monitoring, scheduling, control, and data analysis. Designed and developed dashboards with line performance, upcoming schedule changes, and key performance indicators that were placed throughout their seven facilities.

Confidential Client, IL. Project managed, designed and developed local fallback projects on Ignition Edge for 11 manufacturing lines for client. Local fallback projects are designed to be running in a dormant state until a network connection problem arises, which the local fallback would then spin up to take over control to mitigate line downtime. The fallback projects stored data and published to the centralized Ignition server once network connection was re-established. The Enterprise Administration Module (EAM) was utilized to connect local fallback projects as agents to the central Ignition server acting as the controller, and tasks were created to push application changes from the central server to the fallback projects to ensure project update synergy between servers. After an upgrade of the clients central Ignition server from Ignition 7.9 to Ignition 8.0, each Ignition Edge fallback projects was upgraded from Edge 7.9 to 8.0.

Confidential Client, IL. Designed and developed a control center dashboard on Ignition 7.9 spanning across 18 monitors mounted in sequence on top of the ceiling. Dashboards contained relevant process and machine data in real-time and trended on graphs.

Confidential Client, MI. Designed and developed a SCADA/MES system on Ignition 7.9 for a craft creamery. System allowed for manual creation of manufacturing work orders, OEE analysis, data trending, reports, and alarms.

Multiple Clients. Developed a system to monitor client servers and send out alerts when client servers fail, allowing for rapid response and issue mitigation to increase overall system uptime. System sends out monthly reports showing system up/down time.

Hunter Industries, CA and MX. Designed and developed a statistical process control (SPC) system on Ignition 7.9 with automated sample collection triggers based on time/production counts. Also allowed mold machine/part specific scheduling and load balancing to evenly distribute workload amongst inspectors. Out of control, out of specification, and Nelson rule violations triggered text message/email alerts to the configured supervisors and manufacturing engineers. Data trending tools included individual, X-bar, histogram, pareto,

process performance, box and whisker, parts per million defective, and process capability charts in both ad hoc and saved configuration fashions. Raw and processed data exports were also available.

Hunter Industries, CA. Designed and developed SCADA/MES system on Ignition 7.9 for 40 automation machines and 121 mold machines. System integrated with existing ERP system to read inventory counts and production orders to produce schedules for finished goods, subassembly, hardware, and molding departments to effectively utilize machinery and personnel while eliminating excess inventory.

Confidential Client, NV. Designed and developed a data collection and reporting system for a mining operation on the .NET framework. The system connected to an existing OPC server (Kepware) and allowed users to configure data collection frequency and metadata for each datapoint. Regulatory and efficiency reports were also developed and configured to be autonomously sent to configured personnel through email as well as ad hoc reporting.

JAMES D. PHILLIPS, REGIONAL RMC MANAGER

Education

BS – Electrical Engineer, Auburn University 1982-1988

Professional Experience

Mr. Phillips has over 35 years of experience with MES, HMI, SCADA, DCS, PLC controls, panel/SCADA system design, programming, and start-up within a variety of industries and applications. Recent experience is listed below.

- Configured conversion from Modicon (Modbus Protocol over Ethernet, with MB Bridge) and Wonderware ArchestrA v2014 to Inductive Automation Ignition v. 8.0.6 for Water/Waste Water with remote radio stations. Added MES calcs and HMI displays for multiple wind/hydro power generation /substation units. Created Ignition 8 Perspective HTML clients. Trained operators on Ignition 8.
- Designed and configured a custom Python-SQL based recipe system to interface with existing Inductive Automation Ignition v. 7.9.6 for manufacturing facility. Included an admin HMI page to save, load, retrieve, and edit recipes. Created recipe parameter display units for HMI operations.
- Designed and configured Inductive Automation Ignition v. 7.9.6 for coffee bagging facilities. Configured tags, SQL scripts, security, screens, OEE, MES with SFC interface to JD Edwards ERP.
- Configured Siemens S7/400 upgrade to Rockwell Logix 5000, and Siemens WinCC upgrade to Wonderware Intouch.
- Designed and Configured Inductive Automation Ignition v. 7.9.5 within metal stamping facilities. Configured tags, SQL scripts, security, screens, and timed reports for OEE, MES, Part-Tracking.
- Designed and Configured Inductive Automation Ignition v. 7.9.5 for multi-plant food process facilities.
- Configured enterprise scale Ignition Gateway Networks using cloud services such as Azure/AWS.
- Created remote monitoring and reporting interfaces for enterprise-distributed data systems.
- Configured secure communications using L2TP/IPSec and SSL dual encrypted channels.
- Configured screens, charts, and reports for OEE, Recipe Management using SepaSoft-Ignition modules.
- Configured SepaSoft-Ignition modules interface to J.D. Edwards ERP system.
- Designed and Configured Rockwell CompactLogix PLC v30 and Keyence LS9501 Dual Axis Laser Measuring for fast moving object measurement and sorting.
- Designed and Configured Rockwell CompactLogix PLC v30, 6 Axis STEP Robotics (with CodeSys), and AandD Measure Instrument for extremely accurate (0.01g) object measurement and sorting.
- Designed and Configured Rockwell FTView ME v8.2 and Micrologix PLC v28 for check weighing machine with OEE/MES/PackML integration ability. Managed software OS and hardware panel construction and delivery. Configured custom PLC code to integrate machines for various protocols within various industries. On-site commissioning and trained operators. Provided customer support.
- FTView SE to Inductive Automation (Ignition) conversion project for water treatment plant, $2M.
- Managed a team of 8 to convert FTView SE 7.0 to IA 7.9. Commissioned IA and provided on-site IA training. Configured PLC, SQL, IA, and Tofino Firewalls. Designed multiple PLC control and operation panels. Developed Allen Bradley Compact, Micro, 1756, 1747 PLCs, with RS Logix 5000 and Studio 5000 Logix, Studio 5000 View. Used DeviceNet, ControlNet, DNP3, Modbus, ProfiBus, and ethernet communications.
- Developed FactoryTalk View SE HMI v8.0. Configured FactoryTalk Historian SE. Developed Wonderware HMI with Intouch and Archestra. Constructed and installed multiple NEMA 4X panels with plant interfacing communications and I/O. PLC panel and software interfaced with existing plant systems for supervisory status and control (SCADA). Designed and Retro-fitted control systems to conform with NEC, NFPA, and UL508. Provided fully commissioned and validated systems with training manuals. Managed vendor installation, purchasing, and scheduling.

EXHIBIT B

PAYMENT ARRANGEMENTS
Periodic Compensation

A. For CONTRACTOR services to be rendered under this Agreement, CONTRACTOR shall be paid a total contract amount, including cost reimbursements, not to exceed $391,922.

B. Payment for services and /or reimbursement of costs shall be made upon CONTRACTOR's satisfactory performance, based upon the scope and methodology contained in **EXHIBIT A** as determined by COUNTY.

C. Monthly CONTRACTOR shall submit to the COUNTY DESIGNATED REPRESENTATIVE an invoice or certified claim on the County Treasury for the service performed over the period specified. These invoices or certified claims must cite the assigned Board Contract Number. COUNTY REPRESENTATIVE shall evaluate the quality of the service performed and if found to be satisfactory shall initiate payment processing. COUNTY shall pay invoices or claims for satisfactory work within 30 days of receipt of correct and complete invoices or claims from CONTRACTOR.

D. COUNTY's failure to discover or object to any unsatisfactory work or billings prior to payment will not constitute a waiver of COUNTY's right to require CONTRACTOR to correct such work or billings or seek any other legal remedy.

EXHIBIT C

Indemnification and Insurance Requirements (For Professional Contracts)

INDEMNIFICATION

CONTRACTOR agrees to indemnify, defend (with counsel reasonably approved by COUNTY) and hold harmless COUNTY and its officers, officials, employees, agents and volunteers from and against any and all claims, demands, damages, costs, expenses (including but not limited to reasonable attorney's fees), judgments or liabilities arising out of the negligent performance or attempted performance of the provisions hereof; including any willful or negligent act or omission to act on the part of the CONTRACTOR or his agents or employees or other independent contractors directly responsible to the CONTRACTOR to the fullest extent allowable by law. CONTRACTOR's indemnification obligation applies to COUNTY's active as well as passive negligence but does not apply to COUNTY's sole negligence or willful misconduct.

NOTIFICATION OF ACCIDENTS AND SURVIVAL OF INDEMNIFICATION PROVISIONS

CONTRACTOR shall notify COUNTY immediately in the event of any accident or injury arising out of or in connection with this Agreement. The indemnification provisions in this Agreement shall survive any expiration or termination of this Agreement.

INSURANCE

CONTRACTOR shall procure and maintain for the duration of this Agreement insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder and the results of that work by the CONTRACTOR, his agents, representatives, employees or subcontractors.

A. Minimum Scope of Insurance
Coverage shall be at least as broad as:

1. **Commercial General Liability (CGL):** Insurance Services Office (ISO) Form CG 00 01 covering CGL on an "occurrence" basis, including products-completed operations, personal & advertising injury, with limits no less than $1,000,000 per occurrence and $2,000,000 in the aggregate.
2. **Automobile Liability**: ISO Form Number CA 00 01 covering any auto (Code 1), or if CONTRACTOR has no owned autos, hired, (Code 8) and non-owned autos (Code 9), with limit no less than $1,000,000 per accident for bodily injury and property damage.
3. **Workers' Compensation**: as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than $1,000,000 per accident for bodily injury or disease.
4. **Professional Liability** (Errors and Omissions) Insurance appropriate to the CONTRACTOR'S profession, with limit of no less than $1,000,000 per occurrence or claim, $2,000,000 aggregate.

If the CONTRACTOR maintains higher limits than the minimums shown above, the COUNTY requires and shall be entitled to coverage for the higher limits maintained by

the CONTRACTOR. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the COUNTY.

B. Other Insurance Provisions
The insurance policies are to contain, or be endorsed to contain, the following provisions:

1. **Additional Insured** – COUNTY, its officers, officials, employees, agents and volunteers are to be covered as additional insureds on the CGL policy with respect to liability arising out of work or operations performed by or on behalf of the CONTRACTOR including materials, parts, or equipment furnished in connection with such work or operations. General liability coverage can be provided in the form of an endorsement to the CONTRACTOR's insurance at least as broad as ISO Form CG 20 10 11 85 or if not available, through the addition of both CG 20 10 and CG 20 37 if a later edition is used).
2. **Primary Coverage** – For any claims related to this Agreement, the CONTRACTOR's insurance coverage shall be primary insurance as respects the COUNTY, its officers, officials, employees, agents and volunteers. Any insurance or self-insurance maintained by the COUNTY, its officers, officials, employees, agents or volunteers shall be excess of the CONTRACTOR's insurance and shall not contribute with it.
3. **Notice of Cancellation** – Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the COUNTY.
4. **Waiver of Subrogation Rights** – CONTRACTOR hereby grants to COUNTY a waiver of any right to subrogation which any insurer of said CONTRACTOR may acquire against the COUNTY by virtue of the payment of any loss under such insurance. CONTRACTOR agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation, but this provision applies regardless of whether or not the COUNTY has received a waiver of subrogation endorsement from the insurer.
5. **Deductibles and Self-Insured Retention** – Any deductibles or self-insured retentions must be declared to and approved by the COUNTY. The COUNTY may require the CONTRACTOR to purchase coverage with a lower deductible or retention or provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention.
6. **Acceptability of Insurers** – Unless otherwise approved by Risk Management, insurance shall be written by insurers authorized to do business in the State of California and with a minimum A.M. Best's Insurance Guide rating of "A- VII".
7. **Verification of Coverage** – CONTRACTOR shall furnish the COUNTY with proof of insurance, original certificates and amendatory endorsements as required by this Agreement. The proof of insurance, certificates and endorsements are to be received and approved by the COUNTY before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the CONTRACTOR's obligation to provide them. The CONTRACTOR shall furnish evidence of renewal of coverage throughout the term of the Agreement. The COUNTY reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.

8. **Failure to Procure Coverage** – In the event that any policy of insurance required under this Agreement does not comply with the requirements, is not procured, or is canceled and not replaced, COUNTY has the right but not the obligation or duty to terminate the Agreement. Maintenance of required insurance coverage is a material element of the Agreement and failure to maintain or renew such coverage or to provide evidence of renewal may be treated by COUNTY as a material breach of contract.
9. **Subcontractors** – CONTRACTOR shall require and verify that all subcontractors maintain insurance meeting all the requirements stated herein, and CONTRACTOR shall ensure that COUNTY is an additional insured on insurance required from subcontractors.
10. **Claims Made Policies** – If any of the required policies provide coverage on a claims-made basis:
    i. The Retroactive Date must be shown and must be before the date of the contract or the beginning of contract work.
    ii. Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of contract work.
    iii. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the contract effective date, the CONTRACTOR must purchase "extended reporting" coverage for a minimum of five (5) years after completion of contract work.
11. **Special Risks or Circumstances** – COUNTY reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

Any change requiring additional types of insurance coverage or higher coverage limits must be made by amendment to this Agreement. CONTRACTOR agrees to execute any such amendment within thirty (30) days of receipt.

Any failure, actual or alleged, on the part of COUNTY to monitor or enforce compliance with any of the insurance and indemnification requirements will not be deemed as a waiver of any rights on the part of COUNTY.