

STATE OF CALIFORNIA - DEPARTMENT OF GENERAL SERVICES

STANDARD AGREEMENT

STD 213 (Rev. 03/2019)

AGREEMENT NUMBER

19-13125

PURCHASING AUTHORITY NUMBER (If Applicable)

CDT-7502

1. This Agreement is entered into between the Contracting Agency and the Contractor named below:

CONTRACTING AGENCY NAME

California Department of Technology (CDT)

CONTRACTOR NAME

Analytica Consulting LLC

2. The term of this Agreement is:

START DATE

May 15, 2020 or upon approval, whichever is later

THROUGH END DATE

May 14, 2021

3. The maximum amount of this Agreement is:

\$250,000.00 (Two Hundred Fifty Thousand Dollars and Zero Cents)

4. The parties agree to comply with the terms and conditions of the following exhibits, which are by this reference made a part of the Agreement.

Exhibits	Title	Pages
Exhibit A	Statement of Work	9
Exhibit A-1	Staff Resumes	20
Exhibit A-2	Work Authorization Form	3
+ - Exhibit A-3	Personnel Change Order Request Form	1
+ - Exhibit A-4	Work Authorization Acceptance Document	1
+ - Exhibit B	Budget Detail and Payment Provisions	1
+ - Exhibit B-1	Cost Worksheet	1
+ - Exhibit C*	General Provisions - Information Technology (GSPD-401IT, revised and effective 9/5/14)	online
+ - Exhibit D	Special Terms and Conditions to Safeguard Federal Tax Information	9
+ - Exhibit E	Security and Data Protection	1
+ - Exhibit F	Additional Legal Terms Required for FEMA Reimbursement	4

Items shown with an asterisk (*), are hereby incorporated by reference and made part of this agreement as if attached hereto.

These documents can be viewed at <https://www.dgs.ca.gov/OLS/Resources>

IN WITNESS WHEREOF, THIS AGREEMENT HAS BEEN EXECUTED BY THE PARTIES HERETO.

CONTRACTOR

CONTRACTOR NAME (if other than an individual, state whether a corporation, partnership, etc.)

Analytica Consulting LLC

CONTRACTOR BUSINESS ADDRESS

9810 Scripps Lake Drive, Suite F

CITY

San Diego

STATE

CA

ZIP

92131

PRINTED NAME OF PERSON SIGNING

Clifton Leung

TITLE

Director of Finance & Operations

CONTRACTOR AUTHORIZED SIGNATURE

Clifton Leung

DATE SIGNED

May 18, 2020

SCO ID:

STATE OF CALIFORNIA - DEPARTMENT OF GENERAL SERVICES

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PURCHASING AUTHORITY NUMBER (If Applicable)

CDT-7502

STATE OF CALIFORNIA

CONTRACTING AGENCY NAME

California Department of Technology (CDT)

CONTRACTING AGENCY ADDRESS

P.O. Box 1810

CITY

Rancho Cordova

STATE

CA

ZIP

95670

PRINTED NAME OF PERSON SIGNING

Marisa Duarte-Lott

TITLE

Purchasing Manager

CONTRACTING AGENCY AUTHORIZED SIGNATURE

Marisa Duarte-Lott

Marisa Duarte-Lott (May 19, 2020 10:19 PDT)

DATE SIGNED

May 19, 2020

CALIFORNIA DEPARTMENT OF GENERAL SERVICES APPROVAL

EXEMPTION (If Applicable)

- This is for State of CA use in response to COVID-19, not for CDT use only.
- PCC is exempted.

EXHIBIT A STATEMENT OF WORK

Analytica Consulting, LLC (hereinafter referred to as the "Contractor") agrees to provide the California Department of Technology (hereinafter referred to as the "State"), continuing development of new dashboards and enhancement of existing dashboards in response to the Governor's executive orders to fight COVID-19.

1. OBJECTIVE

Contractor shall design, develop and update dashboards that can be used by the public, and by stakeholders across multiple agencies. The dashboards will provide necessary information on the COVID-19 outbreak, spread and response, which will be used by decision makers to determine responders' immediate action to prevent or mitigate the loss or impairment of life, health, property, or essential public services, pursuant to PCC 1102.

2. TERM/PERIOD OF PERFORMANCE

- a. The period of performance for the Contract shall be from May 15, 2020 or upon approval, whichever is later through May 14, 2021, with one (1) option to extend for an additional 12 months term at the original rates stated in Exhibit B.
- b. The Contractor shall not be authorized to deliver or commence the performance of services as described in this SOW until written approval has been obtained from all entities. Any delivery or performance of service that is commenced prior to the signing of the Contract shall be considered voluntary on the part of the Contractor and non-compensable.
- c. Consistent with the terms and conditions of the original solicitation, and upon mutual consent, the CDT and the Contractor may execute written amendments for changes to this contract that were evaluated and considered.

3. CONTRACT REPRESENTATIVES

All notices required by, or relating to, this Contract shall be in writing and shall be sent to the parties of the Contract at the address set below unless changed from time to time, in which event each party shall so notify the other in writing, and all such notices shall be deemed duly given if deposited, postage prepaid, in the United States mail or e-mailed and directed to the addresses then prevailing.

The Contract Administrator during the term of this contract will be:

State: California Department of Technology	Contractor: Analytica Consulting, LLC
Name: Manveer Bola	Name: Clifton Leung
Phone: 916-431-5491	Phone: 617-319-3633
e-mail: Manveer.Bola@state.ca.gov	e-mail: Cliftonleung@analyticaconsulting.com

The Business Contract Manager during the term of this contract will be:

State: California Department of Technology Unit: Acquisition & IT PMO Branch Name: Roddy Son Address: P.O. Box 1810 MS Y-18 Rancho Cordova, CA 95741 Phone: 915-431-5448 e-mail: Roddy.son@state.ca.gov	Contractor: Analytica Consulting, LLC Name: Clifton Leung Address: 1601 Alhambra Blvd. Suite 100 Sacramento, CA 95816 Phone: 617-319-3633 e-mail: Cliftonleung@analyticaconsulting.com
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4. CONTRACTOR QUALIFICATIONS

Role and Number	Responsibilities and Experience	Minimum Years of Experience
Data Scientist	<p>Deliver solutions leveraging latest machine learning (ML) techniques, including exploratory data analysis, feature engineering, model selection, model evaluation and cross-validation, and deployment at all scales.</p> <p>Gather technical requirements, assess client capabilities and analyze findings to provide appropriate solution recommendations and adoption strategy.</p> <p>Collaborate with client data science teams to enhance, scale, and operationalize existing models.</p> <p>Communicate effectively with both technical and nontechnical stakeholders.</p> <p>Conduct and support white-boarding sessions, workshops, design sessions, and project meeting.</p> <p>Provide thought leadership and best practices required to deliver effective and sustainable solutions.</p>	4
Data Engineer	<p>Develop data warehouses and business intelligence solutions.</p> <p>Data wrangling of heterogeneous data and explore and discover new insights.</p> <p>Gather technical requirements, assess client capabilities and analyze findings to provide appropriate solution recommendations and adoption strategy.</p>	4

	<p>Research, analyze, recommend and select technical approaches for solving challenging and complex development and integration problems.</p> <p>Design and develop scalable data ingestion frameworks to transform variety of data sets.</p> <p>Provide thought leadership and best practices required to deliver effective and sustainable solutions.</p>	
Data Visualization Specialist	<p>Design and develop compelling data visualizations through a variety of techniques including user-centered design, data storytelling, and Gestalt principles.</p> <p>Build tailored visualizations and define required supporting data architecture (e.g., data marts).</p> <p>Collaborate with both business and IT partners to identify key use cases and define associated requirements.</p> <p>Provide thought leadership and best practices required to deliver effective and sustainable solutions.</p>	3

5. PROJECT TASK/DELIVERABLES

Support will include the following services:

- a. Gather and document requirements from users and other stakeholders regarding Tableau dashboards in support of the Governor's mobilization of state personnel and assets to fight the spread of COVID-19.
- b. Propose solutions for Tableau visualizations in support of the COVID-19 response.
- c. Design, develop and enhance Tableau dashboards that satisfy the following requirements:
 - (1) Web-based dashboards accessible via browser on any desktop or mobile device
 - (2) Utilization of source data from other systems/agencies
 - (3) Ongoing refreshes of source data, as requested
 - (4) Leveraging of geographical data and geocoding to highlight and pinpoint affected geographic areas on interactive maps, as requested
- d. Develop, test, implement and maintain public facing and internal Tableau sites in support of the COVID-19 response.
- e. Perform data management for Tableau sites in support of the COVID-19 response including developing and maintaining data models, data dictionaries, database

structure, views, stored procedures, data transformation, data mapping, data imports, and data refresh, as requested.

- f. Perform knowledge transfer including administration, development and configuration, as requested.

6. ACCEPTANCE OF PROJECT TASKS/DELIVERABLES

It shall be in the State's sole determination as to whether a project task/deliverable identified in this Contract or in a supplemental Work Authorization (WA), Exhibit A-2 has been successfully completed and acceptable to the State. Acceptance criteria shall consist of the following:

- a. The approval process is outlined in Section 11, Performance.
- b. A signed WA Acceptance Document (WAAD), Exhibit A-4 is required for each project task/deliverable identified in a WA.
- c. The Contractor shall meet all time-lines, as agreed to in the Contract or in WA.

7. CONTRACTOR REPORTING REQUIREMENTS

The Contractor must submit **weekly** written status reports in MS Word format to the CDT Contract Administrator as directed. The reports shall be detailed regarding current status and future activities. Status reports are **not** considered deliverables under the terms of this Contract. These reports shall include, but not limited to:

- a. A summary of the work completed during the reporting period, showing actual vs. planned.
- b. Highlighted tasks that are behind schedule, adopted remediation plans, and overall impact on the project.
- c. The status of the overall engagement and all phases/projects, including discussion of risks, problems encountered, solutions, and proposed solutions.
- d. The tasks expected to be completed in the next reporting period.
- e. An accounting of Contractor staff person(s) hours for the prior week and for the Contract to date i.e. time sheets.
- f. Ad hoc reporting as required.
- g. If requested, the Contractor shall participate in periodic briefings for Executive Management, as deemed appropriate by the CDT.

8. CONTRACTOR RESPONSIBILITIES

- a. The Contractor will provide its own equipment necessary to perform the required duties.
- b. The Contractor shall designate a primary contact person to whom all project communications may be addressed and who has the authority to act on all aspects of the services.
- c. The Contractor will notify the CDT, in writing, within five (5) calendar days of any changes in the personnel assigned to the project tasks/deliverables by completing a Personnel Change Order Request form, Exhibit A-3 with attached resume and staff experience worksheet. If a Contractor employee is unable to perform due to illness, resignation, or other factors beyond the Contractor's control, the Contractor will make every reasonable effort to provide suitable substitute personnel. The substitute personnel must be equal or better qualifications than the replaced personnel, meet all requirements and be approved in advance of any performance under the Contract by the CDT Contract Administrator via an approved Personnel Change Order Request form. The rates for the substituted personnel must be less than or equal to the rates of the personnel that they are replacing.
- d. The Contractor personnel shall perform their duties remotely or on any of the premises of the CDT facilities located within the greater Sacramento area during regular State business hours and at all other times as required to successfully provide the services described in this SOW.
- e. The Contractor will adhere to the CDT policies and procedures, guidelines and templates including access and security requirements.

9. DEPARTMENT OF TECHNOLOGY RESPONSIBILITIES

- a. Designate a person to whom all Contractor communication may be addressed, and who has the authority to act on all aspects of the services. This person will review the SOW and associated documents with the Contractor to ensure understanding of the responsibilities of both parties.
- b. Provide a timely review and approval of information and documentation provided by the Contractor to perform its obligations.

10. WORK AUTHORIZATIONS (WA)

- a. Each WA shall consist of a detailed statement of the purpose, objective, or goals to be undertaken by the Contractor and all information requested to be provided per WA form, Exhibit A-2.
- b. All WA must be in writing prior to beginning work and signed by the Contractor and the CDT Contract Administrator.
- c. The CDT has the right to require the Contractor to stop or suspend work on any WA.

- d. Personnel resources will not be expended (at a cost to the CDT) on task/deliverable accomplishment in excess of estimated work hours required unless the procedure below is followed:
 - (1) If, in performance of the work, the Contractor determines that a WA to be performed under this Contract cannot be accomplished within the estimated work hours, the Contractor will immediately notify the CDT in writing of the Contractor's estimate of the work hours which will be required to complete the WA in full. Upon receipt of such notification, the CDT may:
 - (a) Authorize the Contractor to expend the estimated additional work hours or service in excess of the original estimate necessary to accomplish the WA;
 - (b) Terminate the WA; or
 - (c) Alter the scope of the WA in order to define tasks that can be accomplished within the remaining estimated work hours.

The CDT will notify the Contractor in writing of its decision within seven (7) calendar days after receipt of the notification. If notice of the decision is given to proceed via an amended WA signed by the Contractor and CDT, the Contractor may expend the estimated additional work hours for agreed upon services. The CDT agrees to reimburse the Contractor for such additional work hours

11. PERFORMANCE

The CDT will be the sole judge of the acceptability of all work performed and all work products produced by the Contractor as a result of this SOW. Should the work performed or the products produced by the Contractor fail to meet the CDT conditions, requirements, specifications, guidelines, or other applicable standards, the following resolution process will be employed, except as superseded by other binding processes:

- a. The CDT will notify the Contractor after completion of each phase of service of any acceptance problems by identifying the specific inadequacies and/or failures in the services performed and/or the products produced by the Contractor. The costs related to rework of unacceptable work products shall not be billed to the CDT.
- b. The Contractor will respond to the CDT by submitting a detailed explanation describing precisely how the identified services and/or products actually adhere to and satisfy all applicable requirements, and/or a proposed corrective action plan to address the specific inadequacies and/or failures in the identified services and/or products. Failure by the Contractor to respond to the CDT's initial problem notification within the required time limits may result in immediate termination of the Contract.

In the event of such termination, the CDT shall pay all amounts due the Contractor for all work accepted prior to termination.

- c. The CDT will notify the Contractor in writing whether it accepts or rejects the explanation and/or plan. If the CDT rejects the explanation and/or plan, the Contractor will submit a revised corrective action plan within three (3) State business days of notification of rejection. Failure by the Contractor to respond to the CDT's notification of rejection by

submitting a revised corrective action plan within the required time limits may result in immediate termination of the Contract. In the event of such termination, the CDT shall pay all amounts due the Contractor for all work accepted prior to termination.

- d. The CDT will notify the Contractor in writing whether it accepts or rejects the revised corrective action plan proposed by the Contractor. Rejection of the revised corrective action plan will result in immediate termination of the Contract. In the event of such termination, the CDT shall pay all amounts due the Contractor for all work accepted prior to termination.

12. PROBLEM ESCALATION

The parties acknowledge and agree that certain technical and project related problems or issues may arise, and that such matters shall be brought to the CDT's attention. Problems or issues shall normally be reported in regular status reports. There may be instances, however, where the severity of the problems justifies escalated reporting. To this extent, the Contractor will determine the level of severity and notify the appropriate CDT personnel. The CDT personnel notified, and the time period taken to report the problem or issue, shall be at a level commensurate with the severity of the problem or issue. The CDT personnel include, but are not limited to, the following:

First level: Manveer Bola, Deputy Chief Technology Innovation Officer

Second level: Scott Gregory, Chief Digital Innovation Officer

Third level: Richard Rogers, Chief Deputy Director

13. AMENDMENTS

Consistent with the terms and conditions of the original agreement, and upon mutual consent, the CDT and the Contractor may execute amendments to this Agreement, including revisions to Exhibit A – Statement of Work (i.e. objective, project tasks and deliverables). There shall be options to amend for additional time and funds. No amendment or variation of the terms of this Agreement shall be valid unless made in writing, and agreed upon by both parties and approved, as required. No verbal understanding or agreement not incorporated into the Agreement is binding on any of the parties.

14. CANCELLATION

The CDT may exercise its option to terminate the Contract at any time with 30 calendar days' prior written notice. In the event of such termination, the CDT shall pay all amounts due the Contractor for all tasks/deliverables accepted prior to termination

15. ATTORNEY'S FEES

Each party is responsible for its own attorney's fees in the event of a dispute between the State and Contractor.

16. OTHER CONTRACT CONSIDERATIONS

- a. The Contractor will act as prime contractor under this Contract. In addition to identifying all personnel proposed to work under this Contract, the Contractor shall also identify its subcontractor affiliation, as applicable.
- b. The CDT reserves the right to approve all subcontractors prior to the performance of any work by the subcontractor.
- c. Nothing contained in this Contract shall create any conceptual relationship between the State and any subcontractors, and no subcontract shall relieve the Contractor of its responsibilities and obligations hereunder. The Contractor is fully responsible to the CDT for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by any of them.
- d. If a subcontractor is a California Certified Small Business (SB) and/or Disabled Veteran Business Enterprise (DVBE), then those amounts paid to certified subcontractors shall be identified on the Contractor's invoice(s).
- e. The Contractor's obligation to pay its subcontractors is an independent obligation from the State's obligation to make payments to the Contractor. As a result, the State shall have no obligation to pay or to enforce the payment of any monies to any subcontractor.
- f. Military and Veteran Code (MVC) 999.5(d), Government Code (GC) 14841, and California Code of Regulations (CCR) 1896.78(e) requires all Prime Contractor's that had a DVBE firm perform any element of work for a contract to report DVBE information.

Prime Contractors are required to maintain records supporting the information that all payments to DVBE subcontractor(s) were made. The Prime DVBE Subcontracting form can be found at the following link: https://www.documents.dgs.ca.gov/dgs/fmc/gsp/pd/pd_810P.pdf and the instructions can be found at the following link: <https://www.dgs.ca.gov/PD/Services/Page-Content/Procurement-Division-Services-List-Folder/File-a-DVBE-Subcontractor-Report#@ViewBag.JumpTo>. Completed forms are to be e-mailed to: primeDVBE@state.ca.gov.

17. FEDERAL TAX ADMINISTRATION REQUIREMENTS

Subject to the Internal Revenue Service (IRS), federal tax information (FTI) requirements, if an unfavorable response is received by the IRS, this contract will be terminated immediately, per General Provisions – Information Technology (GSPD-401IT), clause 23, Termination for Default. In conformation with IRS Publication 1075, Contractor must comply with Exhibit D, Special Terms and Conditions to Safeguard Federal Tax Information.

18. SECURITY AND DATA PROTECTION REQUIREMENTS

The CDT must ensure agreements with state and non-state entities include provisions, which protect and minimize risk to the state when engaging in the development, use, or maintenance of information systems, products, solutions, or services. In order to comply with the State Administrative Manual (SAM) Section 5305.8, Contractor must comply with Exhibit D, Security and Data Protection.

19. ACKNOWLEDGEMENT OF STATE OF EMERGENCY

The parties acknowledge that Contractor has been requested by CDT to enter into this Contract expeditiously on the CDT's standard form agreement in recognition of the Governor of California's declaration of a State of Emergency on March 4, 2020 and the serious threat to the health of California residents as a result of the impacts of the global COVID-19 epidemic. Accordingly, notwithstanding anything to the contrary herein:

a. Detailed Statement of Work.

- (1) Promptly after the execution of this Contract, the parties will jointly collaborate to develop one or more Detailed Statement of Work based on the CDT's detailed requirements (the "Detailed Statement of Work") mutually agreed to by the parties, which Detailed Statement of Work will include a description of work products and deliverables.
- (2) The parties acknowledge that the requirements are fluid and will require continuous revision and collaboration to further refine the Statement of Work.
- (3) The parties acknowledge that the Detailed Statement of Work may clarify or amend the scope of work described in this SOW and other requirements in the Contract to reflect the detailed requirements of the CDT and any limitations or constraints that Contractor must operate within to meet such requirements.
- (4) To the extent of any conflict or inconsistency between the Detailed Statement of Work and this Contract, the Detailed Statement of Work will prevail to the extent of such conflict or inconsistency.

Good Faith Efforts to Make Necessary Amendments. CDT acknowledges the good faith efforts that Contractor has exercised in entering into CDT's standard-form agreement on an expeditious basis under the extraordinary circumstances. Accordingly, if requested by either party, the parties will use good faith efforts to make reasonably amendments pursuant to Section 13 to reflect any necessary changes in order to protect the interest of either party, including each party's intellectual property rights and any proprietary or confidential information.

**EXHIBIT A-1
STAFF RESUMES**

JENNIFER DE LA CRUZ

Director of Data Engineering & Analytics

██████████@analyticaconsulting.com • ██████████

Summary of Qualifications

As Director of Analytics, Jennifer manages Analytica's consulting organization and is responsible for the delivery of all client projects. She is an accomplished data professional with over 35 years of experience in consulting and industry. Jennifer holds a master's degree in data science and engineering from UC San Diego, an MBA from Wharton, and a master's degree in engineering from Stanford University. She is also certified as a Lean Six Sigma Master Black Belt.

Jennifer has a passion for using statistics and data science to solve complex, high-value business problems. Her experience spans a range of functions including financial management, process improvement, operations management, product development and product quality. Jennifer's industry strengths lie in information systems, financial services, healthcare, engineering, manufacturing, and insurance.

Professional Work Experience

Analytica Consulting – San Diego, CA

2019 – Present

Director of Analytics

Jennifer manages Analytica's consulting organization and is responsible for the delivery of all client projects, including:

- Rady Children's Hospital San Diego (RCHSD) – Led the design and development of a centralized data analytics solution to help improve hospital operations
- California Department of Public Health – Led the design and development of several data & analytics projects for the Center of Healthcare Quality and Emergency Preparedness Office.
- Illumina – Led the design and development of several data & analytics projects for the Commercial, Global Quality & Operations, and Manufacturing divisions.
- Qualcomm Employee Diversity and Global Climate Survey Studies – Led the design and development of two HR studies for Qualcomm.
- Becton Dickinson (BD) – Led the design and development of an unsupervised machine learning model using natural language processing to improve product failure classification
- California Community College League (CC League) – Led the design and development of a CEO Tenure and Retention study as well as a Student Performance Funding study.

University of California San Diego – San Diego, CA

2016 – 2018

Master's Thesis Project, Data Science and Engineering: Network Analysis of Political Data

- Designed data model of political situations as network graphs and developed graph database to support solution by constructing working data pipeline that parsed 17 thousand newspaper articles using Stanford CoreNLP natural language processing and transformed annotations into political network of senators of 115th U.S. Congress
- Presented results at UC San Diego to members of Computer Science and Engineering Department, Political Science Department, San Diego Supercomputer Center, and local data science community

IBM Corporation*Data Science Engineer*

2017

Business Process Owner of Global Travel and Expense Reimbursement, HQ

2010 - 2016

Global Travel Expense Controller, IBM Corporate HQ

2008 - 2010

Senior Managing Consultant, IBM Global Business Services

2002 – 2008

- Used complex data mining and predictive statistical modeling to understand patterns of policy non-compliance within large quantities of expense reimbursement data, and developed risk scoring models to detect anomalies
- At IBM Research laboratory, used SQL queries to extract training and test data from multiple tables in large database and applied machine learning techniques of AI to develop classifier that aggregates business travel expenses, then collaborated with team of data scientists to integrate classifier into new, data-driven business solution: intelligence tool that company both sells to clients and uses internally for negotiating volume-based cost savings with suppliers
- Worked directly with senior leaders at consulting clients State Street Bank, Kaiser Permanente, Sprint Nextel and others to identify problems through complex data analysis and deploy solutions for business process improvement
- As IBM-certified Lean Six Sigma Master Black Belt, trained 950 Black Belts, Green Belts and Champions at Fidelity Investments, USAA, Microsoft, and other client companies to convert data into valuable analytics solutions using advanced quantitative methods and statistical modeling techniques such as correlation analysis, regression analysis (linear, non-linear and logistic), analysis of variance, chi-square testing and design of experiments
- Established thought leadership and honed communication skills appropriate for executive-level audiences by writing whitepapers and presenting case studies at conferences of the Institute of Financial Operations, Institute for Defense and Government Advancement, International Quality and Productivity Center, Society of Actuaries, California Association for Healthcare Quality, and other professional organizations, for business development

PricewaterhouseCoopers – San Diego, CA

2000 - 2002

Principal Consultant, PwC Consulting

- Implemented strategic plan for process management at Wellmark Blue Cross and Blue Shield that made process owners accountable for quality metrics and cost
- Trained employees and coached improvement projects in Wellmark call center that saved over half a million dollars while providing better service to two million customers and health care providers

Black & Decker Corporation – Pacoima, CA

1999 – 2000

Director, Six Sigma, Pfister Division

- Implemented Six Sigma initiative for quality improvement and cost reduction at faucet and fixture manufacturer
- Reported directly to President of Pfister Division with dotted line accountability to Black & Decker Vice President
- Led team of five Black Belts in completing projects worth \$6 million in scrap elimination, rework reduction, and process streamlining
- Developed multi-level training strategy for 800 employees to introduce culture of continuous improvement
- Presented quarterly results to Black & Decker's President, Six Sigma Global Support Team, and Wall Street analysts

Rain Bird Sprinkler Manufacturing – Tucson, AZ

1997 – 1998

Plant Manager, Sonora Southwest Molding Division

- Directed \$5.8-million start-up manufacturer of injection molded sprinkler and irrigation components
- Produced 35 million parts in first year running 24/7 operation
- Expanded plant from 30 thousand square feet to 50 thousand square feet, increased capacity from 17 to 33 presses between 40 and 500 tons in size, and increased workforce from 100 to 180 employees
- Managed and recruited leadership team including highly-qualified managers of production, quality, materials, and manufacturing engineering

Protogenesis – Carlsbad, CA 1990 – 1997

President

- Founded company to develop new products and manufacture prototypes, molds, tooling, and fixtures using computer-aided design and computer-aided manufacturing (CAD/CAM) and CNC machining
- Served 300 corporate and professional clients
- Grew sales at equivalent rate of 30% per year over five years
- Built company into entity with strong market value, then negotiated its acquisition by multi-million-dollar, privately held customer of company, securing significant returns for principals

Rohm and Haas Company – Philadelphia, PA

Summer 1989

Marketing Associate, Corporate Headquarters

- Developed strategy to introduce engineering thermoplastics additives into blow molding market with demand of over 50 million pounds a year and growing, by targeting key applications for cars, appliances and computers

General Motors Corporation – Warren, MI

1984 - 1988

Senior Process Engineer, General Motors Technical Center

- Developed new manufacturing technology for polymer composite body panels used on first mass-produced mid-engine sports car made by U.S. manufacturer
- Completed one-year management training program with assignments in auto assembly plant, component manufacturing plant, and advanced vehicle design center

Education and Certifications

University of California San Diego – La Jolla, CA

Master of Advanced Study; Major in Data Science and Engineering

The Wharton School, University of Pennsylvania – Philadelphia, PA

Master of Business Administration; Dual Major in Finance and Entrepreneurial Management

Stanford University – Stanford, CA

Master of Science; Major in Chemical Engineering, General Motors Graduate Study Fellowship

University of Michigan – Ann Arbor, MI

Bachelor of Science; Major in Chemical Engineering, Cum Laude

Skills and Abilities

- Python programming language and libraries (scikit-learn, pandas, SciPy) for data science and AI/ML Applications
- Machine learning algorithms (classification, regression, clustering) for finding new solutions to complex problems
- SQL for querying and managing relational data
- Tableau and other techniques for data visualization

BRENT JOHNSON

██████████@analyticaconsulting.com • ██████████

SUMMARY OF QUALIFICATIONS

Brent is a seasoned business intelligence professional and data visualization expert with over ten years of experience and an MBA from UC Davis. He is a Tableau Desktop Certified Professional and is proficient with several analytic platforms including Salesforce, Cognos, and Denodo.

Brent has deep expertise in the healthcare, vision, and biomedical research industries. He helps clients utilize their data to improve decision-making and increase efficiency. He has garnered extensive experience working with numerous State agencies

PROFESSIONAL WORK EXPERIENCE

Analytica Consulting – San Diego, CA

Principal Consultant

2017 – Present

- California Department of Public Health – developed analytics solutions and data models for the Center for Healthcare Quality (CHCQ). Organized scattered data from numerous paper and electronic spreadsheets into an automated, real-time system. Integrated healthcare quality data encompassing more than 10,000 facilities. Provided each district office the ability to clearly see where compliancy issues are occurring. Improved patient awareness by making such data publicly viewable.
- Illumina – developed analytics solutions to help improve the manufacturing process in Singapore of the company's main product line.
- California Community College League – developed an analytics solution with visual representations of over 100 years of California Community College chief executive officer tenure data. The solution is an interactive infographic that displays the growing presence of women in CEO positions, the effects of the Great Recession on CEO retention, and provides a snapshot of the diversity of California CEOs.
- Tableau Trainer – leads monthly two-day training courses on techniques and best practices for Tableau development.

Cerner Corporation – Roseville, CA

2016 – 2017

Data Analyst Associate

- Performed complex queries on multiple databases to create data sets for usage by analysts .
- Lead analyst on Population Health effort to identify, track, perform interventions, and develop strategy for at-risk population.
- Created interactive Revenue Cycle dashboards to track performance metrics for enterprise hospital system.

Vision Service Plan (VSP) Optics Group – Rancho Cordova, CA

2013 – 2016

Senior Business/Financial Analyst

- Managed analytics team for business with revenue of \$270MM/year, speaker at Tableau Conference 2015.
- Trained both users and developers on how to leverage databases to build interactive dashboards in Cognos and Tableau.
- Managed Salesforce database and created dashboards/queries to better analyze Salesforce data and trained over 200 users.

University of California, Davis Health System – Sacramento, CA

2010 – 2013

MBA Analyst, Financial Services Administration

- Performed economic impact analysis of Betty Irene Moore School of Nursing on Sacramento and California economies.

The Scripps Research institute (TSRI) – La Jolla, CA

2007 – 2009

Assistant to the Director, International Office

- Coordinated programs for one of the largest biomedical non-profits and managed visa documents for 1,000 foreign nationals.

EDUCATION AND CERTIFICATIONS

University of California, Davis, Graduate School of Management – Davis, CA

- Master of Business Administration, Strategy & General Management

University of Miami – Coral Gables, FL

- Bachelor of Arts, Economics. Double Minor: Mathematics & English

Tableau Qualified Associate Certification

Tableau Certified Professional Certification

COMPUTER SKILLS

Affiliations: Metro EDGE Young Professionals Group, IIBA (International Institute of Business Analysis)

Proficient Software: SQL, Tableau Desktop/Server, Cognos Analytics, Salesforce, Excel, PowerPoint, Visio, Minitab, SPSS

THOMAS MACKAY

██████████@analyticaconsulting.com • ██████████

SUMMARY OF QUALIFICATIONS

Thomas is a data analytics expert, data engineer and business process specialist who is thorough, meticulous, highly adaptive and works at an incredible fast pace. With over 15 years of experience in IT, engineering and business intelligence, he currently works as a Principal Consultant for Analytica Consulting providing data architecture, data analytics and data engineering development for multiple Fortune 500 clients within the U.S.

Thomas holds a Master's Degree in Industrial Process Management and a Bachelor's of Engineering degree from Rensselaer Polytechnic Institute (RPI).

EMPLOYMENT HISTORY/EXPERIENCE

Analytica Consulting – San Diego, CA

Principal Data Architect

Dec 2014 – Present

- Rady Children's Hospital of San Diego
 - Led the design and development of centralized data and analytics solutions which visualized and improved operational metrics for the hospital's specialty departments including Cardiology, Endocrinology, Nephrology, Pulmonology and other sub-specialties.
 - Worked as the liaison between the hospital's IT and Healthcare staff to develop the operational dashboards using data from the Epic EMR system.
- AMN Healthcare
 - Led the design and development of a centralized data and analytics solution which integrated physician staffing information in Salesforce with financial and billing data in PeopleSoft as well as other business systems
 - The solution integrated 30 disparate systems into a centralized data architecture using Microsoft SQL Server and QlikView
 - Oversaw the development of 125 dashboards and reports analyzing all facets of the Locum Tenens healthcare staffing business
- Pacific Life
 - Developed analytics portion of a critical project which integrated multiple business platforms with metric and data traceability utilizing QlikView.
 - Created a pilot QlikSense implementation to begin the transition of PacLife to the newer version of Qlik
 - Worked with the data governance team to help with their enterprise information management initiatives
- Hologic Inc.
 - Worked with Business Owners and IT Professionals to develop functional dashboards utilizing QlikView and QlikSense.
 - Developed 3-tier layered QlikView data model architecture on top of several systems including Oracle AGILE, Oracle EBS, SAP, Salesforce, and SharePoint.
 - Mentored and trained Business users and developers on how to support and create QlikView apps.
- UCSD Health System
 - Developed QlikView applications analyzing the operational performance of the Surgical and Radiology departments on top of Epic and IMPAX RIS, UCSD's electronic medical records systems
 - Designed an automatic report distribution system allowing physicians within Surgery and Radiology to analyze their performance metrics using Qlik's NPrinting Platform.

UTAS Aerospace – Chula Vista, CA

Data Architect / Sharepoint Designer / Lean Consultant

May 2009 – Dec 2014

- Designed & developed an extensible SharePoint Site to track issues and define internal business processes with integrated web parts.
- Modeled The R&D Value stream and metrics in QlikView connecting to underlying enterprise data
- Assisted several departments in the adoption and design of SharePoint sites with workflows.

- Assisted in the consolidation of Engineering Forms into a single interface. Material Properties Designer
- Designed & Planned manufacturing of specimens to obtain FAA certified material allowable.
- Created tools to track 5000+ specimen Test programs from raw material to destruction.
- Wrote extensions to CATIA to simplify and automate data entry and processing stores.

Sikorsky Aircraft – Stratford, CT

QlikView Developer / Sharepoint Designer / Lean Consultant

Oct 2005 – Aug 2009

- Subcomponent Supplier interface, preliminary design of hydraulic damper and elastomeric bearings.
- Large assemblies in CATIA V5, modeled aircraft blade fold kinematics.

EDUCATION

- M.S. in Industrial Process Management – Rensselaer Polytechnic Institute, Hartford, CT – May 2011
- B.S. in Aerospace Engineering – Rensselaer Polytechnic Institute, Troy, NY – May 2005

SKILLS

Computer Programming: C#, VB.NET, VBA, SQL, Python

Software: MS Visual Studio .NET SQL Server, Oracle, QlikView, Cognos, Business Objects, SharePoint, Salesforce, Oracle Agile PLM, SAP

MICHAEL MARKS

██████████@analyticaconsulting.com • ██████████

SUMMARY OF QUALIFICATIONS

Michael has 10 years of experience in data analytics, is a Certified Scrum Master and holds a M.S. in Information and Data Science from University of California, Berkeley. He has expertise in several data analytics platforms and programming languages including R, SQL, Python, Microsoft (SQL Server & SSIS), Tableau, Qlik, R Shiny and D3.js.

Michael has domain expertise in several areas including product quality, healthcare analytics, agile project management, human-centered data product design, machine learning, multivariate statistics and simulation modeling.

PROFESSIONAL WORK EXPERIENCE

Analytica Consulting – San Diego, CA

2018 – Present

Senior Consultant

- Becton Dickinson – Managed the design and development of a large-scale machine learning model which re-classified over 500,000 product complaints to help BD's MMS Quality Division successfully pass an FDA audit. Acted as the liaison between IT and the Quality team to develop the solution which integrated data from several Quality Management Systems including TrackWise and SAP.
- Rady Children's Hospital of San Diego – Lead the design and development of an analytics solutions which visualized and improved operational metrics for multiple hospital departments. Worked as the liaison between the hospital's IT and Healthcare staff to develop the operational dashboards using data from the Epic EMR system.
- Qualcomm – Worked with Qualcomm's Chief People officer to analyze the results of a Global Climate survey sent to 35,000 employees. Evaluated the statistical significance of several quantitative variables including age, gender, ethnicity, education, years of service, job function, title, and location. Analyzed several qualitative measures including sentiment of survey comments.
- AMN Healthcare – Lead the development of Salesforce and PeopleSoft usage analysis to help the IT organization allocate development resources to appropriate features/projects

Improvement Path Systems – San Diego, CA

2010 – 2018

Senior Data Manager

- Led the design, creation, and delivery of new data-driven products through collaborations with end-users, software engineers, UX designers, data scientists, and client IT staff
- Invented a high-dimensional, unsupervised machine learning technique to empower a client to assess and monitor patient abnormalities
- Led a team of statisticians in the conception and initial implementation of algorithms that could predict deadly patient harms with minimal data
- Directed skill development for company's analysts and data scientists
- Broke down data governance barriers to enable impactful data science solutions
- Developed and deployed various statistical models to improve client hospital operations
- Started the company's San Diego office by building long term client relationships in the area
- Helped grow company from 7 to almost 50 people

EDUCATION AND CERTIFICATIONS

University of California, Berkeley – Berkeley, CA

- M.S. in Information & Data Science

Oakland University – Oakland, CA

- B.S. in Operations Management
- Minor in Business Analytics

Scrum Alliance

- Certified Scrum Master

RESEARCH

- Co-authored 10 manuscripts and abstracts in the areas of machine learning, optimization, biomechanics, orthopedics, and pharmaceuticals.
- Marks, M., et al. (2018) Measuring Abnormality in High Dimensional Spaces with Applications in Biomechanical Gait Analysis. Scientific Reports <https://www.nature.com/articles/s41598-018-33694-3>
- Marks, M. (2018) Abnormality: Measure a subject's abnormality with respect to a reference population. <https://cran.r-project.org/web/packages/abnormality/abnormality.pdf>

SKILLS AND ABILITIES

- Machine learning, multivariate statistics, simulation modeling and data visualization
- R, SQL, Python, Bash and JavaScript
- Microsoft BI Suite (SQL Server & SSIS), R Shiny, Tableau, Qlik and D3.js

JOSHUA KARPEN

██████████@analyticaconsulting.com • ██████████

SUMMARY OF QUALIFICATIONS

Josh holds a Master of Science in Data Analytics from Northwestern University, and a Data Mining Certification from University of California, San Diego. He is an expert in data modeling, data visualization and predictive analytics. He has expertise and certifications in many data analysis tools and platforms including Tableau, Denodo, Microsoft, R, SAS, Python, and SPSS.

Josh is currently serving as the lead consultant at Illumina providing analytics development and data modeling for the Quality, Manufacturing and Product Development organizations.

PROFESSIONAL WORK EXPERIENCE

Analytica Consulting – San Diego, CA

2016 – Present

Principal Consultant

- Illumina
 - Developed analytics solutions for the Quality department, including automation and optimization of the data extraction process from different data sources (Oracle, SAP and ETQ).
 - Developed a data layer for the Manufacturing division which automated the ETL and statistical processes utilizing R and Python.
 - Developed a data layer for the Product Development team which integrated data between JIRA and Tableau. Developed analytics solutions and dashboards in Tableau.
 - Trained over 50 analysts in Tableau development and data modeling best practice across the organization.
- La Jolla Pharmaceutical Company
 - Provided best practices and guidance on implementing Tableau Server.
 - Developed multiple dashboards to be used by executives, managers, and sales staff in the field.
- California Department of Public Health
 - Developed a large-scale analytics solution for the Center for Healthcare Quality (CHCQ) which integrated scattered data from more than 10,000 healthcare facilities into an automated, real-time system using Tableau, Denodo and Microsoft.
 - Setup an enterprise-wide data analytics platform and provided training, development, and guidance to a community of over 200 data scientists and epidemiologists.
- UC Davis Extension
 - Instructor for multiple Data Modeling & Visualization courses

University of California, San Diego

2009 – 2016

Senior Data and Business Intelligence Analyst

- Led a project to build predictive models on data from customer relationship management tool, Salesforce, utilizing SPSS Modeler and Python for data exploration, transformation, and predictive modeling.
- Used time series forecasting to analyze transaction process times in order to determine optimal staffing levels and meet Service Level Agreements with campus customers.
- Part of project team deploying Tableau Server for enterprise level sharing of dashboards and work products, involving coordination with members of BFS Systems/ACT/ITS.
- Created dashboards and reports for Business and Financial Services department using Tableau software.
 - Worked with disparate data sources such as Procurement, Accounts Payable, Travel, Central Receiving, Salesforce, survey data, account reconciliation, unclaimed wires listings.
 - Helped department process owners to define/prioritize metrics and Key Performance Indicators.
- Analyzed survey data related to customer and staff satisfaction.
 - Used charts/graphics to spot at-risk, high impact departments, to guide outreach strategy.
 - Developed Tableau dashboards to enable automated analysis of survey data across UCSD.
- Provided ad-hoc reports for department use/analysis, using T-SQL to create customized queries extracted from multiple databases.

EDUCATION AND CERTIFICATIONS

Northwestern University – Evanston, IL

- M.S. in Data Analytics

University of California – San Diego, CA

- Certification in Data Mining

University of California – Santa Barbara, CA

- B.A.

Tableau Qualified Associate Certification

Tableau Certified Professional Certification

SKILLS AND ABILITIES

- Expertise using Tableau, Qlik, Cognos to create dashboards and perform ad-hoc analytics.
- Expertise in Denodo to create re-usable data models and views.
- Expertise with predictive modeling and data mining methods including demand forecasting, optimization, and multivariate analysis, utilizing R, SAS, SPSS Modeler, and Python.
- Expertise in statistical analysis: hypothesis testing, tests of significance, sampling, interpretation of p-values, sampling methods.

Jun Lee

██████@analyticaconsulting.com • ██████████

SUMMARY OF QUALIFICATIONS

Jun is a data analysis expert and BI tools specialist with expertise in Qlik, Tableau, Denodo, JReport, D3, and various other software. He has extensive knowledge in software development, having developed in C, C++, Java, Python, R, SQL, HTML, CSS, JavaScript and various related frameworks/programming environments.

Jun has domain expertise within the biotech, media and entertainment, product development, software, finance, public health, and manufacturing industries.

PROFESSIONAL WORK EXPERIENCE

Analytica Consulting – San Diego, CA

Senior Consultant

2016 – Present

- **Illumina**
 - Created Tableau executive dashboards including textual analysis and conditional aggregations.
 - Transitioned data sources of different departments into a modular database capable of building new reports. New key metrics, views, and queries were documented into pdf files.
 - Led onsite Tableau trainings to teams of data architects, IT, support, and business, and created online Tableau support infrastructure.
 - Worked with IT to establish and maintain data governance with Illumina's SAP Hana platform and PostgreSQL database.
- **California Department of Public Health**
 - Created reporting-level Tableau dashboards with drill-down capability into key metrics. Various flat files of different file types were transformed into a single, flexible Tableau data source.
 - Debugged and improved existing ETL process, including C# files in Visual Studio and .NET framework, to incorporate new application mechanisms. Created additional logging features for section management.
 - Documented and recommended future application changes to security, remote database connection, and functionality to meet new business requirements.
- **Franchise Tax Board**
 - Developed 12 Section 501 and WCAG 2.0 compliant tax forms in Adobe InDesign.
 - Created form structure, style, and action behavior cross-referencing Adobe and heuristic best practices for accessibility; compiled a checklist adherent to Section 508 for future reference.
 - Tested forms in different environments and assisted-technology for modular and transparent behavior.
- **Certona**
 - Developed executive dashboards in JReport by creating business views, library components, and customized queries to stored procedures.
 - Formed a new data hierarchy in SQL server and JReport server, including implementation guidelines.
 - Analyzed capabilities of various non-relational databases and provided a data warehouse solution.
- **First Place for Youth**
 - Developed Python scripts that extract all JSON data objects from a website, and structure the data into a clean format for the client.
 - Set up an automated version of the script via an RDC to an Amazon E2 database, allowing users to freely access a continuously refreshing script.
 - Used multi-threading and abstraction to reduce extraction and transformation process time by over 400%.
- **Ingram Micro**
 - Worked with business owners and IT professionals to develop functional dashboards with proper data governance in QlikView.
 - Developed a 2-tier layered QlikView data model architecture and automated cluttered flat files and unstructured data sources.
 - Mentored and trained business users and developers on how to support and create QlikView apps.

PROFESSIONAL WORK EXPERIENCE

UCSD BFS Analytics – San Diego, CA

Data Analyst

2014 – 2016

- Developed a web crawler in Python to extract information from sites and transform into a relational database.
- Transformed data (SQL databases, HTML tables, flat files) into flexible data sources capable of front-end analysis.
- Provided predictive modeling and trend analyses in Tableau to UCSD's staff leadership team, on a biweekly basis. Visualized and presented data analyses in Tableau workbooks and dashboards.
- Optimized Tableau queries by merging data sources and recreating nested relationships, reducing load time and improving accuracy of query results. Blended data from query results, creating new insights into the data.

EDUCATION AND CERTIFICATIONS

University of California, San Diego – La Jolla, CA

- B.S. in Computer Science
- B.S. in Cognitive Science

JAKE CONIGLIONE

██████████@analyticaconsulting.com • ██████████

SUMMARY OF QUALIFICATIONS

Jake is an experienced data analyst and engineer with expertise in developing analytics applications that are accessible to both technical and non-technical business users. He has expertise with several analytics platforms including Tableau and Qlik and has worked with various data sources ranging from relational databases (Oracle, SQL Server, MySQL), commercial applications (Salesforce, Oracle) and custom software. Jake has presented to community leaders, state officials and executives of respected companies.

PROFESSIONAL WORK EXPERIENCE

Analytica Consulting – Sacramento, CA

Consultant

2016 - Present

- California Department of Public Health
 - Lead the design, development, and maintenance of both public-facing and executive-level internal Tableau dashboards to support the analytical and business needs of the Center of Health Care Quality.
 - Works closely with program leadership to understand business requirements, define problems, and provide solutions that consistently meet stakeholder needs.
 - Queried source data systems, recommended and implemented optimized data architecture, and produced analysis-ready data.
- UCSD Health
 - Developed an interactive QlikView application for analyzing stroke risk prevention factors.
- Edwards Life Sciences
 - Developed a QlikView application analyzing Salesforce license usage that provided insights leading to \$200k in annual savings.
- Sony
 - Worked closely with Sony's Program Executives on a QlikView application displaying budgetary data for the PlayStation platform.

Nexi – Arcata, CA

Assistant Designer

2014 –2016

- Researched and developed custom electronic solutions for utility metering.
- Provided technical expertise including data analytics, programming, testing, and development.
- Managed intern-team performance and provide weekly memos to the CEO.

EDUCATION AND CERTIFICATIONS

Humboldt State University – Arcata, CA

- B.S. in Environmental Resources Engineering

State of California Certified - Engineer in Training, #159036

Certified Tableau Developer

SKILLS AND ABILITIES

- Expertise using Tableau Desktop, Tableau Server, and QlikView.
- Experience with numerous data source types including Oracle, SQL, and MySQL.
- Able to write VBA macros to automate processes in Word, Excel.
- Experience building dashboards and reports in Salesforce and analyzing Salesforce data.
- Awarded *Meritorious Winner* of the Consortium of Mathematics and its Applications' Annual Interdisciplinary Contest in Modeling in 2016.

RYAN C. HUFFMAN

██████████@analyticaconsulting.com • ██████████

SUMMARY OF QUALIFICATIONS

Ryan is an experienced leader with over 12 years of expertise in all facets of business planning and execution at high-profile corporations. He holds a Master of Science in Economics, Six Sigma Certification, and Supply Chain Management Certification from Kellogg EMBA. Ryan is an expert in data modeling, data visualization and predictive analytics, in addition to being highly skilled in developing large-scale analytics solutions in order to achieve strategic business objectives.

PROFESSIONAL WORK EXPERIENCE

Analytica Consulting – San Diego, CA

2019 – Present

Senior Consultant

- CC League
 - Developed an analytics solution with visual representations of over 100 years of California Community College chief executive officer tenure data.
 - The solution is an interactive infographic that displays the growing presence of women in CEO positions, the effects of the Great Recession on CEO retention, and provides a snapshot of the diversity of California CEOs.

Altair Eyewear, Rancho Cordova, CA

2016 – 2019

Regional Sales Manager, West Coast

- Directed training efforts to identify needs, and effectively prepare the sales team adequately to implement the changes required.
- While changing the culture, maintained steady growth of revenue of 5% by focusing the efforts of my team through streamlined data and analytics.
- Provided results that were so impactful, the culture and processes have been adopted by VSP Global, and are working to be scaled to include every line of business.
- Teamed with other business leaders throughout the organization to identify opportunities for improved data collection and governance processes, driving more impactful results through our analytical efforts.

VSP, Rancho Cordova, CA

2015 –2016

Manager of Ecommerce Analytics

- Successfully developed the analytics organization for VSP's new ecommerce platform. Identified the needs and requirements, and directly managed team that built the data & analytics infrastructure within VSP's Omni-Channel organization.
- Developed a 3-tiered analytics structure with specialized skills within each leg to optimize the use of data within the new ecommerce business.
- Managed conflict between multiple organizations to continuously move the growth of the analytics organization forward while prioritizing efforts and conflicting initiatives.
- Strategically developed KPI's for the major business units to help identify touch points along customer journey with the intent of executing accountability and ultimately optimizing the customer experience.

VSP, Rancho Cordova, CA

2012 – 2015

Lead, Sales & Operations Planning

- Owned all Supply Chain, Sales, and marketing analytics.
- Mapped, analyzed, and improved supply chain network to enhance responsiveness and profitability.
- Created statistical forecast to improve accuracy from 19% variance to .2% variance year over year for the optical lab network allowing for actionable insight regarding staffing, inventory, and capacity planning.
- Provided financial insight into \$300MM manufacturing network to plan budgets and provide key actions.
- Manage team of analysts, recognized as being strong leader and identifying opportunities.

Sacramento City College, Sacramento, CA
Economics Professor

2014 – Present

- Develop curriculum and instruct economics courses and business statistics. Lecture, facilitate and develop innovative learning opportunities to ensure students are engaged. Manage advanced students to ensure correct facilitation of tutoring services with regards to my lectures, and curriculum.
- Create teaching materials, exams and facilitate lectures regarding materials, ensure students comprehend lessons

SureWest Communications, Roseville, CA
Sales & Marketing Consultant

2011 – 2012

- Led global initiatives to unify sales & marketing efforts.
- Conceptualized the strategy and directly managed the team that measured and compared customer lifetime values to enhance the marketing and sales teams with strategic segmentation and promotional opportunities.
- Routinely coached the executive team on price elasticity of different services and products to determine optimal promotional strategies and exercise price discrimination over time with the intent of growing the CLECfootprint.

Marketing Evolution, El Dorado Hills, CA
Research Analyst

2008 – 2009

- Managed all aspects of marketing analytics for Walmart, Coca-Cola, Victoria's Secret, Intuit, and Vanguard to help understand the cost efficiency and effectiveness of each marketing campaign.
- Optimized the campaign and increase ROI, collaborated with management in developing process improvements.

Sonoma Research Associates, Glenn, CA

2006 – 2007

- Analyzed and performed research in the wine industry regarding price sensitivity.
- Consulted various wineries on sales projections and price optimization, maximized profits with finite products.

EDUCATION AND CERTIFICATIONS

Texas A&M University – College Station, TX

- M.S. in Economics, concentration in Microeconomics, Energy Economics and Forecasting

Sonoma State University – Rohnert Park, CA

- B.A. on Economics, concentration in Quantitative and Econometric Methods

SKILLS AND ABILITIES

- Expertise using Tableau and Qlik to create dashboards and perform ad-hoc analytics.
- Expertise with predictive modeling and data mining methods including demand forecasting, optimization, and multivariate analysis, utilizing R, SAS, SPSS Modeler, and Python.
- Expertise in statistical analysis: hypothesis testing, tests of significance, sampling, interpretation of p-values, sampling methods.

PUBLISHED WORK

Using Instrumental Variable Regression to Estimate the Demand for Wine: co-author, Steven S. Cuellar. Published: *The International Journal of Wine Business Research*

An innovative analytics professional with a continuously-evolving skillset. I build strong partnerships with customers and value being a source of enthusiasm in the workplace.

Relevant Experience

Data Scientist, Product Responsibility | Patagonia
Ventura, CA | 2019 - Current

- Joined the Product Responsibility team as Patagonia’s first data scientist
- Designed, implemented, and administered ELT pipelines to quantify environmental impacts (CO₂, water scarcity, eutrophication, toxicity) of every input to every garment Patagonia manufactures
- Designed impactful data visualizations and dashboards for CO₂ emissions (Plotly, D3.js, Tableau)
- Founded an organizational python user group and spearheaded a Product Data Mart initiative
- Worked in Azure environment (DevOPS, Blob storage, Synapse)

Data Scientist (Sr. Utilities Economist) | Tacoma Power
Tacoma, WA | 2019

- Developed, optimized, and scheduled ELT data pipelines in AWS (Lambda, Databricks)
- AWS admin: authored data pipelines using Lambda, DynamoDB, S3, Athena, CodeCommit and SQS
- Tailored SQL views and tasks in Snowflake to self-serve data in a data portal for fish biologists
- Presented data products to the execs and Utilities Board (view [here](#) @ 42:25)
- Deployed and administered JupyterHub on EC2 instance for org-wide analytics collaboration
- Educated and mentored analysts on data engineering & machine learning techniques

Business Intelligence Analyst, Data Science | MINDBODY
San Luis Obispo, CA | 2018 - 2019

- Project leader for Payments Prediction Engine, deploying machine learning pipelines (Random Forest Regressor, XGBoost) via Alteryx to Gainsight for customer outreach (w/ built-in A/B testing)
- Created “Prophit” – an executive dashboard with user-inputted parameters simulating future company revenue (driven by Monte Carlo simulation, deployed via Alteryx to Tableau)
- Service lead for a group of analysts automating customer service reporting
- Designed an ANN (Keras) to predict churn sensitivity to price increases for Customer Success

Analyst/Programmer, Business Intelligence | California Polytechnic University
San Luis Obispo, CA | 2017 to 2018

- Developed logistic regression model predicting student persistence outcomes after admission
- Provided development, administrative, and consultative support for BI environment w/ 400+ users
- Trained extensively on AWS technologies, including Redshift, S3, EC2, QuickSight

Senior Client Intelligence Analyst | MINDBODY
San Luis Obispo, CA | 2015 to 2017

- Served as primary point of contact to COO/Co-founder on subscriber churn and retention
- Presented analysis to audiences ranging from executives to departments of 100+ people
- Promoted self-service analytics with user-friendly Tableau dashboards and SQLscripts

Research Analyst and Database Manager | The Highland Group, Inc.
Boulder, CO | 2012 to 2014

- Managed a proprietary database for a real estate consulting firm and authored 70+ market studies

Education

M.S. in Economics – Florida Atlantic University
B.S. in Economics – California Polytechnic University
Two years in a PhD program in Economics – University of Colorado – Boulder

Student Employment:

GRE Instructor – Sherwood Test Prep (’12), Textbook Consultant - McMillan Publishing (’10 to ’12), Teaching Assistant, Economics – CU Boulder (’10 to ’12), Student Intern – CALPERS (’10), Graduate Assistant – Florida Atlantic University (’09)

Skills Self-Assessment

Jupyter

Python

SQL

Git

Scikit-Learn

Tableau

AWS

Databricks

Excel

Snowflake

Airflow

Alteryx

Matillion

Pyspark

Azure

PowerBI

R

Scala

JavaScript

Conferences

Tableau users (’15, ’19)

R Cascadia (’19)

JupyterCon (’18)

ADITA ZEQOLLARI

██████████@analyticaconsulting.com • ██████████

Summary of Qualifications

Adita holds an M.S. in Data Science & Engineering from the University of California, San Diego and a B.S. in Financial Mathematics and Statistics from the University of California, Santa Barbara. Adita has 10 years of experience in multiple sectors including healthcare, biotech, and education. Her expertise spans a variety of data analytics areas including machine learning, natural language processing, data visualization, and data management, as well as, data analytics tools including Python, Apache Spark, SAS, Tableau, Alteryx, SQL, Oracle BI, and IBM Cognos.

Professional Work Experience

Analytica Consulting – San Diego, CA

2019 - Present

Data Engineering & Analytics Consultant

- North County Health Services (NCHS) - Developed a large-scale centralized data & analytics solution for physicians to receive automated reports containing vital information on high risk patients. Developed the data layer, which automated the ETL and statistical processes by utilizing Python. Collaborated with the NCHS internal team to deliver the solution to healthcare providers across the NCHS system.
- Edwards Lifesciences – Developed a sales operations analytics solution which integrated data from Salesforce, eSales (custom data warehouse) and a proprietary financial system. The solution provided role-based security enabling both internal and external Edward's sales reps to see their sales performance by client, territory and product.
- California Community College League (CC League) – Developed a performance funding statistical and simulation model which enabled the client to allocate funds appropriately.

Stanford University, School of Medicine, Strategy and Analytics – Stanford, CA

2017 – 2019

Strategic Insights Analyst

- Designed and delivered analyses utilizing internal data combined with external data, obtained through web-scraping and APIs, to inform strategic initiatives in the Stanford Medicine network (Stanford Medical School and Stanford hospitals)
- Reversed engineered the U.S. News and World Report medical school rankings utilized in strategic initiatives to improve Stanford's position
- Consulted with departments and divisions in Stanford Medicine to identify and implement analytical solutions

Stanford University, Institutional Research & Decision Support – Stanford, CA

2015 – 2017

Institutional Research Analyst

- Consulted with internal and external stakeholders to design analyses and visualizations, define information needs, and deliver analyses related to Stanford students and faculty (demographics, enrollment, degrees, compensation) using R, Tableau, SQL, and Oracle BI
- Worked closely with Stanford's IT organization to assist with the development of a new student reporting system by designing dashboard specifications, gathering user requirements, providing subject matter expertise, testing, and resolving data issues
- Lead comparative faculty salary analyses examining faculty salaries by department and rank, compiling data from peer institutions to ensure Stanford's competitiveness in hiring / retaining faculty and to support diversity initiatives

Massachusetts Institute of Technology, Data Management – Cambridge, MA

2013–2016

Business Intelligence Analyst

- Collaborated extensively with the Office of the Provost to identify and deliver university-wide data analytics solutions
- Utilized IBM Cognos and Tableau in an Agile environment to develop dozens of analyses and dashboards for administration, faculty, and other users to support decision-making covering subjects such as finance, HR, research and admissions
- Developed and administered training classes, user groups, and demos to empower users to implement available and emerging software to streamline business processes and gather insights from data

Massachusetts Institute of Technology, School of Engineering – Cambridge, MA

2012 – 2013

Financial Assistant in Research Administration

- Responsible for the fiscal management of 15 engineering faculty members' research accounts
- Worked closely with professors, MIT's Office of Sponsored Programs, and sponsors to prepare and submit grant proposals
- Abbott Vascular, Operations and Site Services – Temecula, CA 2011 – 2012 Financial Analyst
- Analyzed budget variances using SAP and in-house data management and BI systems to provide insight to senior leadership
- Prepared monthly analyses of operational results with comparison to forecast to support operational cost-saving projects
- Generated analyses compiling data across several systems to support audits and ensure compliance with FDA requirements

Education and Certifications

University of California – San Diego, CA

M.S. Data Science & Engineering

University of California Santa Barbara – Santa Barbara, CA

B.S. Financial Mathematics and Statistics

Harvard University Extension School – Cambridge, MA

Courses: Organizational Behavior, Financial Statement Analysis, Investment Theory and Applications, Nonprofit Accounting

**EXHIBIT A-2
WORK AUTHORIZATION FORM**

The task/deliverable(s) will be performed in accordance with this Work Authorization and the provision of Contract Number:

WORK AUTHORIZATION NUMBER

PAGE(S)

of

TITLE OF TASK/DELIVERABLE

TASK/DELIVERABLE SUMMARY *(Brief description of task/deliverable to be performed under work authorization)*

START DATE

COMPLETION DATE

TOTAL ESTIMATED LABOR HOURS

TOTAL ESTIMATED COST

APPROVALS

CONTRACTOR CONTRACT ADMINISTRATOR NAME

TITLE

SIGNATURE

DATE

DEPARTMENT OF TECHNOLOGY CONTRACT ADMINISTRATOR NAME

TITLE

SIGNATURE

DATE

The following pages are not mandatory, as long as the task/deliverable summary on the WA form is detailed, but highly recommended.

1. TASK/DELIVERABLE SUMMARY INFORMATION

SUMMARY			
Task/Deliverable Number			
Task/Deliverable Name			
Version Number			
Total Review Time for Draft and Final Document Task/Deliverable in State Business Days	Total Review Time	Draft Review	Final Review
Delivery/Format			
Number of Copies			
Intended Audience			

2. INTRODUCTION

3. REQUIREMENTS

3.1. REQUIREMENTS DESCRIPTION

3.2. SPECIAL REQUIREMENTS/CLARIFICATIONS

4. TASK/DELIVERABLE CONTENT

4.1. SCOPE

4.2. DESCRIPTION

Project Management Approval – Section where approval signatures are gathered. There should be two tables for review log and management approval signatures.

Table 1.1 Task/Deliverable Review History Log

TASK/DELIVERABLE REVIEW HISTORY LOG		
Reviewer/Role	Date	Comments

Table 1.2 Task/Deliverable Project Management Approval

TASK/DELIVERABLE XXXX		
Approver/Role	Date	Signature
Project Manager		

TASK/DELIVERABLE XXXX
Comments:

4.3. REFERENCED DOCUMENTS

4.4. CRITICAL DEPENDENCIES



4.5. RESOURCES

- The following table lists the key resources by organization required to achieve a successful signoff on Task/Deliverable XXXX.

STATE KEY RESOURCES	
Role	Responsibilities
OTech Project Manager	Responsible for Acceptance of the Final Task/Deliverable.
OTech Project Director	Responsible for Senior Leadership review and approval.
XXXX Project Manager	Responsible for Senior Leadership review and approval.

VENDOR KEY RESOURCES	
Role	Responsibilities
Vendor Project Manager	Responsible for Quality Assurance review.

**EXHIBIT A-3
PERSONNEL CHANGE ORDER REQUEST FORM**

CHANGE ORDER NO. CO-	
Contractor Name: _____ Contract Number: _____	
Proposed Start Date: _____ or upon approval by the Contract Administrator, whichever occurs later.	
<u>Reason for Change:</u> 	
<u>Description of Change:</u> To Swap out the following Personnel. Current Personnel: (Name, classification and hourly rate) Proposed Personnel: (Name including phone number and email address) 	
<u>Proposed Personnel Classification:</u> (must be equal or better than current classification)	<u>Proposed Hourly Rate:</u> (must be less than or equal to current rate)
<u>Resume Attached?</u> <u>Experience Worksheet included?</u>	
<u>Approval:</u> Changes identified above are in accordance with the terms and condition of the contract. By signing below, the Contractor Official has confirmed that the proposed staff meets the personnel classification requirements and any requirements listed in the Statement of Work (SOW), Exhibit A. The Contract Administrator's signature below indicates that he/she has confirmed that the proposed personnel staff meets the requirements listed in the SOW, Exhibit A.	
Contractor Official (Print name & Sign) / Date 	CDT Contract Administrator (Print name & Sign) / Date 

**EXHIBIT A-4
WORK AUTHORIZATION ACCEPTANCE DOCUMENT**

CONTRACTOR NAME: _____

CALIFORNIA DEPARTMENT OF TECHNOLOGY CONTRACT NUMBER: _____

WORK AUTHORIZATION ACCEPTANCE DOCUMENT (WAAD) NUMBER: _____

TITLE: _____

COMPLETION DATE: _____

TOTAL COST: \$ _____

DESCRIPTION:

CALIFORNIA DEPARTMENT OF TECHNOLOGY ACCEPTANCE OR REJECTION:

AUTHORIZED AND APPROVED:

CONTRACTOR OFFICIAL SIGNATURE / DATE

CDT CONTRACT ADMINISTRATOR
SIGNATURE / DATE

Note: Once the Contractor and the California Department of Technology have approved the AD as stipulated in the contract, the Contractor may submit an invoice to the Department of Technology. Refer to payment terms in Exhibit B.

EXHIBIT B
BUDGET DETAIL AND PAYMENT PROVISIONS

1. Payment for services performed under this Contract shall be Hour by Work Authorization. It shall be the CDT's sole determination as to whether a task/deliverable has been successfully completed and is acceptable. A signed Work Authorization Acceptance Document, Exhibit A-4 is required from the CDT Contract Administrator before processing an invoice for payment.
 2. Invoices shall be submitted, and shall identify labor and costs charged. Invoices shall be submitted monthly, in arrears, however, invoices shall be due and payable, and payment shall be made, only after the CDT acceptance under this Contract.
 3. The Contractor costs related to items such as travel and per diem are costs of the Contractor, shall be inclusive of the monthly rate, and will not be paid separately as part of this Contract.
 4. Submit your invoice using ONE of the following options referencing the Contract Number or Agency Order Number:
 - a. Send via U.S. Mail in **TRIPLICATE** to:
California Department of Technology
Financial Management Branch – Accounting Office
P.O. Box 1810
Rancho Cordova, CA 95741
- OR**
- b. Send electronically to: APInvoices@state.ca.gov
 5. It is mutually agreed that if the Budget Act of the current year and/or any subsequent years covered under this Contract does not appropriate sufficient funds for the program, this Contract shall be of no further force and effect. In this event, the State shall have no liability to pay any funds whatsoever to the Contractor or to furnish any other considerations under this Contract and Contractor shall not be obligated to perform any provisions of this Contract.
 6. If funding for any fiscal year is reduced or deleted by the Budget Act for purposes of this program, the State shall have the option to either cancel this Contract with no liability occurring to the State, or offer a contract amendment to the Contractor to reflect the reduced amount.
 7. Payment will be made in accordance with, and within the time specified in, Government Code Chapter 4.5, commencing with Section 927. Payment to small/micro businesses shall be made in accordance with and within the time specified in Chapter 4.5, Government Code 927 et seq.

**EXHIBIT B-1
COST WORKSHEET**

The Contractor shall provide all labor, materials, and equipment necessary to provide the services for **COVID-19 Tableau Dashboard Support** in accordance with the specifications described in the SOW, Exhibit A, at the rates specified below. **Payment for services performed under this contract shall be hourly by WA.**

Consultant Name	Consultant Role	CMAS / GSA Labor Category	CMAS / GSA Labor Rates
Jennifer De La Cruz	Data Visualization Specialist	IT Principal or SME	\$ 150.00
Brent Johnson	Data Visualization Specialist	IT Principal or SME	\$ 150.00
Tom Mackay	Data Engineer	IT Principal or SME	\$ 150.00
Michael Marks	Data Scientist	IT Senior Consultant	\$ 120.00
Joshua Karpen	Data Visualization Specialist	IT Senior Consultant	\$ 120.00
Jun Lee	Data Visualization Specialist	IT Senior Consultant	\$ 120.00
Jake Coniglione	Data Visualization Specialist	IT Senior Consultant	\$ 120.00
Ryan Huffman	Data Visualization Specialist	IT Senior Consultant	\$ 120.00
Brett Vanderblock	Data Visualization Specialist	IT Senior Consultant	\$ 120.00
Adita Zeqollari	Data Visualization Specialist	IT Consultant	\$ 110.00

The total amount of this contract shall not exceed \$250,000.00

EXHIBIT D SPECIAL TERMS AND CONDITIONS TO SAFEGUARD FEDERAL TAX INFORMATION

Federal statute, regulations and guidelines require that all contracts for services relating to the processing, storage, transmission, or reproduction of federal tax returns or return information, the programming, maintenance, repair, or testing of equipment or other property, or the providing of other services, for tax administration purposes include the provisions contained in this exhibit. (See 26 U.S.C. §6103(n); 26 C.F.R. §301.6103(n)-1(a)(2) and (d); Internal Revenue Service (IRS) Publication 1075, Tax Information Security Guidelines for Federal, State and Local Agencies (Rev. 9-2016), Section 5.5 and Exhibit 7.)

The contractor agrees to comply with 26 U.S.C. §6103(n); 26 C.F.R. §301.6103(n)-1; IRS Publication 1075 (Rev. 9-2016); and all applicable conditions and restrictions as may be prescribed by the IRS by regulation, published rules or procedures, or written communication to the contractor. (See 26 C.F.R. §301.6103(n)-1(d); IRS Publication 1075 (Rev. 9-2016))

I. PERFORMANCE

In performance of this contract, the contractor agrees to comply with and assume responsibility for compliance by his or her employees with the following requirements:

- (1) All work will be done under the supervision of the contractor or the contractor's employees.
- (2) Any return or return information made available in any format shall be used only for the purpose of carrying out the provisions of this contract. Information contained in such material will be treated as confidential and will not be divulged or made known in any manner to any person except as may be necessary in the performance of this contract. Disclosure to anyone other than an officer or employee of the contractor will be prohibited.
- (3) All returns and return information will be accounted for upon receipt and properly stored before, during, and after processing. In addition, all related output will be given the same level of protection as required for the source material.
- (4) The contractor certifies that the data processed during the performance of this contract will be completely purged from all data storage components of his or her computer facility, and no output will be retained by the contractor at the time the work is completed. If immediate purging of all data storage components is not possible, the contractor certifies that any IRS data remaining in any storage component will be safeguarded to prevent unauthorized disclosures.
- (5) Any spoilage or any intermediate hard copy printout that may result during the processing of IRS data will be given to the agency or his or her designee. When this is not possible, the contractor will be responsible for the destruction of the spoilage or any intermediate hard copy printouts, and will provide the agency or his or her designee with a statement containing the date of destruction, description of material destroyed, and the method used.
- (6) All computer systems receiving, processing, storing, or transmitting Federal tax information must meet the requirements defined in IRS Publication 1075. To meet functional and assurance requirements, the security features of the environment must provide for the managerial, operational, and technical controls. All security features must be available and activated to protect against unauthorized use of and access to Federal tax information.
- (7) No work involving Federal tax information furnished under this contract will be subcontracted without prior written approval of the IRS.
- (8) The contractor will maintain a list of employees authorized access. Such list will

be provided to the agency and, upon request, to the IRS reviewing office.

- (9) The agency will have the right to void the contract if the contractor fails to provide the safeguards described above.

II. CRIMINAL/CIVIL SANCTIONS

- (1) Each officer or employee of any person to whom returns or return information is or may be disclosed will be notified in writing by such person that returns or return information disclosed to such officer or employee can be used only for a purpose and to the extent authorized herein, and that further disclosure of any such returns or return information for a purpose or to an extent unauthorized herein constitutes a felony punishable upon conviction by a fine of as much as \$5,000 or imprisonment for as long as 5 years, or both, together with the costs of prosecution. Such person shall also notify each such officer and employee that any such unauthorized further disclosure of returns or return information may also result in an award of civil damages against the officer or employee in an amount not less than \$1,000 with respect to each instance of unauthorized disclosure. These penalties are prescribed by IRC sections 7213 and 7431 and set forth at 26 CFR 301.6103(n)-1.
- (2) Each officer or employee of any person to whom returns or return information is or may be disclosed shall be notified in writing by such person that any return or return information made available in any format shall be used only for the purpose of carrying out the provisions of this contract. Information contained in such material shall be treated as confidential and shall not be divulged or made known in any manner to any person except as may be necessary in the performance of the contract. Inspection by or disclosure to anyone without an official need to know constitutes a criminal misdemeanor punishable upon conviction by a fine of as much as \$1,000 or imprisonment for as long as 1 year, or both, together with the costs of prosecution.

Such person shall also notify each such officer and employee that any such unauthorized inspection or disclosure of

returns or return information may also result in an award of civil damages against the officer or employee [United States for Federal employees] in an amount equal to the sum of the greater of \$1,000 for each act of unauthorized inspection or disclosure with respect to which such defendant is found liable or the sum of the actual damages sustained by the plaintiff as a result of such unauthorized inspection or disclosure plus in the case of a willful inspection or disclosure which is the result of gross negligence, punitive damages, plus the costs of the action. These penalties are prescribed by IRC section 7213A and 7431.

- (3) Additionally, it is incumbent upon the contractor to inform its officers and employees of the penalties for improper disclosure imposed by the Privacy Act of 1974, 5 U.S.C. 552a. Specifically, 5 U.S.C. 552a(i)(1), which is made applicable to contractors by 5 U.S.C. 552a(m)(1), provides that any officer or employee of a contractor, who by virtue of his/her employment or official position, has possession of or access to agency records which contain individually identifiable information, the disclosure of which is prohibited by the Privacy Act or regulations established thereunder, and who knowing that disclosure of the specific material is prohibited, willfully discloses the material in any manner to any person or agency not entitled to receive it, shall be guilty of a misdemeanor and fined not more than \$5,000.
- (4) Granting a contractor access to FTI must be preceded by certifying that each individual understands the agency's security policy and procedures for safeguarding IRS information. Contractors must maintain their authorization to access FTI through annual recertification. The initial certification and recertification must be documented and placed in the agency's files for review. As part of the certification and at least annually afterwards, contractors should be advised of the provisions of IRC Sections 7431, 7213, and 7213A (see Exhibit 6, *IRC Sec. 7431 Civil Damages for Unauthorized Disclosure of Returns and Return Information* and Exhibit 5, *IRC Sec. 7213 Unauthorized Disclosure of Information*). The training provided before the initial certification and annually thereafter must also cover the incident response policy

and procedure for reporting unauthorized disclosures and data breaches. (See Section 10) For both the initial certification and the annual certification, the contractor should sign, either with ink or electronic signature, a confidentiality statement certifying their understanding of the security requirements.¹

III. INSPECTION

The IRS and the Agency shall have the right to send its officers and employees into the offices and plants of the contractor for inspection of the facilities and operations provided for the performance of any work under this contract. On the basis of such inspection, specific measures may be required in cases where the contractor is found to be noncompliant with contract safeguards.

REFERENCES

26 U.S.C. §6103(n)

Pursuant to regulations prescribed by the Secretary, returns and return information may be disclosed to any person, including any person described in section 7513 (a), to the extent necessary in connection with the processing, storage, transmission, and reproduction of such returns and return information, the programming, maintenance, repair, testing, and procurement of equipment, and the providing of other services, for purposes of tax administration.

26 C.F.R. §301.6103(n)-1 Disclosure of returns and return information in connection with procurement of property and services for tax administration purposes.

- (a) *General rule.* Pursuant to the provisions of section 6103(n) of the Internal Revenue Code and subject to the requirements of paragraphs (b), (c), and (d) of this section, officers or employees of the Treasury Department, a State tax agency, the Social Security Administration, or the Department of Justice, are authorized to disclose returns and return information (as defined in section 6103(b)) to any person (including, in the case of the Treasury Department, any person described in section 7513(a)), or to an officer

or employee of such person, to the extent necessary in connection with contractual procurement of—

- (1) Equipment or other property, or
- (2) Services relating to the processing, storage, transmission, or reproduction of such returns or return information, the programming, maintenance, repair, or testing of equipment or other property, or the providing of other services, for purposes of tax administration (as defined in section 6103(b)(4)).

No person, or officer or employee of such person, to whom a return or return information is disclosed by an officer or employee of the Treasury Department, the State tax agency, the Social Security Administration, or the Department of Justice, under the authority of this paragraph shall in turn disclose such return or return information for any purpose other than as described in this paragraph, and no such further disclosure for any such described purpose shall be made by such person, officer, or employee to anyone, other than another officer or employee of such person whose duties or responsibilities require such disclosure for a purpose described in this paragraph, without written approval by the Internal Revenue Service.

- (b) *Limitations.* For purposes of paragraph (a) of this section, disclosure of returns or return information in connection with contractual procurement of property or services described in such paragraph will be treated as necessary only if such procurement or the performance of such services cannot otherwise be reasonably, properly, or economically carried out or performed without such disclosure.

Thus, for example, disclosures of returns or return information to employees of a contractor for purposes of programming, maintaining, repairing, or testing computer equipment used by the Internal Revenue Service or a State tax agency should be made only if such services cannot be reasonably, properly, or economically performed by use of information or other data in a form which

¹ A 30 minute disclosure awareness training video produced by the IRS can be found at

<http://www.irsvideos.gov/Governments/Safeguards/DisclosureAwarenessTrainingPub4711>

does not identify a particular taxpayer. If, however, disclosure of returns or return information is in fact necessary in order for such employees to reasonably, properly, or economically perform the computer related services, such disclosures should be restricted to returns or return information selected or appearing at random. Further, for purposes of paragraph (a), disclosure of returns or return information in connection with the contractual procurement of property or services described in such paragraph should be made only to the extent necessary to reasonably, properly, or economically conduct such procurement activity. Thus, for example, if an activity described in paragraph (a) can be reasonably, properly, and economically conducted by disclosure of only parts or portions of a return or if deletion of taxpayer identity information (as defined in section 6103(b)(6) of the Code) reflected on a return would not seriously impair the ability of the contractor or his officers or employees to conduct the activity, then only such parts or portions of the return, or only the return with taxpayer identity information deleted, should be disclosed.

(c) *Notification requirements.* Persons to whom returns or return information is or may be disclosed as authorized by paragraph (a) of this section shall provide written notice to their officers or employees—

- (1) That returns or return information disclosed to such officer or employee can be used only for a purpose and to the extent authorized by paragraph (a) of this section;
- (2) That further inspection of any returns or return information for a purpose or to an extent unauthorized by paragraph (a) of this section constitutes a misdemeanor, punishable upon conviction by a fine of as much as \$1,000, or imprisonment for as long as 1 year, or both, together with costs of prosecution;
- (3) That further disclosure of any returns or return information for a purpose or to an extent unauthorized by paragraph (a) of this section constitutes a felony, punishable upon conviction by a fine of as much as \$5,000, or imprisonment for as long as 5 years, or both, together with the costs of prosecution;

(4) That any such unauthorized further inspection or disclosure of returns or return information may also result in an award of civil damages against any person who is not an officer or employee of the United States in an amount not less than \$1,000 for each act of unauthorized inspection or disclosure or the sum of actual damages sustained by the plaintiff as a result of such unauthorized disclosure or inspection as well as an award of costs and reasonable attorneys fees; and

(5) If such person is an officer or employee of the United States, a conviction for an offense referenced in paragraph (c)(2) or (c)(3) of this section shall result in dismissal from office or discharge from employment.

(d) *Safeguards.* Any person to whom a return or return information is disclosed as authorized by paragraph (a) of this section shall comply with all applicable conditions and requirements which may be prescribed by the Internal Revenue Service for the purposes of protecting the confidentiality of returns and return information and preventing disclosures of returns or return information in a manner unauthorized by paragraph (a). The terms of any contract between the Treasury Department, a State tax agency, the Social Security Administration, or the Department of Justice, and a person pursuant to which a return or return information is or may be disclosed for a purpose described in paragraph (a) shall provide, or shall be amended to provide, that such person, and officers and employees of the person, shall comply with all such applicable conditions and restrictions as may be prescribed by the Service by regulation, published rules or procedures, or written communication to such person. If the Service determines that any person, or an officer or employee of any such person, to whom returns or return information has been disclosed as provided in paragraph (a) has failed to, or does not, satisfy such prescribed conditions or requirements, the Service may take such actions as are deemed necessary to ensure that such conditions or requirements are or will be satisfied, including—

- (1) Suspension or termination of any duty or obligation arising under a contract with the Treasury Department referred to in this paragraph or suspension of disclosures by the Treasury Department otherwise authorized by paragraph (a) of this section, or
- (2) Suspension of further disclosures of returns or return information by the Service to the State tax agency, or to the Department of Justice, until the Service determines that such conditions and requirements have been or will be satisfied.

(e) *Definitions.* For purposes of this section—

- (1) The term *Treasury Department* includes the Internal Revenue Service and the Office of the Chief Counsel for the Internal Revenue Service;
- (2) The term *State tax agency* means an agency, body, or commission described in section 6103(d) of the Code; and
- (3) The term *Department of Justice* includes offices of the United States Attorneys.

IRS Publication 1075 (Rev. 9-2016) Section 5.5 Control over Processing

Processing of FTI, in an electronic media format, including removable media, microfilms, photo impressions, or other formats (including tape reformatting or reproduction or conversion to punch cards, digital images or hard copy printout) will be performed pursuant to one of the following procedures:

5.5.1 Agency Owned and Operated Facility

Processing under this method will take place in a manner that will protect the confidentiality of the information on the electronic media. All safeguards outlined in this publication also must be followed and will be subject to IRS safeguard reviews.

5.5.2 Contractor or Agency Shared Facility – Consolidated Data Centers

Recipients of FTI are allowed to use a shared facility but only in a manner that does not allow access to FTI by employees, agents, representatives or contractors of other agencies using the shared facility.

Note: For purposes of applying sections 6103(l), (m) and (n), the term “agent” includes contractors. Access restrictions pursuant to the IRC authority by which the FTI is received continue to apply. For example, since human services agencies administering benefit eligibility programs may not allow contractor access to any FTI received, their data within the consolidated data center may not be accessed by any contractor of the data center.

The requirements in Exhibit 7, Contract Language for General Services, must be included in the contract in accordance with IRC Section 6103(n).

The contractor or agency-shared computer facility is also subject to IRS safeguard reviews.

Note: The above rules also apply to releasing electronic media to a private contractor or other agency office even if the purpose is merely to erase the old media for reuse.

Agencies utilizing consolidated data centers must implement appropriate controls to ensure the protection of FTI, including a service level agreement (SLA) between the agency authorized to receive FTI and the consolidated data center. The SLA should cover the following:

1. The consolidated data center is considered to be a “contractor” of the agency receiving FTI. The agency receiving FTI – whether it is a state revenue, workforce, child support enforcement or human services agency – is responsible for ensuring the protection of all FTI received. However, as the “contractor” for the agency receiving FTI, the consolidated data center shares responsibility for safeguarding FTI as well.

2. Provide written notification to the consolidated data center management that they are bound by the provisions of Publication 1075, relative to protecting all federal tax information within their possession or control. The SLA should also include details concerning the consolidated data center's responsibilities during a safeguard review and support required to resolve identified findings.
3. The agency will conduct an internal inspection of the consolidated data center every eighteen months (see section 6.3). Multiple agencies sharing a consolidated data center may partner together to conduct a single, comprehensive internal inspection. However, care should be taken to ensure agency representatives do not gain unauthorized access to other agency's FTI during the internal inspection.
4. The employees from the consolidated data center with access to FTI, including system administrators and programmers, must receive disclosure awareness training prior to access to FTI and annually thereafter and sign a confidentiality statement. This provision also extends to any contractors hired by the consolidated data center that has access to FTI.
5. The specific data breach incident reporting procedures for all consolidated data center employees and contractors. The required disclosure awareness training must include a review of these procedures.
6. The Exhibit 7 language must be included in the contract between the recipient agency and the consolidated data center, including all contracts involving contractors hired by the consolidated data center.

7. Identify responsibilities for coordination of the 45-day notification of the use of contractors or sub-contractors with access to FTI.

Note: Generally, consolidated data centers are either operated by a separate state agency (example: Department of Information Services) or by a private contractor. If an agency is considering transitioning to either a state owned or private vendor consolidated data center, the Office of Safeguards strongly suggests the agency submit a request for discussions with Safeguards as early as possible in the decision-making or implementation planning process. The purpose of these discussions is to ensure the agency remains in compliance with safeguarding requirements during the transition to the consolidated data center.

26 U.S.C. §7213. Unauthorized disclosure of information

(a) Returns and return information

(1) Federal employees and other persons

It shall be unlawful for any officer or employee of the United States or any person described in section 6103(n) (or an officer or employee of any such person), or any former officer or employee, willfully to disclose to any person, except as authorized in this title, any return or return information (as defined in section 6103(b)). Any violation of this paragraph shall be a felony punishable upon conviction by a fine in any amount not exceeding \$5,000, or imprisonment of not more than 5 years, or both, together with the costs of prosecution, and if such offense is committed by any officer or employee of the United States, he shall, in addition to any other punishment, be dismissed from office or discharged from employment upon conviction for such offense.

(2) State and other employees

It shall be unlawful for any person (not described in paragraph (1)) willfully to disclose to any person,

except as authorized in this title, any return or return information (as defined in section 6103(b)) acquired by him or another person under subsection (d), (i)(3)(B)(i) or (7)(A)(ii), (l)(6), (7), (8), (9), (10), (12), (15), (16), (19), or (20) or (m)(2), (4), (5), (6), or (7) of section 6103.

Any violation of this paragraph shall be a felony punishable by a fine in any amount not exceeding \$5,000, or imprisonment of not more than 5 years, or both, together with the costs of prosecution.

(3) Other persons

It shall be unlawful for any person to whom any return or return information (as defined in section 6103(b)) is disclosed in a manner unauthorized by this title thereafter willfully to print or publish in any manner not provided by law any such return or return information. Any violation of this paragraph shall be a felony punishable by a fine in any amount not exceeding \$5,000, or imprisonment of not more than 5 years, or both, together with the costs of prosecution.

(4) Solicitation

It shall be unlawful for any person willfully to offer any item of material value in exchange for any return or return information (as defined in section 6103(b)) and to receive as a result of such solicitation any such return or return information. Any violation of this paragraph shall be a felony punishable by a fine in any amount not exceeding \$5,000, or imprisonment of not more than 5 years, or both, together with the costs of prosecution.

(5) Shareholders

It shall be unlawful for any person to whom a return or return information (as defined in section 6103(b)) is disclosed pursuant to the provisions of section 6103(e)(1)(D)(iii) willfully to disclose such return or return information in any manner not provided by law. Any violation of this

paragraph shall be a felony punishable by a fine in any amount not to exceed \$5,000, or imprisonment of not more than 5 years, or both, together with the costs of prosecution

(b) Disclosure of operations of manufacturer or producer

Any officer or employee of the United States who divulges or makes known in any manner whatever not provided by law to any person the operations, style of work, or apparatus of any manufacturer or producer visited by him in the discharge of his official duties shall be guilty of a misdemeanor and, upon conviction thereof, shall be fined not more than \$1,000, or imprisoned not more than 1 year, or both, together with the costs of prosecution; and the offender shall be dismissed from office or discharged from employment.

(c) Disclosures by certain delegates of Secretary

All provisions of law relating to the disclosure of information, and all provisions of law relating to penalties for unauthorized disclosure of information, which are applicable in respect of any function under this title when performed by an officer or employee of the Treasury Department are likewise applicable in respect of such function when performed by any person who is a "delegate" within the meaning of section 7701(a)(12)(B).

(d) Disclosure of software

Any person who willfully divulges or makes known software (as defined in section 7612(d)(1)) to any person in violation of section 7612 shall be guilty of a felony and, upon conviction thereof, shall be fined not more than \$5,000, or imprisoned not more than 5 years, or both, together with the costs of prosecution.

(e) Cross references

(1) Penalties for disclosure of information by preparers of returns

For penalty for disclosure or use of information by preparers of returns, see section 7216.

(2) Penalties for disclosure of confidential information

For penalties for disclosure of confidential information by any officer or employee of the United States or any department or agency thereof, see 18 U.S.C. 1905.

26 U.S.C. §7213A. Unauthorized inspection of returns or return information

(a) Prohibitions

(1) Federal employees and other persons
It shall be unlawful for—

(A) any officer or employee of the United States, or

(B) any person described in subsection (l)(18) or (n) of section 6103 or an officer or employee of any such person, willfully to inspect, except as authorized in this title, any return or return information.

(2) State and other employees

It shall be unlawful for any person (not described in paragraph (1)) willfully to inspect, except as authorized in this title, any return or return information acquired by such person or another person under a provision of section 6103 referred to in section 7213 (a)(2) or under section 6104 (c).

(b) Penalty

(1) In general

Any violation of subsection (a) shall be punishable upon conviction by a fine in any amount not exceeding \$1,000, or imprisonment of not more than 1 year, or both, together with the costs of prosecution.

(2) Federal officers or employees

An officer or employee of the United States who is convicted of any violation of subsection (a) shall, in addition to any other punishment, be dismissed from office or discharged from employment.

(c) Definitions

For purposes of this section, the terms “inspect”, “return”, and “return information” have the

respective meanings given such terms by section 6103 (b).

26 U.S.C. §7431. Civil damages for unauthorized inspection or disclosure of returns and return information

(a) In general

(1) Inspection or disclosure by employee of United States

If any officer or employee of the United States knowingly, or by reason of negligence, inspects or discloses any return or return information with respect to a taxpayer in violation of any provision of section 6103, such taxpayer may bring a civil action for damages against the United States in a district court of the United States.

(2) Inspection or disclosure by a person who is not an employee of United States

If any person who is not an officer or employee of the United States knowingly, or by reason of negligence, inspects or discloses any return or return information with respect to a taxpayer in violation of any provision of section 6103, such taxpayer may bring a civil action for damages against such person in a district court of the United States.

(b) Exceptions

No liability shall arise under this section with respect to any inspection or disclosure -

(1) which results from a good faith, but erroneous, interpretation of section 6103, or

(2) which is requested by the taxpayer.

(c) Damages

In any action brought under subsection (a), upon a finding of liability on the part of the defendant, the defendant shall be liable to the plaintiff in an amount equal to the sum of -

(1) the greater of -

(A) \$1,000 for each act of unauthorized inspection or disclosure of a return or return

information with respect to which such defendant is found liable, or

(B) the sum of -

(i) the actual damages sustained by the plaintiff as a result of such unauthorized inspection or disclosure, plus

(ii) in the case of a willful inspection or disclosure or an inspection or disclosure which is the result of gross negligence, punitive damages, plus

(2) the costs of the action, plus

(3) in the case of a plaintiff which is described in section [7430\(c\)\(4\)\(A\)\(ii\)](#), reasonable attorneys fees, except that if the defendant is the United States, reasonable attorneys fees may be awarded only if the plaintiff is the prevailing party (as determined under section [7430\(c\)\(4\)](#)).

(d) Period for bringing action

Notwithstanding any other provision of law, an action to enforce any liability created under this section may be brought, without regard to the amount in controversy, at any time within 2 years after the date of discovery by the plaintiff of the unauthorized inspection or disclosure.

(e) Notification of unlawful inspection and disclosure

If any person is criminally charged by indictment or information with inspection or disclosure of a taxpayer's return or return information in violation of -

(1) paragraph (1) or (2) of section [7213\(a\)](#),

(2) section [7213A\(a\)](#), or

(3) subparagraph (B) of section 1030(a)(2) of title 18, United States Code, the Secretary shall notify such taxpayer as soon as practicable of such inspection or disclosure.

(f) Definitions

For purposes of this section, the terms "inspect", "inspection", "return", and "return information" have the respective meanings given such terms by section [6103\(b\)](#).

(g) Extension to information obtained under section [3406](#)

For purposes of this section -

(1) any information obtained under section [3406](#) (including information with respect to any payee certification failure under subsection (d) thereof) shall be treated as return information, and

(2) any inspection or use of such information other than for purposes of meeting any requirement under section [3406](#) or (subject to the safeguards set forth in section [6103](#)) for purposes permitted under section [6103](#) shall be treated as a violation of section [6103](#). For purposes of subsection (b), the reference to section [6103](#) shall be treated as including a reference to section [3406](#).

(h) Special rule for information obtained under section [6103\(k\)\(9\)](#)

For purposes of this section, any reference to section [6103](#) shall be treated as including a reference to section 6311(e).

EXHIBIT E

SECURITY AND DATA PROTECTION

Contractor shall certify to the State compliance with applicable industry standards and guidelines, including but not limited to relevant security provisions of the California State Administrative Manual (SAM), California Statewide Information Management Manual (SIMM), The National Institute of Standards and Technology (NIST) 800-53 v4 and Federal Information Processing Standard (FIPS) Publication 199 which protect and minimize risk to the State. At a minimum, provision shall cover the following:

1. The Contractor assumes responsibility of the confidentiality, integrity and availability of the data under its control. The Contractor shall implement and maintain all appropriate administrative, physical, technical, and procedural safeguards at all times during the term of the Agreement to secure such data from data breach or loss, protect the data and information assets from breaches, introduction of viruses, disabling of devices, malware and other forms of malicious or inadvertent acts that can disrupt the State's access to its data or affects the integrity of that data.
2. Confidential, sensitive or personal information shall be encrypted in accordance with SAM 5350.1 and SIMM 5305-A.
3. The Contractor shall comply with statewide policies and laws regarding the use and protection of information assets and data. Unauthorized use of data by Contractor or third parties is prohibited.
4. Signed Security and Confidentiality Statement for all personnel assigned during the term of the Agreement.
5. Apply security patches and upgrades, and keep virus protection software up-to-date on all information asset on which data may be stored, processed, or transmitted.
6. The Contractor shall notify the State data owner immediately if a security incident involving the information asset occurs.
7. The State data owner shall have the right to participate in the investigation of a security incident involving its data or conduct its own independent investigation. The Contractor shall allow the State reasonable access to security logs, latency statistics, and other related security data that affects this Agreement and the State's data, at no cost to the State.
8. The Contractor shall be responsible for all costs incurred by the State due to security incident resulting from the Contractor's failure to perform or negligent acts of its personnel, and resulting in an unauthorized disclosure, release, access, review, destruction; loss, theft or misuse of an information asset. If the contractor experiences a loss or breach of data, the contractor shall immediately report the loss or breach to the State. If the State data owner determines that notice to the individuals whose data has been lost or breached is appropriate, the contractor will bear any and all costs associated with the notice or any mitigation selected by the data owner. These costs include, but are not limited to, staff time, material costs, postage, media announcements, and other identifiable costs associated with the breach or loss of data.
9. The Contractor shall immediately notify and work cooperatively with the State data owner to respond timely and correctly to public records act requests.
10. The Contractor will dispose of records of State data as instructed by the State during the term of this agreement. No data shall be copied, modified, destroyed or deleted by the Contractor other than for normal operation or maintenance during the Agreement period without prior written notice to and written approval by the State.
11. Remote access to data from outside the territorial United States, including remote access to data by authorized support staff in identified support centers, is prohibited unless approved in advance by the State.
12. The physical location of Contractor's data center where the Data is stored shall be within the territorial United States.

EXHIBIT F

ADDITIONAL LEGAL TERMS REQUIRED FOR FEMA REIMBURSEMENT

A. Early Termination

Contract may be terminated pursuant to Termination for Convenience and Termination for Cause set forth in GSPD401IT in Sections 22 and 23 thereof.

B. Remedies

In the event of a breach by the Contractor of any term or provision of this Agreement, the state shall have the right to pursue all remedies set forth in the GSPD401IT, including but not limited to Rights and Remedies of the State for Default set forth in GSPD401IT Section 25.

C. Changes and Modifications

Any cost of a change, modification, change order, or constructive change to the Agreement must be allowable and allocable within the scope of this Agreement, and reasonable for the completion of project scope. Changes can be made by either Party to alter the method, price, or schedule of the work without breaching the agreement if both parties approve in writing.

D. Clean Air Act

1. The Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. Section 7401 et seq.
2. The Contractor agrees to report each violation to the state and understands and agrees that the state will, in turn, report each violation as required to assure notification to the California Governor's Office of Emergency Services, Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office.
3. The Contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

E. Federal Water Pollution Control Act

1. The Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. Sections 1251 et seq.
2. The Contractor agrees to report each violation to the state and understands and agrees that the state will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office.
3. The Contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

F. Debarment and Suspension Clause

1. This Agreement is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such the Contractor is required to verify that none of the Contractor, its principals

(defined at 2 C.F.R. § 180.995), or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

2. The Contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.
3. This certification is a material representation of fact relied upon by the state. If it is later determined that the Contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to the state, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.
4. The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

G. Byrd Anti- Lobbying Amendment, 31 U.S.C. § 1352 (as amended)

1. Contractors who apply or bid for an award of \$100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the state.

APPENDIX A, 44 C.F.R. PART 18- CERTIFICATION REGARDING LOBBYING

The undersigned [Contractor] certifies, to the best of his or her knowledge, that:

- a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- c. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making

or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. § 3801 et seq., apply to this certification and disclosure, if any.

CONTRACTOR

By Clifton Leung

Date May 18, 2020

H. Procurement of Recovered Materials

1. In the performance of this Agreement, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired:
 - a. Competitively within a timeframe providing for compliance with the contract performance schedule;
 - b. Meeting contract performance requirements; or
 - c. At a reasonable price.
2. Information about this requirement, along with the list of EPA-designated items, is available at EPA's Comprehensive Procurement Guidelines web site, <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>
3. The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.

I. Access to Records

The following access to records requirements apply to this Agreement:

1. The Contractor agrees to provide the state, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this Agreement for the purposes of making audits, examinations, excerpts, and transcriptions.
2. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
3. The Contractor agrees to provide the FEMA Administrator or his or her authorized representatives access to construction or other work sites pertaining to the work being completed under the contract.
4. In compliance with the Disaster Recovery Act of 2018, the state and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

J. Department of Homeland Security Seal, Logo, Flags

The Contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval.

K. Compliance with Federal Law, Regulations, and Executive Orders

This is an acknowledgement that FEMA financial assistance will be used to fund all or a portion of the contract. The Contractor will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives.

L. No Obligation by Federal Government

The Federal Government is not a party to this Agreement and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

M. Program Fraud and False or Fraudulent Statements or Related Acts

The Contractor acknowledges that 31 U.S.C. Chapter 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this Agreement.