DEAN C. LOGAN
Registrar-Recorder/County Clerk

ADOPTED
BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES

22   June 12, 2018

CELIA ZAVALA
ACTING EXECUTIVE OFFICER

June 12, 2018

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, California 90012

Dear Supervisors:

APPROVE CONTRACT WITH SMARTMATIC USA CORPORATION
FOR PRIME CONTRACTOR IMPLEMENTATION SERVICES
UNDER THE VOTING SOLUTIONS FOR ALL PEOPLE (VSAP) PROJECT

(ALL SUPERVISORIAL DISTRICTS)
(3 VOTES)

CIO RECOMMENDATION: APPROVE (X) APPROVE WITH MODIFICATION ( )
DISAPPROVE ( )

SUBJECT

The Registrar-Recorder/County Clerk (RR/CC) requesting Board approval of a new Contract (#18-003) with Smartmatic USA Corporation (Smartmatic) to manufacture (hardware and software) and implement new custom-designed ballot marking devices (BMDs) in collaboration with Los Angeles County (County) under the Voting Solutions for All People (VSAP) Project; and (ii) delegation of authority to the RR/CC to amend the Contract. The resulting VSAP solution will go through testing and Secretary of State certification for full implementation for the 2020 Presidential Election cycle.

IT IS RECOMMENDED THAT THE BOARD:

1. Delegate authority to the RR/CC, or designee, to execute a Contract with Smartmatic to provide prime contractor services described under VSAP, substantially similar to Attachment I, effective June 12, 2018, through March 31, 2027 with three, 2-year optional extensions throughMarch 31, 2033, for a maximum dollar amount of $282,097,321, including extensions.

2. Delegate authority to the RR/CC, or designee, to execute future amendments to extend the

contract for three (3) 2-year option terms provided approval from County Counsel and Chief Executive Office (CEO) is obtained.

3. Delegate authority to the RR/CC, or designee, to execute increases to the original contract sum by no more than ten percent (10%), granted your Board is notified at least 14 days prior to executing this additional authority to accommodate unforeseen increases during the contracting period.

4. Delegate authority to the RR/CC, or designee, to execute Change Notices for additional goods and services with allocated pool dollars not to exceed $28,419,598 provided approval from County Counsel and CEO is obtained.

5. Delegate authority to the RR/CC, or designee, to issue written notice(s) of partial or total termination of the contract for convenience without further action by the Board of Supervisors, provided County Counsel approval is obtained.

6. Delegate authority to RR/CC, or designee, to prepare and execute future amendments to reflect changes to new legislation or changes to County Policy Terms and Conditions.

PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

The purpose of Contract #18-003 is the development, manufacturing (hardware and software), implementation, certification, warranty, ongoing maintenance and support of at least 31,100 new BMDs and related components. The BMDs are an essential component of the new voting experience, which was envisioned, designed, and engineered over several phases of the VSAP program, and will be used by County voters to vote and cast paper ballots at a vote center of their choice during an election. The new BMDs and related components will be fully implemented and deployed for the 2020 Presidential Election cycle.

Background

In 2009, through public engagement and research, the RR/CC began an unprecedented and comprehensive effort to replace and modernize the County's current voting systems, the Inkavote Plus and Microcomputer Tally System, by launching the Voting Systems Assessment Project (which was renamed to Voting Solutions for All People in Fall 2017 to highlight the transition from an assessment to a branded solution implementation). The vision of the project is to use a transparent process to develop and implement voting solutions that focus on the needs and expectations of current and future County voters. This human-centered approach is guided by the VSAP General Voting System Principles (http://vsap.lavote.net/principles/), which were adopted at the outset to ensure the needs of County voters remained a top priority throughout the life of the program.

The VSAP has taken a phased approach to system design, development; and implementation as described below. The initial three phases have been completed, and the RR/CC is currently engaged in the final two.

VSAP Multi-Phase Plan (Five Phases)

Phase I: Public Opinion Baseline Research (Completed)

In Phase I of the project, the RR/CC gathered an array of baseline data that would shape the overarching strategy for voting system modernization. This data was gathered from election

stakeholders and subject matter experts including voters, poll workers, advocates, key community organizations and elections staff through a variety of research and engagement activities. This research focused on evaluating the current voting system and experience, and learning what users expect of the future voting system. The research revealed that users expect more than just an upgrade in voting technology. This led our efforts towards modernizing the entire voting experience.

Phase II: Establishment of Principals (Completed)

Building on the research and learnings from Phase I, the VSAP Advisory Committee (AdCom) was established to ensure the voice of the voter continued to guide the voting system design and development process. The AdCom is a formal engagement body composed of stakeholders and advocates that represent different communities in County. As its first task, the AdCom took theresults from the research conducted in Phase I and used that data to create and adopt the General Voting System Principles. These principles ensure the new voting system meets the diverseneeds of County voters.

Following the development of the General Voting System Principles, the RR/CC began its searchfor a new voting system by assessing the voting systems market and regulatory environment inwhich these systems are implemented. The RR/CC also evaluated the acquisition models by which it could acquire a new voting system that would meet the needs of County and its voters. The RR/CC collaborated with a research team of graduate students from the UCLA Luskin School of Public Affairs to conduct research on regulations governing voting systems testing and certification and the impact on County's goal to implement a new voting system. The research found that without changes to the regulatory environment, it would be very difficult for RR/CC to meetits goals of acquiring and implementing a new voting system consistent with the adopted principles. These factors along with feedback from the AdCom made a strong case for the RR/CC to acquire a new voting system by engaging in a voting system development project.

Phase III: System Design and Engineering (Completed)

Phase III of the project marked a major transition from voting system research to the design and development of the new voting system, including a ballot marking device and related components. The work in Phase III of the project was spread across three (3) distinct and coordinated efforts: voting system design, stakeholder engagement, and proactive legislative action. Tocontinue engaging stakeholders and incorporating the expertise needed in voting system design, the VSAP Technical Advisory Committee (TAC) was established. The TAC was formed to provide VSAP with the necessary technical expertise in voting technology, security, transparency, and accessibility during voting system design. The TAC is a diverse group composed of subject matter experts from a variety of industries and fields. The expertise and guidance provided by the TAC was an invaluable component to the completion of Phase III. In addition to engaging the members of TAC, communication and outreach efforts engaged the public and kept it informed about project developments.

To begin to envision and design a new voting system and remain aligned with VSAP values of transparency and citizen participation, VSAP launched an "Open Design Search" in January 2012.The Open Design Search engaged, through an online crowdsourcing platform, a broad range of experts, designers, and the public to begin to gather ideas for the design of an innovative voting system to meet the unique needs of County's large and diverse electorate. There were two (2) primary components to the Open Design Search: 1) Open Innovation Challenge; and 2) Voter Experience Brainstorming Workshops. This Open Design Search was conducted in partnership with the Information Technology Innovation Foundation's Accessible Voting Technology Initiative, Election

Verification Network, Open IDEO, and with funding from the Election Assistance Commission, and resulted in more than 150 concepts for improving the County's voter experience.

In April 2013, County invited the award-winning global design firm, IDEO, to envision a voter experience true to the project principles. Utilizing a human-centered iterative design process, IDEO produced three design concepts that evolved into one model. This work produced design and engineering specifications for a new voting experience which consists of a new Ballot MarkingDevice (BMD), an improved Vote by Mail (VBM) ballot, an innovative Interactive Sample Ballot (ISB), and a Tally System based on modern scalable technologies. Each of these components was the product of extensive research, stakeholder engagement, the human-centered design process, iterative prototyping, and consultation with the VSAP AdCom and VSAP TAC. Together these components wil provide voters with an improved and contemporary voting experience that is more accessible, reliable, secure, and transparent.

Phase IV: Manufacturing and Certification (In Progress)

The VSAP is currently in Phase IV. An important first step of this phase is the selection of a vendor to manufacture and help implement the new VSAP solution. The RR/CC recommends Smartmatic as the contractor for implementation and support services. This recommendation is a result of a two-phased open and competitive solicitation process. During this phase, the voting system will be engineered, manufactured, tested and State certified. As a part of this process, the system will go through a pilot implementation in November 2019. The pilot will adhere to California Elections Code, Section 19000, which regulates the certification of voting systems. At the end of this phase, the system will be ready for full rollout in the County.

Phase V: Phased Implementation (In Progress)

The County envisions a phased implementation of the VSAP components. This approach allows the RR/CC to best balance the implementation risks with the risks in continuing to conduct elections with the current, aging voting systems. The implementation timeline is as follows:

-November 6, 2018 Election (New VBM Ballots and New Tally System) — Implementation of the new VBM ballots and the new Tally System, which will process the new VBM ballots and tabulate the results.

-2019 Mock Election — Implementation of BMDs for a Mock Election in 2019. The Mock Electionwill cover approximately 30–60 vote centers and seeks to test the system functionality and operational processes and procedures in vote centers, as well as provide public awareness of the new voting experience prior to voting in a live election.

-November 2019 Pilot — Implementation and integration of the new VBM ballots, new Tally System, BMDs at vote centers, and the ISB. The November 2019 Election is likely to be small, involving relatively few districts. This pilot will provide learnings and opportunities for process improvement prior to full implementation in a Countywide Presidential Primary Election.

-March and November 2020 Election (Full Rollout) — Full implementation and integration of thenew VBM ballots, new Tally System, BMDs deployed at vote centers and the ISB.

Scope of the VSAP Solution

The full implementation effort is comprised of six (6) major projects:

1. Tally System Project — A new Tally System and ballot layout application is required to create and tabulate ballots for over 5.1 million voters. This system will replace the County's legacyvoting system, which has been in use for decades. The new Tally System is being co-developedwith Digital Foundry in two phases. Under an Enterprise Services Master Agreement (ESMA) Work Order No. 2016-010, an initial version of the tally system has been developed to tabulatethe new VBM ballots. Under a separate Board Letter, the RR/CC is recommending a Sole Source contract with Digital Foundry on June 12, 2018 to continue the co-development effort and build a subsequent version of the Tally System with enhanced features that will be able to tabulate new BMD ballots and be fully integrated with the overall VSAP solution in 2020.

The initial version of the tally system is currently being tested for certification by the California Secretary of State by August 31, 2018 use in the November 6, 2018 Election. Testing and certification of the full-featured and integrated version of the new Tally System is expected in Fall of 2019.

2. VBM Project — New VBM paper ballots were designed for usability and auditability. The RR/CC will implement the new VBM ballots Countywide to the 2.2+ million VBM voters for the November 2018 election. These ballots will be tallied by the new Tally System described above. Additionally, K&H Election Services will be responsible for VBM ballot printing and outgoing mailing services upon Board approval of an RR/CC's amendment to their contract on June 12, 2018.

3. ePollbook Project — An ePollbook solution that will support the ability to look up and verify the registration status of voters in real time, and to comply with Conditional Voter Registration (CVR) requirements will need to be acquired. The ePollbook Project will plan and implement the deployment of ePollbooks at vote centers throughout the County and will also purchase and integrate peripheral Commercial-Off-The-Shelf thermal printers that will be used to print the Ballot Activation Mechanism QR code on BMD ballots.

4. BMD Project — The RR/CC is recommending a contract with Smartmatic as the prime contractor to provide engineering, manufacturing, certification testing and stewardship, and implementation of approximately 31,100 BMDs and ballots. The BMDs were designed and prototyped by IDEO and will be used at vote centers for the Presidential Election cycle in 2020.

5. ISB Project — The ISB solution is a responsive web application that will integrate within the new voting experience. This solution will support compliance with Remote Accessible Vote by Mail and Uniformed and Overseas Citizens Absentee Voting Act voting requirements.

6. Vote Centers Project — In 2020, the County will transition from polling places to vote centers as outlined under the California Voter's Choice Act (CVCA). This new model will allow votersto vote and cast a ballot at any vote center location in the County over an 11-day period. As part of this effort, the RR/CC has also launched the Vote Center Placement Project with core mission to identify and place accessible and convenient vote center locations throughout the County. The RR/CC is currently engaged with PlaceWorks to identify vote center locations.

Implementation of Strategic Plan Goals

This request supports the County Strategic Plan as follows:

Goal III, Realize Tomorrow's Government Today: Our increasingly dynamic and complex environment challenges our collective abilities to respond to public needs and expectations. We want

to be an innovative, flexible, effective, and transparent partner focused on advancing the common good.

FISCAL IMPACT/FINANCING

The total cost for the agreement is $282,097,321, which has been included in the costs projections presented to the CEO. The funding request for FY 2018-19 was submitted to the CEO and was recommended for approval as part of Final Changes. Funding to finance the future years will be requested through the annual budget process.

The RR/CC intends to fund the recommended solution with a combination of funding sources for FY 2018-19. This includes previously allocated Voting Modernization Bond Act Funding (Prop41). The RR/CC has a total of $49M available for this effort pending system certification ($9.4M in FY 2018-19 and $39.6M in FY 2019-20). Additionally, the RR/CC is aggressively seeking alternate funding sources at the State and federal levels to mitigate the County's expense. The RR/CC has identified the following potential sources for FY 2019-20 and is awaiting State budget approval and allocation. Based on previous formulas used for voting system replacement funding allocation, the RR/CC anticipates receiving approximately $43.1M from the California State Budget, $11.5M from the federal Consolidated Appropriation of Bill of 2018 and $8M from California Assembly Bill 1886.

In addition, RR/CC is working on revising the election billing methodology to include a fee to recover system implementation costs that will not be covered by the funding sources identified above. Once cost recovery is obtained, the fee will serve to fund future modifications and system replacement, as needed. We will seek guidance and authorization from the Auditor-Controller on how to establish the appropriate trust fund.

Agreement Pricing

The Agreement utilizes a fixed price model. A fixed price model provides significant predictability and control over potential cost changes in the Agreement's pricing through the end of the contract. The Agreement's pricing includes all software license costs, as well as the costs associated with development, manufacturing, implementation and ongoing maintenance and support.

The maximum Contract Sum will not exceed $282,097,321. The Agreement has the following pricing components:

(1) Contract Elements: These costs are comprised of hardware manufacturing, software engineering, implementation (including integration, certification, training, and help desk services), maintenance and support, and estimated taxes. These costs will not exceed $253,677,723.

(2) Optional Work: These costs are comprised of Additional Goods and Services with allocated pool dollars in the total contract value. These costs will not exceed $28,419,598.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

The Agreement includes all Board of Supervisors' required provisions.

In accordance with the Board's policy of engaging outside counsel for certain information technology agreements, County Counsel retained the law firm Sidley Austin, LLP (Sidley) to assist in all aspects of this procurement. Sidley, in conjunction with County Counsel, assisted the RR/CC in the

development and evaluation of the RFP and the negotiation of the Agreement. Additionally, in accordance with the Board's policy, County Counsel separately has submitted to the Board an attorney-client privileged communication which analyzes the Agreement.

County Counsel has approved Attachment I as to form. The Chief Information Office (CIO) concurs with the RR/CC's recommendation and that office's analysis is attached as Attachment II. CEO Risk Management has reviewed the Agreement provisions concerning Insurance and Indemnification and approves those provisions.

CONTRACTING PROCESS

The RR/CC released a Request for Proposal (RFP) in two phases. Phase one (1) was released on September 18, 2017. The purpose behind this release was two-fold: 1) determine the pool of potential contractors with the capability and capacity to carry a project of this complexity and2) determine the potential pool of subcontractors available and capable of supporting the Prime Contractor. The RFP detailed minimum qualifications which vendors were required to meet in order to proceed to the second phase.

Notice of availability of the RFP was posted on the County's "Doing Business with Us" website and the entire document was available for download from the RR/CC website (http://vsap.lavote.net/request-for-proposals/). In addition, RR/CC electronically notified eligible vendors on its internal mailing list and promoted the RFP through its social media platforms.

This initial phase resulted in the identification of three (3) Prime Contractor vendors and seven (7) specialty vendors. Phase Two (2) was released on January 2, 2018 and was available only to Prime Contractor vendors who pre-qualified during the initial phase.

The RR/CC received proposals from the two pre-qualified proposers by the March 12, 2018 deadline. The proposals came from CGI and Smartmatic USA. The proposal evaluation process was extremely thorough with six (6) evaluators and eleven (11) advisors participating. The proposals were evaluated using the informed averaging process per County Board Policy.

The evaluation process resulted in Smartmatic USA as the top ranked, highest scored proposer. As such, evaluators recommended Smartmatic as the vendor for this Agreement. The lower scoring vendor, CGI, requested a debrief, which was conducted on May 4, 2018. At the time of filing, there were no protests as a result of this solicitation.
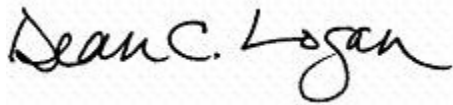
IMPACT ON CURRENT SERVICES (OR PROJECTS)

Approval of the recommended action will ensure manufacturing and software development services can begin for completion in time for the 2020 Presidential Election Cycle.

Respectfully submitted,

DEAN C. LOGAN
Registrar-Recorder/County Clerk

DCL:RF:APL:FP:VW:ca

Enclosures

c: Chief Executive Officer
     Executive Office, Board of Supervisors
     County Counsel
     Chief Information Officer

Reviewed by:

WILLIAM KEHOE
Chief Information Officer

CONTRACT

BY AND BETWEEN

COUNTY OF LOS ANGELES

AND

SMARTMATIC USA CORPORATION

FOR

VOTING SOLUTIONS FOR ALL PEOPLE (VSAP) IMPLEMENTATION AND SUPPORT SERVICES

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CONTRACT

BY AND BETWEEN

COUNTY OF LOS ANGELES

AND

SMARTMATIC USA CORPORATION

FOR

VOTING SOLUTIONS FOR ALL PEOPLE (VSAP)
IMPLEMENTATION AND SUPPORT SERVICES

This Contract for Voting Solutions for All People ("**VSAP**") Implementation and Support Services ("**Contract**") is made and entered into this _____ day of June, 2018 by and between the County of Los Angeles ("**County**") and Smartmatic USA Corporation ("**Contractor**"), a Delaware corporation with its principal place of business at 1001 Broken Sound Parkway NE, Suite D, Boca Raton, FL 33487 (together with the County, the "**Parties**"). When used herein, the term "Contract" includes the body of this Contract and any statement of work ("**Statement of Work**" or "**SOW**") entered into by the Parties hereunder and such other exhibits, attachments, appendices and schedules (all such documents, the "**Exhibits**") appended to this Contract and additional documents that the Parties identify and agree to incorporate herein by reference.

<u>RECITALS</u>

WHEREAS, pursuant to Government Code Section 31000, the Board of Supervisors ("**Board**") is authorized to contract for special services; and

WHEREAS, the Contractor is a private firm specializing in providing VSAP Implementation and Support Services, as defined below; and

WHEREAS, the Contractor warrants that it possesses the necessary special skills, experience, knowledge, technical competence and sufficient staffing to perform under this Contract; and

WHEREAS, Contractor has submitted a proposal to the County's Registrar-Recorder/County Clerk ("**Department**") for provision of such services and, based upon the Request For Proposal process, Contractor has been selected for recommendation for award of such Contract; and

WHEREAS, the County desires that Contractor provide, and Contractor agrees to provide, the goods and services ("**Services**") for implementation and support of the VSAP Solution for the Department in accordance with the terms and conditions set forth in this Contract; and

WHEREAS, the Board has authorized the Department to administer this Contract;

NOW THEREFORE, in consideration of the foregoing Recitals (which are incorporated herein), and the mutual covenants contained herein, and for good and valuable consideration, the Parties agree to the following:

CONTRACT

1.0   APPLICABLE DOCUMENTS/INTERPRETATION

1.1   APPLICABLE DOCUMENTS

All Exhibits that are referenced herein and appended hereto, or are signed by the Parties on or after the date of this Contract and by their express terms are to be part of this Contract, are hereby incorporated by reference. Exhibits A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S and T are attached to and form a part of this Contract.

1.2   DEFINITIONS

All capitalized terms, words and phrases shall have the meaning given in Exhibit Q (Glossary and Acronyms) whenever used in this Contract, including the body of the Contract and Statements of Work, Attachments, Appendices, and Schedules hereto. In the event there is a conflict between how a term is defined in Exhibit Q (Glossary and Acronyms) and any other portion of the Contract, the order of precedence for understanding the meaning of that term shall be as follows: (a) how that term is defined in the body of the Contract, (b) how that term is defined in Exhibit Q (Glossary and Acronyms), (c) how that term is defined in the Statement of Work, and (d) how that term is defined in the other Exhibits, Appendices, Attachments or Schedules. Unless otherwise specified in Exhibit Q (Glossary and Acronyms), all references in Exhibit Q (Glossary and Acronyms) to Sections shall refer to the respective Sections of the body of the Contract (rather than the Exhibits or Appendices thereto).

1.3   INTERPRETATION

The headings herein contained are for convenience and reference only and are not intended to define the scope of any provision thereof. For the purposes of this Contract (i) words (including capitalized terms defined herein) in the singular shall be held to include the plural and vice versa and words (including capitalized terms defined herein) of one gender shall be held to include the other gender as the context requires, (ii) the terms "hereof," "herein" and "herewith" and words of similar import shall, unless otherwise stated, be construed to refer to this Contract as a whole and not to any particular provision of this Contract, and Section references are to Sections of this Contract, unless otherwise specified, (iii) the word "including" and words of similar import when used in this Contract shall mean "including, without limitation," (iv) all references to any period of days shall be deemed to be to the relevant number of calendar days unless otherwise specified, (v) all references herein to "$" or dollars shall refer to United States dollars, unless otherwise specified, (vi) references to "or" will be deemed to be disjunctive but not necessarily exclusive (i.e., unless the context requires otherwise, "or" will be interpreted to mean

"and/or" rather than "either/or") and (vii) "Section", "Subsection", "Paragraph" and "Subparagraph", when used in reference to any part of this Contract, shall have the same meaning no matter which term is used.

1.4   INTEGRATION

This Contract and the Exhibits hereto constitute the complete and exclusive statement of understanding between the Parties, and supersede all previous agreements, written and oral, and all communications between the Parties relating to the subject matter of this Contract. No change to this Contract shall be valid unless prepared pursuant to Section 8.1 (Change Notices and Amendments) and signed by both Parties.

2.0   OWNERSHIP AND INTELLECTUAL PROPERTY

2.1   INTELLECTUAL PROPERTY

2.1.1   Contractor understands and agrees that, except for Pre-Existing Rights, anything developed, designed and/or provided by Contractor in the course of providing the Services, including but not limited to, the VSAP Solution, and all works based thereon, incorporated therein, or derived therefrom, shall be the sole property of County and subject to Paragraph 2.1.4 of the Contract. The VSAP Solution, including any aspects, parts or components of it, in any form prepared, assembled or encountered by or provided to Contractor in connection with the provision of the Services under the Contract, is owned exclusively by County. For avoidance of doubt, the provisions of Subparagraphs 2.1.1 and 2.1.2 do not apply to COTS hardware components.

2.1.2   Contractor and County intend that, to the extent permitted by law and except for Pre-Existing Rights, the VSAP Solution and its subcomponents are conclusively deemed "works made for hire" within the meaning and purview of Article 101 of the United States Copyright Act, 17 U.S.C. §101 et seq. To the extent that the VSAP Solution does not qualify as a "work made for hire," Contractor hereby, subject to County's payment of amounts due hereunder, irrevocably grants, conveys, bargains, sells, assigns, transfers and delivers to County, its successors and assigns, all right, title and ownership interest in and to the VSAP Solution and the intellectual property rights embodied thereby, including copyrights and all U.S. and foreign copyright registrations, copyright applications and copyright renewals for them, and other tangible or intangible IP embodied in or pertaining to the VSAP Solution prepared for County under the Contract, and all goodwill relating to them, free and clear of any liens, claims or other encumbrances, to the fullest extent permitted by law; provided, however, that Pre-Existing Rights shall be excluded from such assignment to County. Contractor will execute all documents and perform all acts that County may reasonably request in order to assist County in perfecting its rights in and to the IP relating to VSAP Solution, at the sole expense of County. If

Contractor fails or refuses to execute any such documents, Contractor hereby appoints the County as Contractor's attorney-in-fact (this appointment to be irrevocable and a power coupled with an interest) to act on Contractor's behalf and to execute such documents. Contractor hereby forever waives and agrees never to assert against the County, its successors or licensees any and all "moral rights" or rights of authorship or attribution Contractor may have in the VSAP Solution or related IP even after expiration or termination of this Contract, including with respect to Pre-Existing Rights. Contractor further represents and warrants that it has current invention assignment agreements with each of its employees and its Subcontractors' employees who will perform work under this Contract requiring each such employee's assignment and transfer of all the IP rights, title, and interests described in this paragraph such that Contractor can legally convey the same to the County.

2.1.3 Contractor must deliver or cause to be delivered to County the VSAP Solution, including, without limitation, all hardware and software components (e.g., the BMD, BMG, ASC, BCS, and ISB), code (executable and source), reports, profiles, analyses, programs, recommendations, guidelines, notes, documentation and memoranda related to the VSAP Solution and Services promptly in accordance with the time limits prescribed in the Contract, and if no time limit is specified, then upon reasonable demand for them or upon termination or completion of the Contract. In the event of the failure by Contractor to make such delivery upon demand, then and in that event, Contractor must pay to County any damages County may sustain by reason of Contractor's failure.

At no additional charge to the County, the Contractor shall also provide or make available to the County all documentation or other written instructions related to the VSAP Solution, including, without limitation, its software as is reasonably necessary for the County to use and take advantage of the full functionality of the VSAP Solution. Such documentation will be supplied to the County by the Contractor in electronic form via the Project Information Library. Such documentation may be updated periodically by the Contractor, at no additional cost to the County, as upgrades, revisions, or other material changes or modifications are made to the VSAP Solution.

The County may, at any time, reproduce copies of all documentation and other materials provided or made available by the Contractor, distribute such copies without restriction (to include to County personnel, County designees, licensees and users of the VSAP Solution), and incorporate such copies into its own technical and user manuals.

2.1.4 **Pre-Existing Rights**. Rights in the VSAP Solution may include Contractor's proprietary information, methodologies, software (including third-party IP and open source software), firmware, designs, components, materials, concepts, or project tools developed without any connection or

reference to the Services or related to the Contract ("**Pre-Existing Materials**"); provided, however, that Contractor shall notify County in advance of such inclusion. Contractor may also incorporate any Contractor Pre-Existing Materials, including COTS hardware components, into the VSAP Solution by providing prior written notice thereof to County, which notice shall include copies of the license under which such third-party (including open source) software and COTS hardware components are made available to County.

2.1.5 To the extent any Contractor Pre-Existing Rights or Pre-Existing Materials are incorporated into the VSAP Solution, Contractor hereby grants to County a fully-paid, royalty-free, irrevocable, perpetual, non-exclusive, transferable in whole or in part (including right to sublicense through multiple tiers), right and license to use the Pre-Existing Materials; provided, however, that such transference includes the entire VSAP Solution or a significant part of the VSAP Solution that includes such Pre-Existing Rights. For avoidance of doubt, the County acknowledges that notwithstanding any license or right granted by Contractor the Pre-Existing Rights are not transferable individually or separate and apart from VSAP Solution and any transference permitted herein shall also include this restriction. To the extent any third-party IP (other than open source software, which is subject to Subparagraph 2.1.5.1) is incorporated into the VSAP Solution, Contractor shall obtain and provide to County a fully-paid, royalty-free, irrevocable, perpetual, non-exclusive, transferable (including right to sublicense through multiple tiers), right and license to use the third-party IP from such third party, provided, with respect to the transferability, that third-party IP shall be subject to the same restriction applicable to Pre-Existing Rights. County grants to Contractor a limited, nonexclusive, non-transferable, revocable right and license to use County IP for the sole purposes of performing its obligations under the Contract.

2.1.5.1 Use of Open Source Software. Except with respect to open source software provided or made available to Contractor by County (or except further to the extent Contractor was otherwise directed by County to use open source software), Contractor represents and warrants that: (a) the performance of any Services, the delivery of any deliverables pursuant to this Contract, or the use of the VSAP Solution will not cause County to be in violation of any open source licenses or otherwise require the publication of any software pursuant to the terms of such open source licenses; and (b) provided that County uses the VSAP Solution in accordance with the applicable licenses and/or notices given to County by Contractor, including, without limitation, providing appropriate licenses and/or notices with any distribution of the VSAP Solution, in the form and to the extent such licenses and/or notices were provided by Contractor to County, County's use of the VSAP Solution under this Contract does not, or will not with the passage

of time, violate any open source licenses or otherwise require the publication of any software pursuant to the terms of such open source licenses. As County's exclusive remedy for a breach of this Sub-paragraph 2.1.5.1, Contractor will either obtain a license for County's use (as permitted under this Contract) of the affected open source software without publication, or provide a functionally equivalent replacement that would not cause a breach of this Sub-paragraph 2.1.5.1 or publication of such software. For the avoidance of doubt, the immediately preceding sentence does not limit any obligations of Contractor in respect of third-party claims and losses under Sub-paragraph 8.23 (Indemnification).

2.2 USE OF PRE-EXISTING MATERIALS AND PRE-EXISTING RIGHTS FOLLOWING TERMINATION FOR CONVENIENCE.

In the event that this Contract is terminated by County for Convenience pursuant to Section 8.42 below prior to the expiration of the Initial Contract Term, then in addition to payments due to the Contractor pursuant to Section 8.48 below, County shall pay to Contractor an amount (the "**Early Termination Payment**") to equal to the then net present value of the Allocated License Fee, discounted at ten percent (10%), that would have been payable between the effective date of termination and the date on which the Initial Contract Term would have expired. As used herein, the term "**Allocated License Fee**" means the amount of nine hundred thousand dollars ($900,000.00) per twelve (12) month period of Maintenance and Support during the Initial Contract Term.

2.3 OWNERSHIP OF MATERIALS

2.3.1 Except for the exceptions in this Section for Pre-Existing Rights and third-party IP, County shall be the sole owner of all right, title and interest, including copyright, in and to all software, plans, diagrams, facilities, documentation, and tools, which are originated or created through Contractor's and its Subcontractor's work pursuant to this Contract. Contractor, for valuable consideration herein provided, shall execute all documents necessary to assign and transfer to, and vest in the County necessary to assign and transfer to, and vest in the County all Contractor's and its Subcontractor's right, title and interest in and to such original materials, including any copyright, patent and trade secret rights which arise pursuant to Contractor's and its Subcontractor's work under this Contract.

2.3.2 County IP is and shall be the property of the County. In addition, other than the Pre-Existing Materials, all VSAP Solution data that is (a) provided to or by or made accessible to or by the County to the Contractor, (b) generated by the VSAP Solution or (c) the product of the VSAP Solution provided by the Contractor hereunder is and shall be the property of the County. For the avoidance of doubt, except as licensed to County hereunder, nothing in this Contract shall impair or limit the rights of

Contractor to use the Pre-Existing Materials for purposes other than the VSAP Solution or other than for performance of this Contract.

2.4   USE OF VSAP SYSTEM BY THE CONTRACTOR

2.4.1   Effective upon achievement of deliverable 2.3.1.11 (Hardware Tooling – DVT) from the Statement of Work, the County hereby grants the Contractor a, perpetual, fully paid up, sublicenseable (through multiple tiers), non-transferrable (except pursuant to Section 8.2) license, at no cost to the Contractor, to use all plans, diagrams, documentation, and tools relating to the Hardware components of the VSAP Solution, as developed, modified, maintained and supported by Contractor in accordance with the terms of this Contract (collectively, the "**VSAP Hardware**") for the purpose of providing voting system solutions to other voting jurisdictions.   All software used by the Contractor in connection therewith shall be developed independently by the Contractor. Subject to any third-party confidentiality restrictions, the Contractor shall disclose no less than annually and hereby grants County an irrevocable, perpetual, non-exclusive, sublicenseable (through multiple tiers), fully paid up, and transferrable license to any improvements to the VSAP Hardware, including all plans, diagrams and documentation relating to such improvements. Such disclosure obligation shall expire upon the expiration of the Initial Contract Term. The County shall have a right to request that such improvements be implemented as Additional Work in accordance with this Contract.

2.4.2   During the Initial Contract Term, in the event that the County elects to make the VSAP Solution (or any portion of the software, code, plans, diagrams, and/or other documentation delivered hereunder) available in an open source format, it shall be a condition to the license and use of any such intellectual property that if the licensee thereof decides to use the VSAP Hardware in connection with the VSAP Solution, then to the extent such licensee engages (or intends to engage) third parties for such VSAP Hardware implementation, such licensee shall be required to engage the Contractor in connection with the design, manufacture, procurement and maintenance and support of such VSAP Hardware.

2.4.3   In the event that the County either (a) desires to distribute the VSAP Solution (excluding the VSAP Hardware prior to the end of the Initial Contract Term) on a for-profit basis (e.g., not as open source software or freeware); or (b) has not established its nonprofit program by the second anniversary of the Final Acceptance, the parties shall meet and confer in good faith and discuss reasonable terms and conditions upon which the Contractor may be permitted to distribute the VSAP Solution (excluding the VSAP Hardware prior to the end of the Initial Contract Term) on a for-profit basis. Contractor acknowledges that there is no guaranty that an agreement will result from such discussions or that any such discussions will be continued for any defined period of time.

3.0 WORK

3.1 Pursuant to the provisions of this Contract, the Contractor shall fully perform, complete and deliver on time, all tasks, deliverables, services, and other work as set forth herein including, but not limited to, Exhibit A (Statement of Work).

3.2 The Contractor agrees that the performance of work and services pursuant to the requirements of this Contract shall conform to high professional standards as exist in the Contractor's profession or field of practice.

3.3 If the Contractor provides any tasks, deliverables, goods, services, or other work to the County other than as specified in this Contract, including the Statement of Work, or if the Contractor provides such items requiring County's prior written approval without first having obtained such written approval, the same shall be deemed to be a gratuitous effort on the part of the Contractor, and the Contractor shall have no claim whatsoever against the County for such tasks, deliverables, goods, services or other work.

3.4 Upon County's written request and mutual approval pursuant to the terms of this Contract, Contractor shall provide Additional Work, including VSAP Solution Customizations, Technology Enhancements and Professional Services, in accordance with this Section and Exhibit A (Statement of Work), at the applicable pricing terms set forth in Exhibit B (Pricing Schedule).

4.0 TERM OF CONTRACT

4.1 The term of this Contract ("**Contract Term**") shall commence upon approval by the Board and will continue until March 31, 2027 under the Contract terms, unless sooner terminated or extended in whole or in part as provided in this Contract (such time period, without Option Terms, the "**Initial Contract Term**"). The Contract Term includes an Implementation Period, at least a twenty-four (24) month Warranty Period after County implementation and acceptance, and at least a five (5) year Maintenance and Support Services Period following the Warranty Period. If Full Rollout occurs later than the primary election in March 2020 (or such equivalent date as may be set by the California Secretary of State at a later date for such primary election), then the Contract Term will be extended to the date that is the last day in the month seven (7) years from such election date; provided that such extension will occur at no additional cost to the County unless and only to the extent the County is responsible for the failure to achieve timely the Full Rollout.

4.2 The County shall have the sole option to extend the Contract Term for up to three (3) additional two (2) year periods (each, an "**Option Term**", and such exercise shall extend the Contract Term) as authorized by the Board, for a maximum total Contract Term of fifteen (15) years (subject to adjustment for any delay in Final Acceptance beyond the date originally contemplated hereunder). Each such extension option may be exercised at the sole discretion of the Registrar-Recorder/County-Clerk. County shall provide Contractor with a non-binding

written notice of its current intent whether to exercise an Option Term (including any grievances it may have with or comments it may wish to convey to Contractor) no later than one hundred eighty (180) calendar days prior to the expiration of the Contract Term. Upon receipt of such notice, either party may request a meeting to discuss the contents of such notice and any follow up or remediation actions which may be necessary. No later than one hundred twenty (120) days prior to the expiration of the Contract Term, the County will provide binding notice to Contractor if it elects to extend the Contract Term. The option to extend shall be set forth in writing, as provided in Section 8.1 (Change Notices and Amendments), and shall be authorized at the sole discretion of the Registrar-Recorder/County-Clerk.

4.3   The County maintains databases that track/monitor Contractor performance history. Information entered into such databases may be used for a variety of purposes, including determining whether the County will exercise an Option Term.

4.4   The Contractor shall notify the County's Project Director of the Contract's pending expiration six (6) months prior to the last date of the Contract Term by sending a written notification to the County's Project Director at the address herein provided in Exhibit E (County's Administration).

5.0   CONTRACT SUM

5.1   CONTRACT SUM

The maximum "**Contract Sum**" under the Terms of this Contract shall be the total monetary amount payable by the County to the Contractor for provision of the Services specified herein in accordance with Exhibit B (Pricing Schedule) to this Contract and shall not exceed two hundred fifty-three million, six hundred seventy-seven thousand, seven hundred twenty-three dollars and no cents ($253,677,723.00) plus any amount of Pool Dollars which County decides to expend at its sole discretion. Contract rates specified in Exhibit B (Pricing Schedule) for the calendar year (beginning with the year that begins on January 1, 2023) may be revised by the Contractor during the last thirty (30) days of the previous calendar year; provided that any increase shall not exceed the lesser of (i) 2.4% or (ii) a cost of living adjustment that tracks the Consumer Product Index for Urban Wage Earners and Clerical Workers (US All Items 1982 – 1984 = 100; CWOR0000SAO), published by the United States Department of Labor, Bureau of Labor Statistics, for the twelve (12) month period ending September 30 of the previous calendar year.

5.2   WRITTEN APPROVAL FOR REIMBURSEMENT

The Contractor shall not be entitled to payment or reimbursement for any tasks or services performed, nor for any incidental or administrative expenses whatsoever incurred in or incidental to performance hereunder, except as specified herein.

5.3 MAXIMUM CONTRACT SUM

The maximum Contract Sum shown in <u>Section 5.1</u> shall be deemed to include all amounts necessary for County to reimburse Contractor for all applicable California and other state and local sales/use taxes on all VSAP Solution provided by the Contractor to the County pursuant to or otherwise due as a result of this Contract including, but not limited to, the product of as-needed Services and enhancements or changes to the VSAP Solution, to the extent applicable. All California sales/use taxes shall be paid directly by the Contractor to the State or other taxing authority. Contractor shall be solely liable and responsible for, and shall indemnify, defend, and hold harmless the County from, any and all such California and other state and local sales/use taxes. Further, Contractor shall be solely liable and responsible for, and shall indemnify, defend, and hold harmless the County from, all applicable California and other state and local sales/use tax on all other items provided by the Contractor pursuant to this Contract and shall pay such tax directly to the State or other taxing authority. In addition, Contractor shall be solely responsible for all taxes based on Contractor's income or gross revenue, or personal property taxes levied or assessed on Contractor's personal property to which the County does not hold title.

5.4 NOTIFICATION OF 75% OF TOTAL CONTRACT SUM

The Contractor shall maintain a system of record keeping that will allow the Contractor to determine when it has incurred seventy-five percent (75%) of the total Contract Sum. Upon occurrence of this event, the Contractor shall send written notification to the County's Project Director at the address herein provided in <u>Exhibit E</u> (County's Administration).

5.5 NO PAYMENT FOR SERVICES PROVIDED FOLLOWING EXPIRATION/ TERMINATION OF CONTRACT

The Contractor shall have no claim against the County for payment of any money or reimbursement, of any kind whatsoever, for any service provided by the Contractor after the expiration or other termination of this Contract, other than (a) amounts payable to the Contractor for Transition Services pursuant to <u>Section 8.4</u> below; (b) amounts payable to the Contractor under <u>Section 8.4</u> below for pre-ordered items; (c) amounts payable to the Contractor under <u>Section 2.2</u> above for continued use of the Pre-existing Rights and Pre-Existing Materials; and (d) any other amounts payable to the Contractor for Transition Services pursuant to <u>Section 8.48</u> below. Should the Contractor receive any such payment (other than as provided in clauses (a)-(d) above) it shall immediately notify the County and shall immediately repay all such funds to the County. Payment by the County for services rendered after expiration/termination of this Contract (other than as provided in clauses (a)-(d) above) shall not constitute a waiver of County's right to recover such payment from the Contractor. This provision shall survive the expiration or other termination of this Contract.

5.6 INVOICES AND PAYMENTS

5.6.1 The Contractor shall invoice the County, monthly, for providing the tasks, deliverables, goods, services, and other work specified in Exhibit A (Statement of Work) and elsewhere hereunder. The Contractor shall prepare invoices, which shall include the charges owed to the Contractor by the County under the terms of this Contract. The Contractor's payments shall be as provided in Exhibit B (Pricing Schedule) and the Contractor shall be paid only for the tasks, deliverables, goods, services, and other work for which County has signed a Deliverable Acceptance Document. If the County does not approve work pursuant to a Deliverable Acceptance Document no payment shall be due to the Contractor for such work. The making of any payment or payment by the County, or receipt thereof by the Contractor, shall not imply acceptance of any deliverable or Final Acceptance (as defined in Exhibit A (Statement of Work)) by the County of such items or the waiver of any warranties or requirements of this Contract.

5.6.2 The Contractor's invoices shall be priced in accordance with Exhibit B (Pricing Schedule).

5.6.3 The Contractor's invoices shall be legible and contain the information set forth in Exhibit A (Statement of Work) describing the tasks, deliverables, goods, services, work hours and facility and/or other work for which payment is claimed. Each monthly invoice shall include, at a minimum, the following information:

- Invoice date, unique invoice number, and the month and year when the service(s) was delivered.

- Contractor's Tax ID Number and remittance address.

- Contract Name and Contract Number

- For each task, subtask, deliverable, good, service, or other work as described in Exhibit A (Statement of Work) and Exhibit B (Pricing Schedule) for which payment is claimed, a signed Deliverable Acceptance Document.

- Each line item on the invoice should be numbered sequentially.

5.6.4 The Contractor shall submit the monthly invoices to the County by the fifteenth (15th) calendar day of the month following the month of service.

5.6.5 All invoices and supporting documentation shall be submitted to the County Project Director, Project Manager and accountspayable@rrcc.lacounty.gov

5.6.6 The County's Project Manager shall contact the Contractor when a revised invoice is required. The Contractor shall notate "Revised" or "Corrected"

on the corrected invoice, update the invoice date, and resubmit in accordance with Section 5.6.5. If the revised invoice uses a different invoice number, the revised invoice shall also reference the original invoice number.

5.6.7 Holdbacks

County will hold back fifteen percent (15%) of the amount of each invoice submitted by the Contractor under this Contract prior to Final Acceptance and approved by the County pursuant to Section 5.6 (Invoices and Payments). Holdbacks shall be due and payable to the Contractor in accordance with the below schedule and conditions, all further subject to adjustment of any amounts arising under this Contract owed to the County by the Contractor, including, but not limited to, any amount arising from Section 5.6.9 (Invoice Discrepancies) and any partial termination of any Task or deliverable set forth in Exhibit A (Statement of Work) provided herein.

(a)   Twenty-five percent (25%) of total holdbacks will be due and payable upon the later of (x) Final Acceptance and (y) successful completion of voting in the March 2020 Presidential primary election by use of the VSAP Solution; provided that such election involved a Full Rollout of the VSAP Solution.

(b)   Twenty-five percent (25%) of total holdbacks shall be due and payable on the date of certification by County of the March 2020 Presidential primary election results with no Challenges filed on or before thirty (30) days following the date of such certification; provided that any holdbacks not released pursuant to this paragraph because of a Challenge shall be released upon (x) a final non-appealable judgment (whether in substance or because the time period for filing an appeal has lapsed without such filing) which upholds the validity of such election or, if the validity of such election is not upheld, the basis for such determination of invalidity is based on matters other than a defect in the VSAP Solution or other alleged default by the Contractor in the provision of goods, services, or deliverables under this Contract, (y) the dismissal with prejudice of such Challenge or (z) the Claim is finally resolved in accordance with the applicable procedures of the California Government Code for such Claim. If the Challenge results in a determination that the basis for any determination of invalidity is based on a defect in the VSAP Solution or other alleged default by the Contractor in the provision of goods, services, or deliverables under this Contract, then the balance of the holdbacks not released pursuant to this paragraph because of a Challenge shall be released upon the Contractor's correction, at its sole cost, of the defects or defaults specified in such determination.

(c)   Twenty-five percent (25%) of total holdbacks accumulated prior to the November 2020 Presidential general election shall be due and payable upon the successful completion of voting in such election.

(d)   Any and total remaining holdbacks (other than holdbacks under clause (c)) will be due and payable upon successful certification by County of the November 2020 Presidential general election results with no Challenges filed on or before thirty (30) days following the date of such certification; provided that any holdbacks previously held back due to a Challenge shall not be released until such time as the Challenge is resolved; provided further that any holdbacks not released pursuant to this paragraph because of a Challenge shall be released upon (x) a final non-appealable judgment (whether in substance or because the time period for filing an appeal has lapsed without such filing) which upholds the validity of such election or, if the validity of such election is not upheld, the basis for such determination of invalidity is based on matters other than a defect in the VSAP Solution or other alleged default by the Contractor in the provision of goods, services, or deliverables under this Contract, (y) the dismissal with prejudice of such Challenge or (z) the Claim is finally resolved in accordance with the applicable procedures of the California Government Code for such Claim. If the Challenge results in a determination that the basis for any determination of invalidity is based on a defect in the VSAP Solution or other alleged default by the Contractor in the provision of goods, services, or deliverables under this Contract, then the balance of the holdbacks not released pursuant to this paragraph because of a Challenge shall be released upon the Contractor's correction, at its sole cost, of the defects or defaults specified in such determination.

5.6.8   County Approval of Invoices

All invoices submitted by the Contractor for payment must have the written approval of the County's Project Manager pursuant to Section 5.6.9 below prior to any payment thereof. In no event shall the County be liable or responsible for any payment prior to such written approval.

5.6.9   Invoice Discrepancies; Payment

The County's Project Manager (and the County's Project Director, if applicable) will review each invoice for any discrepancies and will, within seven (7) calendar days of receipt thereof, (a) approve the amounts requested for payment thereon, which approval shall not be unreasonably withheld, or (b) notify Contractor in writing of any discrepancies found upon such review and deliver to the Contractor a list of disputed charges on such invoice. The Contractor shall review the disputed charges and send a written explanation reasonably addressing the County's concerns regarding the disputed charges within thirty (30) calendar days of receipt of County's notice of discrepancies and disputed charges. If the County does not receive a written explanation for the charges within such thirty (30) calendar day period, Contractor shall be deemed to have waived its right to receive payment for such amounts with that invoice, but may thereafter submit such disputed amounts on a subsequent monthly invoice.   The foregoing is subject to the Dispute Resolution Procedure in Section 8.31 (Dispute Resolution Procedure). County's Project Manager shall cause County to pay all approved invoices (or the undisputed amounts thereon) within thirty (30) calendar days of said approval by County's

Project Manager (and the County's Project Director, if applicable) under this Section 5.6.9.

5.6.10 Local Small Business Enterprises (LSBEs) – Prompt Payment Program (if applicable)

Certified Local Small Business Enterprises ("**LSBEs**") registered in the County's Prompt Payment Program will receive prompt payment for services they provide to County departments. Prompt payment is defined as fifteen (15) calendar days after receipt of an undisputed invoice. A Certified LSBE vendor registered in the Prompt Payment Program must stamp all invoices with the "Prompt Pay" certification stamp.

6.0 ADMINISTRATION OF CONTRACT – COUNTY

6.1 COUNTY'S ADMINISTRATION

6.1.1 A listing of all County's Administration referenced in the following subparagraphs is designated in Exhibit E (County's Administration). The County will notify the Contractor in writing of any change in the names or addresses shown.

6.1.2 County Personnel

The Department shall assign a Project Director and a Project Manager to provide overall management and coordination of the Contract and act as liaisons for the Department. The County's Project Director shall provide information to the Contractor in areas relating to policy and procedural requirements and the County's Project Manager will monitor the Contractor's performance during the Term of the Contract; provided, however, in no event shall Contractor's obligation to fully satisfy all of the requirements of the Contract be relieved, excused or limited thereby. The Department will inform the Contractor in writing of the name, address, and telephone number of the individuals designated to act as Project Director and Project Manager, or any alternate identified in Exhibit E (County's Administration) of this Contract, at the time the Contract is executed and notify the Contractor as changes occur.

6.2 COUNTY'S PROJECT DIRECTOR

6.2.1 The County's Project Director is designated in Exhibit E (County's Administration). The County shall contact the Contractor in writing of any changes in the name or address of the County's Project Director.

6.2.2 The County's Project Director shall be responsible for ensuring that the objectives of this Contract are met and determining Contractor's compliance with the Contract; provided, however, in no event shall

Contractor's obligation to fully satisfy all of the requirements of the Contract be relieved, excused or limited by the County's Project Director.

6.2.3 Upon request of the Contractor, the County's Project Director may provide overall direction to Contractor in the areas relating to the County policy, information requirements, and procedural requirements; <u>provided</u>, <u>however</u>, in no event shall Contractor's obligation to fully satisfy all of the requirements of the Contract be relieved, excused or limited by the County's Project Director.

6.2.4 The County's Project Director is not authorized to make any changes in any of the terms and conditions of the Contract, except as permitted in accordance with <u>Section 8.1</u> (Change Notices and Amendments) of this Contract, and is not authorized to further obligate the County in any respect whatsoever.

6.3 COUNTY'S PROJECT MANAGER

6.3.1 The responsibilities of the County's Project Manager/Alternate Project Manager include:

- Requesting meetings with the Contractor's Project Manager on an as-needed basis; and

- Inspecting any and all tasks, deliverables, goods, services, or other work provided by or on behalf of the Contractor; <u>provided</u>, <u>however</u>, that in no event shall Contractor's obligation to fully satisfy all of the requirements of the Contract be relieved, excused or limited thereby.

6.3.2 The County's Project Manager is not authorized to make any changes in any of the terms and conditions of this Contract and is not authorized to further obligate the County in any respect whatsoever.

6.4 COUNTY'S PROJECT MONITOR

The County's Project Monitor is responsible for overseeing the day-to-day administration of this Contract; <u>provided</u>, <u>however</u>, in no event shall Contractor's obligation to fully satisfy all of the requirements of the Contract be relieved, excused or limited thereby. The County's Project Monitor reports to the County's Project Manager.

6.5 COUNTY'S DEPARTMENTAL CHIEF INFORMATION OFFICER (DCIO)

The Departmental Chief Information Officer ("**DCIO**") is responsible for managing the planning, design, coordination, development, implementation, and maintenance of the Department's information systems.

6.6   COUNTY'S DEPARTMENTAL INFORMATION SECURITY OFFICER (DISO)

The Departmental Information Security Officer ("**DISO**") develops and implements Departmental Information Technology (IT) security application, policies, standards, and procedures intended to prevent the unauthorized use, release, modification, loss, or destruction of data and to ensure the integrity and security of the Department's IT infrastructure.

7.0   ADMINISTRATION OF CONTRACT – CONTRACTOR

7.1   CONTRACTOR'S ADMINISTRATION

7.1.1   A listing of all Contractor's Administration referenced in the following subsections is designated in Exhibit F (Contractor's Administration). The Contractor will notify the County in writing of any change in the names or addresses shown.

7.1.2   Contractor Personnel

7.1.3   The Contractor shall assign a sufficient number of employees to perform the required work. Contractor shall provide a staffing plan and associated organization chart detailing the number of personnel, levels, roles and responsibilities, and team reporting relationships for the duration of the project. Identify all Key Personnel for M&S for the Proposer, personnel for the County and their proposed roles. At least one (1) employee on site shall be authorized to act for the Contractor in every detail and must speak and understand English.

7.1.4   The Contractor shall be required to background check its employees as set forth in Section 7.7 (Background and Security Investigations) of this Contract.

7.2   CONTRACTOR'S ENGAGEMENT DIRECTOR

7.2.1   The Contractor's Engagement Director shall be a full-time employee of the Contractor. The Contractor's Engagement Director shall be the principal officer in the Contractor's office to service the Contract and to act as a liaison for the Contractor in coordinating the performance under the Contract. The County must be provided in writing with the name, address, and telephone number of the individual designated to act as the Engagement Director or any alternate identified in Exhibit F (Contractor's Administration), and provide a current copy of the person's resume at the time the Contract is executed and notify the County as changes occur.

7.2.2   The Contractor's Engagement Director shall be responsible for the Contractor's performance of all tasks, deliverables, goods, services, or other

work provided by or on behalf of the Contractor and ensuring Contractor's compliance with this Contract.

7.2.3   The Contractor's Engagement Director shall be available to meet and confer with the County's Engagement Director on an as-needed basis, either in person or by telephone as mutually agreed by the Parties, to review Contract performance and discuss Contract coordination. Such meetings shall be conducted at a time and place as mutually agreed by the Parties.

7.3   CONTRACTOR'S PROJECT MANAGER

7.3.1   The Contractor's Project Manager is designated in Exhibit F (Contractor's Administration). The Contractor shall notify the County in writing of any change in the name or address of the Contractor's Project Manager.

7.3.2   The Contractor shall assign a Project Manager, and a designated alternate ("**Alternate Project Manager**"), to act as liaison for the Contractor and have full authority to act on behalf of the Contractor in all matters related to the daily operation of the Contract. The Project Manager, or the Alternate Project Manager, shall be available on a daily basis, Monday through Friday, during the hours of 8:00 a.m. and 5:00 p.m. Pacific Time and, during Important, Essential and Critical Election Work Periods, between 6:00 a.m. and 10:00 p.m. Pacific Time, for telephone contact and to regularly meet with County personnel regarding the operation of the Contract.

7.4   NOTICE OF PERSONNEL CHANGES

The Contractor shall inform the County's Project Director in writing of the names, addresses, and telephone numbers of the individuals designated to act as Project Manager and Alternate Project Manager at the time the Contract is implemented and as changes occurs during the Term of the Contract. Such notification shall be made by the Contractor no later than five (5) days after a change occurs and shall include a current resume for the new person. The County shall have the right to approve the assignment or replacement of any personnel recommended by the Contractor.

7.5   APPROVAL OF CONTRACTOR'S STAFF

The County has the absolute right to approve or disapprove all of the Contractor's staff performing work hereunder and any proposed changes in the Contractor's staff, including, but not limited to, the Contractor's Project Manager.

7.6   CONTRACTOR'S STAFF IDENTIFICATION

7.6.1   The Contractor shall provide, at Contractor's expense, all staff assigned to this Contract with a photo ID badge when on the County premises in accordance with the County specifications. Specifications may change at

the discretion of the County and the Contractor will be provided new specifications as required. The format and content of the badge is subject to the County's approval prior to the Contractor implementing the use of the ID badge. The Contractor staff, while on duty or when entering a County facility or its grounds, shall prominently display the photo ID badge on the upper part of the body. Contractor personnel may be asked by a County representative to leave a County facility if they do not have the proper County ID badge on their person and Contractor personnel must immediately comply with such request.

7.6.2   The Contractor shall notify the Department within one (1) day when staff is terminated from working under this Contract. The Contractor shall retrieve and immediately destroy the staff's County photo ID badge at the time of removal from the Contract.

7.6.3   If the County requests the removal of the Contractor's staff, the Contractor is responsible to retrieve and immediately destroy the Contractor's staff's County photo ID badge at the time of removal from working on the Contract.

7.7   BACKGROUND AND SECURITY INVESTIGATIONS

7.7.1   Each of Contractor's staff performing work under this Contract who is in a designated sensitive position, as determined by the County in the County's sole discretion, shall undergo and pass, to the satisfaction of the County, a background investigation as a condition of beginning and continuing to work under this Contract. Such background investigation must be obtained through fingerprints submitted to the California Department of Justice ("**CA DOJ**") to include state, local, and federal level review which may include, but is not limited to, criminal conviction information. At the County's sole and absolute discretion it may accept other completed background checks of equivalent scope as those done using Live Scans through the CA DOJ for non-California residents. Examples of disqualifying factors include, but are not limited to, bribery, robbery, theft, fraud, embezzlement, forgery, extortion and perjury, or possession, sale or attempt to sell a controlled substance, and possession, sale or attempt to sell stolen property, or any felony conviction or conviction of a misdemeanor involving moral turpitude, and job-related misdemeanor convictions. The fees associated with the background investigation shall be at the expense of the Contractor, regardless if the member of the Contractor's staff passes or fails the background investigation. For avoidance of doubt, a person occupies a "sensitive position" if such person (i) makes contributions to project development by making decisions on the architecture of the VSAP Solution, (ii) supervises the development or has control over any part of the VSAP Project or personnel working on the VSAP Project, (iii) develops or has control over any part of the VSAP Project or personnel, (iv) has access to County Contracts and Information, (v) has access to the VSAP Solution,

(vi) occupies a Sensitive Position according to County guidelines, or (vii) is designated by County to Contractor in writing.

7.7.2 A member of Contractor's staff shall not begin to perform services under the Contract until he/she has successfully passed a background investigation to the satisfaction of the County.

7.7.3 During the Contract Term, if the County becomes aware of a subsequent disqualifying factor for a member of the Contractor's staff, the County shall request that the member of the Contractor's staff be immediately removed from performing services under the Contract. Contractor shall comply with County's request.

7.7.4 The Contractor shall advise any Contractor staff member who did not pass the background investigation or who received a subsequent disqualifying factor to contact the County immediately to receive a copy of the Criminal Offender Record Information obtained from the DOJ through the County's background investigation.

7.7.5 The County may request that Contractor's staff be immediately removed from working on this Contract at any time during the Contract Term.

7.7.6 The County, in its sole discretion, may immediately deny or terminate facility access to any member of the Contractor's staff that does not pass an investigation to the satisfaction of the County or whose background or conduct is incompatible with County facility access.

7.7.7 Disqualification of any member of the Contractor's staff pursuant to this Section 7.7 shall not relieve Contractor of its obligation to complete all work in accordance with the terms and conditions of this Contract.

7.8 CONFIDENTIALITY

7.8.1 The Contractor shall maintain the confidentiality of all records, documentation, data, and information, including, but not limited to, County IP, Personally Identifiable Information, billing and sensitive financial information, County records, data and information, Personal Data, County data, any information relating to County's customers, users, patients, partners, or personnel, and any other data, records, and information received, obtained and/or produced under the provisions of this Contract ("**County Confidential Information**") in accordance with all applicable federal, state, and local laws, rules, regulations, ordinances, directives, guidelines, policies, and procedures relating to confidentiality, including, without limitation, the County policies concerning information technology security and the protection of confidential records, information and data.

7.8.2 The Contractor's employees may use data received from the County only to perform functions as defined by this Contract.

7.8.3 Disclosures which are required by law, such as a court order, or which are made with the explicit written authorization of the County are allowable. Any other use or disclosure of data received requires the express approval in writing from the County. No work shall duplicate, disseminate, or disclose any data except as allowed in this Contract.

7.8.4 Access to data received from the County shall be restricted only to workers who need the data to perform their official duties in the performance of this Contract.

7.8.5 Contractor employees who access, disclose, or use the data for a purpose not authorized by this Contract may be subject to civil and criminal sanctions contained in applicable federal and state statutes.

7.8.6 The Contractor shall indemnify, defend, and hold harmless the County, its officers, employees, and agents, from and against any and all claims, demands, damages, liabilities, losses, costs, and expenses, including, without limitation, defense costs, and legal, accounting and other expert, consulting, or professional fees, arising from, connected with, or related to any alleged failure by the Contractor, its officers, employees, agents, or Subcontractors, to comply with this Section 7.8. Any legal defense pursuant to the Contractor's indemnification obligations under this Section 7.8 shall be conducted by the Contractor and performed by the Counsel selected by the Contractor and approved by the County. Notwithstanding the preceding sentence, the County shall have the right to participate in any such defense at its sole cost and expense, except that in the event the Contractor fails to provide the County with a full and adequate defense, as determined by the County in its sole judgment, the County shall be entitled to retain its own counsel, including, without limitation, County Counsel, and to reimbursement from the Contractor for all costs and expenses incurred by the County in doing so. The Contractor shall not have the right to enter into any settlement, agree to any injunction, or make any admission, in each case, on behalf of the County without the County's prior written approval.

7.8.7 The Contractor shall cause all of its officers, employees, agents, and Subcontractors providing services hereunder to adhere to the confidentiality provisions of this Contract and adhere to the provisions of Exhibit G-1 (Contractor Acknowledgment, Confidentiality, and Copyright Assignment Agreement).

7.8.8 The Contractor shall sign and adhere and cause each of its Subcontractors to sign and adhere to the provisions of Exhibit G-1 (Contractor Acknowledgement, Confidentiality), and Copyright Assignment Agreement.

7.8.9 The Contractor shall cause each its employees, affiliates, or other agents, and those of its Subcontractors performing services covered by this Contract to sign and adhere to the provisions of Exhibit G-2 (Individual Acknowledgment, Confidentiality, and Copyright Assignment Agreement).

7.8.10 During the Contract Term, the Contractor shall maintain an updated file of the signed forms and shall forward copies of all signed forms to the County's Project Director whenever changes in personnel occur.

7.8.11 In connection with this Contract and performance of the Services, Contractor may be provided or obtain, from County or otherwise, Personal Data pertaining to County's current and prospective personnel, directors and officers, agents, Subcontractors, patients, and customers and may need to process such Personal Data and/or transfer it, all subject to the restrictions set forth in this Contract and otherwise in compliance with all applicable foreign and domestic laws and regulations for the sole purpose of performing the Services. Without limiting any other warranty or obligation specified in this Contract, and in particular the confidentiality provisions of this Section 7.8 (Confidentiality), during the Contract Term and thereafter in perpetuity, Contractor will not gather, store, log, archive, use, or otherwise retain any Personal Data in any manner and will not disclose, distribute, sell, share, rent, or otherwise transfer any Personal Data to any third party, except as expressly required to perform its obligations in this Contract or as Contractor may be expressly directed in advance in writing by the County. Contractor represents and warrants that Contractor will use and process Personal Data only in compliance with (a) this Contract, (b) County's then-current privacy policy, and (c) all applicable local, state, and federal laws and regulations (including, but not limited to, current and future laws and regulations relating to spamming, privacy, confidentiality, data security, and consumer protection). Contractor will not retain any Personal Data for any period longer than necessary for Contractor to fulfill its obligations under this Contract. As soon as Contractor no longer needs to retain such Personal Data in order to perform its duties under this Contract, Contractor will promptly return or destroy or erase all originals and copies of such Personal Data.

7.8.12 Notwithstanding anything to the contrary herein, the foregoing shall not apply to the Contractor's use of the VSAP Hardware pursuant to the license granted it pursuant to Section 2.4 above, provided that the Contractor shall require that its subcontractors and counterparties practicing under any permitted license hereunder agree to substantially similar provisions to protect the confidentiality of the County IP in a manner reasonably acceptable to the County.

7.9   PARENT GUARANTY

Simultaneously with the signing of the Contract, Smartmatic International Holding B.V., SGO Corporation Ltd., and SGO Corporation N.V. shall enter into an agreement in the form set forth in Exhibit R (Parent Guaranty) guaranteeing payment of all amounts due by Contractor hereunder, with liability in the amount of the Contract Sum.

7.10   IP INSURANCE POLICY

7.10.1 Unless waived by the Department, Contractor shall bind an insurance policy within thirty (30) days of the Commencement Date which is on substantially the same terms as Exhibit T (the "**IP Insurance Policy**"). The IP Insurance Policy shall comply with the requirements of Section 8.24 of this Contract, except that the deductible shall be as described in Exhibit T.

7.10.2 County shall be responsible for the actual amount of any premium payments for the IP Insurance Policy through the next policy renewal date following the November 2020 Presidential Election. Unless otherwise reasonably agreed by the Department, Contractor shall pay for any insurance premiums after such date.

7.10.3 The terms and conditions of this Section 7.10 and Exhibit T will be periodically reviewed at the reasonable request of other party, and adjustments of the terms of coverage may be mutually agreed by the Department and Contractor.

8.0   STANDARD TERMS AND CONDITIONS

8.1   CHANGE NOTICES AND AMENDMENTS

8.1.1 No representative of either County or Contractor, including those named in this Contract, is authorized to make any changes in any of the terms, obligations, or conditions of this Contract, except through the procedures set forth in this Section 8.1 (Change Notices and Amendments). Any change to any work and to any other provisions of this Contract shall be accomplished only as provided in this Section 8.1.

8.1.2 The County reserves the right to initiate change notices that either (i) do not (a) affect the Contract Term or Contract Sum or payments and (b) materially alter the Contract or (ii) for any expenditure of Pool Dollars ("**Change Notice**"). All such changes shall be executed with a Change Notice to this Contract signed by the Contractor and by the County's Project Director (or either such party's designee); provided that any Change Notice for Additional Work shall additionally require an additional Statement of Work, or amendment to the Statement of Work, and written approval of County's Chief Information Office and County Counsel. County is specifically authorized to execute Change Notices for expenditure of Pool

Dollars for acquisition of Additional Work under the Contract. Any requests for the expenditure of Pool Dollars must be approved in writing by the County's Project Director.

8.1.3 For any change which affects the Contract Sum and/or Statement of Work but does not materially alter the Contract, an Amendment to this Contract shall be prepared and executed by the Contractor and by the Registrar-Recorder or his/her designee, <u>provided</u> County Counsel approval is obtained prior to execution of such Amendment.

8.1.4 For any change which (a) affects the Contract Term (other than exercise of below or resulting from Force Majeure), the Contract Sum, and/or Statement of Work under this Contract and (b) materially alters the Contract, an Amendment to this Contract shall be prepared and executed by the Contractor and by the Board or its authorized designee.

8.1.5 [Reserved]

8.1.6 The County's Board or Chief Executive Officer ("**CEO**") or designee may require the addition and/or change of certain terms and conditions in the Contract during the Contract Term to make the Contract consistent with the then-current County-wide contracting policies. The County reserves the right to add and/or change such provisions as required by the Board or CEO. To implement such changes, an Amendment to the Contract shall be prepared and executed by the Contractor and by the Registrar-Recorder or his/her designee.

8.1.7 The Contractor agrees that the exercise of Option Terms shall not change any other term or condition of this Contract during the period of such extensions.

8.1.8 For any change which is clerical or administrative in nature and/or does not affect any term or condition of this Contract, a written change order ("**Change Order**") may be prepared and executed by the Registrar-Recorder or his/her designee.

8.2 ASSIGNMENT AND DELEGATION

8.2.1 The Contractor shall not assign its rights or delegate its duties under this Contract, or both, whether in whole or in part, without the prior written consent of the County, in its discretion, and any attempted assignment or delegation without such consent shall be null and void. For purposes of this subparagraph, the County's consent shall require a written Amendment to the Contract, which is formally approved and executed by the Parties. Any payments by the County to any approved delegatee or assignee on any claim under this Contract shall be deductible, at County's sole discretion, against the claims, which the Contractor may have against the County. For the avoidance of doubt, this Section shall not prevent the Contractor from

delegating its duties to Subcontractors as otherwise allowed under this Contract.

8.2.2 Notwithstanding Section 8.2.1, shareholders, partners, members, or other direct or indirect equity holders of Contractor may transfer, sell, exchange, assign, or divest themselves of any interest they may have therein without the consent of County. However, in the event any such sale, transfer, exchange, assignment, or divestment is effected in such a way as to indirectly or directly give majority control of Contractor to any Person other than the Person who holds a majority controlling interest therein at the time of execution of the Contract, such disposition will be deemed an assignment requiring the prior written consent of the County, which consent shall not be unreasonably withheld, conditioned or delayed.

8.2.3 Any assumption, assignment, delegation, or takeover of any of the Contractor's duties, responsibilities, obligations, or performance of same by any person or entity other than the Contractor, whether through assignment, subcontract, delegation, merger, buyout, or any other mechanism, with or without consideration for any reason whatsoever without County's express prior written approval to the extent required in this Contract, shall be a material breach of the Contract which may result in the termination of this Contract. In the event of such termination, County shall be entitled to pursue the same remedies against Contractor as it could pursue in the event of default by the Contractor.

8.3 WARRANTIES.

The Contractor represents, warrants and covenants that:

8.3.1 The Person executing this Contract for the Contractor is an authorized agent who has actual authority to bind the Contractor to each and every term, condition, and obligation of this Contract and that all actions required of the Contractor to provide such actual authority have been fulfilled.

8.3.2 The Services will be performed in a professional, competent, and timely manner by appropriately qualified Contractor personnel in accordance with this Contract and consistent with industry best practices.

8.3.3 The VSAP Solution shall conform to the specifications and requirements set forth in this Contract without material deviations for the period commencing upon the Commencement Date and continuing through the expiration or termination of Maintenance and Support Services Period. Contractor shall institute quality controls, including suitable testing procedures, if any, to ensure that the VSAP Solution complies with the specifications in a manner consistent with the highest applicable industry standards. Upon the County's reasonable request, the County shall have the right to review Contractor's quality controls in order to verify and/or

improve the quality of the VSAP Solution. This right of review includes the right to verify that there is no existing pattern or repetition of County or voter complaints regarding the VSAP Solution, including functionality or performance issues, and that Contractor's engineers have not currently identified any repeating adverse impact on the VSAP Solution, including functionality or performance, for which the root cause is believed to be a flaw or defect in the VSAP Solution.

8.3.4 Contractor shall not negligently cause any unplanned interruption of the operations of, or accessibility to, the VSAP Solution or any component through any device, method, or means, including, without limitation, the use of any "virus," "lockup," "time bomb," "key lock," "worm," "back door," or "Trojan Horse" device or program, or any disabling code, which has the potential or capability of compromising the security of County's Confidential Information or of causing any unplanned interruption of the operations of, or accessibility of, the VSAP Solution or any component to the County or any user or which could alter, destroy, or inhibit the use of the VSAP Solution or any component, or the data contained therein (collectively, "**Disabling Device[s]**"), which could block access to or prevent the use of the VSAP Solution or any component by the County or users. Contractor represents, warrants, and agrees that it has not purposely placed, nor is it aware of, any Disabling Device in any VSAP Solution component provided to the County under this Contract, nor shall Contractor knowingly permit any subsequently delivered or provided VSAP Solution component to contain any Disabling Device. In addition, Contractor shall prevent viruses from being incorporated or introduced into the VSAP Solution or Updates thereto prior to the installation onto the VSAP Solution and shall prevent any viruses from being incorporated or introduced in the process of Contractor's performance of online support.

8.3.5 The Contractor designed or developed components of the VSAP Solution and approved Contractor Pre-Existing Materials will not infringe the Intellectual Property rights of any third-party. To the best of Contractor's knowledge and subject to Section 8.23.2, any Third-Party Intellectual Property required by, incorporated in, or integrated into the VSAP Solution will not infringe the Intellectual Property rights of any third party.

8.3.6 There is no pending or threatened litigation that would have a material adverse impact on its performance under the Contract. In addition, Contractor also represents and warrants that, based on pending actions, claims, disputes, or other information, Contractor has no knowledge of a failure of the VSAP Solution to perform in accordance with the specifications.

8.3.7 To the extent permissible under the applicable third-party Contracts, Contractor hereby assigns and agrees to deliver to the County all

representations and warranties received by Contractor from its third-party licensors and suppliers, including hardware vendors.

8.3.8 During the Contract Term, Contractor shall not subordinate this Contract or any of its rights hereunder to any third party without the prior written consent of the County, and without providing in such subordination instrument for non-disturbance of County's use of the VSAP Solution (or any part thereof) in accordance with this Contract. This Contract and the VSAP Solution licensed or acquired herein are neither subject to any liens, encumbrances, or pledges nor subordinate to any right or claim of any third party, including Contractor's creditors. County is entitled to use the VSAP Solution without interruption. As of the date furnished, no statement contained in writing in the response to the request for proposals for the VSAP Solution contains any untrue statements about the prior experience or corporate description of Contractor, or omits any fact necessary to make such statement not misleading.

8.3.9 County's remedies under the Contract for the breach of the Contractor's covenants and/or warranties set forth in this Contract will include, but not be limited to, the repair or replacement by Contractor, at its own expense, of the non-conforming VSAP Solution hardware or software components and other corrective measures afforded to the County by Contractor under this Contract.

8.4 BUDGET REDUCTIONS

In the event that the County's Board adopts, in any fiscal year, a County budget which provides for reductions in the salaries and benefits paid to the majority of County employees and imposes similar reductions with respect to County contracts, the County reserves the right to reduce its payment obligation under this Contract correspondingly for that fiscal year and any subsequent fiscal year during the Contract Term (including any extensions), and the services to be provided by the Contractor under this Contract shall also be reduced correspondingly. The County's notice to the Contractor regarding said reduction in payment obligation shall be provided within thirty (30) calendar days of the Board's approval of such actions and such reduction shall be effective sixty (60) days after such notice. Except as set forth in the preceding sentence, the Contractor shall continue to provide all of the services set forth in this Contract. Contractor shall have the right to recover reasonable, non-cancellable expenses (but with a duty to mitigate reasonably any such cost) incurred due to such reduction.

8.5 COMPLAINTS

The Contractor shall develop, maintain, and operate procedures for receiving, investigating, and responding to complaints from the public. Procedures shall include the following:

8.5.1 Simultaneously with Contractor's delivery of Deliverable 3.10a (Deploy VSAP Solution (Prior to Full Rollout)) in preparation for the 2019 Mock Election to the County, the Contractor shall also provide the County with the Contractor's policy for receiving, investigating, and responding to voter and County complaints.

8.5.2 The County will review the Contractor's policy and provide the Contractor with approval of said plan or with requested changes.

8.5.3 If the County requests changes in the Contractor's policy, the Contractor shall make such changes and resubmit the plan within five (5) days for County's approval.

8.5.4 If, at any time, the Contractor wishes to change the Contractor's policy, the Contractor shall submit proposed changes to the County for approval before implementation.

8.5.5 The Contractor shall preliminarily investigate all complaints and notify the County's Contract Administrator of the status of the investigation within five (5) days of receiving the complaint.

8.5.6 When complaints cannot be resolved informally, a system of follow-through shall be instituted which adheres to formal plans for specific actions and strict time deadlines.

8.5.7 Copies of all written responses shall be sent to the County's Contract Administrator within three (3) days of mailing to the complainant.

8.6   COMPLIANCE WITH APPLICABLE LAW

8.6.1 In the performance of this Contract, Contractor shall comply with all applicable federal, state, and local laws, rules, regulations, ordinances, directives, guidelines, policies and procedures, and all provisions required thereby to be included in this Contract are hereby incorporated herein by reference.

8.6.2 Contractor shall indemnify, defend, and hold harmless County, its officers, employees, and agents, from and against any and all claims, demands, damages, liabilities, losses, costs, and expenses, including, without limitation, defense and legal costs, accounting, and other expert, consulting or professional fees, arising from, connected with, or related to any failure by Contractor, or its officers, employees, agents, or Subcontractors, to comply with any such laws, rules, regulations, ordinances, directives, guidelines, policies, or procedures. For the avoidance of doubt, nothing in this Contract is intended to nor shall diminish the right of County, acting in its police and/or governmental capacity, from enforcing the laws, rules, regulations, ordinances, directives, guidelines, policies, or procedures of County. Any legal defense pursuant to Contractor's indemnification

obligations under this <u>Section 8.6</u> shall be conducted by the Contractor and performed by the Counsel selected by the Contractor and approved by the County. Notwithstanding the preceding sentence, County shall have the right to participate in any such defense at its sole cost and expense, except that in the event Contractor fails to provide the County with a full and adequate defense, as determined by the County in its sole judgment, County shall be entitled to retain its own counsel, including, without limitation, County Counsel, and to reimbursement from Contractor for all such costs and expenses incurred by the County in doing so. Contractor shall not have the right to enter into any settlement, agree to any injunction or other equitable relief, or make any admission, in each case, on behalf of the County without County's prior written approval.

8.7   COMPLIANCE WITH CIVIL RIGHTS LAWS

The Contractor hereby assures that it will comply with Subchapter VI of the Civil Rights Act of 1964, 42 U.S.C. Sections 2000 (e) (1) through 2000 (e) (17), to the end that no person shall, on the grounds of race, creed, color, sex, religion, ancestry, age, condition of physical handicap, marital status, political affiliation, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under this Contract or under any project, program, or activity supported by this Contract. The Contractor shall comply with <u>Exhibit D</u> (Contractor's EEO Certification).

8.8   COMPLIANCE WITH THE COUNTY'S JURY SERVICE PROGRAM

8.8.1   Jury Service Program

This Contract is subject to the provisions of the County's ordinance entitled Contractor Employee Jury Service ("**Jury Service Program**") as codified in Sections 2.203.010 through 2.203.090 of the County Code, a copy of which is attached as <u>Exhibit H</u> (Jury Service Ordinance) and incorporated by reference into and made a part of this Contract.

8.8.2   Written Employee Jury Service Policy

1.   Unless the Contractor has demonstrated to the County's satisfaction either that the Contractor is not a "Contractor" as defined under the Jury Service Program (Section 2.203.020 of the County Code) or that the Contractor qualifies for an exception to the Jury Service Program (Section 2.203.070 of the County Code), the Contractor shall have and adhere to a written policy that provides that its Employees shall receive from the Contractor, on an annual basis, no less than five (5) days of regular pay for actual jury service. The policy may provide that Employees deposit any fees received for such jury service with the Contractor or that the Contractor deduct from the Employee's regular pay the fees received for jury service.

2.   For purposes of this <u>Section 8.8.2</u>, "Contractor" means a person, partnership, corporation, or other entity which has a Contract with the County or a subcontract with a County Contractor and has received or will receive an aggregate sum of fifty thousand dollars ($50,000) or more in any twelve (12) month period under one or more County contracts or subcontracts. "Employee" means any California resident who is a full-time employee of the Contractor. "Full-time" means forty (40) hours or more worked per week, or a lesser number of hours if: (1) the lesser number is a recognized industry standard as determined by the County, or (2) Contractor has a long-standing practice that defines the lesser number of hours as full-time. Full-time employees providing short-term, temporary services of ninety (90) days or less within a twelve (12) month period are not considered full-time for purposes of the Jury Service Program. If the Contractor uses any Subcontractor to perform services for the County under the Contract, the Subcontractor shall also be subject to the provisions of this subparagraph. The provisions of this subparagraph shall be inserted into any such subcontract agreement, and a copy of the Jury Service Program shall be attached to the agreement.

3.   If the Contractor is not required to comply with the Jury Service Program when the Contract commences, the Contractor shall have a continuing obligation to review the applicability of its "exception status" from the Jury Service Program, and the Contractor shall immediately notify the County if the Contractor at any time either comes within the Jury Service Program's definition of "Contractor" or if the Contractor no longer qualifies for an exception to the Jury Service Program. In either event, the Contractor shall immediately implement a written policy consistent with the Jury Service Program. The County may also require, at any time during the Contract and at its sole discretion, that the Contractor demonstrate to the County's satisfaction that the Contractor either continues to remain outside of the Jury Service Program's definition of "Contractor" and/or that the Contractor continues to qualify for an exception to the Program.

4.   Contractor's violation of this <u>Section 8.8.2</u> of the Contract may constitute a material breach of the Contract. In the event of such material breach, County may, in its sole discretion, terminate the Contract and/or bar the Contractor from the award of future County contracts for a period of time consistent with the seriousness of the breach.

8.9   CONFLICT OF INTEREST

8.9.1 No County employee whose position with the County enables such employee to influence the award of this Contract or any competing Contract, and no spouse or economic dependent of such employee, shall be employed in any capacity by the Contractor or have any other direct or indirect financial interest in this Contract. No officer or employee of the Contractor who may financially benefit from the performance of work hereunder shall in any way participate in the County's approval or ongoing evaluation of such work or in any way attempt to unlawfully influence the County's approval or ongoing evaluation of such work.

8.9.2 The Contractor shall comply with all conflict of interest laws, ordinances, and regulations now in effect or hereafter to be enacted during the Term of this Contract. The Contractor warrants that it is not now aware of any facts that create a conflict of interest. If the Contractor hereafter becomes aware of any facts that might reasonably be expected to create a conflict of interest, it shall immediately make full written disclosure of such facts to the County. Full written disclosure shall include, but is not limited to, identification of all persons implicated and a complete description of all relevant circumstances. Failure to comply with the provisions of this subparagraph shall be a material breach of this Contract.

8.10 CONSIDERATION OF HIRING COUNTY EMPLOYEES TARGETED FOR LAYOFF/OR RE-EMPLOYMENT LIST

Should the Contractor require additional or replacement personnel after the Commencement Date to perform the services set forth herein, the Contractor shall give first consideration for such employment openings to qualified, permanent County employees who are targeted for layoff or qualified, former County employees who are on a re-employment list during the life of this Contract.

8.11 CONSIDERATION OF HIRING GAIN/GROW PROGRAM PARTICIPANTS

8.11.1 Should the Contractor require additional or replacement personnel after the Commencement Date, the Contractor shall give consideration for any such employment openings to participants in the County's Department of Public Social Services Greater Avenues for Independence (GAIN) Program or General Relief Opportunity for Work (GROW) Program who meet the Contractor's minimum qualifications for the open position. For this purpose, consideration shall mean that the Contractor will interview qualified candidates. The County will refer GAIN/GROW participants by job category to the Contractor. Contractors shall report all job openings with job requirements to: GAINGROW@dpss.lacounty.gov and BSERVICES@WDACS.lacounty.gov and DPSS will refer qualified GAIN/GROW job candidates.

8.11.2 In the event that both laid-off County employees and GAIN/GROW participants are available for hiring, County employees shall be given first priority.

8.12 CONTRACTOR RESPONSIBILITY AND DEBARMENT

8.12.1 Responsible Contractor

A responsible Contractor is a Contractor who has demonstrated the attribute of trustworthiness, as well as quality, fitness, capacity, and experience, to satisfactorily perform the Contract. It is the County's policy to conduct business only with responsible Contractors.

8.12.2 Chapter 2.202 of the County Code

The Contractor is hereby notified that, in accordance with Chapter 2.202 of the County Code, if the County acquires information concerning the performance of the Contractor on this or other contracts which indicates that the Contractor is not responsible, the County may, in addition to other remedies provided in the Contract, debar the Contractor from bidding or proposing on, or being awarded, and/or performing work on County contracts for a specified period of time, which generally will not exceed five (5) years but may exceed five (5) years or be permanent if warranted by the circumstances, and terminate any or all existing contracts the Contractor may have with the County.

8.12.3 Non-responsible Contractor

The County may debar a Contractor if the Board finds, in its discretion, that the Contractor has done any of the following: (1) violated a term of a Contract with the County or a nonprofit corporation created by the County; (2) committed an act or omission which negatively reflects on the Contractor's quality, fitness, or capacity to perform a contract with the County, any other public entity, or a nonprofit corporation created by the County, or engaged in a pattern or practice which negatively reflects on same; (3) committed an act or offense which indicates a lack of business integrity or business honesty; or (4) made or submitted a false claim against the County or any other public entity.

8.12.4 Contractor Hearing Board

1. If there is evidence that the Contractor may be subject to debarment, the Department will notify the Contractor in writing of the evidence, which is the basis for the proposed debarment and will advise the Contractor of the scheduled date for a debarment hearing before the Contractor Hearing Board.

2.   The Contractor Hearing Board will conduct a hearing where evidence on the proposed debarment is presented. The Contractor and/or the Contractor's representative shall be given an opportunity to submit evidence at that hearing. After the hearing, the Contractor Hearing Board shall prepare a tentative proposed decision, which shall contain a recommendation regarding whether the Contractor should be debarred, and, if so, the appropriate length of time of the debarment. The Contractor and the Department shall be provided an opportunity to object to the tentative proposed decision prior to its presentation to the Board.

3.   After consideration of any objections, or if no objections are submitted, a record of the hearing, the proposed decision, and any other recommendation of the Contractor Hearing Board shall be presented to the Board. The Board shall have the right to modify, deny, or adopt the proposed decision and recommendation of the Contractor Hearing Board.

4.   If a Contractor has been debarred for a period longer than five (5) years, that Contractor may, after the debarment has been in effect for at least five (5) years, submit a written request for review of the debarment determination to reduce the period of debarment or terminate the debarment. The County may, in its discretion, reduce the period of debarment or terminate the debarment if it finds that the Contractor has adequately demonstrated one or more of the following: (1) elimination of the grounds for which the debarment was imposed; (2) a bona fide change in ownership or management; (3) material evidence discovered after debarment was imposed; or (4) any other reason that is in the best interests of the County.

5.   The Contractor Hearing Board will consider a request for review of a debarment determination only where: (1) the Contractor has been debarred for a period longer than five (5) years; (2) the debarment has been in effect for at least five (5) years; and (3) the request is in writing, states one or more of the grounds for reduction of the debarment period or termination of the debarment, and includes supporting documentation. Upon receiving an appropriate request, the Contractor Hearing Board will provide notice of the hearing on the request. At the hearing, the Contractor Hearing Board shall conduct a hearing where evidence on the proposed reduction of debarment period or termination of debarment is presented. This hearing shall be conducted and the request for review decided by the Contractor Hearing Board pursuant to the same procedures as for a debarment hearing.

6.   The Contractor Hearing Board's proposed decision shall contain a recommendation on the request to reduce the period of debarment

or terminate the debarment. The Contractor Hearing Board shall present its proposed decision and recommendation to the Board. The Board shall have the right to modify, deny, or adopt the proposed decision and recommendation of the Contractor Hearing Board.

8.12.5 Subcontractors of Contractor

The terms of this <u>Section 8.12</u> shall also apply to Subcontractors of the Contractor.

8.13 [RESERVED]

8.14 CONTRACTOR'S WARRANTY OF ADHERENCE TO COUNTY'S CHILD SUPPORT COMPLIANCE PROGRAM

8.14.1 The Contractor acknowledges that the County has established a goal of ensuring that all individuals who benefit financially from the County through contracts are in compliance with their court-ordered child, family, and spousal support obligations in order to mitigate the economic burden otherwise imposed upon the County and its taxpayers.

8.14.2 As required by the County's Child Support Compliance Program (County Code Chapter 2.200) and without limiting the Contractor's duty under this Contract to comply with all applicable provisions of law, the Contractor warrants that it is now in compliance and shall during the Term of this Contract remain in compliance with employment and wage reporting requirements as required by the Federal Social Security Act (42 USC Section 653a) and California Unemployment Insurance Code Section 1088.5, and shall implement all lawfully served Wage and Earnings Withholding Orders or Child Support Services Department Notices of Wage and Earnings Assignment for Child, Family, or Spousal Support, pursuant to Code of Civil Procedure Section 706.031 and Family Code Section 5246(b).

8.15 COUNTY'S QUALITY ASSURANCE PLAN

The County or its agent(s) will monitor the Contractor's performance under this Contract on not less than an annual basis. Such monitoring will include assessing the Contractor's compliance with all Contract terms and conditions and performance standards. Contractor deficiencies which the County determines are significant or continuing and that may place performance of the Contract in jeopardy if not corrected will be reported to the Board and listed in the appropriate Contractor performance database. The report to the Board will include improvement/corrective action measures taken by the County and the Contractor. If improvement does not occur consistent with the corrective action measures, the County may terminate this Contract or impose other penalties as specified in this Contract.

8.16 DAMAGE TO COUNTY FACILITIES, BUILDINGS, OR GROUNDS

8.16.1 The Contractor shall repair, or cause to be repaired, at its own cost, any and all damage to County facilities, buildings, or grounds caused by the Contractor, employees, or agents of the Contractor in the performance of its/his/her/their duties under this Contract. Such repairs shall be made immediately after the Contractor has become aware of such damage, but in no event later than thirty (30) calendar days after the occurrence.

8.16.2 If the Contractor fails to make timely repairs, County may make any necessary repairs. All costs incurred by County, as determined by the County, for such repairs shall be repaid by the Contractor upon demand.

8.17 EMPLOYMENT ELIGIBILITY VERIFICATION

8.17.1 The Contractor warrants that it fully complies with all federal and state statutes and regulations regarding the employment of aliens and others and that all its employees performing work under this Contract meet the citizenship or alien status requirements set forth in federal and state statutes and regulations. The Contractor shall obtain, from all employees performing work hereunder, all verification and other documentation of employment eligibility status required by federal and state statutes and regulations, including, but not limited to, the Immigration Reform and Control Act of 1986 (P.L. 99-603), or as they currently exist and as they may be hereafter amended. The Contractor shall retain all such documentation for all covered employees for the period prescribed by law.

8.17.2 The Contractor shall indemnify, defend, and hold harmless the County, its agents, officers, and employees from employer sanctions and any other liability which may be assessed against the Contractor or the County or both in connection with any alleged violation by the Contractor and/or any Subcontractor of any federal or state statutes or regulations pertaining to the eligibility for employment of any persons performing work under this Contract.

8.18 FACSIMILE REPRESENTATIONS

The County and the Contractor hereby agree to regard facsimile representations of original signatures of authorized officers of each party, when appearing in appropriate places on the Amendments and/or Change Notices prepared pursuant to Section 8.1 (Change Notices and Amendments), and received via communications facilities, as legally sufficient evidence that such original signatures have been affixed to Amendments and/or Change Notices to this Contract, such that the Parties need not follow up facsimile transmissions of such documents with subsequent (non-facsimile) transmission of "original" versions of such documents.

The Parties hereby agree facsimile and electronic scanned versions of original signatures of authorized signatories of each party have the same force and effect as

original signatures such that the parties need not follow up facsimile or electronic transmissions of executed documents with original wet-signature versions.

8.19   FAIR LABOR STANDARDS

The Contractor shall comply with all applicable provisions of the Federal Fair Labor Standards Act (or foreign equivalent thereof) and shall indemnify, defend, and hold harmless the County and its agents, officers, and employees from any and all liability, including, but not limited to, wages, overtime pay, liquidated damages, penalties, court costs, and attorneys' fees arising under any wage and hour law, including, but not limited to, the Federal Fair Labor Standards Act, for any work performed by the Contractor's employees for which the County may be found jointly or solely liable.

8.20   FORCE MAJEURE

8.20.1 Neither party shall be liable for such party's failure to perform its obligations under and in accordance with this Contract if such failure arises out of fires, floods, epidemics, quarantine restrictions, other natural occurrences, strikes, lockouts (other than a lockout by such party or any of such party's Subcontractors), change of law, freight embargoes, or other events beyond the control and without any fault or negligence of such party (such events, "**Force Majeure Event(s)**").

8.20.2 Notwithstanding the foregoing, a default by a Subcontractor of the Contractor shall not constitute a Force Majeure Event, unless such default arises out of causes beyond the control of both Contractor and such Subcontractor, and without any fault or negligence of either of them. In such case, Contractor shall not be liable for failure to perform, unless the goods or services to be furnished by the Subcontractor were obtainable from other sources at commercially reasonable rates in sufficient time to permit Contractor to meet the required performance schedule. As used in this Section 8.20, the terms "**Subcontractor**" and "**Subcontractors**" mean Subcontractors at any tier.

8.20.3 In the event Contractor's failure to perform arises out of a Force Majeure Event, Contractor agrees to use commercially reasonable efforts to obtain goods or services from other sources, if applicable, at commercially reasonable rates and to otherwise mitigate the damages and reduce the delay caused by such Force Majeure Event.

8.20.4 In the event a Force Majeure Event continues for more than five (5) days, County may terminate this Contract for convenience under Section 8.42 (Termination for Convenience) by providing written notice to Contractor; provided that if County terminates the Contract pursuant to this Section 8.20.4 less than thirty (30) days after such Force Majeure Event commences (and provided such continues uninterrupted though the date of

notice), the applicable portion of the Early Termination Payment shall be due and payable to Contractor, but if County terminates the Contract at any time after such thirty (30) days has elapsed after such Force Majeure Event commences (and <u>provided</u> such continues uninterrupted though the date of notice), County shall not owe any portion of the Allocated License Fee to Contractor. Notwithstanding the foregoing, a Force Majeure Event will not relieve Contractor of its obligations under <u>Exhibit P</u> (Information Security and Privacy Requirements) and <u>Section 7.8</u> (Confidentiality).

8.21   GOVERNING LAW, JURISDICTION, AND VENUE

This Contract shall be governed by, and construed in accordance with, the laws of the state of California. The Contractor agrees and consents to the exclusive jurisdiction of the courts of the state of California for all purposes regarding this Contract and further agrees and consents that venue of any action brought hereunder shall be exclusively in the County.

8.22   INDEPENDENT CONTRACTOR STATUS

8.22.1 This Contract is by and between the County and the Contractor and is not intended, and shall not be construed, to create the relationship of agent, servant, employee, partnership, joint venture, or association, as between the County and the Contractor. The employees and agents of one party shall not be, or be construed to be, the employees or agents of the other party for any purpose whatsoever.

8.22.2 The Contractor shall be solely liable and responsible for providing to, or on behalf of, all persons performing work pursuant to this Contract all compensation and benefits. The County shall have no liability or responsibility for the payment of any salaries, wages, unemployment benefits, disability benefits, federal, state, or local taxes, or other compensation, benefits, or taxes for any personnel provided by or on behalf of the Contractor.

8.22.3 The Contractor understands and agrees that all persons performing work pursuant to this Contract are, for purposes of Workers' Compensation liability, solely employees of the Contractor and not employees of the County. The Contractor shall be solely liable and responsible for furnishing any and all Workers' Compensation benefits to any person as a result of any injuries arising from or connected with any work performed by or on behalf of the Contractor pursuant to this Contract.

8.22.4 The Contractor shall adhere to the provisions stated in <u>Section 7.8</u> (Confidentiality).

8.23   INDEMNIFICATION & LIABILITY LIMITATION

8.23.1 The Contractor shall indemnify, defend, and hold harmless the County, its Special Districts, elected and appointed officers, employees, agents, and volunteers ("**County Indemnitees**") from and against any and all liability, including, but not limited to, demands, claims, actions, fees, costs, and expenses (including attorney and expert witness fees), arising from and/or relating to (a) breach by the Contractor of its obligations under this Contract (including the breach by any Subcontractor under its subcontract), (b) any third-party challenge to the validity or legality of this Contract; or (c) the Contractor's, Subcontractor's, or any of their respective employees', contractors', subcontractors' (of any tier) acts, errors or omissions in the performance of its/their respective duties in the performance of this Contract, except to the extent that such loss or damage arises from (i) breach by the County of its obligations under this Contract or (ii) the gross negligence or willful misconduct of any County Indemnitee.

8.23.2 The Contractor shall indemnify, hold harmless, and defend County from and against any and all liability, damages, costs, and expenses, including, but not limited to, defense costs and attorneys' fees, for or by reason of any actual or alleged infringement or misappropriation of any third party's Intellectual Property arising from or related to the operation and utilization of the VSAP Solution and/or Services under this Contract, other than with respect to liability, damages, costs, and expenses arising out of or relating to breach by the County of its obligations under this Contract up to the coverage limit of the IP Insurance Policy. Notwithstanding the foregoing, Contractor's out-of-pocket liability, damages, costs, and expenses under the foregoing indemnity shall be limited with respect to (a) Pre-Existing Claims, eighteen million dollars ($18,000,000); (b) all claims arising out of Contractor's Pre-Existing Rights, Pre-Existing Materials, or other modifications proposed by or made by Contractor, including in Contractor's response RFP Phase 2 – Proposal Evaluation and Contractor Selection for VSAP Implementation and Support Services (#17-008), one hundred percent (100%) of the Contract Sum and (c) all other claims under the foregoing indemnity, the coverage limit of the IP Insurance Policy. County shall inform the Contractor as soon as practicable of any claim or action alleging such infringement or unauthorized disclosure and shall support the Contractor's defense and settlement thereof. Without limiting the generality of the foregoing, in addition to its obligations under Section 2.1.5, Contractor shall secure direct representations and warranties from each licensor of third-party Intellectual Property regarding non-infringement of third-party Intellectual Property rights for the benefit of County. To the extent that any order or judgment requires the Contractor to cease work on any aspect of the performance under this Contract, all deadlines under this Contract shall be extended day for day by the time any such order or judgment remains in effect.

8.23.3 In the event the VSAP Solution, or any hardware or software component becomes the subject of any complaint, claim, or proceeding alleging

infringement or unauthorized disclosure (other than the Pre-Existing Claims), such that County's continued use of such item is formally restrained, enjoined, or subjected to a risk of damages, the Contractor, at its sole expense, and providing that County's continued use of the VSAP Solution is not materially impeded, shall either: (a) procure for County all rights to continued use of the questioned equipment, part, or software product; (b) replace the questioned equipment, part, or software product with a non-questioned item; or (c) modify the questioned equipment, part, or software so that it is free of claims.

8.23.4 Contractor's aggregate liability pursuant to this Contract, including termination of Contract for any reason, is limited to one hundred percent (100%) of the Contract Sum, except for liability arising under or resulting from (i) any obligation subject to indemnification under this Contract (other than third party intellectual property infringement described in Section 8.23.2 (which applicable liability limits are set forth therein), (ii) a breach of Contractor's confidentiality obligations, (iii) Contractor's infringement or misappropriation of County IP, or (iv) Contractor's gross negligence, or willful or intentional misconduct.

8.24 GENERAL PROVISIONS FOR ALL INSURANCE COVERAGE

Without limiting Contractor's indemnification of the County, and in the performance of this Contract and until all of its obligations pursuant to this Contract have been met, Contractor shall provide and maintain, at its own expense, insurance coverage satisfying the requirements specified in Sections 8.24 and 8.25 of this Contract. These minimum insurance coverage terms, types, and limits (the "Required Insurance") also are in addition to and separate from any other contractual obligation imposed upon Contractor pursuant to this Contract. The County in no way warrants that the Required Insurance is sufficient to protect the Contractor for liabilities which may arise from or relate to this Contract.

8.24.1 Evidence of Coverage and Notice to County

- Certificate(s) of insurance coverage ("**Certificate**") satisfactory to the County, and a copy of an additional insured endorsement confirming the County and its Agents (defined below) have been given insured status under the Contractor's General Liability policy, shall be delivered to the County at the address shown below and provided fifteen (15) days prior to commencing services under this Contract.

- Renewal Certificates shall be provided to the County not less than ten (10) days prior to Contractor's policy expiration dates. The County reserves the right to obtain complete, certified copies of any required Contractor and/or Subcontractor insurance policies at any time.

- Certificates shall identify all Required Insurance coverage types and limits specified herein, reference this Contract by name or number, and be signed by an authorized representative of the insurer(s). The insured party named on the Certificate shall match the name of the Contractor identified as the contracting party in this Contract. Certificates shall provide the full name of each insurer providing coverage, its NAIC (National Association of Insurance Commissioners) ID number, its financial rating, the amounts of any policy deductibles or self-insured retentions exceeding fifty thousand dollars ($50,000.00), and list any County required endorsement forms.

- Neither the County's failure to obtain, nor the County's receipt of, or failure to object to, a non-complying Certificate or endorsement, or any other insurance documentation or information provided by the Contractor, its insurance broker(s) and/or insurer(s), shall be construed as a waiver of any of the Required Insurance provisions.

Certificates and copies of any required endorsements shall be sent to:

> Registrar-Recorder/County Clerk
> 12400 Imperial Highway, Contracts Room 5115,
> Attn: Contract Monitor
> Norwalk, CA 90650
> contracts@rrcc.lacounty.gov

Contractor also shall promptly report to the County any injury, or property damage accident, or incident, including any injury to a Contractor employee occurring on County property, and any loss, disappearance, destruction, misuse, or theft of County property, monies, or securities entrusted to the Contractor.

The Contractor also shall promptly notify the County of any third-party claim or suit filed against the Contractor or any of its Subcontractors which arises from or relates to this Contract and could result in the filing of a claim or lawsuit against the Contractor and/or the County.

8.24.2 Additional Insured Status and Scope of Coverage

The County, its Special Districts, Elected Officials, Officers, Agents, Employees, and Volunteers (collectively, "**County and its Agents**") shall be provided additional insured status under Contractor's General Liability policy with respect to liability arising out of Contractor's ongoing and completed operations performed on behalf of the County. County's and its Agents' additional insured status shall apply with respect to liability and defense of suits arising out of the Contractor's acts or omissions, whether such liability is attributable to the Contractor or to the County. The full

policy limits and scope of protection also shall apply to the County and its Agents as an additional insured, even if they exceed the County's minimum Required Insurance specifications herein. Use of an automatic additional insured endorsement form is acceptable providing it satisfies the Required Insurance provisions herein.

8.24.3 Cancellation of or Changes in Insurance

The Contractor shall provide the County with, or the Contractor's insurance policies shall contain a provision that the County shall receive from the insurer, written notice of cancellation or any change in Required Insurance, including insurer, limits of coverage, term of coverage, or policy period. The written notice shall be provided to the County at least ten (10) days in advance of cancellation for non-payment of premium and thirty (30) days in advance for any other cancellation or policy change. Failure to provide written notice of cancellation or any change in Required Insurance may constitute a material breach of the Contract, in the sole discretion of the County, upon which the County may suspend or terminate this Contract.

8.24.4 Failure to Maintain Insurance

The Contractor's failure to maintain or to provide acceptable evidence that it maintains the Required Insurance shall constitute a material breach of the Contract, upon which the County immediately may withhold payments due to the Contractor, and/or suspend or terminate this Contract. The County, at its sole discretion, may obtain damages from the Contractor resulting from said breach. Alternatively, the County may purchase the Required Insurance and, without further notice to the Contractor, deduct the premium cost from sums due to the Contractor or pursue reimbursement from the Contractor.

8.24.5 Insurer Financial Ratings

Coverage shall be placed with insurers acceptable to the County with A.M. Best ratings of not less than A:VII unless otherwise approved by the County.

8.24.6 Contractor's Insurance Shall Be Primary

The Contractor's insurance policies, with respect to any claims related to this Contract, shall be primary with respect to all other sources of coverage available to the Contractor. Any County-maintained insurance or self-insurance coverage shall be in excess of and not contribute to any Contractor coverage.

8.24.7 Waivers of Subrogation

To the fullest extent permitted by law, the Contractor hereby waives its rights and its insurer(s)' rights of recovery against the County under all the Required Insurance for any loss arising from or relating to this Contract. The Contractor shall require its insurers to execute any waiver of subrogation endorsements, which may be necessary to affect such waiver.

8.24.8 Subcontractor Insurance Coverage Requirements

The Contractor shall include all Subcontractors as insureds under the Contractor's own policies, or shall provide the County with each Subcontractor's separate evidence of insurance coverage. The Contractor shall be responsible for verifying that each Subcontractor complies with the Required Insurance provisions herein, and shall require that each Subcontractor name the County and the Contractor as additional insureds on the Subcontractor's General Liability policy. The Contractor shall obtain the County's prior review and approval of any Subcontractor request for modification of the Required Insurance.

8.24.9 Deductibles and Self-Insured Retentions (SIRs)

The Contractor's policies shall not obligate the County to pay any portion of any Contractor deductible or Self-Insured Retention ("**SIR**"). The County retains the right to require the Contractor to reduce or eliminate policy deductibles and SIRs as respects the County, or to provide a bond guaranteeing the Contractor's payment of all deductibles and SIRs, including all related claims investigation, administration, and defense expenses.

Such bond shall be executed by a corporate surety licensed to transact business in the state of California.

8.24.10 Claims Made Coverage

If any part of the Required Insurance is written on a claim-made basis, any policy retroactive date shall precede the Commencement Date. Contractor understands and agrees it shall maintain such coverage for a period of not less than three (3) years following Contract expiration, termination, or cancellation.

8.24.11 Application of Excess Liability Coverage

Contractors may use a combination of primary and excess insurance policies, which provide coverage as broad as the underlying primary policies, to satisfy the Required Insurance provisions.

8.24.12 Separation of Insureds

All liability policies shall provide cross-liability coverage as would be afforded by the standard Insurance Services Office, Inc. ("**ISO**") separation of insureds provision with no insured versus insured exclusions or limitations.

8.24.13 Alternative Risk Financing Programs

The County reserves the right to review, and then approve, the Contractor use of self-insurance, risk retention groups, risk purchasing groups, pooling arrangements, and captive insurance to satisfy the Required Insurance provisions. The County and its Agents shall be designated as an Additional Covered Party under any approved program.

8.24.14 County Review and Approval of Insurance Requirements

The County reserves the right to review and adjust the Required Insurance provisions, conditioned upon County's determination of changes in risk exposures.

8.25 INSURANCE COVERAGE

8.25.1 Commercial General Liability

Insurance (providing scope of coverage equivalent to ISO policy form CG 00 01), naming the County and its Agents as an additional insured, with limits of not less than:

General Aggregate:	$4 million
Products/Completed Operations Aggregate:	$4 million
Personal and Advertising Injury:	$2 million
Each Occurrence:	$2 million
Professional Liability Coverage Aggregate:	$4 million
Professional Liability Coverage:	$2 million

8.25.2 Automobile Liability

Insurance (providing scope of coverage equivalent to ISO policy form CA 00 01) with limits of not less than one million dollars ($1,000,000) for bodily injury and property damage, in combined or equivalent split limits, for each single accident. Insurance shall cover liability arising out of Contractor's use of autos pursuant to this Contract, including owned, leased, hired, and/or non-owned autos, as each may be applicable.

8.25.3 Workers' Compensation and Employers' Liability

Insurance or qualified self-insurance satisfying statutory requirements, which includes Employers' Liability coverage with limits of not less than one million dollars ($1,000,000) per accident. If Contractor will provide leased employees or is an employee leasing or temporary staffing firm or a Professional Employer Organization, coverage also shall include an Alternate Employer Endorsement (providing scope of coverage equivalent to ISO policy form WC 00 03 01 A) naming the County as the Alternate Employer, and the endorsement form shall be modified to provide that the County will receive not less than thirty (30) days' advance written notice of cancellation of this coverage provision. If applicable to Contractor's operations, coverage also shall be arranged to satisfy the requirements of any federal workers or workmen's compensation law or any federal occupational disease law.

8.25.4 Professional Liability/Errors and Omissions

Insurance covering Contractor's liability arising from or related to this Contract, with limits of not less than one million dollars ($1,000,000) per claim and two million dollars ($2,000,000) aggregate. Further, Contractor understands and agrees it shall maintain such coverage for a period of not less than three (3) years following this Contract's expiration, termination, or cancellation.

8.25.5 Crime Coverage

A Fidelity Bond or Crime Insurance policy with limits of not less than one million dollars ($1,000,000) per occurrence. Such coverage shall protect against all loss of money, securities, or other valuable property entrusted by the County to the Contractor, and apply to all of Contractor's directors, officers, agents, and employees who regularly handle or have responsibility for such money, securities, or property. The County and its Agents shall be named as an additional insured and loss payee as its interests may appear. This insurance shall include third-party fidelity coverage, shall include coverage for loss due to theft, mysterious disappearance, and computer fraud/theft, and shall not contain a requirement for an arrest and/or conviction.

8.25.6 Technology Errors and Omissions

Insurance, including coverage for liabilities arising from errors, omissions, or negligent acts in rendering or failing to render computer or information technology services and technology products. Coverage for violation of software copyright should be included. Technology services should at a minimum include (1) systems analysis; (2) systems programming; (3) data processing; (4) systems integration; (5) outsourcing, including outsourcing development and design; (6) systems design, consulting, development and modification; (7) training services relating to computer software or

hardware; (8) management, repair and maintenance of computer products, networks and systems; (9) marketing, selling, servicing, distributing, installing and maintaining computer hardware or software; and (10) data entry, modification, verification, maintenance, storage, retrieval or preparation of data output, and any other services provided by the vendor with limits not less than ten million dollars ($10,000,000).

8.25.7 Privacy/Network Security (Cyber)

Liability coverage providing protection against liability for (1) privacy breaches (liability arising from the loss or disclosure of confidential information no matter how it occurs); (2) system breach; (3) denial or loss of service; (4) introduction, implantation, or spread of malicious software code; and (5) unauthorized access to or use of computer systems with limits not less than twenty million dollars ($20,000,000). No exclusion/restriction for unencrypted portable devices/media may be on the policy.

8.25.8 Performance Bond Requirement

Within thirty (30) days of the Commencement Date, the Contractor shall bind a surety bond with an insurance company with good and sufficient sureties in the sum of not less than forty-two million five hundred thousand dollars ($42,500,000), which complies with the requirements of Section 8.24 and is substantially similar to the form attached hereto as Exhibit S (the "**Design Performance Bond**"), to assure the faithful performance of the Scope of Work under the Contract through deliverable 2.3.1.2 (Design validation Testing and results for BMD Hardware) from the Statement of Work. Contractor shall provide County the ability to comment on the Design Performance Bond and any changes thereto, and County shall have the right to approve or reject such Performance Bond in its reasonable discretion.

The Design Performance Bond shall be so conditioned as to assure the faithful performance by the Contractor of all work under said Contract through completion of the Scope of Work under the Contract through deliverable 2.3.1.2 (Design validation Testing and results for BMD Hardware) from the Statement of Work such that (i) all such work is completed within the time limits prescribed, and (ii) all such work is completed in a manner that is acceptable to and is accepted by County in accordance with the provisions of this Contract. This Design Performance Bond shall be continuously maintained by the Contractor in full force and effect until the later of (a) deliverable 2.3.1.2 (Design validation Testing and results for BMD Hardware) from the Statement of Work, and (b) the Contractor has provided the Manufacture and Installation Performance Bond in accordance with the following paragraph, whereupon the County shall return the original Design Performance Bond to the Contractor and

execute and deliver all documents reasonably required to confirm the cancellation and expiration of the Design Performance Bond.

As soon as practicable following the deliverable 2.3.1.2 (Design validation Testing and results for BMD Hardware) from the Statement of Work and as a condition to (i) any payments thereafter and (ii) the release of the Design Performance Bond, the Contractor shall bind a surety bond with an insurance company with good and sufficient sureties in the sum of not less than eighty five million dollars ($85,000,000), which complies with the requirements of Section 8.24 and is substantially similar to the form attached hereto as Exhibit S (the "**Manufacture and Installation Performance Bond**"), to assure the faithful performance of the Scope of Work under the Contract through Final Acceptance. Contractor shall provide County the ability to comment on the Manufacture and Installation Performance Bond and any changes thereto, and County shall have the right to approve or reject such Performance Bond in its reasonable discretion.

The Performance Bond shall be so conditioned as to assure the faithful performance by the Contractor of all work under the Contract through Final Acceptance. This Manufacture and Installation Performance Bond shall be continuously maintained by the Contractor in full force and effect until Final Acceptance, whereupon the County shall return the original Manufacture and Installation Performance Bond to the Contractor and execute and deliver all documents reasonably required to confirm the cancellation and expiration of the Manufacture and Installation Performance Bond.

Should any surety or sureties upon the Performance Bond become insufficient or be deemed unsatisfactory by the County, Contractor shall replace the Performance Bond with good and sufficient sureties within thirty (30) days after receiving notice from the County that the surety or sureties are insufficient or unsatisfactory.

No further payment shall be deemed due or will be made under this Contract until the new sureties shall qualify and be accepted by the County.

8.26   LIQUIDATED DAMAGES; OTHER REMEDIES

8.26.1 If, in the reasonable good faith judgment of the Registrar-Recorder, or his/her designee, the Contractor is deemed to be non-compliant with the terms and obligations assumed hereby, the Registrar-Recorder, or his/her designee, at his/her option, in addition to, or in lieu of, other remedies provided herein, may deliver written notice to the Contractor specifying with particularity the nature of such default, and if such default is not cured within thirty (30) days after delivery of such notice, or if such default is of a nature that cannot be cured within such thirty (30) day period and the Contractor has not commenced the cure of such default and thereafter diligently prosecutes such cure to completion, then the County may

withhold an entire monthly payment or deduct pro rata from any Contractor's invoice for work not performed <u>provided</u> that such withholding under this <u>Section 8.26.1</u> shall not exceed, in aggregate, an amount that is five percent (5%) of the total Contract Sum. Any amounts so withheld shall be paid to the Contractor pursuant to the first monthly invoice following the cure of such default.

8.26.2 Subject to Force Majeure, if Contractor shall fail to (a) deliver any Key Deliverable in accordance with the Contract by the Due Date, then the Contractor shall become liable to the County for ten thousand dollars ($10,000) per day for each day between such due date and the date on which such Key Deliverable is achieved in accordance with this Contract and (b) adhere to the requirements in Table B.2. of Appendix B to the Statement of Work, then the Contractor shall be liable to the County one thousand dollars ($1,000) per ticket for such breach, as described therein. Said amount shall be deducted and forfeited from the County's next payment to the Contractor from the County pursuant to <u>Section 5.6</u> (or invoiced to the Contractor if no payment is due). THE AMOUNTS PAID TO AND/OR RETAINED BY THE COUNTY AS LIQUIDATED DAMAGES PURSUANT TO THE FOREGOING PROVISIONS SHALL BE THE COUNTY'S SOLE AND EXCLUSIVE REMEDY WITH RESPECT TO THE CONTRACTOR'S FAILURE TO DELIVER TIMELY SUCH KEY DELIVERABLE BY THE DUE DATE THEREFOR, BUT SHALL NOT LIMIT THE RIGHTS OR REMEDIES OF THE COUNTY WITH RESPECT TO (A) FAILURE TO DELIVER TIMELY ANY OTHER KEY DELIVERABLE BY THE DUE DATE THEREFOR; (B) ANY FAILURE TO ACHIEVE FINAL ACCPETANCE BY THE DUE DATE THEREFOR; OR (C) THE CONTRACTOR'S BREACH OF ANY OTHER PROVSION OF THIS CONTRACT. THE PARTIES HERETO EXPRESSLY AGREE AND ACKNOWLEDGE THAT THE COUNTY'S ACTUAL DAMAGES IN THE EVENT OF THE CONTRACTOR'S FAILURE TO DELIVER TIMELY SUCH KEY DELIVERABLE BY THE DUE DATE THEREFOR WOULD BE EXTREMELY DIFFICULT OR IMPRACTICABLE TO ASCERTAIN AND THAT THE AMOUNT SET FORTH ABOVE REPRESENTS THE PARTIES' REASONABLE ESTIMATE OF SUCH DAMAGES. THE PAYMENT OF SUCH AMOUNT AS LIQUIDATED DAMAGES IS NOT INTENDED AS A FORFEITURE OR PENALTY, BUT IS INTENDED TO CONSTITUTE LIQUIDATED DAMAGES TO SELLER.

8.26.3 Upon giving five (5) days' notice to the Contractor for failure to correct any Deficiency or Defect, the County may correct such Deficiencies and the total costs incurred for correction of such Deficiency or Defect by an alternate source, whether it be forces or separate private contractor, will be deducted and forfeited from the next payment (or invoiced to the Contractor if no payment is due) from the County.

8.26.4 If the VSAP Solution fails to achieve Full Rollout (as a pre-condition to achieving Final Acceptance) for use in the Primary Election in March 2020, or any time following the date that is two hundred ten (210) days prior to the scheduled election date for such election, the Registrar-Recorder determines that the VSAP Solution will not achieve Full Rollout for use in the Primary Election in March 2020, then County shall notify the Contractor in writing of such failure or determination. Promptly following such notice (and in any event within five (5) days), County and the Contractor shall meet and confer in good faith to determine the remedial measures (e.g., adopting a vote-by-mail process, or utilizing County's legacy Inkavote system) that shall be undertaken to ensure a timely, efficient and successful election. County shall consider in good faith reasonable suggestions from the Contractor for such remedial measures, but in the event of any dispute between the parties regarding the steps that should be taken for such remediation, County ultimately has final decision-making authority regarding any efforts it undertakes to ensure a timely, efficient and successful election. If the failure to achieve Full Rollout for use in the March 2020 Primary Election is the result of the Contractor's default hereunder, Contractor shall pay or reimburse all of County's incremental third-party out-of-pocket costs (e.g. overtime) in taking whatever remedial actions the Registrar-Recorder, or his/her designee, undertakes to ensure a timely, efficient and successful election. Any dispute regarding (a) whether such failure (or assumed failure) resulted from the Contractor's default hereunder and/or (b) the amount of such incremental costs for which the Contractor is responsible in each case is subject to review and determination pursuant to Section 8.31 (Dispute Resolution Procedure).

8.26.5 The actions noted in Sections 8.26.2 and 8.26.3 shall not be construed as a penalty, but as adjustment of payment to the Contractor to recover the County cost due to the failure of the Contractor to complete or comply with the provisions of this Contract.

8.26.6 This Section 8.26 shall not, in any manner, restrict or limit the County's right to damages for any breach of this Contract provided by law, except as provided in Section 8.26.2 and shall not, in any manner, restrict or limit the County's right to terminate this Contract as agreed to herein.

8.26.7 The remedies outlined in this Section 8.26 are cumulative and not mutually exclusive, except as provided in Section 8.26.2; provided, however, that should County elect remedies under in both Section 8.26.2 and Section 8.26.4, then Contractor's obligations to pay costs under Section 8.26.4 shall be offset by the liquidated damages that accrued previously under Section 8.26.2.

8.27 **MOST FAVORED PUBLIC ENTITY**

If the Contractor's prices decline, or should the Contractor at any time prior to the expiration of the Contract Term provide the same goods or services under similar quantity and delivery conditions to the State of California or any county, municipality, or district of the State at prices below those set forth in this Contract, then such lower prices shall be immediately extended to the County.

8.28   NON-DISCRIMINATION AND AFFIRMATIVE ACTION

8.28.1   The Contractor certifies and agrees that all persons employed by it, its affiliates, subsidiaries, or holding companies are and shall be treated equally without regard to or because of race, color, religion, ancestry, national origin, sex, age, physical or mental disability, marital status, or political affiliation in compliance with all applicable federal and state anti-discrimination laws and regulations.

8.28.2   The Contractor shall certify to, and comply with the provisions of, Exhibit D (Contractor's EEO Certification).

8.28.3   The Contractor shall take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to race, color, religion, ancestry, national origin, sex, age, physical or mental disability, marital status, or political affiliation in compliance with all applicable federal and state anti-discrimination laws and regulations. Such action shall include, but is not limited to: employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

8.28.4   The Contractor certifies and agrees that it will deal with its Subcontractors, bidders, or vendors without regard to or because of race, color, religion, ancestry, national origin, sex, age, physical or mental disability, marital status, or political affiliation.

8.28.5   The Contractor certifies and agrees that it, its affiliates, subsidiaries, or holding companies shall comply with all applicable federal and state laws and regulations to the end that no person shall, on the grounds of race, color, religion, ancestry, national origin, sex, age, physical or mental disability, marital status, or political affiliation be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under this Contract or under any project, program, or activity supported by this Contract.

8.28.6   The Contractor shall allow the County representatives access to the Contractor's employment records during regular business hours to verify compliance with the provisions of this Section 8.28 (Non-Discrimination and Affirmative Action) when so requested by the County.

8.28.7 If the County finds that any provisions of this Section 8.28 have been violated, such violation shall constitute a material breach of this Contract upon which the County may terminate or suspend this Contract.

While the County reserves the right to determine independently that the anti-discrimination provisions of this Contract have been violated, a determination by the California Fair Employment and Housing Commission or the Federal EEO Commission that the Contractor has violated federal or state anti-discrimination laws or regulations shall also constitute a finding by the County that the Contractor has violated the anti-discrimination provisions of this Contract.

8.28.8 The Parties agree that in the event the Contractor violates any of the anti-discrimination provisions of this Contract, the County shall, at its sole option, be entitled to the sum of five hundred dollars ($500) for each such violation pursuant to California Civil Code Section 1671, as liquidated damages in lieu of terminating or suspending this Contract.

8.29 NON EXCLUSIVITY

Nothing herein is intended nor shall be construed as creating any exclusive arrangement with the Contractor. This Contract shall not restrict the County from acquiring similar, equal, or like goods and/or services from other entities or sources.

8.30 NOTICE OF DELAYS

Except as otherwise provided under this Contract, when either party has knowledge that any actual or potential situation is delaying or threatens to delay the timely performance of this Contract, that party shall, within one (1) day, give notice thereof, including all relevant information with respect thereto, to the other party.

8.31 DISPUTE RESOLUTION PROCEDURE

It is the intent of the Parties that all disputes arising under this Contract (other than where expressly limited) be resolved expeditiously, amicably, and at the level within each party's organization that is most knowledgeable about the disputed issue. The Parties understand and agree that the procedures outlined in this paragraph are not intended to supplant the routine handling of inquiries and complaints through informal contact with their respective managers. Accordingly, for purposes of the procedures set forth in this paragraph, a "dispute" shall mean any action, dispute, claim, or controversy of any kind, whether in contract, or tort, statutory or common law, legal or equitable, now existing or hereafter arising under or in connection with, or in any way pertaining to this Contract.

8.31.1 Contractor and County agree to act with urgency to mutually resolve any disputes which may arise with respect to this Contract. All such disputes shall be subject to the provisions of this Section 8.31 (Dispute Resolution Procedure), (such provisions shall be collectively referred to as the

"**Dispute Resolution Procedure**"). Time is of the essence in the resolution of disputes.

8.31.2 Contractor and County agree that, the existence and details of a dispute notwithstanding, both Parties shall continue without delay their performance hereunder, except for any performance which the County determines should be delayed as a result of such dispute.

8.31.3 If Contractor fails to continue without delay its performance hereunder which the County, in its sole discretion, determines should not be delayed as a result of such dispute, then any additional costs which may be incurred by the Contractor or County as a result of Contractor's failure to continue to so perform shall be borne by the Contractor, and Contractor shall make no claim whatsoever against the County for such costs. Contractor shall promptly reimburse the County for such County costs, as determined by the County, or County may deduct all such additional costs from any amounts due to the Contractor from the County.

8.31.4 If County fails to continue without delay to perform its responsibilities under this Contract which County determines should not be delayed as a result of such dispute, then any additional costs incurred by the Contractor or the County as a result of County's failure to continue to so perform shall be borne by the County, and County shall make no claim whatsoever against the Contractor for such costs. County shall promptly reimburse Contractor for all such additional Contractor costs subject to the approval of such costs by the County.

8.31.5 In the event of any dispute between the Parties with respect to this Contract, Contractor and County shall submit the matter to their respective Project Managers for the purpose of endeavoring to resolve such dispute.

8.31.6 In the event that the Project Managers are unable to resolve the dispute within a reasonable time not to exceed ten (10) days from the date of submission of the dispute to them, then the matter shall be immediately submitted to the Parties' respective Project Directors for further consideration and discussion to attempt to resolve the dispute.

8.31.7 In the event that the Project Directors are unable to resolve the dispute within a reasonable time (not to exceed ten (10) days from the date of submission of the dispute to them), then the matter shall be immediately submitted to Contractor's president or equivalent officer and the Department, or his/her designee. These persons shall have ten (10) days to attempt to resolve the dispute.

8.31.8 In the event that at these levels, there is not a resolution of the dispute acceptable to both Parties, then each party may assert its other rights and

remedies provided under this Contract and/or its rights and remedies as provided by law.

8.31.9 All disputes utilizing this Dispute Resolution Procedure shall be documented in writing by each party and shall state the specifics of each alleged dispute and all actions taken. The Parties shall act in good faith to resolve all disputes. At all three levels described in this Section 8.31 (Dispute Resolution Procedure), the efforts to resolve a dispute shall be undertaken by conference between the Parties' respective representatives, either orally, by face to face meeting or by telephone, or in writing by exchange of correspondence.

8.31.10 Notwithstanding any other provision of this Contract, County's right to terminate this Contract or to seek injunctive relief to enforce the provisions of Section 7.8 (Confidentiality) shall not be subject to this Dispute Resolution Procedure. The preceding sentence is intended only as a clarification of County's rights and shall not be deemed to impair any claims that the County may have against the Contractor's or County's rights to assert such claims after any such termination or such injunctive relief has been obtained.

8.31.11 Contractor shall bring to the attention of the County's Project Manager and/or County's Project Director any dispute between the County and the Contractor regarding the performance of services as stated in this Contract.

8.32 NOTICE TO EMPLOYEES REGARDING THE FEDERAL EARNED INCOME CREDIT

The Contractor shall notify its employees and shall require each Subcontractor to notify its employees that they may be eligible for the Federal Earned Income Credit under the federal income tax laws. Such notice shall be provided in accordance with the requirements set forth in the Internal Revenue Service Notice No. 1015.

8.33 NOTICE TO EMPLOYEES REGARDING THE SAFELY SURRENDERED BABY LAW

The Contractor shall notify and provide to its employees, and shall require each Subcontractor to notify and provide to its employees, information regarding the Safely Surrendered Baby Law, its implementation in Los Angeles County, and where and how to safely surrender a baby. The information is set forth in Exhibit I (Safely Surrendered Baby Law)of this Contract. Additional information is available at www.babysafela.org.

8.34 NOTICES

Except as otherwise provided in this Contract, all notices or demands required or permitted to be given or made under this Contract shall be in writing and shall be hand delivered with signed receipt or mailed by first-class registered or certified

mail, postage prepaid, addressed to the Parties as identified in Exhibits E (County's Administration) and F (Contractor's Administration). Addresses may be changed by either party giving ten (10) days' prior written notice thereof to the other party. The Department or his/her designee shall have the authority to issue all notices or demands required or permitted by the County under this Contract.

8.35 PROHIBITION AGAINST INDUCEMENT OR PERSUASION

Notwithstanding the above, the Contractor and the County agree that, during the Term of this Contract and for a period of one (1) year thereafter, neither party shall in any way intentionally induce or persuade any employee of one party to become an employee or agent of the other party; provided that the foregoing provisions shall not prohibit (i) general solicitations of employment not specifically directed toward a prohibited person (including via electronic, print or other media, via use of recruitment professionals or otherwise), or (ii) the soliciting or hiring of any person (A) who responds to any such general solicitation or advertisement, (B) who initiates employment discussions in the absence of a solicitation prohibited by this Section 8.35, or (C) who is no longer employed by the other Party.

8.36 CALIFORNIA PUBLIC RECORDS ACT

8.36.1 Any documents submitted by the Contractor, all information obtained in connection with the County's right to audit and inspect the Contractor's documents, books, and accounting records pursuant to Section 8.38 (Record Retention and Inspection/Audit Settlement) of this Contract, as well as those documents which were required to be submitted in response to the RFP used in the VSAP Solicitation, become the exclusive property of the County. All such documents become a matter of public record and shall be regarded as public records. Exceptions will be those elements in the California Government Code Section 6250, et seq. (Public Records Act) and which are marked "trade secret," "confidential," or "proprietary." The Contractor agrees to use its reasonable efforts to cause all documentation it receives in connection with the VSAP Solution to be so marked, including the County IP. The County shall not in any way be liable or responsible for the disclosure of any such records, including, without limitation, those so marked, if disclosure is required by law or by an order issued by a court of competent jurisdiction.

8.36.2 In the event the County is required to defend an action on a Public Records Act request for any of the aforementioned documents, information, books, records, and/or contents of a proposal marked "trade secret," "confidential," or "proprietary," the County shall promptly deliver written notice thereof to the Contractor. The Contractor agrees to defend and indemnify the County from all costs and expenses, including reasonable attorney's fees, in action or liability arising under the Public Records Act with respect to such claims. The County agrees to reasonably cooperate with the Contractor respect to any such defense.

8.37   PUBLICITY

   8.37.1 The Contractor shall not disclose any details in connection with this Contract to any person or entity except as may be otherwise provided hereunder or required by law. However, in recognizing the Contractor's need to identify its services and related clients to sustain itself, the County shall not inhibit the Contractor from publishing its role under this Contract within the following conditions:

- The Contractor shall develop all publicity material in a professional manner; and

- During the Contract Term, the Contractor shall not, and shall not authorize another to, publish or disseminate any commercial advertisements, press releases, feature articles, or other materials using the name, logo or seal of the County without the prior written consent of the County's Project Director. The County shall not unreasonably withhold written consent.

   8.37.2 The Contractor may, without the prior written consent of the County, indicate in its proposals and sales materials that it has been awarded this Contract with the County, provided that the requirements of this Section 8.37 (Publicity) shall apply.

8.38   RECORD RETENTION AND INSPECTION/AUDIT SETTLEMENT

The Contractor shall maintain accurate and complete financial records of its activities and operations relating to this Contract in accordance with generally accepted accounting principles. The Contractor shall also maintain accurate and complete employment and other records relating to its performance of this Contract. The Contractor agrees that the County, or its authorized representatives, shall have access to and the right to examine, audit, excerpt, copy, or transcribe any pertinent transaction, activity, or record relating to this Contract. All such material, including, but not limited to, all financial records, bank statements, cancelled checks or other proof of payment, timecards, sign-in/sign-out sheets and other time and employment records, and proprietary data and information shall be kept and maintained by the Contractor and shall be made available to the County during the Term of this Contract and for a period of five (5) years thereafter unless the County's written permission is given to dispose of any such material prior to such time. All such material shall be maintained by the Contractor at a location in the County, provided that if any such material is located outside the County, then, at the County's option, the Contractor shall pay the County for travel, per diem, and other costs incurred by the County to examine, audit, excerpt, copy, or transcribe such material at such other location.

   8.38.1 In the event that an audit of the Contractor is conducted specifically regarding this Contract by any federal or state auditor, or by any auditor or

accountant employed by the Contractor or otherwise, then the Contractor shall file a copy of such audit report with the County's Auditor-Controller within thirty (30) calendar days of the Contractor's receipt thereof, unless otherwise provided by applicable federal or state law or under this Contract. Subject to applicable law, the County shall make a reasonable effort to maintain the confidentiality of such audit report.

8.38.2 Failure on the part of the Contractor to comply with any of the provisions of this Section 8.38 shall constitute a material breach of this Contract upon which the County may terminate or suspend this Contract.

8.38.3 If, at any time during the Contract Term or within five (5) years after the expiration or termination of this Contract, representatives of the County conduct an audit of the Contractor regarding the work performed under this Contract, and if such audit finds that the County's dollar liability for any such work is less than payments made by the County to the Contractor, then the difference shall be either: (a) repaid by the Contractor to the County by cash payment upon demand, or (b) at the sole option of the County's Auditor-Controller, deducted from any amounts due to the Contractor from the County, whether under this Contract or otherwise. If such audit finds that the County's dollar liability for such work is more than the payments made by the County to the Contractor, then the difference shall be paid to the Contractor by the County by cash payment, provided that in no event shall the County's maximum obligation for this Contract exceed the funds appropriated by the County for the purpose of this Contract.

8.38.4 **Financial Statements:** Beginning one (1) year after the Commencement Date and every year thereafter until the expiration of this Contract, the Contractor shall submit to the County a complete set of financial statements, audited if available, for the twelve (12) month period. Such statements shall, at a minimum, include a Balance Sheet (Statement of Financial Position) and Income Statement (Statement of Operations). In addition, the Contractor shall submit a statement regarding any pending litigation since Contractor last reported same to the County. The County reserves the right to request these audited financial statements on a more frequent basis and will so notify Contractor in writing. All financial statements will be kept confidential, only if stamped or marked as confidential on each page of the financial statement.

8.39 RECYCLED BOND PAPER

Consistent with the Board's policy to reduce the amount of solid waste deposited at the County landfills, the Contractor agrees to use recycled-content paper to the maximum extent possible on this Contract.

8.40 SUBCONTRACTING

8.40.1 The requirements of this Contract may not be subcontracted by the Contractor **without the advance approval of the County**. Any attempt by the Contractor to subcontract without the prior consent of the County may be deemed a material breach of this Contract.

8.40.2 If the Contractor desires to subcontract, the Contractor shall provide the following information promptly at the County's request:

- A description of the work to be performed by the Subcontractor;

- A draft copy of the proposed subcontract; and

- Other pertinent information and/or certifications requested by the County.

8.40.3 The Contractor shall indemnify, defend, and hold the County harmless with respect to the activities of each and every Subcontractor in the same manner and to the same degree as if such Subcontractor(s) were the Contractor employees.

8.40.4 The Contractor shall remain fully responsible for all performances required of it under this Contract including those that the Contractor has determined to subcontract (as well as any acts or omissions of permitted Subcontractors), notwithstanding the County's approval of the Contractor's proposed subcontract.

8.40.5 The County's consent to subcontract shall not waive the County's right to prior and continuing approval of any and all personnel, including Subcontractor employees, providing services under this Contract. The Contractor is responsible to notify its Subcontractors of this County right.

8.40.6 The County's Project Manager is authorized to act for and on behalf of the County with respect to approval of any subcontract and Subcontractor employees. After approval of the subcontract by the County, Contractor shall forward a fully executed subcontract to the County for its files.

8.40.7 The Contractor shall be solely liable and responsible for all payments or other compensation to all Subcontractors and their officers, employees, agents, and successors in interest arising through services performed hereunder, notwithstanding the County's consent to subcontract.

8.40.8 The Contractor shall obtain certificates of insurance Certificates, which establish that the Subcontractor maintains all the programs of insurance required by the County from each approved Subcontractor. Before any Subcontractor employee may perform any work hereunder, the Contractor shall ensure delivery of all such documents to:

Registrar-Recorder/County Clerk
12400 Imperial Highway.
Norwalk, CA 90650 Contracts Section, Room 5115

8.40.9 Contractor further agrees to bind Subcontractors to the terms and conditions of this Contract applicable to Subcontractor's performance hereunder, and to its status as a counterparty to an agreement with County, including Sections 2.0 (Ownership and Intellectual Property), 3.0 (Work), 5.5 (No Payment for Services Provided Following Expiration/Termination of Contract), 7.1.2 (Contractor Personnel), 7.5 (Approval of Contractor's Staff), 7.6 (Contractor's Staff Identification), 7.7 (Background and Security Investigations), 7.8 (Confidentiality), and 8.0 (Standard Terms and Conditions) but excluding solely Sections 8.5, 8.20, 8.23.4, 8.26, 8.34, 8.58, 8.63 and 8.67 (only to the extent Subcontractor is not bound to any term) and 9.0 (Unique Terms and Conditions) of this Contract such that the Subcontractor is liable to the County for any performance obligation under, and any breach of, such Section as Contractor. Contractor's and Subcontractor's liability for Subcontractor's breaches shall be joint and several. This section shall apply to Subcontractors of Subcontractor, as if "Contractor" was replaced with "Subcontractor" and "Subcontractor" was replaced with "Sub-Subcontractor".

8.41 TERMINATION FOR BREACH OF WARRANTY TO MAINTAIN COMPLIANCE WITH COUNTY'S CHILD SUPPORT COMPLIANCE PROGRAM

Failure of the Contractor to maintain compliance with the requirements set forth in Section 8.14 (Contractor's Warranty of Adherence to the County's Child Support Compliance Program), or, if Contractor is located or has its principal place of business outside the state of California, compliance with the Child Support Program in the state where it is domiciled or has its principal place of business, shall constitute default under this Contract. Without limiting the rights and remedies available to the County under any other provision of this Contract, failure of the Contractor to cure such default within ninety (90) calendar days of written notice shall be grounds upon which the County may terminate this Contract pursuant to Section 8.43 (Termination for Default) and pursue debarment of the Contractor, pursuant to County Code Chapter 2.202.

8.42 TERMINATION FOR CONVENIENCE

8.42.1 This Contract may be terminated, in whole or in part, from time to time, when such action is deemed by the County, in its sole discretion, to be in its best interest. Termination of work hereunder shall be effected by notice of termination to the Contractor specifying the extent to which performance of work is terminated and the date upon which such termination becomes effective. The date upon which such termination becomes effective shall be no less than ten (10) days after the notice is sent.

8.42.2 After receipt of a notice of termination and except as otherwise directed by the County, the Contractor shall:

- Stop work under this Contract on the date and to the extent specified in such notice; and

- Complete performance of such part of the work as shall not have been terminated by such notice.

8.42.3 All material (including books, records, documents, or other evidence bearing on the costs and expenses of the Contractor under this Contract) shall be maintained by the Contractor in accordance with Section 8.38 (Record Retention and Inspection/Audit Settlement).

8.43 TERMINATION FOR DEFAULT

8.43.1 The County may, by written notice to the Contractor, terminate the whole or any part of this Contract if in the judgment of the County's Project Director:

- Contractor has materially breached this Contract;

- Contractor fails to timely provide and/or satisfactorily perform any task, deliverable, service, or other work required under this Contract; or

- Contractor fails to demonstrate a high probability of timely fulfillment of performance requirements under this Contract, or of any obligations of this Contract and, in either case, fails to demonstrate convincing progress toward a cure within ten (10) days (or such longer period as the County may authorize in writing) after receipt of written notice from the County specifying such failure.

8.43.2 In the event that the County terminates this Contract in whole or in part as provided in Section 8.43.1, the County may procure, upon such terms and in such manner as the County may deem appropriate, goods and services similar to those so terminated. The Contractor shall be liable to the County for any and all excess costs incurred by the County, as determined by the County, for such similar goods and services. The Contractor shall continue the performance of this Contract to the extent not terminated under the provisions of this subparagraph.

8.43.3 Except with respect to defaults of any Subcontractor, the Contractor shall not be liable for any such excess costs of the type identified in Section 8.43.2 if its failure to perform this Contract arises out of fires, floods, epidemics, quarantine restrictions, other natural occurrences, strikes, lockouts (other than a lockout by Contractor or Contractor's

Subcontractors), change of law, freight embargoes, or other events beyond the control and without any fault or negligence of the Contractor. If the failure to perform is caused by the default of a Subcontractor, and if such default arises out of causes beyond the control of both the Contractor and Subcontractor, and without the fault or negligence of either of them, the Contractor shall not be liable for any such excess costs for failure to perform, unless the goods or services to be furnished by the Subcontractor were obtainable from other sources at commercially reasonable rates in sufficient time to permit the Contractor to meet the required performance schedule. As used in this subparagraph, the term "Subcontractor" means Subcontractor at any tier.

8.43.4 If, after the County has given notice of termination under the provisions of this Section 8.43, it is determined by the County that the Contractor was not in default under the provisions of this Section 8.43, or that the default was excusable under the provisions of Section 8.43.3, the rights and obligations of the Parties shall be the same as if the notice of termination had been issued pursuant to Section 8.42 (Termination for Convenience).

8.43.5 The rights and remedies of the County provided in this Section 8.43 shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Contract.

8.44 TERMINATION FOR IMPROPER CONSIDERATION

8.44.1 The County may, by written notice to the Contractor, immediately terminate the right of the Contractor to proceed under this Contract if it is found that consideration, in any form, was offered or given by the Contractor, either directly or through an intermediary, to any County officer, employee, or agent with the intent of securing this Contract or securing favorable treatment with respect to the award, amendment, or extension of this Contract or the making of any determinations with respect to the Contractor's performance pursuant to this Contract. In the event of such termination, the County shall be entitled to pursue the same remedies against the Contractor as it could pursue in the event of default by the Contractor.

8.44.2 The Contractor shall immediately report any attempt by a County officer or employee to solicit such improper consideration. The report shall be made either to the County manager charged with the supervision of the employee or to the County Auditor-Controller's Employee Fraud Hotline at (800) 544-6861.

8.44.3 Among other items, such improper consideration may take the form of cash, discounts, service, the provision of travel or entertainment, or tangible gifts.

8.45 TERMINATION FOR INSOLVENCY

8.45.1 The County may terminate this Contract forthwith in the event of the occurrence of any of the following:

- Insolvency of the Contractor: The Contractor shall be deemed to be insolvent if it has ceased to pay its debts for at least sixty (60) calendar days in the ordinary course of business or cannot pay its debts as they become due, whether or not a petition has been filed under the Federal Bankruptcy Code and whether or not the Contractor is insolvent within the meaning of the Federal Bankruptcy Code;

- The filing of a voluntary or involuntary petition regarding the Contractor under the Federal Bankruptcy Code;

- The appointment of a Receiver or Trustee for the Contractor; or

- The execution by the Contractor of a general assignment for the benefit of creditors.

8.45.2 The rights and remedies of the County provided in this Section 8.45 shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Contract.

8.46 TERMINATION FOR NON-ADHERENCE OF COUNTY LOBBYIST ORDINANCE

The Contractor and each County Lobbyist or County Lobbying firm as defined in the County Code Section 2.160.010 retained by the Contractor shall fully comply with the County's Lobbyist Ordinance, County Code Chapter 2.160. Failure on the part of the Contractor or any County Lobbyist or County Lobbying firm retained by the Contractor to fully comply with the County's Lobbyist Ordinance shall constitute a material breach of this Contract, upon which the County may, in its sole discretion, immediately terminate or suspend this Contract.

8.47 TERMINATION FOR NON-APPROPRIATION OF FUNDS

Notwithstanding any other provision of this Contract, the County shall not be obligated for the Contractor's performance hereunder or by any provision of this Contract during any of the County's future fiscal years unless and until the County's Board appropriates funds for this Contract in the County's budget for each such future fiscal year. In the event that funds are not appropriated for this Contract, then this Contract shall terminate as of June 30 of the last fiscal year for which funds were appropriated. The County shall notify the Contractor in writing of any such non-allocation of funds at the earliest possible date. Upon such termination, the Contractor shall have the right to recover reasonable, non-cancellable expenses (but with a duty to mitigate reasonably any such cost) incurred prior to such termination.

8.48   EFFECT OF TERMINATION

8.48.1   In the event County terminates this Contract in whole or in part as provided hereunder or upon the expiration of the Contract, as applicable, then, unless otherwise specified by County in writing: (a) Contractor shall continue the performance of this Contract to the extent not terminated, (b) Contractor shall cease to perform the Services being terminated on the date and to the extent specified in such notice and provide to the County all completed Services and Services in progress, in a media reasonably requested by the County, (c) County will pay to the Contractor all sums due and payable to Contractor for Services properly performed through the effective date of such expiration or termination (prorated as appropriate), (d) Contractor shall return to the County all monies paid by the County, yet unearned by the Contractor, including any prepaid fees if applicable and (e) Contractor shall promptly return to the County any and all of the County's Confidential Information that relates to the portion of the Contract or Services terminated by the County, including all County Data, in a media reasonably requested by the County. In addition, in the event of a termination for convenience, upon such termination, the Contractor shall have the right to recover reasonable, non-cancellable expenses (but with a duty to mitigate reasonably any such cost) incurred prior to such termination.

8.48.2   Expiration or termination of this Contract for any reason will not release either party from any liabilities or obligations set forth in this Contract which (i) the Parties have expressly agreed in writing will survive any such expiration or termination, or (ii) remain to be performed or by their nature would be intended to be applicable following any such expiration or termination.

8.48.3   Contractor understands and agrees that County has obligations that it cannot satisfy without use of the VSAP Solution provided to the County hereunder or an equivalent system, and that a failure to satisfy such obligations could result in irreparable damage to the County and the entities it serves. Therefore, Contractor agrees that in the event of any expiration or termination of this Contract, Contractor shall fully cooperate with the County in the transition of the County to a new system, toward the end that there be no interruption of County's day-to-day operations due to the unavailability of the VSAP Solution during such transition.

8.48.4   The M&S period will end after the term of M&S is reached or when all County-approved extensions have expired ("**M&S Closeout**"). Upon the completion of the Warranty and M&S periods and any extensions of the M&S period, the Contractor shall perform all activities necessary to close out M&S.   This includes updating and transferring all system documentation to County and performing formal contract closure. Upon County's request for Transition Services, County and Contractor agree to negotiate in good faith the scope of work and the price for such Transition

Services. Contractor agrees that in the event that County terminates the Contract for any material breach by the Contractor, Contractor shall perform Transition Services at no cost to the County. Contractor shall provide the County with all of the Transition Services as provided in this Section 8.48.4. The duty of Contractor to provide such Transition Services shall be conditioned on the County continuing to comply with its obligations under the Contract, including payment of all applicable fees. Contractor shall have no right to withhold or limit its performance or any of such Transition Services on the basis of any alleged breach of this Contract by the County, other than a failure by the County to timely pay the amounts due and payable hereunder. County shall have the right to seek specific performance of this Section 8.48.4 in any court of competent jurisdiction and Contractor hereby waives any defense that damages are an adequate remedy. Compliance with this Section 8.48.4 by either party shall not constitute a waiver or estoppel with regard to any rights or remedies available to the Parties.

8.48.5 Contractor shall promptly return to the County any and all County Confidential Information, County IP, and data that relate to that portion of the Contract and Services terminated by the County.

8.49   VALIDITY

If any provision of this Contract or the application thereof to any person or circumstance is held invalid, the remainder of this Contract and the application of such provision to other persons or circumstances shall not be affected thereby.

8.50   USE OF COUNTY SEAL AND/OR DEPARTMENT LOGOS

The County claims right, title, and interest in and to certain intellectual property, including, but not limited to, the current and former County Seals and Department logos (hereafter collectively "**County Seals**"). Except as expressly authorized herein, the Contractor shall not reproduce, copy, distribute, republish, download, display, post, transmit, or make any other use of any kind whatsoever of the County Seals, in any format or by any means whatsoever. At no time shall the Contractor in any manner (i) modify the County Seals, or (ii) create derivative works of the County Seals. The Contractor shall not in any manner sublicense, transfer or assign its rights, or delegate its duties, with respect to use of the County Seals, whether in whole or in part, without the prior written consent of the County, in its discretion, and any attempted sublicense, transfer, assignment, or delegation without such consent shall be null and void.

8.51   WAIVER

No waiver by the County of any breach of any provision of this Contract shall constitute a waiver of any other breach or of such provision. Failure of the County to enforce at any time, or from time to time, any provision of this Contract shall not

be construed as a waiver thereof. The rights and remedies set forth in this Section 8.51 shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Contract.

8.52 WARRANTY AGAINST CONTINGENT FEES

8.52.1 The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure this Contract upon any Contract or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business.

8.52.2 For breach of this warranty, the County shall have the right to terminate this Contract and, at its sole discretion, deduct from the Contract price or consideration, or otherwise recover the full amount of such commission, percentage, brokerage, or contingent fee.

8.53 WARRANTY OF COMPLIANCE WITH COUNTY'S DEFAULTED PROPERTY TAX REDUCTION PROGRAM

The Contractor acknowledges that the County has established a goal of ensuring that all individuals and businesses that benefit financially from the County through contract are current in paying their property tax obligations (secured and unsecured roll) in order to mitigate the economic burden otherwise imposed upon County and its taxpayers.

Unless the Contractor qualifies for an exemption or exclusion, the Contractor warrants and certifies that to the best of its knowledge it is now in compliance, and during the Term of this Contract will maintain compliance, with the County Code Chapter 2.206.

8.54 TERMINATION FOR BREACH OF WARRANTY TO MAINTAIN COMPLIANCE WITH COUNTY'S DEFAULTED PROPERTY TAX REDUCTION PROGRAM

Failure of the Contractor to maintain compliance with the requirements set forth in Section 8.53 (Warranty of Compliance with the County's Defaulted Property Tax Reduction Program) shall constitute default under this Contract. Without limiting the rights and remedies available to the County under any other provision of this Contract, failure of the Contractor to cure such default within ten (10) days of notice shall be grounds upon which the County may terminate this Contract and/or pursue debarment of the Contractor, pursuant to County Code Chapter 2.206.

8.55 TIME OFF FOR VOTING

The Contractor shall notify its employees, and shall require each Subcontractor to notify and provide to its employees, information regarding the time off for voting

law (California Elections Code Section 14000). Not less than ten (10) days before every statewide election, every Contractor and Subcontractors shall keep posted conspicuously at the place of work, if practicable, or elsewhere where it can be seen as employees come or go to their place of work, a notice setting forth the provisions of Section 14000.

8.56   DATA DESTRUCTION

The Contractor(s), Subcontractor(s) and vendor(s) that have maintained, processed, or stored the County's data and/or information, implied or expressed, have the sole responsibility to certify that the data and information have been appropriately destroyed consistent with the National Institute of Standards and Technology (NIST) Special Publication SP 800-88 Revision 1 titled Guidelines for Media Sanitization, available at:

http://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-88r1.pdf

The data and/or information may be stored on purchased, leased, or rented electronic storage equipment (e.g., printers, hard drives) and electronic devices (e.g., servers, workstations) that are geographically located within the County, or external to the County's boundaries. The County must receive within ten (10) days a signed document from the Contractor(s) and vendor(s) that certifies and validates that the data and information were placed in one or more of the following stored states: unusable, unreadable, and indecipherable.

The Contractor, Subcontractor or vendor shall certify that any County data stored on purchased, leased, or rented electronic storage equipment and electronic devices, including, but not limited to, printers, hard drives, servers, and/or workstations, are destroyed consistent with the current NIST Special Publication SP-800-88, Guidelines for Media Sanitization. The Contractor or vendor shall provide the County with a written certification within ten (10) days of removal of any electronic storage equipment and devices that validates that any and all County data was destroyed and is unusable, unreadable, and/or undecipherable.

8.57   ACCEPTANCE

8.57.1 The VSAP Solution, Services, deliverables, and milestones (if applicable) shall be subject to acceptance, and acceptance testing by the County, which testing shall be in County's sole discretion, to verify that they satisfy the County's acceptance criteria (User Acceptance Test[s]) as more fully described in Exhibit A (Statement of Work).

8.57.2 Production Use shall not be deemed acceptance or Final Acceptance of the VSAP Solution, Services, deliverables and milestones.

8.57.3 If the County's Project Director makes a good faith determination at any time that the VSAP Solution (as a whole, or any component thereof), Services, Deliverables, and/or milestones has not successfully completed an

Acceptance Test or has not achieved Final Acceptance (collectively referred to for purposes of this Section 8.57.3 as "**Designated Test**"), the County's Project Director shall promptly notify the Contractor in writing of such failure, specifying with as much detail as possible the manner in which the VSAP Solution, Services, Deliverables, and/or milestones failed to pass the applicable Designated Test. Contractor shall immediately commence all reasonable efforts to complete, as quickly as possible, such necessary corrections, repairs, and modifications to the VSAP Solution, Services, Deliverables, and/or milestones as will permit the VSAP Solution, Services, Deliverables, and/or milestones to be ready for retesting. Contractor shall notify the County's Project Director in writing when such corrections, repairs, and modifications have been completed, and the applicable Designated Test shall begin again. If, after the applicable Designated Test has been completed for a second time, the County's Project Director makes a good faith determination that the VSAP Solution, Services, Deliverables, and/or milestones again fail(s) to pass the applicable Designated Test, the County's Project Director shall promptly notify Contractor in writing, specifying with as much detail as possible the manner in which the VSAP Solution, Services, Deliverables, and/or milestones failed to pass the applicable Designated Test. Contractor shall immediately commence all reasonable efforts to complete, as quickly as possible, such necessary corrections, repairs, and modifications to the VSAP Solution, Services, Deliverables, and/or milestones as will permit the VSAP Solution, Services, Deliverables, and/or milestones to be ready for retesting.

8.57.4 Such procedure shall continue until such time as County notifies Contractor in writing either: (i) of the successful completion of such Designated Test; or (ii) that County has concluded, subject to the Dispute Resolution Procedure, that satisfactory progress toward such successful completion of such Designated Test is not being made, in which latter event, County shall have the right to make a determination, which shall be binding and conclusive on Contractor, that a non-curable default has occurred and to terminate this Contract in accordance with Section 8.43 (Termination for Default) on the basis of such non-curable default.

8.57.5 Such a termination by the County may be, as determined by the County in its sole judgment: (i) a termination with respect to one or more of the components of the VSAP Solution; (ii) a termination of any part of Exhibit A (Statement of Work) relating to the VSAP Solution, Service(s), deliverable(s), and/or milestone(s) that is (are) not performing or conforming as required herein; or (iii) if County believes the failure to pass the applicable Designated Test materially affects the functionality, performance, or desirability to the County of the VSAP Solution as a whole, the entire Contract. The foregoing is without prejudice to any other rights that may accrue to the County or Contractor under the Terms of this Contract or by law.

8.58 INTEGRATION/INTERFACING

Contractor shall be responsible for developing and delivering the Interfaces, identified in Exhibit A (Statement of Work) as part of the VSAP Solution. If the VSAP Solution is to be integrated/interfaced with other software, equipment, and/or systems provided by the Contractor or at the direction of the Contractor, including any customized enhancements, Upgrade(s), Technology Enhancements and Work Product, the VSAP Solution shall not be deemed to have achieved Final Acceptance by the County until the VSAP Solution and such other systems have been successfully integrated/interfaced and accepted by the County in accordance with the terms of this Contract. For example, if Contractor is to provide VSAP Solution consisting of multiple modules or that includes enhancements, including Work Product, to the VSAP Solution, County's acceptance of the VSAP Solution, any individual component, module or enhancement shall not be final until County accepts all of the VSAP Solution, components, modules or enhancements integrated/interfaced together as a complete system resulting in the VSAP Solution, including the operation of the software on all equipment required for its use in conformance with the Terms of this Contract. Contractor shall not obtain any ownership interest in any other systems merely because they were interfaced, integrated, or used with any VSAP Solution.

8.59 COMMUNICATION SYSTEMS AND ACCESS TO INFORMATION

During the Contract Term, Contractor may receive access to the County's software, computers, equipment, and electronic communications systems (in this Section 8.59 (Communication Systems and Access to Information)) including, but not limited to, voicemail, e-mail, customer databases, and internet and intranet systems. Such County systems are intended for legitimate business use related to County's business. Contractor acknowledges that Contractor does not have any expectation of privacy as between Contractor and County in the use of or access to County systems and that all communications made with such County systems or equipment by or on behalf of the Contractor are subject to County's scrutiny, use, and disclosure, in County's discretion. County reserves the right, for business purposes and activities, to monitor, review, audit, intercept, access, archive, and/or disclose materials sent over, received by or from, or stored in any of its electronic County systems. This includes, without limitation, e-mail communications sent by users across the internet and intranet from and to any domain name owned or operated by County. This also includes, without limitation, any electronic communication system that has been used to access any of the County systems. Contractor further agrees that Contractor will use all appropriate security, such as, for example, encryption and passwords (Contractor must provide passwords and keys to the County), to protect County Confidential Information from unauthorized disclosure (internally or externally) and that the use of such security does not give rise to any privacy rights in the communication as between the Contractor and County. County reserves the right to override any security passwords to obtain access to voicemail, e-mail, computer (and software or other applications) and/or computer disks on County systems. Contractor also acknowledges that County

reserves the right, for any business purposes and activities, to search all work areas (e.g., offices, cubicles, desks, drawers, cabinets, computers, computer disks, and files) and all personal items brought onto County property or used to access County Confidential Information or County systems.

8.60 CONTINUOUS SYSTEM SOFTWARE SUPPORT

If Contractor assigns this Contract, is acquired, or is otherwise controlled by another individual or entity (collectively referred to as a "**Successor Event**"), such individual or entity shall provide any and all remaining Implementation Period and Warranty Period services and deliverables in accordance with the Contract and Maintenance and Support Services in accordance with this Contract for the lesser of (1) at least five (5) years following the Successor Event or (2) the remaining Maintenance and Support Services Period, unless otherwise agreed to in writing by the County. After the Successor Event, the VSAP Solution is not supported to at least the same level that Contractor supported the VSAP Solution prior to the Successor Event, because, for example, Contractor's assignee chooses to support other products or does not otherwise properly staff the support for the VSAP Solution, County, at its sole option, may elect to (x) replace the solutions with a replacement product or (y) transfer the license of the Pre-Existing Rights and Pre-Existing Materials, without cost or penalty, to another similar product ("**Replacement Product**") within Contractor's assignee's or successor's product offering. For purposes of this Section 8.60 (Continuous System Software Support), the term "controlled" shall mean the legal right to elect a majority of the directors of a corporation or similar officers of any other entity or to determine an entity's general management policies through contract or otherwise. The assignee or successor, by taking benefit (including acceptance of any payment under this Contract), ratifies this Contract. All terms and conditions of this Contract shall continue in full force and effect for the Replacement Product. In addition, the following terms and conditions shall apply if County elects to transfer this license to a Replacement Product: (a) Any prepaid maintenance and support shall transfer in full force and effect for the balance of the Replacement Product's maintenance and support term (or equivalent service) at no additional cost. If the prepaid moneys are greater than the Replacement Product's maintenance and support fee for the same term, the credit balance will be applied to future maintenance and support fees or returned to the County, at its option; (b) Any and all software offered separately and needed to fulfill the original VSAP Solution level of functionality shall be supplied by Contractor's assignee or successor without additional cost or penalty and shall not affect the calculation of any maintenance and support fees; (c) Any services required for implementation of the Replacement Product shall be provided by Contractor's assignee or successor without additional cost or penalty; (d) Contractor shall provide to the County reasonable training for purposes of learning the Replacement Product at no cost to County; (e) All license terms and conditions shall remain as granted herein with no additional fees imposed on the County; and (f) The definition of VSAP Solution shall then mean and include the Replacement Product.

8.61 TIME IS OF THE ESSENCE

Time is of the essence with regard to Contractor's performance of the Services.

8.62 OFFSHORE WORK RESTRICTIONS

All software design, development, and production Services shall be performed and rendered and all code held within the United States. In particular, Contractor warrants that it will not transmit or make available any County Confidential Information, County IP, or any County property to any entity or individual outside of the United States other than Cambridge Consulting without the prior written approval of the County.

8.63 COUNTERPARTS

This Contract may be executed in one or more counterparts, each of which shall be deemed an original, and will become effective and binding upon the Parties as of the effective date at such time as all the signatories hereto have signed a counterpart of this Contract.

8.64 SEVERABILITY

If any provision of this Contract or the application thereof to any person or circumstance is held invalid, the remainder of this Contract and the application of such provision to other persons or circumstances shall not be affected thereby.

8.65 CONTRACT DRAFTED BY ALL PARTIES

This Contract is the result of arm's-length negotiations between the Parties. Consequently, each party has had the opportunity to receive advice from independent counsel of its own choosing. This Contract shall be construed to have been drafted by all Parties such that any ambiguities in this Contract shall not be construed against either party.

8.66 NO THIRD-PARTY BENEFICIARIES

Notwithstanding any other provision of this Contract, the Contractor and County do not in any way intend that any person or entity shall acquire any rights as a third-party beneficiary of this Contract, except that this provision shall not be construed to diminish the Contractor's indemnification obligations hereunder.

8.67 SURVIVAL

In addition to any provisions of this Contract which specifically state that they will survive the termination or expiration of this Contract and any rights and obligations under this Contract which by their nature should survive, the following Sections shall survive any termination or expiration of this Contract:

8.68 COMPLIANCE WITH COUNTY'S ZERO TOLERANCE POLICY ON HUMAN TRAFFICKING

Contractor acknowledges that the County has established a Zero Tolerance Policy on Human Trafficking prohibiting contractors from engaging in human trafficking.

If a Contractor or member of Contractor's staff is convicted of a human trafficking offense, the County shall require that the Contractor or member of Contractor's staff be removed immediately from performing services under the Contract. County will not be under any obligation to disclose confidential information regarding the offenses other than those required by law.

Disqualification of any member of Contractor's staff pursuant to this paragraph shall not relieve Contractor of its obligation to complete all work in accordance with the terms and conditions of this Contract.

9.0 UNIQUE TERMS AND CONDITIONS

9.1 LOCAL SMALL BUSINESS ENTERPRISE (LSBE) PREFERENCE PROGRAM

9.1.1 This Contract is subject to the provisions of the County's ordinance entitled Local Small Business Enterprise ("**LSBE**") Preference Program, as codified in Chapter 2.204 of the Los Angeles County Code.

9.1.2 The Contractor shall not knowingly and with the intent to defraud fraudulently obtain, retain, attempt to obtain or retain, or aid another in fraudulently obtaining, retaining, or attempting to obtain or retain certification as an LSBE.

9.1.3 The Contractor shall not willfully and knowingly make a false statement with the intent to defraud, whether by affidavit, report, or other

representation, to a County official or employee for the purpose of influencing the certification or denial of certification of any entity as an LSBE.

9.1.4 If the Contractor has obtained certification as an LSBE by reason of having furnished incorrect supporting information or by reason of having withheld information, and which knew, or should have known, the information furnished was incorrect or the information withheld was relevant to its request for certification, and which by reason of such certification has been awarded this Contract to which it would not otherwise have been entitled, Contractor shall:

1. Pay to the County any difference between the Contract amount and what the County's costs would have been if the Contract had been properly awarded;

2. In addition to the amount described in subdivision (1), be assessed a penalty in an amount of not more than ten percent (10%) of the amount of the Contract; and

3. Be subject to the provisions of Chapter 2.202 of the Los Angeles County Code (Determinations of Contractor Non-responsibility and Contractor Debarment).

The above penalties shall also apply to any business that has previously obtained proper certification but as a result of a change in their status would no longer be eligible for certification, and fails to notify the State and the Department of Consumer and Business Affairs of this information prior to responding to a solicitation or accepting a contract award.

9.2 SOCIAL ENTERPRISE (SE) PREFERENCE PROGRAM

9.2.1 This Contract is subject to the provisions of the County's ordinance entitled Social Enterprise ("**SE**") Preference Program, as codified in Chapter 2.205 of the County Code.

9.2.2 Contractor shall not knowingly and with the intent to defraud, fraudulently obtain, retain, attempt to obtain or retain, or aid another in fraudulently obtaining or retaining or attempting to obtain or retain certification as an SE.

9.2.3 Contractor shall not willfully and knowingly make a false statement with the intent to defraud, whether by affidavit, report, or other representation, to a County official or employee for the purpose of influencing the certification or denial of certification of any entity as an SE.

9.2.4 If Contractor has obtained County certification as an SE by reason of having furnished incorrect supporting information or by reason of having withheld

information, and which knew, or should have known, the information furnished was incorrect or the information withheld was relevant to its request for certification, and which by reason of such certification has been awarded this Contract to which it would not otherwise have been entitled, Contractor shall:

1.   Pay to the County any difference between the Contract amount and what the County's costs would have been if the Contract had been properly awarded;

2.   In addition to the amount described in subdivision (1) above, the Contractor will be assessed a penalty in an amount of not more than ten percent (10%) of the amount of the Contract; and

3.   Be subject to the provisions of Chapter 2.202 of the Los Angeles County Code (Determinations of Contractor Non-responsibility and Contractor Debarment).

The above penalties shall also apply to any entity that has previously obtained proper certification but as a result of a change in their status would no longer be eligible for certification, and fails to notify the Department of Consumer and Business Affairs of this information prior to responding to a solicitation or accepting a contract award.

9.3   DISABLED VETERAN BUSINESS ENTERPRISE (DVBE) PREFERENCE PROGRAM

9.3.1   This Contract is subject to the provisions of the County's ordinance entitled Disabled Veteran Business Enterprise ("**DVBE**") Preference Program, as codified in Chapter 2.211 of the Los Angeles County Code.

9.3.2   Contractor shall not knowingly and with the intent to defraud, fraudulently obtain, retain, attempt to obtain or retain, or aid another in fraudulently obtaining, retaining, or attempting to obtain or retain certification as a DVBE.

9.3.3   Contractor shall not willfully and knowingly make a false statement with the intent to defraud, whether by affidavit, report, or other representation, to a County official or employee for the purpose of influencing the certification or denial of certification of any entity as a DVBE.

9.3.4   If Contractor has obtained certification as a DVBE by reason of having furnished incorrect supporting information or by reason of having withheld information, and which knew, or should have known, the information furnished was incorrect or the information withheld was relevant to its request for certification, and which by reason of such certification has been awarded this contract to which it would not otherwise have been entitled, Contractor shall:

1. Pay to the County any difference between the Contract amount and what the County's costs would have been if the Contract had been properly awarded;

2. In addition to the amount described in subdivision (1) above, the Contractor will be assessed a penalty in an amount of not more than ten percent (10%) of the amount of the Contract; and

3. Be subject to the provisions of Chapter 2.202 of the County Code (Determinations of Contractor Non-responsibility and Contractor Debarment).

Notwithstanding any other remedies in this contract, the above penalties shall also apply to any business that has previously obtained proper certification but as a result of a change in their status would no longer be eligible for certification, and fails to notify the State and the Department of Consumer and Business Affairs of this information prior to responding to a solicitation or accepting a contract award.

9.4 GREEN INITIATIVES

9.4.1 The Contractor shall use reasonable efforts to initiate "green" practices for environmental and energy conservation benefits.

9.4.2 The Contractor shall notify County's Contract Manager of Contractor's new green initiatives prior to the Contract commencement.

[Signature Pages Follow]

IN WITNESS WHEREOF, Contractor has executed this Contract, or caused it to be duly executed and the County of Los Angeles, by order of its Board of Supervisors has caused this Contract to be executed on its behalf by the Chairman of said Board and attested by the Executive Officer-Clerk of the Board thereof, the day and year first above written.

COUNTY OF LOS ANGELES

By _____for
    DEAN C. LOGAN
    REGISTRAR-RECORDER/COUNTY CLERK

CONTRACTOR:
SMARTMATIC USA CORPORATION

By_____

Name_____

Title_____

APPROVED AS TO FORM:
MARY C. WICKHAM
County Counsel

By_____
    Michael D. Owens
    Deputy County Counsel

EXHIBIT A

STATEMENT OF WORK (SOW)

TO THE

VOTING SOLUTIONS FOR ALL PEOPLE (VSAP)
IMPLEMENTATION AND SUPPORT SERVICES
CONTRACT

Appendix A — Statement of Work (SOW)

This Statement of Work ("**SOW**") defines the tasks, deliverables and services to be provided by Smartmatic USA ("**Contractor**") for the Voting Solutions for All People ("**VSAP**") implementation and support services. Figure 1 illustrates the overview of the VSAP Solution, which encompasses all components expected to be integrated and certified. Figure 2 depicts the Contractor's responsibilities for development of the **"Contractor In-Scope Components"** within the context of the overall VSAP Solution.

The following sections capture the activities and deliverables that will be completed by the Contractor. This SOW is organized as follows:

- 1.0 Project Initiation and Management

- 2.0 Development

- 3.0 Implementation

- 4.0 Warranty

- 5.0 Maintenance and Support

- 6.0 Additional Goods and Services

Section 2.0 of this SOW is structured to follow an iterative process for the Contractor In-Scope Components. The iterative process is illustrated in Figure 3 below. In addition to software development, the Ballot Marking Device ("**BMD**") also requires hardware development. Section 2.0 describes the software and hardware development of the BMD at the sub-component level. The BMD sub-components include:

- User Experience / User Interface

- Mechanical (housing, stand, privacy screen and ballot box)

- Application Control System Hardware and Peripherals

- BMD Application Layer

- Application Control System Board Support Package and Firmware

- Ballot Control System Hardware and Peripherals

- Ballot Control System Board Support Package and Firmware

- Paper Handler

- Ballot Printer

- Cases and Carts

In the event of a conflict between the requirements contained within a section of this Statement of Work and the additional information on the intended approach provided by the Contractor, the Contractor and the County will convene a meeting to discuss the conflict. If a resolution cannot be reached, the requirements as set by the County shall take precedence.

Figure 1. Overview Diagram
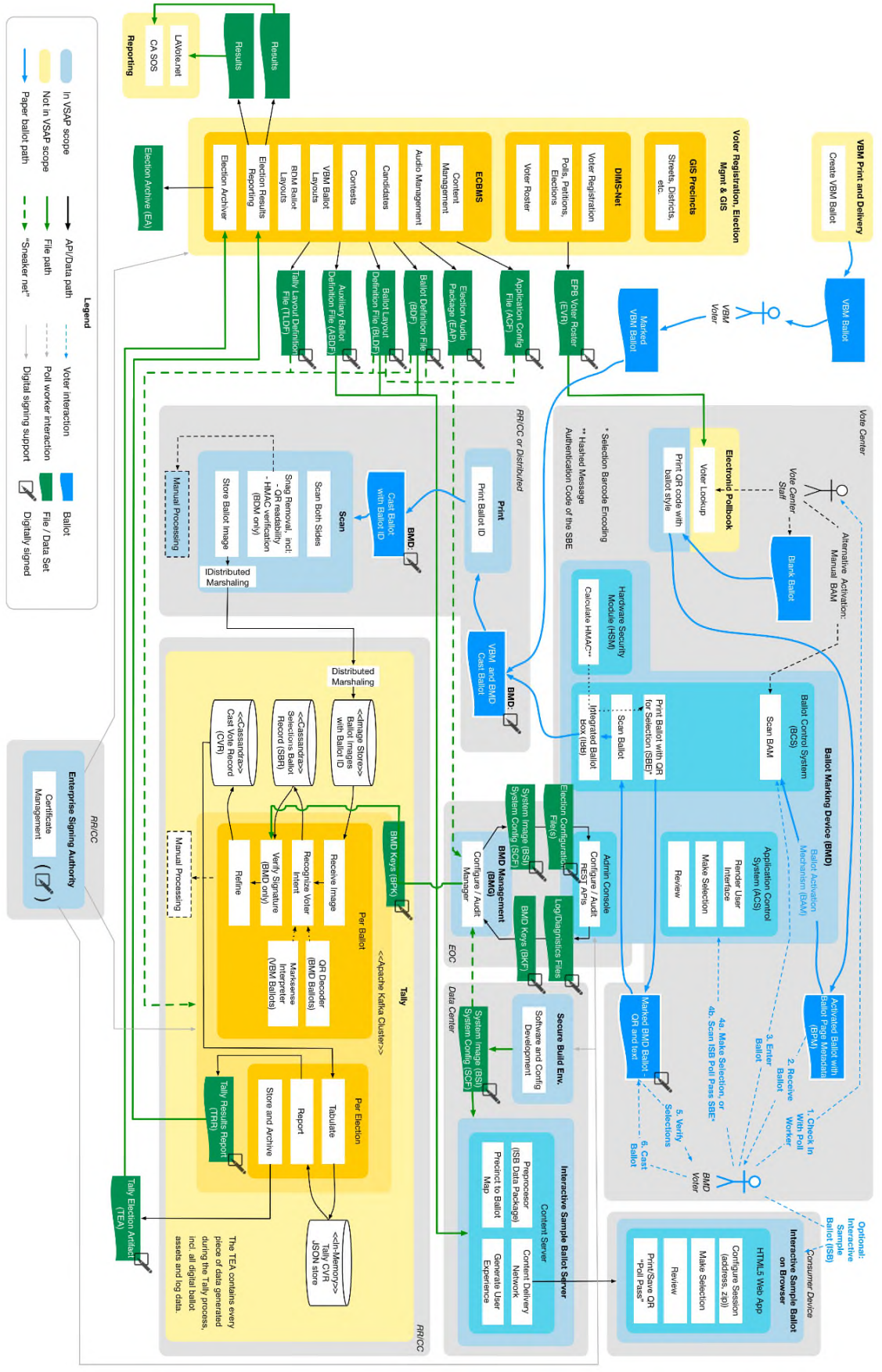
Figure 2. Overview Diagram with Overlay for Contractor Build & Acquire

Figure 3. Iterative Approach to Hardware and Software Development

Engineering Validation Testing

Components
- ☐ Ballot Marking Device
- ☐ Interactive Sample Ballot
- ☐ BMD Manager

Goal
- ☐ Ensure there is high confidence in final design prior to tooling
- ☐ Ensure fidelity to VSAP Guiding Principles
- ☐ Demonstrate components are very likely to pass regulatory certifications

Design Validation Testing

Components
- ☐ Ballot Marking Device
- ☐ Interactive Sample Ballot
- ☐ BMD Manager

Goal
- ☐ Demonstrate quality of off-tool parts and assemblies.
- ☐ Demonstrate units pass regulatory certifications

CA SOS Certification *(Integrated Solution)*

Components
- ☐ Ballot Marking Device
- ☐ Interactive Sample Ballot
- ☐ BMD Manager
- ☐ Election Contest and Ballot Management System
- ☐ Tally System

Goal
- ☐ Demonstrate units pass certification by the California Secretary of State (occurs in parallel to Design Validation Testing)

Production Validation Testing and Production

Components
- ☐ Ballot Marking Device
- ☐ Interactive Sample Ballot
- ☐ BMD Manager

Goal
- ☐ Fulfill BMD orders for full implementation

1.0 Project Initiation and Management

During Project initiation activities, the Contractor will develop a Project Control Document (**"PCD"**), implement required tools and develop artifacts that will establish how the VSAP Project will be managed. The County's VSAP Program Manager and the County Project Management Team will be involved during the development of these deliverables to ensure they are aligned with County standards and provide an effective project management approach.

1.1 Project Planning

The Contractor must perform the activities required to manage and lead the Project through the entire Project life cycle. During Project initiation and management, the Contractor will establish the processes and tools required to manage and control the Project, in consultation with the County.

1.1.1 Project Information Library

The Contractor must develop and maintain a **"Project Information Library"** in a single online repository used to store, organize, track, control and disseminate all information and items produced through this engagement. The Project Information Library will be used by the Contractor, County staff, other vendors contracted by the County (e.g., Design Stewards) and other key stakeholders.

The Project Information Library must include a file structure with defined access and permissions, including administrator rights for County staff. It also must include a web or portal interface for individuals to remotely view/manage Project information and documentation, and input issues or comments to the Project team.

The Contractor will store all work products and deliverables in the Project Information Library for the duration of the Project. Work product and deliverables must be uploaded to, and made available through, the Project Information Library to the County after completion of the related Project event or activity. For deliverables, the delivery timing governs the latest by which the deliverables must be uploaded. For any other items, the materials shall be made available to County no more than two weeks after the Project event or activity. At the end of the Project, the Contractor will archive relevant Project artifacts and turn the Project Information Library over to the County in its entirety.

Deliverable 1.1.1 VSAP Project Information Library	
Delivery Timing	Submitted for approval no more than 15 calendar days after the Project Commencement Date
Delivery Frequency	Created once, maintained throughout the project
Description	Project Information Library as described in Section 1.1.1 above

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The Contractor's project management approach is based on best practices, standards established by the Project Management Institute ("**PMI**"), and the experience of the Contractor's team. For the Project Information Library, the Contractor will utilize Microsoft SharePoint as the document repository and content collaboration platform for VSAP team members and

stakeholders from the County and the Contractor, including all contractors, vendors, and other entities with appropriate need.

The Contractor will provide user guidelines and information via a "Project Information Library Guide" after VSAP's formal award and kick-off. The document will:

- List initial authorized users and their respective accesses and permissions; the document will be updated no less than quarterly in order to include users that come after the initial release of the document

- Show the expected structure for project governance documentation, and work products

- Discuss maintenance and audit policies and responsibilities

The Product Information Library ("PIL") will be available within 15 calendar days after the Project Commencement Date. The Project Information Library Guide will be made available 10 days after the creation of the PIL. At the end of the Project, the Contractor will archive relevant project artifacts and turn the PIL over to the County, in its entirety.

1.1.2   Project Control Document

The Contractor will prepare and submit a Project Control Document that encompasses all activities related to the development, implementation, testing, certification and integration of the VSAP Solution. The PCD is not expected to be a single physical document, but rather an organized collection of all documents and artifacts as described in this section. Activities included in the PCD shall reflect the Project through Maintenance and Support.

The PCD will include:

- Project Schedule — Provides a detailed view of the tasks, milestones and deliverables within the Project and with the overall VSAP Program, including descriptions, durations and activity dependencies. It also includes what resources are to be assigned to each activity (e.g., the County Project Management Team or the Contractor) and responsibilities associated with the resources. Working with the Contractor, the County will determine the needed level of detail for tasks and timeframes. The Project Schedule will be created and maintained in Microsoft Project or a similar collaborative project software solution

- Project Assumptions — Identifies any assumptions about the Project that significantly affect other aspects of the PCD or the Project

- Scope Management Plan — Outlines the processes required to ensure the VSAP Solution and the Project provide all the services set forth in this SOW, and methods for tracking and managing deviations

- Schedule Management Plan — Captures the process for monitoring variances, planned corrective actions to address schedule variances and the process, roles and responsibilities involved in making changes to the Project Schedule

- Project Change Management Plan — Describes strategy for tracking, reviewing and approving the Project scope and Project Schedule

- Design Change Control Plan – Describes the approach and tools required for tracking, reviewing and approving design changes (software and hardware)

- Risk and Issue Management Plan — Describes the approach to identifying, tracking, communicating and determining mitigation strategies for risks and issues

■ Quality Control Plan — Defines a comprehensive quality control plan to be utilized by the Contractor as a self-monitoring tool to ensure the required services are provided as agreed to in the contract. The following elements, at minimum, shall be included:

❑ Activities to be monitored to ensure compliance with all contract requirements;

❑ Monitoring methods;

❑ Frequency of monitoring;

❑ Sample forms to be used in monitoring;

❑ Title/level and qualifications of personnel performing monitoring functions; and

❑ Documentation methods of all monitoring results, including any corrective action taken

■ Resource and Staffing Plan — Captures the projected Contractor resources required and the processes for identifying, qualifying, onboarding and replacing Contractor team members

■ Deliverables Acceptance Process — Captures the processes, timeframes, templates, roles and responsibilities for completing and approving **"Deliverable Expectations Documents,"** submitting deliverables for approval and approving deliverables utilizing **"Deliverable Acceptance Documents."** All Contractor deliverables are subject to review and comment by the County, and the Contractor may be required to produce revised deliverables prior to County approval, acceptance and payment. The Contractor will perform a walkthrough of a draft version of the deliverable with appropriate County staff and solicit feedback prior to submitting the deliverable for approval

■ Project Communication Plan — Details key Project stakeholders and the methods and timeframes for communicating with stakeholders regarding project status, accomplishments, stakeholder impact, etc.

■ Closure Approach — Captures the activities the Contractor will perform to formally close the Project

Deliverable 1.1.2 Project Control Document	
Delivery Timing	Submitted for approval no more than 15 calendar days after the Project Commencement Date
Delivery Frequency	Once, with updates throughout the Project as needed
Description	The Contractor shall deliver the Project Control Document as described in Section 1.1.2.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The PIL will contain a project control page with links to pertinent information and documentation used for monitoring and controlling the VSAP Project. The links to documents will automatically update, as necessary, when changes are made to location and/or information.

The Contractor will utilize a collection of documents (that together are considered the Project Control Document) and processes in order to monitor and control the VSAP Project. This collection will inform the activities and metrics required to proactively manage project scope, schedule, and budget. Based on the Contractor's project management experience, the treatment of critical project control elements can still be done efficiently and effectively when treated separately – using discrete documentation, and in the cases of scope and schedule management, overarching processes. The discrete items will be located in the PIL (see Section 1.1.1) which will use Microsoft SharePoint as the document storage and collaboration platform.

The Contractor will provide these discrete project management documents for VSAP, with links on the project control page in the PIL:

- **Project Schedule** – The project schedule will be reviewed and updated no less than once per week by the Contractor's project management team; project status reporting is facilitated by examination of the schedule's critical path

- **Project Change Management Document**

- **Design Change Control Plan** – Describes the approach and tools required for tracking, reviewing and approving design changes (software and hardware)

- **Risks, Assumptions, Issues, and Dependencies (RAID) Management document** – see Section 1.2; this is a project management document that outlines the approach to identifying, quantifying, tracking and communicating RAID items, and mitigation activities; the document discusses risk and issues logs, including identification, categorization, remediation, and responsible personnel information, and will be reviewed and updated no less than twice per month

- **Quality Control Document** – this is a standard project management document that outlines the approach to independent audits that monitor and verify that contractually defined quality standards are met; specifically, methods, activities, frequency, personnel, forms and documentation utilized are included

- **Resource and Staffing Plan** – this is a standard project management document that lists key personnel/positions (i.e., an organization chart detailing specific personnel, levels and roles) and outlines the approach to bringing on (or replacing) required Contractor resources (key project administrative and technical positions will already be filled at the commencement of the project, and other resources will be onboarded at appropriate times) and utilizing available County resources; key positions include those held by employees and contractors who are responsible or accountable for deliverables

- **Deliverable Acceptance Process Document** – this is a VSAP project management document that outlines processes, timeframes and responsibilities for creating, submitting and approving "Deliverable Acceptance Documents"; all Contractor deliverables are subject to review and comment by the County and as such, documents may require drafts and revisions in order to incorporate feedback, as necessary, for approval

■ **Communication Plan** – this is a standard project management that outlines the methods (e.g., email, meeting announcements, reports) and timelines for informing project stakeholders of events, statuses and changes, etc.

■ **Closure Approach Document** – see Section 1.3.1

The Contractor will execute these overarching project management processes for VSAP, with links to pertinent information on the project control page in the PIL:

■ **Scope Management** – using project management tools, processes (e.g., change management and RAID Management) and guidance documents to ensure the VSAP Solution is delivered in accordance with contractual requirements

■ **Schedule Management** – using project management tools (Microsoft Project and Project Server), processes and guidance documents to ensure the VSAP Solution is delivered in accordance with contractual requirements

All discrete documents that make up the Contractor's Project Control Document materials will be submitted for the County's approval within 15 calendar days after the Project Commencement Date. The overarching project management processes, scope and schedule management, will be executed continuously across the project until the warranty period. After appropriate approval of documents by the County, the project control page will be set up in the PIL with links to pertinent documentation and information.

1.1.3   Project Initiation

1.1.3.1   Project Initiation Planning

The Contractor will conduct a meeting within 20 calendar days of the Project Commencement Date to introduce County leadership and staff to the services covered by this SOW, including the timelines, dependencies and nature of the work effort that will be required to implement this SOW (**"Project Initiation Session"**). Other VSAP stakeholders such as members from the County's Advisory Committees and partner support staff (e.g., Design Stewards, management consultants, Tally Solution developer) may also participate in the Contractor's Project Initiation Session as determined by the County.

The Contractor will work with the County to prepare for the Project Initiation Session including discussion of the resources (e.g., Design Stewards) and components (e.g., Tally System) that are not explicitly part of this SOW that the Contractor will need to coordinate with, or integrate, in order to successfully complete the VSAP Project. The Contractor and the County will determine how to incorporate those resources or discussion of those resources and components into the Project Initiation Session as needed to achieve the objectives of the session. The Contractor and County will also discuss the resources required to complete the tasks outlined in this SOW including Project participants and key VSAP stakeholders (e.g., VSAP Executive Steering Committee, VSAP Program Management Organization, etc.)

The Contractor will develop the **"Project Initiation Session Planning Materials"** for the Project Initiation Session in consultation with the County. The Project Initiation Session Planning Materials will include both an agenda and a presentation. The content for the Project Initiation Session will include the following topics:

■ Project background and overview reflecting understanding of the VSAP vision and future voter experience

■ High-level Project Schedule

- Objectives and definitions

- Process (including change control and issue/risk management)

- Roles and responsibilities

- Keys to success (including any possible challenges and anticipated success criteria)

- Next steps

- Questions and answers

- Resources: individuals working on the Project (Contractor and County) and Project tools/systems

Deliverable 1.1.3.1 Project Initiation Session Planning Materials	
Delivery Timing	Submitted for approval no more than 20 calendar days after the Project Commencement Date
Delivery Frequency	Once
Description	The Contractor shall deliver both of the following materials: ■ Agenda for Project Initiation Session ■ Project Initiation Session Planning Materials

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

Project Initiation Session Planning Materials will be created with the main objective of setting expectations and demonstrating a firm grasp of scope, deliverables, resources and initial schedule to stakeholders.

The Contractor will create the initiation session planning content, to include an agenda and pertinent information/material providing:

- An overview (including objectives and definitions) of the project that demonstrates the Contractor's understanding of the VSAP vision and its commitment to a positive, future voter experience

- A high-level project plan, including tasks, milestones and dates

- A high-level project management processes and methods (including management of change, risks, documentation, status reports, etc.); tools and systems to be used during project execution (e.g., Microsoft SharePoint and Project Server)

- Key project staff roles and responsibilities

- Key assumptions and constraints, known high-likelihood/high-impact risks, and success criteria

- Next steps

Materials will contain information regarding resources and components that are not explicitly part of this SOW, but are part of the overall solution. The materials will take into account how these activities and/or components shall be coordinated and integrated into the planning.

All material to be presented and discussed during the Project Initiation Session will be submitted for the County's approval within 20 calendar days after the Project Commencement Date. As

appropriate, session materials and documentation will be added to the VSAP Project's PIL along with any action items, questions and approvals resulting from the meeting.

1.1.3.2 Project Initiation Session

The Contractor will conduct a Project Initiation Session with key VSAP Stakeholders using the Project Initiation Planning Materials created under Section 1.1.3.1. The Project Initiation Session will be conducted no later than three (3) weeks after the Project Commencement Date.

During the Project Initiation Session, the Contractor will document input from County stakeholders to be incorporated in the Project Initiation Session Event Summary Report.

The Contractor will develop a draft Project Initiation Session Event Summary Report that includes observations, opportunities and challenges based on the Project Initiation Session, as well as County and Contractor attendance.

Deliverable 1.1.3.2 Project Initiation Session and Event Summary Report	
Delivery Timing	**Project Initiation Session:** Conducted no more than 21 calendar days after the Project Commencement Date **Event Summary Report:** Submitted for approval no more than 5 calendar days after Project Initiation Session
Delivery Frequency	Once
Description	The Contractor shall deliver the Project Initiation Session described above and prepared for under Section 1.1.3.1 and a Project Initiation Session Event Summary Report including all of the following: ■ Attendance sheet/roster of Contractor and County participants in Project Initiation Session ■ Project Initiation Session Event Summary Report, including at least: ❑ Observations, opportunities and challenges ❑ Any new items identified as part of the event, including tangential items unrelated to the Project Initiation Session objectives ■ Any materials used during the Project Initiation Session that were not included in the submission of Deliverable 1.1.3.1.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

To comply with the County's request, and relying upon the Contractor's project management experience, a Project Initiation Session will be conducted with the main objective of setting expectations and demonstrating a firm grasp of scope, deliverables, resources and initial schedule to stakeholders. The meeting will be held within 21 days after the Project Commencement Date, utilizing materials created by the Contractor reflecting input from the County.

The Contractor will conduct the Project Initiation Session to introduce VSAP stakeholders to elements covered in the SOW, resources and components, which are not explicitly part of the SOW, but need to be coordinated, or integrated. During the Project Initiation Session, the

Contractor will collect and document all input from VSAP stakeholders in order to create a draft Project Initiation Session Event Summary Report. The report will include:

- A list of attendees and their contact information
- Notes regarding important observations, opportunities and concerns discussed
- Links to any documents discussed that are outside of the approved Project Initiation Session materials

Within five (5) days of the Project Initiation Session, the Contractor will submit for approval a Project Initiation Session Event Summary Report that includes a list of attendees, observations, opportunities, challenges and action items.

1.1.4   Project Orientation Materials

The Contractor will prepare **"Project Orientation Materials"** which will be used by the Contractor and by the County to orient new Project team members to the goals, objectives and approach of the VSAP Project.

The Project Orientation Materials will be used for training new Project team members (County, Contractor and other County vendors) to become familiar with the Project. This shall include:

- Overview of the Project and background
- Information on how to obtain access to the Project Information Library
- Reference documents (with links)
- Overview of relevant Project processes (e.g., status reporting, risk management)
- Project team members, roles and responsibilities

These materials shall be updated throughout the Project as necessary.

Deliverable 1.1.4 VSAP Project Orientation Materials	
Delivery Timing	Submitted for approval no more than 30 calendar days after the Project Commencement Date
Delivery Frequency	Once, updated throughout Project as necessary
Description	The Contractor shall deliver Project Orientation Materials as described in Section 1.1.4.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

Using Microsoft SharePoint as a content collaboration platform, the Contractor will create Project Orientation materials in order for new team members to become acclimated to the VSAP Project. The materials will be part of the PIL, specifically housed in a project orientation space. Some of the materials will be repurposed from other County VSAP directives (e.g., Project Initiation Session Planning Materials; see Section 1.1.3.1).

Since new users will need to access the PIL in order to get oriented, a link to the required SharePoint location will be part of the onboarding communications (i.e., email with pertinent initiation directions).

The Contractor will provide and maintain the following types of materials for new team members:

The Project Orientation Materials will be available within thirty (30) calendar days after the Project Commencement Date in the PIL, and will be updated, as necessary, to address the informational needs of new Project team members from both the County and the Contractor.

1.1.4 VSAP Project Orientation Materials

Topic	Material/Information
Project Overview and Background	- Project Information Library Guide - Project Initiation Session Materials - Link to VSAP video gallery website
Project Information Library Access	Link provided via email to user as part of onboarding process
Reference Documents	List of documents and their respective links (e.g., proposal responses, organization chart, project schedule)
Project Process Overviews and Templates	Common process documents, such as - Project Change Management - Risk Management

1.2 Project Monitoring and Status Reporting

The Contractor will execute the processes outlined in the PCD (see Section 1.1.2) for the duration of the Project to effectively control and manage the Project in coordination with the VSAP Program Management Organization, the VSAP Executive Steering Committee and other stakeholders (e.g., advisory committees, Design Stewards and other consultants).

The Contractor will track the Project status and update applicable portions of the Project Schedule no less than twice per month to reflect the status of the Project against the baseline Project Schedule. In addition, the Contractor will maintain risks and issues logs for the Project a minimum of twice per month, proactively identifying risks and issues to be reviewed with the County Project Management Team.

The Contractor will provide the VSAP Program Manager with written Project Status Reports twice per month and any such other information from time to time, as requested.

The Contractor will schedule and facilitate weekly status meetings with the County Project Management Team to discuss Project progress, issues, resolutions and next steps. The Contractor will prepare and provide an agenda and meeting minutes for each status meeting. In addition, the Contractor will participate in a monthly status meeting with the Executive Steering Committee and, as requested by the County, assist in the preparation of the agenda and minutes for such meeting.

The Contractor, including its subject matter experts, will be available to participate in ad-hoc meetings as mutually agreed upon with the County.

The Project Status Report must capture, at a minimum, the status of the Project including:

- Graphical statuses of scope, schedule and budget (e.g., red, yellow, or green color codes)
- Accomplishments of the last reporting period and objectives for the next reporting period
- Contractor and client responsibilities for the next reporting period

- Actual/projected Project Schedule dates versus baseline Project Schedule milestone dates

- Projected completion dates compared to approved baseline key dates

- Recovery plan for all work activities not tracking to the approved schedule

- Escalated risks, issues (including schedule and budget) and action items

- Key dependencies between efforts and activities, including any other County projects (if applicable)

- Disposition of logged issues and risks

- Important decisions made and/or upcoming decisions

- Any team member changes, with prior approval from the County

- Pending scope change requests with appropriate justification

- One-page graphical summary of the Project Schedule status of all major tasks and subtasks

- Status of integration activities of the VSAP Solution

- Status of certification preparation and coordination

- Matrix linking design changes to the General Voting System Principles

The Issues Log must capture, at minimum:

- Identified issues

- Issue categorization (impact and severity) and prioritization

- Issue remediation actions, timeframes and responsible parties

The Risk Log must capture, at minimum:

- Identified risks

- Risk categorization (impact and severity) and prioritization

- Risk remediation actions, timeframes and responsible parties

Deliverable 1.2 Project Status Report, Issues Log and Risk Log	
Delivery Timing	No more than 3 days after each reporting period closes
Delivery Frequency	Semimonthly (twice per month) delivery of Project Status Report Semimonthly delivery of Risk Log and Issue Log Weekly Project Status Meetings, including agenda and minutes as follows: ■ Agenda: No less than 1 day prior to the status meeting ■ Minutes: No more than 3 days after the status meeting Monthly Status Meetings with the Executive Steering Committee
Description	The Contractor shall conduct weekly status meetings, participate in monthly status meetings with the Executive Steering Committee, create and deliver the Project Status Report twice per month and maintain and deliver the Risk Log and Issue Log twice per month.

Deliverable 1.2 Project Status Report, Issues Log and Risk Log	
	After each semimonthly reporting period, the Contractor will deliver all of the following, as described in Section 1.2:
	■ Status meeting agendas and minutes delivered by the Contractor during the period
	■ The Project Status Report delivered by the Contractor during the reporting period
	■ The Risk and Issue Logs showing all items recently closed, addressed or still open at the end of the reporting period

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

Based on the Contractor's project management experience, it will put in place a structure for monitoring and controlling, as described in the Project Control Document (see Section 1.1.2), including processes for identifying and managing risks, assumptions, issues and dependencies (RAID), and status reporting. These facilitate scope and schedule management and are tools for keeping stakeholders informed about project progress. In order to keep the VSAP Project Management Organization and other stakeholders informed, the Contractor will utilize its collection of tools and processes to track, measure, and communicate project performance.

At a minimum, on a weekly basis, the Contractor's team will review the progress of project schedule tasks in Microsoft Project, identify any variances and determine a corrective course of action (see Section 1.1.2). The state of the project's critical path will be evaluated and used as input to status reports.

As often as they occur throughout the project, the Contractor will identify and record RAID items, keeping risks and issues information in logs for the tracking of categorization, remediation, and responsible personnel (see Section 1.1.2). The Contractor's team will ensure that the logs are formally updated no less than twice a month, and these will be used as inputs to status reports.

Project Status Reports

Twice a month, the Contractor will generate a Project Status Report and make it available stakeholders via Microsoft SharePoint, and the PIL. As directed by the County, the Contractor will include content for the status report as indicated below:

■ Graphical statuses of scope, schedule, and budget (with stoplight colors for easy understanding)

■ Accomplishments since the last reporting period, and objectives for the next reporting period

■ The Contractor and County responsibilities for the next reporting period

■ Impactful project task/milestone date variances (especially with respect to the critical path)

■ Projected completion dates compared to approved baseline key dates

■ Recovery plan for all work activities not adhering to the approved schedule

- Escalated risks, issues (including schedule and budget), and action items

- Key dependencies between efforts and activities, including any other County projects (if applicable)

- Disposition of logged issues and risks

- Important decisions made and/or upcoming decisions

- Any team member changes, with prior approval from the County

- Pending scope change requests, with appropriate justifications

- One-page graphical summary of the Project Schedule status of major tasks and subtasks

- Status of integration activities of the VSAP Solution

- Status of certification preparation and coordination

- Matrix linking design changes to the General Voting System Principles

An example of project status formats used for weekly reporting is provided on the following page.

Figure 4. Project Status Report, Issues Log and Risk Log Example

Weekly Project Status Meetings

The Contractor will schedule and facilitate weekly status meetings (with an agenda made available to stakeholders no less than one (1) day before the meeting via the PIL) with the County Project Management Team to discuss overall schedule, RAID items (with mitigations and resolutions), accomplishments, integration and certification statuses, recovery plans, scope changes, escalations and next steps. Standard project management performance indicators (e.g., Schedule Performance Index) and schedule will be used for reporting purposes.

Minutes will be distributed no more than three (3) days after each meeting that provide details of the conclusions and agreements reached. They will be distributed to attendees and will require a sign off by both Project Managers. The minutes will be made available to stakeholders via the PIL, along with any documents or information that supports performance measurements, etc.

An example of a Weekly Project Status Meeting agenda/minutes is shown in the graphic provided below, which was taken from Confluence for a model project, format, layout, while topics to be covered on the report will be customized to comply with specific requirements of the VSAP Program:

An example of project status format used for monthly reporting is below.

Figure 5.   Project Status Report, Issues Log and Risk Log Example

The Contractor will participate in monthly status meetings with the Executive Steering Committee to review project status, progress, risks and issues, and will also assist in the preparation of these meetings, if required.

1.3   Project Closeout

1.3.1   Project Closeout

Upon completion of implementation and deployment, and prior to the turnover of the VSAP Solution to Warranty (as described in Section 4.0), the Contractor will collaborate with the County to develop the Project Closeout Checklist, which is a checklist of all activities required to consider the Project complete. This includes confirming all VSAP Solution documentation is up to date; all deliverables have been completed, approved and archived (and owned by the County); facilitating a lessons-learned process; and related tactical activities (e.g., rolling people off the Project).

The Contractor will conduct a Project Closeout Session to review the Project Closeout Checklist.

Deliverable 1.3.1 Project Closeout	
Delivery Timing	**Project Closeout Checklist:** Submitted for approval no less than 30 days prior to Final Acceptance **Project Closeout Session:** Conducted no more than 30 days after Final Acceptance
Delivery Frequency	Once
Description	The purpose of this deliverable is to ensure all Project activities and deliverables are complete, and the Project is ready to migrate to the Warranty period. This deliverable will be the completed checklist and confirmation that all Project deliverables have been approved by the County. The Project Closeout Checklist will include, at a minimum: ■ Proof that all deliverables are up-to-date and approved as detailed in the Final Acceptance Report (Deliverable 3.21.1) ■ Control of all Solution and training documentation has been transferred to the Warranty team ■ Lessons learned documented ■ Tactical/administrative activities completed (e.g., returning Project team members' badges) ■ Ensuring hand-off of source code and Build files and confirming receipt by County of all source code and configurations ■ All test scripts (unit, component, regression, etc.) have been completed and have been provided to the County The Contractor shall conduct a Project Closeout Session to review the Project Closeout Checklist.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

At the end of the implementation and deployment stage of the project, the Contractor will generate a Project Closeout Checklist that will be reviewed and approved by the County prior to the Project Closeout Session. This checklist will be used to ensure that the Project is ready to migrate to the Warranty period.

At a minimum the following information will be included in the checklist:

- Proof that all deliverables are up-to-date and approved, as detailed in the Final Acceptance Report

- Proof that control of all Solution and training documentation has been transferred to the Warranty team

- Documented lessons-learned

- Documented issues, and problems encountered, and how those were addressed

- Documented risks, and how those were addressed

- All tactical and administrative activities completed

- The hand-off of the source code, Build files, and confirming receipt by the County of all source codes, and configurations

- All test scripts (unit, component, regression, etc.) have been completed and provided to the County

The Contractor will conduct a Project Closeout Session to review and obtain the acceptance of the checklist.

2.0 Development

During development, the Contractor will complete a series of tasks to finalize the Ballot Marking Device hardware and software design, Interactive Sample Ballot (**"ISB"**) software design and BMD Manager (**"BMG"**) software design, so that the components meet the requirements for functionality, performance and reliability. For manufacturing of the BMD, development entails an iterative approach at the level of each sub-component to identify issues that need to be addressed with the current **"Design Validation Unit"** design, conduct a wide variety of testing activities, iteratively modify the design, finalize the production design, update design documents and successfully obtain all required certifications. Software development will follow a similar, iterative approach.

This section is structured to define the required tasks and deliverables at the component level, and further detailed at the sub-component level for the BMD.

2.1 Solution Planning and Design

2.1.1 Design and Development Plan

Prior to commencing development activities, the Contractor will develop a Design and Development Plan that will document the Contractor's approach to design and development of software and hardware, and will capture the Project approach that will ensure the VSAP Project will meet all of the County's requirements. This must align with the PCD, be based on the VSAP specifications provided by the County and reflect the VSAP branding strategy as defined in collaboration with the County. The Design and Development Plan will capture the approach the Contractor will follow to develop the Contractor In-Scope Components including:

- Requirements traceability

- Solution design (where applicable)

- Solution design validation (where applicable)

- Solution Build

- Performance targets (for current and anticipated future volumes of transactions, users, languages, ballot styles, districts, contests, candidates, precincts, voting locations, etc. for major Countywide elections)

- Testing (including a Test Plan for each development phase)

- Release strategy

- Description of the tools to be used to manage the design and development process (e.g., requirements repository and document repository)

- Plan for ensuring the VSAP Solution aligns with the established standards for the VSAP Program (including branding), regulatory certifications and certification of voting systems by the California Secretary of State

To develop the Design and Development Plan, the Contractor will need to:

- Gain a deep understanding of the business processes the VSAP Solution is expected to serve and the corresponding functionality the VSAP Project will provide

- Understand and demonstrate adherence to the VSAP General Voting System Principles (http://vsap.lavote.net/principles/)

- Establish a requirements traceability plan to ensure all requirements are met, including a process for tracking, updating and managing changes to the requirements traceability matrix throughout the life cycle of the Project (including mapping requirements to design documents and test cases)

- Establish the mechanisms for managing the custom software code through development, Build and Release

- Establish the mechanisms for managing the custom hardware through development, Build and Release

- Establish Contractor's internal processes to ensure the design is an integrated, coherent VSAP Solution (e.g., internal design reviews)

- Establish the approach to developing technical standards and confirming conformance to the standards

- Establish the approach to implementing generally-accepted secure software design life cycle elements (e.g., static and dynamic testing, memory-safe programming language)

- Identify major technical challenges the Contractor must overcome to implement the VSAP Solution

- Define the tools to be used to manage the design and development process (e.g., requirements code repositories, development environments)

Deliverable 2.1.1 Design and Development Plan	
Delivery Timing	Submitted for approval no more than 60 calendar days after the Project Commencement Date
Delivery Frequency	Once, updated throughout Project as necessary
Description	The Contractor shall deliver a Design and Development Plan as described in Section 2.1.1.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

Senior staff on the Contractor's development team will gain a deep understanding of the business processes the VSAP Solution is expected to serve and the corresponding functionality the VSAP Project will provide. They will review the publicly available VSAP documentation (including the General Voting System Principles, the prior phase research, and the quarterly reports) and the IP (including overviews, architecture and design documents, the existing requirements in Jira, and the SSDD). Relevant team members (e.g., solutions architect, software architect, product managers for BMD, ISB and BMG, Quality Assurance ("**QA**") leads for BMD, ISB and BMG, security engineers and Dev Ops; see Sections 2.2.1.4.1.1a, 2.2.2a and 2.2.3a for a complete list of responsibilities and anticipated role and resource alignment) will engage with the County in a series of kickoff meetings with the intention of:

- Quickly getting on the same page about the purpose of each component,

- Understanding the current state of prototype development for each component

- Identifying deficiencies in the existing requirements for each component, particularly with respect to California Voting System Standards ("**CVSS**") and Web Content Accessibility Guidelines ("**WCAG**") requirements

- Confirming the solution design for each component to fulfill the identified purpose and meet the identified requirements

- Identifying where the solution design needs to be validated

- Understanding performance targets for each component

- Identifying major technical challenges towards achieving those performance targets

- Understanding the established standards for the VSAP Program (including branding)

In alignment with Project control (as described in Section 1.1.2.), the Contractor's team will provide in the Design and Development Plan a description of the tools to be used to manage the design and development process, including where requirements and relevant documents will be stored in SharePoint, the PIL software. The Contractor's team will generate a requirements traceability matrix and store it in the PIL through the following process:

1. Collaborate on gathering all the business requirements from work the County has created and the series of kickoff meetings and generate a Functional Requirements Document ("**FRD**"), with each requirement getting a unique requirement ID.

2. Collaborate on gathering all the functional specifications with the product manager and software architect after they are presented with the FRD and generate a Functional Specification Document, with each functional specification getting a unique functional specification ID.

3. Collaborate on generating a test plan with the QA lead to give 100% test coverage of all functional specifications, and assign each test case/scenario a unique test ID.

4. Combine the list of requirement IDs, functional specification IDs, and test IDs in an easy to track matrix.

5. Periodically update the matrix should consultation with the County result in any business requirements changes.

6. Periodically update the matrix should product managers identify changes needed in the functional specifications that were not initially predicted to satisfy the business requirements.

7. Periodically update the matrix should QA leads identify changes needed in the test cases/scenarios should changes arise in the functional specifications, or deficiencies are identified during any part of the implementation process.

As part of the effort to create the Enterprise Software Architecture Document (see Section 2.1.2), the staff will perform Solution design validation. The Design and Development Plan inside the PIL will link to documentation of that process, and the Enterprise Software Architecture Document itself will function as documentation of the Solution design. Similarly, the Software Development Plans for each of the components (see Sections 2.2.1.4.1.1a, 2.2.2a and 2.2.3a) will be concurrently created with this Design and Development Plan, and those component software development plans will be linked to details on the Solution Build and Release strategy for each component.

The solutions architect and product manager for each of the components (BMD software, BMD hardware, ISB, and BMG) will meet with the County to establish performance targets for each component, and those standards will be documented as requirements in the FRD during step 1 of generating the requirements traceability matrix. A complete discussion of testing for each solution will be included in the Test Plans for each component (see Sections 2.2.1.4.1.1b, 2.2.2b and 2.2.3b), and a discussion will be included in the Design and Development Plan for how the EVT plans can be extended to DVT and PVT as needed. It is anticipated that the full suite of tests discussed in the Test Plans (including end-to-end integration and system tests) will be used as a testing baseline for the entire lifecycle of the VSAP.

Throughout the process of putting together this comprehensive Design and Development Plan, the Contractor's solutions architect and Project Manager will stay in close contact with the County, showing drafts and getting feedback, so that development can begin as soon as possible.

2.1.2   Enterprise Software Architecture Document

Prior to commencing development activities, the Contractor will develop an Enterprise Software Architecture Document that will capture the overall architecture of the VSAP Solution, including components that are within the Contractor's scope for implementation and coordination. The

goal for the Enterprise Software Architecture Document is to convey the overarching architecture of VSAP, and how it interacts with the broader ecosystem, including:

- A description of the software architecture drivers and their impact

- Description of the major components and their role in the overall solution

- Major interfaces and integration points between the components and the ecosystem

- Description of the ballot flows, for all modalities, from origination to processing

- Description of the data flows that support the voting process

- The security approach, including interfaces, interactions, and defensive mechanisms

- Dependencies on frameworks and abstraction layers

For software components, such as the BMD Application Layer, ISB and BMD Manager, the Contractor shall also develop a Software Architecture Document at a more granular level. The Enterprise Software Architecture Document ties those together, and includes a perspective of the overall VSAP Solution.

To develop the Enterprise Software Architecture Document, the Contractor will:

- Develop a deep understanding of the architecture and design work completed in prior phases

- Identify areas where the prior work requires refinement, such as the security architecture, and elaborate these areas to a comprehensive and consistent architecture perspective

- Describe the conceptual architecture in a set of comprehensive, yet easy to digest models and visualizations that convey the solution to technical and non-technical stakeholders

- Capture the overall software architecture in a set of formal architecture notation that guide the subsequent work at a component level

- Establish the approach to developing technical standards and confirming conformance to the standards

- Define the tools to be used to support the architecture work throughout the project (e.g., requirements code repositories, development environments)

Deliverable 2.1.2 Enterprise Software Architecture Document	
Delivery Timing	Submitted for approval no more than 60 calendar days after the Project Commencement Date
Delivery Frequency	Once, updated throughout Project as necessary
Description	The Contractor shall deliver a Design and Development Plan as described in Section 2.1.2.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

Concurrent with the creation of the Design and Development Plan (2.1.1), the Contractor's software architect, in conjunction with the QA leads, user interface/user experience leads, Dev Ops, network engineers and engineering managers (see Sections 2.2.1.1, 2.2.1.4.1a, 2.2.2a, and 2.2.3a for roles and responsibilities across the various Contractor In-Scope Components) will review the existing SSDD and conduct meetings with the County's engineering staff, and representatives working on Tally, and the ballot layout solution to understand the details of the secure interface between the various software components of the VSAP.

The Contractor's software development team led by the solution architect will develop a deep understanding of the architecture and design work completed in prior phases and identify areas where prior work requires refinement. This will include a close look at the security architecture around inter-component communication. They will develop flow charts and other visualizations to accompany an easy to understand narrative with the aim of describing data and ballot flow, and how these flows are secured to non-technical stakeholders. Simultaneously, they will create high-level, but rigorous documentation of the software architecture that provides for that data and ballot flows, and the administrative processes that make use of that architecture to run elections, from origination to processing.

These high-level architecture specifications will indicate what the imagined layers of abstraction are, and how different frameworks will allow for that abstraction. They will define the tools used to support the development of the architecture (e.g., reliance on git repositories, or JetBrains Development Software Suites), and they will establish the approach to developing technical standards that the product managers will rely upon to develop the individual component Software Development Plans, and component architecture documents and specifications (see Sections 2.2.1.4.1a, 2.2.1.4.2a/b, 2.2.2a/c/e, and 2.2.3/a/c/e).

All documentation will be made available through a formal Enterprise Software Architecture Document stored in the PIL and updated, as needed, throughout the iterative development process.

2.2   Engineering Validation Testing

During Engineering Validation Testing (**"EVT"**), the Contractor will identify the issues related to the design of the Design Validation Units that need to be changed for production. The Contractor will finalize the BMD design so that it meets all requirements for functionality, usability, performance and reliability, including those related to design for manufacturing (**"DFM"**) and required certifications. EVT may be an iterative process to ensure that the design meets all the requirements prior to moving to Design Validation Testing (**"DVT"**).

While the BMD tasks are separated at the sub-component level in this Section 2.2, the Contractor will submit fully functional BMD units at the end of the EVT stage to demonstrate that they meet all the requirements and all sub-components are integrated.

Where applicable, this Section 2.2 is organized as follows:

- **Complete:** Refers to aspects of the design that have been completed by the County in prior phases. No further work is expected by the Contractor.

- **To Be Done:** Refers to aspects of the design that have <u>not</u> yet been finalized or developed by the County. The Contractor will complete the design as part of the VSAP Project.

- **Specification Documents:** Links in each section are provided as a convenience to direct the Contractor to the County's specifications for the respective component. The complete set of specification documents reside in the County's VSAP IP library.

- **Requirements:** Links in each section direct the Contractor to the County's requirements for the respective component. Although additional requirements may be developed by the County (e.g., to respond to changes in the Elections Code and regulations) during the Project period, the requirements are considered complete. The Contractor will understand the requirements as context for the VSAP Solution design and for the associated specification documents. The Contractor must ensure that the VSAP Solution is implemented in a way that meets the requirements and aligns with the overall design intent. The Contractor must use the requirements for developing test cases that will enable the assessment and verification of solution design. The Contractor shall inform the County if any conflicting or unclear requirements are identified as part of the VSAP Project. The Design Stewards will assist the County in verifying alignment of final design with design intent.

- **Tasks:** Refers to the tasks to be completed by the Contractor based on the work remaining for the respective component.

2.2.1   Ballot Marking Device

2.2.1.1   User Experience / User Interface

Complete:

- The design of the main user experience (**"UX"**) is complete and has been prototyped in English, Spanish and Korean. This includes the main voting flows, the help and settings menus and major error cases for both the touchscreen and tactile keypad user interfaces (**"UI"**), as well as audio. Write-ins has been localized in English QWERTY keyboard only

- The dual-switch interface for accessibility peripherals follows the main touch flow with a special two-button interaction model and device configuration flow, which has been defined

- A flow for using the manual Ballot Activation Mechanism (**"BAM"**) has been confirmed and finalized

- High-level requirements for the administrative and diagnostic interfaces

To Be Done:

- Localize the UI for the other supported languages, including adapting the write-in interface as needed, for both touch and keypad interfaces, including audio

- Identify and design for additional edge and error cases

- Demonstrate dual switch interface

■ Capture detailed requirements for the administrative and diagnostic interfaces and
define UI flow

Specification Documents:

- Location: BMD UX
- Filenames:
  - ❑ 3.2 BMD User Interface Design.pdf
  - ❑ 3.2 BMD User Interface Flows.pdf
  - ❑ 3.2 BMD User Interface Flows.sketch
  - ❑ BMD System Sounds.zip
  - ❑ BMD Animations.zip
  - ❑ BMD Icons.zip
  - ❑ Video-Dual Switch.mp4
  - ❑ BAM
  - ❑ Known Issues and Recommendations

Requirements:

- BMD Requirements
- Legal and Regulatory

Tasks:

- Complete localization of UI, including the write-in interface, for all the supported
  languages. Note: It shall also be configured to support future language needs. Support
  languages currently required include:
  - ❑ English
  - ❑ Chinese (Mandarin, Cantonese)
  - ❑ Cambodian/Khmer
  - ❑ Korean
  - ❑ Spanish
  - ❑ Tagalog/Filipino
  - ❑ Vietnamese
  - ❑ Hindi
  - ❑ Japanese
  - ❑ Thai
  - ❑ Farsi
  - ❑ Armenian
  - ❑ Russian

■ Identify and design remaining edge and error cases

■ Evaluate and address Known Issues and Recommendations from the document linked above and incorporate design refinements as required based on mutual agreement with the County and Design Stewards

■ Test across touchscreen, tactile controller and dual-switch interfaces

■ Test the Poll Pass (QR code) feature

■ Validate the performance to ensure it can support all languages and all ballot styles

■ Iterate on above tasks as necessary until design is shown to meet performance requirements

Deliverable 2.2.1.1 Updated BMD User Experience / User Interface Design Assets — EVT	
Delivery Timing	Submitted for approval as fully functional BMDs at the end of the EVT stage
Delivery Frequency	Once
Description	The Contractor shall deliver updated design assets based on EVT, including: ■ Native design files (i.e., those developed in Sketch) ■ UI flows map ■ System sound files ■ UI animations ■ UI icons

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

Recognizing "Easy and Accessible", "Privacy", and "Options" as some of the main VSAP General Voting System Principles, it is clear that adherence to the simple design principles of the VSAP Project, UI localization, accessibility for the disabled, and a multi-access UI are of paramount consideration in extension of the design and flows developed in prior phases. The product manager, utilizing the team described below, will ultimately be responsible for delivering the Design Assets to the County.

The Contractor will have a UI/UX and design team. The list of responsibilities and anticipated role and resource alignment is as follows:

■ **Front-end Product Manager/Artistic Director:**

❑ Understand all business requirements as documented in the Design and Development Plan (and help to create that documentation to begin with) as they relate to overall UI/UX of the VSAP Project.

❑ Identify and design any remaining edge cases from the prior phases development.

❑ Work with the County to develop design refinements (possibly with an eye towards integrating simple representations of appropriate County landmarks and themes, as the Design Stewards feel appropriate).

❑ Participate in the iterative process of updating UI/UX requirements in the Design and Development Plan, as needed. Any proposed changes to the UI/UX related to any Contractor In-Scope Components will be documented following the Design Change Control Plan.

❑ Attend and possibly lead all UI/UX related meetings with the County.

❑ Expand upon and develop the UI flows map in Microsoft Visio.

❑ Assign design, development, and test tasks to the team (including Known Issues and Recommendations from the linked documents).

❑ Ensure that all UI/UX related requirements have been fulfilled before the fully functional BMD is submitted at the end of the EVT.

❑ Work with the software architect and software security lead to ensure that all UI/UX coding choices conform to the architecture plan and are secure.

❑ Capture detailed requirements for the administrative and diagnostics interfaces, and UI flow.

■ **Project Coordinator:**

❑ Be the point person on the Contractor's side for all UI/UX/design related communications between the County and the Contractor.

❑ Work to complete the UI/UX portion of the requirements traceability matrix.

❑ Attend all UI/UX related meetings with the County.

❑ Ensure timely execution of all tasks for the UI/UX team.

■ **QA Lead:**

❑ Design the Test Plan and assist with completing the requirements traceability matrix.

❑ Oversee the QA engineers to implement the Test Plan (including testing of the Poll Pass/QR Code feature, as well as the touchscreen, tactile, and dual-switch interfaces).

❑ Iteratively work with the County (following the lead of the product manager) to conduct further User Experience testing by community stakeholders to explore elements that may require further design.

❑ Iteratively work with the development team to ensure 100% passing of the Test Plan.

■ **Animator/Illustrator:**

❑ Expand on existing and create all new UI animation assets.

❑ Expand upon and create additional UI Icons.

❑ Implement and extend Design Assets (native design files).

❑ Work with the front-end engineers to integrate them into the front-end code.

■ **Sound Engineer:**

❑ Expand on existing and create new system sound files.

Localizations

The Contractor's project managers will work with the County-provided translators (a resource for each required language), coordinated by the County, to develop static phrase-based translations. New phrases will be added and existing phrases modified in the front-end code for the BMD ACS and the ISB. Dynamic content (e.g., ballot measures) will be provided by the ballot layout solution in an agreed upon data transfer specification (possibly the Ballot Definition File, or Auxiliary Ballot Definition File), and such data will automatically combine with translated phrases to produce the language specific UI content that the voter will experience in the frontend UI of the BMD and/or ISB. Testing of all languages in the localization requirements will be part of the Test Plan.

2.2.1.2 Mechanical (housing, stand, privacy screen and ballot box)

Complete:

- BMD mechanical elements have been designed for manufacturing, with the exception of the paper handler

- Five functional Design Validation Unit prototypes have been built to the final design and have passed a preliminary shock and vibration test

- 3D CAD and engineering drawings for all components are complete

To Be Done:

- Further compliance testing required, which may identify other design issues to be addressed

Specification Documents:

- Location: BMD Hardware
- Filenames:
  - Vox_ID_Deck_2016-06_28.pdf
  - 5.4.2.2.1 Designing & Using the BMD
  - 5.4.2.2.2 Designing & Engineering the External BMD Components
  - 5.4.2.2.3 Designing & Engineering the Internal BMD Components
  - 5.4.2.2.4 Designing & Engineering the BMD's Paper Handler
  - 5.4.2.3 BMD Manufacturing Release Package
  - 5.4.4 BMD Design Validation Units
  - Known Issues and Recommendations

Requirements:

- BMD Requirements

Tasks:

- Design assembly processes, work instructions and quality assurance suitable for the EVT Build

- Evaluate and address Known Issues and Recommendations from the document linked above and incorporate design refinements as required based on mutual agreement with the County and Design Stewards

- Build test units and test mechanical design against performance requirements. Address issues raised in testing

- Iterate on above tasks as necessary until design is shown to meet performance requirements

Deliverable 2.2.1.2 Engineering Validation Testing and Results for BMD Hardware	
Delivery Timing	Submitted for approval as fully functional BMDs at the end of the EVT stage, including completion of tasks described in the following Sections: ■ 2.2.1.2 Mechanical (housing, stand, privacy screen and ballot box) ■ 2.2.1.3 Application Control System Hardware and Peripherals ■ 2.2.1.6 Ballot Control System Hardware and Peripherals ■ 2.2.1.8 Paper Handler ■ 2.2.1.9 Ballot Printer ■ 2.2.1.10 Cases and Carts
Delivery Frequency	Once

Description	The Contractor shall deliver:
	
	■ Assembled EVT test unit BMDs
	■ Test reports from verification tests
	■ Summary of design changes made to address Known Issues
	■ Documentation of issues raised in testing and design changes made to address them
	■ Updated "Design & Engineering Specification" documentation, as needed
	■ Updated manufacturing package(1)
	   ❑ 3D CAD of parts and assemblies
	   ❑ Engineering drawings of parts and assemblies
	   ❑ Bill of Materials
	   ❑ Electrical engineering computer-aided design for printed circuit board assemblies (where applicable)
	
	*(1)Manufacturing package does not apply to 2.2.1.9 Ballot Printer and 2.2.1.10 Cases and Carts, as these products may be commercial off the shelf ("**COTS**") or industrial off the shelf ("**IOTS**").*

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

To deliver BMDs in the EVT/DVT/PVT and mass production phases, the Contractor will employ a BMD hardware team. The list of responsibilities and anticipated role and resource alignment is as follows:

■ **BMD Hardware Product Manager:**

❑ Attend and possibly lead any BMD hardware-related meetings with the County.

❑ Understand all business requirements as documented in the Design and Development Plan (and help to create that documentation to begin with) as they relate to the BMD hardware.

❑ Be the point person on the Contractor's side for all BMD hardware-related communications between the County and the Contractor.

❑ Understand the design and specifications of the BMD prototype developed during earlier phases, and work with the engineering leads (see below) to adapt those specifications for cost savings, reliability, spare parts lifecycle, simplicity for both time to production and ease of maintenance, etc.

❑ As required, provide access to and demonstrate mock-up BMD prototypes.

❑ Participate in the iterative process of updating requirements in the Design and Development Plan, as needed.

❑ Work with Project Manager and engineering leads, QA lead, manufacturing specialist and certifications manager to create development, Build, test and certification schedules. These schedules will be documented in the PIL. The Build schedule will be turned in as the deliverable for Section 3.2.

❑ Work with a project coordinator to ensure the engineering leads, QA lead, manufacturing specialist and certification manager are on track with the development, Build, testing and certification schedules.

❑ Establish CAD, Altium and other documentation versioning guidelines.

❑ Work with project coordinator to perform Application Layer software testing on lab samples.

■ **Mechanical + Case + Cart Engineering Lead:**

❑ Attend kickoff and status update meetings with the County as they relate to the mechanical components and the case or cart.

❑ Manage mechanical engineers responsible for housing, stand, privacy screen, ballot box, cart and case.

❑ Review CAD files of the reference design provided by the County developed during earlier phases.

─ Focus on the top and bottom housings, which require special consideration given that other modules are expected to be placed on top of them.

─ Verify that any sub-component changes generate any necessary changes in housing, stand, privacy screen and ballot box.

─ Identify possible adaptations to the reference design to improve cost savings, reliability, spare parts lifecycle, and simplicity for both time to production and ease of maintenance.

❑ Lead iterative process for proposing modifications to reference design, including design review of work product from the mechanical engineers.

❑ Manage production of new prototype(s) and iteration during EVT.

❑ Work with manufacturing specialist to contract component manufacturers.

❑ Manage development of case design for individual transport of BMD, legs, privacy screen, integrated ballot box, power supply, keypad and headphones.

❑ Work with manufacturing specialist to procure temporary and permanent tooling.

❑ Manage development of cart design including considerations for:

— Network and power connections to BMG (see Section 2.2.3a).

— Heat dissipation (when being powered on and managed through the BMG).

— Secure and environmentally controlled storage in the EOC.

— Portability for easy deployment and collection inside Vote Centers.

❑ With the help of the manufacturing specialist and compliance manager, select production materials and finishes (e.g. ABS plastics for housing, ballot box and privacy screen, and metals for stand and ballot box).

■ **Electronics + Peripherals Engineering Lead:**

❑ Attend kickoff and status update meetings with the County as they relate to electronics and peripherals.

❑ Review the design and specifications of existing ACS and BCS SOMs and associated peripherals developed during earlier phases.

❑ Manage electrical engineers responsible for ACS and BCS SOMs and peripherals.

❑ Lead iterative process for proposing modifications to BCS and ACS SOMs and associated peripherals, including design review of work product from the electrical engineers.

❑ Work with manufacturing specialist to contract component manufacturers.

❑ Work with BMD Application Layer software engineering lead to coordinate firmware development and installation on lab samples.

❑ Work with the manufacturing specialist to plan production deployment of firmware in the United States.

■ **Paper Handler + Ballot Printer Engineering Lead:**

❑ Attend kickoff and status update meetings with the County as they relate to the paper handler and ballot printer.

❑ Coordinate development schedule of the paper handler and ballot printer with product manager.

❑ Coordinate integration of printer driver with BCS firmware (see Section 2.2.1.7).

■ **Manufacturing Specialist:**

❑ Lead negotiations with potential component manufacturers including performance standards, Build schedules, warranty, component lifecycle and replacement plan, etc.

❑ Qualify temporary and permanent tooling packages.

❑ Create Bill of Materials ("**BOM**") for each sub-component, including manufacturing cost estimation.

❑ Create BOM for full production BMD.

❑ Manage component manufacturers to:

— Select the appropriate manufacturing techniques for each sub-component.

— Assure cost and weight optimization.

— Assure compliance with Build schedules.

— Along with compliance manager, verify performance standards.

❑ Generate Standard Operating Procedures ("**SOPs**") for all component manufacturers.

❑ Along with mechanical + case engineering lead, select list of materials and finishes for each sub-component.

■ **QA Lead:**

❑ Adapt Contractor's existing process quality documents in coordination with the County to ensure that manufacturing processes will result in products that meet the required performance standards.

❑ Manage a team of QA engineers.

❑ Along with the engineering leads, develop Test Plans for all BMD hardware components and sub-components and document the Test Plans in the PIL. For example:

— Environmental Testing

— Vibration Testing

— Bench Handling Testing

— Electrical Testing

— CVSS requirements

❑ Work with the Project Manager to update the requirements traceability matrix with test cases to ensure performance standards are met and CVSS requirements are addressed.

❑ Work with BMD Application Layer software QA lead to coordinate firmware testing.

❑ Prepare test results reports upon completion of tests.

■ **QA Engineers:**

❑ Implement the Test Plans for all BMD hardware components on lab samples.

❑ Implement the Test Plans for all BMD hardware components on mock-ups/high fidelity prototypes.

❑ Assist in iterative testing and remediation process to hit performance standards and, with the compliance manager, assist in ensuring compliance with CVSS requirements.

❑ Report issues in the tracking system.

■ **Housing + Stand Mechanical Engineer:**

❑ Participate in the iterative process for proposing modifications to the existing specification for housing and stand.

❑ Create refinements and adjustment to the CAD 3D drawings for each sub-component.

❑ Assist in iterative testing and remediation process to hit performance standards and, with the compliance manager, assist in ensuring compliance with CVSS requirements.

❑ Support engineering lead to prepare lab samples, mock-ups and high fidelity prototypes, and pilot run.

■ **Case + Cart Integration Mechanical Engineer:**

❑ Create the CAD drawings and other specification documentation for producing the cases and carts.

❑ Verify the proposed cases and carts are suitable for and will integrate well into all physical environments (e.g., Election Operations Center, Vote Centers, transport vehicles, etc.)

❑ Assist in iterative testing and remediation process to hit performance standards and, with the compliance manager, assist in ensuring compliance with CVSS requirements.

❑ Support engineering lead to prepare lab samples, mock-ups and high fidelity protoypes, and pilot run.

■ **Privacy Screen + Ballot Box Mechanical Engineer:**

❑ Participate in the iterative process for proposing modifications to the existing specification for privacy screen and ballot box.

❑ Create refinements and adjustment to the CAD 3D drawings for each sub-component.

❑ Assist in iterative testing and remediation process to hit performance standards and, with the compliance manager, assist in ensuring compliance with CVSS requirements.

❑ Support engineering lead to prepare lab samples, mock-ups and high fidelity prototypes, and pilot run.

■ **ACS + Peripherals Electrical Engineer:**

❑ Participate in the iterative process for proposing modifications to the existing specification for ACS SOM and peripherals.

❑ Assist in iterative testing and remediation process to hit performance standards and, with the compliance manager, assist in ensuring compliance with CVSS requirements.

❑ Develop documentation to support agreed upon modifications:

— Wiring diagrams

— Gerber/Altium files for circuit boards

❑ Work with the Operating System ("**OS**")/driver/firmware developers to implement firmware for the BCS (see Section 2.2.1.5)

- ❑ Support engineering lead to prepare lab samples, mock ups and high fidelity prototypes, and pilot run.

- ■ **BCS + Peripherals Electrical Engineer:**

  - ❑ Participate in the iterative process for proposing modifications to the existing specification for BCS SOM and peripherals as updates come in on the paper handler and ballot printer.

  - ❑ Develop documentation to support agreed upon modifications:

    - — Wiring diagrams

    - — Gerber/Altium files for circuit boards

  - ❑ Work with the OS/driver/firmware developers to implement firmware for the BCS (see Section 2.2.1.7).

  - ❑ Support engineering lead to prepare lab samples, mock-ups and high fidelity prototypes, and pilot run.

- ■ **Certification Manager:**

  - ❑ Understand the CVSS.

  - ❑ Work with the Product Manager to make sure requirements are generated in the requirements traceability matrix to ensure passing of the CVSS.

  - ❑ Manage the State-Approved Testing Agency to do periodic assessments to ensure CVSS requirements are on track.

  - ❑ Manage the dedicated compliance managers to assist with day-to-day CVSS requirements fulfillment throughout the Build process.

  - ❑ Upon Build completion, verify full compliance with the CVSS.

- ■ **Dedicated Compliance Managers:**

  - ❑ As led by the certification manager, assist in the day-to-day Build process to ensure FRD and CVSS requirements are being met on an ongoing basis.

- ■ **Overall Contractor Responsibilities:**

  - ❑ Perform final hardware assembly, load firmware, and perform incoming quality check.

  - ❑ Deliver production BMDs to the County.

2.2.1.3   Application Control System Hardware and Peripherals

Complete:

- ■ Selection of the IOTS system on module and design of the CPU carrier board complete

- ■ Peripherals and key components, including the main application CPU System On Module (**"SOM"**), chosen

- ■ Build of five functional Design Validation Unit prototypes to the final design

- ■ Board layout and bill of materials documented

To Be Done:

- Update the selected IOTS SOM
- Evaluate options for secure USB port that meets voting system standards
- Develop to pass Federal Communications Commission (**"FCC"**) certification testing
- Improve cable and connector robustness, particularly low-voltage differential signaling cable termination

Specification Documents:

- Location: BMD Hardware
- Filenames:
  - ❑ Vox_ID_Deck_2016-06_28.pdf
  - ❑ 5.4.2.2.1 Designing & Using the BMD
  - ❑ 5.4.2.2.2 Designing & Engineering the External BMD Components
  - ❑ 5.4.2.2.3 Designing & Engineering the Internal BMD Components
  - ❑ 5.4.2.3 BMD Manufacturing Release Package
  - ❑ 5.4.4 BMD Design Validation Units
  - ❑ Known Issues and Recommendations

Requirements:

- BMD Requirements

Tasks:

- Evaluate and address Known Issues and Recommendations from the document linked above and incorporate design refinements as required based on mutual agreement with the County and Design Stewards
- Build test units and test electrical design against performance requirements
- Address issues raised in testing
- Iterate on above tasks as necessary until design is shown to meet performance requirements

Deliverable:

This sub-component is one aspect of the BMD hardware and will be completed at the same time as the other BMD hardware sub-components in order to deliver an assembled BMD unit. The result of these tasks will be considered to meet deliverable 2.2.1.2 Engineering Validation Testing and Results for BMD Hardware, and shall be submitted upon completion of all tasks described in the following sections:

- 2.2.1.2 Mechanical (housing, stand, privacy screen and ballot box)
- 2.2.1.3 Application Control System Hardware and Peripherals
- 2.2.1.6 Ballot Control System Hardware and Peripherals
- 2.2.1.8 Paper Handler

- ■ 2.2.1.9 Ballot Printer

- ■ 2.2.1.10 Cases and Carts

See Section 2.2.1.2 Mechanical (housing, stand, privacy screen and ballot box) for a description of the deliverable.

2.2.1.4   BMD Application Layer

The BMD Application Layer ("**Application Layer**") runs the voting application on the BMD, including the user interface and integration with the various hardware components.

The BMD is designed with a two-machine architecture to provide a clear delineation between the user interface components, managed by the Application Control System (**"ACS"**), and the paper path, managed by the Ballot Control System (**"BCS"**). The ACS and BCS are integrated through an internal network and communicate through APIs.

- ■ The ACS drives the touchscreen display, keypad controller, QR code scanner, etc.

- ■ The ACS application layer will be based on Android or Linux, with strong support of UI tools

- ■ The BCS drives the paper path, including the scanner and printer

- ■ The BCS application layer will be based on Linux, with strong support for device management

The BMD Application Layer consists of two parts:

- ■ The ACS, which drives the user interface, audio and voting selection; and manages the overall workflow

- ■ The BCS, which drives the paper path, accepts, prints, scans and casts the ballot

ACS and BCS communicate either using an API-based integration (**"Shuttle API"**) over an Ethernet connection or a binary protocol over a bus.

The ACS application layer consists of:

- ■ The voting application, implementing the user interactions with the BMD

- ■ The BMD deployment management service, which receives and installs system images and BMD election configuration files. The BMD deployment management service is also responsible for deploying software updates to the BCS

It is expected that the API will allow the ACS and BCS to be developed and updated independently, while still maintaining interoperability.

The software development model for the Application Layer follows the hardware manufacturing model from EVT to DVT to Production Validation Testing (**"PVT"**). The goal is to have a completely working BMD and surrounding VSAP ecosystem by the end of EVT, not just a partial prototype that may undergo substantial changes. Therefore, the software development for the Application Layer must be complete and integrated with the BMD within EVT. Minor changes and refinements may be introduced in DVT and PVT.

2.2.1.4.1   _BMD Application Layer Tasks and Deliverables_

The purpose of the application development tasks at this stage of the process is to finalize the selection of the production software stack based on previous recommendations and develop

the first version of the Application Layer, ready for deployment with the BMD hardware at the EVT stage.

2.2.1.4.1.1 Develop Software Development Plan and Test Plan

The Software Development Plan and Test Plan drive the specific approach to implement the Application Layer. While the BMD Application Layer shares the overall approach with the software development for the ISB and BMG components, there are likely differences related to the deployment platform of the ACS and BCS SOM components of the BMD.

Deliverable 2.2.1.4.1.1a BMD Application Layer Software Development Plan	
Delivery Timing	Submitted for approval prior to software development
Delivery Frequency	Once
Description	This deliverable describes the overall approach to confirming the requirements, refining the design and developing, testing and deploying the solution. The Application Layer Software Development Plan shall include, at minimum: ■ Requirements confirmation ■ Requirements management ■ Design validation and refinement ■ Release and sprint planning, with delivery cadence ■ Code versioning ■ Build management and continuous integration with deployment to production-class hardware (ACS and BCS SOM runtime environment) ■ Defect management and resolution

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The BMD Application Layer Software Development Plan will be generated concurrently with the Design and Development Plan of 2.1.1. The solution architect, working in conjunction with the Project Manager, coordinators, and the BMD product manager (see below for roles and responsibilities) will help confirm the BMD requirements and develop the BMD Application Layer Software Development Plan. The BMD Application Layer product manager will document the Plan in SharePoint, per Section 1.1.1 Project Information Library. It will include relevant visualizations in the form of flow charts, graphs, and Gantt charts to ensure complete understanding of the process and timelines for completion.

The Contractor will employ a BMD Application Layer software team. The list of responsibilities and anticipated role and resource alignment is as follows:

■ **Product Manager:**

❑ Understand all business requirements as documented in the Design and Development Plan (and help to create that documentation to begin with) as they relate to the BMD Application Layer.

❑ Be the point person on the Contractor's side for all BMD-related communications between the County and the Contractor.

❑ Understand the system architecture of the assets developed during earlier phases, and work with the software architect to plan how to expand/replace that work as needed, and verify the documentation created by the software architect.

❑ Participate in the iterative process of updating requirements in the BMD Application Layer Software Plan, as needed.

❑ Attend and possibly lead any BMD-related meetings with the County.

❑ Manage a QA lead and engineering manager to make sure all sprints make sense and the overall process will be conducted to an optimal cadence.

❑ Work with the software architect and Dev Ops to design and construct Build management and continuous integration scripts, and environments for both ACS and BCS.

❑ Establish and document code versioning guidelines.

■ **Software Architect:**

❑ Understand the system architecture of the assets developed during earlier phases.

❑ Understand all business requirements as documented in the Design and Development Plan (and help to create that documentation to begin with) as they relate to the BMD Application Layer.

❑ Design and document the architecture of the envisioned ACS, BCS, and interface between them, and update as the understanding of the requirements evolve.

❑ Work with Dev Ops to design and construct Build management, continuous integration scripts, and environments for both ACS, and BCS.

❑ Work with the security engineering team to ensure security of all aspects of the BMD Application Layer software.

■ **Security Engineering Team:**

❑ Understand the full system architecture designed by the architect.

❑ Perform a threat assessment and risk analysis of the architecture to ensure the architecture itself has measures to mitigate all reasonable security risks.

❑ Work with the QA team to design tests to verify the implementation has fully implemented those risk mitigation strategies.

■ **UI/UX Design Team** (the list of responsibilities and anticipated role and resource alignment is stated in Section 2.2.1.1 User Experience/User Interface)**:**

❑ Assist with planning the UX/UI, as demanded by the requirements.

■ **UI/UX Engineers:**

❑ Assist the ACS developers to ensure a beautiful and smooth UI/UX per the artistic direction and requirements of the UI/UX design team.

❑ Develop the different native style codes to enable different user settings allowing voters to select various contrast, font-size and language choices, while simultaneously ensuring a consistent and usable UI/UX.

- **QA Lead:**

  ❑ Design the Test Plan and assist with completing the requirements traceability matrix for both ACS and BCS.

  ❑ Work with the security engineering team to develop tests to verify the security of the BMD Application Layer software.

  ❑ Work with the UI/UX team to develop tests to verify the UI/UX requirements.

  ❑ Design an end-to-end functional test within the overall solution that will include relevant aspects of the BMG.

  ❑ Work with Dev Ops for continuous integration, and load testing.

  ❑ Participate in sprint planning.

  ❑ Oversee the QA engineers to implement the Test Plan.

  ❑ Iteratively work with the development team to ensure 100% passing of the Test Plan.

  ❑ Attend at least one planning meeting with the County (possibly more, as required) to design the User Acceptance Testing.

  ❑ Iteratively work with the County (per the Product Manager) to ensure the passing of the User Acceptance Testing.

- **QA Engineers:**

  ❑ Implement a system test within the ACS, and BCS, as specified in the requirements traceability matrix.

  ❑ Implement functional tests, per the requirements traceability matrix.

  ❑ Implement integration tests, per the requirements traceability matrix.

  ❑ Assist in the implementation of security tests, per the requirements traceability matrix.

  ❑ Implement a load/stress test.

- **Engineering Manager:**

  ❑ Understand the system architecture to be built.

  ❑ Manage team of software engineers to implement the system architecture.

  ❑ Plan sprints and manage Scrums to implement the architecture in a timely fashion.

  ❑ Work with the QA team and assign tasks to the engineers to ensure 100% test coverage and passing, per the requirements traceability matrix.

- **Android or Linux Application Developers:**

  ❑ As led by the engineering manager, write unit and functional tests for, and then implement the system architecture of the ACS.

- **Java/Protocol Developers:**

  ❑ Write unit and functional tests for, and then implement the connection between ACS and BCS.

  ❑ Write unit and functional tests for, and then implement the REST API accessible to the BMG (see Section 2.2.3 below).

- ■ **Hardware/Driver/Linux OS Software Engineers:**
  - ❑ As led by the engineering manager, write unit and functional tests for, and then implement the system architecture of the BCS.
  - ❑ In conjunction with the hardware team, develop Board Support Packages for both the ACS, and BCS.

- ■ **Senior Systems Engineers:**
  - ❑ As led by the engineering manager, write unit and functional tests for, and then implement the system architecture of the BMD deployment service.

- ■ **Certification Manager:**
  - ❑ Understand the CVSS.
  - ❑ Work with the product manager to make sure requirements are generated in the requirements traceability matrix to ensure passing of the CVSS.
  - ❑ Manage the State-Approved Testing Agency to do periodic assessments to ensure CVSS requirements are on track.
  - ❑ Manage the dedicated compliance managers to assist with day-to-day CVSS requirements fulfillment throughout the Build process.
  - ❑ Upon Build completion, verify full compliance with the CVSS.

- ■ Compliance Manager:
  - ❑ As led by the certification manager, assist in the day-to-day Build process to ensure FRD and CVSS requirements are being met on an ongoing basis.

The purpose of the BMD Application Layer Software Development Plan is to map out in detail how development of the ACS and BCS software will progress, while simultaneously explaining how such development will lead to the required outcome. The Plan will include the following sections:

- ■ **Requirements confirmation**
  - ❑ The Plan will link to the relevant sections of the requirements traceability matrix and associated JIRA tasks.

- ■ **Requirements management**
  - ❑ The Plan will discuss the process of updating requirements over time and ensuring that each requirement has appropriate unit and functional tests associated with it.

- ■ **Design validation and refinement**
  - ❑ The Plan will discuss how the software architect will use various software suites to fully document the proposed solution and where to find those native files. All JIRA tasks will have reference to the appropriate documentation associated with the task/requirement (see Sections 2.2.1.4.1.2a/b).

- ■ **Release and sprint planning, with delivery cadence**
  - ❑ The engineering manager and QA lead will layout the planned sprints to fulfill all requirements of both the ACS, and BCS software.

- ■ **Code versioning**

❑ The engineering manager and product manager will relate the sprints to expected internal and external Releases of the ACS, and BCS software, with an explanation of the version choices.

■ **Build management and continuous integration with deployment to production-class hardware (ACS and BCS SOM runtime environment)**

❑ The product manager together with the QA lead, software architect, and Dev Ops teams will describe the expected implementation of continuous integration (using Team City, see 2.2.1.4.1.3a/b below).

■ **Defect management and resolution**

❑ The product manager and QA lead will discuss a process for bug reporting and resolution integration into sprint planning (where points will be set aside ahead of time for expected defect resolution needs).

■ **Certifications planning**

❑ The certification manager will discuss proper development practices to ensure CVSS requirements are met.

Deliverable 2.2.1.4.1.1b BMD Application Layer Test Plan	
Delivery Timing	Submitted for approval prior to software development
Delivery Frequency	Once
Description	This deliverable describes the approach to testing the solution under development. The preference is to test as early and often as possible in the life cycle and detect defects when they are relatively easy to fix. The Application Layer Test Plan shall cover, at minimum: ■ Unit test within classes/low level modules of the code ■ System test within the ACS and BCS ■ Integration test within the BMD ■ Security test of all components and integration ■ End-to-end functional test within the overall solution, including the BMG ■ Load/stress testing ■ User Experience testing by community stakeholders of elements that require further design ■ User Acceptance Test

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The BMD Application Layer Test Plan will be documented in the PIL by the QA lead (see 2.2.1.4.1.1a for roles and responsibilities of the BMD Application Layer software team) in conjunction with the BMD Application Layer product manager, the software architect, Dev Ops team, security engineering team, and the certification manager. It will detail how the engineering and QA teams will create tests in the following testing categories:

■ Unit test within classes/low level modules of the code

- System test within the ACS and BCS

- Integration test within the BMD

- Security test of all components and integration

- End-to-end functional test within the overall solution, including the BMG

- Load/stress testing

- User Experience testing by community stakeholders of elements that require further design

- User Acceptance Test

The plan will explain how these tests ensure that the BMD Application Layer software complies with both the CVSS requirements (functional, usability, TDP, accessibility and privacy, and especially software) and the non-CVSS FRD requirements. The plan will include specific mention that the BMD Application Layer will be developed following a Test-Driven Development **("TDD")** philosophy. Whenever possible, unit and functional tests (with references to the test IDs in the requirements traceability matrix) will be written in advance of development. Development tasks will not be considered complete in a sprint until the unit and functional tests are both cleared by QA as actually testing what is expected and pass such tests.

Deliverable 2.2.1.4.1.1c BMD Application Layer Test Cases — EVT	
Delivery Timing	Submitted for approval prior to testing
Delivery Frequency	Once
Description	This deliverable captures all test cases, whether manual or automated. This includes, at minimum: ■ Test cases with traceability to requirements and acceptance criteria ■ Test suites and dependency chains ■ All test data required to execute the test cases ■ Test scripts for all automated tests

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

Per the "Integrity" and "Transparency" General Voting System Principles, it is imperative that testing and security are in the forefront of all development team members' minds. As such, nearly every member of the BMD Application Layer software team and supporting teams are involved in the design, implementation, and validation of all Test Cases specified in the requirements traceability matrix, as well as unit and functional tests. As mentioned in Section 2.2.1.4.1.1b, the team will follow the TDD general philosophy. Under TDD, whenever possible, unit and functional tests are written prior to any development. A continuous integration Build plan will be implemented by the product manager and Dev Ops (using Team City), so all commits will automatically result in all Test Cases running to ensure ongoing test passing. The QA lead (and QA engineering team) will create a comprehensive set of test data which will be stored in the test section of the git repository, along with the Test Cases themselves. The test suite will have an option to prompt for confirmation that any tests which cannot be automated were actually run and entered into the Test Report (see Section 2.2.1.4.4).

2.2.1.4.1.2   Validate and Refine the Design

Requirements: The requirements for the Application Layer have been defined in Phase 3 (System Design and Engineering) of the VSAP Project. As part of this task, the Contractor shall develop an understanding of the requirements and how they have driven the design documents that are the core input into this Project. The County does not intend to revisit the requirements or to hold requirement validation sessions.

Similarly, Phase 3 (System Design and Engineering) of the VSAP Project also established the software design of the solution, captured in distinct sections of the Software Solution Design Document (**"SSDD"**), including the design for the Application Layer. The County seeks to capture the next version of the VSAP design into two new document formats:

- Software Architecture Document, which captures the core architecture design
- Software Specifications, capturing the detailed software specifications

These two documents will replace the current SSDD and form the new basis for building and describing the software components.

For the BMD Application Layer, the documents that describe the current version of the design include the documents listed below.

Specification Documents:

- Location: BMD Software & Software Solution Design Document
- Filenames:
  - SSDD — Section 02 — System Connectivity
  - SSDD — Section 03 — System Security
  - SSDD — Section 04 — Ballot Marking Device
  - BMD Software, Section 5.4.3, detailed software design specification documents:
    - Software Architecture Specification
    - Shuttle API Specification
  - 3.2 BMD User Interface Design.pdf
  - 3.2 BMD User Interface Flows.pdf
  - 3.2 BMD User Interface Flows.sketch
  - BMD System Sounds.zip
  - BMD Animations.zip
  - BMD Icons.zip
  - Video-Dual Switch.mp4

Requirements:

- BMD Requirements

Based on review of the requirements, the goal for this task is to identify the potential gaps in the design. The design includes, but is not limited to:

- The User Experience, including detailed screen layout and flow

- ■ The final technology stack, including operating system, frameworks and toolkits
- ■ The interface definitions between the ACS, BCS and components

After identification, all gaps and outstanding open items must be addressed in a functionally complete design. The County expects design artifacts to be generated such as detailed software architecture diagrams, event models and data structures. The County's expectation is that these artifacts will be generated as maintainable models through widely available tooling.

It is the intention for the design of the Application Layer to be complete at the end of the EVT stage.

Deliverable 2.2.1.4.1.2a BMD Application Layer Software Architecture Document — EVT	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	The Contractor shall create the Software Architecture Document based on the SSDD that contains several sections that capture detailed software design specifications for the Application Layer, including: ■ System Connectivity that describes how the major components of the overall voting solution communicate and exchange data ■ System Security that describes the data integrity, confidentiality and availability of the voting system. The BMD, and the software that controls it, is the heart of the voting system and touches on all aspects of system security ■ BMD that describes the hardware and software components of the BMD, their interactions and how they will support the voting process. It is a key section of the overall design for the Application Layer

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

Prior phases of the VSAP Project have resulted in incredibly clear, complete, and cogent documentation of the BMD Application Layer software, both in the form of architecture documentation and software specifications. The Contractor will have a kickoff software planning meeting with the County and follow up breakout meetings to review the existing documentation with the appropriate stakeholders at the County, and to discuss what deficiencies, if any, those stakeholders found in the form and content of the documentation. The software architect (per the staff plan outlined in Section 2.2.1.4.1.1a BMD Application Layer Software Development Plan) will be responsible for the generation of the new Software Architecture Document. Per Section 1.1.1, the Software Architecture Document will be stored in the Project Information Library, with revisions made available to the County and a final version prepared through an iterative process of such revisions. Both because the extant documentation is so extensive, and in accordance with the "Cost Effective" General Voting System Principle, the software architect, where possible, will rely on the existing documentation:

- ■ Expanding upon it (e.g., updating the revision table)

- ■ Augmenting it (e.g., where it is noted that "Software upgrade and secure boot will not be implemented in this phase of the development but will be planned for during the design process." will be replaced with a discussion of the actual implementation)

- ■ Reformatting it as "The County seeks to capture the next version of the VSAP design into two new document formats" which "will replace the current SSDD and form the new basis for building and describing the software components."

- ■ Totally replacing with new content where either new business/functional requirements resulted in new architecture requirements or the County found previous content deficient

The Architect will consult with supporting members of the BMD Application Layer development team and supporting teams, including Dev Ops, security engineering team, QA leads, hardware, and UI/UX team, to ensure that the architecture meets all requirements and conforms with the "Transparency" General Voting System Principle to allow for as much publication as possible, while simultaneously respecting the "Integrity" General Voting System Principleto ensure a completely secure product. As in the existing IP, the new Software Architecture Document will have sections giving general descriptions, as well as have subsections for all major software components, including but not limited to:

- ■ Boot-loader (firmware)

- ■ ACS and BCS OS

- ■ ACS and BCS File System

- ■ ACS and BCS Web Server

- ■ ACS Bi-directional API for BMG Interaction

- ■ BCS Controllers

- ■ BCS Real Time Components

- ■ BDF JSON Transformation to ACS POJOs

- ■ ACS Election Rendering and UI/UX

- ■ ACS Accessibility Features

- ■ ACS Voter Error Handling

- ■ ACS Access Control for Vote Center Error Handling

- ■ System Connectivity (through the BMG)

- ■ System Security

The Architecture Document will contain summary versions of, and references to the native Software Specification Documents, further detailed in Section 2.2.1.4.1.2b.

Deliverable 2.2.1.4.1.2b Final BMD Application Layer Software Design Document — EVT	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	The Contractor shall create the final BMD Application Layer Software Design Document based on the preexisting design specifications that contain several documents that capture detailed software design specifications for the Application Layer, including:

Deliverable 2.2.1.4.1.2b Final BMD Application Layer Software Design Document — EVT	
	■ Software Specification that provides a comprehensive architectural overview of the system and is intended to capture and convey the structure and the architectural decisions that have been made on the system, along with rationale ■ Application Detailed Design Specification that provides a detailed description of the BMD Application Layer as described in the Software Architecture Specification document (linked above) ■ Shuttle API or Other Protocol Specification that defines the interface that allows the ACS and BCS to communicate with each other While the County emphasizes the development of highly maintainable and transparent code over the creation of documentation, some core artifacts are critical such as: ■ Detailed software architecture diagrams ■ Event model ■ Data structures ■ Interface specifications These artifacts must be in portable, standards-based electronic formats, rather than documents or presentations.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

Varying members of the BMD Application Layer software team (see Section 2.2.1.4.1.1a for a breakdown of roles and responsibilities) will generate specifications in the following (or comparable) documentation/specification software suites:

- Microsoft Visio for flow diagrams

- StarUML for component specification and connections

- Balsamiq for working UI/UX wireframes

- Sketch or In Design for Design Assets (see 2.2.1.1 above)

- White papers written in LaTex for security specifications

- SharePoint for interface between ACS and BCS specification and other component interface specification, as well as overall hardware and software philosophy, design, and usage documentation

- Vagrant, Puppet, and Docker for full stack environment specification (including OS, frameworks, and toolkits), production, deployment setup, and images

These materials will be referred to in the final BMD Application Layer Software Design Document and stored in the PIL, per Section 1.1.

2.2.1.4.1.3 Establish the Development Environment

The development environment includes all processes and toolchains to develop and test the Application Layer software, including the software repository, continuous integration and test automation. The County intends to maintain ownership and governance (directly, or through a separate entity) of the software development environment. Changes and optimizations of the environment must be reflected in this deliverable.

Deliverable 2.2.1.4.1.3a BMD Application Layer Software and Deployment — EVT	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	This deliverable covers all software code, configuration and runtime components to be deployed to the ACS and BCS environment. These include: ■ Software repository for each Release ■ Operating system baseline and configuration ■ BMD system configuration and application configuration file

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The software development environment will be designed and maintained by the engineering manager of the BMD Application Layer in consultation with the software architect, QA lead, and Dev Ops (see Section 2.2.1.4.1.1a BMD Application Layer Software Development Plan for a breakdown of roles and responsibilities). Per Section 2.2.1.4.1.2b Final BMD Application Layer Software Design Document, Dev Ops will prepare Vagrant and Puppet configurations and Docker images with fully specified third-party stack (OS baseline and configuration), and preloaded OS images (fully function virtual machine images) that will allow for easy ramp of Engineers to develop on both the ACS and BCS (there will be different configuration files and images created for ACS and BCS). These Vagrant and Puppet configurations and Docker images will be stored in the PIL per Section 1.1, with full ownership and governance transferred to the County. Changes and optimizations will be tested locally and then permanently maintained in the PIL. The Vagrant and Puppet files will be stored in a special git repository for configuring development and staging environments, with a full version history available.

These configuration repositories will refer to the main git repositories for ACS and BCS, with configuration files requiring developers to insert their usernames and RSA keys in their local dev environments after cloning the configuration environments. This will allow automated setup, including cloning of the main repositories, while maintaining the identity of each individual developer in the commit history. All git repositories will ultimately be duplicated in the PIL before delivering the PIL to the County at project completion. A Build system, such as Maven, or Gradle will be used and stored in the main repositories for automatic dependency resolution. Any common configurations of third-party software (e.g., developer IDE, Continuous Integration Server, etc.) will also be maintained in the Vagrant/Puppet configurations, and ultimately, the PIL.

The code created to implement the various APIs will employ a Gradle plugin (e.g., Swagger https://swagger.io/) that will auto-generate API endpoint documentation as part of the Build

process. This documentation will include high-level descriptions of the purpose and function of each endpoint, as well as detailed specifications.

Deliverable 2.2.1.4.1.3b BMD Application Layer Software Tooling	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	This deliverable includes all tooling required to develop and maintain the Application Layer, including: ■ Configuration of the Integrated Development Environment (**"IDE"**) ■ Software repository ■ Continuous Build and integration ■ Test automation ■ Deployment and Release management

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The engineering team (see the staffing plan in 2.2.1.4.1.1a) will use JetBrains software suite (IntelliJ) to allow for maximum ease of, and efficiency in, development while also enabling the greatest amount of automation in documentation, integration, and preparation for CVSS and other FRD requirements testing. The IDE will be the main development access point of the engineers, and therefore, must integrate VCS access, continuous Build and integration, and local testing. Team City will be employed for CI and test automation, which will automatically tag Releases, and will produce images for use in internal QA BMD deployment.

2.2.1.4.1.4   Develop and Test the Solution

Development and testing should be approached as integrated activities, with testing commencing as early as possible in the development process. The County expects the majority of testing to be automated and repeatable, based on a managed and comprehensive set of test cases that trace back to the requirements.

End-to-end testing is conducted at the project level, not at the component level. However, prior to end-to-end testing of the Application Layer, testing must include deployment and execution on the ACS and BCS SOM hardware. It must not be limited to a simulated environment. The EVT stage is not complete until all components, and the integration between the components, have been fully tested. This includes all hardware, all software and all interfaces.

Deliverable 2.2.1.4.1.4 BMD Application Layer Test Report — EVT	
Delivery Timing	Submitted for approval as fully functional BMDs at the end of the EVT stage
Delivery Frequency	Once
Description	This deliverable includes a comprehensive test report that captures the test outcomes at all levels specified in the Test Plan and is a key input to the completeness of this project stage. The County envisions that this deliverable is largely automatically generated as part of the test execution. It includes:

Deliverable 2.2.1.4.1.4 BMD Application Layer Test Report — EVT	
	■ Test methodology and test tools
	■ Outcomes of all test levels and test cases
	■ Indication of the test coverage
	■ Test trends and "hot spots" of the software that are more prone to defects than others

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

As in 2.2.1.4.1.1c, the team will follow the TDD general philosophy. Under TDD, whenever possible, unit and functional tests are written prior to any development. A continuous integration Build plan will be implemented by the product manager and Dev Ops in Team City, so all commits will automatically result in all Test Cases running to ensure ongoing test passing. In the Test Report, the QA lead (see the staffing plan in 2.2.1.4.1.1a BMD Application Layer Software Development Plan) will document the full test methodology and tools used for testing and continuous integration, as well as where the "hot spots" of the software were seen to be more prone to defects than others. The QA lead will ensure that the outcome of running the full test suites is an automatically generated report indicating the outcomes of all test levels and Test Cases. The test scripts will yield an indication of test coverage (in this context meaning code coverage) for both ACS and BCS.

2.2.1.5   Application Control System Board Support Package and Firmware

Complete:

■ Temporary Board Support Package built on embedded Linux and off-the-shelf drivers used to build the prototype voting application loaded on the Design Validation Units for demonstration purposes

To Be Done:

■ Develop the production Board Support Package and drivers based on the software stack chosen for the UX/UI application layer

Specification Documents:

■ Location: BMD Software

■ Filename:

❑ Software Architecture Specification

❑ Software Solution Design Document — Section 04 — Ballot Marking Device

Requirements:

■ BMD Requirements

Tasks:

■ Review design rationale for proposed OS and finalize selection

■ Select, modify, or build Board Support Package for selected OS

■ Demonstrate and test functionality on EVT hardware

■ Address issues raised in testing

■ Iterate on above tasks as necessary until design is shown to meet performance requirements

Deliverable 2.2.1.5 Application Control System Board Support Package Software Image — EVT	
Delivery Timing	Submitted for approval as fully functional BMDs at the end of the EVT stage
Delivery Frequency	Once
Description	The Contractor shall deliver: ■ ACS Board Support Package software image ■ Associated documentation

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The Contractor agrees with the County's plan of using Android or Linux as the OS for the ACS subsystem. During a kickoff meeting between the hardware teams, the Contractor and the County will determine if any modifications need to be made to the existing ACS schematic https://voteamerica.atlassian.net/wiki/download/attachments/180322333/P1984-002b_searchable.pdf?version=1&modificationDate=1514592597170&cacheVersion=1&api=v2. Any such modifications will be reflected in an updated Altium Designer schematic, and after final approval from the County, will become part of the PIL. Once the schematic has been finalized, a firmware/driver/OS engineer from the BMD Application Layer software team (see Section 2.2.1.4.1a for roles and responsibilities) will work with the schematic to develop custom Android or Linux firmware, as needed. Given that security is especially critical in the design of the firmware, the security engineering team will be part of that development. Moreover, open sourcing the firmware source code may prove to be challenging with respect to maintaining security of the BMD, and the Contractor will work with the County to determine which parts of the custom firmware, if any, will be able to be open sourced.

Lab samples will be prepared by the hardware team for testing the custom firmware, being installed periodically through the custom bootloader. Any modifications to the bootloader will also have been approved by the County. For security purposes, the bootloader will only load the custom firmware that has been signed with the appropriate key. It is expected that the firmware development will be an iterative process as the hardware is modified, or functional needs are updated. The firmware code itself will be developed and maintained in a git repository, which will become part of the PIL.

2.2.1.6   *Ballot Control System Hardware and Peripherals*

Complete:

■ Design of the BCS printed circuit board assemblies is complete

■ Five functional design validation unit prototypes of the final design were built

■ Board layouts and bill of materials are documented

To Be Done:

- Validate and document that printer driver board and BCS are not affected by final thermal print mechanism specification

- Assess consolidation of printer driver board with BCS

- Validate and document any changes to BCS hardware caused by cost-reduction efforts on the paper handler

- Assess potential changes to BCS to facilitate the BMD passing FCC scan tests

Specification Documents:

- Location: BMD Hardware

- Filenames:
  - ❑ Vox_ID_Deck_2016-06_28.pdf
  - ❑ 5.4.2.2.1 Designing & Using the BMD
  - ❑ 5.4.2.2.2 Designing & Engineering the External BMD Components
  - ❑ 5.4.2.2.3 Designing & Engineering the Internal BMD Components
  - ❑ 5.4.2.2.4 Designing & Engineering the BMD's Paper Handler
  - ❑ 5.4.2.3 BMD Manufacturing Release Package
  - ❑ 5.4.4 BMD Design Validation Units
  - ❑ Known Issues and Recommendations

Requirements:

- BMD Requirements

Tasks:

- Evaluate and address Known Issues and Recommendations from the document linked above and incorporate design refinements as required based on mutual agreement with the County and Design Stewards

- Build test units and test electrical hardware design against performance requirements

- Document and resolve issues raised in testing

- Iterate on above tasks as necessary until design is shown to meet performance requirements

Deliverables:

This sub-component is one aspect of the BMD hardware and will be completed at the same time as the other BMD hardware sub-components in order to deliver an assembled BMD unit. The result of these tasks will be considered to meet deliverable 2.2.1.2 Engineering Validation Testing and Results for BMD Hardware, and shall be submitted upon completion of all tasks described in the following sections:

- 2.2.1.2 Mechanical (housing, stand, privacy screen and ballot box)

- 2.2.1.3 Application Control System Hardware and Peripherals

- ■ 2.2.1.6 Ballot Control System Hardware and Peripherals
- ■ 2.2.1.8 Paper Handler
- ■ 2.2.1.9 Ballot Printer
- ■ 2.2.1.10 Cases and Carts

See Section 2.2.1.2 Mechanical (housing, stand, privacy screen and ballot box) for a description of the deliverable.

2.2.1.7   Ballot Control System Board Support Package and Firmware

Complete:

- ■ Initial Board Support Package and firmware complete

To Be Done:

- ■ Update Board Support Package and firmware
- ■ Update firmware and drivers, as applicable, to meet the final thermal printer paper handler specifications

Specification Documents:

- ■ Location: BMD Software
- ■ Filename:
  - ❑ Software Architecture Specification
  - ❑ BCS Software Design Description
  - ❑ BCS Software Detailed Design
  - ❑ Software Solution Design Document — Section 04 — Ballot Marking Device

Requirements:

- ■ BMD Requirements

Tasks:

- ■ Update firmware, if needed, to support changes to the paper handler or printer
- ■ Demonstrate and test functionality on EVT hardware
- ■ Address issues raised in testing
- ■ Iterate on above tasks as necessary until design is shown to meet performance requirements

Deliverables:

- ■ BCS BSP software image
- ■ Related documentation

Deliverable 2.2.1.7 Ballot Control System Board Support Package Software Image — EVT	
Delivery Timing	Submitted for approval as fully functional BMDs at the end of the EVT stage
Delivery Frequency	Once
Description	The Contractor shall deliver: ■ BCS Board Support Package software image ■ Related documentation

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The Contractor will provide an updated SoM for BCS, which will require updating the BCS Board Support Package.

As the paper handler and/or printer is modified (see Section 2.2.1.8 and 2.2.1.9) it is expected that new Linux drivers will need to be developed for both control flow and error handling. One of the main focuses of the firmware/driver/OS engineers from the BMD Application Layer software team will be to develop said drivers (see Section 2.2.1.4.1a for roles and responsibilities). These engineers will work closely with the paper handler/printer hardware teams (both on the Contractor's and County's side) and the QA lead to review and update the requirements for paper handler/printer, and to develop a series of comprehensive tests against those requirements that will become part of the requirements traceability matrix (see Section 2.1.1). These requirements may involve an update to the interface between ACS and BCS, as the functionality and implementation of the paper handler/printer is developed.

These modified paper handler/printer drivers will be merged into the existing BCS Board Support Package and firmware, then the QA lead and BMD product manager will make sure that tests for this package are comprehensive and that the package achieves a 100% pass rate, pulling in support from QA engineers and firmware/driver/OS engineers to update the Test Cases and implementation, as necessary, throughout the iterative development process. Any needed modifications to the BCS SOM will be documented in the native Altium Designer files (to be documented in the Software Architecture Document/Software Specifications Documentation, and Detailed Software Specifications Documentation, as in 2.2.1.4.2a/b), and will go through the same type of security review and approval process described in Section 2.2.1.5. All code and test development will be managed in a git repository (stored in the PIL, and ready to be open sourced, as appropriate), and ultimately, a full stack image will be created for deployment through the BMG.

2.2.1.8 Paper Handler

Complete:

■ Functional design demonstrated and specified with manufacturing methods suitable for low-volume production

To Be Done:

■ Complete full production engineering for the paper handler

- Refine the paper handler design for higher volume production techniques and processes, including evaluating and documenting potential for cost reduction (e.g., by adjusting the design of the metal parts to be more net shaped, instead of being an assembly of machined components fastened with screws)

- Refine and document design as print mechanism is finalized

Specification Documents:

- Location: BMD Hardware
- File Names:
  - ❑ Vox_ID_Deck_2016-06_28.pdf
  - ❑ 5.4.2.2.1 Designing & Using the BMD
  - ❑ 5.4.2.2.2 Designing & Engineering the External BMD Components
  - ❑ 5.4.2.2.3 Designing & Engineering the Internal BMD Components
  - ❑ 5.4.2.2.4 Designing & Engineering the BMD's Paper Handler
  - ❑ 5.4.2.3 BMD Manufacturing Release Package
  - ❑ 5.4.4 BMD Design Validation Units
  - ❑ Known Issues and Recommendations

Requirements:

- BMD Requirements

Tasks:

- Evaluate and address Known Issues and Recommendations from the document linked above and incorporate design refinements as required based on mutual agreement with the County and Design Stewards

- Build test units and test mechanical design against performance requirements

- Address issues raised in testing

- Iterate on above tasks as necessary until design is shown to meet performance requirements

Deliverables:

This sub-component is one aspect of the BMD hardware and will be completed at the same time as the other BMD hardware sub-components in order to deliver an assembled BMD unit. The result of these tasks will be considered to meet deliverable 2.2.1.2 Engineering Validation Testing and Results for BMD Hardware, and shall be submitted upon completion of all tasks described in the following sections:

- 2.2.1.2 Mechanical (housing, stand, privacy screen and ballot box)

- 2.2.1.3 Application Control System Hardware and Peripherals

- 2.2.1.6 Ballot Control System Hardware and Peripherals

- 2.2.1.8 Paper Handler

■ 2.2.1.9 Ballot Printer

■ 2.2.1.10 Cases and Carts

See Section 2.2.1.2 Mechanical (housing, stand, privacy screen and ballot box) for a description of the deliverable.

2.2.1.9   Ballot Printer

Complete:

■ Reference design demonstrated with modified Fujitsu print mechanism

To Be Done:

■ Custom develop, or commercially source, a production print mechanism to the specifications set forth in the design documentation.

Specification Documents:

■ Location: BMD Hardware

■ File Name:

❑ 5.4.2.2.4 Designing & Engineering the BMD's Paper Handler

Requirements:

■ BMD Requirements

Tasks:

■ Design and manufacture printer to specifications

■ Build test units and test mechanical design against performance requirements

■ Address issues raised in testing

Deliverables:

This sub-component is one aspect of the BMD hardware and will be completed at the same time as the other BMD hardware sub-components in order to deliver an assembled BMD unit. The result of these tasks will be considered to meet deliverable 2.2.1.2 Engineering Validation Testing and Results for BMD Hardware, and shall be submitted upon completion of all tasks described in the following sections:

■ 2.2.1.2 Mechanical (housing, stand, privacy screen and ballot box)

■ 2.2.1.3 Application Control System Hardware and Peripherals

■ 2.2.1.6 Ballot Control System Hardware and Peripherals

■ 2.2.1.8 Paper Handler

■ 2.2.1.9 Ballot Printer

■ 2.2.1.10 Cases and Carts

See Section 2.2.1.2 Mechanical (housing, stand, privacy screen and ballot box) for a description of the deliverable.

2.2.1.10 Cases and Carts

Complete:

- Reference sketch/illustration and high-level requirements

To Be Done:

- Create detailed design, perform functional testing and refine design based on testing
- Collaborate with the County to work with its racking and storage strategy in the Election Operations Center (**"EOC"**) or other designated facility

Specification Documents:

- Location: BMD Hardware
- File Names:
  - ❑ Vox_ID_Deck_2016-06_28.pdf
  - ❑ 5.4.2.2.1 Designing & Using the BMD
  - ❑ 5.4.2.2.2 Designing & Engineering the External BMD Components

Requirements:

- BMD Requirements

Tasks:

- Design case and cart with consideration for storage at County's EOC and transportation to/from Vote Centers
- Build test units of the case and cart and test BMDs against applicable performance requirements
- Address issues raised in testing
- Iterate on above tasks as necessary until design is shown to meet performance requirements

Deliverables:

This sub-component is one aspect of the BMD hardware and will be completed at the same time as the other BMD hardware sub-components in order to deliver an assembled BMD unit. The result of these tasks will be considered to meet deliverable 2.2.1.2 Engineering Validation Testing and Results for BMD Hardware, and shall be submitted upon completion of all tasks described in the following sections:

- 2.2.1.2 Mechanical (housing, stand, privacy screen and ballot box)
- 2.2.1.3 Application Control System Hardware and Peripherals
- 2.2.1.6 Ballot Control System Hardware and Peripherals
- 2.2.1.8 Paper Handler
- 2.2.1.9 Ballot Printer
- 2.2.1.10 Cases and Carts

See Section 2.2.1.2 Mechanical (housing, stand, privacy screen and ballot box) for a description of the deliverable.

2.2.2 Interactive Sample Ballot

The ISB is a web-based solution that delivers the following services:

- Enables voters to view their sample ballot online in an accessible and responsive format, digitally pre-mark vote selections prior to arriving at the Vote Center and generate a QR code (**"Poll Pass"**) that may be used to quickly transfer the pre-marked selections when casting a ballot on the BMDs at Vote Centers

- Enables voters with disabilities to privately and securely access, mark and print a Remote Accessible Vote by Mail (**"RAVBM"**) ballot on their personal devices, which may be returned with their VBM packet

- Enables military and overseas voters to vote and print an electronic Uniformed and Overseas Citizens Absentee Voting Act (**"UOCAVA"**) ballot and a privacy waiver signature form, which may be signed and faxed in

Both the RAVBM ballot and the UOCAVA ballot will be similar to the BMD Ballot in that the voter's selections will be encoded in a QR code as well as printed in human-readable text for auditability purposes. The Poll Pass is not considered a ballot and only contains pre-marked selections in the QR code to streamline the BMD voting experience.

The following diagram in Figure 6 illustrates the context of the ISB used to generate a Poll Pass in the BMD-centric voting path. The initial steps in the diagram are different for ISB voters, but then the paths converge and ISB voters complete the process on the BMD. Similarly, Figure 7 illustrates the context by which voters use and submit an RAVBM or UOCAVA ballot.

Figure 6.   Interactive Sample Ballot Voting Path

Election Mgmt

ECBMS

Contests

Candidates

Ballot Layout Definition File (BLDF)

Ballot Definition File (BDF)

Auxiliary Ballot Definition File (ABDF)

Data Center

Interactive Sample Ballot Server
Content Server

Preprocessor (ISB Data Package)

Precinct to Ballot Map

Content Delivery Network

Generate User Experience

Consumer Device

Interactive Sample Ballot on Browser
HTML5 Web App

Configure Session (address, zip)

Make Selection

Review

Print/Save QR "Poll Pass"

1. Determine Ballot Style

2. Pre-select

3. Generate Poll Pass

4. Check-in with Pollworker

5. Receive Activated Ballot

6. Enter Ballot

7. Scan ISB Poll Pass

8a. Verify Selections (on display)

8b. Verify Selections (on paper)

9. Cast Ballot

ISB Voter

Vote Center

Vote Center Staff

Blank Ballot

Electronic Pollbook

Voter Lookup

Print QR code with ballot style

Activated Ballot with Ballot Page Metadata (BPM)

Ballot Marking Device (BMD)

Ballot Control System (BCS)

Scan Activated Ballot

Print Ballot with QR for Selection

Scan Ballot

Integrated Ballot Box (IBB)

Application Control System (ACS)

Render User Interface

Make Selection

Review

Scan ISB

Marked BMD Ballot - QR and text

BMD Voter

1. Check In With Vote Center Staff to determine ballot style

2. Receive Activated Ballot

3. Enter Ballot

4. Make Selection

5. Verify Selections

6. Cast Ballot

Legend

In VSAP scope

Not in VSAP scope

ISB Voter interaction

Poll worker interaction

BDM Voter interaction

File path

API/Data path

Paper ballot path

Ballot

File / Data Set

Digitally signed

Figure 7. RAVBM and UOCAVA Voting Path
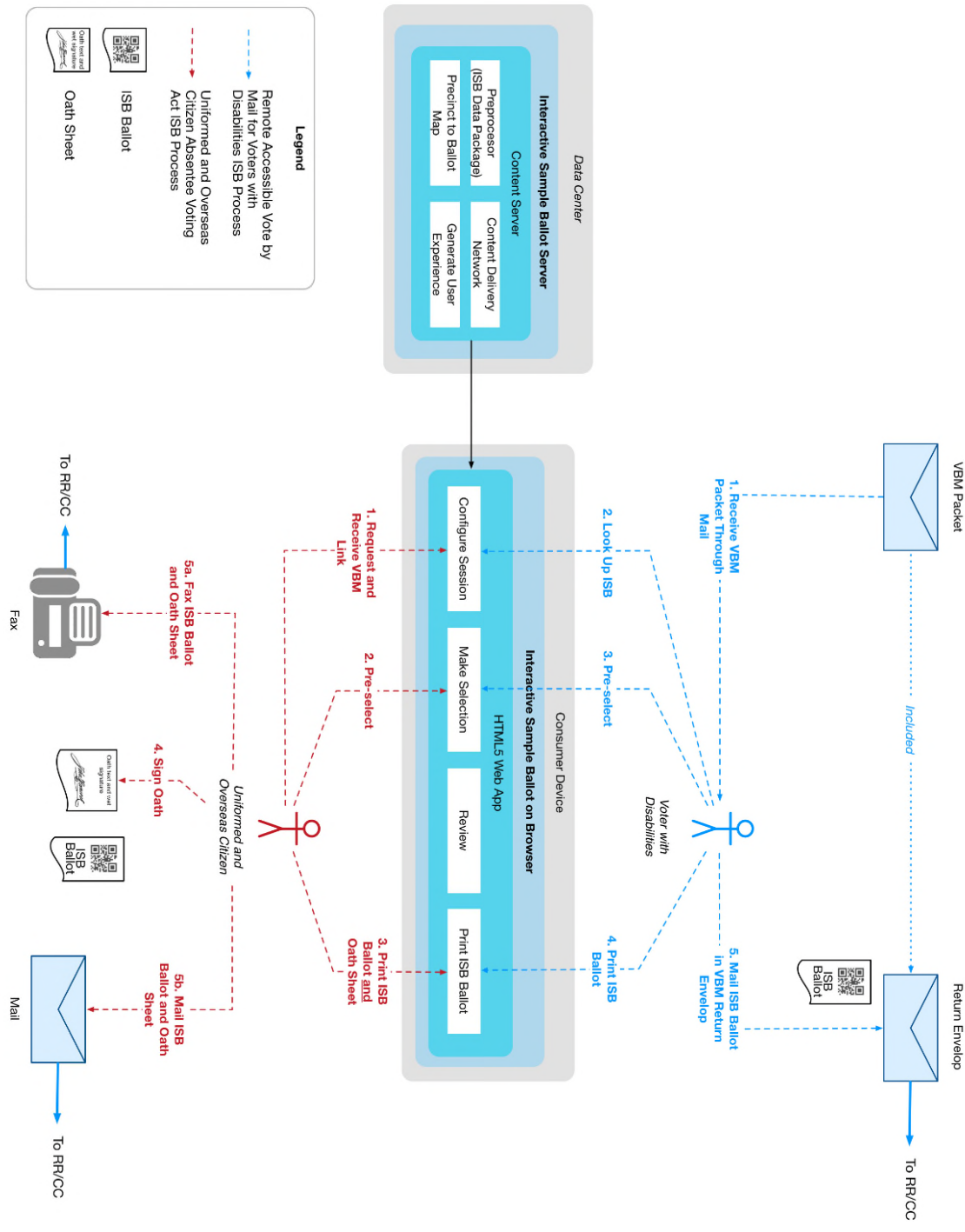
The ISB solution consists of:

- A search interface with Department databases to retrieve the correct ballot style given the user's voter information or address

- A content server, running on commodity hardware. It is configured with two (2) file types generated from the ballot layout solution: a Ballot Definition File and an Auxiliary Ballot Definition File. These files help to present the correct ballot style for the voter, which is generated as a self-contained UX to be executed within an HTML5 browser environment, requiring no server interaction and storing no personally identifiable information

- A responsive web application designed to be fully functional in both a desktop and mobile browser environments, capable of running the self-contained HTML5 application to guide the user through the pre-selection process and generate a Poll Pass, a RAVBM ballot or a UOCAVA ballot

The development of the ISB application and the BMD application layer should be coordinated to maintain a consistent user experience. The ACS will contain functionality to read the QR code on the Poll Pass.

Because of the need to integrate with the BMD as a complete solution at the EVT milestone, the ISB application must be functionally complete at that time. Minor changes and refinements may be introduced in DVT. Notwithstanding anything to the contrary in this document, the ISB must be compliant with the current laws and regulations related to remote accessible vote by mail.

2.2.2.1   ISB Tasks and Deliverables

The purpose of the application development tasks at this stage of the process is to finalize the selection of the production software stack based on previous recommendations and develop the first version of the ISB content server and HTML5 application, ready for integration with the BMD hardware at the EVT stage.

2.2.2.1.1   Develop Software Development Plan and Test Plan

The Software Development Plan and Test Plan drive the specific approach to implement the ISB solution. While it shares the overall approach with the software development for the Application Layer components, there are likely differences since the deployment platform is a content server and client browser environment.

Deliverable 2.2.2a ISB Software Development Plan	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	This deliverable describes the overall approach to confirming the requirements; refining the design; and developing, testing and deploying the solution. The ISB Software Development Plan shall include, at minimum: ■ Requirements confirmation ■ Requirements management ■ Design validation and refinement ■ Release and sprint planning, with delivery cadence ■ Code versioning

Deliverable 2.2.2a ISB Software Development Plan
<table><tr><td></td><td>   - Build management and continuous integration and testing with deployment to production-class hardware (content server) and target desktop and mobile browser environments   - Defect management   </td></tr></table>

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The ISB Software Development Plan will be generated concurrently with the Design and Development Plan of 2.1.1. The solution architect, working in conjunction with the Project Manager and coordinators and the ISB product manager (see below) will help confirm the ISB requirements and will develop the ISB Software Development Plan. The ISB product manager will document the Plan in SharePoint, per Section 1.1.1 Project Information Library. As the ISB consists in part of an HTML5 app and search interface, the Plan will discuss how the developers will tackle accessibility (compliance with WCAG 2.0), security, and cross-platform reliability with an eye towards passing all necessary CVSS and FRD requirements. It will include relevant visualizations in the forms of flow charts, graphs, and Gantt charts to ensure complete understanding of the process and timelines for completion.

The Contractor will have an ISB software team. The list of responsibilities and anticipated role and resource alignment is as follows:

- **Product Manager:**
  - ❑ Understand all business requirements, as documented in the Design and Development Plan (and aid in initial creation of the documentation) as they relate to the ISB.
  - ❑ Be the point person on the Contractor's side for all ISB related communications between the County and the Contractor.
  - ❑ Understand the system architecture of the assets developed during earlier phases, and work with the software architect to plan how to expand/replace that work, as needed, and verify the documentation created by the software architect.
  - ❑ Participate in the iterative process of updating requirements in the ISB Software Plan, as needed.
  - ❑ Attend and possibly lead all ISB-related meetings with the County.
  - ❑ Manage a QA lead and engineering manager to make sure all sprints are cohesive, and the overall process will be conducted to an optimal cadence.
  - ❑ Work with the software architect and Dev Ops to design and construct Build management and continuous integration scripts, in addition to all environments for the HTML5 app, search interface, and content server.
  - ❑ Establish and document code versioning guidelines.
- **Software Architect:**
  - ❑ Understand the system architecture of the assets developed during earlier phases for the search interface, the HTML5 app, and the content server.

❑ Understand all business requirements, as documented in the Design and Development Plan (and aid in initial creation of the documentation), as they relate to the ISB components.

❑ Work with all stakeholders to identify and fill in potential gaps in the existing ISB UI/UX design.

❑ Work with Dev Ops to design and construct Build management, continuous integration scripts, and environments for the search interface, the HTML5 app, and the content server.

❑ Work with the security engineering team to ensure security of all aspects of the ISB.

■ **Security Engineer:**

❑ Understand the full system architecture established by the software architect (see above).

❑ Perform a threat assessment and risk analysis of the architecture to ensure the architecture itself has measures to mitigate all security risks.

❑ Work with the QA team to design tests to verify the implementation has fully implemented those risk mitigation strategies.

■ **UI/UX Design Team** (the list of responsibilities and anticipated role and resource alignment is stated in Section 2.2.1.1 User Experience/User Interface)**:**

❑ Work with all stakeholders to identify and fill in potential gaps in the existing ISB UI/UX design.

❑ Assist with planning the UX/UI, as demanded by the requirements.

■ **UI/UX Engineers:**

❑ As lead by the UI/UX design team, work with the React.js engineers to implement a beautiful and smooth cross-platform front-end to the HTML5 app and search interface.

❑ Develop front-end code to support different languages and a variety of font scaling while maintaining usability of the design.

❑ Work with the compliance manager to implement WCAG 2.0.

■ **QA Lead:**

❑ Design the Test Plan and assist with completing the requirements traceability matrix for all components of the ISB.

❑ Work with the security engineering team to develop tests that verify the security of the ISB software.

❑ Work with the UI/UX team to develop tests that verify the UI/UX requirements.

❑ Design end-to-end functional tests within the overall solution that will include Poll Pass, RAVBM, and UOCAVA ballots.

❑ Work with Dev Ops for continuous integration and load testing.

❑ Participate in sprint planning.

❑ Oversee the QA engineers to implement the Test Plan.

❑ Iteratively work with the development team to ensure 100% passing of the Test Plan.

❏ Attend at least one planning meeting with the County (possibly more, as required) to design the User Acceptance Testing.

❏ Iteratively work with the County (per the Product Manager) to ensure the passing of the User Acceptance Testing.

■ **QA Engineers:**

❏ Implement a System Test within the ISB, as specified in the requirements traceability matrix.

❏ Implement functional tests, per the requirements traceability matrix.

❏ Implement integration tests, per the requirements traceability matrix.

❏ Assist in the implementation of security tests, per the requirements traceability matrix.

❏ In conjunction with Dev Ops, implement a load/stress test.

■ **Engineering Manager:**

❏ Understand the system architecture of all aspects of the Search Interface, the HTML5 App, and the Content Server.

❏ Manage team of software engineers to implement the system architecture.

❏ Plan sprints and manage SCRUMs to implement the architecture in a timely fashion.

❏ Work with the QA team and assign tasks to the engineers to ensure 100% test coverage, and passing, per the requirements traceability matrix.

■ **React.js Developers:**

❏ As led by the Engineering Manager, write unit and functional tests for, and then implement the system architecture of the ISB HTML5 App and the Search Interface.

■ **Java Developers:**

❏ As led by the Engineering Manager, write unit and functional tests for, and then implement the system architecture of the ISB Content Server.

■ **Certification Manager:**

❏ Understand the CVSS and WCAG 2.0.

❏ Work with the Product Manager to make sure requirements are generated in the requirements traceability matrix to ensure passing of the CVSS and WCAG 2.0.

❏ Manage the State-Approved Testing Agency to do periodic assessments to ensure CVSS requirements are on track.

❏ Manage the dedicated Compliance Managers to assist with day-to-day CVSS and WCAG 2.0 requirements fulfillment throughout the Build process.

❏ Upon Build completion, verify full compliance with the CVSS and WCAG 2.0.

■ **Compliance Manager:**

❏ As led by the Certification Manager, assist in the day-to-day Build process to ensure FRD, CVSS and WCAG 2.0 requirements are being met on an ongoing basis.

The purpose of the ISB Software Development Plan is to map out in detail how development of the HTML5 App, Search Interface and Content Server software will progress while

simultaneously explaining how such development will lead to the required outcome. The Plan will include the following sections:

- **Requirements confirmation**
  - ❑ The Plan will link to the relevant sections of the requirements traceability matrix and associated JIRA tasks.

- **Requirements management**
  - ❑ The Plan will discuss the process of updating requirements over time and ensuring that each requirement has appropriate unit and functional tests associated with it.

- **Design validation and refinement**
  - ❑ The Plan will discuss how the software architect will use various software suites to fully document the proposed solution and where to find those native files. All JIRA tasks will have reference to the appropriate documentation associated with the task/requirement (see Sections 2.2.2a/b).

- **Release and sprint planning, with delivery cadence**
  - ❑ The engineering manager and QA lead will layout the planned sprints to fulfill all the requirements of both the HTML5 app and the content server software.

- **Code versioning**
  - ❑ The engineering manager and product manager will relate the sprints to expected internal and external releases of the HTML5 app and content server software, with an explanation of the version choices.

- **Build management and continuous integration and testing with deployment to production-class hardware (content server) and target desktop and mobile browser environments**
  - ❑ The product manager together with the QA lead, software architect and Dev Ops teams will describe the expected implementation of continuous integration (likely through Team City, see Sections 2.2.2b/c below).

- **Defect management and resolution**
  - ❑ The product manager and QA lead will discuss a process for bug reporting and resolution integration into sprint planning (where points will be set aside ahead of time for expected defect resolution needs).

- **Certifications Planning**
  - ❑ The certification manager will discuss proper development practices to ensure passing CVSS and WCAG 2.0 requirements will be as smooth as possible.

Deliverable 2.2.2b ISB Test Plan	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	This deliverable describes the approach to testing the ISB solution under development. The preference is to test as early and often as possible in the life cycle and detect defects when they are relatively easy to fix. The ISB Test Plan shall cover, at minimum:

	■ Unit testing within classes/low level modules of the code ■ System testing within the ISB server and browser-based components ■ Integration testing within the BMD ■ End-to-end functional testing within the overall solution, including loading ballot layout solution configuration files ■ Security testing of all components and integration ■ Load/stress testing at the server level ■ User Experience testing by community stakeholders ■ User Acceptance Testing ■ Security testing

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The ISB Test Plan will be documented in the PIL by the QA lead (see Section 2.2.2a for roles and responsibilities of the ISB software team) in conjunction with the ISB product manager, the software architect, Dev Ops team, UI/UX team, security engineering team, and the certifications manager. It will include sections detailing how the engineering and QA teams will create (and what those tests will be) in the following testing categories:

- Unit testing within classes/low level modules of the code

- System testing within the ISB server and browser-based components

- Integration testing within the BMD (QR code generation and scanning)

- End-to-end functional testing within the overall solution, including loading ballot layout solution configuration files

- Security testing of all components and integration

- Load/stress testing at the server level

- Cross platform User Experience testing by community stakeholders

- User Acceptance Testing

The Plan will explain how these tests help to ensure the ISB complies with WCAG 2.0 and any applicable CVSS requirements (functional, usability, accessibility and privacy, and especially software). The Plan will include specific mention that the ISB will be developed following a TDD philosophy. Whenever possible, unit and functional tests (with references to the Test IDs in the requirements traceability matrix) will be written in advance of development. Development tasks will not be considered complete in a sprint until the unit and functional tests are both cleared by QA as actually testing what is expected and pass such tests.

Deliverable 2.2.2c ISB Test Cases — EVT	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	This deliverable captures all test cases, whether manual or automated. This includes, at minimum:

Deliverable 2.2.2c ISB Test Cases — EVT	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
	■ Test cases with traceability to requirements and acceptance criteria ■ Test suites and dependency chains ■ All test data required to execute the test cases ■ Test scripts for all automated tests

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

Per the "Integrity" and "Transparency" General Voting System Principles, it is imperative that testing and security are in the forefront of all development team members' minds. As such, nearly every member of the ISB team and support teams are involved in the design, implementation, and validation of all Test Cases specified in the requirements traceability matrix, as well as unit and functional tests, with special attention being paid to Accessibility, Security, and Reliability, as discussed in Section 2.2.2b. As mentioned in Section 2.2.2b, the team will follow the TDD general philosophy. Under TDD, whenever possible, unit and functional tests are written prior to any development. The product manager and Dev Ops (using Team City) will implement a continuous integration Build plan, so all commits will automatically result in each Test Case running to ensure the ongoing passing of all tests. Test Cases will include testing of the generated Poll Pass QR code on the BMD QR code scanner, which will require some inter-team planning with the QA leads on the BMD Application Layer software and BMD hardware teams; similarly for testing of the RAVBM and UOCAVA ballots. The QA lead (and QA engineering team) will create a comprehensive set of test data which will be stored in the test section of the git repository, along with the Test Cases. The test suite will have an option to prompt for confirmation that any tests which cannot be automated were actually run and entered into the Test Report (see Section 2.2.2g).

2.2.2.1.2   Validate and Refine the Design

Requirements: The Contractor shall develop an understanding of the ISB requirements and how they have driven the design and requirement documents that are the core input of this Project. The County does not intend to revisit the requirements or to hold requirement validation sessions.

Similarly, Phase 3 (System Design and Engineering) of the VSAP Project also established a preliminary software design of the ISB solution, captured in distinct sections of the SSDD. To further expand upon the requirements gathered in Phase 3 and to add RAVBM and UOCAVA support within the ISB requirements, a Software Requirements Specification was completed for the ISB.

The software design is captured in the following documents (see the related deliverables for the document description).

Specification Documents:

   ■ Location: Interactive Sample Ballot

- ◾ File Names:
  - ❑ SSDD — Section 02 — System Connectivity
  - ❑ SSDD — Section 03 — System Security
  - ❑ SSDD — Section 07 — Interactive Sample Ballot (for reference for design refinement, utilize the Software Requirements Specification for final requirements)
  - ❑ Section 4 Interactive Sample Ballot, detailed design documents:
    - ─ Interactive Sample Ballot (ISB) Design Deck
    - ─ ISB Sketch File
    - ─ Printed Poll Pass Native File
  - ❑ ISB RAVBM Ballot Sample
  - ❑ ISB UOCAVA Ballot Sample
  - ❑ Known Issues and Recommendations

Requirements:

- ◾ ISB Requirements
- ◾ Interactive Sample Ballot Software Requirements Specification

The goal for this task is to identify the potential gaps in the design, based on review of the requirements. The design includes, but is not limited to:

- ◾ UX, including detailed screen layout and flow, and compatibility with desktop screen readers and mobile accessibility modes (note: this compatibility is not reflected in the demo website)
- ◾ The final technology stack, including operating system, frameworks and toolkits for the content server
- ◾ The development of a self-contained HTML5 browser application

After identification, all gaps and outstanding open items must be addressed in a functionally complete design. Since the UX of the ISB is a critical success factor, the design must be user-tested prior to starting significant development effort. The County expects design artifacts to be generated such as detailed software architecture diagrams, event models and data structures. The County's expectation is that these artifacts will be generated as maintainable models through widely available tooling.

It is the intention for the design of the ISB to be complete at the end of the EVT stage. While subsequent stages may introduce changes, the goal of software development in EVT is a functionally and technically complete solution.

Deliverable 2.2.2d ISB Software Architecture Document — EVT	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	The Contractor shall create the Software Architecture Document based on the Software Requirements Specification and SSDD documentation that contain several sections that capture detailed software design specifications for the ISB, including:

Deliverable 2.2.2d ISB Software Architecture Document — EVT	
	■ System Connectivity that describes how the major components of the overall voting solution exchange data.
	■ System Security that describes the data integrity, confidentiality and availability of the voting system.
	■ ISB that describes the flow, user experience, components, design considerations, security considerations, interfaces and the software stack. It is a key section of the overall design for the ISB.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

Before the Software Architect creates the formal documentation of the ISB Software Architecture, a series of kickoff meetings will be held with the County and key members of the Contractor's ISB software development team (see Section 2.2.2a for roles and responsibilities), notably the software architect, the ISB product manager and key members of the UI/UX team, with the goal of understanding how historical research has led to the current design, and to identify any potential gaps. Once such gaps are identified, the UI/UX team will develop possible solutions in conjunction with the software architect, the ISB product manager, and the security engineerings team. These potential solutions will be reviewed with the County and put through a series of user and engineering tests to ensure ease of use, security, localizability, accessibility, and developability of any potential solution. It is anticipated that all UI/UX of the ISB serach interface and HTML5 app will undergo iterative revisions through the Build process, and that documentation and code will be updated in accordance with these needed revisions.

Once a baseline design is fully agreed upon with the County (and throughout the iterative revision process), the software architect will be responsible for preparing a document that references both elements of Section 2.2.2e Final Software Design Document, and 2.1.1 (requirements traceability matrix), and builds upon the existing documentation. Separate sections will be developed for the search interface, the HTML5 app, and the content server, laying out general operating principles, and then delving into the specific implementation of each component with reference to the requirements. Special attention will be paid to the system connectivity (how the components of the ISB interact, as well as how they interact with the entire VSAP Project, with special consideration given to the election configuration files and the enterprise signing authority), system security (focusing on data integrity, confidentiality and how that relates to availability of the voting system), accessibility implementation, and implementation of the localization requirements, with a guide on how to manage additional languages (including RTL languages).

The Architect will consult with supporting members of the ISB software development team and supporting teams, to ensure that the documented architecture meets all requirements and conforms with the "Transparency" General Voting System Principleto allow for as much publication as possible, while simultaneously respecting the "Integrity" General Voting System Principleto ensure a completely secure product. The proposed architecture envisions very little interaction between the outside world and the content server, so disclosing this architecture seems less of a threat, though special attention needs to be paid to protecting the details of the architecture of the private County network, as it relates here to the connection between the

ballot layout solution, enterprise signing authority, and the pre-processor in any published documentation.

Deliverable 2.2.2e Final ISB Software Design Document — EVT	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	The Contractor shall create the final ISB Software Design Document based on the pre-existing ISB Software Requirement Specification and Phase 3 System Design and Engineering design artifacts. Due to requirement changes since the Phase 3 design documentation was created, this deliverable is meant to create design documentation that reflects all changes included in the ISB Software Requirements Specification, and any gap analysis the selected Contractor performs for this phase of the project. While the County emphasizes the development of highly maintainable and transparent code over the creation of documentation, some core artifacts are critical such as: ■ Detailed software architecture diagrams ■ Interaction between the server and browser environment ■ Data structures ■ Interface and configuration specifications These artifacts must be in portable, standards-based electronic formats, rather than documents or presentations.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

As in Section 2.2.2d, varying members of the ISB software team (see Section 2.2.2a for a breakdown of roles and responsibilities) will generate specifications in the following (or comparable) documentation/specification software suites:

■ Microsoft Visio for flow diagrams

■ StarUML for component specification and connections

■ Balsamiq for working UI/UX wireframes

■ Sketch or In Design for Design Assets (see Section 2.2.1.1 above)

■ White papers written in LaTex for security specifications, if needed

■ SharePoint for a discussion of how the pre-processor converts the BDF and ABDF into ballot styles, as well as a discussion of how the precinct to ballot style lookup table is generated

■ Vagrant, Puppet, and Docker for full stack environment specification (including OS, frameworks, and toolkits), production, deployment setup, and images

These materials will be referred to in the Final ISB Software Design Document, and stored in the PIL, per Section 1.1.

2.2.2.1.3 *Establish the Development Environment*

The development environment includes all processes and toolchains to develop and test the ISB software, including the software repository, continuous integration and test automation. It is the County's intention to transition the ongoing development to the County or a separate entity following the Project completion. Changes and optimizations of the environment must be reflected in this deliverable.

Deliverable 2.2.2f ISB Software and Deployment — EVT	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	This deliverable covers all software code, configuration and runtime components to be deployed to the server and browser environment. These include: ■ Software repository for each release ■ Operating system baseline and configuration ■ ISB system configuration ■ Documentation for all software code

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The software development environment will be designed and maintained by the engineering manager in consultation with the software architect, QA lead, and Dev Ops (see Section 2.2.2a ISB Software Development Plan for a breakdown of roles and responsibilities). Per Section 2.2.2e Final ISB Software Design Document, Dev Ops will prepare Vagrant and Puppet configurations, in addition to Docker images with fully specified third-party stack (OS baseline and configuration), and preloaded OS images (fully functional virtual machine images) that will allow for easy ramp of engineers to develop on the search interfaces, HTML5 app, and content manager server. The Vagrant and Puppet configurations, including the Docker images will be stored in the PIL per Section 1.1, with full ownership and governance transferred to the County. Changes and optimizations will be tested locally, and then permanently maintained in the PIL. The Vagrant and Puppet files will be stored in a special git repository for configuring development and staging environments, with a full version history available.

These repositories will refer to the main git repositories for content server and HTML5 app (including the search interface), with configuration files requiring developers to insert their usernames and RSA keys in their local dev environments after cloning the configuration environments. This will allow automated setup, including cloning of the main repositories, while maintaining the identity of each individual developer. All git repositories will ultimately be duplicated in the PIL before turning the Library over to the County at project completion. Npm will be used as a Build system for the HTML5 app (React.js) and Maven and Gradle for the content server (Java), whose configurations will be stored in the main repositories for automatic dependency resolution. Any common configurations of third-party software (e.g., developer IDE, Continuous Integration Server, etc.) will also be maintained in the Vagrant/Puppet configurations, and ultimately the PIL. Non-election specific runtime configuration of the content server is expected to be stored as .yml files and maintained on the local servers (generally, these files cannot be maintained in the code repositories, or published because they will contain sensitive local information that could be used in an attack).

Deliverable 2.2.2g ISB Software Tooling	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	This deliverable includes all tooling required to develop and maintain the ISB, including: ■ Configuration of the IDE ■ Software repository ■ Continuous Build and integration ■ Test automation ■ Deployment management

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The engineering team (see the staffing plan in Section 2.2.2a) will use JetBrains software suite (IntelliJ, and WebStorm, so all engineers can use the same IDE) to allow for maximum ease of, and efficiency in, development while also enabling the greatest amount of automation in documentation, integration, and preparation for FRD and CVSS requirements testing. The IDE will be the main development access point of the engineers, and therefore, must integrate VCS access, continuous Build and integration, and local testing. Team City will be employed for CI and test automation, which will automatically tag Releases, and will produce images for use in deployment to an internal QA environment. Automated deployment scripts will be created by Dev Ops for use in deploying new Builds of HTML5 js files to the CDN and content server components to the internal QA content server, and then upon confirmation from the County of final approval, all code and Build plan will be turned over to the California Secretary of State for certification and generation of the signed production image Build and associated hash, which will be deployed to the production server.

2.2.2.1.4 *Develop and Test the Solution*

Development and testing should be approached as integrated activities, with testing commencing as early as possible in an iterative development process. The County expects the majority of testing to be automated and repeatable, based on a managed and comprehensive set of Test Cases that trace back to the requirements.

End-to-end testing is conducted at the project level, not at the component level. Testing must include scanning of the Poll Pass QR code on the BMD QR code scanner.

Deliverable 2.2.2h ISB Test Report — EVT	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	This deliverable covers a comprehensive test report that captures the test outcomes at all levels and is a key input to the completeness of this stage. The County envisions that this deliverable is largely automatically generated as part of the test execution. It includes: ■ Test methodology and test tools ■ Outcomes of all test levels and test cases

| | ■ Indication of the test coverage |
| | ■ Test trends and "hot spots" of the software that are more prone to defects than others |

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

As in Section 2.2.2b, the team will follow the TDD general philosophy. Under TDD, unit and functional tests are, whenever possible, written prior to any development. The product manager and Dev Ops will implement a continuous integration Build plan in Team City, so all commits will automatically result in each Test Case running to ensure ongoing test passing. In the Test Report, the QA lead (see the staffing plan in Section 2.2.2a ISB Software Development Plan) will document the full test methodology and tools used for testing and continuous integration, as well as where the "hot spots" of the software were seen to be more prone to defects than others. The QA lead will ensure that the outcome of running the full test suites is an automatically generated report indicating the outcome of all test levels and Test Cases. The test scripts will yield an indication of test coverage (in this context meaning code coverage) for the search interface, HTML5 app, and content server. A separate, manually generated, testing report will need to be created for final testing of the generated Poll Pass QR code on the actual BMD device, as well as testing of the RAVBM, and UOCAVA ballots.

2.2.3 BMD Manager

The BMG is the mechanism to deploy the Application Layer onto the BMD hardware and configure BMDs for elections. The BMG is a critical tool for carrying out certain administrative functions on BMDs at a large scale without requiring direct physical access. Activities such as securing units for elections and maintaining and repairing BMD hardware will require physical contact with individual BMD units.

BMDs will always be configured with all necessary election data prior to transportation to Vote Centers, where they operate in stand-alone fashion, not connected to any networks. Between elections, while housed at the EOC, BMDs are placed in a rack that allows the units to be accessed through a hardwired, isolated and secure network by the BMG for administration of one-to-many devices simultaneously.

Administrative tasks include:

- Running diagnostics of the hardware, Application Layer software and peripherals

- Loading system images, including the operating system for the ACS and BCS

- Loading BMD configurations with election-specific data and settings

- Obtain the serial number and hardware cryptographic key for BMDs used in an election

- Exporting aggregated BMD logs

The following diagram in Figure 8 illustrates the context of the BMG in the VSAP architecture.

Figure 8.   BMD Manager in the Context of the VSAP Architecture
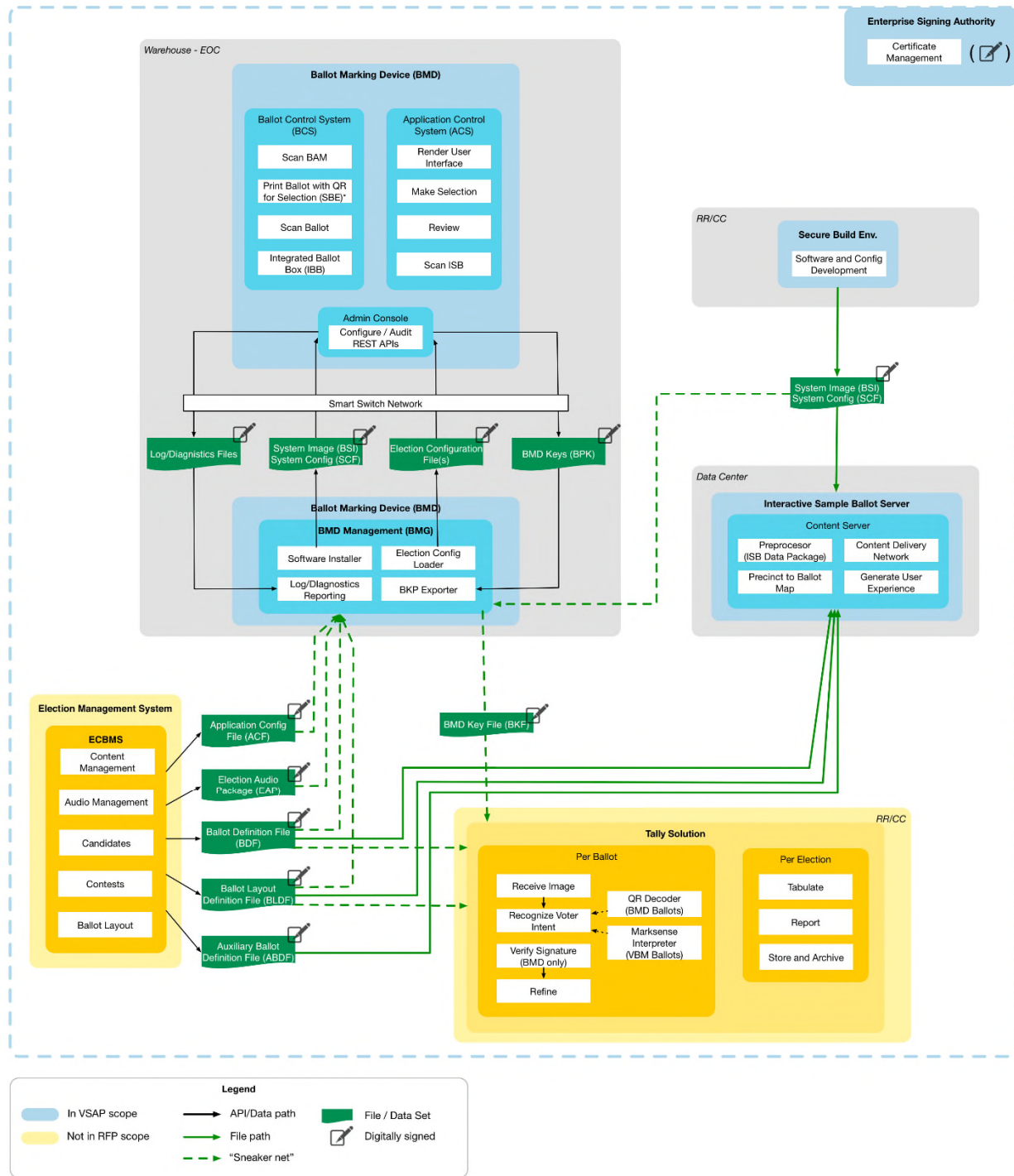
The core Application Layer code, including the entire ACS and BCS software stack, is provided from the secure Build environment as a BMD System Image and System Configuration File. There is no need to update these prior to each election. The change rate of BCS software is anticipated to be low, and the ACS may see changes to improve efficiency or add functional capability.

The Application Layer is configurable with election data provided by the following interface files that are created by the ballot layout solution with a defined interface specification:

- Application Configuration File
- Ballot Definition File
- Ballot Layout Definition File
- Election Audio Package

For security reasons, there is no network connection between the BMG beyond the racked BMDs. Therefore, the configuration file (including the system images) are loaded within the BMG through a manual and audited process. Note that the Ballot Definition File and Auxiliary Ballot Definition File also configure the ISB, which must maintain a consistent user experience with the BMD, while the Ballot Definition File also configures Tally, which tabulates the ballots.

The BMG only operates from the controlled EOC environment. It would not be used at any Vote Center.

The BMG software must be able to interoperate with multiple versions of the BMD Application Layer.

Because of the need to configure the BMDs as a complete solution at EVT stage, the BMG solution must be functionally complete at the EVT stage as well. Minor changes and refinements may be introduced in DVT and PVT.

2.2.3.1 BMD Manager Tasks and Deliverables

The purpose of the application development tasks at this stage of the process is to select the production software stack based on previous recommendations and develop the first version of the BMG software, ready for integration with the BMD hardware at the EVT stage.

2.2.3.1.1 Develop Software Development Plan and Test Plan

The Software Development Plan and Test Plan drive the specific approach to implement the BMG solution. While it shares the overall approach with the software development for the BMD Application Layer and ISB components, there are some key differences since the BMG is a technical solution to be used by administrators, not the public.

Deliverable 2.2.3a BMG Software Development Plan	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	This deliverable describes the overall approach to confirming the requirements, refining the design and developing, testing and deploying the solution. The BMG Software Development Plan shall include, at minimum: ■ Requirements confirmation ■ Requirements management ■ Design validation and refinement ■ Release and sprint planning, with delivery cadence ■ Code versioning

| | ■ Build management and continuous integration with deployment environment |
| | ■ Defect management |

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The BMG is described as a desktop application (see SSDD 5.2 page 15), but the Contractor proposes creating a two-tiered software architecture, with the BMG server allowing not only API access to the BMDs, but also to a BMG front-end web application. It will include a self-contained identity management, and role provisioning service (possibly LDAP). The identity service could be internal, so that the BMD does not need to access the internet. Alternatively, it could use an existing identity management located offsite, but still behind the County firewall, though this will require greater coordination, and security management. The latter solution provides the benefit that the entire system can be managed from RR/CC, if also connected to the BMD server through the County's network/firewall. The Contractor plans to discuss these issues with the County in a series of kickoff meetings relating to BMG development, during which the existing BMG requirements will be discussed, and new requirements generated, as needed.

The BMG Software Development Plan will be generated concurrently with the Design and Development Plan of 2.1.1. The Software Architect, working in conjunction with the Project Manager, coordinators, and the BMG product manager will help confirm the BMD requirements and develop the BMG Software Development Plan. The BMG product manager will document the Plan in SharePoint. It will include relevant visualizations in the form of flow charts, graphs, and Gantt charts to ensure complete understanding of the process, and timelines for completion. As mentioned above, a wide variety of domain experts will aid the product manager to design the Plan.

The Contractor will have a BMG development team. The list of responsibilities and anticipated role and resource alignment is as follows:

■ **Product Manager/Process Engineer:**

❑ Help to develop and understand all business requirements, as documented in the Design and Development Plan (and aid in initial creation of the documentation), as they relate to all BMG components (software, networking, electrical, security, external interfaces, and identity management, etc.).

❑ Be the point person on the Contractor's side for all BMG-related communications between the County and Contractor.

❑ Work with the software architect to plan how to expand/replace that work, as needed, and verify the documentation created by the software architect.

❑ Participate in the iterative process of updating requirements in the BMG Software Development Plan, as needed.

❑ Attend, and possibly lead, all BMG related meetings with the County.

❑ Work with the County to understand all users and uses of the EOC facility and help develop processes around those users' needs that are tightly integrated into the revised architecture of the EOC facility.

❑ Consult with the manager of the physical buildout of the re-envisioned EOC and help to perform line accounting.

❑ Manage a QA lead and engineering manager, to make sure all sprints are cohesive, and the overall process will be conducted to an optimal cadence.

❑ Work with the software architect, Dev Ops, and networking engineers to design and construct Build management and continuous integration scripts, in addition to all environments for the front-end and back-end software components of the BMG.

❑ Establish and document code versioning guidelines.

◼ **Software Architect:**

❑ Understand all business requirements, as documented in the Design and Development Plan (and aid in initial creation of the documentation), as they relate to the BMG software, and networking components.

❑ Work with Dev Ops and network engineers to design and construct Build management, continuous integration scripts, and environments for the BMG software and networking components.

❑ Work with the security engineering team to ensure security of all aspects of the BMG software components.

◼ **Security Engineering Team:**

❑ Understand the full software system architecture established by the software architect (see above).

❑ As part of the End-to-End Security Plan of Section 3.5, perform a threat assessment and risk analysis of the software, network, electrical, and building architecture to ensure they are designed with measures to mitigate all reasonable security risks (for example DHCP assigned IPs, based on pre-approved MAC address lists so that no foreign networking device can attach to the internal network).

❑ Help to develop a physical security plan for the EOC facility, including access control looped into the identity and role management system of the BMG, as well as real-time video monitoring, and logging of all physical locations within the facility.

◼ **UI/UX Team:**

❑ Design the front-end interface for BMG search feature to locate a specific subgroup of BMDs, per various criteria (see SSDD 5.1).

❑ Design the front-end interface for BMG management of BMD elections.

❑ Design the front-end interface for BMG post-election log management.

❑ Dedicated UI/UX engineers who will:

❑ Work with the React.js developers to implement these easy to use and beautiful designs of the front-end interface to the BMG.

◼ **QA Lead:**

❑ Design a Test Plan for:

— The proposed BMG API endpoints.

— Demonstrating the ability to physically locate and power-on BMDs under a variety of search criteria, with the aid of the network engineers

— Dealing with BMDs with differing versions of BMD Application Layer software.

— Deploying upgrades to the BMD Application Layer software.

— Obtaining the BDF and EAP and confirming validity.

— Deploying the BDF and EAP to selected BMDs.

— The front-end interface to the BMG.

❑ Understand any new requirements from the kickoff and ongoing meetings, and update the requirements traceability matrix, as needed.

❑ Participate in sprint planning.

❑ Oversee the QA engineers to implement the Test Plan.

❑ Iteratively work with the development teams to ensure 100% passing of the Test Plan.

❑ Attend at least one planning meeting with the County (possibly more, as required) to design User Acceptance Testing.

❑ Iteratively work with the County (per the product manager) to ensure the passing of User Acceptance Testing.

■ **QA Engineers:**

❑ Implement a system test for the front-end, back-end, the BMG, and connections to ballot layout solution and Tally, as specified in the requirements traceability matrix.

❑ Implement functional tests, per the requirements traceability matrix.

❑ Implement integration tests, per the requirements traceability matrix.

❑ Assist in the implementation of security tests, per the requirements.

■ **Network Engineers:**

❑ Develop the smart switching solution for physically locating BMDs, based on their IP addresses.

❑ Work with the electricians to develop an efficient power-on over ethernet solution for selectively accessing groups of BMDs.

❑ Develop an interface (possibly through Unix scripting) for automated control of the smart switching, and power-on over ethernet solutions.

■ **Electricians:**

❑ Be provided by the County.

❑ Work with the building architects and network engineers to develop the on demand local BMD power solution.

■ **Building Architects:**

❑ Be provided by the County.

❑ Ensure the design of the interior rows and racking solutions satisfy building safety, and fire codes.

❑ Work with the product manager/process engineer to design the interior to allow the operations team easy access to all BMDs, and other facility needs (packaging of extra printed materials for elections, etc.).

❑ Work with an HVAC team to consider and mitigate the climate control, and other environmental factors relevant to storing and maintaining the BMDs.

❑ Work with the Contractor and the County to build out the re-envisioned EOC.

■ **Software Engineering Manager:**

❑ Understand the system architecture and all aspects of the interface developed by the network engineers to access the smart switch, and power-on over ethernet networks.

❑ Understand the system architecture of the BMD software, and election deployment system including the enterprise signing authority.

❑ Understand the system architecture of the connections to the ballot layout solution, and Tally.

❑ Understand the system architecture of the BMG back-end server, and front-end interface.

❑ Manage team of software engineers to implement these system architectures.

❑ Plan sprints and manage Scrums to implement the architecture in a timely fashion.

❑ Work with the QA team and assign tasks to the engineers, ensuring 100% test coverage, and passing, per the requirements traceability matrix.

■ **Java Developers:**

❑ Write unit and functional tests for, and then implement the back-end server component of the BMG.

❑ Write unit and functional tests for, and then implement the bi-directional API with the BMDs.

■ **React.js Developers:**

❑ As led by the software engineering manager, write unit and functional tests for, and then implement the front-end interface component of the BMG.

■ **Certification Manager:**

❑ Understand the CVSS.

❑ Work with the product manager to make sure requirements are generated in the requirements traceability matrix to guarantee passing of the CVSS.

❑ Manage the State-Approved Testing Agency to do periodic assessments to ensure CVSS requirements are on track.

❑ Manage the dedicated compliance managers to assist with day-to-day CVSS requirements fulfillment throughout the Build process.

❑ Upon Build completion, verify full compliance with the CVSS.

■ **Compliance Manager:**

❑ As led by the certification manager, assist in the day-to-day Build process to ensure FRD and CVSS requirements are being met on an ongoing basis.

The purpose of the BMG Software Development Plan is to map out, in detail, how development of the BMG software, network, and secure facility will progress, while simultaneously explaining how such development will lead to the required outcome. The Plan will include the following sections:

- **Requirements confirmation**
  - ❑ The Plan will link to the relevant sections of the requirements traceability matrix, and associated JIRA tasks.

- **Requirements management**
  - ❑ The Plan will discuss the process of updating requirements over time and ensuring that each requirement has appropriate unit and functional tests associated with it.

- **Design validation and refinement**
  - ❑ The Plan will discuss how the software architect will use various software suites to fully document the proposed solution, and where to find those native files. All JIRA tasks will have reference to the appropriate documentation associated with the task/requirement (see Sections 2.2.3d/e below).

- **Release and sprint planning, with delivery cadence**
  - ❑ The engineering manager and QA lead will layout the planned sprints to fulfill all the requirements of BMG front-end, and server software.

- **Network/Power/Facilities/Security project management**
  - ❑ The product manager will coordinate the development of a buildout schedule with the assistance of the building architects, electricians, network engineers, and facilities security team.

- **Code versioning**
  - ❑ The engineering manager and product manager will relate the sprints to expected internal and external Releases of the BMG front-end, and server software, with an explanation of the version choices.

- **Build management and continuous integration with deployment environment**
  - ❑ The product manager, together with the QA l software architect, and Dev Ops teams will describe the expected implementation of continuous integration (likely through Team City, see Section 2.2.3f below).

- **Defect management and resolution**
  - ❑ The product manager and QA lead will discuss a process for bug reporting and resolution integration into sprint planning (where points will be set aside ahead of time, for any expected defect resolution needs).

- **Certifications Planning**
  - ❑ The certification manager will discuss proper development practices to ensure CVSS requirements are met.

Deliverable 2.2.3b BMG Test Plan	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once

Description	This deliverable describes the approach to testing the solution under development. The preference is to test as early and often as possible in the life cycle and detect defects when they are relatively easy to fix. The BMG Test Plan shall cover, at minimum: ■ Unit testing within classes/low level modules of the code ■ System testing within the Application Configuration File components ■ Integration testing within the BMD ■ End-to-end functional testing within the overall solution, including loading ballot layout solution configuration files ■ Load/stress testing (of volumes of transactions, users and locations) at the server level ■ Security testing of all components and integration, including all BMD interfaces accessed by the BMG ■ User Acceptance Testing

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The BMG Test Plan will be documented in the PIL by the QA lead (see Section 2.2.3a for roles and responsibilities of the BMG software team) in conjunction with the BMG product manager, the software architect, Dev Ops team, security engineering team, network engineering and facility securities teams and the certifications manager. It will include sections detailing how the engineering and QA teams will create (and what those tests will be) in the following testing categories:

- Unit testing within classes/low level modules of the code

- System testing within the Application Configuration File components

- Integration testing with the BMD

- End-to-end functional testing within the overall solution, including loading ballot layout solution configuration files

- Load/stress testing (of volumes of transactions, users and locations) at the server level

- User Experience testing by stakeholders and users of the BMG front-end

- Security testing of all components and integration, including all BMD interfaces accessed by the BMG

- User Acceptance Testing

The plan will explain how these tests help to ensure the BMD Application Layer Software complies with the FRD and CVSS requirements (functional, usability, TDP, accessibility and privacy, and especially software). The Plan will include specific mention that the BMD Application Layer will be developed following a TDD philosophy. Whenever possible, unit and functional tests (with references to the test IDs in the requirements traceability matrix) will be written in advance of development. Development tasks will not be considered complete in a sprint until the unit and functional tests are both cleared by QA as actually testing what is expected and pass such tests. Separate sub Test Plans will be developed for the front-end,

back-end (and its interface to the ballot layout solution through the Ballot Definition File, Auxiliary Ballot Definition File, and Election Audio Package, etc.), network and related search features, access control, identity management, BMD ACS and BCS image updates, including security tests, BMD election updates, including security tests, load/stress testing at the server level, and BMD maintenance, as specified in the requirements traceability matrix.

Deliverable 2.2.3c BMG Test Cases — EVT	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	This deliverable captures all test cases, whether manual or automated. This includes, at minimum: ■ Test cases with traceability to requirements and acceptance criteria ■ Test suites and dependency chains ■ All test data required to execute the test cases ■ Test scripts for all automated tests

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

Per the "Integrity" General Voting System Principle, it is imperative that testing and security are in the forefront of all development team members' minds. As such, nearly every member of the BMG Team and supporting teams are involved in the design, implementation, and validation of all Test Cases specified in the requirements traceability matrix, as well as unit and functional tests, with special attention being paid to security, and reliability, as discussed in Section 2.2.3b. As mentioned in Section 2.2.3b, the team will follow the TDD general philosophy. Under TDD, whenever possible, unit and functional tests are written prior to any development, with pre-created sample ballot layout solution election configuration files. The product manager and Dev Ops will implement a continuous integration Build plan in Team City, so all commits will automatically result in each Test Case running to ensure the ongoing test passing. Beyond the front-end and back-end software (and testing the back-end integration with the BMD, the ballot layout solution, and Tally), Test Cases will include testing of the network and related search features, facility access control, facility security protocols, automated climate management, BMD, and supporting election materials shipping process drills.

2.2.3.1.2   *Validate and Refine the Design*

Requirements: The requirements for the BMG have been defined in Phase 3 (System Design and Engineering) of the VSAP Project. As part of this task, the Contractor shall develop an understanding of the requirements and how they have driven the design documents that are the core input into this Project. The County does not intend to revisit the requirements established in Phase 3 or to hold requirement validation sessions of those requirements.

Similarly, Phase 3 (System Design and Engineering) of the VSAP Project also established the software design of the solution, captured in distinct sections of the SSDD. They are captured in the following documents (see the related deliverables for the document description).

Specification Documents:

- Location: BMD Manager (BMG)
- File Names:
    - ❑ SSDD — Section 02 — System Connectivity
    - ❑ SSDD — Section 03 — System Security
    - ❑ SSDD — Section 05 — BMD Manager

Requirements:

- BMG Requirements

The goal for this task is to identify the potential gaps in the design, based on review of the requirements. The design includes, but is not limited to:

- The administrative processes, including detailed sequencing
- The final technology stack, including operating system, frameworks and toolkits
- The security model, including file signing and key verification
- The ACS APIs to support communication between BMG and BMD

After identification, all gaps and outstanding open items must be addressed in a functionally complete design. The County expects design artifacts to be generated such as detailed software architecture diagrams, event models and data structures. The County's expectation is that these artifacts will be generated as maintainable models through widely available tooling.

It is the intention for the design of the BMG to be complete at the end of the EVT stage. While subsequent stages may introduce changes, the goal of software development in EVT is a functionally and technically complete solution.

Deliverable 2.2.3d BMG Software Architecture Document — EVT	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	The Contractor shall create the Software Architecture Document based on the SSDD that contains several sections that capture detailed software design specifications for the BMG, these include: ■ System Connectivity that describes how the major components of the overall voting solution exchange data ■ System Security that describes the data integrity, confidentiality and availability of the voting system. The BMD, and the software that controls it, is the heart of the voting system and touches on all aspects of system security ■ BMG that describes the device management, administration, internal components, security considerations and interfaces of the BMG

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

Before the software architect creates the revised formal documentation of the BMG software architecture, the Contractor's BMG software development team (see Section 2.2.3a for roles and responsibilities) will thoroughly review Sections 2, 3, and 5 of the SSDD and as well as the existing BMG requirements.

The requirements review will involve a series of kickoffs with the County and key members of the BMG software development team, notably the software architect, the BMG product manager, key members of the UI/UX team, the security team, and the network engineers with the goal of further understanding how the BMG software and the EOC facility will function together to maintain, secure, and prepare the BMDs for elections (see Section 2.2.3a for how the Contractor envisions these pieces fitting together). Administrative processes will be fully defined, including detailed sequencing. The security model will be well understood between the BMG and BMD, including how software upgrades get deployed to the BMDs, how elections get deployed to the BMDs, and how logs are retrieved from the BMDs and stored, specifying the role of symmetric (or potentially asymmetric) key pairs in file signing (potentially through hash chaining of logs), and how to verify the keys and make them available to Tally, including the role of the enterprise signing authority. New requirements may arise (for example identity and role management, facility security protocols, and UI/UX requirements for the BMG front-end) through initial planning sessions. These potential requirements will be reviewed by the County, and the UI/UX for the front-end of the BMG will be validated through User Acceptance Testing to ensure ease of use by the BMD administration team. The development process will undergo iterative

revisions through the build process, and that documentation and code will be updated in accordance with these needed revisions.

Once a baseline design is fully agreed upon with the County (and throughout the iterative revision process), the software architect will be responsible for preparing a document that references both elements of 2.2.3e Final Software Design Document, and 2.1.1 (requirements traceability matrix), which builds upon Section 5 of the SSDD, as a foundation. Separate sections will be developed for, at a minimum, the following:

- Network Implementation
- Identity and Role Management
- Facility Security
- Administrative Processes
- Bi-directional API between ACS (BMD) and BMG
- BMD software upgrades
- The Interface with the ballot layout solution
- BMD Election Deployment
- BMD Log Gathering
- BPK Export
- The Security Model
- The Interface with Tally

The Architect will consult with supporting members of the BMG software development team and supporting teams, including Dev Ops, security engineering team, QA leads, network, UI/UX team, and certifications to ensure that the documented architecture meets all requirements and conforms with the "Transparency" General Voting System Principle to allow for as much publication as possible, while simultaneously respecting the "Integrity" General Voting System Principleto ensure a completely secure product.

Deliverable 2.2.3e Final BMG Software Design Document — EVT	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	The Contractor shall create the final BMG Software Design Document based on the preexisting design specifications that contain several documents that capture detailed software design specifications for the BMG. While the County emphasizes the development of highly maintainable and transparent code over the creation of documentation, some core artifacts are critical such as: ■ Detailed software architecture diagrams ■ Interaction between the server and browser environment ■ Data structures ■ Interface and configuration specifications These artifacts must be in portable, standards-based electronic formats, rather than documents or presentations

__The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.__

As in Section 2.2.3d, members of the BMG software team (see Section 2.2.3a for a breakdown of roles and responsibilities) will generate specifications in the following (or comparable) documentation/specification software suites:

- Microsoft Visio for flow diagrams

- StarUML for component specification and connections

- MySQL Workbench (for DB specifications and DB → ORM visualization)

- Balsamiq for working UI/UX wireframes

- Sketch or In Design for Design Assets related to the front-end of the BMG

- White papers written in LaTex for security and verification specifications (e.g. the role of the Enterprise Signing Authority or log hash-chaining for log file verification)

- SharePoint for a discussion and documentation of the bi-directional API between BMG and ACS

- Lucidchart for network diagramming

- AutoCAD for electrical diagramming and interior shelving and space management

- Vagrant, Puppet, and Docker for full stack environment specification (including OS, frameworks, and toolkits), production, deployment setup, and images

These materials will be referred to in the Final BMG Software Design Document, and stored in the PIL, per Section 1.1.

2.2.3.1.3 Establish the Development Environment

The development environment includes all processes and toolchains to develop and test the BMG software, including the software repository, continuous integration and test automation. It is the County's intention to transition the ongoing development to the County or a separate entity following the Project completion. Changes and optimizations of the environment must be reflected in this deliverable.

Deliverable 2.2.3f BMG Software and Deployment — EVT	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	This deliverable covers all software code, configuration and runtime components to be deployed to the server and browser environment. These include: ■ Software repository for each Release ■ Operating system baseline and configuration ■ BMG system configuration

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The software development environment will be designed and maintained by the BMG engineering manager in consultation with the software architect, QA lead, and Dev Ops (see Section 2.2.3a for a breakdown of roles and responsibilities). Per Section 2.2.3e Final BMG Software Design Document, Dev Ops will prepare Vagrant and Puppet configurations, in addition to Docker images with fully specified third-party stack (OS baseline and configuration), and preloaded OS images (fully functional virtual machine images) that will allow for easy ramp of engineers to develop on the BMG front-end and back-end. Network engineers will develop access scripts to the smart network for the locating of and power-on over ethernet for the BMDs, that will be included in the Vagrant and Puppet repositories and fully functional virtual machine images. These Vagrant and Puppet configurations, including the Docker images will be stored in the PIL per Section 1.1, with full ownership and governance transferred to the County. Changes and optimizations will be tested locally, and permanently maintained in the PIL. The Vagrant and Puppet files will be stored in a special git repository for configuring development and staging environments, with a full version history available.

These repositories will refer to the main git repositories for front-end and back-end of the BMG software, with configuration files requiring developers to insert their usernames and RSA keys in their local dev environments after cloning the configuration environments. This will allow automated setup, including cloning of the main repositories, while maintaining the identity of each individual developer. All git repositories will ultimately be duplicated in the PIL before turning the Library over to the County at project completion. It is anticipated that a Build system, such as npm, in the BMG front-end and Maven, or Gradle for the back-end, which will be used and stored in the main repositories for automatic dependency resolution. Any common configurations of third-party software (e.g., developer IDE, Continuous Integration Server, etc.) will also be maintained in the Vagrant/Puppet configurations, and ultimately the PIL. Non-election specific runtime configuration of the content server is expected to be stored as .yml files and maintained on the local servers (generally, these files cannot be maintained in the code repositories, or published because they will contain sensitive local information that could be used in an attack).

The code created to implement the various APIs will employ a Gradle plugin (e.g. Swagger https://swagger.io/) that will auto-generate API endpoint documentation as part of the Build process. This documentation will include high-level descriptions of the purpose and function of each endpoint, as well as detailed specifications.

Deliverable 2.2.3g BMG Software Tooling	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	This deliverable includes all tooling required to develop and maintain the BMG software, including: ■ Configuration of the IDE ■ Software repository ■ Continuous Build and integration ■ Test automation ■ Deployment management

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The engineering team (see the staffing plan in 2.2.3a) will use JetBrains software suite (IntelliJ, and WebStorm, so all engineers can use the same IDE) to allow for maximum ease of, and efficiency in development, while also enabling the greatest amount of automation in documentation, testing, integration, and preparation for CVSS requirements testing. The IDE will be the main development access point of the engineers, and therefore, must integrate VCS access, continuous Build and integration, and local testing. Team City will be employed for CI and test automation, which will automatically tag Releases, and will call on automated deployment scripts will be created by Dev Ops for use in deploying new Builds of React.js files to the internal QA BMG front-end server, and BMG back-end images to the internal QA back-end server. Upon confirmation from the County of final approval, all code and Build plans will be turned over to the California Secretary of State for certification and generation of the signed production image Build and associated hash, which will be deployed to the production servers.

2.2.3.1.4   Develop and Test the Solution

Development and test should be approached as integrated activities, with testing commencing as early as possible in the development process. The County expects the majority of testing to be automated and repeatable, based on a managed and comprehensive set of Test Cases that trace back to the requirements.

End-to-end testing is conducted at the project level, not at the component level. However, prior to end-to-end testing of the BMG, testing must include deployment of the BMD software and configuration with a sample BMD.

Deliverable 2.2.3h BMG Test Report — EVT	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	This deliverable covers a comprehensive test report that captures the test outcomes at all levels and is a key input to the completeness of this project stage. The County envisions that this deliverable is largely automatically generated as part of the test execution. It includes: ■ Test methodology and test tools ■ Outcomes of all test levels and test cases ■ Indication of the test coverage ■ Test trends and "hot spots" of the software that are more prone to defects than others

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

As in Section 2.2.3b, the team will follow the TDD general philosophy. Under TDD, whenever possible, unit and functional tests are written prior to any development. A continuous integration plan will be implemented by the engineering manager and Dev Ops in Team City, so all commits will automatically result in each Test Case running to ensure the ongoing passing of all tests. In the Test Report, the QA Lead (see the staffing plan in Section 2.2.3a) will document the

full test methodology and tools used for testing and continuous intergration, as well as where the expected "hot spots" of the software were seen to be more prone to defects than others. The QA lead will ensure that the outcome of running the full test suites is an automatically generated report, indicating the outcome of all test levels and Test Cases. The test scripts will yield an indication of test coverage (in this context meaning code coverage) for the front-end and back-end of the BMG, network, and associated search features. A separate, manually generated, testing report will be created for final testing of facility security, and control.

2.3 Design Validation Testing

During DVT, the Contractor will verify that the off-tool design passes all functional tests. The Contractor will qualify the hard tool for every part in the assembly, gain confidence in all corrective actions for any issue that causes unacceptable quality of parts and assemblies and build sufficient sub-assemblies and assemblies to test for qualification (meets regulatory requirements) and reliability (meets use requirements). Furthermore, the Contractor will refine the BMD, ISB and BMG software applications based on BMD hardware changes, BMD Application Layer changes or user experience enhancements since EVT.

Note: Regulatory testing and certification is described in Section 2.4 Regulatory Certification of the VSAP Solution.

While the BMD hardware tasks are separated at the sub-component level in this Section 2.3, the Contractor will submit fully functional BMD units at the end of the DVT stage to demonstrate that they meet all the requirements and all sub-components are integrated.

2.3.1   Ballot Marking Device

2.3.1.1   User Experience / User Interface

Tasks:

- Review results of DVT testing
- Support User Interface change requests, if needed

Deliverable 2.3.1.1 Updated BMD User Experience / User Interface Design Assets — DVT	
Delivery Timing	Submitted for approval as fully functional BMDs at the end of the DVT stage
Delivery Frequency	Once
Description	The Contractor shall deliver: ■ Updated design assets based on DVT, including: ■ Native design files (i.e., those developed in Sketch) ■ UI flows map ■ System sound files ■ User Interface animations ■ User Interface icons

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The UI/UX team described in Section 2.2.1.1 will be available to make any required changes to the native Design Assets. Ongoing UI testing will have occurred during the EVT, and the UI/UX team will have had ongoing status update meetings with the County's design lead. Additional end-user testing will be conducted with voters on the fully functional EVT BMD, and the results will be reviewed by the Contractor's UI/UX team, in conjunction with the County. Any necessary UI changes will be expressed in updates to the Balsamiq wireframes (to be included in the PIL) and Sketch design files, and those changes will be implemented by the engineering teams (please refer to Section 2.3.1.4 below).

2.3.1.2   Mechanical (housing, stand, privacy screen and ballot box)

Tasks:

- Design and build mass production tooling
- Design assembly processes, work instructions and quality assurance suitable for low-volume production
- Qualify hard tooling for each component
- Build and test DVT units against performance requirements
- Test for regulatory certifications (Underwriter's Laboratory, FCC, etc.)
- Address issues raised in testing

Deliverable 2.3.1.2 Design Validation Testing and Results for BMD Hardware	
Delivery Timing	Submitted for approval as fully functional BMDs, built from parts from production processes (and tooling), at the end of the DVT stage, including completion of tasks described in the following Sections: ■ 2.3.1.2 Mechanical (housing, stand, privacy screen and ballot box) ■ 2.3.1.3 Application Control System Hardware and Peripherals ■ 2.3.1.6 Ballot Control System Hardware and Peripherals ■ 2.3.1.8 Paper Handler ■ 2.3.1.9 Ballot Printer ■ 2.3.1.10 Cases and Carts
Delivery Frequency	Once

Description	The Contractor shall deliver:
	■ Tooling drawings for approval prior to beginning tool construction
	■ Final tooling drawings upon tooling completion
	■ First article inspection reports
	■ Documentation tracking tooling and assembly issues to resolution
	■ DVT test units (including case and cart)
	■ Test reports from validation tests
	■ Regulatory certifications
	■ Documentation of issues raised in test and design changes made to address them
	■ Updated "Design & Engineering Specification" documentation, as needed
	■ Updated manufacturing package:
	  ❑ 3D CAD of parts and assemblies
	  ❑ Engineering drawings of parts and assemblies
	  ❑ Mechanical Bill of Materials

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

As mentioned in Section 2.2.1.2, the ME and EEs will work with the engineering leads to develop tooling drawings for design approval. These drawings will be qualified by the manufacturing specialist and presented to the County for approval and stored in the PIL. DVT (high fidelity prototype) units will be produced through temporary tooling and put through the rigorous Test Plan developed by the QA lead in conjunction with the certification manager for certification testing. The Solution will be delivered to the State-Approved Testing Agency laboratory. The BMD hardware product manager will prepare First Article Inspection Reports and document them in the PIL. All hardware specification documentation will be updated in the PIL, and an updated manufacturing package including 3D CAD of parts and assemblies, engineering drawings of parts and assemblies, and a mechanical Bill of Materials will be delivered to the County.

2.3.1.3   Application Control System Hardware and Peripherals

Tasks:

- Develop printed circuit board assembly manufacturing process
- Develop in circuit test fixture and protocols
- Develop electronics subassembly and test protocols
- Build and test DVT units against performance requirements
- Test for regulatory certifications (Underwriters Laboratory, FCC, etc.)
- Address issues raised in testing

Deliverables:

This sub-component is one aspect of the BMD hardware and will be completed at the same time as the other BMD hardware sub-components in order to deliver an assembled BMD unit. The result of these tasks will be considered to meet deliverable 2.3.1.2 Design Validation Testing and Results for BMD Hardware, and shall be submitted upon completion of all tasks described in the following sections:

- 2.3.1.2 Mechanical (housing, stand, privacy screen and ballot box)
- 2.3.1.3 Application Control System Hardware and Peripherals
- 2.3.1.6 Ballot Control System Hardware and Peripherals
- 2.3.1.8 Paper Handler
- 2.3.1.9 Ballot Printer
- 2.3.1.10 Cases and Carts

See Section 2.3.1.2 Mechanical (housing, stand, privacy screen and ballot box) for a description of the deliverable.

2.3.1.4   BMD Application Layer

The Application Layer for the BMD will be functionally complete at the end of the EVT stage. There should be no functional gaps between the requirements, design and developed code.

From a software perspective, there should be no difference in scaling from a small number of EVT deployments to a large number of DVT deployments. However, it is possible that, as the BMD hardware completes the DVT stage, changes will be made within the BMD hardware design that affect the software. In addition, there may be refinements to the BMD user experience based on further testing.

Any BMD changes or user experience requirements must go through an accelerated software development life cycle process for implementation. The process is expected to leverage all previously established development approach, Test Plans and tooling.

2.3.1.4.1 BMD Application Layer Tasks and Deliverables

The purpose of the application development tasks at this stage of the process is to refine the Application Layer based on BMD hardware changes or user experience refinements and deploy the Application Layer to the BMD hardware at the DVT stage.

2.3.1.4.1.1 Capture Changes and Refine the Design

The design for the Application Layer has been defined in the EVT stage and captured in the BMD Application Layer Software Architecture Document and Software Specifications.

The goal for this task is to capture any changes to the design and refine the deliverables from the EVT stage, to be brought forward to the DVT stage.

2.3.1.4.1.2 Develop and Test the Refined Solution

The goal for this task is to develop the code needed to implement the refined design and retest the solution. Additional Test Cases likely will be required to be developed by the Contractor.

Similar to the EVT, end-to-end testing is conducted at the project level, not at the component level, but testing should include deployment to the changed BMD hardware.

Deliverable 2.3.1.4 BMD Application Layer — DVT Update Package	
Delivery Timing	Submitted for approval as fully functional BMDs at the end of the DVT stage
Delivery Frequency	Once
Description	The Contractor shall update the following deliverables created during the EVT as needed: ■ Deliverable 2.2.1.4.1.1c: BMD Application Layer Test Cases — EVT ■ Deliverable 2.2.1.4.1.2a: BMD Application Layer Software Architecture Document — EVT ■ Deliverable 2.2.1.4.1.2b: BMD Application Layer Software Specifications — EVT ■ Deliverable 2.2.1.4.1.3a: BMD Application Layer Software and Deployment — EVT ■ Deliverable 2.2.1.4.1.4: BMD Application Layer Test Report — EVT (An update to this item is mandatory, even if no changes occurred in any of the above deliverables, to ensure full regression testing.)

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The BMD Application Layer software team described in Section 2.2.1.4.1a will be available to provide updates, as needed, to the software stack powering the ACS, BCS, and the BMDs' connections to the BMG. As in Section 2.3.1.1, any needed and documented changes to the UI/UX will be implemented by this team, with updates stored in git repositories, and new Releases tagged. The Contractor does not expect many fundamental changes to the system architecture, but in the event there are, the software architect will update the documentation from Section 2.2.1.3.1.2a, and the native software specifications of Section 2.2.1.3.1.2b, with appropriate version control notes describing what has changed, and the updated documents are stored in the PIL. Should any requirements change, updates will be made to the requirements traceability matrix, and appropriate changes will be implemented in the BMD Application Layer Test Cases of Section 2.2.1.4.1.1c, and pushed to their appropriate git repositories. Such changes will not be considered complete until reviewed by the QA lead, fully implemented by the QA engineers and/or software developers, and demonstrated with 100% test coverage, and 100% test passing. A new BMD Application Layer Test Report will then be generated and stored in the PIL (this will occur even if no changes were needed to the BMD Application Layer Software), designated as the DVT BMD Application Layer Test Report. Lastly, any revisions necessary to the deployment process will be documented as in Section 2.2.1.4.1.3a, and a DVT Update Package will be deployed through the updated deployment process.

2.3.1.5 Application Control System Board Support Package and Firmware

Tasks:

- Modify Board Support Package, if necessary
- Demonstrate and test functionality on DVT hardware
- Address issues raised in testing

Deliverable 2.3.1.5 Application Control System Board Support Package Software Image — DVT	
Delivery Timing	Submitted for approval as fully functional BMDs at the end of the DVT stage
Delivery Frequency	Once
Description	The Contractor shall deliver: ■ ACS Board Support Package software image updated for DVT ■ Associated documentation

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The Contractor does not anticipate that changes will be needed to the ACS Board Support Package after the conclusion of EVT; however, the BMD software development team specified in Section 2.2.1.4.1a (including the firmware/driver/OS engineer, as discussed in Section 2.2.1.5 above) will be available throughout DVT, in the event that the ACS Board is modified after EVT, or additional functionality is required. Just as in Section 2.2.1.5, any proposed updates to the

ACS Board Support Package and firmware will go through the appropriate security review and approvals process, and after approval, will be documented in native formats in the PIL, then developed with code pushed to the appropriate git repository. Ultimately, a new DVT image will be created and deployed to the BMDs through the custom bootloader.

2.3.1.6   Ballot Control System (BCS) Hardware and Peripherals

Tasks:

- Develop printed circuit board assembly manufacturing process
- Develop in circuit test fixture and protocols
- Develop electronics subassembly and test protocols
- Build and test DVT units against performance requirements
- Test for regulatory certifications (Underwriters Laboratory, FCC, etc.)
- Address issues raised in testing

Deliverables:

This sub-component is one aspect of the BMD hardware and will be completed at the same time as the other BMD hardware sub-components in order to deliver an assembled BMD unit. The result of these tasks will be considered to meet Deliverable 2.3.1.2 Design Validation Testing and Results for BMD Hardware, and shall be submitted upon completion of all tasks described in the following sections:

- 2.3.1.2 Mechanical (housing, stand, privacy screen and ballot box)
- 2.3.1.3 Application Control System Hardware and Peripherals
- 2.3.1.6 Ballot Control System Hardware and Peripherals
- 2.3.1.8 Paper Handler
- 2.3.1.9 Ballot Printer
- 2.3.1.10 Cases and Carts

See Section 2.3.1.2 Mechanical (housing, stand, privacy screen and ballot box) for a description of the deliverable.

2.3.1.7   Ballot Control System Board Support Package and Firmware

Tasks:

- Update firmware, if needed, to support changes to the paper handler or printer
- Demonstrate and test functionality on DVT hardware
- Address issues raised in testing

Deliverable 2.3.1.7 Ballot Control System Board Support Package Software Image — DVT	
Delivery Timing	Submitted for approval as fully functional BMDs at the end of the DVT stage
Delivery Frequency	Once

Deliverable 2.3.1.7 Ballot Control System Board Support Package Software Image — DVT	
Description	The Contractor shall deliver: ■ BCS Board Support Package software image updated for DVT ■ Related documentation

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The Contractor does not anticipate that changes will be needed to the BCS Board Support Package after the conclusion of EVT; however, the BMD software development team specified in Section 2.2.1.4.1a (including the firmware/driver/OS engineer, as discussed in Section 2.2.1.7 above) will be available throughout DVT, in the event that the paper handler/printer, or the BCS Board is modified after EVT, or additional functionality is required. Just as in Section 2.2.1.7, any proposed updates to the BCS Board Support Package and firmware will go through the appropriate security review and approvals process, and after approval, will be documented in native formats in the PIL, then developed with code pushed to the appropriate git repository. Modifications to the interface between the ACS and BCS to allow additional or changed error reporting and/or access to changed features of the paper handler/printer will be documented in the ACS-BCS interface specification, then the protocol developers will be looped in to implement said changes, and the Android or Linux Application developers will create updates to the UI to support the changed functionality, as required, all through the standard process with the appropriate updates to documentation. Ultimately, a new DVT image will be created and deployed to the BMDs through the custom bootloader.

2.3.1.8 Paper Handler

Tasks:

■ Design and build mass production tooling, if needed

■ Qualify hard tooling for each component

■ Build and test DVT units against performance requirements

■ Test for regulatory certifications (Underwriters Laboratory, FCC, etc.)

■ Address issues raised in testing

Deliverables:

This sub-component is one aspect of the BMD hardware and will be completed at the same time as the other BMD hardware sub-components in order to deliver an assembled BMD unit. The result of these tasks will be considered to meet Deliverable 2.3.1.2 Design Validation Testing and Results for BMD Hardware, and shall be submitted upon completion of all tasks described in the following sections:

■ 2.3.1.2 Mechanical (housing, stand, privacy screen and ballot box)

■ 2.3.1.3 Application Control System Hardware and Peripherals

■ 2.3.1.6 Ballot Control System Hardware and Peripherals

■ 2.3.1.8 Paper Handler

■ 2.3.1.9 Ballot Printer

■ 2.3.1.10 Cases and Carts

See Section 2.3.1.2 Mechanical (housing, stand, privacy screen and ballot box) for a description of the deliverable.

2.3.1.9   Ballot Printer

Tasks:

■ Build units for DVT testing

Deliverables:

This sub-component is one aspect of the BMD hardware and will be completed at the same time as the other BMD hardware sub-components in order to deliver an assembled BMD unit. The result of these tasks will be considered to meet Deliverable 2.3.1.2 Design Validation Testing and Results for BMD Hardware, and shall be submitted upon completion of all tasks described in the following sections:

■ 2.3.1.2 Mechanical (housing, stand, privacy screen and ballot box)

■ 2.3.1.3 Application Control System Hardware and Peripherals

■ 2.3.1.6 Ballot Control System Hardware and Peripherals

■ 2.3.1.8 Paper Handler

■ 2.3.1.9 Ballot Printer

■ 2.3.1.10 Cases and Carts

See Section 2.3.1.2 Mechanical (housing, stand, privacy screen and ballot box) for a description of the deliverable.

2.3.1.10 Cases and Carts

Tasks:

■ Build cases and carts for use in DVT testing

Deliverables:

This sub-component is one aspect of the BMD hardware and will be completed at the same time as the other BMD hardware sub-components in order to deliver an assembled BMD unit. The result of these tasks will be considered to meet Deliverable 2.3.1.2 Design Validation Testing and Results for BMD Hardware, and shall be submitted upon completion of all tasks described in the following sections:

■ 2.3.1.2 Mechanical (housing, stand, privacy screen and ballot box)

■ 2.3.1.3 Application Control System Hardware and Peripherals

■ 2.3.1.6 Ballot Control System Hardware and Peripherals

■ 2.3.1.8 Paper Handler

■ 2.3.1.9 Ballot Printer

■ 2.3.1.10 Cases and Carts

See Section 2.3.1.2 Mechanical (housing, stand, privacy screen and ballot box) for a description of the deliverable.

2.3.1.11 Hardware Tooling

Tasks:

■ Produce final hard tooling for each sub-component

Deliverable 2.3.1.11 Hardware Tooling — DVT	
Delivery Timing	Submitted for ownership by the County at the end of the DVT stage
Delivery Frequency	Once
Description	The Contractor shall finalize the hard tooling for each sub-component such that the BMD passes all required tests and certifications.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

At the end of the DVT stage the manufacturing specialist, along with the mechanical engineering lead, will deliver a final hard tooling package, which will include the tooling plastics and metals for the following:

■ Mechanical (housing, stand, privacy screen and ballot box)

■ Application Control System Hardware and Peripherals

■ Ballot Control System Hardware and Peripherals

■ Paper Handler

■ Ballot Printer

■ Cases and Carts

These tasks will be performed as described in the product development process stated in Section 2.2.1.2, and cleared with the certification manager and QA team, and verified by a State-Approved Testing Agency.

2.3.2   Interactive Sample Ballot

The ISB software will be functionally complete at the end of the EVT stage. There should be no functional gaps between the requirements, design and developed code. However, it is possible that, as the BMD Application Layer completes the DVT stage, changes will be made that affect the ISB software. In addition, there may be refinements to the ISB user experience based on further testing.

Any ISB changes or user experience requirements must go through an accelerated software development life cycle process for implementation. The process is expected to leverage all previously established development approach, Test Plans and tooling.

2.3.2.1   ISB Tasks and Deliverables

The purpose of the application development tasks at this stage of the process is to refine the ISB based on Application Layer changes or user experience refinements and deploy the ISB to the server and client devices at the DVT stage.

2.3.2.1.1   *Capture Changes and Refine the Design*

The design for the ISB has been defined in the EVT stage and captured in the ISB Software Architecture Document and Software Specifications.

The goal for this task is to capture any changes to the design and refine the deliverables from the EVT stage, to be brought forward to the DVT stage.

2.3.2.1.2   *Develop and Test the Refined Solution*

The goal for this task is to develop the code needed to implement the refined design and retest the solution. Additional Test Cases are likely required.

Similar to the EVT, end-to-end testing is conducted at the project level, not at the component level, but testing should include deployment to ISB server and mobile test devices.

Deliverable 2.3.2 ISB — DVT Update Package	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	The Contractor shall update the following deliverables created during the EVT as needed: ■ Deliverable 2.2.2c: ISB Test Cases ■ Deliverable 2.2.2d: ISB Software Architecture Document ■ Deliverable 2.2.2e: ISB Software Specifications ■ Deliverable 2.2.2f: ISB Software and Deployment ■ Deliverable 2.2.2h: ISB Test Report (An update to this item is mandatory, even if no changes occurred in any of the above deliverables, to ensure full regression testing.)

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

While it is not anticipated that updates will be needed, the ISB software team described in Section 2.2.2a will be available to provide any necessary updates to all components of the ISB. As in Section 2.3.1.1, any needed and documented changes to the UI/UX of the search interface, or the HTML5 app will be implemented by the ISB React.js engineers, with updates stored in git repositories, and new Releases tagged. The Contractor does not expect many fundamental changes to the system architecture of the pre-processors, or how the pre-processed content is pushed to the CDN, but in the event that there are any, the software architect will update the documentation from Section 2.2.2d, and the native software specifications of Section 2.2.2e, with appropriate version control notes describing what has changed, and the updated documents are stored in the PIL. Should any requirements change, updates will be made to the requirements traceability matrix, and appropriate changes will be implemented in the ISB Test Cases of Section 2.2.2c, and pushed to their appropriate git

repositories. Such changes will not be considered complete until reviewed by the QA lead, fully implemented by the QA engineers and/or software developers, and demonstrated with 100% test coverage, and 100% test passing. A new ISB Test Report will then be generated and stored in the PIL (this will occur even if no changes were needed to the ISB software), designated as the DVT ISB Test Report. Ultimately, any revisions necessary to the deployment process will be documented as in Section 2.2.2f, and a DVT Update Package will be deployed through the updated deployment process.

2.3.3   BMD Manager

The BMD Manager (BMG) software will be functionally complete at the end of the EVT stage; there should be no functional gaps between the requirements, design and developed code. However, it is possible that, as the BMD Application Layer completes the DVT stage, changes will be made that affect the BMG software. In addition, there may be refinements to the BMG user experience based on further testing.

Any BMG changes or user experience requirements must go through an accelerated software development life cycle process for implementation. The process is expected to leverage all previously established development approaches, Test Plans and tooling.

2.3.3.1   BMD Manager Tasks and Deliverables

The purpose of the application development tasks at this stage of the process is to refine the BMG based on BMD hardware, Application Layer, or BMG user experience changes, and make the BMG ready for integration with the BMD hardware at the DVT stage.

2.3.3.1.1   Capture Changes and Refine the Design

The design for the BMG has been defined in the EVT stage and captured in the ISB Software Architecture Document and Software Specifications.

The goal for this task is to capture any changes to the design and refine the deliverables from the EVT stage, to be brought forward to the DVT stage.

2.3.3.1.2   Develop and Test the Refined Solution

The goal for this task is to develop the code needed to implement the refined design and retest the solution. Additional Test Cases are likely required.

Similar to the EVT, end-to-end testing is conducted at the project level, not at the component level, but testing should include deployment to BMG server and BMD hardware.

Deliverable 2.3.3 BMD Manager	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	The Contractor shall update the following deliverables created during the EVT as needed: ■ Deliverable 2.2.3c: BMG Test Cases ■ Deliverable 2.2.3d: BMG Software Architecture Document ■ Deliverable 2.2.3e: BMG Software Specifications ■ Deliverable 2.2.3f: BMG Software and Deployment

	■ Deliverable 2.2.3h: BMG Test Report (An update to this item is mandatory, even if no changes occurred in any of the above deliverables, to ensure full regression testing.)

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The BMG software team described in Section 2.2.3a will be available to provide updates, as needed, to the software stack powering the BMG. As in Section 2.3.1.1, any needed and documented changes to the UI/UX will be implemented by this team, with updates stored in git repositories, and new Releases tagged. The Contractor does not expect many fundamental changes to the system architecture, but in the event that there are any, the software architect will update the documentation from Section 2.2.3d, and the native software specifications of Section 2.2.3e, with appropriate version control notes describing what has changed, and the updated documents are stored in the PIL. Should any requirements change, updates will be made to the requirements traceability matrix, and appropriate changes will be implemented in the BMG Test Cases of Section 2.2.3c and pushed to their appropriate git repositories. Such changes will not be considered complete until reviewed by the QA lead, fully implemented by the QA engineers and/or software developers, and demonstrated with 100% test coverage, and 100% test passing. A new BMG Test Report will then be generated and stored in the PIL (this will occur even if no changes were needed to the BMG software), designated as the DVT BMG Test Report. Lastly, any revisions necessary to the deployment process will be documented, as in Section 2.2.3f, and a DVT Update Package will be deployed through the updated deployment process.

2.4 Regulatory Certification of the VSAP Solution

During Regulatory Certification of the VSAP Solution, the Contractor in collaboration with the County will use BMD units assembled from tooled DVT parts, BMD software, BMG and ISB to obtain all necessary regulatory certifications, including California Secretary of State certification.

2.4.1 Conduct a Certifications Analysis

The Contractor shall conduct an analysis to identify the types of regulatory certifications that will be required prior to deploying the VSAP Solution for use by the public. Certification by the California Secretary of State is a known requirement and is expected to be included as part of the analysis. The analysis must consider other regulatory/certification bodies, such as the FCC, Underwriters Laboratory and any other bodies that may require certification, approval, or proof of compliance. The analysis must clearly identify the certifications/approvals that are mandatory prior to VSAP Solution deployment, and those that are optional.

Deliverable 2.4.1 Certifications Analysis	
Delivery Timing	Submitted for approval no less than 30 calendar days prior to EVT completion
Delivery Frequency	Once
Description	The Contractor shall produce a Certifications Analysis as described in this section.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The Contractor will perform a certification analysis to determine if any additional certifications, other than California certification testing, will be required. This analysis will consider requirements such as, FCC, UL, Restriction of Hazardous Substances Directive (RoHS), Federal Information Processing Standard (FIPS 140-2) and other like certifications. In addition to mandatory requirements, the Contractor will also look for certifications that may improve the overall solution, such as WCAG. The Certification Analysis will classify the certifications as mandatory or optional and will be provided to the County for approval no less than 30 calendar days before EVT completion.

2.4.2 Obtain California Secretary of State Certification of the VSAP Solution

The Contractor shall conduct the process to obtain California Secretary of State certification for all VSAP Solution components as an integrated end-to-end system. This will entail modifying the VSAP Solution as needed during the certification process, including changes to the hardware, firmware, software or third-party software necessary and sufficient to certify the BMD, BMG and ISB components, which are the Contractor In-Scope Components of this Project. The ballot layout solution and Tally components of the VSAP Solution are being developed and modified outside the scope of this Project, but as part of the certification services Statement of Work, the Contractor shall coordinate with the County to identify and direct any changes to those components necessary to achieve integration and certification of the overall VSAP Solution.

Any modifications to the system components must remain aligned with VSAP General Voting System Principles, vision and requirements and approved by the County.

Up until the solution is certified by the California Secretary of State, the Contractor will be required to make changes to the BMD, BMG and ISB components, and to coordinate and direct changes to the ballot layout solution and Tally components, to ensure overall Solution integration and to comply with all applicable regulations and the Elections Code.

The County shall cover the initial $360,000 of cost towards certification of the VSAP Solution by the California Secretary of State. The County shall deposit these funds directly into the escrow account. Any certification fees beyond this amount that are attributable to Contractor In-Scope Components (and not attributable to out-of-scope system components) shall be paid by the Contractor to the California Secretary of State until the entire VSAP Solution is certified.

The Contractor must understand and follow the certification process and requirements as defined by the California Secretary of State. The process and requirements are described at the websites listed below and as prescribed by the Elections Code and regulations:

- Voting System Certification Regulations (Contractor must comply with these requirements): http://www.sos.ca.gov/administration/regulations/current-regulations/elections/voting-system-certification-regulations/

- Voting Technology (Contractor must comply with these requirements): http://www.sos.ca.gov/elections/voting-systems/

In addition, the U.S. Election Assistance Commission has established voluntary national guidelines that could impact the future of voting systems in the State of California. The Contractor should be aware of these guidelines and consider them for the long-term roadmap of the VSAP Solution. The information provided at the website below is for the Contractor's awareness:

- Voluntary Voting System Guidelines (for Contractor's reference): https://www.eac.gov/voting-equipment/voluntary-voting-system-guidelines/

Deliverable 2.4.2a California Secretary of State Certification of the VSAP Solution	
Delivery Timing	Certification by the California Secretary of State to be achieved no less than 75 calendar days prior to Full Rollout
Delivery Frequency	Once
Description	The Contractor shall: ■ Obtain California Secretary of State Certification of the end-to-end VSAP Solution complying with all guidelines and requirements set forth by the California Secretary of State as part of the certification process. ■ Document issues raised and design changes made to address the issues during the certification process. ■ Update all BMD Hardware Design and Engineering Specification documents, BMD Manufacturing Packages, and BMD, BMG and ISB Software Documentation developed during DVT.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The timely completion of California Secretary of State Certification is one of the most significant hurdles for the VSAP Project. The Contractor has a team of experienced certification specialists

that is led by the Contractor's certification manager, a former State-approved Testing Authority Laboratory Director. Drawing upon the cumulative knowledge of this team, the Contractor will be able to successfully shepherd the VSAP Solution through California Secretary of State certification.

Because the VSAP is composed of multiple products that have been developed by different parties at different times, the Contractor anticipates that certifying VSAP will be more challenging than a typical certification. The best way to meet this challenge is to test, test, and test some more throughout the development process. The success or failure of a test campaign starts with the pretesting process. See Section 3.8 for details on the Contractor's pretesting methodology. During this testing process the Contractor will coordinate with the County to identify and direct any changes to those components necessary to achieve integration and certification of the overall VSAP Solution. Once this testing is complete the solution is ready to be submitted to the California Secretary of State's office. The Contractor, in coordination with the County, will modify the VSAP Solution, as needed, during the certification process, including changes to the hardware, firmware, software or third-party software necessary to certify the BMD, BMG and ISB components, while at the same time remaining in alignment with VSAP's General Voting System Principles, vision and requirements, as approved by the County.

Another major challenge relating to certification is the time it will take to undergo certification, which can be extensive. Achieving both full feature development and certification in time for the March 2020 primaries will require incredible coordination between the Project Managers, development teams, certification manager, the County and the out-of-scope developers. The Contractor's certification manager has already been in contact with several State-Approved Testing Agencies to discuss methods to shorten the certification process as much as possible. These methods will be included in the Design and Development Plan (see Section 2.1.1) and implemented throughout the development and testing process.

The Contractor understands that the County will cover the initial $360,000 of cost towards certification of the VSAP Solution and that any certification fees beyond this amount that are attributable to Contractor In-Scope Components (and not attributable to out-of-scope system components) will be paid by the Contractor to the California Secretary of State until the entire VSAP Solution is certified.

Upon completing of the certification process the report and any other certification documents will be submitted to the County, as outlined in Section 2.4.2.b. The documentation that is required to be updated as a result of certification testing will be updated per Section 3.16.4.

Deliverable 2.4.2b Post California Secretary of State Certification Roadmap	
Delivery Timing	Submitted for approval no more than 60 calendar days after certification by the California Secretary of State
Delivery Frequency	Once
Description	The Contractor shall provide a roadmap that will analyze the conditions of the VSAP certification and its implications for adoption within and outside the State of California.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The Contractor will provide the Post California Secretary of State Certification Roadmap.

2.4.3   Obtain Other Certifications as Required

Upon completion of Deliverable 2.4.1 Certifications Analysis, the County and Contractor shall discuss the level of effort required for the Contractor to obtain all certifications and/or approvals identified as mandatory or as approved by the County. The County also may require that the Contractor seek and obtain some or all certifications/approvals identified as optional in Deliverable 2.4.1 Certifications Analysis.

Any Additional Work to support this task shall be provided based on a negotiated work order pursuant to Section 6.0.

2.5 Production Validation Testing and Production

During PVT, the Contractor will validate and qualify additional tools needed to support quantities for production manufacturing ramp up, including assembly jigs, test software, serialization and traceability, and will complete other necessary manufacturing-related, but not design-related, tasks. At this stage, the ISB software will be deployed to the server and client devices, and the BMG will be integrated with the BMD hardware.

The Contractor will fulfill BMD orders as defined in Section 3.2 (Analysis of BMD Production Schedule and Strategy). The County does not expect any changes to the software and hardware during PVT to facilitate volume production that would require re-certification or *de minimis* approval. As such, the Contractor shall anticipate any volume production needs affecting the design during the EVT and DVT stages.

While the BMD hardware tasks are separated at the sub-component level in this Section 2.5, the Contractor will submit fully functional BMD units at the end of the PVT stage to demonstrate that they meet all the requirements and all sub-components are integrated.

2.5.1 Ballot Marking Device

2.5.1.1 User Experience / User Interface

Tasks:

- None

Deliverables:

- None

2.5.1.2 Mechanical (housing, stand, privacy screen and ballot box)

Tasks:

- Design and build jigs and fixtures needed to support mass production
- Design assembly processes, work instructions and quality assurance
- Build and test PVT units against quality metrics
- Build initial shipment of BMDs

Deliverable 2.5.1.2 Production Validation Testing and Results for BMD Hardware	
Delivery Timing	Submitted for approval as fully functional BMDs at the end of the PVT and Production stage, including completion of tasks described in the following Sections: ■ 2.5.1.2 Mechanical (housing, stand, privacy screen and ballot box) ■ 2.5.1.3 Application Control System Hardware and Peripherals ■ 2.5.1.6 Ballot Control System Hardware and Peripherals ■ 2.5.1.8 Paper Handler ■ 2.5.1.9 Ballot Printer ■ 2.5.1.10 Cases and Carts
Delivery Frequency	Once
Description	The Contractor shall deliver: ■ Production BMD units ■ Quality reports

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The BMD hardware manufacturing specialist (see Section 2.2.1.2) will provide the manufacturing partners with a final BMD BOM, SOP testing procedures, SW, and the Contractor's QA requirements, as well as a required production delivery plan previously agreed upon through the supply chain managements meetings (see Section 3.2). From these tasks, the factory will begin a custom designed factory setup specific for the BMD. During this setup, Jigs, fixtures, manufacturing space, personal training, and all necessary equipment and tools needed to complete the mass production of the BMD will be applied. A representative of the County will be invited to be present during and after completion of this setup.

The manufacturing specialist will supervise the mass production process until its completion, and will generate all production related reports, for example, failure rates, repairs, output, and QA, which will be documented in the PIL.

The off-the-line BMD components will be delivered for final assembly and installation of custom pre-certified firmware/software in the United States. Throughout the process, quality checks will be performed. Firmware/software for COTS components may be pre-installed. These production BMDs will be delivered to the County per the Build schedule of Section 3.2.

2.5.1.3 Application Control System Hardware and Peripherals

Tasks:

- Design and build jigs and fixtures needed to support mass production
- Design assembly processes, work instructions and quality assurance
- Build initial shipment of BMDs
- Test units against quality metrics

Deliverables:

This sub-component is one aspect of the BMD hardware and will be completed at the same time as the other BMD hardware sub-components in order to deliver an assembled BMD unit. The result of these tasks will be considered to meet Deliverable 2.5.1.2 Production Validation Testing and Results for BMD Hardware, and shall be submitted upon completion of all tasks described in the following sections:

- 2.5.1.2 Mechanical (housing, stand, privacy screen and ballot box)
- 2.5.1.3 Application Control System Hardware and Peripherals
- 2.5.1.6 Ballot Control System Hardware and Peripherals
- 2.5.1.8 Paper Handler
- 2.5.1.9 Ballot Printer
- 2.5.1.10 Cases and Carts

See Section 2.5.1.2 Mechanical (housing, stand, privacy screen and ballot box) for a description of the deliverable.

2.5.1.4   BMD Application Layer

The Application Layer for the BMD will be functionally complete at the end of the EVT stage and further refined at the DVT stage. There should be no functional gaps between the requirements, design and developed code. From a software perspective, there should be no difference in scaling from a small number of DVT deployments to a large number of PVT deployments. At this stage of the process, the Application Layer will be deployed to the BMD hardware.

Deliverable 2.5.1.4 BMD Application Layer — PVT Deployment	
Delivery Timing	Submitted for approval as fully functional BMDs at the end of the PVT and Production stage
Delivery Frequency	Once
Description	The Contractor shall confirm the Application Layer has been deployed to the BMD hardware as produced in the PVT stage.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

At the PVT stage, the ACS and BCS firmware will be deployed to each production BMD through the custom bootloader, as in Sections 2.5.1.5 and 2.5.1.7, to prepare the boards to receive their system images through the BMG. The BMDs will be added to the BMG network (by MAC address insertion into the DHCP table), and the ACS and BCS system images will be deployed through the BMG. The BMG will run a comprehensive diagnostic and system test on each BMD after the full system images are installed to verify functionality.

2.5.1.5   Application Control System Board Support Package and Firmware

Tasks:

- Modify Board Support Package, if necessary
- Demonstrate functionality on PVT hardware

Deliverable 2.5.1.5 Application Control System Board Support Package Software Image — PVT	
Delivery Timing	Submitted for approval as fully functional BMDs at the end of the PVT and Production stage
Delivery Frequency	Once
Description	The Contractor shall deliver: ■ ACS Board Support Package software image updated for PVT ■ Associated documentation

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

At the PVT stage, the ACS firmware will be deployed to each production BMD through the custom bootloader by the Contractor in the continental United States, to prepare the boards to receive their system images through the BMG.

2.5.1.6 Ballot Control System Hardware and Peripherals

Tasks:

- Design and build jigs and fixtures needed to support mass production
- Design assembly processes, work instructions and quality assurance
- Build and test PVT units against quality metrics
- Build initial shipment of BMDs
- Characterize the capability of manufacturing processes

Deliverables:

This sub-component is one aspect of the BMD hardware and will be completed at the same time as the other BMD hardware sub-components in order to deliver an assembled BMD unit. The result of these tasks will be considered to meet Deliverable 2.5.1.2 Production Validation Testing and Results for BMD Hardware, and shall be submitted upon completion of all tasks described in the following sections:

- 2.5.1.2 Mechanical (housing, stand, privacy screen and ballot box)
- 2.5.1.3 Application Control System Hardware and Peripherals
- 2.5.1.6 Ballot Control System Hardware and Peripherals
- 2.5.1.8 Paper Handler
- 2.5.1.9 Ballot Printer
- 2.5.1.10 Cases and Carts

See Section 2.5.1.2 Mechanical (housing, stand, privacy screen and ballot box) for a description of the deliverable.

2.5.1.7 Ballot Control System Board Support Package and Firmware

Tasks:

- Modify firmware, if necessary
- Demonstrate functionality on PVT hardware

Deliverable 2.5.1.7 Ballot Control System Board Support Package Software Image — PVT	
Delivery Timing	Submitted for approval as fully functional BMDs at the end of the PVT and Production stage
Delivery Frequency	Once
Description	The Contractor shall deliver: ■ BCS Board Support Package software image updated for PVT ■ Associated documentation

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

At the PVT stage, the BCS firmware will be deployed to each production BMD through the custom bootloader by the Contractor in the continental United States, to prepare the boards to receive their system images through the BMG.

2.5.1.8   Paper Handler

Tasks:

- Design and build jigs and fixtures needed to support mass production
- Design assembly processes, work instructions and quality assurance
- Build and test PVT units against quality metrics
- Build initial shipment of BMDs
- Characterize the capability of manufacturing processes

Deliverables:

This sub-component is one aspect of the BMD hardware and will be completed at the same time as the other BMD hardware sub-components in order to deliver an assembled BMD unit. The result of these tasks will be considered to meet Deliverable 2.5.1.2 Production Validation Testing and Results for BMD Hardware, and shall be submitted upon completion of all tasks described in the following sections:

- 2.5.1.2 Mechanical (housing, stand, privacy screen and ballot box)
- 2.5.1.3 Application Control System Hardware and Peripherals
- 2.5.1.6 Ballot Control System Hardware and Peripherals
- 2.5.1.8 Paper Handler
- 2.5.1.9 Ballot Printer
- 2.5.1.10 Cases and Carts

See Section 2.5.1.2 Mechanical (housing, stand, privacy screen and ballot box) for a description of the deliverable.

2.5.1.9   Ballot Printer

Tasks:

- Build units for PVT testing
- Build initial shipment of BMDs

Deliverables:

This sub-component is one aspect of the BMD hardware and will be completed at the same time as the other BMD hardware sub-components in order to deliver an assembled BMD unit. The result of these tasks will be considered to meet Deliverable 2.5.1.2 Production Validation

Testing and Results for BMD Hardware, and shall be submitted upon completion of all tasks described in the following sections:

- 2.5.1.2 Mechanical (housing, stand, privacy screen and ballot box)
- 2.5.1.3 Application Control System Hardware and Peripherals
- 2.5.1.6 Ballot Control System Hardware and Peripherals
- 2.5.1.8 Paper Handler
- 2.5.1.9 Ballot Printer
- 2.5.1.10 Cases and Carts

See Section 2.5.1.2 Mechanical (housing, stand, privacy screen and ballot box) for a description of the deliverable.

2.5.1.10 Cases and Carts

Tasks:

- Build cases and carts for initial shipment of BMDs

Deliverables:

This sub-component is one aspect of the BMD hardware and will be completed at the same time as the other BMD hardware sub-components in order to deliver an assembled BMD unit. The result of these tasks will be considered to meet Deliverable 2.5.1.2 Production Validation Testing and Results for BMD Hardware, and shall be submitted upon completion of all tasks described in the following sections:

- 2.5.1.2 Mechanical (housing, stand, privacy screen and ballot box)
- 2.5.1.3 Application Control System Hardware and Peripherals
- 2.5.1.6 Ballot Control System Hardware and Peripherals
- 2.5.1.8 Paper Handler
- 2.5.1.9 Ballot Printer
- 2.5.1.10 Cases and Carts

See Section 2.5.1.2 Mechanical (housing, stand, privacy screen and ballot box) for a description of the deliverable.

2.5.2 ISB

The ISB software will be functionally complete at the end of the EVT stage and refined at the DVT stage. There should be no functional gaps between the requirements, design and developed code. At this stage in the process, the ISB will be deployed to the server and client devices.

Deliverable 2.5.2 ISB — PVT Deployment	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once

Description	The Contractor shall confirm the ISB has been deployed to the server and client devices as produced in the PVT stage.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

During the planning stage a detailed process to deploy the ISB software will be designed, which will include numerous test designs to determine the correct deployment and operation of the component, then testing of deployments will be performed to verify the test and procedures, and once the expected results are produced, they will be validated.

Once the official ISB software is completed, the deployment procedure will be executed, the tests established, then a report containing the test results will be generated and delivered to the County. This report may include operational details that would require updating documentation, configuration management system, or monitoring system.

2.5.3 BMD Manager

The BMG software will be functionally complete at the end of the EVT stage and refined at the DVT stage. There should be no functional gaps between the requirements, design and developed code. At this stage of the process, the BMG shall be integrated with the BMD hardware at the PVT stage.

Deliverable 2.5.3 BMD Manager Deployment	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	The Contractor shall document the integration of the BMG with the BMD hardware at the PVT stage.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

At the PVT stage, the BMG software will be deployed to front-end and back-end servers in the EOC to integrate with the PVT BMDs. The PVT ACS, and BCS software images will be deployed to the BMDs through the PVT BMG, once complete, the Contractor will document the success of this integration.

2.5.4 Integrated System Documentation

The Contractor shall create documentation for the VSAP Solution showing how all the components are integrated and interfaced with each other, including applicable dependencies.

Deliverable 2.5.4 Integrated System Documentation	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	The Contractor shall create documentation for the integrated VSAP Solution as described in the task above.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

Based on the Software Architecture Documents of Sections 2.2.1.4.1.3a, 2.2.2d, and 2.2.3d, along with inspiration from Figure 1 (Overview Diagram), the solutions architect will create Integrated System Documentation with flow diagrams in Visio, in addition to accompanying narrative discussion explaining how all components of the VSAP Solution are integrated and interface with each other. Other information will demonstrate who is responsible for inputting data, managing elections, and how data is secured, and the flows between all components of the VSAP Solution.

2.6   Tally System Scanners

The County may request that the Contractor procure scanners to be used with the Tally System. In such event, the County will specify the type and number of scanners to be procured. Additionally, the County may request that the Contractor assist with planning and implementing the distributed Tally scanning strategy.

Any Additional Work to support this task shall be provided based on a negotiated work order pursuant to Section 6.0.

3.0 Implementation

During implementation, the Contractor will lead and work collaboratively with County staff to prepare and deploy the VSAP Solution. This includes development of an Implementation Strategy, Implementation Plan, a System Interface Plan, an End-to-End Security Plan, a Training and Knowledge Transfer Plan and other documentation required to prepare for deployment of the VSAP Solution. The Contractor also will provide applicable services to support deployment of the VSAP Solution in Vote Center Test Labs, the 2019 Mock Election, the November 2019 Pilot election, Vote Center Demonstration Centers and Full Rollout including systems integration services, coordination services, on-site support services and Help Desk services.

3.1 Develop an Implementation Strategy and Plan

The Contractor will develop an Implementation Strategy that defines the overall approach to implementation, and, at a high-level, how the Contractor will execute it. The Implementation Strategy must be closely coordinated with the County's overall implementation strategy for VSAP, including other VSAP Program activities not led by the Contractor. The Implementation Strategy will need to address, at minimum, the overall approach to deploying the VSAP Solution to:

- Vote Center Test Lab Testing 1
- Vote Center Test Lab Testing 2
- 2019 Mock Election
- November 2019 Pilot (including the California Secretary of State application process)
- Vote Center Demonstration Centers
- Full Rollout

The Contractor will subsequently develop an Implementation Plan, which details the decisions, tasks, activities and resources required to execute to the Implementation Strategy. The Implementation Plan will need to address, at minimum:

- Scope of each deployment milestone (e.g., # of Vote Centers, # of BMDs, etc.)
- Roles and responsibilities during each deployment milestone (e.g., set up, test, transport, deploy and operate)
- Staffing required to set up, test, transport, deploy and operate
- Support model before, during and after the election period

Deliverable 3.1a Implementation Strategy	
Delivery Timing	Submitted for approval no more than 60 calendar days after the Project Commencement Date
Delivery Frequency	Once
Description	The Contractor shall deliver an Implementation Strategy as described in Section 3.1.

Deliverable 3.1b Implementation Plan	
Delivery Timing	Submitted for approval no less than 90 days prior to the first deployment milestone listed in the Implementation Strategy
Delivery Frequency	Once
Description	The Contractor shall deliver an Implementation Plan as described in Section 3.1.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The Contractor, in collaboration with the County, will develop an Implementation Strategy and Implementation Plan. The Implementation Strategy will consisit of a high level document outlining the general approach to deploying the VSAP Solution in the required settings:

- Vote Center Test Lab Testing 1
- Vote Center Test Lab Testing 2
- 2019 Mock Election
- November 2019 Pilot (including the California Secretary of State application process)
- Vote Center Demonstration Centers
- Full Rollout

The Implementation Plan will be produced through the following activities:

- A discovery phase, intended to identify and document all the knowledge relative to:
  - Breakdown of activities pertaining to each previous stage (Vote Center Labs, 2019 Mock Election, November 2019 Pilot, and Voter Demonstration Centers)
  - Identification of critical resources
  - Identification of critical or new technologies
  - Identification of key staff involved in each stage
- Research and analysis
  - Analysis of dependencies within the system
  - Testing of the technologies identified as new, or critical
  - Development of guidelines
- Planning
  - Documentation of activities to be performed (as adequate for each stage)
  - Design of a monitoring activity to proactively identify issues that may arise
  - Development of contingency plan(s) to be enforced during stages
- Presentation to stakeholders
  - Feedback session
  - Decision to iterate

■ Partial roll-out to stages

   ❑ Training or retraining of County staff for deployment strategies and guidelines

   ❑ During each deployment milestone (i.e., any of the agreed upon stages) documentation of incidents or issues will be undertaken, and if required, application of contingency measures

3.2 Analysis of BMD Production Schedule and Strategy

The Contractor will provide BMDs in varying quantities over time throughout the Project. Table 1 and Table 2 highlight the County's current estimates, which are to be assessed by the Contractor regarding the feasibility and any implications. The Contractor shall provide feedback, lead times and any alternatives (including alternative manufacturing methods and procedures, if necessary) to meet the County's anticipated dates for Vote Center Test Labs, the 2019 Mock Election, November 2019 Pilot (Local Election), Vote Center Demonstration Centers and full Countywide Rollout for the 2020 election cycle. The County expects to meet each milestone as soon as possible, but no later than dates set forth in Table 1 and Table 2 below. The BMD Production Schedule and Strategy will need to address, at minimum:

■ Production methods, including any alternative manufacturing methods and procedures if necessary

■ Manufacturing tasks and activities

■ The number of BMDs needed for EVT, DVT, California Secretary of State certification as well as PVT and Production stages

■ Lead time, accounting for County acceptance testing and preparation prior to each anticipated milestone

■ Roles and responsibilities of vendors in the overall supply chain

■ Assumptions

Table 1.   Estimated Quantities and Timing of BMDs — Testing

Deployment Milestone	Timing of Milestone (no later than)	Estimated Quantity	Certified
Vote Center Test Lab Testing 1	June 2019	10	No
Vote Center Test Lab Testing 2	July 2019		

Table 2.   Estimated Quantities and Timing of BMDs — Deployment

Deployment Milestone	Timing of Milestone (no later than)	Estimated Quantity	Certified
2019 Mock Election	September 2019	1,200[1]	No[2]
November 2019 Pilot (Local Elections)	November 5, 2019		
Vote Center Demonstration Centers	December 2019		
Full Rollout	March 3, 2020	31,100	Yes

Deliverable 3.2 BMD Production Schedule and Strategy	
Delivery Timing	Submitted for approval no less than 30 calendar days prior to the conclusion of EVT
Delivery Frequency	Once
Description	The Contractor shall deliver a BMD Production Schedule and Strategy as described in Section 3.2.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

Per Section 2.2.1.2, the BMD hardware project manager along with the manufacturing specialist and Project Manager will construct a production schedule and strategy that includes the number of BMDs required at the EVT, DVT, certification, PVT and the two testing (Vote Center Test Lab Testing 1, Vote Center Test Lab Testing 2) and six deployment production stages (2019 Mock Election, November 2019 Pilot, Vote Center Demonstration Centers, and Full Rollout). The schedule will be provided as a Gantt chart, indicating for each milestone when production is expected to begin and end. It will indicate fallback manufacturing options for each phase (e.g., extra shifts, additional manufacturing lines, etc.) which can be used if production falls behind schedule for any of the milestones. The Gantt chart will be accompanied by a legend indicating the manufacturing methods and procedures in the primary and fallback options.

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[1] The BMD units produced are expected to be used for Full Rollout and thus are not in addition to the estimated quantity of 31,100 BMDs.

[2] Ballot Marking Devices will be certifiable.

The BMD Production Schedule and Strategy will be presented to the County for approval and documented in the PIL.

3.3 Deliver Production BMDs

The Contractor will deliver BMDs per the agreed upon schedule.

Deliverable 3.3a BMDs for Vote Center Test Lab Testing 1 and 2	
Delivery Timing	As defined in the BMD Production Schedule and Strategy (see Section 3.2)
Delivery Frequency	Once
Description	The Contractor shall deliver the agreed upon number of BMDs for Vote Center Test Lab Testing 1 and 2.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

Based on the strategy and schedule stated on Section 3.2, the Contractor will deliver BMD units for Vote Center Test Lab Testing 1 and 2. A production schedule will be provided by the Project Manager or Engagement Director to the County.

Deliverable 3.3b BMDs for California Secretary of State Certification	
Delivery Timing	As defined in the BMD Production Schedule and Strategy (see Section 3.2)
Delivery Frequency	Once
Description	The Contractor shall deliver the agreed upon number of BMDs for testing and ultimate certification by the California Secretary of State.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

Based on the strategy and schedule stated in Section 3.2, the Contractor will deliver BMD units for testing and ultimate certification by the California Secretary of State, and a production schedule will be provided by the Project Manager or Engagement Director to the County.

Deliverable 3.3.c.1 BMDs for 2019 Mock Election, November 2019 Pilot and Vote Center Demonstration Centers - Check Point 1	
Delivery Timing	10/1/2018
Delivery Frequency	Once
Description	The Contractor shall deliver the following to show the progress to date toward delivering the agreed upon number of BMDs for public use in the 2019 Mock Election, November 2019 Pilot and Vote Center Demonstration Centers: • Preliminary Report that shows status of:

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- o Selection, Letters of Intent and Agreements with Final Product Development Partners
- o Selection, Letters of Intent and Agreements with Third Party (Indirect) Vendors
- o Selection, Letters of Intent and Agreements with Manufacturing Partners
- o Selection of the most relevant electronic components, COTS and IOTS
- o Having Finalized and/or Updated Legal Contracts, Letters of Intent, Non-Disclosure Agreements and Non-Compete Agreements with all of Contractor's Manufacturing Partners
- Preliminary (Sprint 1) Mechanical Drawings Designs, except Paper Handler Mechanism aka Paper Transport System.
- First round of Lab Samples (no Plastics or Metals), except Paper Handler Mechanism aka Paper Transport System.
- Early Manufacturing strategy (Plastic and Metal Parts Supply, Sub-Assembly and Final Assembly)
- Preliminary high level Bill of Materials for Final Assembly

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The Contractor agrees to complete all the requirements set forth above in this section.

Deliverable 3.3.c.2 BMDs for 2019 Mock Election, November 2019 Pilot and Vote Center Demonstration Centers - Check Point 2	
Delivery Timing	1/2/2019
Delivery Frequency	Once
Description	The Contractor shall deliver the following to show the progress to date toward delivering the agreed upon number of BMDs for public use in the 2019 Mock Election, November 2019 Pilot and Vote Center Demonstration Centers: • One Non-Functional Prototype with "Mockup" Parts • Report with commitment components purchases • Status Report for Bill of Materials, Material Availability and Manufacturing Plan for EVT

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

Based on the strategy and schedule stated in Section 3.2, and the tasks and dates specified in 3.3.c.1 - 3.3.c.2, the Contractor will deliver BMD units for public use in the 2019 Mock Election, November 2019 Pilot, and Vote Center Demonstration. A Production Schedule will be provided by the Project Manager or Engagement Director to the County.

Deliverable 3.3.d.1 BMDs for Full Rollout - Check Point 1	
Delivery Timing	6/24/19
Delivery Frequency	Once

Deliverable 3.3.d.1 BMDs for Full Rollout - Check Point 1	

Description	The Contractor shall deliver the following to show the progress to date toward delivering the agreed upon number of BMDs for public use in the Countywide 2020 election cycle (Full Rollout):
	
	• Report detailing Plan for Manufacturing Pilot Run I
	    o General Production Strategy for Manufacturing Pilot Run I
	    o Assembly Line Setup for Manufacturing Pilot Run I
	    o Preliminary Standard Operating Procedures for Manufacturing Pilot Run I
	• Report with status of all component purchases and material production year to date
	• Tooling Status Report year to date
	• Preliminary findings of Smartmatic Lab Test Reports (Sprint 1)

The Contractor agrees to complete all the requirements set forth above in this section.

Deliverable 3.3.d.2 BMDs for Full Rollout - Check Point 2	
Delivery Timing	7/1/19
Delivery Frequency	Once

Description	The Contractor shall deliver the following to show the progress to date toward delivering the agreed upon number of BMDs for public use in the Countywide 2020 election cycle (Full Rollout):
	
	• Report summarizing results of Manufacturing Pilot Run I
	    o Assembly Line Setup for Pilot Run I
	    o SOP for Pilot Run I
	    o QA Reports
	    o Diagnostic Summary
	    o Summary of Issues found and Plan for Pilot Run II
	• Report detailing Plan for Manufacturing Pilot Run II
	    o General Production Strategy for Manufacturing Pilot Run II
	    o Assembly Line Setup for Manufacturing Pilot Run II
	    o Preliminary SOP for Manufacturing Pilot Run II
	• Report with status of all components purchases and material production YTD
	• Tooling Status Report YTD
	• Shipment Confirmation for 5 DVT Units (from Pilot Run I)
	• Preliminary findings of Smartmatic Lab Test Reports (Sprint 2)

The Contractor agrees to complete all the requirements set forth above in this section.

Deliverable 3.3.d.3 BMDs for Full Rollout - Check Point 3	
Delivery Timing	7/15/19

Deliverable 3.3.d.3 BMDs for Full Rollout - Check Point 3	
Delivery Frequency	Once

Description	The Contractor shall deliver the following to show the progress to date toward delivering the agreed upon number of BMDs for public use in the Countywide 2020 election cycle (Full Rollout):
	
	• Report summarizing results of Manufacturing Pilot Run II
	   o Assembly Line Setup for Pilot Run II
	   o Standard Operating Procedures for Pilot Run II
	   o Quality Assurance Reports
	   o Diagnostic Summary
	   o Summary of Issues found and Plan for manufacturing production
	• Report with status of all components purchases and material production year to date
	• Tooling Status Report year to date
	• Smartmatic Lab Test Reports results and reports
	• Shipment Confirmation for five (5) DVT Units (from Pilot Run II)

The Contractor agrees to complete all the requirements set forth above in this section.

Deliverable 3.3.d.4 BMDs for Full Rollout - Check Point 4	
Delivery Timing	9/1/19
Delivery Frequency	Once
Description	The Contractor shall deliver the following to show the progress to date toward delivering the agreed upon number of BMDs for public use in the Countywide 2020 election cycle (Full Rollout): • Test results from a California State-Approved Testing Agency verifying compliance of the BMDs with CVSS hardware requirements. • Shipment and Delivery Confirmation for 1200 Units (from manufacturing production's First Run)

The Contractor agrees to complete all the requirements set forth above in this section.

Deliverable 3.3.d.5 BMDs for Full Rollout - Final Check Point	
Delivery Timing	11/22/19
Delivery Frequency	Once

Deliverable 3.3.d.5 BMDs for Full Rollout - Final Check Point	
Description	The Contractor shall deliver the following to show the progress to date toward delivering the agreed upon number of BMDs for public use in the Countywide 2020 election cycle (Full Rollout): • Shipment and Delivery Confirmation for remaining Mass Production Units to reach the full complement of 31,100 Units

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

Based on the strategy and schedule stated in Section 3.2, and the tasks and dates specified in 3.3.d.1 - 3.3.d.5, the Contractor will deliver BMD units for public use in the Countywide 2020 election cycle (Full Rollout).

3.4   Develop System Interface Plan

The System Interface Plan will list and describe the current and target set of interfaces, categorize whether interfaces are inbound or outbound, identify source or destination systems and recommend an appropriate strategy for implementing the interface. Interfaces in this context refers to all system to system interfaces via traditional file exchange, all integration between components requiring software development, all integration between components requiring customized use of APIs, etc. See Figure 8 above for an illustration of the system interfaces for the VSAP Solution.

This strategy should focus on the design, development and testing of the required integration points to be produced and describe the suite of tools required to support that strategy.

Deliverable 3.4 System Interface Plan	
Delivery Timing	Submitted for approval no more than 60 calendar days after Project commences
Delivery Frequency	Once
Description	The Contractor shall provide a System Interface Plan that includes, at minimum: ■ List of interfaces ■ Categorization of interfaces (inbound, outbound) ■ Source and destination system/component ■ Strategy to complete the interface ■ Description of data being exchanged, including security

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The Contractor will create a System Interface Plan that is easy to understand by non-technical VSAP staff. It will consist of Microsoft Visio schematics at various levels of abstraction (expanding upon the existing interface schematic of Figure 8), and API specifications in SharePoint. Accompanying the schematics will be a list of all interfaces in the VSAP with an

indication of what data flow is outbound vs inbound, a description of the data, and an easy to understand explanation of how the data interface is to be secured. This description will indicate which components are connected on a network to the Digital Signing Authority (see Deliverable 3.6b), and which files/data streams will be manually signed and transferred between components. In the initial kickoff meetings between the Contractor's security engineering team, software architect, solutions architect, signing authority and the County representatives (Tally, ballot layout solution, and relevant security experts) the Contractor will confirm the security model of SSDD 3.3, and will discuss a strategy to implement each interface to ensure clear guidelines for encrypting, and decrypting at the interface.

3.5   Develop An End-to-End Security Plan

The Contractor will provide an End-to-End Security Plan. It shall include:

Contractor Compliance with CVSS Security Requirements — The Contractor will develop, implement, maintain and use appropriate safeguards as outlined in the CVSS security requirements that reasonably prevent the misuse of information systems and appropriately protect the confidentiality, integrity and availability of information systems.

Subcontractor Compliance with Center for Internet Security Top 20 Critical Security Controls — The Contractor will ensure that any subcontractor or agent, to whom the Contractor provides access, agrees to the same security restrictions and conditions that apply to the Prime Contractor. The Contractor will ensure that any subcontractor or agent, to whom the County provides access to information systems, agrees to implement reasonable and appropriate safeguards that comply with the Center for Internet Security Top 20 Critical Security Controls to ensure the confidentiality, integrity and availability of the information systems.

Supply Chain Risk Management — The Contractor will develop a plan that ensures the security of hardware, firmware and software throughout the manufacturing supply chain.

Threat Modeling and Risk Assessment Processes and Procedures — The Contractor will develop, implement, maintain and use systematic processes and procedures for ensuring continuous monitoring and assessment of emerging threat landscape and to provide situational awareness of systems and their potential vulnerabilities.

Application Development Security Practices — The Contractor will provide policies and practices by which County data as well as County IP is protected during application development tasks.

Security Responsibilities — The Contractor will define security responsibilities of the County and the Contractor to ensure compliance and data security, confidentiality and integrity of systems and data. FIPS Reference: http://csrc.nist.gov/groups/STM/cmvp/documents/140-1/140val-all.htm

User Policies and Procedures to Protect Systems — The Contractor will implement policies and procedures regarding the use of information systems that describe how users are to protect against intrusion, tampering, viruses, etc.

Testing Security Practices — The End-to-End Security Plan will define the specific goals of the security testing, components to be tested, testing methodology, test cases and expected results. The End-to-End Security Plan shall align to the security requirements for certification by the California Secretary of State. The End-to-End Security Plan will further specify acceptance criteria for moving components to production (i.e., define what "election ready" means) and document the roles and responsibilities of the County and the Contractor staff required to conduct the testing.

Contractor Staff Security Training Practices — The Contractor will produce security training requirements for contracted staff and provide security training to contracted staff that access VSAP Project information systems.

Incident Response Plan — The Contractor will have an Incident Response Plan that documents its incident response structure and communication process to customers during a disaster or incident. The Incident Response Plan shall also include lessons learned from incidences to prevent future such incidents. The Contractor will commit to immediately report security incidents that occur to the VSAP Solution to the California Secretary of State as well as any security incidents that may affect any County system to the appropriate County Information Security Officer.

Audit Event Log — The Contractor will ensure that Audit Event Logs are working as designed and are being captured in accordance with County records retention policies, or state and federal requirements (whichever requires that data is retained the longest). The Contractor will also identify a mechanism for maintaining, auditing and analyzing event logs.

Monitoring and Protecting County Data — The Contractor will immediately notify designated County security personnel of any potential breach or risk, including when:

- County data may be at risk
- County data may be at risk of unauthorized disclosure(s)
- County data may have been breached
- County data is subpoenaed through a legal channel
- County data may be inaccessible due to supplier disputes, bankruptcy, or other business and legal scenarios
- County data or copy of County data or any replica, or digital shadow has been intentionally or accidentally copied or moved to a non-U.S. geography or non- County authorized third party

Data Protection for Shipment of BMDs — The Contractor will securely erase data and will document its secure erase process when equipment (i.e., BMDs) needs to be sent back to Contractor or manufacturer for service, upgrades or warranty. Refer to NIST SP 800-88, Guidelines for Media Sanitization — NIST Web Site: https://www.nist.gov/. When equipment with data needs to be shipped, the Contractor will securely ship the equipment taking appropriate precautions to secure the data on the equipment.

Compliance with County Data Security Restrictions — The Plan will include the method by which the Contractor will comply with County Data Security Restrictions, including:

- Restriction on County Data Location — The Contractor will provide information about location of data storage, addressing requirements to keep all data in the United States (including in a disaster scenario)
- Written Approval to Relocate County Data — The Contractor will document how it will assure the County that its data will not be relocated without the County's written approval
- Restriction on Copying of County Data — The Contractor will not copy any County data obtained while performing services under this Agreement to any media, including hard drives, flash drives, or other electronic device, other than as expressly approved by the County

- ◼ Return or Destroy County Data — The Contractor will return or destroy all confidential information received from the County, or created or received by the Contractor on behalf of the County. For any items destroyed, the County will require certification of secure destruction (Department of Defense (**"DoD"**) standards) along with a list of what was destroyed (model, serial number, content, date of destruction, etc.). If the Contractor determines that returning or destroying the confidential information is infeasible, the Contractor will notify the County in writing of the conditions that make return or destruction infeasible. If the County agrees that return or destruction of confidential information is infeasible, the Contractor will extend the protections of the Contract to such confidential information and limit further uses and disclosures of such confidential information to those purposes that make the return or destruction infeasible, for so long as the Contractor maintains such confidential information. A few references of examples for recommended media destruction practices are listed below:
  - ❑ NIST Special Publication 800- 88:
    http://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-88r1.pdf
  - ❑ FTC Reference: 16 CFR Part 682:
    https://www.ftc.gov/sites/default/files/documents/federal_register_notices/disposal-consumer-report-information-and-records-16-cfr-part-682/040420disposalofconsumer.pdf
  - ❑ Recognized Vendor Association (Vendors that perform destruction):
    http://www.naidonline.org/nitl/en/certification.html
- ◼ County Data Return Format — The Contractor will return all data that is the property of the County in a format specified by the County

Help Desk Level 2 Ticket Security — The Contractor will document how its internal service desk will keep the County's tickets secure. The County personnel creating service desk tickets with the Contractor must be securely authenticated. For example, when a service request or a service incident request involves a County configuration setting, requests about data, network architecture, manual and automated controls, access control, remote access, or procedures, the data in the request must remain secure. Requesters must always be authenticated through documented agreed upon procedures and controls.

Help Desk Personnel Authentication — The Contractor will guarantee that a current approved caller list and agreed procedures will be on file and referenced by its trained employees and subcontractors that respond to any service/incident requests from the County and others as authorized by the County in writing. As a part of the employee security awareness training, the Contractor's service staff must be trained and certified (at least annually) on social engineering techniques and the agreed-upon procedures and safeguards. The Contractor will agree to secure and audit the authorized lists and agreed-upon procedures.

Deliverable 3.5 End-to-End Security Plan	
Delivery Timing	Submitted for approval prior to commencing EVT
Delivery Frequency	Once, and updated prior to commencing DVT and subsequently prior to commencing PVT (or as mutually agreed upon)
Description	The Contractor shall provide an End-to-End Security Plan as described in the task above.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The Contractor will deliver an End-to-End Security Plan that will be updated in three phases to reflect increasingly available information over time and to allow development to proceed in a timely fashion. The End-to-End Security Plan will contain information on the following sections:

- The Contractor's Compliance with CVSS Security Requirements
- Subcontractor Compliance with Center for Internet Security Top 20 Critical Security Controls
- Supply Chain Risk Management
- Threat Modeling and Risk Assessment Processes and Procedures
- Application Development Security Practices
- Security Responsibilities
- User Policies and Procedures to Protect Systems
- Testing Security Practices
- Contractor Staff Security Training Practices
- Incident Response Plan, including Monitoring and Protecting County Data
- Audit Event Log
- Data Protection for Shipment of BMDs
  - ❑ Restriction on County Data Location
  - ❑ Written Approval to Relocate County Data
  - ❑ Restriction on Copying of County Data
  - ❑ Return or Destroy County Data
  - ❑ County Data Return Format
- Help Desk Level 2 Ticket Security
- Help Desk Personnel Authentication
- Physical Security Plan for Temporary Facility
- Physical Security Plan for EOC

As the Contractor In-Scope Components are being developed, the understanding of security requirements will evolve. The Contractor will develop and update sections of the End-to-End Security Plan as understanding evolves. The Phase 1 document will, at a minimum, consist of the following areas:

- Securing the Contractor's office space
  - ❑ Access Control
  - ❑ Developer hardware
  - ❑ Internal equipment (eg servers)
  - ❑ Etc.

- ■ Information Security for employees/contracted employees/the County as it relates to the project
  - ❑ Security awareness
  - ❑ Data transfer with County
  - ❑ Etc.
- ■ Network/coms monitoring
  - ❑ VPN
  - ❑ Network monitoring
  - ❑ Etc.
- ■ Securing code repositories
- ■ Incident reporting and response
  - ❑ Training for response
- ■ Compliance with County Data Security Restrictions

The Phase 2 document will, at a minimum, consist of the Phase 1 content as well as the following areas:

- ■ Confirmation that development will result in CVSS Compliance
- ■ Confirm that subcontractor contracts integrate CIS Top 20 controls
- ■ Supply chain security management
- ■ Non-supply chain vendor security management
  - ❑ County data may be inaccessible due to supplier disputes, bankruptcy, or other business and legal scenarios
- ■ Discuss third party consultants performing ongoing threat modeling and risk assessment and confirming the Contractor and County review resulting recommendations and decide which ones to implement
- ■ Application Development and Security Practices - Merge from prior plan
- ■ Security Responsibilities - Merge from prior plan
- ■ User Policies and Procedures to Protect Systems – Merge from prior plan
- ■ Testing Security Practices
- ■ Contractor Staff Security Training Practices – Merge from prior plan and see earlier section on subcontractors
- ■ Potentially expand or merge incident response plan from prior plan
- ■ Audit Event Log – Confirm plan for ensuring Audit Event Logs are working as they are supposed to and confirm retention requirements
- ■ Data Protection for Shipment of BMDs – Propose modification that we will establish policies for the County to use in these scenarios.
- ■ Compliance with County Data Security Restrictions – merge from prior phase

The Phase 3 document will, at a minimum, consist of the Phase 1 and 2 content as well as the following areas:

- Help Desk Level 2 Ticket Security
- Help Desk Personnel Authentication
- Physical security plan for temporary facility/EOC

3.5.1   Provide Continuity Plan

The Contractor will work with the County to complete continuity planning, according to CVSS and County standards. Where CVSS is silent, conforming to requirements and best practices, such as NIST security requirements, are recommended before moving information systems into a production status.

Deliverable 3.5.1 Continuity Plan	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	The Contractor shall deliver a Continuity Plan as described in Section 3.5.1.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The Contractor will work with the County to develop a Business Continuity Plan (BCP) to address the prevention of, and recovery from, threats to election operations. The BCP will explore negative occurrences that could result in an interruption of service, and/or damage to critical hardware or software systems. The plan will also discuss the necessary precautionary steps, and activities to mitigate the disruption of scenarios outlined. The Contractor and the County will govern the BCP development in accordance with CVSS standards, and where there is no directive, NIST security requirements will be used as reference. BCP is a living document that is revisited and updated regularly and thus, the Contractor and the County will be required to meet multiple times in order to keep this deliverable in alignment with the needs of the VSAP project, and the upcoming voting environment. Meetings will be scheduled in the first quarter of 2019.

The Contractor's continuity planning process includes:

- Identification of critical systems, processes, and personnel, etc.
- Business impact analysis
- Threat and risk analysis
- Exploration of impact scenarios
- Solution(s) design and contingency planning
- Education of key personnel

The BCP requires input from key technical and administrative resources from the Contractor and the County, and ultimately, the County will approve the BCP prior to VSAP production deployment.

One of the goals is to produce clear and concise directions/steps/options for personnel who are called upon to perform recovery operations; where possible, checklists and step-by-step procedures will be part of the BCP. In addition, the Contractor will work with the County to explore scenarios (if/where applicable) described on the California Procedures and Guidelines For Voting in a State of Emergency or Natural Disaster website (http://www.sos.ca.gov/elections/publications-and-resources/voting-emergency-natural-disaster/).

3.6 Confirm System Interfaces Design and Develop Interfaces

System interfaces and required integrations defined in the SSDD will be implemented, tested, refined and coordinated across the various components. The System Interface Design will describe the source and target systems, the type and layout of data to be interfaced, how and when data will be extracted from source system and loaded into target system.

Interfaces between various components of the VSAP Solution consist of digitally signed data exchanges. By verifying the digital signature of the interface files, such as configuration files, the recipient ensures that the files were created by the trusted source and have not been tampered with. This is a key security provision of the overall VSAP Solution. Digital signing, verification and key management is the responsibility of an enterprise signing authority, which is to be established and delivered by the Contractor as part of the VSAP Solution. It will be used by all components that are participants of data exchanges. One of the challenges of key management is that, by design, not all components are network connected. For example, the BMG and Tally operate on separate networks from each other, and from the ballot layout solution.

The Contractor will develop the System Interface Design to provide detail on the interfaces to be developed including assumptions, dependencies, structure, format, schedule, testing plan and milestones.

Deliverable 3.6a System Interface Design	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Once
Description	The Contractor shall deliver the System Interface Design as described in Section 3.6 and complete development of interfaces.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The Contractor will create a System Interface Design that will contain detailed API specifications and/or file specifications (format and structure). The Design will leverage the schematics of the System Interface Plan (see Section 3.4) (to demonstrate dependencies), API specifications in the PIL and will be codified. The detailed System Interface Design will allow for sprint planning (see Sections 2.2.1.4.1a, 2.2.2a, and 2.2.3a), security test design (see Section 3.16.2.7), and integration/end-to-end test design (see Section 3.16.2.3). This System Interface Design will indicate which components are connected on a network to the Digital Signing Authority (see Deliverable 3.6b), and which files/data streams will be manually signed and transferred between components via physical medium. In the initial kickoff meetings between the Contractor's Security Engineering Team, Software Architect, Solutions Architect, Signing Authority, and the County representatives (Tally, ballot layout solution, and relevant security experts), the Contractor will confirm the security model of SSDD 3.3, and will discuss a strategy to implement

each interface to ensure clear guidelines for encrypting and decrypting at the interface. The Project Manager will work closely with the solutions architect, software architect, and security engineering team to develop a schedule for building the interfaces with clear milestones for project tracking. Interface tests will be included in the requirements traceability matrix, and will be identified specifically as Interface tests, and test cases will be stored in the appropriate git repositories.

Deliverable 3.6b Digital Signing Authority	
Delivery Timing	Upon completion of tasks described in this section prior to EVT completion
Delivery Frequency	Once
Description	The Contractor shall deliver an enterprise signing authority that can be used by all VSAP components to sign data exchanges such that the contents can be trusted as originating from the intended source, has not been tampered with and is complete. The signing authority must comply with the highest FIPS PUB 180-4 standards. The signing authority must include mechanisms and processes for secure certificate management, both in network-connected and non-connected scenarios.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The Digital Signing Authority or Certificate Authority will be an integral part of trusted interfaces within the VSAP Solution, allowing VSAP components to sign data exchanges such that the data can be trusted as originating from the intended source, as well as verifying that the contents have not been tampered with and by comparing hash signatures, verifying the data is complete. The Contractor will deliver a Certificate Authority that complies with the highest FIPS PUB 180-4 standards for hashing (likely SHA-256, the Contractor will discuss this choice with the County at kickoff time). The Contractor will confirm the role of the Certificate Authority with the County (as currently envisioned in SSDD Section 3.3) for signing BMG application images, BMD images, election configuration files (BDF, ABDF, TLDF, and EAP, etc.), and Log Files. As noted in Section 3.6a, for the purpose of mitigating as much risk as possible in securing elections, the ballot layout solution and Tally will not be on a network connected to the County's main firewall. As such, the Certificate Authority will need to be physically accessible and protected by a physical security plan including access control, which will allow authorized election management to gain physical access to the signing authority for physical file transfer pre and post signing when accessing the interfaces between Tally/ballot layout solution, and BMG, or ISB pre-processor.

As the Digital Signing Authority is a Certificate Authority, the Contractor will follow the recommendations outlined in the CA/Browser Forum Network and Certificate System Security Requirements to protect the Certificate Authority itself.

3.7   Systems Integration and Coordination

In the role of Systems Integrator, the Contractor shall provide Systems Integration Services and Coordination Services as part of the VSAP Project to ensure seamless integration of all VSAP components and the overall VSAP Solution. The Contractor's role will change depending on the VSAP component considered. However, it is the County's expectation that the Contractor will

collaborate closely with the County to ensure the delivery of an integrated solution and a tightly coordinated approach across all parties.

As part of the overall Implementation Plan, the Contractor shall develop a strategy and plan to address the requisite Systems Integration Services and Coordination Services that cover the entire VSAP Project life cycle — from development to testing to deployment in pilot, "mock election" and full production stages. The activities and deliverables in this section shall address the execution, monitoring and reporting status of the Systems Integration and Coordination Services as further described below.

3.7.1   Provide Systems Integration Services

The Contractor shall provide **"Systems Integration Services"** to ensure seamless integration of all VSAP components and the overall VSAP Solution. System Integration Services will be applied to all of the functionality, interfaces, integration, security, etc. of the BMD, BMG and ISB. When any functional, security or technology issues arise related to the seamless integration of the BMD, BMG and ISB, the Contractor will ultimately be responsible for resolution and all regression testing of all impacted components.

Deliverable 3.7.1 Report of Systems Integration Activities	
Delivery Timing	Submitted no later than the fifth day of each month
Delivery Frequency	Monthly for the duration of full Implementation
Description	The Contractor shall deliver a Report of Systems Integration Activities including, at minimum: ■ Integration issues identified ■ Issue description ■ Parties involved ■ Planned resolution activities and timing ■ Actual resolution activities and outcome

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

As part of the planning project management process, all the stakeholders must agree upon an internal, formal integration framework that will specify all interfaces and functional integration points required by the solution components. This framework will be created and managed by the software architect. This individual, with support of the technical group, will have the responsibility to resolve any technical or functional integration issue, as well as any possible internal conflict between different module owners. When an integration problem arises, the software architect will discuss it with the group to find an optimal solution, and then update the integration framework; however, if an agreement could not be reached, escalate the problem to the project management team. This technical team will design and review the integration tests that will be executed to meet the integration quality criteria established for the deliverables, and the project. Any changes to the integration framework will be shared between all the stakeholders, based on the project communication plan, and change urgency. The procedure for requesting and committing changes to the integration framework will follow the change management procedures established by the Project Manager.

As part of the control project management process during the development phase, all status information regarding testing (unitary tests, stress test, and integration tests) will be consolidated in a single location using an application designed to plan, track, and manage software development projects. As part of the development control activities, every developer, QA tester, and continuous integration automation server will routinely report the test results in the tracking software in order have an ongoing integration status. The software architect, or any other designated stakeholder can generate the Report of Systems Integration Activities with the frequency requested, or on demand, based on the information available in the tracking system.

3.7.2   Provide Coordination Services

The Contractor shall provide **"Coordination Services"** to ensure a tightly coordinated approach across all parties (County and third-party vendors) responsible for developing or delivering any VSAP component. Coordination Services will be applied to all the interfaces and functionality of all components of the VSAP Solution including ballot layout solution, Tally System, ePollbook and the thermal printers connected to the ePollbook as illustrated in Figure 9. As part of Coordination Services, the Contractor will identify performance issues related to any component and associated interfaces, identify the party responsible for the component/interface, ensure a resolution is identified, oversee resolution activities and confirm resolution of performance issues. When any issues arise related to any of the VSAP Solution components, the Contractor will be responsible for coordination among third-party vendors and the County and for ensuring that a resolution is achieved, but not for performing changes to components developed by the County (i.e., ballot layout solution, Tally System) or by a third-party vendor (i.e., ePollbook and thermal printers connected to the ePollbooks) as those parties will be responsible for changes to their components.

Figure 9.   Overview Diagram with Overlay for Contractor Coordination

Deliverable 3.7.2 Report of Coordination Activities	
Delivery Timing	Submitted no later than the fifth day of each month
Delivery Frequency	Monthly for the duration of full Implementation
Description	The Contractor shall deliver a Report of Coordination Activities including, at minimum: ■ Coordination issues identified ■ Issue description ■ Parties involved and responsible for resolution ■ Planned resolution activities and timing as provided by the responsible party ■ Actual resolution activities and outcome as confirmed by the Contractor

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

To successfully coordinate the development and delivery of all VSAP components, the Contractor's Project Manager will lead a committee comprised of a lead from each VSAP component team. At the beginning of the project, this committee will meet weekly to develop a consolidated delivery plan that will include expected delivery dates, criteria to report actual progress, critical issues found, and their current status. In addition, the committee will establish the information report frequency, and the preferred method in which the information is delivered to the group. A conflict resolution process will also be established and explained to the committee members, to clarify how conflicts will be managed, as well as an escalation process, in cases where an agreement could not be reached by the committee. After the plan is completed, information will be reported weekly, in addition to the committee meeting once per month. In the event of a critical incident that could impact other areas is detected, the committee would meet on demand, as required.

The Project Manager will be responsible for consolidating a log of issues reported, and for generating a monthly Report of Coordination Activities, including all parameters requested, and will include any additional information that could be considered of interest to the County, or the Contractor.

Governance and procedures will be based on best practices from the current PMI project management book regarding team management, integration, procurement, and communicaiton.

3.8   Perform Pre-Certification Tests

The Contractor will retain the services of a State-Approved Testing Agency, which is an Independent Testing Authority that is approved by the California Secretary of State to conduct voting system certification tests for the State. The State-Approved Testing Agency will conduct the CVSS required tests during the development of the BMDs, ISB and BMG components until they are very likely to pass the required tests for certification and use in California as components of a voting system (e.g., comply with the CVSS). These tests shall occur during the EVT stage and include:

- ■ Functional testing — Functionality testing will be conducted, depending on the system's use of specific technologies and configurations, the systems' capabilities and the outcomes of previous testing

- ■ Usability/accessibility/privacy testing — This will test the fully integrated VSAP Solution including internal and external system interfaces, usability (including volume testing), accessibility and security

- ■ Hardware testing — This will evaluate the ability of the system hardware to withstand exposure to the various environmental conditions, storage, maintenance and transportation

- ■ Software testing — This will evaluate programming completeness, consistency, correctness, modifiability, structure and traceability, along with modularity and construction

- ■ Telecommunications testing — This will test for the transmission of certain data including, but not limited to, voter authentication and ballot definition

- ■ Security testing — This will consist of, but is not limited to, effective access control, physical data security, penetration testing and other forms of vulnerability testing

- ■ Quality assurance and configuration management — This will involve review of submitted documentation for completeness and accuracy in describing the VSAP Solution, its conformance to the requirements for manufacturer configuration and quality assurance practices

The intent of this pre-testing is to minimize the time and iterations required to obtain certification of the voting components once they are submitted to the California Secretary of State. The County expects to conduct the necessary iterations of testing and modifications before, rather than during, the actual certification testing.

Attention should be paid early on to the requirements of the application and documentation delineated in Section 9, the Technical Data Package, of the CVSS, including system performance, system functionality description, system hardware specifications, software design specifications, system security specifications, system test and verification specifications, system maintenance manual, personnel deployment and training requirements, configuration audits and system change notes.

The Contractor will perform security tests in accordance with the End-to-End Security Plan and the requirements of the CVSS. The Contractor will record and report the results for review and approval by the County. The Contractor will fix any errors or issues encountered, conduct root cause analyses as required and document outcomes of any re-testing activities. In addition to Contractor's security tests, the County may, at its discretion, conduct its own penetration tests to validate all or a portion of the security requirements specified in this document. The County will record and report the results and the Contractor will fix any errors, omissions or issues identified in the penetration tests report. The Contractor will conduct root cause analyses as required and document outcomes of any remediation activities.

Deliverable 3.8 Pre-Certification Test Results	
Delivery Timing	Submitted for approval no less than 30 calendar days prior to EVT completion
Delivery Frequency	As many times as necessary to make California Secretary of State Certification likely without re-submission

Deliverable 3.8 Pre-Certification Test Results	
Description	The Contractor shall provide the results of completed certification tests to the County for each iteration and the final test results that indicate likely approval by the California Secretary of State.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.
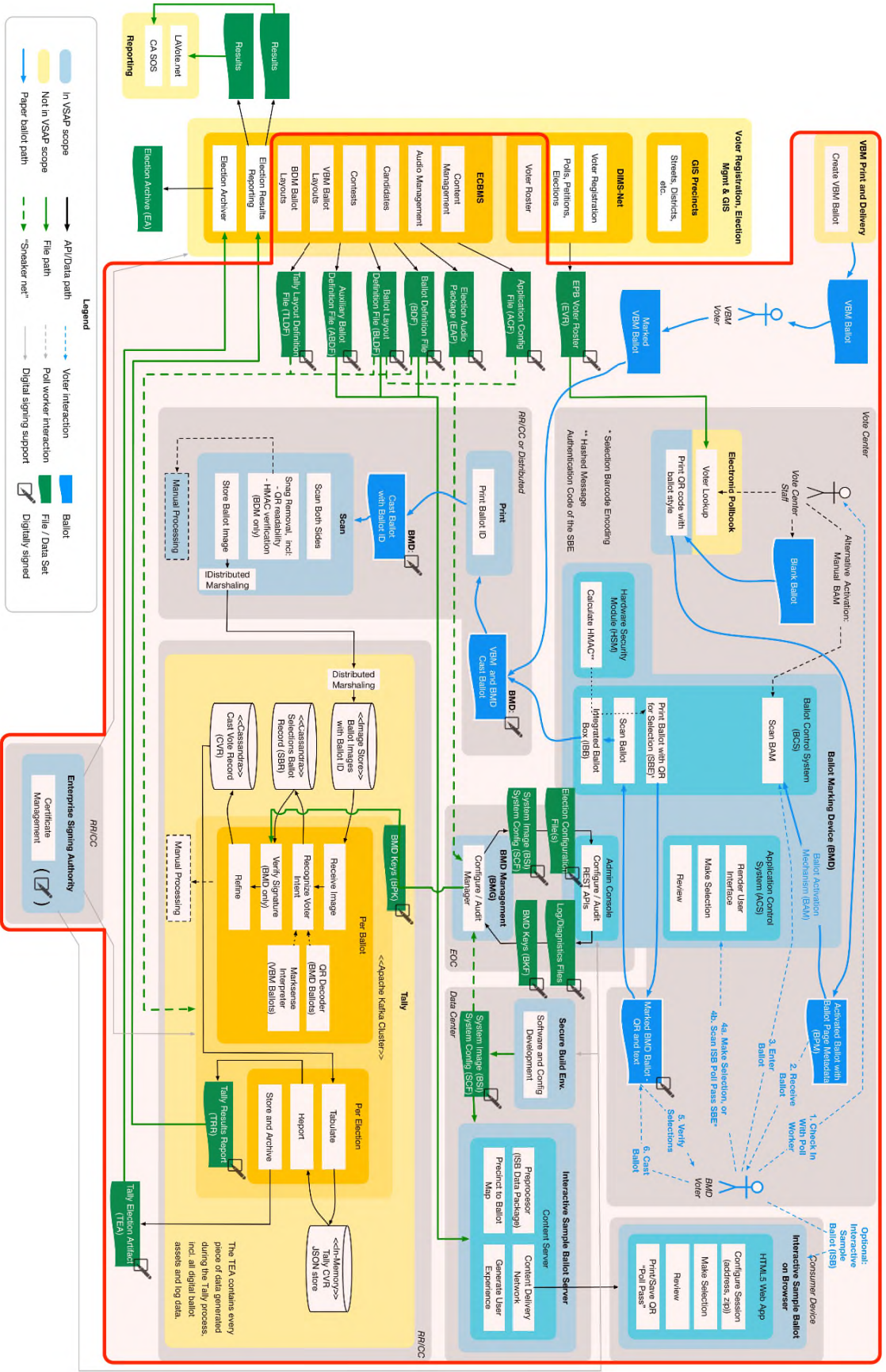
Pre-Certification testing is critical to the timely completion of the VSAP project. The Contractor has a team of experienced Certification Specialists that is led by our Certification Manager, a former State-approved Testing Authority Laboratory Director. Drawing upon the cumulative knowledge of this team, the Contractor will be able to successfully shepherd the VSAP solution through California Secretary of State certification. The certification manager will be an integral part in identifying CVSS requirements as part of the FRD that drives the creation of the requirements traceability matrix (which is part of the Design and Development Plan, see Section 2.1.1).

During a series of kickoff meetings with the County, the Certification Team and the County will agree upon the proper way to assess out-of-scope components for their compliance with the CVSS. Once these agreements have been made, the Certification Team will begin the assessment process to determine what gaps exist between the development already performed and the CVSS requirements. This gap assessment will be used by the Project Management Team and Product Managers for the purpose of scrum planning, to ensure developing against such requirements is included in the overall development schedule.

Beyond the initial planning phases, the Contractor's approach to obtaining Certification is to integrate Certification/Compliance Specialists as full-time members of the product development teams (see Sections 2.2.1.4.1.1a, 2.2.1.2, 2.2.2a, and 2.2.3a for lists of roles and responsibilities). The Certification/Compliance Specialists will be present at scrum meetings to ensure the CVSS requirements are being considered prior to code being created and will participate in code review to ensure proper coding conventions were adhered to. The Certification/Compliance Specialists will serve as a daily resource to the engineers (who are following a TDD process), so that unit and functional tests are designed from the beginning to comply with CVSS requirements. In such a way, CVSS compliance will be woven directly into the DNA of the code. In addition to supporting the development teams, the Certification Specialists will also work with the QA Lead and Engineers on each of the product teams to ensure requirements are interpreted and tested properly across all category of tests, both automated and manual, and will be specified in the product Test Plans (see Sections 2.2.1.4.1.1b, 2.2.2b, and 2.2.3b).

Throughout the development, implementation and M&S lifecycles, the Certification Manager will oversee the individual Certification/Compliance Specialists on the product teams, providing guidance on requirement interpretations, and how the requirements should be applied. The Certification Manager will coordinate the ramifications of CVSS requirements on any functional requirement changes with the Project Manager (which will be documented as updates to the FRD and requirements traceability matrix) and will facilitate communications with the County, State-Approved Testing Agency, and/or the office of the California Secretary of State.

In coordination with the Solutions Architect, the Certification Manager will arrange for iterative Integration Testing to ensure that all components, both in and out-of-scope, are prepared for California Secretary of State Certification testing. These tests will allow all development teams,

Project Managers, and the County to verify that the VSAP Solution, as a whole, is functioning correctly and by coordinating the involvement of a State-Approved Testing Agency, these tests will provide in-site assessments on the compliance of the Solution to the CVSS. In addition, during the EVT stage, the Contractor will integrate the State-Approved Testing Agency resources into our QA Teams. As Builds are completed, they will be verified by our own Compliance Team and copies of the Build will be provided to the State-Approved Testing Agency for their review. This same process will be used for all aspects of the development effort; Technical Data Package, Security, and Hardware, etc. Using this process will greatly minimize the risk of needing many iterations to successfully complete certification tests.

The Certification Manager and Project Manager will document all of these Pre-Certification tests, and prior to the end of EVT, the Certification Manager will prepare a Pre-Certification Test Report for the County and for inclusion to the PIL.

3.9 Develop VSAP Solution Use Procedures

The Contractor will develop VSAP Solution Use Procedures that detail the step-by-step instructions to be carried out to deploy the VSAP Solution to the public for use in an election as required by the CVSS for submission of the Technical Data Package. The Use Procedures shall cover all components of the VSAP Solution including the ballot layout solution, Tally System, ePollbook and the thermal printers connected to the ePollbook in addition to the BMD, ISB and BMG.

Deliverable 3.9 VSAP Solution Use Procedures	
Delivery Timing	Submitted for approval no less than 60 calendar days prior to submission of Technical Data Package to California Secretary of State
Delivery Frequency	Once
Description	The Contractor shall develop the VSAP Solution Use Procedures as required for submission to the California Secretary of State per Section 2.4.2.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The Contractor will deliver the required Use Procedures to the California Secretary of State no less than 60 days prior to the submission of the Technical Data Package. These procedures will be split into two parts, the first procedure document will contain the necessary information to guide the user through the processes of installing the certified environment, election software, and any other configurations that need to be made, and the second procedure document will contain a keystroke-by-keystroke guide that will take you through the creation and deployment of an election. These procedures will also include L&A steps, proper security seal placement, and other necessary steps to ensure correct operations for the voting system.

3.10 Deploy VSAP Solution (Prior to Full Rollout)

As noted in Section 3.2, the County intends to initially deploy the BMDs in Vote Center Test Labs, the 2019 Mock Election, the November 2019 Pilot (Local Election) and Vote Center Demonstration Centers prior to full Countywide Rollout for the 2020 election cycle.

During deployment, the Contractor shall be responsible for immediate assistance to the County as required to assist it with the operation of the BMDs, ISB and BMG and for assisting the County staff with the implementation of the Level 1 Help Desk capabilities. Before deployment can begin, the Contractor shall ensure that the following activities have taken place:

■ The Implementation Plan is fully developed, documented and approved, and includes the specific timeframe and activities associated with the Vote Center Test Labs, the 2019 Mock Election, the November 2019 Pilot (Local Election) and Vote Center Demonstration Centers

■ All critical resources have been identified and are available to support deployment activities

■ Critical or new technologies have been fully tested and key resources identified to provide needed support

■ Contingency plans are in place to address implementation issues that may arise

The Contractor is responsible for direct and immediate support to the County staff in deployment. After deployment, all major BMD, ISB and BMG functionality described in the final design documents shall be available including:

■ Security controls as described in the End-to-End Security Plan

■ Interfaces with all VSAP components, regardless of whether in-scope for the Contractor

After deployment of the VSAP Solution for each milestone, the Contractor shall document lessons learned. The Contractor shall review the lessons learned with the County and identify action items for the Contractor, County and/or other third-party vendors to be considered and completed prior to the subsequent deployment of the VSAP Solution.

Deliverable 3.10a Deploy VSAP Solution (Prior to Full Rollout)	
Delivery Timing	Upon completion of successful deployment of the VSAP Solution during each deployment milestone prior to Full Rollout as defined in Table 1, Table 2, Deliverable 3.1 (Implementation Plan) and Deliverable 3.2 (BMD Production Schedule and Strategy)
Delivery Frequency	Once per deployment milestone
Description	The Contractor shall deploy the VSAP Solution for each deployment milestone prior to Full Rollout as described in Section 3.10.

__The Contractor agrees to complete all the requirements set forth above in this section.__
__The information below is intended to provide additional detail about how the__
__requirements will be executed by the Contractor.__

The Contractor will assist the County in deploying the VSAP Solution prior to Full Rollout per the Implementation Plan of Section 3.1.

Deliverable 3.10b Post-Deployment Lessons Learned	
Delivery Timing	Submitted for approval no more than 30 calendar days after completion of successful deployment of the VSAP Solution during each deployment milestone prior to Full Rollout
Delivery Frequency	Once per deployment milestone
Description	The Contractor shall document lessons learned about each deployment as it relates to the Contractor In-Scope Components and the integration of the overall VSAP Solution. The Contractor shall also provide recommendations of changes to improve future deployment, including the responsible party and action items.

__The Contractor agrees to complete all the requirements set forth above in this section.__
__The information below is intended to provide additional detail about how the__
__requirements will be executed by the Contractor.__

After deployment of the VSAP Solution, at each milestone the Contractor will issue a **Post-Deployment Lessons Learned Report**, with input and collaboration from the VSAP Program Management Organization, other stakeholders, or subcontractors. The primary purpose of a lessons learned review is to assess the overall success of each project milestone, the project in general, and to learn from issues or mistakes, and to reinforce best practices and innovative solutions. The Contractor will review all noted lessons learned with the County, identify, and agree upon solution/improvement action items for the Contractor, the County, and/or other third-party vendors before initiating the next stage in deployment of the VSAP Solution.

The Contractor has a structured approach to gathering lessons learned by cataloging information in the PIL, via the project page platform in SharePoint, each lesson acquired throughout each deployment stage, or as requested by the County, at the end of each deployment milestone. Lessons are reviewed and analyzed by the Project team using a Root Cause Analysis process to determine the cause of the event and identifying an effective solution to avoid the issue or problem in future deployment stages, as well as to improve performance for the next stages as part of our drive for continuous improvement.

The project team will be trained on the process for lessons learned identification and analysis; therefore, value added, and high improvement impact lessons learned are recorded, and included in the PIL.

A log will be available in the PIL for team members with authorized access to record lessons learned. An example of a Lessons Learned Log and individual Lesson Learned content is shown in the following graphics taken from Confluence for a model project, the format, layout, and lessons learned categories will be customized to comply with the specific requirements of the County's VSAP Program.

Figure 10. Lessons Learned – Screenshot #1

Figure 11. Lessons Learned – Screenshot #2

Each lesson learned will be thoroughly analyzed and included as part of the Post-Deployment Lessons Learned Report. The Post-Deployment Lessons Learned Report is a typical end-result of the iterative process described in Section 3.10 and will be documented and discussed through the PIL.

3.11 Deploy VSAP Solution to All Sites

Upon successful completion of the deployment for each milestone prior to Full Rollout, the County will deploy the VSAP Solution throughout the County both in early voting and on Election Day. Certification by the California Secretary of State is required prior to full deployment.

During deployment, the Contractor shall be responsible for immediate assistance to the County as required to assist it with the operation of the BMDs, ISB and BMG and for assisting the County staff with the implementation of the Level 1 Help Desk capabilities. Before deployment can begin, the Contractor shall ensure that the following activities have taken place:

■ The Implementation Plan is fully developed, documented and approved, and includes the specific timeframe and activities associated with Full Rollout

■ All critical resources have been identified and are available to support deployment activities

■ Critical or new technologies have been fully tested and key resources identified to provide needed support

■ Contingency plans are in place to deal with implementation issues that may arise

The Contractor is responsible for direct and immediate support to County staff in deployment. After deployment, all major BMD, ISB and BMG functionality described in the final design documents shall be available including:

■ Security controls as described in the End-to-End Security Plan

■ Interfaces with all VSAP components, regardless of whether in-scope for the Contractor

Deliverable 3.11 Deploy VSAP Solution to All Sites	
Delivery Timing	Upon completion of successful deployment of the VSAP Solution for a Countywide election in the 2020 election cycle (Full Rollout)
Delivery Frequency	Once
Description	The Contractor shall deploy the VSAP Solution to all sites as described in Section 3.11.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The Contractor will assist the County in deploying the VSAP Solution to all sites per the Implementation Plan of Section 3.1.

3.12 Comply with Applicable Elections Code or Regulations After Initial California Secretary of State Certification

Should applicable provisions of the Elections Code or regulations change after Certification but during Implementation, the Contractor will be required to comply with current Elections Code and regulations.

Any Additional Work to support this task shall be provided based on a negotiated work order pursuant to Section 6.0.

If the VSAP Solution is determined to be out of compliance, for reasons not due to changes in the Elections Code and regulations (such determination to be made by the County at the County's sole discretion), the work to bring the VSAP Solution into compliance will be the responsibility of the Contractor at no additional cost to the County.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

After the initial certification process, the Contractor will continue to review the VSAP Solution to ensure that the VSAP Solution remains in compliance. If the Elections Code or regulations change after certification, the Contractor will perform an impact analysis and provide the County with a plan to comply with the changing regulations. The Contractor will offer its assistance to the County in completing the necessary steps to remain in compliance. This work will be negotiated between the Contractor and the County, and then a formal work order will be requested of the County pursuant to Section 6.0. In the unlikely event that the VSAP Solution is determined to be out of compliance, for reasons not due to changes in the Elections Code and regulations, the Contractor will perform the necessary work to bring the VSAP Solution into compliance at no cost to the County.

3.13 Component Hardware Services

The BMD includes the hardware, firmware, software and third-party software necessary and sufficient to operate the BMD. The Contractor will provide the following services for the BMDs:

- Repair and replacement (individual BMD-specific)
- Product recall and update (*all* BMDs)
- Installing and testing and re-installing and re-testing component software updates
- Preventative maintenance (ahead of even-year election cycles and prior to any special Countywide elections)
- Maintenance of the Bill of Materials for all Contractor In-Scope Components
- Hardware life cycle management (e.g., hardware sub-component may be obsolete in the future and the Contractor should be aware/keep track and identify replacement(s) accordingly. This effort will need to be far enough in advance to consider re-certification, if necessary, prior to an election)
- Quarterly reporting to the County of changes in Bill of Materials and hardware life cycle

As applicable, the Contractor shall provide the following services in accordance with the response times listed in Table 3 below.

3.13.1   Provide Repair and Replacement Services

The Contractor shall repair or replace the BMDs on-site or off-site. The Contractor will not be required to substitute another BMD while one is being repaired.

Repair and replacement bundled services will be for damage or breakage due to normal use. Units subject to abuse or negligence by the County, such as being left out in the rain, shall be repaired for a fee under a negotiated work order pursuant to Section 6.0.

If any component of the BMD requires servicing, the Contractor shall endeavor to provide such servicing at the County's location. If the Contractor determines it necessary to replace or repair any BMD Unit, or component, at the Contractor's facility, the Contractor shall coordinate all transportation logistics and pay all shipping costs to transport such BMD Unit, or component, to and from the Contractor's location. All such required repairs are to be completed within the timeframe specified in Table 3 without additional cost to the County. The Contractor shall return the BMD at its own expense by overnight shipment, if necessary.

Deliverable 3.13.1 Repair and Replacement of BMDs	
Delivery Timing	Upon completion of successful deployment of the VSAP Solution for a Countywide election (Full Rollout)
Delivery Frequency	As needed
Description	The Contractor shall repair and replace BMDs as described in Section 3.13.1.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

During the contract execution, as part of the hardware provision, the Contractor will include within the warranty period a repair or replacement service to ensure full operation of all BMDs to

be provided, including any additional BMDs ordered by the County. However, if a repair or replacement is necessary during the M&S period, after the warranty has expired, any repair to the BMD caused by abusive use will generate a cost for parts and labor, which will be invoiced to the County.

The repair and replacement service will be conducted on-site, such as in the County warehouse (e.g., EOC), where the BMD readiness will be executed, or by the on-site field support during election events. Also, if a repair of the BMD is required after an on-site replacement, this may be executed off-site in the Contractor's facilities, where the Contractor will be responsible for the logistics and cost incurred for the BMD retrieval, and its return.

The service request will be received through the Contractor's Level 2 Help Desk (L2HD) for incident tracking, which allows the County to monitor the status from start to finish within the system. In those cases where the incident requires a direct repair, or replacement of any component and/or the complete BMD is involved, as part of the monitoring, all measures applied to resolve the incident will be logged into the Help Desk solution.

During the evaluation of the incident, the technical team will determine whether the warranty covers the service repair, such as the incident is due to damage/breakage from normal use, or if it is out of warranty scope due to negligence and/or abusive use of the equipment/component by the operator.

Depending upon the phase of deployment, the response time and solution time will be governed by the schedule specified in Table 3.

The Contractor's extensive expertise in maintenance and repairs spans our vast hardware portfolio, which not only includes machines with ballot scanning parts, but also touch screen voting machines, authentication devices, voting session activators, counting devices, and mobile biometric registration units. The Contractor's knowledge library contains information about procedures related to the most common hardware malfunctions that provides the technical team and the County with diagnostics and repair procedures to test the hardware, identify the problem using the isolation technique, and to find the root cause of the malfunction. Using this method, the problem is isolated through trial and error, then by exchanging the suspected defective component, and lastly, by testing the machine to verify if the problem has been resolved.

The Contractor's experience gives us an expansive database of possible problems, possible root cause, and the steps to isolate it, and resolve it. For example, in our experience with the ballot scanning machines, such as the BMDs, we can direct you to the following five most common hardware glitches:

1. Loose Wiring Connection
2. Paper Feed Problem
3. No Power
4. Screen Problems, such as Distorted, Pixelated Font, Abnormal Display, or Touch Function Failure/Touch Screen Failure
5. Peripheral Failures, such as USB Ports, Printer, and others

The Contractor has documentation on all hardware with indications of the problem, possible causes, repair work flow, and hardware replacement procedure that will be adjusted to the specified hardware design, and part of the BMD requested by the County, giving us the best and quickest way to diagnose, detect, and repair any incident reported in the BMD.

3.13.2 Provide Component Recall and Update Services

The Contractor shall provide:

- Deficiency correction — Correct all Deficiencies in all BMDs

- Error correction — Provide user support for all errors (whether caused by deficiencies or user error) arising during use of the BMD through a Help Desk service and other technical and administrative staff

- Documentation — Provide complete BMD documentation and update such documentation periodically to account for repairs and changes in the BMD

- Training — Conduct user and administrator training for County regarding any updates or other changes to affected components

Deliverable 3.13.2 Contractor In-Scope Component Recall and Update Services	
Delivery Timing	As required by County delivery of Defect-free components Within 60 days of delivery of Defect-free components, delivery of the following: ■ Updated documentation related to the affected component ■ Updated training materials related to the affected component if needed
Delivery Frequency	As needed
Description	Contractor will deliver: ■ Defect-free components ■ Updated documentation related to the affected component ■ Updated training materials related to the affected component, if needed

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

During project execution, should a defect in the BMD design, components, or parts approved by the County as part of this project that are provided by the Contractor, or a third-party provider, experience any issue or design flaw that affects the operability of the BMD, the Contractor will analyze the incident, and present the findings to the County. A report will then be generated with the corrective measures, allowing the Contractor and the County to select the best resolution, such as a repair or replacement of the component(s) from the affected BMD, which would trigger a recall process of the affected BMDs. This period includes the warranty period and, if contracted, the M&S period(s).

After the acceptance of the most viable corrective measure, the Contractor will conduct the following steps:

1. Analyze and execute a deep root cause finding to evaluate the impact of the problem. Please consider the reported problem could be caused by a deficiency in a component of the BMD, an error caused by deficiencies, or user errors reported during the project execution, or any other problem that affects, or could affect the normal usage of the BMD in actual, or future use.

2. The Contractor will present to the County the root cause findings and present all the possible measures to resolve the problem. This measure could be a repair, a change, or an update of any sub-component of the BMD.

3. After an agreement between the County and the Contractor in the best measure to be executed, present a recall, or process plan to resolve the problem.

4. Proceed to execute a test in the recall process, to confirm the problem is resolve with the selected measure. If the measure resolves the incident, it will be evaluated with the County's support, and if needed, the BMD will be re-certificated.

5. Execute the recall process, after the solution has been re-certified, if required, this could apply to a unit, batch, or lot, to resolve the issue. This recall process could stem from a software update, hardware repair, and/or hardware replacement.

6. Update any documentation that is affected by the measure taken to resolve the process will be updated and made available to all stakeholders.

7. Execute a re-training to update training sessions affected by the measure(s) taken to resolve the problem.

Using our in-depth manufacturing experience, we will select the best components created in house, or by third-party hardware providers to define BOM required to manufacture the BMD to ensure the best quality, which prevents malfunctions from component failure. Additionally, to ensure the proper functioning of the final design, Engineering models are assembled for testing prior to the mass production process, significantly reducing the probability of a subsequent component failure, diminishing any need for activation of a recall process.

3.13.3   Develop Preventative Maintenance Schedule

The Contractor will develop a Preventative Maintenance Schedule for the BMDs.

Deliverable 3.13.3 Preventative Maintenance Schedule	
Delivery Timing	Submitted for approval upon delivery of DVT BMDs

Delivery Frequency	Once
Description	The Contractor shall develop a Preventative Maintenance Schedule.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The Contractor will produce a Preventative Maintenance Schedule as agreed upon with the County.

3.13.4   Conduct Preventative Maintenance on BMDs

The Contractor will conduct preventive maintenance on all of the BMDs according to the agreed upon Preventative Maintenance Schedule.

Deliverable 3.13.4 Preventative Maintenance on BMDs	
Delivery Timing	Completed as agreed upon in the Preventative Maintenance Schedule
Delivery Frequency	Ahead of even-year election cycles, prior to any special Countywide elections and other mutually agreed-upon frequencies
Description	The Contractor shall conduct preventative maintenance on all of the BMDs.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The Contractor, in conjunction with the County, will develop and execute a preventative maintenance script consistent with the Preventative Maintenance Schedule. Preventative maintenance will be conducted at the County facility (e.g., EOC, transitional facility).

3.13.5   Track BMD Hardware Lifecycle and Maintain the Bill of Materials

The Contractor will establish and track the BMD sub-component hardware life cycles and review, update and maintain the Bill of Materials for the BMDs to ensure the timely availability of all sub-components of the BMDs.

The Contractor will submit the updated Hardware Lifecycle and Bill of Materials quarterly to the County noting changes, near-term end-of-availability items and recommended substitutions as necessary to ensure the feasibility of repair and additional manufacture of BMDs. Though the County plans to order quantities of BMDs that ensure sufficient spares for each election, the Contractor will need to cooperate in the monitoring and planning of these life cycles to ensure the County is not short of working BMDs for any election during the Contract period. The replacement of parts in the BOM due to a notice of obsolescence of sub-components must take into account the possibility that re-certification (or *de minimis* approval) by the California Secretary of State may be necessary before implementing replacements in the BMDs.

Deliverable 3.13.5 BMD Hardware Lifecycle and Bill of Materials Report	
Delivery Timing	Submitted as per the agreed upon Project schedule
Delivery Frequency	Quarterly

Description	The Contractor shall establish and track the BMD hardware life cycle, maintain and update the Bill of Materials and inform the County on any changes or near-term end-of-availability items. The BMD Hardware Lifecycle and Bill of Materials Report shall also include the Contractor's recommended hardware substitutions, if necessary.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

For the duration of the M&S period, the Contractor will establish and track the BMD hardware life cycle, maintain and provide quarterly updates to the BOM in the form of a quarterly Bill of Materials Report, and proactively inform the County of any changes or upcoming end-of-availability items and suggest replacements. Changes to the BMD hardware will be approved by the County and documented in the appropriate documentation in the PIL as described in 3.16.4. Any changes may require updates to the firmware, which will go through the revision process described in Section 2.2.1.15/2.2.1.17. Once all changes have been complete, the Contractor will submit the updated BMD for re-certification described in Section 3.16.3, which is expected to follow a similar path as the original certification process. All steps in the re-certification process will be fully documented and stored alongside the documentation of the original certification process.

3.14 Component Software Services

The Contractor will provide the following services for the BMD, ISB and BMG software:

- Software changes — Once an update to the software has been completed, certified (if needed) and accepted by the County, the Contractor shall install the changes. For the BMD software specifically, the Contractor shall install the changes into all deployed BMDs with assistance from the County as required. The Contractor shall provide a Software Maintenance report including installs and tests, re-installs and re-tests

- Deficiency and Error correction — Corrections for all Deficiencies and incorrect features (**"Errors"**) in the component software

- Documentation — Updates to all related documentation to account for any corrections to the BMD, ISB and BMG software components

- Training — Conduct related user and administrator training

Deliverable 3.14 Report of Software Maintenance	
Delivery Timing	As needed
Delivery Frequency	As needed
Description	The Contractor shall deliver a report of the software maintenance activities during the period since the last report, discussing the activities as described above.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

As part of the Software Maintenance Services, the Contractor will generate a report as needed regarding any applicable updates performed for the BMD, ISB, or BMG. The report may include:

1. **The installation of all software changes on the devices**. Once an update to the software has been completed, certified (if needed), and accepted by the County, the Contractor will install the newly updated software version in all deployed BMDs. The report will detail the software updates issued and installed in the equipment during the current quarter period.

2. **Deficiency and Error corrections**. The Contractor will correct deficiencies and incorrect features (**"Errors"**) in the component software, in which case, the Contractor will install the updated software version in all deployed equipment. The report will detail any deficiencies, or errors corrected during the current quarter period.

3. **Documentation updated**. When a new software version is installed and deficiencies or errors are corrected, the related documentation will be updated to reflect the changes that were made in the BMD, ISB, and BMG software components. The report will detail what documentation has been updated during the current quarter period, due to changes on the software.

4. **Training**. As needed, based on the nature and complexity of changes to the software, the Contractor will prepare and conduct related user and administrator training to inform stakeholders of the changes and implications of the updated software versions installed on the BMD equipment, and changes that were made in the ISB, and BMG software components. The report will detail what training sessions were carried out during the current quarter period due to changes on the software, allowing updates to the team.

For each update, the Contractor will provide the County with a Software Maintenance Report, which will include details on the installs, tests, re-installs, and re-tests performed.

When analyzing and correcting issues, the Contractor complies with the process of customization and development of software passing through the following general phases:

- **Information analysis and design:** Any error or deficiency identified and reported by the stakeholders will be analyzed. The Contractor's personnel will be meeting with authorized staff from the County to clarify and define the current situation and condition of the systems and processes, to fully understand the error, and to design the corrections, or changes in the software needed to correct the deficiency. If the correction implies a major change to the software (i.e. solution architecture, code structure, or feature functionality), then the proposed design will be discussed with the County to obtain approval or make the needed modifications.

- **Implementation of software development:** During this phase the design is translated into code. Unit tests are carried out to ensure that the requirements and correct designs have been accomplished. The outcome of this phase is the software version Release that will be tested in an integral manner in the next phase.

- **Quality assurance:** A set of tests are performed to validate that the software complies with every requirement defined, and no new defects, or bugs are present in the Release. Since the solution is composed of multiple components, each time a new software version is released for any of the components, the whole solution is subject to complete end-to-end testing, to validate that no change has had a negative impact on any functional, or non-functional feature of any of the components. During this phase, the County will also test and approve the released version before loading it on the equipment.

■ **Equipment update:** The Contractor will perform the required activities to ensure that the previously deployed equipment, as well as the equipment that may be stored, is kept up to date with the latest software version released. The Contractor will agree with the County on the best logistical plan to achieve this goal.

■ **Knowledge Transfer:** The Contractor will transfer all relevant knowledge to County personnel, which includes updating all documentation and training related to the software components that need to be modified, as based on the necessary software changes. It also includes conducting training sessions for operative, technical and/or administrator County personnel, as needed.

3.15 Sub-Component Services (Third-Party Hardware & Software)

The Contractor will be responsible for fixing or providing alternative solutions for deficiencies or errors in third-party hardware and software included in the BMD, ISB or BMG components. Examples of third-party sub-components are processor boards, QR code scanners and operating systems that are embedded in the BMD, ISB or BMG.

The Contractor shall ensure support for third-party hardware and software is provided to the full extent of the third-party warranty and sufficient to meet the County's needs. The Contractor will be the primary point of contact with the County for remediating third-party hardware and software issues and will be responsible for ensuring third-party compliance with the Contract and deliverables requirements.

The County shall not substitute third-party hardware or software provided by the Contractor with a different version than in use in the BMD, ISB or BMG.

In the event that any Deficiency in a third-party software sub-component is not promptly remedied by the manufacturer or author of the sub-component, the Contractor shall ameliorate any Deficiency in the BMD, the BMG or the ISB arising from such Deficiency, in all ways in accordance with its obligations (e.g., by the development of alternative software solutions for the BMD, the BMG or the ISB for the defect in the third-party software, or the replacement of the third-party software with other software to perform the required functions). Similarly, for third-party hardware sub-components, the Contractor will be required to repair or replace third-party hardware due to Deficiencies in them.

If any Deficiency or error is identified in third-party hardware or software components, the Contractor shall:

■ Make reasonable efforts to diagnose the Deficiency, assist County with remedying the Deficiency, assist County with obtaining support or warranty service from the third-party vendor or warranty service provider; and remedy any Deficiency in the BMD arising from any defect in or misconfiguration of any such third-party components

■ If any Deficiency in third-party software is not promptly remedied by the warranty service provided or author of such component, the Contractor shall promptly ameliorate any Deficiency in the BMD, the BMG or the ISB software arising therefrom, in accordance with its obligations to maintain the BMD, BMG, or ISB software. Contractor's duties with respect to such third-party software shall <u>not</u> include modifying the Source Code of such third-party software to correct Deficiencies therein. However, by way of example and without limitation, Contractor's duties in respect to the BMD software <u>shall</u> include:

❑ Ensuring compatibility between all third-party software components and the BMD, BMG, or ISB software, if necessary by modifying the BMD, BMG or ISB software to maintain such compatibility

❑ Remediation of any Deficiencies related to the configuration of any third-party software components as used in the BMD, BMG, or ISB software and development of alternative software solutions in the BMD, BMG, or ISB software for bugs, errors, or other defects in the third-party software that cause the BMD, BMG, or ISB software not to perform in accordance with Specifications or that otherwise cause the BMD, BMG, or ISB software to exhibit Deficiencies

Deliverable 3.15 Report of Third-Party Sub-component Maintenance	
Delivery Timing	Submitted within five days of the end of each fiscal quarter
Delivery Frequency	Quarterly
Description	The Contractor shall deliver a report of third-party sub-component maintenance as described in Section 3.15.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The Contractor will be responsible for correcting or providing alternative solutions for deficiencies or errors in third-party hardware and software included in the BMD, ISB or BMG components. The hardware and software warranty provided by the Contractor covers the third-party components if it pertains to issue and bug fixing, it does not cover enhancements, new functionalities, new features, or changes to the agreed upon requirements. New version Releases will be provided quarterly, covering all the changes applied during the previous period, along with a report of the third-party sub-component maintenance procedures applied.

The Contractor will agree with the third-party hardware and software manufacturers to provide warranty and support terms that comply with the County's needs, serving as the contact point and intermediary for the warranty claims.

It is important to note that the warranty and maintenance terms and conditions cover only the third-party hardware and software that composes the solution provided by the Contractor. The County shall not substitute third-party hardware or software provided by the Contractor with a different version than in use in the BMD, ISB, or BMG.

Ultimately, the Contractor will be responsible for the total compliance of the initially delivered solution, and the mutually agreed upon necessary updates. It is important to note that integrating other hardware or software not provided by the Contractor in the solution, without the previous certification, and written authorization of the Contractor, may cause improper functioning of the solution. In this case, the warranty provided by the Contractor will not cover any defect or damage, as a consequence of such integration of unapproved hardware and/or software into the solution.

During the warranty and maintenance period, the Contractor will determine the best course of action to either repair or replace third-party hardware and/or software components or sub-component, if the manufacturer is not able to comply with the warranty and agreed upon SLA.

Any deficiency or errors identified and reported in the hardware or software components that occurs during the warranty period, the Support Service team will perform a complete analysis to recreate the conditions under which the reported error occurs. This serves to:

1. Diagnose the reported deficiency correctly to determine the failing component so as to identify the third-party manufacturer associated to the component, and to identify if the cause is related to the source code, or configuration of the component.

2. Determine and execute the best way to correct the deficiency, which might involve:

   a) Bugs in a third-party component software, in which case, the Contractor will address the warranty claim to obtain the support or warranty service from the proper third-party manufacturer to Release a new version of the software.

   b) Incorrect configuration of the component, in which case, the Contractor will determine the correct settings to be documented and applied to the corresponding components, as needed.

   c) Generate a new version of the source code for the BMD, BMG, or ISB components software, if determined that with that fix the third-party component software can remain unchanged.

   d) Provide or develop an alternative hardware and/or software solution for the failing component, which causes the BMD, BMG, or ISB components to under-perform and exhibit deficiencies.

3. Execute a new cycle of test cases to recreate and validate that the deficiency was corrected, and the overall end-to-end solution performs as defined in the requirements under normal operation, and under the conditions in which the deficiency originally occurred. The end-to-end validation means ensuring the compatibility between all third-party software components and the BMD, BMG, or ISB software, if necessary, by modifying the BMD, BMG, or ISB software to maintain such compatibility.

The Contractor will submit a report detailing any third-party sub-component maintenance activity performed, with will be delivered within five days of the end of each fiscal quarter to the County.

3.16 Configuration Management

3.16.1 Provide Builds and Releases

The Contractor will be required to provide Builds (that result in Releases) that include all Contractor In-Scope Components, all Contractor-provided third-party hardware and/or software and all Contractor provided hardware and firmware.

The Contractor shall manage and implement the BMD, BMG and ISB software and associated sub-component third-party product revisions. The Contractor and the County shall jointly determine Release schedule and time of implementation.

The Contractor shall adhere to the following process for installing a new Release:

- The Contractor shall install the Release to all relevant domains with the County approval to sync all domains as necessary

- The Contractor shall install the Release into a non-production environment

- The Contractor shall perform a regression test to ensure the Release did not negatively affect current functionality across all the Contractor In-Scope Components (BMD, BMG and ISB). Regression test results will be provided to the County and the County must approve the Release prior to its implementation

- The Contractor will work with the County in conducting integration tests with non-Contractor components (e.g., ballot layout solution, Tally System, ePollbook, thermal printers connected to the ePollbook)

- The County shall conduct UAT testing with support from the Contractor

- ■ The Contractor shall resolve problems/incidents found in regression or integration testing of the Contractor In-Scope Components

- ■ The Contractor shall provide a list of changes that may require updates to the Training Materials

- ■ The Contractor shall provide changes necessary to the system documentations

All changes and fixes shall be implemented based on a mutually agreed upon schedule. All changes shall go through all phases of testing by the Contractor and the VSAP Project Team. The test results shall be documented and provided to the VSAP Project Team for approval before a decision is made to put the new Release into production. All relevant system documentation shall be updated and provided to the County after any system changes.

Deliverable 3.16.1 Configuration Management Report	
Delivery Timing	Upon completion of tasks described in this section prior to each election
Delivery Frequency	Upon completion of each Release resulting from a Build
Description	The Contractor shall deliver each Configuration Management Report describing activities completed in Section 3.16.1.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

It is expected that the County will have ongoing update and planning meetings for each of the component software systems that will result in Release schedules for new feature requests and bug reports, which will be translated into updates to the requirements traceability matrix and sprint planning. The Contractor will maintain ongoing BMD, ISB and BMG software development teams throughout the development process (see Sections 2.2.1.4.1a, 2.2.2a, and 2.2.3a). These teams will be responsible for creating new Builds and Releases, as needed, prior to each election, and they will follow a TDD philosophy on new Builds and Releases (see Sections 2.2.1.4.1b, 2.2.2b, 2.2.3b). Recall that in TDD, coding assignments begin with the development of unit/functional tests, and a task is not considered complete until those unit/functional tests pass 100%. In fact, through continuous integration, when code is pushed to a repository, the entire suite of tests is automatically run on the entire code base, and management will be alerted if code is pushed that breaks the Build process at all.

Code updates for new Releases will be pushed to the respective git repositories, stored in the PIL. The product manager of each component (BMD, ISB, BMG) will be responsible for updating any relevant system documentation (which will have embedded version control describing changes to the documentation), as well as delivering Builds that pass all tests as in Sections 3.16.2.1-3.16.2.7.

As a means of validating the fully automated test suites themselves, between Builds, prospective Builds will be pushed to QA environments and undergo test suites of the *prior* Build. Some of these *prior* Build tests may be expected to fail given changes to functionality, and such failures on the *prior* Build test will be deemed acceptable, but otherwise all *prior* Build test suites and the new current Build tests must pass 100%. In this way we will form a sort of "test suite chain", akin to a hash chain, where passing the current Build test suite validates nearly the entire history of test suites, with the only exceptions being expected.

The process of regression, functional, integration, and UAT testing may result in the discovery of problems/incidents that will need to be resolved through the iterative development process.

Once the County Project Management Team confirms the successful Test Reports, including UAT for the new Build, and gives approval to release the Build into production, a tag will be created in the relevant git repositories, new system images created and deployed to the appropriate BMDs through the standard BMG deployment process (for BMD updates), or following the standard ISB, or BMG deployment processes (see Sections 2.2.2f and 2.2.3f) to enact the Release to the appropriate production systems.

In summary, the Contractor will adhere to the following process for installing new Releases:

1. The Contractor will install the Release to all relevant domains with the County approval to sync all domains, as necessary.

2. The Contractor will install the Release into a non-production environment.

3. The Contractor will perform a regression test to ensure the Release did not negatively affect current functionality across all the Contractor In-Scope Components (BMD, BMG, and ISB). Regression test results will be provided to the County and the County must approve the Release prior to its implementation.

4. The Contractor will work with the County in conducting integration tests with non-Contractor developed components (e.g., ballot layout solution, Tally System, ePollbook, and/or thermal printers connected to the ePollbook)

5. The County will then conduct UAT testing with support from the Contractor.

6. The Contractor will resolve problems/incidents found in regression or integration testing of the Contractor In-Scope Components.

7. The Contractor will provide a list of changes that may require updates to the Training Materials.

8. The Contractor will provide changes necessary to the system documentation.

Along with the Build images, deployment, updates to documentation and updates to software repositories, the Contractor will provide a Configuration Management Report for BMD, ISB, and BMG, describing what the Contractor did through this Build release process, and the new production configuration of the systems.

3.16.2   Test Builds of Contractor In-Scope Components

The Contractor will perform or coordinate the following six (6) types of tests on all Builds of the VSAP Solution beginning with certification by the California Secretary of State and continuing through the last Build during the M&S period.

3.16.2.1 Perform Unit Tests

The Contractor shall perform unit tests upon completion of software development or upon subsequent revision of the software, to verify the software performs as described in the Software Architecture Document.

Deliverable 3.16.2.1 Unit Test Scripts and Unit Test Results	
Delivery Timing	Upon completion of tasks described in this section following each Build

Delivery Frequency	Following each Build
Description	The Contractor shall deliver Unit Test Scripts and Unit Test Results as described in Section 3.16.2.1.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

As described in 3.16.1, the Contractor will develop and run a comprehensive test suite, including unit and functional tests prior to each Build, and present the 100% passing results to the County for approval, prior to deploying the Release. All new test cases will be saved in the appropriate git repository (see Sections 2.2.1.4.2, 2.2.2 and 2.2.3).

3.16.2.2 Perform System Tests

The Contractor shall perform a system test upon completion of software development or subsequent revisions to software, to verify that the software customization performs as described in the Software Architecture Document. Any revisions that affect the user experience shall undergo User Experience testing. Regression test scenarios are to be included in the System Test Cases and System Test Results, to confirm that changes to the system have not adversely impacted baseline functionality.

Deliverable 3.16.2.2 System Test Cases and System Test Results	
Delivery Timing	Upon completion of tasks described in this section following each Build
Delivery Frequency	Following each Build
Description	The Contractor shall deliver System Test Cases and System Test Results as described in Section 3.16.2.2.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

As described in 3.16.1, the Contractor will develop and run a comprehensive test suite, including System Tests to verify that any customizations to the software perform as described in the Software Architecture Document, prior to each Build and present the 100% passing results to the County for approval, prior to deploying the Release. As noted in 3.16.1, the full test suites of the *prior* Build will also be run, with only expected failures being allowed on this *prior Build* test suite, thereby providing validation of the new Build test suites themselves, through a "test chaining" process. All new Test Cases will be saved in the appropriate git repository (see Sections 2.2.1.4.2, 2.2.2 and 2.2.3).

3.16.2.3 Perform Integration Tests

The Contractor shall perform an integrated system test to verify that all software components work together as designed. Integration testing will include the integration of all components of the VSAP Solution. The Test Cases will incorporate test scenarios that confirm continuity and accuracy across modules and accommodate testing of files produced by or for external systems.

Deliverable 3.16.2.3 Integration Test Cases and Integration Test Results	
Delivery Timing	Upon completion of tasks described in this section
Delivery Frequency	Following each Build
Description	The Contractor shall deliver Integration Test Cases and Integration Test Results as described in Section 3.16.2.3.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

As described in 3.16.1, the Contractor will develop and run a comprehensive test suite, including integration tests prior to each Build, and present the 100% passing results to the County for approval, prior to deploying the Release. All new Test Cases will be saved in the appropriate git repository (see Sections 2.2.1.4.2, 2.2.2 and 2.2.3). For the Integration Tests, special attention will be paid to the BMG connections to the ballot layout solution, and Tally, as well as the ISB connection ballot layout solution. These Test Cases will confirm continuity and accuracy across modules and accommodate testing of files produced by or for external systems.

3.16.2.4 Perform User Acceptance Tests

The Contractor, in collaboration with the County, shall develop Test Cases and perform end-to-end User Acceptance Testing to verify that the VSAP Solution performs as intended to support the County's voting processes.

Deliverable 3.16.2.4 User Acceptance Test Cases and Test Results	
Delivery Timing	Upon completion of tasks described in this section following each Build
Delivery Frequency	Following each Build
Description	The Contractor shall deliver User Acceptance Test Cases and Test Results as described in Section 3.16.2.4.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

As described in 3.16.1, the Contractor will develop and run a comprehensive test suite, including User Acceptance Testing, prior to each Build and present the 100% passing results to the County for approval, prior to deploying the Release. All new Test Cases will be saved in the appropriate git repository (see Sections 2.2.1.4.2, 2.2.2 and 2.2.3). The Contractor QA leads will work with the County throughout the development of the new Release to create appropriate User Acceptance Testing of the entire VSAP Solution.

3.16.2.5 Perform Regression Tests

The Contractor shall perform independent regression testing to confirm that changes introduced by individual components have not inadvertently impacted overall VSAP Solution functionality.

Deliverable 3.16.2.5 Regression Test Cases and Test Results	
Delivery Timing	Upon completion of tasks described in this section following each Build
Delivery Frequency	Following each Build
Description	The Contractor shall deliver Regression Test Cases and Test Results as described in Section 3.16.2.5.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

As described in 3.16.1, the Contractor will develop and run a comprehensive test suite, including Regression Tests, prior to each Build and present the 100% passing results to the County for approval, prior to deploying the Release. All new Test Cases will be saved in the appropriate git repository (see Sections 2.2.1.4.2, 2.2.2 and 2.2.3). As described in 3.16.1, the "test chaining" will provide a means of validating the Test Suites themselves and ensure that the tests of changes introduced by individual components remain valid tests of the system, and that these changes have not inadvertently impacted overall VSAP Solution functionality.

3.16.2.6 Perform Volume/Stress Tests

The Contractor shall perform volume/stress testing to measure the Contractor In-Scope Components against performance targets established in the Design and Development Plan.

Deliverable 3.16.2.6 Volume/Stress Test Cases and Volume/Stress Test Results	
Delivery Timing	Upon completion of tasks described in this section following each Build
Delivery Frequency	Following each Build
Description	The Contractor shall deliver Volume/Stress Test Cases and Volume/Stress Test Results as described in Section 3.16.2.6.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

As described in 3.16.1, the Contractor will develop and run a comprehensive test suite, including Volume and Stress Tests, prior to each Build and present the 100% passing results to the County for approval, prior to deploying the Release. All new Test Cases will be saved in the appropriate git repository (see Sections 2.2.1.4.2, 2.2.2 and 2.2.3). These tests will make sure that any updates satisfy the minimum performance targets established and documented in the Design and Development Plan (see Section 2.1.1).

3.16.2.7 Perform Security Tests

The Contractor shall perform security testing to validate the security measures established within the VSAP Solution are compliant with County policies and state regulations and are sufficient to restrict unauthorized access into the system or unauthorized use of features or functions as well as to resist service disruption from denial-of-service attacks.

Deliverable 3.16.2.7 Security Test Cases and Security Test Results	
Delivery Timing	Upon completion of tasks described in this section following each Build
Delivery Frequency	Following each Build
Description	The Contractor shall deliver Security Test Cases and Security Test Results as described in Section 3.16.2.7.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

As described in 3.16.1, the Contractor will develop and run a comprehensive test suite, including Security Tests (at a minimum based on the threats described in SSDD 3.4, see also response 3.5), prior to each Build and present the 100% passing results to the County for approval, prior to deploying the Release. All new Test Cases will be saved in the appropriate git repository (see Sections 2.2.1.4.2, 2.2.2 and 2.2.3).

3.16.3 Provide Certification Services for Re-Certification or *De Minimis* Approval of Releases

The Contractor shall work with the County to determine the Certification status of new Releases and seek *de minimis* change approval from the California Secretary of State where possible. If a Release meets conditions for *de minimis* change approval, the Contractor shall be responsible for submission and support for those approval processes.

If a Release requires full re-certification, the Contractor shall provide all the relevant information, documentation (e.g., updated Use Procedures), source code and equipment necessary to enable re-certification and work with the California Secretary of State to achieve re-certification.

Any Additional Work to support this task shall be provided based on a negotiated work order pursuant to Section 6.0.

3.16.4 Provide System Documentation Updates

Once the VSAP Solution has been deployed, the Contractor shall make updates to relevant system documentation to reflect any changes that have occurred in a system update/Release in a manner suitable for submission to the California Secretary of State in a future re-certification or *de minimis* request.

At the completion of the Implementation, the Contractor shall conduct a review with the VSAP Project Team and identify any documentation that shall be updated because of changes. The Contractor shall be required to update the documentation and provide it to the VSAP Project Team for review and final acceptance.

The following documents are some of the critical documents that shall be updated and provided to the VSAP Project Team at the completion of a Release:

- Functional and technical design documents:
  - ❑ BMD Application Layer Software Architecture Document
  - ❑ BMD Application Layer Software Specifications
  - ❑ ISB Software Architecture Document

- ❑ ISB Software Specifications
- ❑ BMG Software Architecture Document
- ❑ BMG Software Specifications
- ■ Updated End-to-End Security Plan
- ■ Updated VSAP Solution Use Procedures

The Contractor shall also transfer all agreed to, and finalized, documentation to the VSAP Project Team. The format and the medium of transfer shall be at the discretion of the VSAP Project Team.

Deliverable 3.16.4 Contractor System Documentation	
Delivery Timing	Upon completion of tasks described in this section prior to each Release
Delivery Frequency	Prior to each Release
Description	The Contractor shall deliver Contractor System Documentation as described in Section 3.16.4

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

After deployment of the VSAP solution, the Contractor will update documentation as necessary to reflect systems updates that occurred during Release(s). The Contractor will work with the County after implementation to determine which specific documents must be updated. The VSAP Project Team is responsible for participating in the formal reviews with the Contractor, and delivery acceptance of the documents.

At a minimum, the documents to be updated are:

- ■ Functional and technical design documents:
    - ❑ BMD Application Layer Software Architecture Document
    - ❑ BMD Application Layer Software Specifications
    - ❑ ISB Software Architecture Document
    - ❑ ISB Software Specifications
    - ❑ BMG Software Architecture Document
    - ❑ BMG Software Specifications
- ■ End-to-End Security Plan
- ■ VSAP Solution Use Procedures

Required updates will be submitted to the California Secretary of State in a manner suitable for their assessment, as discussed and agreed upon during the review meetings with the VSAP Project Team. These documents will be final.

3.17 Training and Knowledge Transfer

3.17.1 Develop the Training and Knowledge Transfer Plan

The Contractor shall be responsible for the development of training curricula, schedules, training materials and training evaluation materials. The Contractor shall be responsible for the setup and maintenance of a training environment that allows trainees access to instances of the BMDs, ISB and BMG. The Contractor shall also be responsible for conducting face-to-face, hands-on training in logical groupings (at locations provided by the VSAP Project Team) and for managing all training planning and logistics.

The Contractor will also ensure knowledge transfer occurs to key Department staff. This includes identifying key roles (e.g., County operational staff, County training staff and County technical staff) early in the VSAP Project and actively engaging personnel throughout the VSAP Project to ensure they receive the knowledge required to fill the role. This includes providing checkpoints to ensure the required knowledge is being transferred and establish correction action plans, if required.

Training shall be developed in alignment with the requirements defined in the Training and Knowledge Transfer Plan developed by the Contractor and approved by the County. Training Materials shall be updated prior to each Release.

The BMD training shall focus on the navigation and use of the system. It shall also cover new business processes and/or workflows.

After each training event, the Contractor shall provide the County with documented evidence of each trainee's competence to operate or otherwise work with the BMD and integrate its support in to their election work. Training shall be of sufficient length to ensure adequate comprehension. Training shall be provided "just in time" prior to an election and shall comprehensively address all BMD operations including security considerations. Training shall be provided at such time that it is relevant for an upcoming election.

The Contractor shall be responsible for coordinating training efforts with election subject matter experts (**"SMEs"**) who shall provide policy and practice support to the Contractor and be present at the training sessions to provide input, as necessary, regarding practice and policy questions or implications.

The Training and Knowledge Transfer Plan shall describe the types of training and the audience for each. It shall also provide a description of training materials, a description of training methodology, a detailed list of topics to be covered for each type of training and a description of the methodology for evaluating effectiveness of the training. The Training and Knowledge Transfer Plan shall provide an overview of tools and materials to be employed in the training including workbooks, handouts, evaluation material and a training software if employed. The types of training shall account for various audiences including, at a minimum, "train-the-trainer" trainers, other County users (including the County Level 1 Help Desk staff), VSAP Project Team and VSAP Executive Team. The Contractor shall not be responsible for Vote Center Staff training. The Training and Knowledge Transfer Plan shall detail the development of curriculum, materials, a training database, a training roll-out schedule, computer based training (where appropriate) and a training schedule including number of days and preliminary agendas for the training. The Training and Knowledge Transfer Plan shall also identify the proposed training staff.

The Contractor shall be responsible for providing training to all County Level 1 Help Desk staff that shall be tasked with handling VSAP related issues. Training shall focus on the process of the help desk staff supporting VSAP users in resolving VSAP issues that are referred to the

Help Desk. For those referrals that indicate issues best addressed by specialists employed by the Contractor, the Contractor will train the County staff in the manner and means by which such referrals to Help Desk Level 2 are to be conducted and the resolution communicated back the Help Desk Level 1.

Deliverable 3.17.1 Training and Knowledge Transfer Plan	
Delivery Timing	Before training begins
Delivery Frequency	Once
Description	The Contractor shall deliver a Training and Knowledge Transfer Plan as described in Section 3.17.1.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

To ensure that the County can manage, configure, operate, and support the VSAP Solution, including the Ballot Marketing Device ("BMD"), BMD Manager ("BMG"), and the Interactive Sample Ballot ("ISB") and how they are integrated as part of the end-to-end VSAP Solution an appropriate Knowledge Transfer process will be implemented to cover all relevant areas from back-end to front-end sub-systems, and their functionalities.

The training methodology includes five steps: 1) Theoretical, 2) Hands-on Exercises, 3) Discussion, 4) Examination, and 5) Post-Training Evaluation and Support.

Figure 12. Contractor Training Methodology

Once the County trainees have been certified by the Contractor, the County will be prepared to begin training staff, following the same methodology. The new trainers will receive the manuals, tests, and necessary equipment from the Contractor to ensure the County can educate staff accordingly. The new trainers will have access to the Contractor's staff, in case of any challenges, questions, or issues.

Training Method and Audience

The training methodology will be a traditional classroom training approach, wherein trainees are given ample time to learn the concepts, participate in demonstrations, manual exams, and undergo simulations using different scenarios to assess their capabilities. During training they will obtain the benefits of actual hands-on experience using the same voting equipment that will be deployed during the election.

The target audience for training will include: key department staff, trainers of the Vote Center staff members, and County users, such as the County Level 1 Help Desk staff, VSAP Project Team, and the VSAP Executive Team. The number of trainees per training session will be mutually agreed upon between the County and the Contractor.

The County may assign SMEs to be present in each session to offer policy and practice support, and if necessary, provide input regarding practice and/or policy implications, questions, hesitations, or other relevant feedback. If the SME personnel will be involved, the Contractor will coordinate with them on the effort required for their participation in the sessions.

If a change request is made during the project execution, including the warranty period and the contracted Maintenance and Support periods, of any significant part of the overall systems that are a part of this contract, such as the BMDs, BMG, and/or ISB, should that change impact the training material or contents, after implementation of the modification, and prior the new Release, the Contractor will update the impacted training material to deliver the most current information about the system operation to the County.

Knowledge Transfer to Key Personnel

As part of the training scope for the key department staff outlined by the County, such as County operational staff, training staff, technical staff, high-level support staff, or VSAP Project designated stakeholders, the Contractor will perform knowledge transfer training, based on an actively engaging process with these individuals during the VSAP project execution and implementation, which will ensure they receive the expertise required to fill and execute their assigned role within the project. This engaging process will not only provide the required information about the systems and their components, but it will also include continuous monitoring of their knowledge acquisition process, such as checkpoints, or activity executions, with close expert supervision to take corrective actions to ensure success of the knowledge transfer, if needed.

Back-End Knowledge Transfer

This section is comprised of courses related to the BMG and ISB solutions. The Contractor's specialized Master Training will educate to the County and VASP project team on the following topics:

■ Configuring, Managing BMG and ISB solutions

■ Setting up an Election (candidates, electoral distribution, configuring an election, etc.)

Front-End Knowledge Transfer

This section is comprised of courses related to Configuring and Managing Front-End devices, such as the BMD, Ballot Scanners, and courses related to operating and supporting devices in the field. The courses related to operating and supporting devices consist of:

■ Train-the-Trainer

■ Support Center Agents and Supervisors

As a previous step to the personnel in field training, the Contractor shall train the Los Angeles County government trainers in the specialization areas that they will cover later, ensuring that at the end of the course they will be prepared, as much in the technical part, as the operational aspect of an election, using the VSAP Solution. Part of the training shall also include a short, actual training demonstration, to assess the teaching effectiveness of the trainer candidates in transferring the knowledge to the trainees.

3.17.2 Develop Training Materials

The Training Materials shall include items used to conduct the training sessions for the BMDs, BMG and ISB which shall ensure that training objectives are met. These materials can include presentations, demonstrations, activities, handouts and other required documentation and media. These materials shall also include training plans, evaluation materials and training maintenance and support plans. An electronic copy of all Training Materials shall be provided to the County.

Training Materials shall be required for each of the training types described in the Training and Knowledge Transfer Plan. Each individual trainee should receive a copy of the Training Materials.

Updated VSAP training shall be required with the implementation of any significant changes or upgrades to the BMDs, BMG, or ISB. The additional training platform shall be dependent on the needs of VSAP and the specific changes that occur.

Deliverable 3.17.2 Training Materials	
Delivery Timing	Before training begins, according to the agreed-upon Training and Knowledge Transfer Plan and associated schedule
Delivery Frequency	Once
Description	The Contractor shall deliver Training Materials as described in Section 3.17.2.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

In the training venues determined by the VSAP Project team, the Contractor will provide the required setup, logistics, and materials to ensure the best training environment to ensure a successful knowledge transfer to all attendees.

In addition, the Contractor will consider all training material as a live document; therefore, all material developed by the Contractor for any training session type will be updated for future use, in the event any part of the system delivered, such as the BMDs, BMG, and/or ISB, receive a software/hardware change/upgrade (as a requested enhancement, new functionality, or an incident resolution) that affect the usability of the systems in any means, will be identified, documented, and uploaded to the PIL.

Training Material

The Contractor will design, elaborate, and deliver the required training material. A soft copy of the Training Materials will be given to the County. This material includes, but is not limited to:

1. Training Presentation

2. Hard copied Manuals/Handbooks, including textual and graphical illustrations (which become the property of the trainee after concluding the training session, for future consultation)

3. Demonstrative Video (where required)

4. Certification Exams (hard copies or in online platform)

Training Equipment to be Used

To ensure all materials and exercises executed during the session are correctly conducted, the Contractor will provide the required tools to each trainer to perform a successful training session, in the event training venues provided by the County do not include this equipment.

Training Facilities

The Contractor expects the County to provide adequate facilities for training.

3.17.3 Provide Training Metrics

The Contractor shall provide a Report of Training Metrics, which includes training metrics for reporting progress and effectiveness. Metrics may include the number of participants registered to be trained, participants trained and number of participants receiving training certification.

Deliverable 3.17.3 Report of Training Metrics	
Delivery Timing	According to agreed-upon Training and Knowledge Transfer Plan and associated schedule
Delivery Frequency	After each training session
Description	The Contractor shall deliver a Report of Training Metrics as described in Section 3.17.3.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The Contractor will perform a detailed follow up on the training process using metrics and take corrective action to improve training quality and outcomes.

The Contractor will deliver the following metrics, in addition to those required by the County:

1. Quantity of participants registered for the training sessions

2. Quantity of participants contacted/confirmed for each training session

3. Quantity of participants that assisted in each training session

4. Quantity of participants certified at the end of each training session (minimum, average, maximum, and detailed score per trainee)

5. Total of participants to date, divided into these categories: Registered, Contacted/Confirmed, Assisted in Training, and Certified

6. Absentee and un-certified rate per training session, and to date

7. Expected rate of assisted in training and certifications to date

8. Variance between expected training result versus actual results

9. And various others

3.17.4 Provide User Guide Documentation

The Contractor shall be responsible for providing user guide documentation for the BMDs, BMG and ISB. The User Guide Documentation shall explain how the system (BMDs, BMG, or ISB) is intended to be handled, stored, used and/or operated and shall be written in clear language that has been proofed and edited by the Contractor for completeness and readability. The User Guide Documentation will be an input to the Use Procedures to be developed by the Contractor and approved by the California Secretary of State. The Contractor shall provide updates to the User Guide Documentation during implementation, reflecting applicable changes based on new Releases, system enhancements and system updates.

Deliverable 3.17.4 User Guide Documentation	
Delivery Timing	Upon completion of tasks described in this section prior to each Release, system enhancement or system update, as needed
Delivery Frequency	As needed
Description	The Contractor shall deliver User Guide Documentation as described in Section 3.17.4.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The Contractor will provide comprehensive user guides for BMDs, BMG, and the ISB, to be developed in conjunction with the County. These documents will provide detailed information on how to properly operate and perform the necessary tasks for conducting an Election. The Contractor shall also provide updates to the User Guide Documentation during Implementation, reflecting any applicable changes based on new Releases, system enhancements, and/or system updates. The user guides will comply with the CVSS requirements.

3.18 Provide On-Site Support Services

The Contractor will be required to provide on-site support for no additional charge. On-site support personnel technically competent to fully support and repair the BMD units and other Contractor In-Scope Components shall be provided to County up to 60 days prior to an election for up to sixteen (16) hours per day.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

Provided as part of the County contract, on-site support will be deployed to fully support all components of the VSAP system. This on-site support will be a combination of features that will represent the support strategy to be implemented for the County:

Setup and Installation of the Systems and Applications:

The Contractor will provide technical support staff during the readiness process of the BMD. Although the production process of the BMD will be conducted by the County, it will be important to have the Contractor support during this stage of the project, to ensure the County's successful execution of this activity.

Additionally, during the setup and installation of the BMG and ISB applications, the Contractor will provide the proper support to ensure the County's execution of these activities will be done efficiently, and as expected. Our technical specialists (database, infrastructure, security, and application specialists) will also be available for support and consulting activities during the deployment and operational phases of the three support election periods (important, essential, and critical support).

Maintenance Process:

After the election process, the Contractor will conduct the evaluation process to execute:

Preventive Maintenance: This will be performed on the BMDs under operating conditions and is intended for the conservation of the BMDs by using revision and reparation, to ensure proper functionality, and reliability.

Corrective Maintenance: Intended to correct any damage or malfunctions observed in the BMDs covered by the warranty. The process will evaluate any defects and correct, or repair them, depending upon the type of the incident encountered. Out of warranty incidents may be processed by the Contractor, if requested by the County, as part of a service order.

Remote Support:

The Contractor will provide a L2HD service to analyze, address, and resolve all requests not resolved by the County L1HD. This support applies to the three systems that are part of the VSAP solution (BMD, BMG, and ISB).

On-Site Support:

The Contractor will provide on-site support to handle any incidents or malfunctions that cannot be resolved via the L2HD. In these cases, no fewer than eight (8) Contractor support personnel will be present in the County's EOC and no fewer than two (2) Contractor support personnel will be present in the RR/CC Headquarters during the timeframe identified above. These support personnel will perform on-site evaluation of incidents and identify solutions. In either situation, the Contractor's on-site support personnel will execute the solution to ensure the continuity of the processes.

If the County chooses, the Contractor will provide on-site support in the field at Vote Centers during the election period. On-site support at Vote Centers is considered Additional Work subject to a negotiated work order pursuant to Section 6.0. The County will provide adequate notice to the Contractor to allow the Contractor to engage and properly train staff who would be deployed in the field at Vote Centers.

3.19 Provide Help Desk Services

The County will provide Help Desk Level 1 Support including for BMD, BMG and ISB. The Contractor will be responsible for providing Level 2 Help Desk Support to address and resolve all Help Desk requests not resolved by Help Desk Level 1 for BMD, BMG and ISB. The

Contractor's Help Desk Level 2 Support will be broken into Tier 1, Tier 2, Tier 3 and Standard Level 2 Support as follows:

Tier 1: Election Day minus 120 days to Election Day minus 61 days

Tier 2: Election Day minus 60 days to Election Day minus 21 days

Tier 3: Election Day minus 20 days to Election Day

Standard Level 2 Support: Occurring outside the timeframes of the tiers above

The Contractor support response times for each Tier will be further broken down by Level of Severity with response times determined for each Level of Error Severity.

3.19.1   Support Tiers

3.19.1.1 Support Tier 1

Issues occurring between 61 and 120 days before Election Day (**"Important Election Work Period"**) require Support Tier 1 Service. In the event of a special Election, County shall notify Contractor of the need for support as soon as possible.

The County, or at the request of the Contractor with approval by the County, may determine to escalate problems occurring during Support Tier 1 Service periods as requiring Support Tier 2 or 3 Service if delayed problem resolution will negatively affect the performance of the BMD, BMG, ISB or any part thereof during the related Election. In such circumstances, the County shall not incur additional fees.

3.19.1.2 Support Tier 2

Issues occurring between 21 and 60 days before Election Day (**"Essential Election Work Period"**) require Support Tier 2 Service. In the event of a special Election, County shall notify the Contractor of the need for support as soon as possible. The Contractor shall make reasonable efforts to provide Support Tier 2 service beginning as close as possible to the date service is requested even if such date is less than the timeframe identified in Table 3. During Support Tier 2 events, the Contractor must commit to continual work, including the reassignment of staff to bring resolution as quickly as possible within the time required.

The County, or at the request of the Contractor with approval by the County, may determine to escalate problems occurring during Support Tier 2 service periods as requiring Support Tier 3 service if delayed problem resolution will negatively affect the performance of the BMD, BMG, ISB or any part thereof during the related Election. In such circumstances, the County shall not incur additional fees.

3.19.1.3 Support Tier 3

Issues occurring twenty (20) or fewer days prior to Election Day (**"Critical Election Work Period"**) require Support Tier 3 Service.

3.19.1.4 Standard Level 2 Support

Issues occurring outside the timeframes of the tiers described above will require the Standard Level 2 Support Service.

3.19.2   Level of Error Severity

3.19.2.1 Error Severity 1

Error Severity 1 issues shall include minor imperfections, routine repair and replacement of failed equipment or modules, questions and minor software upgrades. Additionally, an issue may be assigned to Error Severity 1 if the issue impacts County's use of any component of the BMD, the BMG or the ISB without causing any loss of functionality or operability.

3.19.2.2 Error Severity 2

Error Severity 2 issues shall include those resulting in a loss of functionality or operability of any component of the BMD, the BMG or the ISB, but for which a workaround acceptable to County is developed within the Diagnosis Timeframe specified on Table 3.

3.19.2.3 Error Severity 3

Error Severity 3 issues shall include those resulting in a loss of functionality or operability of any component of the BMD, the BMG or the ISB for which a workaround acceptable to County is not developed within the Diagnosis Timeframe specified on Table 3.

3.19.3   Support Tiers and Level of Error Severity

Varying levels of support for the BMD, the BMG and the ISB and their sub-components are required depending on when issues are identified in relation to an Election Date. Table 3 identifies required Contractor response times by Support Tier and Level of Error Severity, where response times are to be measured in Calendar Days (not Business Days).

Table 3.   Required Response Times

Required Response Times by Support Tier and Level of Error Severity				
Support Tier[3]	Tier Description	Error Severity	Diagnosis Timeframe[4]	Resolution Timeframe[5]
1	**Important Election Work Periods**	1	Two Days	One Week
		2	Two Hours	Two Days
		3	Two Hours	Two Days

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[3] Applicable time for Countywide and UDEL Elections is Election Day minus 120 days through completion of official canvass or recounts. For Special Elections, the applicable time is E-60 (or three weeks after notification of special Election date by County) through completion of official canvass or recounts.

[4] The Diagnosis Timeframe for a reported issue will be met when the Contractor provides a substantive response to the issue. A substantive response includes, at a minimum, a clearly worded description of the issue and an estimate of what will be done to resolve the issue within the associated Resolution Timeframe. Response times for Resolution Timeframe and Diagnosis Timeframe purposes shall each be measured from the time of the County's report of the issue to the Contractor.

[5] The allotted time periods for allowable Diagnosis Timeframe and Resolution Timeframe on any reported issue in accordance with this Table 3 shall begin at the time of first attempt to reach Contractor regarding the condition reported, if by phone, by email or fax sent during the Business Day, or by email sent at any time during an Important Election Work Period or Critical Election Work Period. Resolution time refers to how long it takes from the time an issue is logged until it is resolved, a workaround is provided or a service unit is delivered.

		1	Four Hours	Two Days
2	**Essential Election Work Period**	2	One Hour	One Day
		3	One Hour	One Day
3	**Critical Election Work Period**	1	Two Hours	One Day
		2	One Hour	Four Hours
		3	One Hour	Four Hours
Standard Level 2	**Standard Work Period**	1	Two Days	One Week
		2	Two Hours	Two Days
		3	Two Hours	Two Days

3.19.4   Provide Contractor In-Scope Component Help Desk Services

The Contractor shall provide telephone response through its help desk each Business Day between 8:00 a.m. and 5:00 p.m. Pacific Time and between 6:00 a.m. and 10:00 p.m. PT during Important, Essential and Critical Election Work Periods, and shall also provide assistance to County staff by email for all Contractor In-Scope Components during Implementation, Warranty and M&S periods.

Contractor shall ensure sufficient staffing of the Help Desk Level 2 during help desk hours such that any call or email received during such hours receive a substantive response, as defined in Table 3.

Staff providing service at the Help Desk Level 2 shall be trained in the operation, maintenance and repair of the BMD, in the determination of the source of errors in usage of the BMD (whether caused by user error or malfunction), and to provide guidance to County personnel in the use of all Contractor In-Scope Components.

Staff providing service at the Help Desk Level 2 shall furthermore have ready access to test hardware and software allowing testing and/or verification of any County reported Deficiencies. Contractor shall have a fully functioning lab with the same components and versions of components being used by the County at any time to facilitate testing and verification. Contractor shall ensure the appropriate technical support staff and management shall be available for maintenance, repair or support that cannot be accomplished via the Help Desk Level 2 or other on-site support staff.

- Documentation. The Contractor shall maintain a maintenance history for all individual BMD devices (hardware and BMD software) serviced, as well as inventory-wide summary reports of maintenance history
- Secure Online Support. Secure online support services shall be hosted and maintained by the Contractor for problem diagnosis and resolution, software updates and documentation Releases
- Updates. The Contractor shall provide updates as required pursuant to the Agreement for the correction of Deficiencies, or as the Contractor deems necessary and useful to the performance of the Contractor In-Scope Components

The Contractor shall provide a monthly Contractor In-Scope Component Help Desk Services Report documenting service requests, resolutions and recommended changes to be made to

Contractor In-Scope Components. The format and medium shall be approved by the County Project Management Team.

Deliverable 3.19.4 Contractor In-Scope Component Help Desk Services Report	
Delivery Timing	Submitted no later than the fifth day of each month
Delivery Frequency	Monthly
Description	The Contractor shall deliver each Contractor In-Scope Component Help Desk Services Report as described in Section 3.19.4.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

As part of the requested support strategy, the Contractor will provide a Level 2 Help Desk ("L2HD") that will support the process under the following schedule and periods:

- **Tier 1:** As stated by the County, this level will be used **120 days before Election Day**, up to **61 days prior to Election Day**. During this period the L2HD will work each business day from **6:00 a.m. to 10:00 p.m. Pacific Time ("PT").**

- **Tier 2:** As stated by the County, this level will be used **60 days before Election Day**, up to **21 days prior to Election Day**. During this period the L2HD will work each business day from **6:00 a.m. to 10:00 p.m**. PT.

- **Tier 3:** As stated by the County, this level will be used **20 days before Election Day**, **up to the Election Day.** During this period the L2HD will work each day from **6:00 a.m. to 10:00 p.m. PT.**

Outside of the Important, Essential and Critical Election Work Periods, the L2HD will be available from 8:00 a.m. to 5:00 p.m. PT.

The L2HD deployed by the Contractor will provide technical support to the Level 1 Help Desk ("L1HD") in the following areas:

- Use of the BMDs equipment, as well as BMG, and ISB systems.

- Resolution of mid-level incidences that may appear in the systems mentioned above.

- Drive the high-level incidences through the specialized Contractor team to provide the solution.

- Monitoring and tracking of incident resolutions to preserve the information related to each incident, and its resolution within the database.

To comply with the support activities, the L2HD personnel will be trained using various training courses defined in the Section 3.17.1 as follows:

- **BMD Operation:** Technical explanation for the operation of the BMD

- **BMD Operation and Advanced Trouble-shooting/Repair:** Provide skills for the operation, maintenance, trouble-shooting/problem identification, and repair of the BMDs

- **VSAP Operation and Trouble-shooting/Repair:** Provide skills for the operation, maintenance, trouble-shooting/problem identification, of the VSAP systems

■ **Contingency Procedures:** Procedures established to ensure the continuity of the service

To facilitate technical support in the L2HD, the Contractor will have multiple devices available for technicians to test scenarios described by the callers, allowing them to reproduce the incident and/or test the solution to be provided, ensuring an accurate resolution.

All incidents resolved by the L2HD and on-site support will be part of a monthly Help Desk service report to be delivered to the County, where the information of each service request, and resolutions executed will be included. Should the Contractor detect possible improvements, either for the system, or the process, the recommendations will be included in the report. The report will be also used to feed the BMDs maintenance history database, providing updated information about the services made to each BMD during the L2HD operation. The format of the report and the medium in which it will be delivered shall be discussed with and approved by the County Project Management Team.

Aside from the support provided by the L2HD, the Contractor will have an online support web page where the information for diagnostics and common troubleshooting will be available. When software updates or new documentation is available, whether made by the Contractor to provide better performance, or to correct Deficiencies (if any), or are a result of an agreement between the Contractor and the County (based on a negotiated work order pursuant to Section 6.0) for new functionalities or required enhancements due to any possible changes required by updates/modification of the Elections Code and/or regulations, this content will also be available on the web page.

3.19.5   Provide Contractor In-Scope Component Problem Log Tracking

The Contractor shall create and update an interactive/automated problem log accessible 24/7 to authorized County staff, which shall be reviewed and revised at least weekly for follow-up on unresolved issues. This Contractor In-Scope Component Problem Log Report shall include the following:

- Problem Number (a unique ID assigned by the Contractor)
- Date and time reported
- County employee or affiliate reporting the problem and phone number
- Contractor personnel receiving the initial County contact regarding the problem
- Description of the problem
- Support Tier assigned to problem
- Error Severity assigned to problem
- Resolution status and estimated fix date (completed by the Contractor)
- Resolution plan (completed by the Contractor)
- Resolution description and date resolved (completed by the Contractor)
- A log of each individual contact between the County and the Contractor regarding the problem, including the date, time, County and Contractor personnel names for each contact, textual summaries of phone calls and copies of all related email text and other correspondence

Deliverable 3.19.5 Contractor In-Scope Component Problem Log Report	
Delivery Timing	Submitted no later than the fifth day of each month
Delivery Frequency	Monthly
Description	The Contractor shall deliver each Contractor In-Scope Component Problem Log Report as described in Section 3.19.5.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

To ensure appropriate support has been provided, the Contractor will provide all stakeholders with 24/7 access to information from the L2HD via an online portal regarding any unresolved incident, those previously resolved, and to any incident processed throughout the project lifecycle.

This information will allow the County and the Contractor to monitor any unresolved incidents, and review the information gathered by the personnel involved with the resolution. The information will include:

- Unique ID number
- Date and time when the incident was reported to the L2HD
- Contact person reporting the incident and contact number
- L2HD contact receiving the incident report
- Problem description
- Error severity assigned to the incident
- Solution provided
- Status of the incident
- Solution updates (if any)
- Date of the incident resolution

The information will be kept until the end of the project and will not only be used for monitoring open incidents, but it will also serve as a historical log of previous incidents to be used during the Project, for example, the lessons learned documentation process.

The information will be available not only to comply with the main objective stated, but to also evaluate the incidents during the project, and to deliver final recommendations to the County, as part of Contractor's lessons learned process.

3.20 Provide Service Measurement and Reporting

The Contractor shall conduct service level monitoring and reporting that shall include:

- Ongoing monitoring of the Contractor adherence to service levels
- Issues that could impact an agreed-upon service levels
- Resolution of root-causes impacting the Contractor's ability to meet agreed-upon service levels

■ Monthly statistics and management reports to the County on service level attainment

Deliverable 3.20 Contractor Service Level Report	
Delivery Timing	Submitted no later than the fifth day of each month
Delivery Frequency	Monthly
Description	The Contractor shall deliver each Contractor Service Level Report as described in Section 3.20.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

As part of the remote and on-site support services, the Contractor will consolidate a monthly base report delivered no later than the fifth day of the month, which will provide information gathered during the operation of the previous month from the Help Desk. This report will provide the County with the required information about any incident reported, the way in which it was resolved, the root cause, and if the incident required the execution of a deeper solution that could affect the current VSAP system, or any of their components, such as the BMDs (in software or hardware), BMG, and/or the ISB.

The monthly base report will be managed by the support personnel, then revised and approved by management to effectively present and address any incident reported, providing the fastest resolution of the incident to the County. As part of the report, the following topics will be covered:

1. Ongoing monitoring of the Contractor's adherence to service levels

2. Issues that could impact an agreed upon service level

3. Resolution of root causes impacting the Contractor's ability to meet agreed upon service levels

4. Monthly statistics and management reports to the County on service level attainment

This report will work as a base to measure the support response and implement any corrective measure, in the event the support response does not meet the requirements of each support tier for the election periods (important, essential, and critical support).

3.21 Implementation Close

Implementation will be considered complete once all of the following have occurred:

■ The County has conducted a full deployment of all Contractor In-Scope Components and services in the same Countywide Election, and has been deemed successful by the County

■ A punch list of defects or errors in the Contractor In-Scope Components has been made and agreed upon

■ The County has formally accepted each Contractor In-Scope Component after the punch list changes have been made

3.21.1 Criteria for Acceptance of Contractor In-Scope Components

The Contractor shall achieve BMD, BMG and ISB acceptance upon successful completion of all the following:

- The Contractor's completion and delivery of all SOW work pursuant to acceptance, including all BMD units (other than any additional BMD units purchased subsequently), training, testing, reports and other deliverables associated with the acceptance of the BMD or the BMG or the ISB, respectively

- Successful implementation of all functions and features associated with acceptance of the BMD or the BMG or the ISB, respectively, and successful achievement of all applicable required testing, as verified by the County

- The County has conducted a full deployment of all Contractor In-Scope Components and services in the same Countywide Election, and has been deemed successful by the County

- The VSAP Program Manager has provided the Contractor with written approval, as evidenced by the VSAP Program Manager's countersignature on all applicable prior Deliverable Acceptance Documents, of all such work; and

- The VSAP Program Manager has provided the Contractor with written approval, as evidenced by VSAP Program Manager's countersignature on the applicable Deliverable Acceptance Document, of the Contractor's achievement of acceptance. The date of satisfaction of the foregoing, including written approval thereof shall be known as the Acceptance Date for the respective component of VSAP

Each component will end its Implementation period upon its acceptance by the County as outlined above. There will be no "deemed acceptance" allowed.

Deliverable 3.21.1 Final Acceptance Report	
Delivery Timing	Submitted for approval prior to commencement of Warranty period
Delivery Frequency	Once

Description	Contractor will provide a Final Acceptance Report documenting completion of the tasks described above and County acceptance of Contractor In-Scope Components as described above. The Final Acceptance Report will include, at minimum:
	
	■ Proof that all deliverables are up-to-date and approved including:
	  ❑ Functional Specifications and Design Documentation
	  ❑ System Architecture
	  ❑ Technical Design Documentation
	  ❑ Test Cases and Test Scripts
	  ❑ Training Manuals, End-User Guides and Materials
	  ❑ Final certified versions of the System software source code and trusted Build files
	  ❑ Delivery and inventory of all BMDs
	  ❑ Achievement of California Secretary of State certification and other mandatory certifications

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

Prior to the release of the Final Acceptance Report, the Contractor agrees to inspect and correct/repair any applicable incident, error, defect, or proven non-conformity to the requirements that may be detected during the system acceptance test, and/or any phase during the VSAP system deployment.

After full deployment of all components, and the successful execution of the systems during the Election, the Contractor will request final acceptance for the contracted systems, and will then proceed with the details of the Final Acceptance Report.

During the project execution, the Contractor's technical teams will directly test and pursue the acceptance of every component at each milestone with their County counterpart, and document it for future reference as part of the technical review, and acceptance. Once all components are tested, reviewed, and accepted by the technical teams from the Contractor and the County, this document will be the base for top management's acceptance of the respective milestone. A form, similar to the one provided below, will be used for this process, and will serve as an agreement, and acceptance of the tested component, and the technical team leader will be responsible for signing this form.

Figure 13. Sample Test Acceptance Form

To consider the BMD, BMG, ISB systems, and their sub-components accepted, the following objectives must previously be accomplished:

1. The Contractor's completion and delivery of all SOW pursuant to acceptance, including all BMD units (including any additional BMDs that may have been purchased by the County), training, testing, reports, and other deliverables associated with the acceptance of the BMD, BMG, or ISB, respectively.

2. Successful implementation of all functions and features associated with acceptance of the BMD, BMG, or ISB, respectively, and successful achievement of all required testing, as verified by the County.

Once all acceptance tests of the sub-systems and functionalities that are required to complete a milestone acceptance test are fully reviewed and accepted, including written approval from the Contractor's and the County's technical teams, the completed Final Acceptance Report will be based upon the sub-systems acceptance documents to be presented for final written approval by the VSAP Program Manager. The date considered as the formal acceptance will be the date in which the countersignature of the VSAP Program Manager is furnished for the Deliverable Acceptance Document. It is understood that milestones cannot be partially, or "deemed" accepted; therefore, the document will be presented only when the County's technical team accepts all sub-components of the milestone.

At a minimum, the Final Acceptance Report will include the following information for the respective milestone, and attachments, which will be considered as a complete acceptance document:

- Functional Specifications and Design Documentation
- System Architecture
- Technical Design Documentation
- Test Cases and Test Scripts
- Training Manuals, End-User Guides, and materials of the milestone
- Final certified versions of the system software source code, and trusted Build files, if applicable for the milestone
- Delivery and inventory of the implemented BMDs, if applicable for the milestone
- Attainment of the California Secretary of State Certification and any other mandatory certifications

3.22 Provide Services Related to Facility Space

During the County's transition period from its current InkaVote Plus system to the VSAP Solution, the Contractor may be requested to provide temporary facilities (e.g., warehouse) for use by the County and to assist with transitioning to a permanent facility. The County and Contractor will collaborate on identification of facility requirements, the period of use, and the facility shall be located within reasonable proximity (10-mile radius) to Department headquarters.

As a point of reference, the County's current Elections Operations Center is located in Santa Fe Springs, CA. The warehouse covers 110,000 ft^2 with an additional 18,000 ft^2 for administrative offices.

Any Additional Work to support this task shall be provided based on a negotiated work order pursuant to Section 6.0.

3.23 Facility and Environmental Requirements for Ballot Marking Device and BMD Manager Operations

The Contractor will develop a report detailing the facility and environmental requirements for the use of the BMG and BMD at an Elections Operations Center. This report will take into account all aspects of the BMD and BMG operations, infrastructure, processes, and procedures, including, but not limited to:

- Storage

- Startup and shutdown

- Pre-election programming and proofing

- Diagnostic testing

- Preparation

- Securing

- Staging

- Transportation

- Post-election deprocessing

- Maintenance and repair

- Custody control

- Environmental conditions (temperature, humidity, dirt/dust, static electricity, etc.)

- Network infrastructure

- Electrical infrastructure and supply

Deliverable 3.23 Facility and Environmental Requirements for BMD and BMG Operations	
Delivery Timing	Submitted for approval no more than 90 calendar days after the Project Commencement Date
Delivery Frequency	Once
Description	Contractor will provide a Facility and Environmental Requirements for BMD and BMG Operations meeting the intent and content requirements specified in this section.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

The Contractor agrees to complete all the requirements set forth above in this section.

4.0 Warranty

4.1 Warranty Scope

Warranty Services (**"Warranty"**) and Maintenance and Support Services (**"M&S"**) requirements will be identical except that the County shall pay an annual fee for these Services during the M&S period while during Warranty the services will be provided at no additional cost to the County. The Contractor will not be responsible for coordination with third-party vendors of other VSAP components of the VSAP Solution other than Contractor In-Scope Components during the Warranty period, unless Warranty-covered issues impact integration with other VSAP components.

The Contractor shall warrant to the County that each Contractor In-Scope Component shall be free from all Deficiencies during the Warranty period.

The Contractor shall provide Warranty for the following:

Component/Service	Warranty Services
Initial BMDs (Ballot Marking Devices)	Y
Additional BMDs	Y
BMG (BMD Manager Software)	Y
ISB (Interactive Sample Ballot)	Y
Third-Party Components	Y
Additional Goods and Services	Y

4.1.1 Exceptions to BMD Warranty Services

During the Warranty period, the Contractor shall provide all M&S, including Warranty, without additional charge for all BMD Hardware and BMD Software, including Additional BMD Units and Additional Goods and Services (see Section 6.0) except if such M&S are required as a result of:

- Changes, modifications or alterations not authorized or approved by the Contractor, or
- Accident, theft, vandalism, abuse or use that is not in accordance with instructions or specifications furnished by the Contractor

4.2 Warranty Terms

The Warranty period for each of the Contractor In-Scope Components will be twenty-four (24) months.

4.2.1 Third-Party Warranty Terms

The warranty term for third-party hardware and software provided by the Contractor as sub-components to its Contractor In-Scope Components shall be the duration as provided by the third-party manufacturer of each sub-component.

4.3 Warranty Initiation

The Warranty period will begin as defined in Section 3.21.

4.4 Comply with Applicable Law During Warranty

The Contractor will be required to comply with applicable provisions of the Elections Code and regulations under a negotiated work order pursuant to Section 6.0. This would include re-certifications or any other changes required by changes to the Elections Code and regulations. This would include *de minimis* submissions or re-certifications or any other changes required by changes to the Elections Code or regulations.

Any Additional Work to support this task shall be provided based on a negotiated work order pursuant to Section 6.0.

4.5 Provide On-Site Support Services

The Contractor will be required to provide on-site support (up to 60 days prior to an election) for no additional charge throughout the Warranty period. On-site support personnel technically competent to fully support and repair the BMD units and other Contractor In-Scope Components shall be provided to County during all support periods for up to sixteen (16) hours per day (such that the support period covers all election operational hours).

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

As part of the support service required during the Warranty period, the Contractor will provide technical, on-site support for up to 16 hours per day, starting 60 days before each election that will be conducted during the Warranty period. To support any incidents reported during this time, the Contractor will base the support strategy on the requested response times, as stated in Table 3 "Required Response Times", subsection Section 3.19.3 "Support Tiers and Level of Error Severity", to attend to, and resolve the reported incident.

In addition, the Contractor will provide the required support technicians and procedures to troubleshoot any component part of this contract, on-site, and in those cases when it cannot be resolved directly with this first level of support, the Contractor will maintain a second level of support for those incidents with a higher degree of complexity.

4.6 Other Services to be Provided During Warranty

During the Warranty period, Contractor shall provide the following services and deliverables as specified in Section 3.0 Implementation.

Table 4.   Other Services to be Provided During the Warranty Period

Deliverable	Update or Ongoing as Needed
3.5 End-to-End Security Plan	Update
3.5.1 Continuity Plan	Update
3.9 VSAP Solution Use Procedures	Update

Deliverable	Update or Ongoing as Needed
3.13.1 Repair and Replacement of BMDs	Ongoing
3.13.2 Contractor In-Scope Component Recall and Update Services	Ongoing
3.13.3 Preventative Maintenance Schedule	Update
3.13.4 Preventative Maintenance on BMDs	Ongoing
3.13.5 BMD Hardware Lifecycle and Bill of Materials Report	Ongoing
3.14 Report of Software Maintenance	Ongoing
3.15 Report of Third-Party Sub-component Maintenance	Ongoing
3.16.1 Configuration Management Report	Ongoing
3.16.2.1 Unit Test Scripts and Unit Test Results	Ongoing
3.16.2.2 System Test Cases and System Test Results	Ongoing
3.16.2.3 Integration Test Cases and Integration Test Results	Ongoing
3.16.2.4 User Acceptance Test Cases and Test Results	Ongoing
3.16.2.5 Regression Test Cases and Test Results	Ongoing
3.16.2.6 Volume/Stress Test Cases and Volume/Stress Test Results	Ongoing
3.16.2.7 Security Test Cases and Security Test Results	Ongoing
3.16.4 Contractor System Documentation	Ongoing
3.17.1 Training and Knowledge Transfer Plan	Update
3.17.2 Training Materials	Update
3.17.3 Report of Training Metrics	Update
3.17.4 User Guide Documentation	Ongoing
3.19.4 Contractor In-Scope Component Help Desk Services Report	Ongoing
3.19.5 Contractor In-Scope Component Problem Log Report	Ongoing
3.20 Contractor Service Level Report	Ongoing

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

During the Warranty period, the Contractor will continue to provide all the contracted services listed in Table 4 "Other Services to be Provided During the Warranty Period" of the current

section, and as specified in Section 3.0 "Implementation." In addition, the Contractor will, at the request of the County, make software and hardware enhancements for the VSAP Solution for Additional Work. Similarly, as part of the resolution of any detected incident, the support during the Warranty period includes all the testing, re-certification, documentation updates, and training updates needed to resolve such incident.

5.0 Maintenance and Support

5.1 Maintenance and Support Scope

The Contractor shall provide M&S for the components listed in Table 5. An illustration of the scope for M&S by the Contractor in relation to the overall VSAP Solution is also shown in Figure 1.

Table 5.   Components In-Scope for M&S Services

Component/Service	M&S
Initial BMDs	Y
BMG	Y
ISB	Y
Third-Party Sub-Components	Y

Figure 14. Overview Diagram with Overlay for Contractor M&S
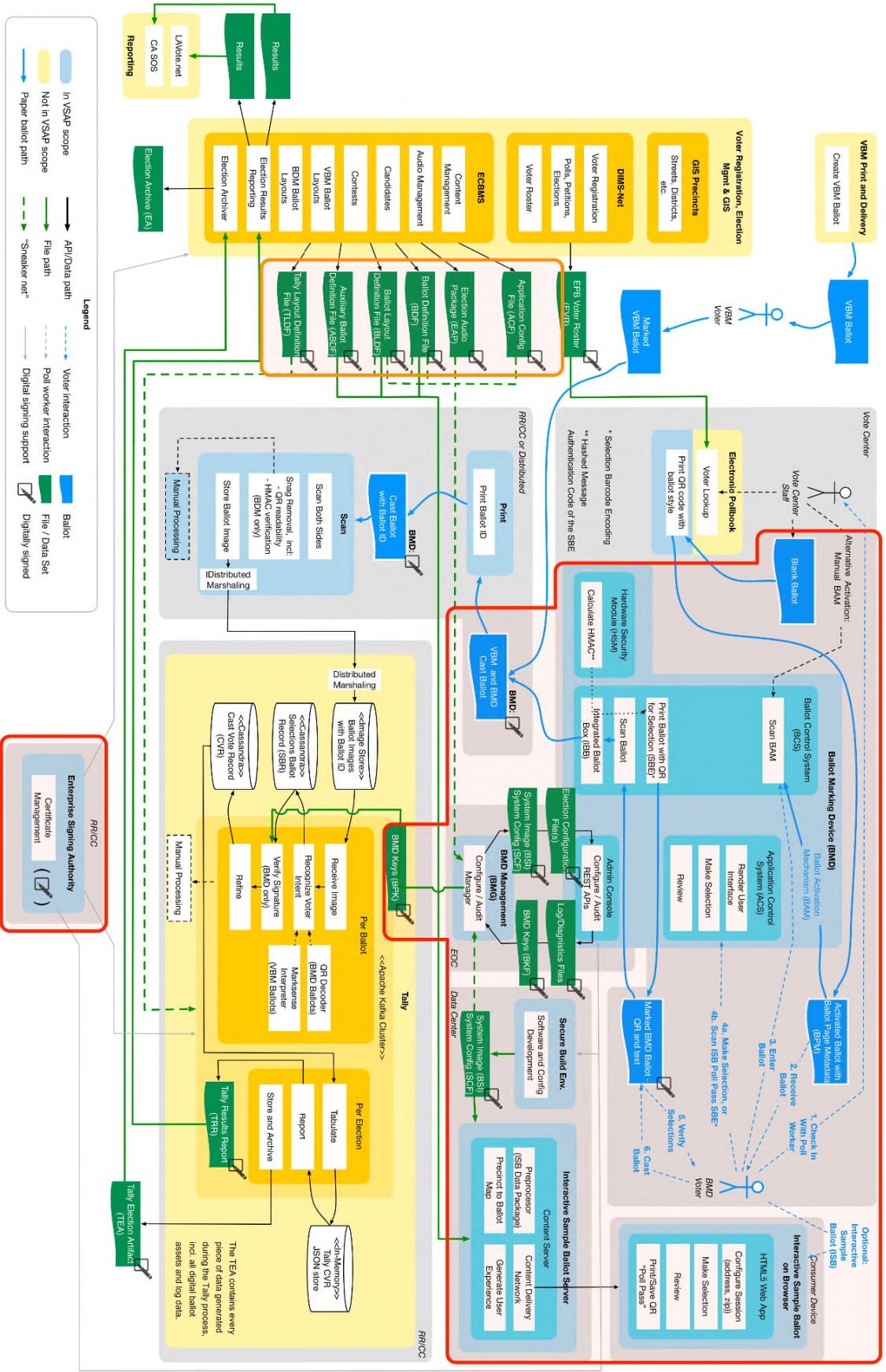
5.1.1 Third-Party Sub-Components

Third-party sub-components will include IOTS hardware as well as software tools, operating systems, etc., used in the development of the components. Further, there may be third-party sub-components in the BMD, the BMG or ISB (either hardware or software) which the Contractor will deliver as part of its committed deliverables. The County expects such third-party sub-components will be delivered together with the manufacturers' standard warranties and that the Contractor will manage and support these third-party sub-components as part of its Maintenance and Support responsibilities.

5.1.2 Coordination of Other Vendor VSAP Components

The Contractor will not be responsible for coordination with third-party vendors of other VSAP components during the M&S period, unless as specified through a negotiated work order.

5.2 M&S Terms

After completion of the Warranty period, County intends to retain the Contractor to provide M&S and the County will pay an annual fee for such services as determined in the Contract pursuant to selection and award to the winning Contractor.

The Initial Contract Term includes a five (5) year Maintenance and Support period following the Warranty period. The County shall have the sole option to extend the Contract Term for up to three (3) additional two (2) year periods, for a maximum total of eleven (11) years of Maintenance and Support after the Warranty period.

5.3 M&S Initiation

The M&S period for each Contractor In-Scope Component will begin upon close of the Warranty period of that component.

5.4 Comply with Applicable Election Law During M&S

The Contractor will be required to comply with applicable provisions of the Elections Code and regulations under a negotiated work order pursuant to Section 6.0. This would include re-certifications or any other changes required by the Elections Code and regulations. This would include *de minimis* change submissions or re-certifications or any other changes required by the Elections Code and regulations.

Any Additional Work to support this task shall be provided based on a negotiated work order pursuant to Section 6.0.

5.5 Provide On-Site Support Services

The Contractor will be required to provide on-site support (up to 60 days prior to an election) at agreed upon M&S pricing throughout the M&S period. On-site support personnel technically competent to fully support and repair the BMD units and other Contractor In-Scope Components shall be provided to County during all support periods for up to sixteen (16) hours per day (such that the support period covers all election operational hours).

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

For any M&S period contracted, the scope of the services will include the on-site support for each election, during such period. This service will start 60 days before the election and during the ongoing M&S period, support will be provided for any incident reported to the Contractor using the response times as requested in Table 3 "Required Response Times" of Section 3.19.3 "Support Tiers and Level of Error Severity", to attend to, and resolve the incident.

The Contractor will provide the required expert technical personnel and infrastructure to troubleshoot any part of the solution. In those cases where the incident has a higher level of complexity that cannot be resolved directly with the first level of support, the Contractor will have a second level of support in place, with a higher degree of knowledge and experience.

5.6 Other Services to be Provided During M&S

During the M&S period, Contractor shall provide the following services and deliverables as specified in Section 3.0 Implementation.

Table 6.   Other Services Provided During Maintenance and Support

Deliverable	Update or Ongoing as Needed
3.5 End-to-End Security Plan	Update
3.5.1 Continuity Plan	Update
3.9 VSAP Solution Use Procedures	Update
3.13.1 Repair and Replacement of BMDs	Ongoing
3.13.2 Contractor In-Scope Component Recall and Update Services	Ongoing
3.13.3 Preventative Maintenance Schedule	Update
3.13.4 Preventative Maintenance on BMDs	Ongoing
3.13.5 BMD Hardware Lifecycle and Bill of Materials Report	Ongoing
3.14 Report of Software Maintenance	Ongoing
3.15 Report of Third-Party Sub-component Maintenance	Ongoing

Deliverable	Update or Ongoing as Needed
3.16.1 Configuration Management Report	Ongoing
3.16.2.1 Unit Test Scripts and Unit Test Results	Ongoing
3.16.2.2 System Test Cases and System Test Results	Ongoing
3.16.2.3 Integration Test Cases and Integration Test Results	Ongoing
3.16.2.4 User Acceptance Test Cases and Test Results	Ongoing
3.16.2.5 Regression Test Cases and Test Results	Ongoing
3.16.2.6 Volume/Stress Test Cases and Volume/Stress Test Results	Ongoing
3.16.2.7 Security Test Cases and Security Test Results	Ongoing
3.16.4 Contractor System Documentation	Ongoing
3.17.1 Training and Knowledge Transfer Plan	Update
3.17.2 Training Materials	Update
3.17.3 Report of Training Metrics	Update
3.17.4 User Guide Documentation	Ongoing
3.19.4 Contractor In-Scope Component Help Desk Services Report	Ongoing
3.19.5 Contractor In-Scope Component Problem Log Report	Ongoing
3.20 Contractor Service Level Report	Ongoing

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

During the M&S period, the Contractor will continue to provide all the contracted services listed in Table 6 "Other Services to be Provided During M&S" of the current section, which work is included in the cost of M&S. In addition, the Contractor will, at the request of the County, make software and hardware enhancements for the VSAP Solution as Additional Work. This includes services of conducting tests, fixing/repair activities, providing technical support, keeping registries updated, reports and logs associated with all the activities and results obtained, updating all the documents and material when required, conducting training sessions to update the related users with the latest changes, upgrades, and updates.

5.7   M&S Closeout

The M&S period will end after the term of M&S is reached or when all County approved extensions have expired (**"M&S Closeout"**). Upon the completion of the Warranty and M&S periods and any extensions of the M&S period, the Contractor shall perform all activities

necessary to close out M&S. This includes updating and transferring all system documentation to County and performing formal contract closure.

5.7.1   M&S Closeout Checklist

The Contractor shall provide an M&S Closeout Checklist that shall, at a minimum, include a list of deliverables, documentations accepted, outstanding issues with a related plan for remediation and final acceptance by the County. The M&S Closeout Checklist shall be in the form and format agreed to by the County Project Management Team.

The Closeout Checklist shall confirm that all tasks have been completed, all deliverables have been accepted and all activities that need to be completed to officially close the M&S period have been completed.

Deliverable 5.7.1 M&S Closeout Checklist	
Delivery Timing	Submitted for approval no less than 60 calendar days prior to Contract end date
Delivery Frequency	Once
Description	The Contractor shall deliver an M&S Closeout Checklist as described in Section 5.7.1.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

At the end of the M&S stage of the Project, the Contractor will generate a final report where it will state what was done during this stage of the Project, how it was accomplished, the results obtained, an analysis of issues and problems encountered and how they were addressed, in addition to other subjects. Along with the final report, the Contractor will generate a Project M&S Closeout Checklist to be reviewed with the County to validate that all the activities and deliverables for this stage have been completed and accepted.

The Checklist, which will include as a minimum:

- List of activities and deliverables already accepted

- Documentation delivered and accepted

- Activities and deliverables pending for completion and acceptance from the County

The Contractor will agree with the County Project Management Team on the form and format for this checklist and conduct the review a maximum of 60 days before of the end date of the contract.

5.7.2   Disposition of County Intellectual Property After M&S

The Contractor shall identify any of the VSAP Project's proprietary documentation and return it to the County. Any electronic copies of the VSAP Project proprietary information (such as any County IP) stored on the Contractor equipment shall be transferred back to the County and/or destroyed.

The Contractor shall also transfer all agreed to, and finalized, documentation to the County Project Management Team. The format and the medium of transfer shall be at the discretion of the County Project Management Team.

Deliverable 5.7.2 Disposition of County Intellectual Property Report	
Delivery Timing	Submitted for approval no later than 5 calendar days following M&S Closeout or as required by the NDA, whichever is sooner
Delivery Frequency	Once
Description	The Contractor shall deliver a Disposition of County Intellectual Property Report as described in Section 5.7.2. The Disposition of County Intellectual Property Report, at minimum, shall include: ■ An attestation that proprietary information has been transferred back to the County and/or destroyed ■ All agreed to, and finalized, documentation has been transferred to the County

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

After the service end, which is after the end of the Warranty period, or any M&S period endings, the Contractor will proceed to start the handover of any physical documentation and the transfer, or destruction of any digital documentation that includes partial or total IP of the County.

All documentation that has been accessible through the Project Information Library (not limited to designs, manual, training documentation, procedures, and other) will be transferred to the County Project Management Team in the format and medium of transfer that was agreed upon by the County. The Contractor will submit a report indicating all the information and documents that have been effectively returned, transferred, or destroyed, no later than five (5) calendar days following M&S Closeout, or as required by the NDA, whichever is sooner. The County shall sign a formal acceptance of that report.

5.7.3   System Documentation Updates

The Contractor shall make updates to relevant system documentation (operations, training, security, design, requirements, use procedures, etc.) to reflect any changes that have occurred during Warranty or M&S periods.

5.7.4   Transfer of Materials

At M&S Closeout, the Contractor shall conduct a review with the County Project Management Team and identify any documentation that shall be updated because of changes during the Warranty or M&S periods. The Contractor shall be required to update the documentation and provide it to County Project Management Team for review and final acceptance.

The Contractor shall identify any County proprietary documentation and return it to County. Any electronic copies of County proprietary information stored on the Contractor's equipment shall be destroyed and/or transferred back to County. This section is not meant to replace or supersede any requirement in the NDA, which the Contractor must comply with in all respects.

The Contractor shall release the source code for all interfaces developed during the M&S period, specifically for VSAP, to County with a complete set of documented source code for them. As part of the transfer of source code, the Contractor shall conduct a detailed workshop

with the County Project Management Team explaining the structure of the source code and how to navigate and find key aspects of the system functionality within the code.

Deliverable 5.7.4a Updated System Documentation at M&S Closeout	
Delivery Timing	Submitted for approval no less than 20 calendar days prior to Contract end date
Delivery Frequency	Once
Description	The Contractor shall provide updated system documentation at M&S Closeout as described in Section 5.7.4.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

At M&S Closeout, all documentation related to the M&S services, such as service reports, logs, dashboards, procedures, and manuals, among other types of documents that may need to be updated with the latest changes executed during the M&S period, will be updated, and delivered to the County within a maximum of 20 days before the formal contract end date, for final review and acceptance.

The Contractor, together with the County Project Management Team, will have a final review of the documentation to obtain the final acceptance of the documentation generated. During this revision activity, any proprietary documentation of the County will be returned, digital documents will be transferred to the County's platform, and any other digital or physical copies still stored on the Contractor's Project Information Library will be eliminated.

Deliverable 5.7.4b Transfer Source Code	
Delivery Timing	**Transfer Source Code:** Submitted no less than 20 calendar days prior to Contract end date **Transfer Source Code Workshop:** Conducted no less than 20 calendar days prior to Contract end date
Delivery Frequency	Once
Description	The Contractor shall transfer source code developed during the M&S period to the County and conduct a workshop as described in Section 5.7.4.

The Contractor agrees to complete all the requirements set forth above in this section. The information below is intended to provide additional detail about how the requirements will be executed by the Contractor.

At M&S Closeout, as part of the final material delivery to the County, the Contractor will release the source code for all interfaces developed during the M&S period, with the complete set of documented source codes, updated with all the changes made during that period. This delivery will be due at a maximum of 20 days before the final administrative Project Closeout.

To complete the knowledge transfer, a workshop and training session will be scheduled with the assigned personnel from the County Project Management Team, which by the Contractor will train the personnel in all the solution components, software structure, language, configuration, administration, and usage of the framework. This will provide the team with the knowledge necessary to navigate and find key aspects of the system's functionality within the code, and to compile new versions, among other relevant activities for the code development. The planning

for the workshop will be done in conjunction with the County Project Management Team to determine whether it is convenient to carry out one single session for all components, or individual separate sessions, depending on the personnel that is to attend, and their technical knowledge in relation to the source code language and framework.

6.0 Additional Goods and Services

The County maintains the right to request Additional Work (e.g., additional goods and services) and this section provides the mechanism for which the County will request from the Contractor to peform additional tasks and services, provide additional goods and services, and expect collaboration on the delivery of general improvements in accordance with the Contract. These requests result from various categories of Additional Work that were not originally anticipated or were not fully defined to the level of specification required to provide a fixed-price at the time of Contract execution, which could include but not be limited to the following:

- Enhancements or re-certification support services (especially for *de minimis* items);
- Design enhancements to VSAP Solution components;
- Order of additional BMDs required during the Warranty or M&S periods;
- Dedicated support by the Contractor for Vote Centers up to and during elections;
- Facilities for warehousing BMDs.

Pursuant to Section 8.1 (Change Notices and Amendments) of the Contract, the request for Additional Work will be defined and documented in a negotiated work order via the process as prescribed below:

1. County sends request to Contractor for Additional Work;

2. County and Contractor collaborate on requirements and specifications for requested Additional Work;

3. The Contractor shall analyze the changes and share constructive feedback on performing the requested Additional Work to the County.

4. Contractor estimates the level of effort for services and additional goods required based on the hourly rates and costs for additional goods as set forth in Exhibit F (Rates for Other Goods and Services);

5. Using the Change Notice template finalized during the Project initiation activity, the Contrator will provide a firm-fixed fee for the performance of said Additional Work and shall minimaly include the following:

   o Detailed description of activities, tasks, and expected deliverables or goods;
   o Impact to other tasks or deliverables and/or to overall Project schedule;
   o Timeframe (i.e., schedule) for delivery;
   o Resources required from both the County and Contractor;
   o Fixed cost; and
   o Completed Deliverable Expectatiosn Document.

The sections below provide additional information on currently identified categories of Additional Work that have been contemplated but not fully defined.

6.1 Provide Enhancements

If the County determines that system enhancements are required for Contractor In-Scope Components, the County reserves the right to request from Contractor development of enhancements (whether due to changes in the Elections Code and regulations or County request) beyond those in the accepted design of the BMDs, BMG and ISB during Implementation, Warranty or M&S periods.

6.2 Provide Enhancement Certification

If the County determines it is necessary to re-certify or provide a request for a *de minimis* ruling by the California Secretary of State on enhancements made during Implementation, Warranty or M&S periods, the Contractor shall be required to provide re-certification support services for these enhancements under Additional Work pursuant to this section.

APPENDIX A
DELIVERABLES DEFINITION TABLE
TO EXHIBIT A

TO THE

VOTING SOLUTIONS FOR ALL PEOPLE (VSAP) IMPLEMENTATION AND SUPPORT SERVICES CONTRACT

VSAP Deliverables Definition Table – Implementation

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
1.1.1	VSAP Project Information Library	Develop and maintain a Project Information Library in a single online repository used to store, organize, track, control and disseminate all information and items produced through this engagement.	No	No	1.1.1	1.1.1, 1.1.1.1 - 1.1.1.7
1.1.2	Project Control Document	Deliver and maintain a Project Control Document as a collection of all of the following • Project Schedule • Project Assumptions • Scope Management Plan • Schedule Management Plan • Project Change Management Plan • Risk and Issue Management Plan • Quality Control Plan • Resource and Staffing Plan • Deliverables Acceptance Process • Project Communication Plan • Closure Approach	No	No	1.1.2	1.1.2, 1.1.2.1 - 1.1.2.20
1.1.3.1	Project Initiation Session Planning Materials	Deliver both of the following materials: • Agenda for Project Initiation Session • Project Initiation Session Planning Materials The materials are to be developed in consultation with County to discuss the project background, schedule, objectives and definitions, processes, roles and responsibilities, keys to success, next steps, questions and answers, and project resources.	No	No	1.1.3.1	1.1.3.1
1.1.3.2	Project Initiation Session and Event Summary Report	Deliver the Project Initiation Session based on the materials within Deliverable 1.1.3.1, and submit a Project Initiation Session Event Summary Report that includes observations, opportunities and challenges based on the Project Initiation Session, as well as County and Contractor attendance.	No	No	1.1.3.2	1.1.3.2

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
1.1.4	VSAP Project Orientation Materials	Create and update materials for the Contractor and the County to use to orient new project team members to the goals, objectives and approach of the VSAP Project, including relevant Project processes and Project Team members, roles and responsibilities.	No	No	1.1.4	1.1.4, 1.1.4.1 - 1.1.4.4
1.2	Project Status Report, Issues Log and Risk Log	Conduct weekly status meetings, participate in monthly status meetings with the Executive Steering Committee, create and deliver the Project Status Report twice per month and maintain and deliver the Risk Log and Issue Log twice per month. Deliver the status meeting agendas, Project Status Report, and Risk and Issue logs semimonthly.	No	No	1.2	1.2, 1.2.1 - 1.2.46
1.3.1	Project Closeout	Develop and complete the Project Closeout Checklist that will show all VSAP Solution documentation is up to date; all deliverables have been completed, approved and archived (and owned by the County); facilitating a lessons-learned process; handing off of source code, build files and completed test scripts; and related tactical activities (e.g., rolling people off the Project). The purpose of this deliverable is to ensure all Project activities and deliverables are complete, and the Project is ready to migrate to the Warranty period.	No	Yes	1.3.1	1.3.1
2.1.1	Design and Development Plan	Deliver and keep updated the Design and Development Plan that documents the Contractor's approach to design and development of software and hardware, and captures the Project approach that will ensure the VSAP Project will meet all of the County's requirements. This must align with the Project Control Document (Deliverable 1.1.2), be based on the VSAP specifications provided by the County and reflect the VSAP branding strategy as defined in collaboration with the County.	Yes	Yes	2.1.1	2.1.1

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
2.1.2	Enterprise Software Architecture Document	Deliver and keep updated the Enterprise Software Architecture Document that captures the overall architecture of the VSAP Solution, including components that are within the Contractor's scope for implementation and coordination. The goal for the Enterprise Software Architecture Document is to convey the overarching architecture of VSAP, and how it interacts with the broader ecosystem.	No	Yes	2.1.2	2.1.2
2.2.1.1	Updated BMD User Experience / User Interface Design Assets – EVT	Deliver updated design assets (native design files (i.e., those developed in Sketch), UI flows map, system sound files, UI animations and UI icons) based on EVT.	No	No	2.2.1.1	2.2.1.1
2.2.1.2	Engineering Validation Testing and Results for BMD Hardware	Deliver for approval as fully functional BMDs at the end of the EVT Stage all of the following • Assembled EVT test unit BMDs • Test reports from verification tests • Documentation of issues raised in testing and design changes made to address them • Updated "Design & Engineering Specification" documentation, as needed • Updated manufacturing package, as specified	Yes	Yes	2.2.1.2	2.2.1.2

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
2.2.1.4.1.1a	BMD Application Layer Software Development Plan	Deliver the plan that describes the overall approach to confirming the requirements, refining the design and developing, testing and deploying the solution, including all of the following • Requirements confirmation • Requirements management • Design validation and refinement • Release and sprint planning, with delivery cadence • Code versioning • Build management and continuous integration with deployment to production-class hardware (ACS and BCS SOM runtime environment) • Defect management and resolution	No	No	2.2.1.4.1.1a	2.2.1.4.1.1a
2.2.1.4.1.1b	BMD Application Layer Test Plan	Deliver the plan that describes the approach to testing the solution under development, including all of the following • Unit Test within classes/low level modules of the code • System Test within the ACS and BCS • Integration Test within the BMD • Security test of all components and integration • End-to-end functional test within the overall solution, including the BMG • Load/stress testing • User Experience testing by community stakeholders of elements that require further design • User Acceptance Test The preference is to test as early and often as possible in the life cycle and detect defects when they are relatively easy to fix.	No	No	2.2.1.4.1.1b	2.2.1.4.1.1b

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
2.2.1.4.1.1c	BMD Application Layer Test Cases – EVT	Submit all test cases, whether manual or automated, including all of the following • Test cases with traceability to requirements and acceptance criteria • Test suites and dependency chains • All test data required to execute the test cases • Test scripts for all automated tests	No	No	2.2.1.4.1.1c	2.2.1.4.1.1c
2.2.1.4.1.2a	BMD Application Layer Software Architecture Document – EVT	Create the Software Architecture Document as the current version of the core architecture design based on the Software Solution Design Document (SSDD) that contains several sections that capture detailed software design specifications for the Application Layer, including System Connectivity and System Security.	No	Yes	2.2.1.4.1.2a	2.2.1.4.1.2a
2.2.1.4.1.2b	Final BMD Application Layer Software Design Document – EVT	Deliver the final BMD Application Layer Software Design Document as the current version of the detailed software specifications based on the preexisting design specifications that contain several documents that capture detailed software design specifications for the Application Layer, including Software Specification, Application Detailed Design Specification and Shuttle API Specification. Critical, core artifacts that must be included are all of the following • Detailed software architecture diagrams • Event model • Data structures • Interface specifications	No	No	2.2.1.4.1.2b	2.2.1.4.1.2b
2.2.1.4.1.3a	BMD Application Layer Software and Deployment – EVT	Complete all software code, configuration and runtime components to be deployed to the ACS and BCS environment, including • Software repository for each release • Operating system baseline and configuration • BMD system configuration and application configuration file	No	No	2.2.1.4.1.3a	2.2.1.4.1.3a, 2.2.1.4.1.3a.1 - 2.2.1.4.1.3a.7

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
2.2.1.4.1.3b	BMD Application Layer Software Tooling	Deliver all tooling required to develop and maintain the Application Layer, including • Configuration of the Integrated Development Environment ("IDE") • Software repository • Continuous build and integration • Test automation • Deployment and release management	No	No	2.2.1.4.1.3b	2.2.1.4.1.3b
2.2.1.4.1.4	BMD Application Layer Test Report – EVT	Deliver a comprehensive test report that captures the test outcomes at all levels specified in the Test Plan, including all of the following information • Test methodology and test tools • Outcomes of all test levels and test cases • Indication of the test coverage • Test trends and "hot spots" of the software that are more prone to defects than others This is a key input to the completeness of this project stage.	No	No	2.2.1.4.1.4	2.2.1.4.1.4
2.2.1.5	Application Control System Board Support Package Software Image – EVT	Deliver both of the following based on the software stack chosen for the UX/UI application layer • ACS Board Support Package software image • Associated documentation	No	No	2.2.1.5	2.2.1.5
2.2.1.7	Ballot Control System Board Support Package Software Image – EVT	Deliver the following regarding the completion of the Board Support Package and firmware • BCS Board Support Package software image • Related documentation	No	No	2.2.1.7	2.2.1.7
2.2.2a	ISB Software Development Plan	Document the approach for confirming the requirements for the Interactive Sample Ballot (ISB); refining the design; and developing, testing and deploying the solution.	No	Yes	2.2.2a	2.2.2a

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
2.2.2b	ISB Test Plan	Document the approach to testing the ISB solution under development, including all of the following • Unit Test within classes/low level modules of the code • System Test within the ISB server and browser-based components • Integration Test within the BMD • End-to-end functional test within the overall solution, including loading ECBMS configuration files • Security test of all components and integration • Load/Stress testing at the server level • User Experience testing by community stakeholders • User Acceptance Test • Security testing	No	No	2.2.2b	2.2.2b
2.2.2c	ISB Test Cases – EVT	Document all test cases, whether manual or automated, including all of the following • Test cases with traceability to requirements and acceptance criteria • Test suites and dependency chains • All test data required to execute the test cases • Test scripts for all automated tests	No	No	2.2.2c	2.2.2c
2.2.2d	ISB Software Architecture Document – EVT	Create the Software Architecture Document based on the Software Requirements Specification and SSDD documentation that contain several sections that capture detailed software design specifications for the ISB.	No	Yes	2.2.2d	2.2.2d

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
2.2.2e	Final ISB Software Design Document – EVT	Create the final ISB Software Design Document after identifying and addressing any gaps and open items from the pre-existing ISB Software Requirement Specification, Phase 3 System Design and Engineering design artifacts, and requirement changes since the Phase 3 design documentation was created. The documentation must include • Detailed software architecture diagrams • Interaction between the server and browser environment • Data structures • Interface and configuration specifications	No	No	2.2.2e	2.2.2e
2.2.2f	ISB Software and Deployment – EVT	Provide all software code, configuration and runtime components to be deployed to the server and browser environment, including • Software repository for each release • Operating system baseline and configuration • ISB System Configuration • Documentation for all software code	No	No	2.2.2f	2.2.2f, 2.2.2f.1 - 2.2.2f.7
2.2.2g	ISB Software Tooling	Deliver all tooling required to develop and maintain the ISB, including • Configuration of the IDE • Software repository • Continuous build and integration • Test automation • Deployment management	No	No	2.2.2g	2.2.2g

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
2.2.2h	ISB Test Report – EVT	Provide a comprehensive test report that captures the test outcomes at all levels and is a key input to the completeness of this stage. The report must include all of the following • Test methodology and test tools • Outcomes of all test levels and test cases • Indication of the test coverage • Test trends and "hot spots" of the software that are more prone to defects than others	No	No	2.2.2h	2.2.2h
2.2.3a	BMG Software Development Plan	Document the overall approach to confirming the requirements, refining the design and developing, testing and deploying the solution, including all of the following • Requirements confirmation • Requirements management • Design validation and refinement • Release and sprint planning, with delivery cadence • Code versioning • Build management and continuous integration with deployment environment • Defect management	No	No	2.2.3a	2.2.3a

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
2.2.3b	BMG Test Plan	Document the approach to testing the solution under development, including all of the following • Unit Test within classes/low level modules of the code • System Test within the Application Configuration File components • Integration Test within the BMD • End-to-end functional test within the overall solution, including loading ECBMS configuration files • Load/stress testing (of volumes of transactions, users and locations) at the server level • Security test of all components and integration, including all BMD interfaces accessed by the BMG • User Acceptance Test	No	Yes	2.2.3b	2.2.3b
2.2.3c	BMG Test Cases – EVT	Provide all test cases, whether manual or automated, including all of the following • Test cases with traceability to requirements and acceptance criteria • Test suites and dependency chains • All test data required to execute the test cases • Test scripts for all automated tests	No	No	2.2.3c	2.2.3c

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
2.2.3d	BMG Software Architecture Document – EVT	Create the Software Architecture Document based on the SSDD that contains several sections that capture detailed software design specifications for the BMG, including all of the following • System Connectivity that describes how the major components of the overall voting solution exchange data • System Security that describes the data integrity, confidentiality and availability of the voting system. The BMD, and the software that controls it, is the heart of the voting system and touches on all aspects of system security • BMG that describes the device management, administration, internal components, security considerations and interfaces of the BMG	No	Yes	2.2.3d	2.2.3d
2.2.3e	Final BMG Software Design Document – EVT	Create the final BMG Software Design Document based on the preexisting design specifications that contain several documents that capture detailed software design specifications for the BMG. The artifacts must include all of the following • Detailed software architecture diagrams • Interaction between the server and browser environment • Data structures • Interface and configuration specifications	No	No	2.2.3e	2.2.3e
2.2.3f	BMG Software and Deployment – EVT	Provide all software code, configuration and runtime components to be deployed to the server and browser environment, including all of the following • Software repository for each release • Operating system baseline and configuration • BMG system configuration	No	No	2.2.3f	2.2.3f, 2.2.3f.1 - 2.2.3f.7

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
2.2.3g	BMG Software Tooling	Provide all tooling required to develop and maintain the BMG software, including all of the following • Configuration of the IDE • Software repository • Continuous build and integration • Test automation • Deployment management	No	No	2.2.3g	2.2.3g
2.2.3h	BMG Test Report – EVT	Deliver a comprehensive test report that captures the test outcomes at all levels and is a key input to the completeness of this project stage. The report must include all of the following: • Test methodology and test tools • Outcomes of all test levels and test cases • Indication of the test coverage • Test trends and "hot spots" of the software that are more prone to defects than others	No	No	2.2.3h	2.2.3h
2.3.1.1	Updated BMD User Experience / User Interface Design Assets – DVT	Deliver as part of the submission of fully functional BMDs at the end of the DVT stage, all of the following • Updated design assets based on DVT, including: • Native design files (i.e., those developed in Sketch) • UI flows map • System sound files • User Interface animations • User Interface icons	No	No	2.3.1.1	2.3.1.1

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
2.3.1.2	Design Validation Testing and Results for BMD Hardware	Submit for approval fully functional BMDs, built from parts from production processes (and tooling), at the end of the DVT stage, including all of the following • Tooling drawings for approval prior to beginning tool construction • Final tooling drawings upon tooling completion • First article inspection reports • Documentation tracking tooling and assembly issues to resolution • DVT test units (including case and cart) • Test reports from validation tests • Regulatory certifications • Documentation of issues raised in test and design changes made to address them • Updated "Design & Engineering Specification" documentation, as needed • Updated manufacturing package, as specified	Yes	Yes	2.3.1.2	2.3.1.2
2.3.1.4	BMD Application Layer – DVT Update Package	Develop the code needed to implement the refined design and then retest the solution, including updating specified deliverables created during the EVT, as needed.	No	No	2.3.1.4	2.3.1.4
2.3.1.5	Application Control System Board Support Package Software Image – DVT	Deliver documentation related to any modification of the board support package, testing of functionality on DVT hardware, and how issues raised in testing were addressed. The deliverable must include both of the following • ACS Board Support Package software image updated for DVT • Associated documentation	No	No	2.3.1.5	2.3.1.5

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
2.3.1.7	Ballot Control System Board Support Package Software Image – DVT	Deliver documentation related to any updates to firmware to support changes to the paper handler or printer, testing of functionality on DVT hardware, and how issues raised in testing were addressed. The deliverable must include both of the following: • BCS Board Support Package software image updated for DVT • Related documentation	No	No	2.3.1.7	2.3.1.7
2.3.1.11	Hardware Tooling – DVT	Finalize the hard tooling for each sub-component such that the BMD passes all required tests and certifications.	No	Yes	2.3.1.11	2.3.1.11
2.3.2	ISB – DVT Update Package	Capture changes to and refine the ISB design, as needed, and develop and test the refined solution, including updating the following deliverables created during the EVT as needed: • Deliverable 2.2.2c: ISB Test Cases • Deliverable 2.2.2d: ISB Software Architecture Document • Deliverable 2.2.2e: ISB Software Specifications • Deliverable 2.2.2f: ISB Software and Deployment • Deliverable 2.2.2h: ISB Test Report	No	No	2.3.2	2.3.2

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
2.3.3	BMD Manager	Capture changes to and refine the BMG, as needed, and develop and test the refined solution, including updating the following deliverables created during the EVT as needed: • Deliverable 2.2.3c: BMG Test Cases • Deliverable 2.2.3d: BMG Software Architecture Document • Deliverable 2.2.3e: BMG Software Specifications • Deliverable 2.2.3f: BMG Software and Deployment • Deliverable 2.2.3h: BMG Test Report	No	No	2.3.3	2.3.3, 2.3.3.1 - 2.3.3.3
2.4.1	Certifications Analysis	Produce a Certifications Analysis to identify the types of regulatory certifications that will be required prior to deploying the VSAP Solution for use by the public.	No	Yes	2.4.1	2.4.1
2.4.2a	California Secretary of State Certification of the VSAP Solution	Provide documentation that all of the following have been completed: • Obtain California Secretary of State Certification of the end-to-end VSAP Solution complying with all guidelines and requirements set forth by the California Secretary of State as part of the certification process. • Document issues raised and design changes made to address the issues during the certification process. • Update all BMD Hardware Design and Engineering Specification documents, BMD Manufacturing Packages, and BMD, BMG and ISB Software Documentation developed during DVT.	No	Yes	2.4.2a	2.4.2a

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
2.4.2b	Post California Secretary of State Certification Roadmap	Provide a roadmap that will analyze the conditions of the VSAP Certification and its implications for adoption within and outside the State of California	No	Yes	2.4.2b	2.4.2b
2.5.1.2	Production Validation Testing and Results for BMD Hardware	Deliver the Production BMD Units and quality reports related to the production validation testing of the PVT units.	No	Yes	2.5.1.2	2.5.1.2
2.5.1.4	BMD Application Layer – PVT Deployment	Confirm the Application Layer has been deployed to the BMD hardware as produced in the PVT stage.	No	No	2.5.1.4	2.5.1.4
2.5.1.5	Application Control System Board Support Package Software Image – PVT	Deliver both of the following • ACS Board Support Package software image updated for PVT • Associated documentation	No	No	2.5.1.5	2.5.1.5
2.5.1.7	Ballot Control System Board Support Package Software Image – PVT	Deliver both of the following: • BCS Board Support Package software image updated for PVT • Associated documentation	No	No	2.5.1.7	2.5.1.7
2.5.2	ISB – PVT Deployment	Confirm the ISB has been deployed to the server and client devices as produced in the PVT stage.	Yes	Yes	2.5.2	2.5.2
2.5.3	BMD Manager Deployment	Document the integration of the BMG with the BMD hardware at the PVT stage.	Yes	Yes	2.5.3	2.5.3
2.5.4	Integrated System Documentation	Create documentation for the integrated VSAP Solution showing how all the components are integrated and interfaced with each other, including applicable dependencies.	No	Yes	2.5.4	2.5.4

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
3.1a	Implementation Strategy	Deliver an Implementation Strategy that addresses the overall approach to deploying the VSAP Solution and that is closely coordinated with the County's overall implementation strategy for VSAP, including other VSAP Program activities not led by Contractor.	No	No	3.1a	3.1a
3.1b	Implementation Plan	Deliver an Implementation Plan that details the decisions, tasks, activities and resources required to execute to the Implementation Strategy.	Yes	Yes	3.1b	3.1b
3.2	BMD Production Schedule and Strategy	Deliver a BMD Production Schedule and Strategy that addresses all of the following • Number of BMDs required at various milestones throughout the Project, including EVT, DVT, Certification as well as PVT and Production stages • Timeframe by when BMD orders are to be delivered • Alternative manufacturing methods and procedures, if necessary, to meet the BMD production schedule	No	Yes	3.2	3.2
3.3a	BMDs for Vote Center Test Lab Testing 1 and 2	Deliver the agreed-upon number of production BMDs for Vote Center Test Lab Testing 1 and 2.	No	No	3.3a	3.3a
3.3b	BMDs for California Secretary of State Certification	Deliver the agreed upon number of production BMDs for testing and ultimate certification by the California Secretary of State.	Yes	Yes	3.3b	3.3b

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #

3.3.c.1	BMDs for 2019 Mock Election, November 2019 Pilot and Vote Center Demonstration Centers – Check Point 1	Deliver the following to show the progress to date toward delivering the agreed upon number of BMDs for public use in the 2019 Mock Election, November 2019 Pilot and Vote Center Demonstration Centers:
		
		• Preliminary Report that shows status of:
		  o Selection, Letters of Intent and Agreements with Final Product Development Partners
		  o Selection, Letters of Intent and Agreements with Third Party (Indirect) Vendors
		  o Selection, Letters of Intent and Agreements with Manufacturing Partners
		  o Selection of the most relevant electronic components, COTS and IOTS
		  o Having Finalized and/or Updated Legal Contracts, Letters of Intent, Non-Disclosure Agreements and Non-Compete Agreements with all of Contractor's Manufacturing Partners
		• Preliminary (Sprint 1) Mechanical Drawings Designs, except Paper Handler Mechanism aka Paper Transport System.
		• First round of Lab Samples (no Plastics or Metals), except Paper Handler Mechanism aka Paper Transport System.
		• Early Manufacturing strategy (Plastic and Metal Parts Supply, Sub-Assembly and Final Assembly)
		• Preliminary high level Bill of Materials for Final Assembly.
			No	No	3.3.c.1	3.3.c.1

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
3.3.c.2	BMDs for 2019 Mock Election, November 2019 Pilot and Vote Center Demonstration Centers – Check Point 2	Deliver the following to show the progress to date toward delivering the agreed upon number of BMDs for public use in the 2019 Mock Election, November 2019 Pilot and Vote Center Demonstration Centers: • One Non-Functional Prototype with "Mockup" Parts • Report with commitment components purchases • Status Report for Bill of Materials, Material Availability and Manufacturing Plan for EVT	No	No	3.3.c.2	3.3.c.2

3.3.d.1	BMDs for Full Rollout – Check Point 1	Deliver the following to show the progress to date toward delivering the agreed upon number of BMDs for public use in the Countywide 2020 election cycle (Full Rollout):
		• Report detailing Plan for Manufacturing Pilot Run I
		  o General Production Strategy for Manufacturing Pilot Run I
		  o Assembly Line Setup for Manufacturing Pilot Run I
		  o Preliminary Standard Operating Procedures for Manufacturing Pilot Run I
		• Report with status of all component purchases and material production year to date
		• Tooling Status Report year to date
		• Preliminary findings of Smartmatic Lab Test Reports (Sprint 1)
			No	No	3.3.d.1	3.3.d.1

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #

3.3.d.2	BMDs for Full Rollout – Check Point 2	Deliver the following to show the progress to date toward delivering the agreed upon number of BMDs for public use in the Countywide 2020 election cycle (Full Rollout):
		
		• Report summarizing results of Manufacturing Pilot Run I
		  ○ Assembly Line Setup for Pilot Run I
		  ○ SOP for Pilot Run I
		  ○ QA Reports
		  ○ Diagnostic Summary
		  ○ Summary of Issues found and Plan for Pilot Run II
		• Report detailing Plan for Manufacturing Pilot Run II
		  ○ General Production Strategy for Manufacturing Pilot Run II
		  ○ Assembly Line Setup for Manufacturing Pilot Run II
		  ○ Preliminary SOP for Manufacturing Pilot Run II
		• Report with status of all components purchases and material production YTD
		• Tooling Status Report YTD
		• Shipment Confirmation for 5 DVT Units (from Pilot Run I)
		• Preliminary findings of Smartmatic Lab Test Reports (Sprint 2)
			No	No	3.3.d.2	3.3.d.2

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #

3.3.d.3	BMDs for Full Rollout – Check Point 3	Deliver the following to show the progress to date toward delivering the agreed upon number of BMDs for public use in the Countywide 2020 election cycle (Full Rollout):
		
		• Report summarizing results of Manufacturing Pilot Run II
		  ○ Assembly Line Setup for Pilot Run II
		  ○ Standard Operating Procedures for Pilot Run II
		  ○ Quality Assurance Reports
		  ○ Diagnostic Summary
		  ○ Summary of Issues found and Plan for manufacturing production
		• Report with status of all components purchases and material production year to date
		• Tooling Status Report year to date
		• Smartmatic Lab Test Reports results and reports
		• Shipment Confirmation for five (5) DVT Units (from Pilot Run II)
			No	No	3.3.d.3	3.3.d.3

3.3.d.4	BMDs for Full Rollout – Check Point 4	Deliver the following to show the progress to date toward delivering the agreed upon number of BMDs for public use in the Countywide 2020 election cycle (Full Rollout): • Test results from a California State-Approved Testing Agency verifying compliance of the BMDs with CVSS hardware requirements • Shipment and Delivery Confirmation for 1200 Units (from manufacturing production's First Run)	No	Yes	3.3.d.4	3.3.d.4

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
3.3.d.5	BMDs for Full Rollout – Final Check Point	Deliver the following to show the progress to date toward delivering the agreed upon number of BMDs for public use in the Countywide 2020 election cycle (Full Rollout): • Shipment and Delivery Confirmation for remaining Mass Production Units to reach the full complement of 31,100 Units.	Yes	Yes	3.3.d.5	3.3.d.5
3.4	System Interface Plan	Provide a System Interface Plan that includes all of the following • List of interfaces • Categorization of interfaces (inbound, outbound) • Source and destination system/component • Strategy to complete the interface • Description of data being exchanged, including security	No	Yes	3.4	3.4

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
3.5	End-to-End Security Plan	Provide an End-to-End Security Plan that includes all of the following • Contractor Compliance with California Voting System Standards ("CVSS") Security Requirements • Subcontractor Compliance with Center for Internet Security Top 20 Critical Security Controls • Supply Chain Risk Management • Threat Modeling and Risk Assessment Processes and Procedures • Application Development Security Practices • Security Responsibilities • User Policies and Procedures to Protect Systems • Testing Security Practices • Contractor Staff Security Training Practices • Incident Response Plan • Audit Event Log • Monitoring and Protecting County Data • Data Protection for Shipment of BMDs • Compliance with County Data Security Restrictions • Help Desk Level 2 Ticket Security • Help Desk Personnel Authentication	No	No	3.5	3.5
3.5.1	Continuity Plan	Deliver a Continuity Plan according to CVSS Standards, with NIST security requirements recommended where CVSS is silent.	No	Yes	3.5.1	3.5.1
3.6a	System Interface Design	Deliver the System Interface Design as described in Section **Error! Reference source not found.**3.6 and complete development of interfaces.	No	Yes	3.6a	3.6a

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
3.6b	Digital Signing Authority	Deliver an enterprise signing authority that can be used by all VSAP components to sign data exchanges such that the contents can be trusted as originating from the intended source, has not been tampered with and is complete. The signing authority must comply with the highest FIPS PUB 180-4 standards. The signing authority must include mechanisms and processes for secure certificate management, both in network-connected and non-connected scenarios.	No	Yes	3.6b	3.6b
3.7.1	Report of Systems Integration Activities	Deliver a Report of Systems Integration Activities, including all of the following • Integration issues identified • Issue description • Parties involved • Planned resolution activities and timing • Actual resolution activities and outcome	No	No	3.7.1	3.7.1
3.7.2	Report of Coordination Activities	Deliver a Report of Coordination Activities, including all of the following • Coordination issues identified • Issue description • Parties involved and responsible for resolution • Planned resolution activities and timing as provided by the responsible party • Actual resolution activities and outcome as confirmed by the Contractor	No	No	3.7.2	3.7.2
3.8	Pre-Certification Test Results	Provide the results of completed certification tests to the County for each iteration and the final test results that indicate likely approval by the California Secretary of State.	No	No	3.8	3.8
3.9	VSAP Solution Use Procedures	Develop the VSAP Solution Use Procedures as required for submission to the California Secretary of State per Section 2.4.2.	No	No	3.9	3.9

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
3.10a	Deploy VSAP Solution (Prior to Full Rollout)	Deploy the VSAP Solution for each deployment milestone prior to Full Rollout as described in Section 3.10.	No	Yes	3.10a	3.10a, 3.10a.1 - 3.10a.5
3.10b	Post-Deployment Lessons Learned	Document all lessons learned about each deployment as it relates to the Contractor's In-Scope Components and the integration of the overall VSAP Solution. Also provide recommendations of changes to improve future deployment, including the responsible party and action items.	No	No	3.10b	3.10b
3.11	Deploy VSAP Solution to All Sites	Deploy the VSAP Solution to all sites.	No	Yes	3.11	3.11
3.13.1	Repair and Replacement of BMDs	Repair and replace BMDs.	No	Yes	3.13.1	3.13.1
3.13.2	Contractor In-Scope Component Recall and Update Services	Deliver all of the following • Defect-free components • Updated documentation related to the affected component • Updated training materials related to the affected component, if needed	No	No	3.13.2	3.13.2
3.13.3	Preventative Maintenance Schedule	Develop a Preventative Maintenance Schedule for all the BMDs.	No	No	3.13.3	3.13.3
3.13.4	Preventative Maintenance on BMDs	Conduct preventative maintenance on all of the BMDs consistent with the Preventative Maintenance Schedule.	No	Yes	3.13.4	3.13.4

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
3.13.5	BMD Hardware Lifecycle and Bill of Materials Report	Establish and track the BMD hardware life cycle, maintain and update the Bill of Materials and inform the County on any changes or near-term end-of-availability items. The BMD Hardware Lifecycle and Bill of Materials Report shall also include the Contractor's recommended hardware substitutions, if necessary.	No	No	3.13.5	3.13.5
3.14	Report of Software Maintenance	Deliver a report of the software maintenance activities during the period, related to software changes, deficiency and error completion, documentation and training.	No	No	3.14	3.14
3.15	Report of Third-Party Sub-component Maintenance	Deliver a report of third-party subcomponent maintenance related to third-party hardware and software included in the BMD, ISB or BMG components.	No	No	3.15	3.15
3.16.1	Configuration Management Report	Deliver each Configuration Management Report related to Builds that result in Releases.	No	No	3.16.1	3.16.1
3.16.2.1	Unit Test Scripts and Unit Test Results	Deliver Unit Test Scripts and Unit Test Results related to unit tests performed upon completion of software development or upon subsequent revision of the software, to verify the software performs as described in the Software Architecture Document.	No	No	3.16.2.1	3.16.2.1
3.16.2.2	System Test Cases and System Test Results	Deliver System Test Cases and System Test Results related to system testing (with regression test scenarios) and any necessary user experience and testing.	No	No	3.16.2.2	3.16.2.2
3.16.2.3	Integration Test Cases and Integration Test Results	Deliver Integration Test Cases and Integration Test Results related to an integrated system test to verify that all software components work together as designed.	No	No	3.16.2.3	3.16.2.3

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
3.16.2.4	User Acceptance Test Cases and Test Results	Deliver User Acceptance Test Cases and Test Results related to end-to-end user acceptance testing to verify that the VSAP Solution performs as intended to support the County's voting processes.	No	No	3.16.2.4	3.16.2.4
3.16.2.5	Regression Test Cases and Test Results	Deliver Regression Test Cases and Test Results related to independent regression testing to confirm that changes introduced by individual components have not inadvertently impacted overall VSAP Solution functionality.	No	No	3.16.2.5	3.16.2.5
3.16.2.6	Volume/Stress Test Cases and Volume/Stress Test Results	Deliver Volume/Stress Test Cases and Volume/Stress Test Results based on volume/stress testing to measure the In-Scope Components against performance targets established in the Design and Development Plan.	No	No	3.16.2.6	3.16.2.6
3.16.2.7	Security Test Cases and Security Test Results	Deliver Security Test Cases and Security Test Results based on security testing to validate the security measures established within the VSAP Solution are compliant with County policies and state regulations and are sufficient to restrict unauthorized access into the system or unauthorized use of features or functions as well as to resist service disruption from denial-of-service attacks.	No	No	3.16.2.7	3.16.2.7

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #

3.16.4	Contractor System Documentation	Deliver updated Contractor System Documentation prior to each release, including all of the following documents
		• Functional and technical design documents:
		  ○ BMD Application Layer Software Architecture Document
		  ○ BMD Application Layer Software Specifications
		  ○ ISB Software Architecture Document
		  ○ ISB Software Specifications
		  ○ BMG Software Architecture Document
		  ○ BMG Software Specifications
		• End-to-End Security Plan
		• VSAP Solution Use Procedures
			No	No	3.16.4	3.16.4

3.17.1	Training and Knowledge Transfer Plan	Deliver a Training and Knowledge Transfer Plan that includes the specified information such as the types of training and the audience for each, a description of training materials and tools to be employed, a description of training methodology, a detailed list of topics to be covered for each type of training, a description of the methodology for evaluating effectiveness of the training, the training schedule and proposed training staff.	No	Yes	3.17.1	3.17.1
3.17.2	Training Materials	Deliver Training Materials for each of the training types described in the Training and Knowledge Transfer Plan.	No	No	3.17.2	3.17.2
3.17.3	Report of Training Metrics	Deliver a Report of Training Metrics, which includes training metrics for reporting progress and effectiveness, such as the number of participants registered to be trained, participants trained and number of participants receiving training certification.	No	No	3.17.3	3.17.3
3.17.4	User Guide Documentation	Deliver User Guide Documentation for the BMDs, BMG and ISB explaining how the system (BMDs, BMG, or ISB) is intended to be operated.	Yes	Yes	3.17.4	3.17.4

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
3.19.4	Contractor In-Scope Component Help Desk Services Report	Deliver each Contractor In-Scope Component Help Desk Services Report documenting service requests, resolutions and recommended changes to be made to Contractor In-Scope Components.	No	No	3.19.4	3.19.4
3.19.5	Contractor In-Scope Component Problem Log Report	Deliver each Contractor In-Scope Component Problem Log Report, including the specified information such as problem number, date and time reported, description of the problem, Support Tier assigned to the problem, resolution status and estimated fix date, and resolution plan.	No	No	3.19.5	3.19.5
3.20	Contractor Service Level Report	Deliver each Contractor Service Level Report, including all of the following • Ongoing monitoring of the Contractor adherence to service levels • Issues that could impact an agreed-upon service levels • Resolution of root-causes impacting the Contractor's ability to meet agreed-upon service levels • Monthly statistics and management reports to the County on service level attainment	No	Yes	3.20	3.20
3.21.1	Final Acceptance Report	Provide a Final Acceptance Report documenting completion of the specified tasks and County acceptance of In-Scope Components.	Yes	Yes	3.21.1	3.21.1
3.23	Facility and Environmental Requirements for BMD and BMG Operations	Provide Facility and Environmental Requirements for BMD and BMG Operations.	No	Yes	3.23	3.23

VSAP Deliverables Definition Table – M&S and Warranty

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
3.5	End-to-End Security Plan	Update the End-to-End Security Plan that includes all of the following • Contractor Compliance with California Voting System Standards ("CVSS") Security Requirements • Subcontractor Compliance with Center for Internet Security Top 20 Critical Security Controls • Supply Chain Risk Management • Threat Modeling and Risk Assessment Processes and Procedures • Application Development Security Practices • Security Responsibilities • User Policies and Procedures to Protect Systems • Testing Security Practices • Contractor Staff Security Training Practices • Incident Response Plan • Audit Event Log • Monitoring and Protecting County Data • Data Protection for Shipment of BMDs • Compliance with County Data Security Restrictions • Help Desk Level 2 Ticket Security • Help Desk Personnel Authentication	No	No	3.5	3.5
3.5.1	Continuity Plan	Update the Continuity Plan according to CVSS Standards, with NIST security requirements recommended where CVSS is silent.	No	No	3.5.1	3.5.1
3.9	VSAP Solution Use Procedures	Update the VSAP Solution Use Procedures as required for submission to the California Secretary of State per Section 2.4.2.	No	No	3.9	3.9
3.13.1	Repair and Replacement of BMDs	Repair and replace BMDs.	No	No	3.13.1	3.13.1

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
3.13.2	Contractor In-Scope Component Recall and Update Services	Continue to deliver all of the following • Defect-free components • Updated documentation related to the affected component • Updated training materials related to the affected component, if needed	No	No	3.13.2	3.13.2
3.13.3	Preventative Maintenance Schedule	Update the Preventative Maintenance Schedule for all the BMDs.	No	No	3.13.3	3.13.3
3.13.4	Preventative Maintenance on BMDs	Conduct preventative maintenance on all of the BMDs consistent with the Preventative Maintenance Schedule.	No	No	3.13.4	3.13.4
3.13.5	BMD Hardware Lifecycle and Bill of Materials Report	Continue to track the BMD hardware life cycle, maintain and update the Bill of Materials and inform the County on any changes or near-term end-of-availability items. The BMD Hardware Lifecycle and Bill of Materials Report shall also include the Contractor's recommended hardware substitutions, if necessary.	No	No	3.13.5	3.13.5
3.14	Report of Software Maintenance	Deliver a report of the software maintenance activities during the period, related to software changes, deficiency and error completion, documentation and training.	No	No	3.14	3.14
3.15	Report of Third-Party Sub-component Maintenance	Deliver a report of third-party subcomponent maintenance related to third-party hardware and software included in the BMD, ISB or BMG components.	No	No	3.15	3.15
3.16.1	Configuration Management Report	Deliver each Configuration Management Report related to Builds that result in Releases.	No	No	3.16.1	3.16.1

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
3.16.2.1	Unit Test Scripts and Unit Test Results	Deliver Unit Test Scripts and Unit Test Results related to unit tests performed upon completion of software development or upon subsequent revision of the software, to verify the software performs as described in the Software Architecture Document.	No	No	3.16.2.1	3.16.2.1
3.16.2.2	System Test Cases and System Test Results	Deliver System Test Cases and System Test Results related to system testing (with regression test scenarios) and any necessary user experience and testing.	No	No	3.16.2.2	3.16.2.2
3.16.2.3	Integration Test Cases and Integration Test Results	Deliver Integration Test Cases and Integration Test Results related to an integrated system test to verify that all software components work together as designed.	No	No	3.16.2.3	3.16.2.3
3.16.2.4	User Acceptance Test Cases and Test Results	Deliver User Acceptance Test Cases and Test Results related to end-to-end user acceptance testing to verify that the VSAP Solution performs as intended to support the County's voting processes.	No	No	3.16.2.4	3.16.2.4
3.16.2.5	Regression Test Cases and Test Results	Deliver Regression Test Cases and Test Results related to independent regression testing to confirm that changes introduced by individual components have not inadvertently impacted overall VSAP Solution functionality.	No	No	3.16.2.5	3.16.2.5
3.16.2.6	Volume/Stress Test Cases and Volume/Stress Test Results	Deliver Volume/Stress Test Cases and Volume/Stress Test Results based on volume/stress testing to measure the In-Scope Components against performance targets established in the Design and Development Plan.	No	No	3.16.2.6	3.16.2.6

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
3.16.2.7	Security Test Cases and Security Test Results	Deliver Security Test Cases and Security Test Results based on security testing to validate the security measures established within the VSAP Solution are compliant with County policies and state regulations and are sufficient to restrict unauthorized access into the system or unauthorized use of features or functions as well as to resist service disruption from denial-of-service attacks.	No	No	3.16.2.7	3.16.2.7
3.16.4	Contractor System Documentation	Deliver updated Contractor System Documentation prior to each release, including all of the following documents • Updated Functional Design Document • Updated Technical Design Document • Updated End-to-End Security Plan • Updated VSAP Solution Use Procedures	No	No	3.16.4	3.16.4
3.17.1	Training and Knowledge Transfer Plan	Update the Training and Knowledge Transfer Plan that includes the specified information such as the types of training and the audience for each, a description of training materials and tools to be employed, a description of training methodology, a detailed list of topics to be covered for each type of training, a description of the methodology for evaluating effectiveness of the training, the training schedule and proposed training staff.	No	No	3.17.1	3.17.1
3.17.2	Training Materials	Update the Training Materials for each of the training types described in the updated Training and Knowledge Transfer Plan.	No	No	3.17.2	3.17.2
3.17.3	Report of Training Metrics	Deliver a Report of Training Metrics, which includes training metrics for reporting progress and effectiveness, such as the number of participants registered to be trained, participants trained and number of participants receiving training certification.	No	No	3.17.3	3.17.3

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
3.17.4	User Guide Documentation	Update User Guide Documentation for the BMDs, BMG and ISB explaining how the system (BMDs, BMG, or ISB) is intended to be operated.	No	No	3.17.4	3.17.4
3.19.4	Contractor In-Scope Component Help Desk Services Report	Deliver each Contractor In-Scope Component Help Desk Services Report documenting service requests, resolutions and recommended changes to be made to Contractor In-Scope Components.	No	No	3.19.4	3.19.4
3.19.5	Contractor In-Scope Component Problem Log Report	Deliver each Contractor In-Scope Component Problem Log Report, including the specified information such as problem number, date and time reported, description of the problem, Support Tier assigned to the problem, resolution status and estimated fix date, and resolution plan.	No	No	3.19.5	3.19.5
3.20	Contractor Service Level Report	Deliver each Contractor Service Level Report, including all of the following • Ongoing monitoring of the Contractor adherence to service levels • Issues that could impact an agreed-upon service levels • Resolution of root-causes impacting the Contractor's ability to meet agreed-upon service levels • Monthly statistics and management reports to the County on service level attainment	No	No	3.20	3.20
5.7.1	M&S Closeout Checklist	Deliver an M&S Closeout Checklist, including, at a minimum, a list of deliverables, documentations accepted, outstanding issues with a related plan for remediation and final acceptance by the County.	No	No	5.7.1	5.7.1

Deliverable #	Deliverable Name	Deliverable Description	Key Deliverable (Yes/No)	DED Required (Yes/No)	Task ID #	Payment Milestone #
5.7.2	Disposition of County Intellectual Property Report	Deliver a Disposition of County Intellectual Property Report, including • An attestation that proprietary information has been transferred back to the County and/or destroyed • All agreed to, and finalized, documentation has been transferred to the County	No	No	5.7.2	5.7.2
5.7.4a	Updated System Documentation at M&S Closeout	Provide system documentation at M&S Closeout that has be updated because of changes during the Warranty or M&S periods.	No	No	5.7.4	5.7.4a
5.7.4b	Transfer Source Code	Transfer to the County source code developed during the M&S period and conduct a workshop explaining the structure of the source code and how to navigate and find key aspects of the system functionality within the code.	No	No	5.7.4	5.7.4a

APPENDIX B
PERFORMANCE REQUIREMENTS SUMMARY (PRS) CHART
TO EXHIBIT A

TO THE

VOTING SOLUTIONS FOR ALL PEOPLE (VSAP) IMPLEMENTATION AND SUPPORT SERVICES CONTRACT

The following tables set forth the Contractor's Key Deliverables and Help Desk Service Level Agreements (SLAs) that will be monitored for compliance and adherence by the County throughout the Project. It further sets forth the method by which the County will monitor Contractor's successful achievement of each performance requirement and the associated deduction in fees associated with not achieving each performance requirement or as set forth in Section 8.26 (Liquidated Damages; Other Remedies).

Table B.1 – Performance Requirements for Key Deliverables Table

ID #	Specific Performance Requirement	Monitoring Method	Deduction in Fees
1	2.1.1 Design and Development Plan	On-time delivery per agreed upon Due Date and acceptance of the deliverable per signed Deliverable Acceptance Document.	As set forth in Section 8.26 (Liquidated Damages; Other Remedies).
2	2.2.1.2 Engineering Validation Testing and Results for BMD Hardware	On-time delivery per agreed upon Due Date and acceptance of the deliverable per signed Deliverable Acceptance Document.	As set forth in Section 8.26 (Liquidated Damages; Other Remedies).
3	2.3.1.2 Design Validation Testing and Results for BMD Hardware	On-time delivery per agreed upon Due Date and acceptance of the deliverable per signed Deliverable Acceptance Document.	As set forth in Section 8.26 (Liquidated Damages; Other Remedies).
4	2.5.2 ISB – PVT Deployment	On-time delivery per agreed upon Due Date and acceptance of the deliverable per signed Deliverable Acceptance Document.	As set forth in Section 8.26 (Liquidated Damages; Other Remedies).
5	2.5.3 BMD Manager Deployment	On-time delivery per agreed upon Due Date and acceptance of the deliverable per signed Deliverable Acceptance Document.	As set forth in Section 8.26 (Liquidated Damages; Other Remedies).
6	3.1b Implementation Plan	On-time delivery per agreed upon Due Date and acceptance of the deliverable per signed Deliverable Acceptance Document.	As set forth in Section 8.26 (Liquidated Damages; Other Remedies).

ID #	Specific Performance Requirement	Monitoring Method	Deduction in Fees
2	3.19.1.2 Provide Tier 2 Help Desk Services **Tier 2:** Election Day minus 60 days to Election Day minus 21 days Contractor will be responsible for providing Level 2 Help Desk Support to address and resolve all Help Desk requests not resolved by Help Desk Level 1 for BMD, BMG and ISB.	Contractor Service Level Report depicting achievement of SLA's as specified in Section 3.19 – Table 3 in Exhibit A (Statement of Work)	For every one (1) day past the resolution specified for the ticket type, the deduction in fees shall be $1,000.00 per ticket.
3	3.19.1.3 Provide Tier 3 Help Desk Services **Tier 3:** Election Day minus 20 days to Election Day Contractor will be responsible for providing Level 2 Help Desk Support to address and resolve all Help Desk requests not resolved by Help Desk Level 1 for BMD, BMG and ISB.	Contractor Service Level Report depicting achievement of SLAs as specified in Section 3.19 – Table 3 in Exhibit A (Statement of Work)	For every one (1) hour past the resolution specified for the ticket type, the deduction in fees shall be $1,000.00 per ticket.
4	3.19.1.4 Provide Standard Level 2 Support Services **Standard Support:** Support when the specified tiers do not apply Contractor will be responsible for providing Level 2 Help Desk Support to address and resolve all Help Desk requests not resolved by Help Desk Level 1 for BMD, BMG and ISB.	Contractor Service Level Report depicting achievement of SLAs as specified in Section 3.19 – Table 3 in Exhibit A (Statement of Work)	For every one (1) week past the resolution specified for the ticket type, the deduction in fees shall be $1,000.00 per ticket.

APPENDIX C
CONTRACTOR'S KEY PERSONNEL
TO EXHIBIT A

TO THE

VOTING SOLUTIONS FOR ALL PEOPLE (VSAP) IMPLEMENTATION AND SUPPORT SERVICES CONTRACT

The following table sets forth the Contractor's Key Personnel as of the Effective Date of the Contract through the M&S Closeout.

KEY PERSONNEL NAME	PROJECT ROLE	TITLE IN ORGANIZATION	% OF DEDICATED TIME FOR WORK EFFORT – IMPLEMENTATION	% OF DEDICATED TIME FOR WORK EFFORT – WARRANTY AND M&S	% OF TIME ON-SITE (WORK WEEK)
Daniel Murphy	Engagement Director (Implementation Phase)	Department Director, Smartmatic	100%	10%	100%
Angela McWhorter	Project Manager	Junior Solutions Manager, Smartmatic	100%	100%	100%
Tyler Rubin	Solution Architect	Solutions Manager, Smartmatic	100%	100%	100%
James Long	Voting Subject Matter Expert / Alternate Project Manager	Director of Certification, Smartmatic	100%	0%	100%
Antinette Ralph Starks	Service Delivery Manager	Service Delivery Manager, Smartmatic	100%	100%	100%
Alberto Castro	Engagement Director (Warranty and M&S Phases)	Global Service Director for the Americas, Smartmatic	20%	100%	100%

APPENDIX D

CONTRACTOR'S SUBCONTRACTORS

TO EXHIBIT A

TO THE

VOTING SOLUTIONS FOR ALL PEOPLE (VSAP) IMPLEMENTATION AND SUPPORT SERVICES CONTRACT

The following table sets forth the Contractor's Subcontractors as of the Effective Date of the Contract through the M&S Closeout.

SUBCONTRACTOR ORGANIZATION	ORGANIZATION REPRESENTATIVE	TITLE IN ORGANIZATION	ROLE ON VSAP PROJECT
Flex Ltd. 6201 America Center Drive San Jose, CA 95002	Timothy Stewart	Vice President, Secretary	Contract manufacturing
Votem 50 Public Square Suite 200 Cleveland, OH 44115	Pete Martin	Chief Executive Office	Development, integration and implementation of the Interactive Sample Ballot software

APPENDIX E
DELIVERABLE EXPECTATIONS DOCUMENT (DED)
TO EXHIBIT A

TO THE

VOTING SOLUTIONS FOR ALL PEOPLE (VSAP) IMPLEMENTATION AND SUPPORT SERVICES CONTRACT

Deliverable Expectations Document Template

Project Deliverable Expectations Document (DED)	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	
Frequency:	Contract/SOW Reference:
County's Review of Draft DED: [XX] Days	Initial Draft Submission Due Date:
Distribution: County Program Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy	Final Submission Due Date: [XX] Days after receipt of draft comments
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Phone Number:	Date Re-Submitted 2:
E-mail:	Date Re-Submitted 3:
Contractor Project Director or Contractor Project Manager Signoff:	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Deliverable Acceptance Document Template

Project Deliverable Acceptance Document (DAD)	
Project Deliverable or Task Number:	**Title of Deliverable or Task:**
Deliverable Description:	
Frequency:	Contract/SOW Reference:
Date Deliverable or Task Completed:	Deliverable or Task Cost:
Distribution: County Program Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy	
Contractor Submission Information	
Submitted By (Printed Name and Title):	Date Submitted:
Phone Number:	E-mail:
County Approval/Comments	
Deliverable or Task Accepted?	[ ] Yes [ ] No (if No, explain below)
Reason for Not Accepting Deliverable or Task (if applicable):	
Approval #1	
Approved By (Printed Name and Title):	Date:
Signature:	
Approval #2 (if applicable)	
Approved By (Printed Name and Title):	Date:
Signature:	

APPENDIX F
RATES FOR OTHER GOODS AND SERVICES
TO EXHIBIT A

TO THE

VOTING SOLUTIONS FOR ALL PEOPLE (VSAP) IMPLEMENTATION AND SUPPORT SERVICES CONTRACT

Table F.1 – Professional Services Rate Card

ROLE DESCRIPTION	HOURLY RATE
Off-Site Blended Team Member	$107.00
On-Site Blended Team Member	$132.00
Android Developer	$111.00
Animator	$87.00
Application Specialist	$120.00
Compliance/Certification Manager	$74.00
Development/Systems Operations Engineer	$105.00
Documentation Lead	$90.00
Electrical Engineer	$120.00
Electrical Engineering Lead	$130.00
Engagement Director	$192.00
Software Engineering Lead / Manager	$141.00
Financial Controller	$120.00
Front-end Developer	$100.00
CSS UI/UX Engineer	$74.00
Graphic Designer	$55.00
Hardware/Driver/OS Software Engineer	$92.00
Help Desk Specialist	$90.00
Desktop/Office Support	$70.00
Information Security Specialist	$116.00
Infrastructure Specialist	$114.00
Java Developer	$100.00
Senior Java Developer	$110.00
Maintenance Assistant	$70.00
Maintenance Operator	$65.00
Maintenance Supervisor	$110.00
Maintenance Support	$90.00
Manufacturing Specialist	$65.00
Mechanical Engineer	$120.00
Mechanical Engineering Lead	$135.00
Network Engineer	$115.00
Operations Manager	$117.00
Product Manager	$105.00
Procurement Coordinator	$110.00
Production/Readiness Specialist	$104.00
Project Coordinator	$104.00
Project Coordinator Lead	$140.00
Project Manager	$180.00

ROLE DESCRIPTION	HOURLY RATE
QA Engineer	$87.00
QA Manager	$105.00
Repair Technician	$60.00
Security Engineer	$141.00
Security Engineer Lead	$154.00
Service Delivery Manager	$160.00
Software Architect	$129.00
Solution Architect	$173.00
Administrative / Solutions Coordinator	$124.00
Sound Engineer	$120.00
Technical Writer	$74.00
Technical Writer Lead	$111.00
Trainer Lead	$75.00
Trainer	$70.00
Training Manager	$123.00
UI/UX/Design Product Manager / Artistic Director	$124.00
Voting Subject Matter Expert / Certification Director	$170.00

Table F.2 – Ballot Marking Device per Unit Cost

NUMBER OF UNITS	COST PER UNIT
<501 Units	███
501 – 1,000 Units	███
1,001 – 5,000 Units	███
>5,000 Units	███

Table F.3 – Ballot Marking Device Cases per Unit Cost

NUMBER OF UNITS	COST PER UNIT
<501 Units	███
501 – 1,000 Units	███
1,001 – 5,000 Units	███
>5,000 Units	███

Table F.4 – Ballot Marking Device Carts per Unit Cost

NUMBER OF UNITS	COST PER UNIT
<501 Units	██████
501 – 1,000 Units	██████
1,001 – 5,000 Units	██████
>5,000 Units	██████

APPENDIX G
CONTRACT DISCREPANCY REPORT
TO EXHIBIT A

TO THE

VOTING SOLUTIONS FOR ALL PEOPLE (VSAP) IMPLEMENTATION AND SUPPORT SERVICES CONTRACT

CONTRACT DISCREPANCY REPORT

TO:

FROM:

DATES: **Prepared:**   _____

              Returned by Contractor: _____

              Action Completed: _____

DISCREPANCY PROBLEMS: _____

_____

_____

_____   _____

Signature of County Representative   Date

CONTRACTOR RESPONSE (Cause and Corrective Action): _____

_____

_____

_____   _____

Signature of Contractor Representative   Date

COUNTY EVALUATION OF CONTRACTOR RESPONSE: _____

_____

_____

_____   _____

Signature of Contractor Representative   Date

COUNTY ACTIONS: _____

_____

_____

CONTRACTOR NOTIFIED OF ACTION:

County Representative's Signature and Date   _____

Contractor Representative's Signature and Date _____

EXHIBIT B

PRICING SCHEDULE

TO THE

**VOTING SOLUTIONS FOR ALL PEOPLE (VSAP)
IMPLEMENTATION AND SUPPORT SERVICES
CONTRACT**

Exhibit B - Pricing Schedule - Table B.1 Implementation Phase

Deliverable #	Deliverable Description	Fixed Price Fee	Less 15% Holdback	Invoice Amount	Due Date
1.1.1	VSAP Project Information Library	$328,000.00	$49,200.00	$278,800.00	7/9/2018
1.1.1.1	VSAP Project Information Library Update Q3 18	$68,330.00	$10,249.50	$58,080.50	9/10/2018
1.1.1.2	VSAP Project Information Library Update Q4 18	$68,330.00	$10,249.50	$58,080.50	12/10/2018
1.1.1.3	VSAP Project Information Library Update Q1 19	$68,330.00	$10,249.50	$58,080.50	3/11/2019
1.1.1.4	VSAP Project Information Library Update Q2 19	$68,330.00	$10,249.50	$58,080.50	6/10/2019
1.1.1.5	VSAP Project Information Library Update Q3 19	$68,330.00	$10,249.50	$58,080.50	9/9/2019
1.1.1.6	VSAP Project Information Library Update Q4 19	$68,330.00	$10,249.50	$58,080.50	12/9/2019
1.1.1.7	VSAP Project Information Library Update Final	$82,020.00	$12,303.00	$69,717.00	3/9/2020
1.1.2	Project Control Document	$484,440.00	$72,666.00	$411,774.00	7/9/2018
1.1.2.1	Project Control Document M8 18	$40,370.00	$6,055.50	$34,314.50	8/28/2018
1.1.2.2	Project Control Document M9 18	$40,370.00	$6,055.50	$34,314.50	9/25/2018
1.1.2.3	Project Control Document M10 18	$40,370.00	$6,055.50	$34,314.50	10/30/2018
1.1.2.4	Project Control Document M11 18	$40,370.00	$6,055.50	$34,314.50	11/27/2018
1.1.2.5	Project Control Document M12 18	$40,370.00	$6,055.50	$34,314.50	12/21/2018
1.1.2.6	Project Control Document M1 19	$40,370.00	$6,055.50	$34,314.50	1/29/2019
1.1.2.7	Project Control Document M2 19	$40,370.00	$6,055.50	$34,314.50	2/26/2019
1.1.2.8	Project Control Document M3 19	$40,370.00	$6,055.50	$34,314.50	3/26/2019
1.1.2.9	Project Control Document M4 19	$40,370.00	$6,055.50	$34,314.50	4/30/2019
1.1.2.10	Project Control Document M5 19	$40,370.00	$6,055.50	$34,314.50	5/28/2019
1.1.2.11	Project Control Document M6 19	$40,370.00	$6,055.50	$34,314.50	6/25/2019
1.1.2.12	Project Control Document M7 19	$40,370.00	$6,055.50	$34,314.50	7/30/2019
1.1.2.13	Project Control Document M8 19	$40,370.00	$6,055.50	$34,314.50	8/27/2019
1.1.2.14	Project Control Document M9 19	$40,370.00	$6,055.50	$34,314.50	9/24/2019
1.1.2.15	Project Control Document M10 19	$40,370.00	$6,055.50	$34,314.50	10/29/2019
1.1.2.16	Project Control Document M11 19	$40,370.00	$6,055.50	$34,314.50	11/26/2019
1.1.2.17	Project Control Document M12 19	$40,370.00	$6,055.50	$34,314.50	10/27/2019
1.1.2.18	Project Control Document M1 20	$40,370.00	$6,055.50	$34,314.50	1/28/2020
1.1.2.19	Project Control Document M2 20	$40,370.00	$6,055.50	$34,314.50	2/25/2020
1.1.2.20	Project Control Document Final	$363,330.00	$54,499.50	$308,830.50	3/31/2020
1.1.3.1	Project Initiation Session Planning Materials	$28,000.00	$4,200.00	$23,800.00	7/12/2018
1.1.3.2	Project Initiation Session and Event Summary Report	$7,500.00	$1,125.00	$6,375.00	7/23/2018
1.1.4	VSAP Project Orientation Materials	$26,010.00	$3,901.50	$22,108.50	7/13/2018
1.1.4.1	VSAP Project Orientation Materials Update Q1 19	$10,830.00	$1,624.50	$9,205.50	1/17/2019
1.1.4.2	VSAP Project Orientation Materials Update Q7 19	$10,830.00	$1,624.50	$9,205.50	7/18/2019

Deliverable #	Deliverable Description	Fixed Price Fee	Less 15% Holdback	Invoice Amount	Due Date
1.1.4.3	VSAP Project Orientation Materials Update Q1 20	$10,830.00	$1,624.50	$9,205.50	1/16/2020
1.1.4.4	VSAP Project Orientation Materials Update Final	$6,500.00	$975.00	$5,525.00	3/19/2020
1.2	Project Status Report, Issues Log and Risk Log	$123,040.00	$18,456.00	$104,584.00	3/27/2020
1.2.1	Project Status Report, Issues Log and Risk Log W2	$23,260.00	$3,489.00	$19,771.00	7/9/2018
1.2.2	Project Status Report, Issues Log and Risk Log W4	$23,260.00	$3,489.00	$19,771.00	7/23/2018
1.2.3	Project Status Report, Issues Log and Risk Log W6	$23,260.00	$3,489.00	$19,771.00	8/6/2018
1.2.4	Project Status Report, Issues Log and Risk Log W8	$23,260.00	$3,489.00	$19,771.00	8/20/2018
1.2.5	Project Status Report, Issues Log and Risk Log W10	$23,260.00	$3,489.00	$19,771.00	9/4/2018
1.2.6	Project Status Report, Issues Log and Risk Log W12	$23,260.00	$3,489.00	$19,771.00	9/17/2018
1.2.7	Project Status Report, Issues Log and Risk Log W14	$23,260.00	$3,489.00	$19,771.00	10/1/2018
1.2.8	Project Status Report, Issues Log and Risk Log W16	$23,260.00	$3,489.00	$19,771.00	10/15/2018
1.2.9	Project Status Report, Issues Log and Risk Log W18	$23,260.00	$3,489.00	$19,771.00	10/29/2018
1.2.10	Project Status Report, Issues Log and Risk Log W20	$23,260.00	$3,489.00	$19,771.00	11/12/2018
1.2.11	Project Status Report, Issues Log and Risk Log W22	$23,260.00	$3,489.00	$19,771.00	11/26/2018
1.2.12	Project Status Report, Issues Log and Risk Log W24	$23,260.00	$3,489.00	$19,771.00	12/10/2018
1.2.13	Project Status Report, Issues Log and Risk Log W26	$23,260.00	$3,489.00	$19,771.00	12/21/2018
1.2.14	Project Status Report, Issues Log and Risk Log W28	$23,260.00	$3,489.00	$19,771.00	1/7/2019
1.2.15	Project Status Report, Issues Log and Risk Log W30	$23,260.00	$3,489.00	$19,771.00	1/21/2019
1.2.16	Project Status Report, Issues Log and Risk Log W32	$23,260.00	$3,489.00	$19,771.00	2/4/2019
1.2.17	Project Status Report, Issues Log and Risk Log W34	$23,260.00	$3,489.00	$19,771.00	2/18/2019
1.2.18	Project Status Report, Issues Log and Risk Log W36	$23,260.00	$3,489.00	$19,771.00	3/4/2019
1.2.19	Project Status Report, Issues Log and Risk Log W38	$23,260.00	$3,489.00	$19,771.00	3/18/2019
1.2.20	Project Status Report, Issues Log and Risk Log W40	$23,260.00	$3,489.00	$19,771.00	4/1/2019
1.2.21	Project Status Report, Issues Log and Risk Log W42	$23,260.00	$3,489.00	$19,771.00	4/15/2019
1.2.22	Project Status Report, Issues Log and Risk Log W44	$23,260.00	$3,489.00	$19,771.00	4/29/2019
1.2.23	Project Status Report, Issues Log and Risk Log W46	$23,260.00	$3,489.00	$19,771.00	5/13/2019
1.2.24	Project Status Report, Issues Log and Risk Log W48	$23,260.00	$3,489.00	$19,771.00	5/28/2019
1.2.25	Project Status Report, Issues Log and Risk Log W50	$23,260.00	$3,489.00	$19,771.00	6/10/2019
1.2.26	Project Status Report, Issues Log and Risk Log W52	$23,260.00	$3,489.00	$19,771.00	6/24/2019
1.2.27	Project Status Report, Issues Log and Risk Log W54	$23,260.00	$3,489.00	$19,771.00	7/8/2019
1.2.28	Project Status Report, Issues Log and Risk Log W56	$23,260.00	$3,489.00	$19,771.00	7/22/2019
1.2.29	Project Status Report, Issues Log and Risk Log W58	$23,260.00	$3,489.00	$19,771.00	8/5/2019
1.2.30	Project Status Report, Issues Log and Risk Log W60	$23,260.00	$3,489.00	$19,771.00	8/19/2019
1.2.31	Project Status Report, Issues Log and Risk Log W62	$23,260.00	$3,489.00	$19,771.00	9/3/2019
1.2.32	Project Status Report, Issues Log and Risk Log W64	$23,260.00	$3,489.00	$19,771.00	9/16/2019
1.2.33	Project Status Report, Issues Log and Risk Log W66	$23,260.00	$3,489.00	$19,771.00	9/30/2019

Deliverable #	Deliverable Description	Fixed Price Fee	Less 15% Holdback	Invoice Amount	Due Date
1.2.34	Project Status Report, Issues Log and Risk Log W68	$23,260.00	$3,489.00	$19,771.00	10/14/2019
1.2.35	Project Status Report, Issues Log and Risk Log W70	$23,260.00	$3,489.00	$19,771.00	10/28/2019
1.2.36	Project Status Report, Issues Log and Risk Log W72	$23,260.00	$3,489.00	$19,771.00	11/11/2019
1.2.37	Project Status Report, Issues Log and Risk Log W74	$23,260.00	$3,489.00	$19,771.00	11/25/2019
1.2.38	Project Status Report, Issues Log and Risk Log W76	$23,260.00	$3,489.00	$19,771.00	12/9/2019
1.2.39	Project Status Report, Issues Log and Risk Log W78	$23,260.00	$3,489.00	$19,771.00	12/23/2019
1.2.40	Project Status Report, Issues Log and Risk Log W80	$23,260.00	$3,489.00	$19,771.00	1/6/2020
1.2.41	Project Status Report, Issues Log and Risk Log W82	$23,260.00	$3,489.00	$19,771.00	1/20/2020
1.2.42	Project Status Report, Issues Log and Risk Log W84	$23,260.00	$3,489.00	$19,771.00	2/3/2020
1.2.43	Project Status Report, Issues Log and Risk Log W86	$23,260.00	$3,489.00	$19,771.00	2/17/2020
1.2.44	Project Status Report, Issues Log and Risk Log W88	$23,260.00	$3,489.00	$19,771.00	3/2/2020
1.2.45	Project Status Report, Issues Log and Risk Log W90	$23,260.00	$3,489.00	$19,771.00	3/16/2020
1.2.46	Project Status Report, Issues Log and Risk Log W92	$23,260.00	$3,489.00	$19,771.00	3/30/2020
1.3.1	Project Closeout	$371,700.00	$55,755.00	$315,945.00	2/4/2020
2.1.1	Design and Development Plan	$177,514.00	$26,627.10	$150,886.90	7/2/2018
2.1.2	Enterprise Software Architecture Document	$177,514.00	$26,627.10	$150,886.90	7/2/2018
2.2.1.1	Updated BMD User Experience / User Interface Design Assets – EVT	$79,855.00	$11,978.25	$67,876.75	3/1/2019
2.2.1.2	Engineering Validation Testing and Results for BMD Hardware	$97,664.00	$14,649.60	$83,014.40	2/22/2019
2.2.1.4.1.1a	BMD Application Layer Software Development Plan	$65,600.00	$9,840.00	$55,760.00	7/2/2018
2.2.1.4.1.1b	BMD Application Layer Test Plan	$72,700.00	$10,905.00	$61,795.00	7/2/2018
2.2.1.4.1.1c	BMD Application Layer Test Cases – EVT	$135,870.00	$20,380.50	$115,489.50	3/1/2019
2.2.1.4.1.2a	BMD Application Layer Software Architecture Document – EVT	$58,760.00	$8,814.00	$49,946.00	8/6/2018
2.2.1.4.1.2b	Final BMD Application Layer Software Design Document – EVT	$54,590.00	$8,188.50	$46,401.50	8/6/2018
2.2.1.4.1.3a	BMD Application Layer Software and Deployment – EVT	$433,805.00	$65,070.75	$368,734.25	3/1/2019
2.2.1.4.1.3a.1	BMD Application Layer Software and Deployment – EVT M7 18	$247,885.00	$37,182.75	$210,702.25	8/1/2018
2.2.1.4.1.3a.2	BMD Application Layer Software and Deployment – EVT M8 18	$247,885.00	$37,182.75	$210,702.25	9/1/2018
2.2.1.4.1.3a.3	BMD Application Layer Software and Deployment – EVT M9 18	$247,885.00	$37,182.75	$210,702.25	10/1/2018
2.2.1.4.1.3a.4	BMD Application Layer Software and Deployment – EVT M10 18	$247,885.00	$37,182.75	$210,702.25	11/1/2018
2.2.1.4.1.3a.5	BMD Application Layer Software and Deployment – EVT M11 18	$247,885.00	$37,182.75	$210,702.25	12/1/2018
2.2.1.4.1.3a.6	BMD Application Layer Software and Deployment – EVT M12 18	$247,885.00	$37,182.75	$210,702.25	1/1/2019
2.2.1.4.1.3a.7	BMD Application Layer Software and Deployment – EVT M1 19	$247,885.00	$37,182.75	$210,702.25	2/1/2019
2.2.1.4.1.3b	BMD Application Layer Software Tooling	$120,400.00	$18,060.00	$102,340.00	7/2/2018
2.2.1.4.1.4	BMD Application Layer Test Report – EVT	$52,430.00	$7,864.50	$44,565.50	3/18/2019
2.2.1.5	Application Control System Board Support Package Software Image – EVT	$390,000.00	$58,500.00	$331,500.00	2/22/2019
2.2.1.7	Ballot Control System Board Support Package Software Image – EVT	$130,000.00	$19,500.00	$110,500.00	2/22/2019
2.2.2a	ISB Software Development Plan	$65,790.00	$9,868.50	$55,921.50	7/2/2018

Deliverable #	Deliverable Description	Fixed Price Fee	Less 15% Holdback	Invoice Amount	Due Date
2.2.2b	ISB Test Plan	$56,780.00	$8,517.00	$48,263.00	7/2/2018
2.2.2c	ISB Test Cases – EVT	$145,800.00	$21,870.00	$123,930.00	3/1/2019
2.2.2d	ISB Software Architecture Document – EVT	$56,470.00	$8,470.50	$47,999.50	8/6/2018
2.2.2e	Final ISB Software Design Document – EVT	$67,580.00	$10,137.00	$57,443.00	8/6/2018
2.2.2f	ISB Software and Deployment – EVT	$156,147.00	$23,422.05	$132,724.95	2/22/2019
2.2.2f.1	ISB Software and Deployment – EVT M7	$200,761.00	$30,114.15	$170,646.85	8/1/2018
2.2.2f.2	ISB Software and Deployment – EVT M8	$200,761.00	$30,114.15	$170,646.85	9/1/2018
2.2.2f.3	ISB Software and Deployment – EVT M9	$200,761.00	$30,114.15	$170,646.85	10/1/2018
2.2.2f.4	ISB Software and Deployment – EVT M10	$200,761.00	$30,114.15	$170,646.85	11/1/2018
2.2.2f.5	ISB Software and Deployment – EVT M11	$200,761.00	$30,114.15	$170,646.85	12/1/2018
2.2.2f.6	ISB Software and Deployment – EVT M12	$200,761.00	$30,114.15	$170,646.85	1/1/2019
2.2.2f.7	ISB Software and Deployment – EVT M13	$200,761.00	$30,114.15	$170,646.85	2/1/2019
2.2.2g	ISB Software Tooling	$125,600.00	$18,840.00	$106,760.00	7/2/2018
2.2.2h	ISB Test Report – EVT	$72,450.00	$10,867.50	$61,582.50	3/11/2019
2.2.3a	BMG Software Development Plan	$76,590.00	$11,488.50	$65,101.50	7/2/2018
2.2.3b	BMG Test Plan	$65,790.00	$9,868.50	$55,921.50	7/2/2018
2.2.3c	BMG Test Cases – EVT	$156,840.00	$23,526.00	$133,314.00	3/1/2019
2.2.3d	BMG Software Architecture Document – EVT	$62,470.00	$9,370.50	$53,099.50	8/6/2018
2.2.3e	Final BMG Software Design Document – EVT	$387,913.00	$58,186.95	$329,726.05	2/22/2019
2.2.3f	BMG Software and Deployment – EVT	$498,739.00	$74,810.85	$423,928.15	8/1/2018
2.2.3f1	BMG Software and Deployment – EVT M7 18	$498,739.00	$74,810.85	$423,928.15	9/1/2018
2.2.3f2	BMG Software and Deployment – EVT M8 18	$498,739.00	$74,810.85	$423,928.15	10/1/2018
2.2.3f3	BMG Software and Deployment – EVT M9 18	$498,739.00	$74,810.85	$423,928.15	11/1/2018
2.2.3f4	BMG Software and Deployment – EVT M10 18	$498,739.00	$74,810.85	$423,928.15	12/1/2018
2.2.3f5	BMG Software and Deployment – EVT M11 18	$498,739.00	$74,810.85	$423,928.15	1/1/2019
2.2.3f6	BMG Software and Deployment – EVT M12 18	$498,739.00	$74,810.85	$423,928.15	2/1/2019
2.2.3f7	BMG Software and Deployment – EVT M1 19	$498,739.00	$74,810.85	$423,928.15	7/2/2018
2.2.3g	BMG Software Tooling	$146,750.00	$22,012.50	$124,737.50	7/2/2018
2.2.3h	BMG Test Report – EVT	$79,760.00	$11,964.00	$67,796.00	3/11/2019
2.3.1.1	Updated BMD User Experience / User Interface Design Assets – DVT	$79,855.00	$11,978.25	$67,876.75	6/19/2019
2.3.1.2	Design Validation Testing and Results for BMD Hardware	$234,208.00	$35,131.20	$199,076.80	6/14/2019
2.3.1.4	BMD Application Layer – DVT Update Package	$147,850.00	$22,177.50	$125,672.50	6/14/2019
2.3.1.5	Application Control System Board Support Package Software Image – DVT	$189,900.00	$28,485.00	$161,415.00	6/14/2019
2.3.1.7	Ballot Control System Board Support Package Software Image – DVT	$215,600.00	$32,340.00	$183,260.00	6/14/2019
2.3.1.11	Hardware Tooling – DVT	$3,239,475.00	$485,921.25	$2,753,553.75	6/14/2019
2.3.2	ISB – DVT Update Package	$410,560.00	$61,584.00	$348,976.00	6/14/2019

Deliverable #	Deliverable Description	Fixed Price Fee	Less 15% Holdback	Invoice Amount	Due Date
2.3.3	BMD Manager	$532,635.00	$79,895.25	$452,739.75	6/14/2019
2.3.3.1	BMD Manager M3	$532,635.00	$79,895.25	$452,739.75	3/13/2019
2.3.3.2	BMD Manager M4	$532,635.00	$79,895.25	$452,739.75	4/18/2019
2.3.3.3	BMD Manager M5	$532,635.00	$79,895.25	$452,739.75	5/8/2019
2.4.1	Certifications Analysis	$150,060.00	$22,509.00	$127,551.00	1/18/2019
2.4.2a	California Secretary of State Certification of the VSAP Solution	$0.00	$0.00	$0.00	1/3/2020
2.4.2b	Post California Secretary of State Certification Roadmap	$10,000.00	$1,500.00	$8,500.00	1/6/2020
2.5.1.2	Production Validation Testing and Results for BMD Hardware	$225,600.00	$33,840.00	$191,760.00	11/25/2019
2.5.1.4	BMD Application Layer – PVT Deployment	$170,890.00	$25,633.50	$145,256.50	8/19/2019
2.5.1.5	Application Control System Board Support Package Software Image – PVT	$75,000.00	$11,250.00	$63,750.00	8/19/2019
2.5.1.7	Ballot Control System Board Support Package Software Image – PVT	$82,000.00	$12,300.00	$69,700.00	8/19/2019
2.5.2	ISB – PVT Deployment	$124,440.00	$18,666.00	$105,774.00	8/19/2019
2.5.3	BMD Manager Deployment	$362,540.00	$54,381.00	$308,159.00	8/19/2019
2.5.4	Integrated System Documentation	$97,650.00	$14,647.50	$83,002.50	8/19/2019
3.1.a	Implementation Strategy	$43,765.00	$6,564.75	$37,200.25	9/10/2018
3.1.b	Implementation Plan	$43,765.00	$6,564.75	$37,200.25	2/25/2019
3.2	BMD Production Schedule and Strategy	$56,740.00	$8,511.00	$48,229.00	2/25/2019
3.3.a	BMDs for Vote Center Test Lab Testing 1 and 2	$159,063.00	$23,859.45	$135,203.55	7/2/2019
3.3.b	BMDs for California Secretary of State Certification	$272,807.00	$40,921.05	$231,885.95	6/24/2019
3.3.c.1	BMDs for 2019 Mock Election, November 2019 Pilot and Vote Center Demonstration Centers - Check Point 1	$12,000,000.00	$1,800,000.00	$10,200,000.00	10/1/2018
3.3.c.2	BMDs for 2019 Mock Election, November 2019 Pilot and Vote Center Demonstration Centers - Check Point 2	$15,000,000.00	$2,250,000.00	$12,750,000.00	1/2/2019
3.3.d.1	BMDs for Full Rollout - Check Point 1	$2,579,520.00	$386,928.00	$2,192,592.00	6/24/2019
3.3.d.2	BMDs for Full Rollout - Check Point 2	$43,356,155.00	$6,503,423.25	$36,852,731.75	7/1/2019
3.3.d.3	BMDs for Full Rollout - Check Point 3	$27,764,414.00	$4,164,662.10	$23,599,751.90	7/15/2019
3.3.d.4	BMDs for Full Rollout - Check Point 4	$48,528,828.00	$7,279,324.20	$41,249,503.80	9/1/2019
3.3.d.5	BMDs for Full Rollout - Final Check Point	$7,000,000.00	$1,050,000.00	$5,950,000.00	11/22/2019
3.4	System Interface Plan	$91,745.00	$13,761.75	$77,983.25	8/21/2018
3.5	End-to-End Security Plan	$189,400.00	$28,410.00	$160,990.00	3/4/2019
3.5.1	Continuity Plan	$120,000.00	$18,000.00	$102,000.00	6/27/2019
3.6a	System Interface Design	$79,855.00	$11,978.25	$67,876.75	8/27/2019
3.6b	Digital Signing Authority	$340,056.00	$51,008.40	$289,047.60	2/22/2019
3.7.1	Report of Systems Integration Activities	$145,030.00	$21,754.50	$123,275.50	6/14/2019
3.7.2	Report of Coordination Activities	$177,514.00	$26,627.10	$150,886.90	3/5/2020
3.8	Pre-Certification Test Results	$260,000.00	$39,000.00	$221,000.00	1/18/2019

Deliverable #	Deliverable Description	Fixed Price Fee	Less 15% Holdback	Invoice Amount	Due Date
3.9	VSAP Solution Use Procedures	$215,450.00	$32,317.50	$183,132.50	5/6/2019
3.10a	Deploy VSAP Solution (Prior to Full Rollout)	$0.00	$0.00	$0.00	12/11/2019
3.10a.1	BMDs for Vote Center Test Lab Testing 1	$36,500.00	$5,475.00	$31,025.00	5/3/2019
3.10a.2	BMDs for Vote Center Test Lab Testing 2	$36,500.00	$5,475.00	$31,025.00	7/2/2019
3.10a.3	BMDs for 2019 Mock Election	$73,000.00	$10,950.00	$62,050.00	9/25/2019
3.10a.4	BMDs for November 2019 Pilot	$146,000.00	$21,900.00	$124,100.00	11/5/2019
3.10a.5	BMDs for Vote Center Demonstration Centers	$73,000.00	$10,950.00	$62,050.00	12/11/2019
3.10b	Post-Deployment Lessons Learned	$162,525.00	$24,378.75	$138,146.25	1/2/2020
3.11	Deploy VSAP Solution to All Sites	$495,864.00	$74,379.60	$421,484.40	3/3/2020
3.13.1	Repair and Replacement of BMDs	$189,540.00	$28,431.00	$161,109.00	3/13/2020
3.13.2	Contractor In-Scope Component Recall and Update Services	$500,864.00	$75,129.60	$425,734.40	3/13/2020
3.13.3	Preventative Maintenance Schedule	$145,640.00	$21,846.00	$123,794.00	6/17/2019
3.13.4	Preventative Maintenance on BMDs	$694,646.00	$104,196.90	$590,449.10	6/19/2020
3.13.5	BMD Hardware Lifecycle and Bill of Materials Report	$165,740.00	$24,861.00	$140,879.00	3/5/2027
3.14	Report of Software Maintenance	$89,560.00	$13,434.00	$76,126.00	3/13/2020
3.15	Report of Third-Party Sub-component Maintenance	$93,410.00	$14,011.50	$79,398.50	3/5/2027
3.16.1	Configuration Management Report	$177,514.00	$26,627.10	$150,886.90	11/15/2019
3.16.2.1	Unit Test Scripts and Unit Test Results	$165,300.00	$24,795.00	$140,505.00	11/15/2019
3.16.2.2	System Test Cases and System Test Results	$176,480.00	$26,472.00	$150,008.00	11/15/2019
3.16.2.3	Integration Test Cases and Integration Test Results	$251,470.00	$37,720.50	$213,749.50	11/15/2019
3.16.2.4	User Acceptance Test Cases and Test Results	$206,400.00	$30,960.00	$175,440.00	11/15/2019
3.16.2.5	Regression Test Cases and Test Results	$147,380.00	$22,107.00	$125,273.00	11/15/2019
3.16.2.6	Volume/Stress Test Cases and Volume/Stress Test Results	$370,580.00	$55,587.00	$314,993.00	11/15/2019
3.16.2.7	Security Test Cases and Security Test Results	$592,013.00	$88,801.95	$503,211.05	11/15/2019
3.16.4	Contractor System Documentation	$450,390.00	$67,558.50	$382,831.50	11/15/2019
3.17.1	Training and Knowledge Transfer Plan	$1,048,892.00	$157,333.80	$891,558.20	2/4/2019
3.17.2	Training Materials	$948,802.00	$142,320.30	$806,481.70	6/19/2019
3.17.3	Report of Training Metrics	$20,622.00	$3,093.30	$17,528.70	1/21/2020
3.17.4	User Guide Documentation	$253,480.00	$38,022.00	$215,458.00	6/14/2019
3.19.4	Contractor In-Scope Component Help Desk Services Report	$220,415.00	$33,062.25	$187,352.75	3/5/2027
3.19.5	Contractor In-Scope Component Problem Log Report	$176,040.00	$26,406.00	$149,634.00	3/5/2027
3.20	Contractor Service Level Report	$205,690.00	$30,853.50	$174,836.50	3/5/2027
3.21.1	Final Acceptance Report	$215,478.00	$32,321.70	$183,156.30	2/28/2020
3.23	Facility and Environmental Requirements for BMD and BMG Operations	$0.00	$0.00	$0.00	9/3/2018
	Total Implementation Fees:	**$189,463,987.00**	**$28,419,598.05**	**$161,044,388.95**	

Exhibit B - Pricing Schedule - Table B.2 Holdbacks Table

Deliverable #	Holdbacks Description	Invoice Amount	Target Date
Holdback Payment #1	1st - 25% of Holdbacks paid in accordance with the terms of Contract Paragragh 5.6.7(a)	$7,104,899.51	~March 2020
Holdback Payment #2	2nd - 25% of Holdbacks paid in accordance with the terms of Contract Paragragh 5.6.7(b)	$7,104,899.51	~May 2020
Holdback Payment #3	3rd - 25% of Holdbacks paid in accordance with the terms of Contract Paragragh 5.6.7(c)	$7,104,899.51	~November 2020
Holdback Payment #4	4th - Remaining Holdbacks paid in accordance with the terms of Contract Paragragh 5.6.7(d)	$7,104,899.52	~January 2021
Total Holdback Payments:		**$28,419,598.05**	

Exhibit B - Pricing Schedule - Table B.3 Insurance Payments

Payment #	Payment Description	Payment Amount	Target Date
Premium Payment #1	1st Installment Not To Exceed Payment payable 1st day of County Fiscal Year based on Proof of Annual Policy Statement	$1,500,000.00	7/1/2018
Premium Payment #2	2nd Installment Payment payable 30 days after Commencement Date	$6,000,000.00	7/12/2018
Premium Payment #3	3rd Installment Not To Exceed Payment payable 1st day of County Fiscal Year based on Proof of Annual Policy Statement	$1,500,000.00	7/1/2019
Premium Payment #4	4th Installment Not To Exceed Payment payable 1st day of County Fiscal Year based on Proof of Annual Policy Statement	$1,500,000.00	7/1/2020
Total Insurance Payments:		**$10,500,000.00**	

Exhibit B - Pricing Schedule - Table B.4 M&S Phase (One-time Costs)

Deliverable #	Deliverable Description	Fixed Price Fee	Less 15% Withhold	Invoice Amount	Due Date
5.7.1	M&S Closeout Checklist	$177,514.00	Not Applicable	$177,514.00	1/4/2027
5.7.2	Disposition of County Intellectual Property Report	$177,514.00	Not Applicable	$177,514.00	3/12/2027
5.7.4a	Updated System Documentation at M&S Closeout	$177,514.00	Not Applicable	$177,514.00	2/12/2027
5.7.4b	Transfer Source Code	$177,514.00	Not Applicable	$177,514.00	2/12/2027
Total M&S One-Time Fees:		**$710,056.00**	**Not Applicable**	**$710,056.00**	

Exhibit B - Pricing Schedule - Table B.5 M&S Phase (Annual Payments)

Deliverable #	Deliverable Description	Warranty Year 1 Fixed Fee Price	Warranty Year 2 Fixed Fee Price	M&S Year 1 Fixed Fee Price	M&S Year 2 Fixed Fee Price	M&S Year 3 Fixed Fee Price	M&S Year 4 Fixed Fee Price	M&S Year 5 Fixed Fee Price	Total M&S Costs
3.5	End-to-End Security Plan	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3.5.1	Continuity Plan	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3.9	VSAP Solution Use Procedures	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3.13.1	Repair and Replacement of BMDs	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3.13.2	Contractor In-Scope Component Recall and Update Services	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3.13.3	Preventative Maintenance Schedule	$0.00	$0.00	$732,116.00	$732,116.00	$732,116.00	$732,116.00	$732,116.00	$3,660,580.00
3.13.4	Preventative Maintenance on BMDs	$0.00	$0.00	$732,116.00	$732,116.00	$732,116.00	$732,116.00	$732,116.00	$3,660,580.00
3.13.5	BMD Hardware Lifecycle and Bill of Materials Report	$0.00	$0.00	$732,116.00	$732,116.00	$732,116.00	$732,116.00	$732,116.00	$3,660,580.00
3.14	Report of Software Maintenance	$0.00	$0.00	$732,116.00	$732,116.00	$732,116.00	$732,116.00	$732,116.00	$3,660,580.00
3.15	Report of Third-Party Sub-component Maintenance	$0.00	$0.00	$732,116.00	$732,116.00	$732,116.00	$732,116.00	$732,116.00	$3,660,580.00
3.16.1	Configuration Management Report	$0.00	$0.00	$732,116.00	$732,116.00	$732,116.00	$732,116.00	$732,116.00	$3,660,580.00
3.16.2.1	Unit Test Scripts and Unit Test Results	$0.00	$0.00	$732,116.00	$732,116.00	$732,116.00	$732,116.00	$732,116.00	$3,660,580.00
3.16.2.2	System Test Cases and System Test Results	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3.16.2.3	Integration Test Cases and Integration Test Results	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3.16.2.4	User Acceptance Test Cases and Test Results	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3.16.2.5	Regression Test Cases and Test Results	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3.16.2.6	Volume/Stress Test Cases and Volume/Stress Test Results	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3.16.2.7	Security Test Cases and Security Test Results	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3.16.4	Contractor System Documentation	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3.17.1	Training and Knowledge Transfer Plan	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3.17.2	Training Materials	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3.17.3	Report of Training Metrics	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3.17.4	User Guide Documentation	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3.19.4	Contractor In-Scope Component Help Desk Services Report	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3.19.5	Contractor In-Scope Component Problem Log Report	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3.20	Contractor Service Level Report	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total M&S Annual Fees:		**$0.00**	**$0.00**	**$5,124,812.00**	**$5,124,812.00**	**$5,124,812.00**	**$5,124,812.00**	**$5,124,812.00**	**$25,624,060.00**

Exhibit B - Pricing Schedule - Table B.6 M&S Optional Extensions (Bi-Annual Payments)

Deliverable #	Deliverable Description	M&S Optional Extension 1 (2 years)	M&S Optional Extension 2 (2 years)	M&S Optional Extension 3 (2 years)	Total Optional M&S (6 years)
3.5	End-to-End Security Plan	$0.00	$0.00	$0.00	$0.00
3.5.1	Continuity Plan	$0.00	$0.00	$0.00	$0.00
3.9	VSAP Solution Use Procedures	$0.00	$0.00	$0.00	$0.00
3.13.1	Repair and Replacement of BMDs	$1,452,066.00	$1,452,066.00	$1,452,066.00	$4,356,198.00
3.13.2	Contractor In-Scope Component Recall and Update Services	$1,452,066.00	$1,452,066.00	$1,452,066.00	$4,356,198.00
3.13.3	Preventative Maintenance Schedule	$933,105.00	$933,105.00	$933,105.00	$2,799,315.00
3.13.4	Preventative Maintenance on BMDs	$933,105.00	$933,105.00	$933,105.00	$2,799,315.00
3.13.5	BMD Hardware Lifecycle and Bill of Materials Report	$1,452,066.00	$1,452,066.00	$1,452,066.00	$4,356,198.00
3.14	Report of Software Maintenance	$1,452,066.00	$1,452,066.00	$1,452,066.00	$4,356,198.00
3.15	Report of Third-Party Sub-component Maintenance	$1,452,066.00	$1,452,066.00	$1,452,066.00	$4,356,198.00
3.16.1	Configuration Management Report	$0.00	$0.00	$0.00	$0.00
3.16.2.1	Unit Test Scripts and Unit Test Results	$0.00	$0.00	$0.00	$0.00
3.16.2.2	System Test Cases and System Test Results	$0.00	$0.00	$0.00	$0.00
3.16.2.3	Integration Test Cases and Integration Test Results	$0.00	$0.00	$0.00	$0.00
3.16.2.4	User Acceptance Test Cases and Test Results	$0.00	$0.00	$0.00	$0.00
3.16.2.5	Regression Test Cases and Test Results	$0.00	$0.00	$0.00	$0.00
3.16.2.6	Volume/Stress Test Cases and Volume/Stress Test Results	$0.00	$0.00	$0.00	$0.00
3.16.2.7	Security Test Cases and Security Test Results	$0.00	$0.00	$0.00	$0.00
3.16.4	Contractor System Documentation	$0.00	$0.00	$0.00	$0.00
3.17.1	Training and Knowledge Transfer Plan	$0.00	$0.00	$0.00	$0.00
3.17.2	Training Materials	$0.00	$0.00	$0.00	$0.00
3.17.3	Report of Training Metrics	$0.00	$0.00	$0.00	$0.00
3.17.4	User Guide Documentation	$0.00	$0.00	$0.00	$0.00
3.19.4	Contractor In-Scope Component Help Desk Services Report	$0.00	$0.00	$0.00	$0.00
3.19.5	Contractor In-Scope Component Problem Log Report	$0.00	$0.00	$0.00	$0.00
3.20	Contractor Service Level Report	$0.00	$0.00	$0.00	$0.00
Total M&S Bi-Annual Fees:		**$9,126,540.00**	**$9,126,540.00**	**$9,126,540.00**	**$27,379,620.00**

EXHIBIT C

CONTRACTOR'S PROPOSED SCHEDULE

TO THE

VOTING SOLUTIONS FOR ALL PEOPLE (VSAP) IMPLEMENTATION AND SUPPORT SERVICES CONTRACT

ID	Deliverable #	Payment Milestone #	Task ID #	Task Name	Duration	Start	Finish
1				VSAP DELIVERABLES SCHEDULE	2800 days	Tue 6/12/18	Mon 3/5/29
2				Project Commencement	0 days	Tue 6/12/18	Tue 6/12/18
3	1		1	PROJECT INITIATION AND MANAGEMENT	469 days	Tue 6/12/18	Fri 3/27/20
4	1.1.1	1.1.1	1.1.1	Project Information Library (PIL)	20 days	Tue 6/12/18	Mon 7/9/18
7	1.1.2	1.1.2	1.1.2	Project Control	20 days	Tue 6/12/18	Mon 7/9/18
33	1.1.3.1	1.1.3.1	1.1.3.1	Project Initiation Session Planning Materials	23 days	Tue 6/12/18	Thu 7/12/18
36	1.1.3.2	1.1.3.2	1.1.3.2	Project Initiation Session and Event Summary Report	30 days	Tue 6/12/18	Mon 7/23/18
40	1.1.4	1.1.4	1.1.4	VSAP Project Orientation Materials	4 days	Tue 7/10/18	Fri 7/13/18
41	1.2	1.2	1.2	Project Status Report, Issues Log and Risk Log	459 days	Tue 6/26/18	Fri 3/27/20
111	2			DEVELOPMENT	410 days	Tue 6/12/18	Mon 1/6/20
112	*2.1.1*	*2.1.1*	*2.1.1*	*Design and Development Plan*	*15 days*	*Tue 6/12/18*	*Mon 7/2/18*
115	2.1.2	2.1.2	2.1.2	Enterprise Software Architecture Document	15 days	Tue 6/12/18	Mon 7/2/18
118				BMD	200 days	Tue 6/12/18	Mon 3/18/19
119				EVT	200 days	Tue 6/12/18	Mon 3/18/19
120	2.2.1.1	2.2.1.1	2.2.1.1	Updated BMD User Experience/User Interface Design Assets - EVT	189 days	Tue 6/12/18	Fri 3/1/19
123	*2.2.1.2*	*2.2.1.2*	*2.2.1.2*	*Engineering Validation Testing and Results for BMD Hardware*	*1 day*	*Fri 2/22/19*	*Fri 2/22/19*
124				BMD Application Layer Software	200 days	Mon 6/18/18	Mon 3/18/19
125	2.2.1.4.1.1a	2.2.1.4.1.1a	2.2.1.4.1.1a	BMD Application Layer Software Development Plan	15 days	Tue 6/12/18	Mon 7/2/18
128	2.2.1.4.1.1b	2.2.1.4.1.1b	2.2.1.4.1.1b	BMD Application Layer Test Plan	15 days	Tue 6/12/18	Mon 7/2/18
131	2.2.1.4.1.1c	2.2.1.4.1.1c	2.2.1.4.1.1c	BMD Application Layer Test Cases - EVT	185 days	Mon 6/18/18	Fri 3/1/19
187	2.2.1.4.1.2a	2.2.1.4.1.2a	2.2.1.4.1.2a	BMD Application Layer Software Architecture Document - EVT	40 days	Tue 6/12/18	Mon 8/6/18
190	2.2.1.4.1.2b	2.2.1.4.1.2b	2.2.1.4.1.2b	Final BMD Application Layer Software Design Document - EVT	40 days	Tue 6/12/18	Mon 8/6/18
193	2.2.1.4.1.3a	2.2.1.4.1.3a	2.2.1.4.1.3a	BMD Application Layer Software and Deployment - EVT	185 days	Mon 6/18/18	Fri 3/1/19
214	2.2.1.4.3b	2.2.1.4.3b	2.2.1.4.3b	BMD Application Layer Software Tooling	15 days	Tue 6/12/18	Mon 7/2/18
215	2.2.1.4.1.4	2.2.1.4.1.4	2.2.1.4.1.4	BMD Application Layer Test Report - EVT	11 days	Mon 3/4/19	Mon 3/18/19
216	2.2.1.5	2.2.1.5	2.2.1.5	Application Control System Board Support Package Software Image - EVT	184 days	Tue 6/12/18	Fri 2/22/19
217	2.2.1.7	2.2.1.7	2.2.1.7	Ballot Control System Board Support Package Software Image - EVT	184 days	Tue 6/12/18	Fri 2/22/19
218				ISB	195 days	Tue 6/12/18	Mon 3/11/19
219	2.2.2a	2.2.2a	2.2.2a	ISB Software Development Plan	15 days	Tue 6/12/18	Mon 7/2/18
222	2.2.2b	2.2.2b	2.2.2b	ISB Test Plan	15 days	Tue 6/12/18	Mon 7/2/18
225	2.2.2c	2.2.2c	2.2.2c	ISB Test Cases - EVT	185 days	Mon 6/18/18	Fri 3/1/19
281	2.2.2d	2.2.2d	2.2.2d	ISB Software Architecture Document - EVT	40 days	Mon 6/18/18	Mon 8/6/18
284	2.2.2e	2.2.2e	2.2.2e	Final ISB Software Design Document - EVT	40 days	Tue 6/12/18	Mon 8/6/18
287	2.2.2f	2.2.2f	2.2.2f	ISB Software and Deployment - EVT	180 days	Mon 6/18/18	Fri 2/22/19
307	2.2.2g	2.2.2g	2.2.2g	ISB Software Tooling	10 days	Tue 6/19/18	Mon 7/2/18
308	2.2.2h	2.2.2h	2.2.2h	ISB Test Report - EVT	11 days	Mon 2/25/19	Mon 3/11/19
309				BMG	195 days	Tue 6/12/18	Mon 3/11/19
310	2.2.3a	2.2.3a	2.2.3a	BMG Software Development Plan	15 days	Tue 6/12/18	Mon 7/2/18
313	2.2.3b	2.2.3b	2.2.3b	BMG Test Plan	15 days	Tue 6/12/18	Mon 7/2/18

ID	Deliverable #	Payment Milestone #	Task ID #	Task Name	Duration	Start	Finish
316	2.2.3c	2.2.3c	2.2.3c	BMG Test Cases - EVT	185 days	Mon 6/18/18	Fri 3/1/19
372	2.2.3d	2.2.3d	2.2.3d	BMG Software Architecture Document - EVT	40 days	Tue 6/12/18	Mon 8/6/18
375	2.2.3e	2.2.3e	2.2.3e	Final BMG Software Design Document - EVT	40 days	Tue 6/12/18	Mon 8/6/18
378	2.2.3f	2.2.3f	2.2.3f	BMG Software and Deployment - EVT	180 days	Mon 6/18/18	Fri 2/22/19
398	2.2.3g	2.2.3g	2.2.3g	BMG Software Tooling	10 days	Tue 6/19/18	Mon 7/2/18
399	2.2.3h	2.2.3h	2.2.3h	BMG Test Report- EVT	11 days	Mon 2/25/19	Mon 3/11/19
400				DVT	83 days	Mon 2/25/19	Wed 6/19/19
401				BMD	83 days	Mon 2/25/19	Wed 6/19/19
402	2.3.1.1	2.3.1.1	2.3.1.1	Updated BMD User Experience/User Interface Design Assets - DVT	72 days	Tue 3/12/19	Wed 6/19/19
405	*2.3.1.2*	*2.3.1.2*	*2.3.1.2*	*Design Validation Testing and Results for BMD Hardware*	*69 days*	*Tue 3/12/19*	*Fri 6/14/19*
406	2.3.1.4	2.3.1.4	2.3.1.4	BMG Application Layer - DVT Update Package	80 days	Mon 2/25/19	Fri 6/14/19
415	2.3.1.5	2.3.1.5	2.3.1.5	Application Control System Board Support Package Software Image - DVT	80 days	Mon 2/25/19	Fri 6/14/19
416	2.3.1.7	2.3.1.7	2.3.1.7	Ballot Control System Board Support Package Software Image - DVT	80 days	Mon 2/25/19	Fri 6/14/19
417	2.3.1.11	2.3.1.11	2.3.1.11	Hardware Tooling - DVT	64 days	Tue 3/19/19	Fri 6/14/19
418				ISB	80 days	Mon 2/25/19	Fri 6/14/19
419	2.3.2	2.3.2	2.3.2	ISB - DVT Update Package	80 days	Mon 2/25/19	Fri 6/14/19
428				BMG	80 days	Mon 2/25/19	Fri 6/14/19
429	2.3.3	2.3.3	2.3.3	BMD Manager	80 days	Mon 2/25/19	Fri 6/14/19
438				Regulatory Certification of the VSAP Solution	410 days	Tue 6/12/18	Mon 1/6/20
439	2.4.1	2.4.1	2.4.1	Certification Analysis	159 days	Tue 6/12/18	Fri 1/18/19
440	2.4.2a	2.4.2a	2.4.2a	California Secretary of State Certification of the VSAP Solution	142 days	Thu 6/20/19	Fri 1/3/20
441	2.4.2b	2.4.2b	2.4.2b	Post California Secretary of State Certification Roadmap	1 day	Mon 1/6/20	Mon 1/6/20
442				PVT	71 days	Mon 8/19/19	Mon 11/25/19
443				BMD	71 days	Mon 8/19/19	Mon 11/25/19
444	2.5.1.2	2.5.1.2	2.5.1.2	Production Validation Testing and Results for BMD Hardware	71 days	Mon 8/19/19	Mon 11/25/19
461	2.5.1.4	2.5.1.4	2.5.1.4	BMG Application Layer - PVT Deployment	1 day	Mon 8/19/19	Mon 8/19/19
462	2.5.1.5	2.5.1.5	2.5.1.5	Application Control System Board Support Package Software Image - PVT	1 day	Mon 8/19/19	Mon 8/19/19
463	2.5.1.7	2.5.1.7	2.5.1.7	Ballot Control System Board Support Package Software Image - PVT	1 day	Mon 8/19/19	Mon 8/19/19
464				ISB	1 day	Mon 8/19/19	Mon 8/19/19
465	*2.5.2*	*2.5.2*	*2.5.2*	*ISB - PVT Deployment*	*1 day*	*Mon 8/19/19*	*Mon 8/19/19*
466				BMG	1 day	Mon 8/19/19	Mon 8/19/19
467	*2.5.3*	*2.5.3*	*2.5.3*	*BMD Manager Deployment*	*1 day*	*Mon 8/19/19*	*Mon 8/19/19*
468	2.5.4	2.5.4	2.5.4	Integrated System Documentation	1 day	Mon 8/19/19	Mon 8/19/19
469	3	3		IMPLEMENTAITON	2800 days	Tue 6/12/18	Mon 3/5/29
470	3.1a	3.1a	3.1a	Implementation Strategy	65 days	Tue 6/12/18	Mon 9/10/18
473	*3.1b*	*3.1b*	*3.1b*	*Implementation Plan*	*42 days*	*Fri 12/28/18*	*Mon 2/25/19*
474				Submit Implementation Plan	1 day	Fri 12/28/18	Fri 12/28/18
475				Obtain LAC approval	5 days	Mon 12/31/18	Fri 1/4/19
476	3.2	3.2	3.2	BMD Production Schedule and Strategy	6 days	Mon 2/18/19	Mon 2/25/19

ID	Deliverable #	Payment Milestone #	Task ID #	Task Name	Duration	Start	Finish
479	3.3a	3.3a	3.3a	Deliver Production BMDs	300 days	Mon 10/1/18	Fri 11/22/19
480	3.3a		3.3a	BMDs for Vote Center Test Lab Testing 1 and 2	43 days	Fri 5/3/19	Tue 7/2/19
481	**3.3b**	**3.3b**	**3.3b**	***BMDs for California Secretary of State Certification***	*1 day*	*Mon 6/24/19*	*Mon 6/24/19*
482	**3.3c**	**3.3c**	**3.3c**	**BMDs for 2019 Mock Election, November 2019 Pilot and Vote Center Distribution Centers**	**68 days**	**Mon 10/1/18**	**Wed 1/2/19**
483	3.3c1	3.3c1	3.3c1	BMDs for 2019 Mock Election, November 2019 Pilot and Vote Center Distribution Centers - Check Point 1	1 day	Mon 10/1/18	Mon 10/1/18
484	3.3c2	3.3c2	3.3c2	BMDs for 2019 Mock Election, November 2019 Pilot and Vote Center Distribution Centers - Check Point 2	1 day	Wed 1/2/19	Wed 1/2/19
485	**3.3d**	**3.3d**	**3.3d**	***BMDs for Full Rollout***	*110 days*	*Mon 6/24/19*	*Fri 11/22/19*
486	3.3.d.1	3.3.d.1	3.3.d.1	BMDs for Full Rollout - Check Point 1	1 day	Mon 6/24/19	Mon 6/24/19
487	3.3.d.2	3.3.d.2	3.3.d.2	BMDs for Full Rollout - Check Point 2	1 day	Mon 7/1/19	Mon 7/1/19
488	3.3.d.3	3.3.d.3	3.3.d.3	BMDs for Full Rollout - Check Point 3	1 day	Mon 7/15/19	Mon 7/15/19
489	3.3.d.4	3.3.d.4	3.3.d.4	BMDs for Full Rollout - Check Point 4	1 day	Sun 9/1/19	Sun 9/1/19
490	3.3.d.5	3.3.d.5	3.3.d.5	BMDs for Full Rollout - Final Check Point	1 day	Fri 11/22/19	Fri 11/22/19
491	3.4	3.4	3.4	System Interface Plan	51 days	Tue 6/12/18	Tue 8/21/18
494	3.5	3.5	3.5	End-to-End Security Plan	190 days	Tue 6/12/18	Mon 3/4/19
504	3.5.1	3.5.1	3.5.1	Continuity Plan	6 days	Thu 6/20/19	Thu 6/27/19
507	3.6a	3.6a	3.6a	System Interface Design	6 days	Tue 8/20/19	Tue 8/27/19
510	3.6b	3.6b	3.6b	Digital Signing Authority	184 days	Tue 6/12/18	Fri 2/22/19
513	3.7.1	3.7.1	3.7.1	Report of Systems Integration Activities	436 days	Thu 7/5/18	Thu 3/5/20
535	3.7.2	3.7.2	3.7.2	Report of Coordination Activities	436 days	Thu 7/5/18	Thu 3/5/20
536				**Submit Report of Coordination Activities**	**436 days**	**Thu 7/5/18**	**Thu 3/5/20**
558	3.8	3.8	3.8	Pre-Certification Test Results	6 days	Fri 1/11/19	Fri 1/18/19
561	3.9	3.9	3.9	VSAP Solution Use Procedures	13 days	Thu 4/18/19	Mon 5/6/19
564				Deploy VSAP Solution	175 days	Fri 5/3/19	Thu 1/2/20
565	3.10a	3.10a	3.10a	Deploy VSAP Solution (Prior to Full Rollout)	159 days	Fri 5/3/19	Wed 12/11/19
571	3.10b	3.10b	3.10b	Post-Deployment Lessons Learned	164 days	Mon 5/20/19	Thu 1/2/20
582	3.11	3.11	3.11	Deploy VSAP Solution to All Sites	1 day	Tue 3/3/20	Tue 3/3/20
583	3.13.1	3.13.1	3.13.1	Repair and Replacement of BMDs**	1 day	Fri 3/13/20	Fri 3/13/20
584	3.13.2	3.13.2	3.13.2	Contractor In-Scope Component Recall and Update Services**	1 day	Fri 3/13/20	Fri 3/13/20
585	3.13.3	3.13.3	3.13.3	Preventative Maintenance Schedule	1 day	Mon 6/17/19	Mon 6/17/19
586	3.13.4	3.13.4	3.13.4	Preventative Maintenance on BMDs**	24 days	Tue 5/19/20	Fri 6/19/20
587	3.13.5	3.13.5	3.13.5	BMD Hardware Lifecycle and Bill of Materials Report	1871 days	Fri 1/3/20	Fri 3/5/27
588	3.14	3.14	3.14	Report of Software Maintenance**	1871 days	Fri 1/3/20	Fri 3/5/27
589	3.15	3.15	3.15	Report of Third-Party Sub-component Maintenance	1 day	Fri 3/13/20	Fri 3/13/20
590	3.16.1	3.16.1	3.16.1	Configuration Management Report**	1 day	Fri 11/15/19	Fri 11/15/19
591	3.16.2.1	3.16.2.1	3.16.2.1	Unit Test Scripts and Unit Test Results	100 days	Mon 7/1/19	Fri 11/15/19
592	3.16.2.2	3.16.2.2	3.16.2.2	System Test Cases and System Test Results	100 days	Mon 7/1/19	Fri 11/15/19
593	3.16.2.3	3.16.2.3	3.16.2.3	Integration Test Cases and Integration Test Results	100 days	Mon 7/1/19	Fri 11/15/19

ID	Deliverable #	Payment Milestone #	Task ID #	Task Name	Duration	Start	Finish
594	3.16.2.4	3.16.2.4	3.16.2.4	User Acceptance Test Cases and Test Results	100 days	Mon 7/1/19	Fri 11/15/19
595	3.16.2.5	3.16.2.5	3.16.2.5	Regression Test Cases and Test Results	100 days	Mon 7/1/19	Fri 11/15/19
596	3.16.2.6	3.16.2.6	3.16.2.6	Volume/Stress Test Cases and Volume/Stress Test Results	100 days	Mon 7/1/19	Fri 11/15/19
597	3.16.2.7	3.16.2.7	3.16.2.7	Security Test Cases and Security Test Results	100 days	Mon 7/1/19	Fri 11/15/19
598	3.16.4	3.16.4	3.16.4	Contractor System Documentation	100 days	Mon 7/1/19	Fri 11/15/19
599				Training Documentation	2741 days	Mon 9/3/18	Mon 3/5/29
600	3.17.1	3.17.1	3.17.1	Training and Knowledge Transfer Plan	1 day	Mon 2/4/19	Mon 2/4/19
601	3.17.2	3.17.2	3.17.2	Training Materials	1 day	Wed 6/19/19	Wed 6/19/19
602	3.17.3	3.17.3	3.17.3	Report of Training Metrics**	1 day	Tue 1/21/20	Tue 1/21/20
603	**3.17.4**	**3.17.4**	**3.17.4**	**User Guide Documentation**	**1 day**	**Fri 6/14/19**	**Fri 6/14/19**
604	3.19.4	3.19.4	3.19.4	Contractor In-Scope Component Help Desk Services Report	1892 days	Thu 12/5/19	Fri 3/5/27
605				Submitted no later than the 5th day of each month for 5 years	1892 days	Thu 12/5/19	Fri 3/5/27
606	3.19.5	3.19.5	3.19.5	Contractor In-Scope Component Problem Log Report	1892 days	Thu 12/5/19	Fri 3/5/27
608	3.20	3.20	3.20	Contractor Service Level Report	1892 days	Thu 12/5/19	Fri 3/5/27
609				Submitted no later than the 5th day of each month for 5 years	1892 days	Thu 12/5/19	Fri 3/5/27
610	**3.21.1**	**3.21.1**	**3.21.1**	**Final Acceptance Report**	**1 day**	**Fri 2/28/20**	**Fri 2/28/20**
611	3.23	3.23	3.23	Facility and Environmental Requirements for BMD and BMG	1 day	Mon 9/3/18	Mon 9/3/18
612	1.3.1	1.3.1	1.3.1	PROJECT CLOSEOUT	1 day	Tue 2/4/20	Tue 2/4/20
613	4			WARRANTY	523 days	Wed 3/4/20	Fri 3/4/22
614	5			MAINTENANCE AND SUPPORT	1311 days	Sat 3/5/22	Fri 3/12/27
615				Closeout			
616	5.7.1	5.7.1	5.7.1	M&S Closeout Checklist	1 day	Mon 1/4/27	Mon 1/4/27
617	5.7.2	5.7.2	5.7.2	Disposition of County Intellectual Property Report	1 day	Fri 3/12/27	Fri 3/12/27
618	5.7.4a	5.7.4a	5.7.4a	Updated System Documentation at M&S Closeout	1 day	Fri 2/12/27	Fri 2/12/27
619	5.7.4b	5.7.4b	5.7.4b	Transfer Source Code	1 day	Fri 2/12/27	Fri 2/12/27
620							
621							
622				**Legend:**			
623				Blue/Bold/Italics = Key Deliverable			
				Gray (**) = Timing is TBD			

EXHIBITS

D TO P

TO THE

VOTING SOLUTIONS FOR ALL PEOPLE (VSAP)
IMPLEMENTATION AND SUPPORT SERVICES
CONTRACT

CONTRACTOR'S EEO CERTIFICATION

Smartmatic USA Corporation
_____
Contractor Name

1001 Broken Sound Pkwy NW, Suite D, Boca Raton, Florida 33487
_____
Address

45-4736528
_____
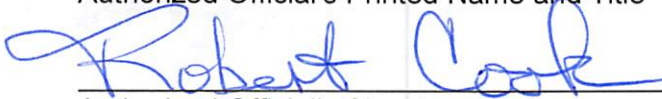Internal Revenue Service Employer Identification Number

GENERAL CERTIFICATION

In accordance with Section 4.32.010 of the Code of the County of Los Angeles, the contractor, supplier, or vendor certifies and agrees that all persons employed by such firm, its affiliates, subsidiaries, or holding companies are and will be treated equally by the firm without regard to or because of race, religion, ancestry, national origin, or sex and in compliance with all anti-discrimination laws of the United States of America and the State of California.

CONTRACTOR'S SPECIFIC CERTIFICATIONS

1. The Contractor has a written policy statement prohibiting discrimination in all phases of employment.   Yes ■   No ☐

2. The Contractor periodically conducts a self analysis or utilization analysis of its work force.   Yes ■   No ☐

3. The Contractor has a system for determining if Its employment practices are discriminatory against protected groups.   Yes ■   No ☐

4. Where problem areas are identified in employment practices, the Contractor has a system for taking reasonable corrective action, to include establishment of goals or timetables.   Yes ■   No ☐

Robert Cook -Director
_____
Authorized Official's Printed Name and Title

_____   5/18/18
Authorized Official's Signature   Date

Exhibit E – COUNTY'S ADMINISTRATION

CONTRACT NO.   18-003
Contractor: Smartmatic USA Corp
1001 Broken Sound Parkway NE, Suite D, Boca Raton, FL 33487

COUNTY ENGAGEMENT DIRECTOR:

Name: Dean Logan

Title: Registrar-Recorder/County Clerk

Address: 12400 Imperial Highway. Norwalk, CA 90650 Phone: (562) 462-2716

E-Mail: DLogan@rrcc.lacounty.gov

COUNTY PROJECT MANAGER:

Name: Kenneth Bennett

Address: 12400 Imperial Highway. Norwalk, CA 90650 Phone: (562) 462-2699

E-Mail: KBennett@rrcc.lacounty.gov

COUNTY ALTERNATE PROJECT MANAGER:

Name: Tim McNamara

Address: 12400 Imperial Highway. Norwalk, CA 90650 Phone: (562) 462-2722

E-Mail: TMcNamara@rrcc.lacounty.gov

COUNTY CONTRACT PROJECT MONITOR:

Name: Contracts Section: Francisco Perez

Address: Contracts:12400 Imperial Highway Room 5115 Norwalk, CA 90650 Telephone: (562)

462-2907 or (562) 462-2905 or (562) 462-2737

E-Mail Address: contracts@rrcc.lacounty.gov

Exhibit F – CONTRACTOR'S ADMINISTRATION

CONTRACT NO.   18-003
Contractor: Smartmatic USA Corp
                            1001 Broken Sound Parkway NE, Suite D, Boca Raton, FL 33487

CONTRACTOR'S ENGAGEMENT DIRECTOR

Name: Dan Murphy

Phone: (202) 427-4495

E-Mail: Daniel.murphy@smartmatic.com

CONTRACTOR'S PROJECT MANAGER

Name: Angie McWhorter

Phone: (310) 946-3190

E-Mail: angie.mcwhorter@smartmatic.com

CONTRACTOR'S ALTERNATE PROJECT MANAGER

Name: James Long

Phone: (770) 403-5961

E-Mail: james.long@smartmatic.com

CONTRACTOR'S AUTHORIZED OFFICIALS

Name: Kevin Shelly, President, Smartmatic USA Corp

Phone: (703) 967-8223

E-Mail: kevin.shelly@smartmatic.com

Name: Robert Cook, Vice President, Smartmatic USA Corp

Phone: (561) 870-4129

E-Mail: rcook@smartmatic.com

ACKNOWLEDGEMENT, CONFIDENTIALITY, AND COPYRIGHT ASSIGNMENT AGREEMENT-G1

LOS ANGELES COUNTY VOTING SOLUTIONS FOR ALL PEOPLE ("VSAP")

(Note: This certification is to be executed and returned to County with Contractor's executed Contract. Work cannot begin on the Contract until County receives this executed document.)

Contract No. 18-003 ("Contract")

Contractor Smartmatic, USA

Subcontractor Name (if signed on its behalf)_____

1. General Information

The Contractor referenced above has entered into a contract with the County of Los Angeles to provide certain services to the County. The County requires the Contractor and each Subcontractor to sign this Acknowledgement, Confidentiality, and Copyright Assignment Agreement ("Agreement"). Contractor/Subcontractor shall also cause each of its employees, affiliates, consultants, and other agents (collectively, "Authorized Associates") approved by the County in advance in writing who will perform work under this Contract to execute and submit an Individual Acknowledgement, Confidentiality, and Copyright Assignment Agreement.

2. Contractor Acknowledgement

Contractor/Subcontractor understands and agrees that Authorized Associates and, if applicable, any Subcontractors that will provide services in the above referenced Contract are Contractor's sole responsibility. Contractor understands and agrees that Contractor's Authorized Associates must rely exclusively upon Contractor/Subcontractor for payment of salary and any and all other benefits payable by virtue of Contractor's Authorized Associates performance of work under the above-referenced Contract.

Contractor/Subcontractor understands and agrees that Authorized Associates are not employees of the County of Los Angeles for any purpose whatsoever and that Authorized Associates do not have and will not acquire any rights or benefits of any kind from the County of Los Angeles by virtue of my performance of work under the above-referenced Contract. Contractor understands and agrees that Authorized Associates will not acquire any rights or benefits from the County of Los Angeles pursuant to any agreement between any person or entity and the County of Los Angeles.

3. Term

This Agreement is effective upon Contractor's/Subcontractor's execution and shall continue in full force and effect through the term of the Contract, except that the Confidentiality provisions shall continue in full force and effect (a) for 15 years for all Confidential Information (as defined below) that is not a trade

ACKNOWLEDGEMENT, CONFIDENTIALITY, AND COPYRIGHT ASSIGNMENT AGREEMENT-G1

secret (as defined in the California Uniform Trade Secrets Act) and (b) in perpetuity for all Confidential Information which is a trade secret, so long as such information remains a trade secret under any applicable law.

ll Confidential Information (as defined below) that is not a trade secret (as defined in the California Uniform Trade Secrets Act) and (b) in perpetuity for all Confidential Information which is a trade secret, so long as such information remains a trade secret under any applicable law.

4. Confidentiality

For purposes of this Agreement, "Confidential Information" shall mean: (a) any related data, information, or material the County discloses to Contractor/Subcontractor to facilitate Contractor's/Subcontractor's performance of services under the Contract; (b) any proprietary, confidential, and/or trade secret information of the County and/or others the County possesses relating to its current or planned voting systems, technology, designs, specifications, manufacturing methods, know-how, operational plans, business relationships, software, or firmware; (c) any data, information, or material identifying, characterizing, or related to any trait, feature, function, risk, threat, vulnerability, weakness, or problem regarding any data or system security in the County's current or planned voting systems, or to any safeguard, countermeasure, contingency plan, policy, or procedure, for any data or system security contemplated or implemented by the County, (d) any other non-public information shared with the Contractor/Subcontractor or their Authorized Associates by the County, (e) all notes, analyses, compilations, forecasts, studies, samples, data, statistics, summaries, interpretations, documentation, user guides, and other materials prepared by or for Contractor/Subcontractor or any Authorized Party that contain, are based on, or otherwise reflect or are derived from, in whole or in part, any documents, materials or other information disclosed by the County to Contractor/Subcontractor or are created, prepared, or derived as a work made for hire or otherwise assigned under the provisions of the Contract.

Unless otherwise agreed to in writing by the County, and except as required by applicable law, rule or regulation, Contractor/Subcontractor agrees not to disclose to any person (other than those persons otherwise allowed in this Agreement the fact that the Confidential Information exists or has been made available, the fact that the Contractor/Subcontractor is in talks with the County regarding the VSAP or any term, condition or other fact relating to the VSAP or such discussions or negotiations, including, without limitation, the status thereof.

Notwithstanding the foregoing, Confidential Information shall not include information that: (a) was in the public domain when disclosed; or (b) becomes public domain after disclosure, other than as a result of the Contractor's/Subcontractor's (or any of its Authorized Associates') violation of this Agreement. If any portion of the Confidential Information falls within any of the above exceptions, the remainder shall continue to be subject to the terms of this Agreement.

Contractor/Subcontractor agrees, on behalf of itself and all of its Authorized Associates to whom Contractor/Subcontractor discloses or provides any of the Confidential Information to: (a) protect from loss and hold in confidence all Confidential Information; (b) utilize the Confidential Information solely for the limited purpose of performing the Contract and not otherwise exploit it; (c) disclose the Confidential Information only to those Authorized Associates to whom such disclosure is authorized by the County in advance in writing, and solely to the extent necessary to adequately perform services under the Contract and not to otherwise disclose or reveal it to anyone; (d) have each such Authorized Associate

ACKNOWLEDGEMENT, CONFIDENTIALITY, AND COPYRIGHT ASSIGNMENT AGREEMENT-G1

also sign an Acknowledgement, Confidentiality, and Copyright Assignment Agreement (which shall be delivered to the County) (e) protect the Confidential Information using at least the same physical, electronic, and other protections and care it uses for its own proprietary and/or confidential information of a similar sensitivity, but in no case less than reasonable protections and care; (f) stamp any copies of any Confidential Information as "Confidential & Proprietary" or in some other manner clearly indicating that it is confidential or proprietary; and (g) not cause the Confidential Information to be transported, transmitted, or otherwise conveyed or sent outside of the United States without the express prior written approval of County.

    a.   Legally Required Disclosure

In the event that the Contractor/Subcontractor is requested pursuant to, or required by, applicable law, regulation or stock exchange rule or by legal process to disclose any Confidential Information or any other information concerning the County or the VSAP, the Contractor/Subcontractor agrees that it will provide the County with prompt notice of such request or requirement in order to enable the County to seek an appropriate protective order or other remedy (at the Contractor's/Subcontractor's sole expense), to consult with the Contractor/Subcontractor with respect to the County taking steps to resist or narrow the scope of such request or legal process, or to waive compliance, in whole or in part, with the terms of this Agreement. In the event that no such protective order or remedy is obtained, or that the County waives compliance with the terms of this Agreement, the Contractor/Subcontractor will furnish only that portion of any Confidential Information which the Contractor/Subcontractor is advised by counsel is legally required and will exercise best efforts (at the Contractor's/Subcontractor's sole expense) to obtain reliable assurance that confidential treatment will be accorded any Confidential Information.

    b.   Return or Destruction of Confidential Information

Contractor/Subcontractor shall maintain a log of each copy of any and all Confidential Information provided to Contractor/Subcontractor or its Authorized Associates. Said log shall contain a serial number, bates number or other identifying code of the Confidential Information, a title or description of the Confidential Information, the name and title of the person who has possession and control of such copy at all times, the person who authorized his or her receipt of that copy of Confidential, the basis for his or her need to access such Confidential Information, and a description of the location where said copy of Confidential Information is maintained. Such log shall be available for inspection by the County at any time upon request. A sample log is attached hereto as Attachment A.

Promptly upon Contract termination, Contractor/Subcontractor shall, at the choice of the County, either (x) return to the County or (y) destroy all copies of any Confidential Information, including those provided to its Authorized Associates. Electronic copies shall be cleared, purged, or destroyed consistent with the current National Institute of Standard and Technology (NIST) Special Publication SP-800-88, Guidelines for Media Sanitization. Available at: http://csrc.nist.gov/publications/PubsDrafts.html#SP-800-88 Rev.%201. Contractor/Subcontractor shall not retain any copies of the Confidential Information or any portion thereof. Simultaneous with the return to the County of all copies of the Confidential Information, Contractor/Subcontractor shall deliver to the County a written certification, executed by a duly authorized officer of Contractor/Subcontractor , stating that: (a) all copies of the Confidential Information have been returned to the County or destroyed; (b) Contractor/Subcontractor has not retained any copies of the Confidential Information or any portion thereof; and (c) Contractor/Subcontractor has

ACKNOWLEDGEMENT, CONFIDENTIALITY, AND COPYRIGHT ASSIGNMENT AGREEMENT-G1

not improperly disclosed or revealed any of the Confidential Information. A sample written certification is attached hereto as <u>Attachment B</u>.

      c.   Residuals

Nothing in this Agreement shall restrict any employee or representative of the County from using general ideas, concepts, practices, learning, or know-how that are retained in the memory of such employee or representative following the Contract, <u>provided</u> that the foregoing is not intended to grant, and shall not be deemed to grant any license under any Patents of the Contractor/Subcontractor.

5.   Background Checks

Contractor/Subcontractor agrees that it has or will conduct a background check as determined by the County and as defined in the Contract on each of its Authorized Associates prior to allowing them access to Confidential Information.

6.   Notice of Immunity under the Defend Trade Secrets Act

Contractor/Subcontractor hereby acknowledges and agrees that it has provided each of its Authorized Associates written notice that the Defend Trade Secrets Act, 18 U.S.C. § 1833(b) provides an immunity for the disclosure of a trade secret to report a suspected violation of law and/or in an anti-retaliation lawsuit as follows:

1) Immunity. An individual shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of a trade secret that is made: (a) (i) in confidence to a Federal, State, or local government official, either directly or indirectly, or to an attorney; and (ii) solely for the purpose of report or investigating a suspected violation of law; or (b) in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal.

2) Use of Trade Secret Information in Anti-Retaliation Lawsuit. An individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the individual's attorney and use the trade secret information in the court proceeding, if the individual: (a) files any document containing the trade secret under seal; and (b) does not disclose the trade secret, expect pursuant to court order.

7.   Copyright Assignment Agreement

Contractor/Subcontractor and their Authorized Associates agree that all materials, documents, software programs and documentation, written designs, plans, diagrams, reports, software development tools and aids, diagnostic aids, computer processable media, source codes, object codes, conversion aids, training documentation and aids, and other information and/or tools of all types, developed or acquired by Contractor/Subcontractor and their Authorized Associates in whole or in part pursuant to the above referenced Contract, and all works based thereon, incorporated therein, or derived therefrom shall be the sole property of the County. In this connection, Contractor/Subcontractor and their Authorized Associates hereby assign and transfer to the County in perpetuity for all purposes all my right, title, and interest in and to all such

ACKNOWLEDGEMENT, CONFIDENTIALITY, AND COPYRIGHT ASSIGNMENT AGREEMENT-G1

items, including, but not limited to, all unrestricted and exclusive copyrights, patent rights, trade secret rights, and all renewals and extensions thereof. Whenever requested by the County, Contractor/Subcontractor and their Authorized Associates agree to promptly execute and deliver to County all papers, instruments, and other documents requested by the County, and to promptly perform all other acts requested by the County to carry out the terms of this Agreement, including, but not limited to, executing an assignment and transfer of copyright in a form substantially similar to Exhibit M1, attached hereto and incorporated herein by reference.

The County shall have the right to register all copyrights in the name of the County of Los Angeles and shall have the right to assign, license, or otherwise transfer any and all of the County's right, title, and interest, including, but not limited to, copyrights, in and to the items described above.

8. No Representations or Warranties

The Contractor/Subcontractor understands and agrees that the County: (a) has not made or make any representation or warranty hereunder, expressed or implied, as to the accuracy or completeness of the County Confidential Information or (b) shall have any liability hereunder to the Contractor/Subcontractor relating to or resulting from the use of the County Confidential Information or any errors therein or omissions therefrom.

9. Indemnification

Contractor shall indemnify, defend, and hold harmless the County and its officers, employees, and agents, from and against any and all claims, demands, liabilities, damages, costs, and expenses, including, without limitation, defense costs and legal, accounting or other expert consulting or professional fees in any way arising from or related to, any breach by Contractor, any Subcontractor, or any of their Authorized Associates of this Agreement, and any disclosure, misappropriation or misuse of any of the Confidential Information arising from any such breach by Contractor, any Subcontractor, or any of their Authorized Associates of this Agreement or from any negligent acts or omissions of Contractor, any Subcontractor, or any of their Authorized Associates.

10. Remedies

The County maintains any and all rights and remedies available to it at law or in equity, including, without limitation the right to seek an injunction or protective order. Contractor/Subcontractor is further advised that in addition to any tort or contractual remedies, unauthorized disclosure of this Agreement may also make the Contractor/Subcontractor liable under one or more of the following statutes Computer Fraud and Abuse Act, the Economic Espionage Act of 1996, the Defense of Trade Secrets Act, California Uniform Trade Secrets Act, the California Computer Data and Access Fraud Act, and the California Penal Code. It is understood and agreed that no failure or delay by the County in exercising any right, power or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege hereunder.

ACKNOWLEDGEMENT, CONFIDENTIALITY, AND COPYRIGHT ASSIGNMENT AGREEMENT-G1

11. Non-Solicitation

During the Contract term, Contractor/Subcontractor and their Authorized Associates will not, directly or indirectly, solicit any employee or independent contractor of the County for the purpose of hiring them or otherwise causing them to cease employment or engagement with the County; <u>provided</u> that the foregoing provisions shall not prohibit (i) general solicitations of employment not specifically directed toward a prohibited person (including via electronic, print or other media, via use of recruitment professionals or otherwise), or (ii) the soliciting or hiring of any person (A) who responds to any such general solicitation or advertisement, (B) who initiates employment discussions in the absence of a solicitation prohibited by this Section 9, or (C) who is no longer employed by the County.

12. Assignability and Transfer

This Agreement is not assignable or transferable without the prior written consent of the County.

13. Governing Law, Jurisdiction, and Venue

This Agreement shall be governed by California law, without regard to its rules regarding conflicts of law. Contractor/Subcontractor agrees and consents to the exclusive personal and other jurisdiction of the courts of the State of California (except with respect to claims that are subject to exclusive federal subject matter jurisdiction, as to which Contractor/Subcontractor agrees and consents to the exclusive jurisdiction of the Federal District Court of the Central District of California) for all purposes regarding this Agreement and further agrees and consents that venue of any action brought hereunder shall be exclusively in the County of Los Angeles, California.

14. Entire Agreement

This Agreement contains the full and complete understanding of the parties with respect to the subject matter hereof and supersedes all prior representations and understandings, whether oral or written. In the event that any provision hereof or any obligation hereunder is found invalid or unenforceable pursuant to judicial decree or decision, any such provision, obligation or grant of rights shall be deemed and construed to extend only to the maximum permitted by law, and the remainder of this Agreement shall remain valid and enforceable according to its terms.

15. Severability

If any term or provision of this Agreement or any application hereof shall be invalid or unenforceable, the remainder of this Agreement and any other application of such term or provision shall not be affected thereby; and, to the extent permitted and possible, the invalid or unenforceable term or provision shall be deemed replaced by a term or provision that is valid and enforceable and that comes closest to expressing the intention of such invalid or unenforceable term or provision.

Contractor/Subcontractor understands and acknowledges that any violation of this Agreement may subject Contractor/Subcontractor and its Authorized Associates to civil and/or criminal action and/or penalties.

ACKNOWLEDGEMENT, CONFIDENTIALITY, AND COPYRIGHT ASSIGNMENT AGREEMENT-G1

Authorized
Signature: <u>Robert Cook</u>   Date: <u>5/18/8</u>

Name: <u>Robert Cook</u>   Title: <u>Director</u>

Company: <u>Smartmatic USA Corporation</u>

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LOS ANGELES COUNTY VOTING SOLUTIONS FOR ALL PEOPLE ("VSAP")

(Note: This certification is to be executed and returned to County with Contractor's executed Contract. Work cannot begin on the Contract until County receives this executed document.)

Contract No. 18-003 ("Contract")

Contractor Smartmatic, USA

Subcontractor Name (if signed on its behalf) _FLEX_

1. General Information

The Contractor referenced above has entered into a contract with the County of Los Angeles to provide certain services to the County. The County requires the Contractor and each Subcontractor to sign this Acknowledgement, Confidentiality, and Copyright Assignment Agreement ("Agreement"). Contractor/Subcontractor shall also cause each of its employees, affiliates, consultants, and other agents (collectively, "Authorized Associates") approved by the County in advance in writing who will perform work under this Contract to execute and submit an Individual Acknowledgement, Confidentiality, and Copyright Assignment Agreement.

2. Contractor Acknowledgement

Contractor/Subcontractor understands and agrees that Authorized Associates and, if applicable, any Subcontractors that will provide services in the above referenced Contract are Contractor's sole responsibility. Contractor understands and agrees that Contractor's Authorized Associates must rely exclusively upon Contractor/Subcontractor for payment of salary and any and all other benefits payable by virtue of Contractor's Authorized Associates performance of work under the above-referenced Contract.

Contractor/Subcontractor understands and agrees that Authorized Associates are not employees of the County of Los Angeles for any purpose whatsoever and that Authorized Associates do not have and will not acquire any rights or benefits of any kind from the County of Los Angeles by virtue of my performance of work under the above-referenced Contract. Contractor understands and agrees that Authorized Associates will not acquire any rights or benefits from the County of Los Angeles pursuant to any agreement between any person or entity and the County of Los Angeles.

3. Term

This Agreement is effective upon Contractor's/Subcontractor's execution and shall continue in full force and effect through the term of the Contract, except that the Confidentiality provisions shall continue in full force and effect (a) for 15 years for all Confidential Information (as defined below) that is not a trade secret (as defined in the California Uniform

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Trade Secrets Act) and (b) in perpetuity for all Confidential Information which is a trade secret, so long as such information remains a trade secret under any applicable law.

II Confidential Information (as defined below) that is not a trade secret (as defined in the California Uniform Trade Secrets Act) and (b) in perpetuity for all Confidential Information which is a trade secret, so long as such information remains a trade secret under any applicable law.

4. Confidentiality

For purposes of this Agreement, "Confidential Information" shall mean: (a) any related data, information, or material the County discloses to Contractor/Subcontractor to facilitate Contractor's/Subcontractor's performance of services under the Contract; (b) any proprietary, confidential, and/or trade secret information of the County and/or others the County possesses relating to its current or planned voting systems, technology, designs, specifications, manufacturing methods, know-how, operational plans, business relationships, software, or firmware; (c) any data, information, or material identifying, characterizing, or related to any trait, feature, function, risk, threat, vulnerability, weakness, or problem regarding any data or system security in the County's current or planned voting systems, or to any safeguard, countermeasure, contingency plan, policy, or procedure, for any data or system security contemplated or implemented by the County, (d) any other non-public information shared with the Contractor/Subcontractor or their Authorized Associates by the County, (e) all notes, analyses, compilations, forecasts, studies, samples, data, statistics, summaries, interpretations, documentation, user guides, and other materials prepared by or for Contractor/Subcontractor or any Authorized Party that contain, are based on, or otherwise reflect or are derived from, in whole or in part, any documents, materials or other information disclosed by the County to Contractor/Subcontractor or are created, prepared, or derived as a work made for hire or otherwise assigned under the provisions of the Contract.

Unless otherwise agreed to in writing by the County, and except as required by applicable law, rule or regulation, Contractor/Subcontractor agrees not to disclose to any person (other than those persons otherwise allowed in this Agreement the fact that the Confidential Information exists or has been made available, the fact that the Contractor/Subcontractor is in talks with the County regarding the VSAP or any term, condition or other fact relating to the VSAP or such discussions or negotiations, including, without limitation, the status thereof.

Notwithstanding the foregoing, Confidential Information shall not include information that: (a) was in the public domain when disclosed; or (b) becomes public domain after disclosure, other than as a result of the Contractor's/Subcontractor's (or any of its Authorized Associates') violation of this Agreement. If any portion of the Confidential Information falls within any of the above exceptions, the remainder shall continue to be subject to the terms of this Agreement.

Contractor/Subcontractor agrees, on behalf of itself and all of its Authorized Associates to whom Contractor/Subcontractor discloses or provides any of the Confidential Information to: (a) protect from loss and hold in confidence all Confidential Information; (b) utilize the

ACKNOWLEDGEMENT, CONFIDENTIALITY, AND COPYRIGHT ASSIGNMENT AGREEMENT-G1

Confidential Information solely for the limited purpose of performing the Contract and not otherwise exploit it; (c) disclose the Confidential Information only to those Authorized Associates to whom such disclosure is authorized by the County in advance in writing, and solely to the extent necessary to adequately perform services under the Contract and not to otherwise disclose or reveal it to anyone; (d) have each such Authorized Associate also sign an Acknowledgement, Confidentiality, and Copyright Assignment Agreement (which shall be delivered to the County) (e) protect the Confidential Information using at least the same physical, electronic, and other protections and care it uses for its own proprietary and/or confidential information of a similar sensitivity, but in no case less than reasonable protections and care; (f) stamp any copies of any Confidential Information as "Confidential & Proprietary" or in some other manner clearly indicating that it is confidential or proprietary; and (g) not cause the Confidential Information to be transported, transmitted, or otherwise conveyed or sent outside of the United States without the express prior written approval of County.

a.   Legally Required Disclosure

In the event that the Contractor/Subcontractor is requested pursuant to, or required by, applicable law, regulation or stock exchange rule or by legal process to disclose any Confidential Information or any other information concerning the County or the VSAP, the Contractor/Subcontractor agrees that it will provide the County with prompt notice of such request or requirement in order to enable the County to seek an appropriate protective order or other remedy (at the Contractor's/Subcontractor's sole expense), to consult with the Contractor/Subcontractor with respect to the County taking steps to resist or narrow the scope of such request or legal process, or to waive compliance, in whole or in part, with the terms of this Agreement. In the event that no such protective order or remedy is obtained, or that the County waives compliance with the terms of this Agreement, the Contractor/Subcontractor will furnish only that portion of any Confidential Information which the Contractor/Subcontractor is advised by counsel is legally required and will exercise best efforts (at the Contractor's/Subcontractor's sole expense) to obtain reliable assurance that confidential treatment will be accorded any Confidential Information.

b.   Return or Destruction of Confidential Information

Contractor/Subcontractor shall maintain a log of each copy of any and all Confidential Information provided to Contractor/Subcontractor or its Authorized Associates. Said log shall contain a serial number, bates number or other identifying code of the Confidential Information, a title or description of the Confidential Information, the name and title of the person who has possession and control of such copy at all times, the person who authorized his or her receipt of that copy of Confidential, the basis for his or her need to access such Confidential Information, and a description of the location where said copy of Confidential Information is maintained. Such log shall be available for inspection by the County at any time upon request. A sample log is attached hereto as <u>Attachment A</u>.

Promptly upon Contract termination, Contractor/Subcontractor shall, at the choice of the County, either (x) return to the County or (y) destroy all copies of any Confidential Information, including those provided to its Authorized Associates. Electronic copies shall

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be cleared, purged, or destroyed consistent with the current National Institute of Standard and Technology (NIST) Special Publication SP-800-88, Guidelines for Media Sanitization. Available at: http://csrc.nist.gov/publications/PubsDrafts.html#SP-800-88 Rev.%201. Contractor/Subcontractor shall not retain any copies of the Confidential Information or any portion thereof. Simultaneous with the return to the County of all copies of the Confidential Information, Contractor/Subcontractor shall deliver to the County a written certification, executed by a duly authorized officer of Contractor/Subcontractor , stating that: (a) all copies of the Confidential Information have been returned to the County or destroyed; (b) Contractor/Subcontractor has not retained any copies of the Confidential Information or any portion thereof; and (c) Contractor/Subcontractor has not improperly disclosed or revealed any of the Confidential Information. A sample written certification is attached hereto as Attachment B.

      c.   Residuals

Nothing in this Agreement shall restrict any employee or representative of the County from using general ideas, concepts, practices, learning, or know-how that are retained in the memory of such employee or representative following the Contract, provided that the foregoing is not intended to grant, and shall not be deemed to grant any license under any Patents of the Contractor/Subcontractor.

5. Background Checks

Contractor/Subcontractor agrees that it has or will conduct a background check as determined by the County and as defined in the Contract on each of its Authorized Associates prior to allowing them access to Confidential Information.

6. Notice of Immunity under the Defend Trade Secrets Act

Contractor/Subcontractor hereby acknowledges and agrees that it has provided each of its Authorized Associates written notice that the Defend Trade Secrets Act, 18 U.S.C. § 1833(b) provides an immunity for the disclosure of a trade secret to report a suspected violation of law and/or in an anti-retaliation lawsuit as follows:

1) Immunity. An individual shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of a trade secret that is made: (a) (i) in confidence to a Federal, State, or local government official, either directly or indirectly, or to an attorney; and (ii) solely for the purpose of report or investigating a suspected violation of law; or (b) in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal.

2) Use of Trade Secret Information in Anti-Retaliation Lawsuit. An individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the individual's attorney and use the trade secret information in the court proceeding, if the individual: (a) files any document containing the trade secret under seal; and (b) does not disclose the trade secret, expect pursuant to court order.

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7. Copyright Assignment Agreement

Contractor/Subcontractor and their Authorized Associates agree that all materials, documents, software programs and documentation, written designs, plans, diagrams, reports, software development tools and aids, diagnostic aids, computer processable media, source codes, object codes, conversion aids, training documentation and aids, and other information and/or tools of all types, developed or acquired by Contractor/Subcontractor and their Authorized Associates in whole or in part pursuant to the above referenced Contract, and all works based thereon, incorporated therein, or derived therefrom shall be the sole property of the County. In this connection, Contractor/Subcontractor and their Authorized Associates hereby assign and transfer to the County in perpetuity for all purposes all my right, title, and interest in and to all such items, including, but not limited to, all unrestricted and exclusive copyrights, patent rights, trade secret rights, and all renewals and extensions thereof. Whenever requested by the County, Contractor/Subcontractor and their Authorized Associates agree to promptly execute and deliver to County all papers, instruments, and other documents requested by the County, and to promptly perform all other acts requested by the County to carry out the terms of this Agreement, including, but not limited to, executing an assignment and transfer of copyright in a form substantially similar to Exhibit M1, attached hereto and incorporated herein by reference.

The County shall have the right to register all copyrights in the name of the County of Los Angeles and shall have the right to assign, license, or otherwise transfer any and all of the County's right, title, and interest, including, but not limited to, copyrights, in and to the items described above.

8. No Representations or Warranties

The Contractor/Subcontractor understands and agrees that the County: (a) has not made or make any representation or warranty hereunder, expressed or implied, as to the accuracy or completeness of the County Confidential Information or (b) shall have any liability hereunder to the Contractor/Subcontractor relating to or resulting from the use of the County Confidential Information or any errors therein or omissions therefrom.

9. Indemnification

Contractor shall indemnify, defend, and hold harmless the County and its officers, employees, and agents, from and against any and all claims, demands, liabilities, damages, costs, and expenses, including, without limitation, defense costs and legal, accounting or other expert consulting or professional fees in any way arising from or related to, any breach by Contractor, any Subcontractor, or any of their Authorized Associates of this Agreement, and any disclosure, misappropriation or misuse of any of the Confidential Information arising from any such breach by Contractor, any Subcontractor, or any of their Authorized Associates of this Agreement or from any negligent acts or omissions of Contractor, any Subcontractor, or any of their Authorized Associates.

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10. Remedies

The County maintains any and all rights and remedies available to it at law or in equity, including, without limitation the right to seek an injunction or protective order. Contractor/Subcontractor is further advised that in addition to any tort or contractual remedies, unauthorized disclosure of this Agreement may also make the Contractor/Subcontractor liable under one or more of the following statutes Computer Fraud and Abuse Act, the Economic Espionage Act of 1996, the Defense of Trade Secrets Act, California Uniform Trade Secrets Act, the California Computer Data and Access Fraud Act, and the California Penal Code. It is understood and agreed that no failure or delay by the County in exercising any right, power or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege hereunder.

11. Non-Solicitation

During the Contract term, Contractor/Subcontractor and their Authorized Associates will not, directly or indirectly, solicit any employee or independent contractor of the County for the purpose of hiring them or otherwise causing them to cease employment or engagement with the County; provided that the foregoing provisions shall not prohibit (i) general solicitations of employment not specifically directed toward a prohibited person (including via electronic, print or other media, via use of recruitment professionals or otherwise), or (ii) the soliciting or hiring of any person (A) who responds to any such general solicitation or advertisement, (B) who initiates employment discussions in the absence of a solicitation prohibited by this Section 9, or (C) who is no longer employed by the County.

12. Assignability and Transfer

This Agreement is not assignable or transferable without the prior written consent of the County.

13. Governing Law, Jurisdiction, and Venue

This Agreement shall be governed by California law, without regard to its rules regarding conflicts of law. Contractor/Subcontractor agrees and consents to the exclusive personal and other jurisdiction of the courts of the State of California (except with respect to claims that are subject to exclusive federal subject matter jurisdiction, as to which Contractor/Subcontractor agrees and consents to the exclusive jurisdiction of the Federal District Court of the Central District of California) for all purposes regarding this Agreement and further agrees and consents that venue of any action brought hereunder shall be exclusively in the County of Los Angeles, California.

14. Entire Agreement

This Agreement contains the full and complete understanding of the parties with respect to the subject matter hereof and supersedes all prior representations and understandings, whether oral or written. In the event that any provision hereof or any obligation hereunder is

ACKNOWLEDGEMENT, CONFIDENTIALITY, AND COPYRIGHT ASSIGNMENT AGREEMENT-G1

found invalid or unenforceable pursuant to judicial decree or decision, any such provision, obligation or grant of rights shall be deemed and construed to extend only to the maximum permitted by law, and the remainder of this Agreement shall remain valid and enforceable according to its terms.

15. Severability

If any term or provision of this Agreement or any application hereof shall be invalid or unenforceable, the remainder of this Agreement and any other application of such term or provision shall not be affected thereby; and, to the extent permitted and possible, the invalid or unenforceable term or provision shall be deemed replaced by a term or provision that is valid and enforceable and that comes closest to expressing the intention of such invalid or unenforceable term or provision.

Contractor/Subcontractor understands and acknowledges that any violation of this Agreement may subject Contractor/Subcontractor and its Authorized Associates to civil and/or criminal action and/or penalties.

Authorized
Signature: _Timothy Stewart_   Date: _5/25/18_
Name: _TIM STEWART_   Title: _VP, Secretary_
Company: _FLX_

ACKNOWLEDGEMENT, CONFIDENTIALITY, AND COPYRIGHT ASSIGNMENT AGREEMENT-G1

LOS ANGELES COUNTY VOTING SOLUTIONS FOR ALL PEOPLE ("VSAP")

(Note: This certification is to be executed and returned to County with Contractor's executed Contract. Work cannot begin on the Contract until County receives this executed document.)

Contract No. 18-003 ("Contract")

Contractor Smartmatic, USA

Subcontractor Name (if signed on its behalf)____Votem Corp._____

1. General Information

The Contractor referenced above has entered into a contract with the County of Los Angeles to provide certain services to the County. The County requires the Contractor and each Subcontractor to sign this Acknowledgement, Confidentiality, and Copyright Assignment Agreement ("Agreement"). Contractor/Subcontractor shall also cause each of its employees, affiliates, consultants, and other agents (collectively, "Authorized Associates") approved by the County in advance in writing who will perform work under this Contract to execute and submit an Individual Acknowledgement, Confidentiality, and Copyright Assignment Agreement.

2. Contractor Acknowledgement

Contractor/Subcontractor understands and agrees that Authorized Associates and, if applicable, any Subcontractors that will provide services in the above referenced Contract are Contractor's sole responsibility. Contractor understands and agrees that Contractor's Authorized Associates must rely exclusively upon Contractor/Subcontractor for payment of salary and any and all other benefits payable by virtue of Contractor's Authorized Associates performance of work under the above-referenced Contract.

Contractor/Subcontractor understands and agrees that Authorized Associates are not employees of the County of Los Angeles for any purpose whatsoever and that Authorized Associates do not have and will not acquire any rights or benefits of any kind from the County of Los Angeles by virtue of my performance of work under the above-referenced Contract. Contractor understands and agrees that Authorized Associates will not acquire any rights or benefits from the County of Los Angeles pursuant to any agreement between any person or entity and the County of Los Angeles.

3. Term

This Agreement is effective upon Contractor's/Subcontractor's execution and shall continue in full force and effect through the term of the Contract, except that the Confidentiality provisions shall continue in full force and effect (a) for 15 years for all Confidential Information (as defined below) that is not a trade secret (as defined in the California Uniform Trade Secrets Act) and (b) in perpetuity for all Confidential Information which is a trade secret, so long as such information remains a trade secret under any applicable law.

ACKNOWLEDGEMENT, CONFIDENTIALITY, AND COPYRIGHT ASSIGNMENT AGREEMENT-G1

ll Confidential Information (as defined below) that is not a trade secret (as defined in the California Uniform Trade Secrets Act) and (b) in perpetuity for all Confidential Information which is a trade secret, so long as such information remains a trade secret under any applicable law.

4. Confidentiality

For purposes of this Agreement, "Confidential Information" shall mean: (a) any related data, information, or material the County discloses to Contractor/Subcontractor to facilitate Contractor's/Subcontractor's performance of services under the Contract; (b) any proprietary, confidential, and/or trade secret information of the County and/or others the County possesses relating to its current or planned voting systems, technology, designs, specifications, manufacturing methods, know-how, operational plans, business relationships, software, or firmware; (c) any data, information, or material identifying, characterizing, or related to any trait, feature, function, risk, threat, vulnerability, weakness, or problem regarding any data or system security in the County's current or planned voting systems, or to any safeguard, countermeasure, contingency plan, policy, or procedure, for any data or system security contemplated or implemented by the County, (d) any other non-public information shared with the Contractor/Subcontractor or their Authorized Associates by the County, (e) all notes, analyses, compilations, forecasts, studies, samples, data, statistics, summaries, interpretations, documentation, user guides, and other materials prepared by or for Contractor/Subcontractor or any Authorized Party that contain, are based on, or otherwise reflect or are derived from, in whole or in part, any documents, materials or other information disclosed by the County to Contractor/Subcontractor or are created, prepared, or derived as a work made for hire or otherwise assigned under the provisions of the Contract.

Unless otherwise agreed to in writing by the County, and except as required by applicable law, rule or regulation, Contractor/Subcontractor agrees not to disclose to any person (other than those persons otherwise allowed in this Agreement the fact that the Confidential Information exists or has been made available, the fact that the Contractor/Subcontractor is in talks with the County regarding the VSAP or any term, condition or other fact relating to the VSAP or such discussions or negotiations, including, without limitation, the status thereof.

Notwithstanding the foregoing, Confidential Information shall not include information that: (a) was in the public domain when disclosed; or (b) becomes public domain after disclosure, other than as a result of the Contractor's/Subcontractor's (or any of its Authorized Associates') violation of this Agreement. If any portion of the Confidential Information falls within any of the above exceptions, the remainder shall continue to be subject to the terms of this Agreement.

Contractor/Subcontractor agrees, on behalf of itself and all of its Authorized Associates to whom Contractor/Subcontractor discloses or provides any of the Confidential Information to: (a) protect from loss and hold in confidence all Confidential Information; (b) utilize the Confidential Information solely for the limited purpose of performing the Contract and not otherwise exploit it; (c) disclose the Confidential Information only to those Authorized Associates to whom such disclosure is authorized by the County in advance in writing, and

ACKNOWLEDGEMENT, CONFIDENTIALITY, AND COPYRIGHT ASSIGNMENT AGREEMENT-G1

solely to the extent necessary to adequately perform services under the Contract and not to otherwise disclose or reveal it to anyone; (d) have each such Authorized Associate also sign an Acknowledgement, Confidentiality, and Copyright Assignment Agreement (which shall be delivered to the County) (e) protect the Confidential Information using at least the same physical, electronic, and other protections and care it uses for its own proprietary and/or confidential information of a similar sensitivity, but in no case less than reasonable protections and care; (f) stamp any copies of any Confidential Information as "Confidential & Proprietary" or in some other manner clearly indicating that it is confidential or proprietary; and (g) not cause the Confidential Information to be transported, transmitted, or otherwise conveyed or sent outside of the United States without the express prior written approval of County.

a.   Legally Required Disclosure

In the event that the Contractor/Subcontractor is requested pursuant to, or required by, applicable law, regulation or stock exchange rule or by legal process to disclose any Confidential Information or any other information concerning the County or the VSAP, the Contractor/Subcontractor agrees that it will provide the County with prompt notice of such request or requirement in order to enable the County to seek an appropriate protective order or other remedy (at the Contractor's/Subcontractor's sole expense), to consult with the Contractor/Subcontractor with respect to the County taking steps to resist or narrow the scope of such request or legal process, or to waive compliance, in whole or in part, with the terms of this Agreement. In the event that no such protective order or remedy is obtained, or that the County waives compliance with the terms of this Agreement, the Contractor/Subcontractor will furnish only that portion of any Confidential Information which the Contractor/Subcontractor is advised by counsel is legally required and will exercise best efforts (at the Contractor's/Subcontractor's sole expense) to obtain reliable assurance that confidential treatment will be accorded any Confidential Information.

b.   Return or Destruction of Confidential Information

Contractor/Subcontractor shall maintain a log of each copy of any and all Confidential Information provided to Contractor/Subcontractor or its Authorized Associates. Said log shall contain a serial number, bates number or other identifying code of the Confidential Information, a title or description of the Confidential Information, the name and title of the person who has possession and control of such copy at all times, the person who authorized his or her receipt of that copy of Confidential, the basis for his or her need to access such Confidential Information, and a description of the location where said copy of Confidential Information is maintained. Such log shall be available for inspection by the County at any time upon request. A sample log is attached hereto as Attachment A.

Promptly upon Contract termination, Contractor/Subcontractor shall, at the choice of the County, either (x) return to the County or (y) destroy all copies of any Confidential Information, including those provided to its Authorized Associates. Electronic copies shall be cleared, purged, or destroyed consistent with the current National Institute of Standard and Technology (NIST) Special Publication SP-800-88, Guidelines for Media Sanitization. Available at: http://csrc.nist.gov/publications/PubsDrafts.html#SP-800-88 Rev.%201.

ACKNOWLEDGEMENT, CONFIDENTIALITY, AND COPYRIGHT ASSIGNMENT AGREEMENT-G1

Contractor/Subcontractor shall not retain any copies of the Confidential Information or any portion thereof. Simultaneous with the return to the County of all copies of the Confidential Information, Contractor/Subcontractor shall deliver to the County a written certification, executed by a duly authorized officer of Contractor/Subcontractor , stating that: (a) all copies of the Confidential Information have been returned to the County or destroyed; (b) Contractor/Subcontractor has not retained any copies of the Confidential Information or any portion thereof; and (c) Contractor/Subcontractor has not improperly disclosed or revealed any of the Confidential Information. A sample written certification is attached hereto as Attachment B.

      c.   Residuals

Nothing in this Agreement shall restrict any employee or representative of the County from using general ideas, concepts, practices, learning, or know-how that are retained in the memory of such employee or representative following the Contract, provided that the foregoing is not intended to grant, and shall not be deemed to grant any license under any Patents of the Contractor/Subcontractor.

5.   Background Checks

Contractor/Subcontractor agrees that it has or will conduct a background check as determined by the County and as defined in the Contract on each of its Authorized Associates prior to allowing them access to Confidential Information.

6.   Notice of Immunity under the Defend Trade Secrets Act

Contractor/Subcontractor hereby acknowledges and agrees that it has provided each of its Authorized Associates written notice that the Defend Trade Secrets Act, 18 U.S.C. § 1833(b) provides an immunity for the disclosure of a trade secret to report a suspected violation of law and/or in an anti-retaliation lawsuit as follows:

1) Immunity. An individual shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of a trade secret that is made: (a) (i) in confidence to a Federal, State, or local government official, either directly or indirectly, or to an attorney; and (ii) solely for the purpose of report or investigating a suspected violation of law; or (b) in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal.

2) Use of Trade Secret Information in Anti-Retaliation Lawsuit. An individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the individual's attorney and use the trade secret information in the court proceeding, if the individual: (a) files any document containing the trade secret under seal; and (b) does not disclose the trade secret, expect pursuant to court order.

ACKNOWLEDGEMENT, CONFIDENTIALITY, AND COPYRIGHT ASSIGNMENT AGREEMENT-G1

7.   Copyright Assignment Agreement

Contractor/Subcontractor and their Authorized Associates agree that all materials, documents, software programs and documentation, written designs, plans, diagrams, reports, software development tools and aids, diagnostic aids, computer processable media, source codes, object codes, conversion aids, training documentation and aids, and other information and/or tools of all types, developed or acquired by Contractor/Subcontractor and their Authorized Associates in whole or in part pursuant to the above referenced Contract, and all works based thereon, incorporated therein, or derived therefrom shall be the sole property of the County. In this connection, Contractor/Subcontractor and their Authorized Associates hereby assign and transfer to the County in perpetuity for all purposes all my right, title, and interest in and to all such items, including, but not limited to, all unrestricted and exclusive copyrights, patent rights, trade secret rights, and all renewals and extensions thereof. Whenever requested by the County, Contractor/Subcontractor and their Authorized Associates agree to promptly execute and deliver to County all papers, instruments, and other documents requested by the County, and to promptly perform all other acts requested by the County to carry out the terms of this Agreement, including, but not limited to, executing an assignment and transfer of copyright in a form substantially similar to Exhibit M1, attached hereto and incorporated herein by reference.

The County shall have the right to register all copyrights in the name of the County of Los Angeles and shall have the right to assign, license, or otherwise transfer any and all of the County's right, title, and interest, including, but not limited to, copyrights, in and to the items described above.

8.   No Representations or Warranties

The Contractor/Subcontractor understands and agrees that the County: (a) has not made or make any representation or warranty hereunder, expressed or implied, as to the accuracy or completeness of the County Confidential Information or (b) shall have any liability hereunder to the Contractor/Subcontractor relating to or resulting from the use of the County Confidential Information or any errors therein or omissions therefrom.

9.   Indemnification

Contractor shall indemnify, defend, and hold harmless the County and its officers, employees, and agents, from and against any and all claims, demands, liabilities, damages, costs, and expenses, including, without limitation, defense costs and legal, accounting or other expert consulting or professional fees in any way arising from or related to, any breach by Contractor, any Subcontractor, or any of their Authorized Associates of this Agreement, and any disclosure, misappropriation or misuse of any of the Confidential Information arising from any such breach by Contractor, any Subcontractor, or any of their Authorized Associates of this Agreement or from any negligent acts or omissions of Contractor, any Subcontractor, or any of their Authorized Associates.

10.   Remedies

ACKNOWLEDGEMENT, CONFIDENTIALITY, AND COPYRIGHT ASSIGNMENT AGREEMENT-G1

The County maintains any and all rights and remedies available to it at law or in equity, including, without limitation the right to seek an injunction or protective order. Contractor/Subcontractor is further advised that in addition to any tort or contractual remedies, unauthorized disclosure of this Agreement may also make the Contractor/Subcontractor liable under one or more of the following statutes Computer Fraud and Abuse Act, the Economic Espionage Act of 1996, the Defense of Trade Secrets Act, California Uniform Trade Secrets Act, the California Computer Data and Access Fraud Act, and the California Penal Code. It is understood and agreed that no failure or delay by the County in exercising any right, power or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege hereunder.

11. Non-Solicitation

During the Contract term, Contractor/Subcontractor and their Authorized Associates will not, directly or indirectly, solicit any employee or independent contractor of the County for the purpose of hiring them or otherwise causing them to cease employment or engagement with the County; provided that the foregoing provisions shall not prohibit (i) general solicitations of employment not specifically directed toward a prohibited person (including via electronic, print or other media, via use of recruitment professionals or otherwise), or (ii) the soliciting or hiring of any person (A) who responds to any such general solicitation or advertisement, (B) who initiates employment discussions in the absence of a solicitation prohibited by this Section 9, or (C) who is no longer employed by the County.

12. Assignability and Transfer

This Agreement is not assignable or transferable without the prior written consent of the County.

13. Governing Law, Jurisdiction, and Venue

This Agreement shall be governed by California law, without regard to its rules regarding conflicts of law. Contractor/Subcontractor agrees and consents to the exclusive personal and other jurisdiction of the courts of the State of California (except with respect to claims that are subject to exclusive federal subject matter jurisdiction, as to which Contractor/Subcontractor agrees and consents to the exclusive jurisdiction of the Federal District Court of the Central District of California) for all purposes regarding this Agreement and further agrees and consents that venue of any action brought hereunder shall be exclusively in the County of Los Angeles, California.

14. Entire Agreement

This Agreement contains the full and complete understanding of the parties with respect to the subject matter hereof and supersedes all prior representations and understandings, whether oral or written. In the event that any provision hereof or any obligation hereunder is found invalid or unenforceable pursuant to judicial decree or decision, any such provision, obligation or grant of rights shall be deemed and construed to extend only to the maximum

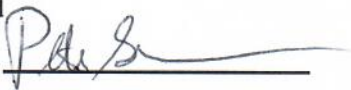## ACKNOWLEDGEMENT, CONFIDENTIALITY, AND COPYRIGHT ASSIGNMENT AGREEMENT-G1

permitted by law, and the remainder of this Agreement shall remain valid and enforceable according to its terms.

15. Severability

If any term or provision of this Agreement or any application hereof shall be invalid or unenforceable, the remainder of this Agreement and any other application of such term or provision shall not be affected thereby; and, to the extent permitted and possible, the invalid or unenforceable term or provision shall be deemed replaced by a term or provision that is valid and enforceable and that comes closest to expressing the intention of such invalid or unenforceable term or provision.

Contractor/Subcontractor understands and acknowledges that any violation of this Agreement may subject Contractor/Subcontractor and its Authorized Associates to civil and/or criminal action and/or penalties.

Authorized
Signature: _____   Date: __May 22, 2018_____
Name: Peter G Martin_____   Title: _CEO_____
Company: __Votem Corp_____

ACKNOWLEDGEMENT, CONFIDENTIALITY, AND COPYRIGHT ASSIGNMENT AGREEMENT-G-2

LOS ANGELES COUNTY VOTING SOLUTIONS FOR ALL PEOPLE ("VSAP")

(Note: This certification is to be executed and returned to County with Contractor's executed Contract. Work cannot begin on the Contract until County receives this executed document.)

Contract No.18-003 ("Contract")

Contractor Name: Smartmatic, USA

Subcontractor Name (if applicable) _____

Individual Name _____

1.   General Information

The Contractor referenced above has entered into a contract with the County of Los Angeles to provide certain services to the County. The County requires you to sign this Acknowledgement, Confidentiality, and Copyright Assignment Agreement ("Agreement").

2.   Individual Acknowledgement

I understand and agree that the Contractor referenced above has exclusive control for purposes of the above-referenced Contract. I understand and agree that I must rely exclusively upon the Contractor/Subcontractor referenced above for payment of salary and any and all other benefits payable to me or on my behalf by virtue of my performance of work under the above-referenced Contract.

I understand and agree that I am not an employee of the County of Los Angeles for any purpose whatsoever and that I do not have and will not acquire any rights or benefits of any kind from the County of Los Angeles by virtue of my performance of work under the above-referenced Contract. I understand and agree that I do not have and will not acquire any rights or benefits from the County of Los Angeles pursuant to any agreement between any person or entity and the County of Los Angeles.

I understand and agree that I may be required to undergo a background and security investigation(s). I understand and agree that my continued performance of work under the above-referenced Contract is contingent upon my passing, to the satisfaction of the County, any and all such investigations. I understand and agree that my failure to pass, to the satisfaction of the County, any such investigation shall result in my immediate release from performance under this and/or any future contract.

ACKNOWLEDGEMENT, CONFIDENTIALITY, AND COPYRIGHT ASSIGNMENT AGREEMENT-G-2

3.   Term

This Agreement is effective upon execution and shall continue in full force and effect through the term of the Contract, except that the Confidentiality provisions shall continue in full force and effect (a) for 15 years for all Confidential Information (as defined below) that is not a trade secret (as defined in the California Uniform Trade Secrets Act) and (b) in perpetuity for all Confidential Information which is a trade secret, so long as such information remains a trade secret under any applicable law.

4.   Confidentiality

I may be involved with work pertaining to services provided by the County of Los Angeles and, if so, I may have access to confidential data and information pertaining to persons and/or entities receiving services from the County. In addition, I may also have access to proprietary information supplied by other vendors doing business with the County of Los Angeles. The County has a legal obligation to protect all such confidential data and information in its possession, especially data and information concerning health, criminal, and welfare recipient records. I understand that if I am involved in County work, the County must ensure that I, too, will protect the confidentiality of such data and information. Consequently, I understand that I must sign this agreement as a condition of my work to be provided by the above-referenced Contractor for the County. I have read this agreement and have taken due time to consider it prior to signing.

For purposes of this Agreement, "Confidential Information" shall mean: (a) any related data, information, or material the County discloses to Contractor/Subcontractor to facilitate Contractor's/Subcontractor's performance of the Contract; (b) any proprietary, confidential, and/or trade secret information of the County and/or others the County possesses relating to its current or planned voting systems, technology, designs, specifications, manufacturing methods, know-how, operational plans, business relationships, software, or firmware; (c) any data, information, or material identifying, characterizing, or related to any trait, feature, function, risk, threat, vulnerability, weakness, or problem regarding any data or system security in the County's current or planned voting systems, or to any safeguard, countermeasure, contingency plan, policy, or procedure, for any data or system security contemplated or implemented by the County, (d) any other non-public information shared with the Contractor/Subcontractor or their Authorized Associates by the County, (e) all notes, analyses, compilations, forecasts, studies, samples, data, statistics, summaries, interpretations, documentation, user guides, and other materials prepared by or for Contractor/Subcontractor or any Authorized Party that contain, are based on, or otherwise reflect or are derived from, in whole or in part, any documents, materials or other information disclosed by the County to Contractor/Subcontractor or are created, prepared, or derived as a work made for hire or otherwise assigned under the provisions of the Contract.

Unless otherwise agreed to in writing by the County, and except as required by applicable law, rule or regulation, I agree not to disclose to any person (other than those persons otherwise allowed in this Agreement) the fact that the Confidential Information exists or has been made available, the fact that the Contractor/Subcontractor is in talks with the County regarding the VSAP or any term, condition or other fact relating to the VSAP or such discussions or negotiations, including, without limitation, the status thereof.

Notwithstanding the foregoing, Confidential Information shall not include information that: (a) was in the public domain when disclosed; or (b) becomes public domain after disclosure, other than as a result of the

ACKNOWLEDGEMENT, CONFIDENTIALITY, AND COPYRIGHT ASSIGNMENT AGREEMENT-G-2

Contractor's, Subcontractor's, or any of their employee's, consultant's, or other agent's violation of this Agreement. If any portion of the Confidential Information falls within any of the above exceptions, the remainder shall continue to be subject to the terms of this Agreement.

I agree to: (a) protect from loss and hold in confidence all Confidential Information; (b) utilize the Confidential Information solely for the limited purpose of performing services under the Contract and not otherwise exploit it; (c) disclose the Confidential Information only to those to whom such disclosure is authorized by the County in advance in writing, and solely to the extent necessary to adequately perform services under the Contract and not to otherwise disclose or reveal it to anyone; (d) protect the Confidential Information using at least the same physical, electronic, and other protections and care my employee uses for its own proprietary and/or confidential information of a similar sensitivity, but in no case less than reasonable protections and care; (e) stamp any copies of any Confidential Information as "Confidential & Proprietary" or in some other manner clearly indicating that it is confidential or proprietary; and (f) not cause the Confidential Information to be transported, transmitted, or otherwise conveyed or sent outside of the United States without the express prior written approval of County.

d.   Legally Required Disclosure

In the event that I am requested pursuant to, or required by, applicable law, regulation or stock exchange rule or by legal process to disclose any Confidential Information or any other information concerning the County or the VSAP, I agree that it will provide the County with prompt notice of such request or requirement in order to enable the County to seek an appropriate protective order or other remedy, to consult with me with respect to the County taking steps to resist or narrow the scope of such request or legal process, or to waive compliance, in whole or in part, with the terms of this Agreement. In the event that no such protective order or remedy is obtained, or that the County waives compliance with the terms of this Agreement, I will furnish only that portion of any Confidential Information which I am advised by counsel is legally required and will exercise best efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information.

e.   Return or Destruction of Confidential Information

Promptly upon Contract termination, I shall, at the choice of the County, either (x) return to the County or (y) destroy all copies of any Confidential Information. Electronic copies shall be cleared, purged, or destroyed consistent with the current National Institute of Standard and Technology (NIST) Special Publication SP-800-88, Guidelines for Media Sanitization. Available at: http://csrc.nist.gov/publications/PubsDrafts.html#SP-800-88 Rev.%201. I shall not retain any copies of the Confidential Information or any portion thereof.

f.   Residuals

Nothing in this Agreement shall restrict any employee or representative of the County from using general ideas, concepts, practices, learning, or know-how that are retained in the memory of such employee or representative following the Contract, provided that the foregoing is not intended to grant, and shall not be deemed to grant any license under any Patents of the Contractor/Subcontractor.

ACKNOWLEDGEMENT, CONFIDENTIALITY, AND COPYRIGHT ASSIGNMENT AGREEMENT-G-2

5. Notice of Immunity under the Defend Trade Secrets Act

I hereby acknowledges and agrees that I have been provided written notice that the Defend Trade Secrets Act, 18 U.S.C. § 1833(b) provides an immunity for the disclosure of a trade secret to report a suspected violation of law and/or in an anti-retaliation lawsuit as follows:

3) Immunity. An individual shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of a trade secret that is made: (a) (i) in confidence to a Federal, State, or local government official, either directly or indirectly, or to an attorney; and (ii) solely for the purpose of report or investigating a suspected violation of law; or (b) in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal.

4) Use of Trade Secret Information in Anti-Retaliation Lawsuit. An individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the individual's attorney and use the trade secret information in the court proceeding, if the individual: (a) files any document containing the trade secret under seal; and (b) does not disclose the trade secret, expect pursuant to court order.

6. Copyright Assignment Agreement

I agree that all materials, documents, software programs and documentation, written designs, plans, diagrams, reports, software development tools and aids, diagnostic aids, computer processable media, source codes, object codes, conversion aids, training documentation and aids, and other information and/or tools of all types, developed or acquired by me in whole or in part pursuant to the above referenced contract, and all works based thereon, incorporated therein, or derived therefrom shall be the sole property of the County. In this connection, I hereby assign and transfer to the County in perpetuity for all purposes all my right, title, and interest in and to all such items, including, but not limited to, all unrestricted and exclusive copyrights, patent rights, trade secret rights, and all renewals and extensions thereof. Whenever requested by the County, I agree to promptly execute and deliver to County all papers, instruments, and other documents requested by the County, and to promptly perform all other acts requested by the County to carry out the terms of this agreement, including, but not limited to, executing an assignment and transfer of copyright in a form substantially similar to Exhibit M1, attached hereto and incorporated herein by reference.

The County shall have the right to register all copyrights in the name of the County of Los Angeles and shall have the right to assign, license, or otherwise transfer any and all of the County's right, title, and interest, including, but not limited to, copyrights, in and to the items described above.

7. No Representations or Warranties

I understand and agree that the County: (a) has not made or make any representation or warranty hereunder, expressed or implied, as to the accuracy or completeness of the County Confidential Information or (b) shall have any liability hereunder to the Contractor/Subcontractor relating to or

ACKNOWLEDGEMENT, CONFIDENTIALITY, AND COPYRIGHT ASSIGNMENT AGREEMENT-G-2

resulting from the use of the County Confidential Information or any errors therein or omissions therefrom.

8.   Remedies

The County maintains any and all rights and remedies available to it at law or in equity, including, without limitation the right to seek an injunction or protective order. I am further advised that in addition to any tort or contractual remedies, unauthorized disclosure of this Agreement may also make me liable under one or more of the following statutes Computer Fraud and Abuse Act, the Economic Espionage Act of 1996, the Defense of Trade Secrets Act, California Uniform Trade Secrets Act, the California Computer Data and Access Fraud Act, and the California Penal Code. It is understood and agreed that no failure or delay by the County in exercising any right, power or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege hereunder.

9.   Non-Solicitation

During the Contract term, I will not, directly or indirectly, solicit any employee or independent contractor of the County for the purpose of hiring them or otherwise causing them to cease employment or engagement with the County; provided that the foregoing provisions shall not prohibit (i) general solicitations of employment not specifically directed toward a prohibited person (including via electronic, print or other media, via use of recruitment professionals or otherwise), or (ii) the soliciting or hiring of any person (A) who responds to any such general solicitation or advertisement, (B) who initiates employment discussions in the absence of a solicitation prohibited by this Section 9, or (C) who is no longer employed by the County.

10.   Assignability and Transfer

This Agreement is not assignable or transferable without the prior written consent of the County.

11.   Governing Law, Jurisdiction, and Venue

This Agreement shall be governed by California law, without regard to its rules regarding conflicts of law. I agree and consent to the exclusive personal and other jurisdiction of the courts of the State of California (except with respect to claims that are subject to exclusive federal subject matter jurisdiction, as to which I agree and consent to the exclusive jurisdiction of the Federal District Court of the Central District of California) for all purposes regarding this Agreement and further agrees and consents that venue of any action brought hereunder shall be exclusively in the County of Los Angeles, California.

12.   Entire Agreement

This Agreement contains the full and complete understanding of the parties with respect to the subject matter hereof and supersedes all prior representations and understandings, whether oral or written. In the event that any provision hereof or any obligation hereunder is found invalid or unenforceable pursuant to judicial decree or decision, any such provision, obligation or grant of rights shall be deemed and construed to extend only to the maximum permitted by law, and the remainder of this Agreement shall remain valid and enforceable according to its terms.

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13. Severability

If any term or provision of this Agreement or any application hereof shall be invalid or unenforceable, the remainder of this Agreement and any other application of such term or provision shall not be affected thereby; and, to the extent permitted and possible, the invalid or unenforceable term or provision shall be deemed replaced by a term or provision that is valid and enforceable and that comes closest to expressing the intention of such invalid or unenforceable term or provision.

I understand and acknowledge that any violation of this Agreement may subject me to civil and/or criminal action and/or penalties.

Signature: _____

Name: _____   **Date:** _____

Title: _____   **Company:**
_____

Title 2 ADMINISTRATION
Chapter 2.203.010 through 2.203.090
CONTRACTOR EMPLOYEE JURY SERVICE

2.203.010 Findings.

The board of supervisors makes the following findings. The county of Los Angeles allows its permanent, full-time employees unlimited jury service at their regular pay. Unfortunately, many businesses do not offer or are reducing or even eliminating compensation to employees who serve on juries. This creates a potential financial hardship for employees who do not receive their pay when called to jury service, and those employees often seek to be excused from having to serve. Although changes in the court rules make it more difficult to excuse a potential juror on grounds of financial hardship, potential jurors continue to be excused on this basis, especially from longer trials. This reduces the number of potential jurors and increases the burden on those employers, such as the county of Los Angeles, who pay their permanent, full-time employees while on juror duty. For these reasons, the county of Los Angeles has determined that it is appropriate to require that the businesses with which the county contracts possess reasonable jury service policies. (Ord. 2002-0015 § 1 (part), 2002)

2.203.020 Definitions.

The following definitions shall be applicable to this chapter:

A.   "Contractor" means a person, partnership, corporation or other entity which has a contract with the county or a subcontract with a county contractor and has received or will receive an aggregate sum of $50,000 or more in any 12-month period under one or more such contracts or subcontracts.

B.   "Employee" means any California resident who is a full-time employee of a contractor under the laws of California.

C.   "Contract" means any agreement to provide goods to, or perform services for or on behalf of, the county but does not include:

1.   A contract where the board finds that special circumstances exist that justify a waiver of the requirements of this chapter; or

2.   A contract where federal or state law or a condition of a federal or state program mandates the use of a particular contractor; or

3.   A purchase made through a state or federal contract; or

4.   A monopoly purchase that is exclusive and proprietary to a specific manufacturer, distributor, or reseller, and must match and inter-member with existing supplies, equipment or systems maintained by the county pursuant to the Los Angeles County Purchasing Policy and Procedures Manual, Section P-3700 or a successor provision; or

5.   A revolving fund (petty cash) purchase pursuant to the Los Angeles County Fiscal Manual, Section 4.4.0 or a successor provision; or

6.   A purchase card purchase pursuant to the Los Angeles County Purchasing Policy and Procedures Manual, Section P-2810 or a successor provision; or

7.   A non-agreement purchase with a value of less than $5,000 pursuant to the Los Angeles County Purchasing Policy and Procedures Manual, Section A-0300 or a successor provision; or

8.   A bona fide emergency purchase pursuant to the Los Angeles County Purchasing Policy and Procedures Manual, Section PP-1100 or a successor provision.

D.　　"Full time" means 40 hours or more worked per week, or a lesser number of hours if:

　　　1.　　The lesser number is a recognized industry standard as determined by the chief administrative officer, or

　　　2.　　The contractor has a long-standing practice that defines the lesser number of hours as full time.

E.　　"County" means the county of Los Angeles or any public entities for which the board of supervisors is the governing body. (Ord. 2002-0040 § 1, 2002: Ord. 2002-0015 § 1 (part), 2002)

2.203.030 Applicability.

This chapter shall apply to contractors who enter into contracts that commence after July 11, 2002. This chapter shall also apply to contractors with existing contracts which are extended into option years that commence after July 11, 2002. Contracts that commence after May 28, 2002, but before July 11, 2002, shall be subject to the provisions of this chapter only if the solicitations for such contracts stated that the chapter would be applicable. (Ord. 2002-0040 § 2, 2002: Ord. 2002-0015 § 1 (part), 2002)

2.203.040 Contractor Jury Service Policy.

A contractor shall have and adhere to a written policy that provides that its employees shall receive from the contractor, on an annual basis, no less than five days of regular pay for actual jury service. The policy may provide that employees deposit any fees received for such jury service with the contractor or that the contractor deduct from the employees' regular pay the fees received for jury service. (Ord. 2002-0015 § 1 (part), 2002)

2.203.050 Other Provisions.

A.　　Administration. The chief administrative officer shall be responsible for the administration of this chapter. The chief administrative officer may, with the advice of county counsel, issue interpretations of the provisions of this chapter and shall issue written instructions on the implementation and ongoing administration of this chapter. Such instructions may provide for the delegation of functions to other county departments.

B.　　Compliance Certification. At the time of seeking a contract, a contractor shall certify to the county that it has and adheres to a policy consistent with this chapter or will have and adhere to such a policy prior to award of the contract. (Ord. 2002-0015 § 1 (part), 2002)

2.203.060 Enforcement and Remedies.

For a contractor's violation of any provision of this chapter, the county department head responsible for administering the contract may do one or more of the following:

1. Recommend to the board of supervisors the termination of the contract; and/or,

　　2. Pursuant to chapter 2.202, seek the debarment of the contractor. (Ord. 2002-0015 § 1 (part), 200

2.203.070. Exceptions.

A.   Other Laws. This chapter shall not be interpreted or applied to any contractor or to any employee in a manner inconsistent with the laws of the United States or California.

B.   Collective Bargaining Agreements. This chapter shall be superseded by a collective bargaining agreement that expressly so provides.

C.   Small Business. This chapter shall not be applied to any contractor that meets all of the following:

1.   Has ten or fewer employees during the contract period; and,

2.   Has annual gross revenues in the preceding twelve months which, if added to the annual amount of the contract awarded, are less than $500,000; and,

3.   Is not an affiliate or subsidiary of a business dominant in its field of operation.

"Dominant in its field of operation" means having more than ten employees and annual gross revenues in the preceding twelve months which, if added to the annual amount of the contract awarded, exceed $500,000.

"Affiliate or subsidiary of a business dominant in its field of operation" means a business which is at least 20 percent owned by a business dominant in its field of operation, or by partners, officers, directors, majority stockholders, or their equivalent, of a business dominant in that field of operation. (Ord. 2002-0015 § 1 (part), 2002)

2.203.090. Severability.

If any provision of this chapter is found invalid by a court of competent jurisdiction, the remaining provisions shall remain in full force and effect. (Ord. 2002-0015 § 1 (part), 2002)

EXHIBIT I

SAFELY SURRENDERED BABY LAW

EXHIBIT I

Safely Surrendered Baby Law

What is the Safely Surrendered Baby Law?

California's Safely Surrendered Baby Law allows parents or other persons, with lawful custody, which means anyone to whom the parent has given permission to confidentially surrender a baby. As long as the baby is three days (72 hours) of age or younger and has not been abused or neglected, the baby may be surrendered without fear of arrest or prosecution.

Every baby deserves a chance for a healthy life. If someone you know is considering abandoning a baby, let her know there are other options. For three days (72 hours) after birth, a baby can be surrendered to staff at any hospital or fire station in Los Angeles County.

How does it work?

A distressed parent who is unable or unwilling to care for a baby can legally, confidentially, and safely surrender a baby within three days (72 hours) of birth. The baby must be handed to an employee at a hospital or fire station in Los Angeles County. As long as the baby shows no sign of abuse or neglect, no name or other information is required. In case the parent changes his or her mind at a later date and wants the baby back, staff will use bracelets to help connect them to each other. One bracelet will be placed on the baby, and a matching bracelet will be given to the parent or other surrendering adult.

What if a parent wants the baby back?

Parents who change their minds can begin the process of reclaiming their baby within 14 days. These parents should call the Los Angeles County Department of Children and Family Services at **1-800-540-4000**.

Can only a parent bring in the baby?

No. While in most cases a parent will bring in the baby, the Law allows other people to bring in the baby if they have lawful custody.

Does the parent or surrendering adult have to call before bringing in the baby?

No. A parent or surrendering adult can bring in a baby anytime, 24 hours a day, 7 days a week, as long as the parent or surrendering adult surrenders the baby to someone who works at the hospital or fire station.

Does the parent or surrendering adult have to tell anything to the people taking the baby?

No. However, hospital or fire station personnel will ask the surrendering party to fill out a questionnaire designed to gather important medical history information, which is very useful in caring for the baby. The questionnaire includes a stamped return envelope and can be sent in at a later time.

What happens to the baby?

The baby will be examined and given medical treatment. Upon release from the hospital, social workers immediately place the baby in a safe and loving home and begin the adoption process.

## What happens to the parent or surrendering adult?

Once the parent or surrendering adult surrenders the baby to hospital or fire station personnel, they may leave at any time.

Why is California doing this?

The purpose of the **Safely Surrendered Baby Law** is to protect babies from being abandoned, hurt or killed by their parents. You may have heard tragic stories of babies left in dumpsters or public bathrooms. Their parents may have been under severe emotional distress. The mothers may have hidden their pregnancies, fearful of what would happen if their families found out. Because they were afraid and had no one or nowhere to turn for help, they abandoned their babies. Abandoning a baby is illegal and places the baby in extreme danger. Too often, it results in the baby's death. The **Safely Surrendered Baby Law** prevents this tragedy from ever happening again in California.

A baby's story

Early in the morning on April 9, 2005, a healthy baby boy was safely surrendered to nurses at Harbor-UCLA Medical Center. The woman who brought the baby to the hospital identified herself as the baby's aunt and stated the baby's mother had asked her to bring the baby to the hospital on her behalf. The aunt was given a bracelet with a number matching the anklet placed on the baby; this would provide some identification in the event the mother changed her mind about surrendering the baby and wished to reclaim the baby in the 14-day period allowed by the Law. The aunt was also provided with a medical questionnaire and said she would have the mother complete and mail back in the stamped return envelope provided. The baby was examined by medical staff and pronounced healthy and full-term. He was placed with a loving family that had been approved to adopt him by the Department of Children and Family Services.

EXHIBIT I
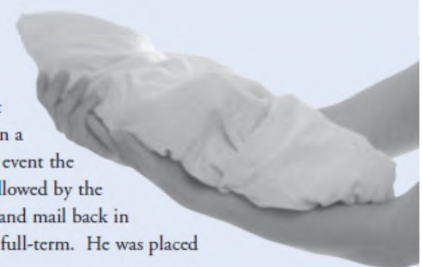
Ley de Entrega de Bebés Sin Peligro

Los recién nacidos pueden ser entregados en forma segura al personal de cualquier hospital o cuartel de bomberos del Condado de Los Ángeles

Sin pena. Sin culpa. Sin nombres.

En el Condado de Los Ángeles: 1-877-BABY SAFE • 1-877-222-9723

www.babysafela.org

EXHIBIT I

Ley de Entrega de Bebés
Sin Peligro

¿Qué es la Ley de Entrega de Bebés sin Peligro?

La Ley de Entrega de Bebés sin Peligro de California permite la entrega confidencial de un recién nacido por parte de sus padres u otras personas con custodia legal, es decir cualquier persona a quien los padres le hayan dado permiso. Siempre que el bebé tenga tres días (72 horas) de vida o menos, y no haya sufrido abuso ni negligencia, pueden entregar al recién nacido sin temor de ser arrestados o procesados.

Cada recién nacido se merece la oportunidad de tener una vida saludable. Si alguien que usted conoce está pensando en abandonar a un recién nacido, infórmele que tiene otras opciones. Hasta tres días (72 horas) después del nacimiento, se puede entregar un recién nacido al personal de cualquier hospital o cuartel de bomberos del condado de Los Angeles.

¿Cómo funciona?

El padre/madre con dificultades que no pueda o no quiera cuidar de su recién nacido puede entregarlo en forma legal, confidencial y segura dentro de los tres días (72 horas) del nacimiento. El bebé debe ser entregado a un empleado de cualquier hospital o cuartel de bomberos del Condado de Los Ángeles. Siempre que el bebé no presente signos de abuso o negligencia, no será necesario suministrar nombres ni información alguna. Si el padre/madre cambia de opinión posteriormente y desea recuperar a su bebé, los trabajadores utilizarán brazaletes para poder vincularlos. El bebé llevará un brazalete y el padre/madre o el adulto que lo entregue recibirá un brazalete igual.

¿Qué pasa si el padre/madre desea recuperar a su bebé?

Los padres que cambien de opinión pueden comenzar el proceso de reclamar a su recién nacido dentro de los 14 días. Estos padres deberán llamar al Departamento de Servicios para Niños y Familias (Department of Children and Family Services) del Condado de Los Ángeles al 1-800-540-4000.

¿Sólo los padres podrán llevar al recién nacido?

No. Si bien en la mayoría de los casos son los padres los que llevan al bebé, la ley permite que otras personas lo hagan *si tienen custodia legal*.

¿Los padres o el adulto que entrega al bebé deben llamar antes de llevar al bebé?

No. El padre/madre o adulto puede llevar al bebé en cualquier momento, las 24 horas del día, los 7 días de la semana, siempre y cuando entreguen a su bebé a un empleado del hospital o cuartel de bomberos.

¿Es necesario que el padre/madre o adulto diga algo a las personas que reciben al bebé?

No. Sin embargo, el personal del hospital o cuartel de bomberos le pedirá a la persona que entregue al bebé que llene un cuestionario con la finalidad de recabar antecedentes médicos importantes, que resultan de gran utilidad para cuidar bien del bebé. El cuestionario incluye un sobre con el sello postal pagado para enviarlo en otro momento.

¿Qué pasará con el bebé?

El bebé será examinado y le brindarán atención médica. Cuando le den el alta del hospital, los trabajadores sociales inmediatamente ubicarán al bebé en un hogar seguro donde estará bien atendido, y se comenzará el proceso de adopción.

¿Qué pasará con el padre/madre o adulto que entregue al bebé?

Una vez que los padres o adulto hayan entregado al bebé al personal del hospital o cuartel de bomberos, pueden irse en cualquier momento.

¿Por qué se está haciendo esto en California? ?

La finalidad de la **Ley de Entrega de Bebés sin Peligro** es proteger a los bebés para que no sean abandonados, lastimados o muertos por sus padres. Usted probablemente haya escuchado historias trágicas sobre bebés abandonados en basureros o en baños públicos. Los padres de esos bebés probablemente hayan estado pasando por dificultades emocionales graves. Las madres pueden haber ocultado su embarazo, por temor a lo que pasaría si sus familias se enteraran. Abandonaron a sus bebés porque tenían miedo y no tenían nadie a quien pedir ayuda. El abandono de un recién nacido es ilegal y pone al bebé en una situación de peligro extremo. Muy a menudo el abandono provoca la muerte del bebé. La **Ley de Entrega de Bebés sin Peligro** impide que vuelva a suceder esta tragedia en California.

Historia de *un bebé*

A la mañana temprano del día 9 de abril de 2005, se entregó un recién nacido saludable a las enfermeras del Harbor-UCLA Medical Center. La mujer que llevó el recién nacido al hospital se dio a conocer como la tía del bebé, y dijo que la madre le había pedido que llevara al bebé al hospital en su nombre. Le entregaron a la tía un brazalete con un número que coincidía con la pulsera del bebé; esto serviría como identificación en caso de que la madre cambiara de opinión con respecto a la entrega del bebé y decidiera recuperarlo dentro del período de 14 días que permite esta ley. También le dieron a la tía un cuestionario médico, y ella dijo que la madre lo llenaría y lo enviaría de vuelta dentro del sobre con franqueo pagado que le habían dado. El personal médico examinó al bebé y se determinó que estaba saludable y a término. El bebé fue ubicado con una buena familia que ya había sido aprobada para adoptarlo por el Departamento de Servicios para Niños y Familias.

LIVING WAGE ORDINANCE

(INTENTIONALLY OMMITTED)

LIVING WAGE RATE ANNUAL ADJUSTMENTS

(INTENTIONALLY OMMITTED)

EXHIBIT L

PAYROLL STATEMENT OF COMPLIANCE

(INTENTIONALLY OMMITTED)

FORMS REQUIRED AT COMPLETION OF THE CONTRACTS INVOLVING INTELLECTUAL PROPERTY DEVELOPED-DESIGNED BY CONTRACTOR. THE INTELLECTUAL PROPERTY DEVELOPED/ DESIGNED BECOMES PROPERTY OF THE COUNTY AFTER CREATION OR AT THE END OF THE CONTRACT TERM.

 M1 INDIVIDUAL'S ASSIGNMENT AND TRANSFER OF COPYRIGHT

 M2 CONTRACTOR'S ASSIGNMENT AND TRANSFER OF COPYRIGHT

 M3 NOTARY STATEMENT FOR ASSIGNMENT AND TRANSFER OF COPYRIGHT

<u>INDIVIDUAL'S ASSIGNMENT AND TRANSFER OF COPYRIGHT</u>

For good and valuable consideration, receipt of which is hereby acknowledged, the undersigned, _____, an individual ("Grantor"), does hereby assign, grant, convey and transfer to the County of Los Angeles, California ("Grantee") and its successors and assigns throughout the world in perpetuity, all of Grantor's right, title and interest of every kind and nature in and to all materials, documents, software programs and documentation, written designs, plans, diagrams, reports, software development tools and aids, diagnostic aids, computer processable media, source codes, object codes, conversion aids, training documentation and aids, and other information and/or tools of all types (including, without limitation, those items listed on Schedule A, attached hereto and incorporated herein by reference) developed or acquired, in whole or in part, under the Agreement described below, including, but not limited to, all right, title and interest in and to all copyrights and works protectable by copyright and all renewals and extensions thereof (collectively, the "Works"), and in and to all copyrights and right, title and interest of every kind or nature, without limitation, in and to all works based thereon, incorporated in, derived from, incorporating, or related to, the Works or from which the Works are derived.

Without limiting the generality of the foregoing, the aforesaid conveyance and assignment shall include, but is not limited to, all prior choses-in-action, at law, in equity and otherwise, the right to recover all damages and other sums, and the right to other relief allowed or awarded at law, in equity, by statute or otherwise.

_____ and Grantee have entered into County of Los Angeles

Agreement Number _____ for _____, dated _____, as

amended by Amendment Number _____, dated _____,

{NOTE to Preparer: reference all existing Amendments} as the same hereafter may be amended or otherwise

modified from time to time (the "Agreement").

Grantor's Signature		Date

Grantor's Printed Name: _____

Grantor's Printed Position: _____

CONTRACTOR'S ASSIGNMENT AND TRANSFER OF COPYRIGHT

For good and valuable consideration, receipt of which is hereby acknowledged, the undersigned, _____, a _____, ("Grantor") does hereby assign, grant, convey and transfer to the County of Los Angeles, California ("Grantee") and its successors and assigns throughout the world in perpetuity, all of Grantor's right, title and interest of every kind and nature in and to all materials, documents, software programs and documentation, written designs, plans, diagrams, reports, software development tools and aids, diagnostic aids, computer processable media, source codes, object codes, conversion aids, training aids, training documentation and aids, and other information and/or tools of all types (including, without limitation, those items listed on Schedule A, attached hereto and incorporated herein by reference) developed or acquired, in whole or in part, under the Agreement described below, including, but not limited to, all right, title and interest in and to all copyrights and works protectable by copyright and all renewals and extensions thereof (collectively, the "Works"), and in and to all copyrights and right, title and interest of every kind or nature, without limitation, in and to all works based thereon, incorporated in, derived from, incorporating or relating to, the Works or from which the Works are derived.

Without limiting the generality of the foregoing, the aforesaid conveyance and assignment shall include, but is not limited to, all prior choices-in-action, at law, in equity and otherwise, the right to recover all damages and other sums, and the right to other relief allowed or awarded at law, in equity, by statute or otherwise.

Grantor and Grantee have entered into County of Los Angeles Agreement Number _____

for _____,

dated _____, as amended by Amendment Number _____, dated _____,

{NOTE to Preparer: reference all existing Amendments} as the same hereafter may be amended or otherwise modified from time to time (the "Agreement").

_____   _____
Grantor's Signature   Date

Grantor's Printed Name: _____

Grantor's Printed Position: _____

(To be Completed by County and attached to M-1 and/or M-2)

REQUIRED ONLY IF COPYRIGHT IS TO BE REGISTERED WITH COPYRIGHT BUREAU

STATE OF CALIFORNIA   )
) ss.
COUNTY OF LOS ANGELES   )

On _____, 20___, before me, the undersigned, a Notary Public in and for the State of California, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the _____ of _____, the corporation that executed the within Assignment and Transfer of Copyright, and further acknowledged to me that such corporation executed the within Assignment and Transfer of Copyright pursuant to its bylaws or a resolution of its Board of Directors.

WITNESS my hand and official seal.

                           _____
                                NOTARY PUBLIC

BUSINESS ASSOCIATE AGREEMENT UNDER THE HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT OF 1996 (HIPAA)

(INTENTIONALLY OMMITTED)

CHARITABLE CONTRIBUTIONS CERTIFICATION

(INTENTIONALLY OMMITTED)

INFORMATION SECURITY AND PRIVACY REQUIREMENTS

This Exhibit P (Information Security And Privacy Requirements) sets forth information security procedures to be established by Contractor before the Effective Date of the Contract and maintained throughout the Term of the Contract. These procedures are in addition to the requirements of the Contract and its Exhibit G-1 between the Parties. They present a minimum standard only. However, it is Contractor's sole obligation to: (i) implement appropriate measures to secure its systems and data, including County Confidential Information and County IP against internal and external threats and risks; and (ii) continuously review and revise those measures to address ongoing threats and risks. Failure to comply with the minimum standards set forth in this Exhibit P (Information Security and Privacy Requirements) will constitute a material, non-curable breach of the Contract by Contractor, entitling County, in addition to and cumulative of all other remedies available to it at law, in equity, or under the Contract, to immediately terminate the Contract. Unless specifically defined in this Exhibit, capitalized terms shall have the meanings set forth in the Contract.

1. Security Policy. Contractor shall establish and maintain a formal, documented, mandated, company-wide information security program, including security policies, standards and procedures (collectively "Information Security Policy"). The Information Security Policy will be communicated to all Contractor personnel and Subcontractors in a relevant, accessible, and understandable form and will be regularly reviewed and evaluated to ensure its operational effectiveness, compliance with all applicable laws and regulations, and to address new threats and risks.

2. Personnel and Contractor Protections. Contractor shall screen and conduct background checks on all contractor personnel and subcontractors contacting County Confidential Information or County IP, for potential security risks and require all employees, contractors, and subcontractors to sign an appropriate written confidentiality/non-disclosure agreement. All agreements with third-parties involving access to Contractor's systems and data, including all outsourcing arrangements and maintenance and support agreements (including facilities maintenance), shall specifically address security risks, controls, and procedures for information systems. Contractor shall supply each of its Contractor personnel and subcontractors with appropriate, ongoing training regarding information security procedures, risks, and threats. Contractor shall have an established set of procedures to ensure Contractor personnel and subcontractors promptly reportactual and/or suspected breaches of security.

3. Removable Media. Except in the context of Contractor's routine back-ups or as otherwise specifically authorized by County in writing, Contractor shall institute strict physical and logical security controls to prevent transfer of County Confidential Information or County IP to any form of Removable Media. For purposes of this Exhibit P (Information Security and Privacy Requirements), "Removable Media" means portable or removable hard disks, floppy disks, USB memory drives, zip disks, optical disks, CDs, DVDs, digital film, digital cameras, memory cards (e.g., Secure Digital (SD), Memory Sticks (MS), CompactFlash (CF), SmartMedia (SM), MultiMediaCard (MMC), and xD-Picture Card (xD)), magnetic tape, and all other removable data storage media.

4. Storage, Transmission, and Destruction of County Confidential Information and County IP. Contractor shall encrypt (i.e., National Institute of Standards and Technology (NIST) Special Publication (SP) 800-111 Guide to Storage Encryption Technologies for End User Devices[1]) all County Confidential Information and County IP(stored and during transmission). If County Confidential Information and County IP is no longer required to be retained by Contractor under

the Contract and applicable law, Contractor shall destroy such County Confidential Information and County IP by: (a) shredding or otherwise destroying paper, film, or other hard copy media so that the County Confidential Information and County IP cannot be read or otherwise cannot be reconstructed; and (b) clearing, purging, or destroying electronic media containing County Confidential Information and County IP with NIST Special Publication 800-88, Guidelines for Media Sanitization[2] and US Department of Defense (DOD) 5220.22-M data sanitization and clearing directive[3] such that the County Confidential Information and County IP cannot be retrieved.

5. Data Control; Media Disposal and Servicing. Subject to and without limiting therequirements under Section 4 (Storage, Transmission and Destruction of County Confidential Information and County IP), County Confidential Information and County IP: (i) may only be made available and accessible to those parties explicitly authorized under the Contract or otherwise expressly approved by County in writing; (ii) if transferred across the Internet, any wireless network (e.g., cellular, 802.11x, or similar technology), or other public or shared networks, must be protected using industry standard encryption technology in accordance with the National Institute of Standards and Technology (NIST) Special Publication (SP) 800-52 Guidelines for the Selection and use of Transport Layer Security Implementations[4]; and (iii) if transferred using Removable Media (as defined above) must be sent via a bonded courier or protected using industry standard encryption technology in accordance with NIST SP 800-111 Guide to Storage Encryption Technologies for End User Devices[5]. The foregoing requirements shall apply to back-up data stored by Contractor at off-site facilities. In the event any hardware, storage media, or Removable Media must be disposed of or sent off-site for servicing, Contractor shall ensure all County Confidential Information and County IP, has been cleared, purged, or scrubbed from such hardware and/or media using industry best practices in accordance with NIST SP 800-88, Guidelines for Media Sanitization[6]).

6. Physical and Environmental Security. Contractor will house County Confidential Information and County IP in secure areas and protected by perimeter security such as barrier access controls (e.g., the use of guards and entry badges) that provide a physically secure environment from unauthorized access, damage, and interference.

7. Communications and Operational Management. Contractor shall: (i) monitor and manage all of its information system, including, without limitation, implementing operational procedures, change management and incident response procedures; and (ii) deploy adequate anti-viral software and adequate back-up facilities to ensure essential business information can be promptly recovered in the event of a disaster or media failure; and (iii) ensure its operating procedures will be adequately documented and designed to protect information, computer media, and data from theft and unauthorized access.

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[1] Available at http://www.csrc.nist.gov/

[2] Available at http://www.csrc.nist.gov/

[3] Available at http://www.dtic.mil/whs/directives/corres/pdf/522022MSup1.pdf

[4] Available at http://www.csrc.nist.gov/

[5] Available at http://www.csrc.nist.gov/

[6] Available at http://www.csrc.nist.gov/

8. Access Control. Contractor shall implement formal procedures to control access to its systems, services, and data, including, but not limited to, user account management procedures and the following controls: a. Network access to both internal and external networked services shall be controlled, including, but not limited to, the use of properly configured firewalls; b. Operating systems will be used to enforce access controls to computer resources including, but not limited to, authentication, authorization, and event logging; c. Applications will include access control to limit user access to information and application system functions; and d. All systems will be monitored to detect deviation from access control policies and identify suspicious activity. Contractor shall record, review and act upon all events in accordance with incident response policies set forth below.

9. Security Incident. A "Security Incident" shall have the meaning given to such term in 45 C.F.R. § 164.304.

a. Contractor will promptly notify (but in no event more than twenty-four (24) hours after the detection of a Security Incident) the designated County security contact by telephone and subsequently via written letter of any potential or actual security attacks or Security Incidents.

b. The notice shall include the approximate date and time of the occurrence and a summary of the relevant facts, including a description of measures being taken to address the occurrence. A Security Incident includes instances in which internal personnel access systems in excess of their user rights or use the systems inappropriately.

c. Contractor will provide a monthly report of all Security Incidents noting the actions taken. This will be provided via a written letter to the County security representative on or before the first (1st) week of each calendar month. County or its third-party designee may, but is not obligated, perform audits and security tests of Contractor's environment that may include, but are not limited to, interviews of relevant personnel, review of documentation, or technical inspection of systems, as they relate to the receipt, maintenance, use, retention, and authorized destruction of County Confidential Information and County IP.

d. In the event County desires to conduct an unannounced penetration test, County shall provide contemporaneous notice to Contractor's Project Manager, or such equivalent position. Contractor shall provide all information reasonably requested by County in connection with any such audits and shall provide reasonable access and assistance to County upon request. Contractor agrees to comply with all reasonable recommendations that result from such inspections, tests, and audits within reasonable timeframes. County reserves the right to view, upon request, any original security reports that Contractor has undertaken on its behalf to assess Contractor's own network security. If requested, copies of these reports will be sent via bonded courier to the County security contact. Contractor will notify County of any new assessments.

10. Security Audits. During the Term of this Contract, County or its third-party designee may annually, or more frequently as agreed in writing by the Parties, request a security audit (e.g., attestation of security controls) of Contractor's data center and systems. The audit will take place at a time mutually agreed to by the Parties, but in no event on a date more than ninety (90) days from the date of the request by County. County's request for security audit will specify the areas (e.g., Administrative, Physical and Technical) that are subject to the audit and may include but not limited to physical controls inspection, process reviews, policy reviews evidence of external and internal vulnerability scans, penetration tests results, evidence of code reviews, and evidence of system configuration and audit log reviews. County shall pay for all third-party costs associated with the audit. It is understood that summary data of the results may filtered to remove the specific information

of other Contractor customers such as IP address, server names, etc. Contractor shall cooperate with County in the development of the scope and methodology for the audit, and the timing and implementation of the audit. Any of the County's regulators shall have the same right upon request, to request an audit as described above. Contractor agrees to comply with all reasonable recommendations that result from such inspections, tests, and audits within reasonable timeframes.

EXHIBIT Q

GLOSSARY AND ACRONYMS

TO THE

VOTING SOLUTIONS FOR ALL PEOPLE (VSAP) IMPLEMENTATION AND SUPPORT SERVICES CONTRACT

1.0 Glossary

This Exhibit Q (Glossary and Acronyms) is attached to and incorporated by reference to the Voting Solutions for All People Implementation and Support Services Contract by and between the County of Los Angeles and Smartmatic USA Corporation dated for reference purposes as of the Effective Date. The words and phrases listed below shall have the meanings given to them in this Exhibit Q (Glossary and Acronyms) whenever used in the Contract, including the Exhibits and Appendices thereto. Capitalized terms not otherwise defined in this Exhibit Q (Glossary and Acronyms) shall have the meanings ascribed to them in the document in which they appear. In the event there is a conflict between how a term is defined in this Exhibit Q (Glossary and Acronyms) and any other portion of the Contract, the order of precedence for understanding the meaning of that term shall be as follows: (a) how that term is defined in the Contract, (b) how that term is defined in this Exhibit Q (Glossary and Acronym) and (c) how that term is defined in the Statement of Work, and d) how that term is defined in the other Exhibits, Appendices, Attachments or Schedules. Unless otherwise specified herein, all references in this Exhibit Q (Glossary and Acronyms) to Sections shall refer to the respective Sections of the Contract (rather than the Exhibits or Appendices thereto).

A

Additional Work: Professional Services and other work and/or deliverables which may be provided by Contractor to County upon County's or Contractor's request, and County's approval pursuant to Section 6.0 of the Statement of Work and a Change Notice approved in accordance with the Contract.

Affiliates: Any other Person that directly or indirectly, through one or more intermediaries, controls, is controlled by or is under common control with, such first Person.

Alternate Project Manager: The designated alternate to the Project Manager.

Application Control System ("ACS"): The software and electronics system inside the Ballot Marking Device that runs the voting application and controls all of the Ballot Marking Device peripherals.

Application Layer: The highest level in the Open System Interconnection model that the user interacts with and that interacts with the software.

Audio Ballot Booth ("ABB"): The accessible voting station in the current InkaVote+ voting system. The function of the ABB will be replaced by the accessibility features designed into the Ballot Marking Device in the new voting system.

Auxiliary Ballot Definition File ("ABDF"): The data package that will contain all the data needed to drive the Interactive Sample Ballot that is not included in the Ballot Definition File. It will contain data that will be content managed via the Interactive Sample Ballot Content Management System. Described in the System Connectivity section of the Software Solution Design Document.

B

Ballot Activation Mechanism ("BAM"): A way to bridge the air gap between the Electronic Pollbook and the Ballot Marking Device inside a Vote Center to activate a voting session with the correct ballot style.

Ballot Control System ("BCS"): The software and electronics system that is responsible for printing, scanning and moving the Ballot Marking Device Ballot within the Ballot Marking Device.

Ballot Definition File ("BDF"): A data package that provides all of the content and ordering required to populate a ballot for any precinct in the election. Described in the System Connectivity section of the Software Solution Design Document.

Ballot Layout Definition File ("BLDF"): The list of locations for printing contests and candidates on the BMD Ballot and the Vote by Mail ballot. Described in the System Connectivity section of the Software Solution Design Document.

Ballot Marking Device ("BMD"): The voting machine that voters use to make selections, mark and cast their paper ballot inside of a Vote Center in the new voting system.

Ballot Page Metadata ("BPM"): The collection of data needed to activate the appropriate ballot on the Ballot Marking Device. A BPM Quick Response code is printed on the BMD Ballot during voter check in as part of the Ballot Activation Mechanism. Described in the System Connectivity section of the Software Solution Design Document.

Bill of Materials: A structured list of the raw materials, parts and assemblies that constitute a product to be manufactured. The Bill of Materials shall include applicable standards compliance certifications and known issues or defects regarding any item on the list.

BMD Application Configuration File ("ACF"): Voting application configuration and editable content. Described in the System Connectivity section of the Software Solution Design Document.

BMD Ballot: The paper ballot used with Ballot Marking Devices in a Vote Center.

BMD Election Interaction Data ("BID"): The anonymized Ballot Marking Device interaction data collected to help the County understand how voters are using the Ballot Marking Devices and identify potential issues that may be occurring in the field. Described in the System Connectivity section of the Software Solution Design Document.

BMD Election Logs ("BEL"): The logs generated by a single Ballot Marking Device over the course of one election. Described in the System Connectivity section of the Software Solution Design Document.

BMD External Hardware ("BEH"): All of the external hardware of the Ballot Marking Device. All of the components of the Ballot Marking Device that are not the BMD Internal System.

BMD Internal System ("BIS"): The electronics and software that run inside of the Ballot Marking Device. Includes the Application Control System, Ballot Control System, paper handler and other peripherals.

BMD Manager ("BMG"): A software application used in the Election Operations Center to manage the fleet of Ballot Marking Devices inside the secure Election Operations Center network.

BMD Public Keys ("BPK"): A data package containing a list of the Ballot Marking Device IDs (serial/machine number) and public keys. Described in the System Connectivity section of the Software Solution Design Document.

BMD System Configuration File ("SCF"): A data package that contains the system level configurations and font files for the Ballot Marking Device. Described in the System Connectivity section of the Software Solution Design Document.

BMD System Image ("BSI"): The image loaded onto Ballot Marking Devices using the BMD Manager application inside the secure Election Operations Center network. Provides the certified Ballot Marking Device operating system and application image.

Board Support Package ("BSP"): The package of low-level software that loads the operating system and device drivers for all the devices on a mother board. In the Ballot Marking Device, both the Application Control System and Ballot Control System each have their own board support package.

Board of Supervisors ("Board"): The Board of Supervisors of the County.

Build: The set of hardware or software, or both, components that are created to achieve a specific purpose and tested and deployed together. The Build may include a series of versions, with unique names or numbers, to reflect the ongoing development of the applicable components.

C

California Polling Place Accessibility Guidelines ("CAPPAG"): Guidelines compiled by the California Secretary of State, with help from the California Department of Rehabilitation, to help elections officials ensure that polling places are accessible to voters with disabilities to the extent possible.

California Voting System Standards ("CVSS"): The standards voting systems must meet to be certified for use in the State of California. Created by the office of the California Secretary of State. Previously referred to as the California Voting System Performance Standards.

Cast Vote Record ("CVR"): A data package that is the tabulation ready digital record of a voter's ballot selections. The CVR is the main output of the Tally System. Described in the System Connectivity section of the Software Solution Design Document.

Certificate: Certificate(s) of insurance coverage.

Challenge: Either (x) a Claim (as defined in the California Government Code) that is accepted by the applicable government agency, (y) an action brought in a court of competent jurisdiction by a third party or (z) a recount under the Election Code, in each case challenging the validity or outcome of an election that is related to an alleged fault in the Contractor In-Scope Components or Additional Work for the VSAP Solution.

Change Notice: A change notice initiated by the Registrar-Recorder or his/her designee for any expenditure of Pool Dollars as described in Section 8.1 of the Contract.

Change Order: An order prepared and executed by the Registrar-Recorder or his/her designee relating to any change to the Contract which is clerical or administrative in nature and/or does not affect any term or condition of the Contract.

Commencement Date: The date mutually agreed upon between Contractor and County following Board approval of the Contract on which the work on the Project will begin.

Commercial Off-The-Shelf ("COTS"): Devices that are sold commercially and are readily available, such as laptops, scanners, tablets and printers.

Contract: The agreement executed between County and Contractor. Included are all supplemental agreements amending or extending the service to be performed. The Contract sets forth the terms and conditions for the issuance and performance of all tasks, deliverables, services and other work related to VSAP.

Contract Term: The term of the Contract set forth in Section 4.0 thereof.

Contractor: Smartmatic USA Corporation.

Contractor In-Scope Components: All the components of the Voting Solutions for All People Solution to be provided by the Contractor as described in the Statement of Work.

Coordination Services: The services required to ensure a tightly coordinated approach across all parties (the County, Contractor and third-party vendors) responsible for developing or delivering any VSAP component, including identification of performance issues and coordination among all parties involved in the process to resolve the issues.

County: The County of Los Angeles, in the State of California.

County and its Agents: The County, its Special Districts, Elected Officials, Officers, Agents, Employees, and Volunteers.

County Confidential Information: All records, documentation, data, and information including, but not limited to, County IP, Personally Identifiable Information, billing and sensitive financial information, County records, data and information, Personal Data, County data, any information relating to County's customers, users, patients, partners, or personnel, and any other data, records, and information received, obtained and/or produced under the provisions of this Contract.

County Indemnitees: The County, its Special Districts, elected and appointed officers, employees, agents, and volunteers.

County Intellectual Property ("County IP"): (a) any related data, information, material or other Intellectual Property the County discloses to Contractor/Subcontractor to facilitate Contractor's/Subcontractor's performance of services under the Contract; (b) any proprietary, confidential, trade secret information and/or other Intellectual Property of the County and/or others the County possesses relating to its current or planned voting systems, technology, designs, specifications, manufacturing methods, know-how, operational plans, business relationships, software (including object and source code), or firmware; (c) any data, information, material and/or other Intellectual Property identifying, characterizing, or related to any trait, feature, function, risk, threat, vulnerability, weakness, or problem regarding any data or system security in the County's current or planned voting systems, or to any safeguard, countermeasure, contingency plan, policy, or procedure, for any data or system security contemplated or implemented by the County, (d) any other non-public information shared with the Contractor/Subcontractor or their Authorized Associates by the County and (e) all notes, analyses, compilations, forecasts, studies, samples, data, statistics, summaries, interpretations, documentation, user guides, other materials or Intellectual Property prepared by or for Contractor/Subcontractor or any Authorized Party that

contain, are based on, or otherwise reflect or are derived from, in whole or in part, any documents, materials or other information disclosed by the County to Contractor/Subcontractor or are created, prepared, or derived as a work made for hire or otherwise assigned under the provisions of the Contract.

County Project Management Team: The Department staff who will work with the Contractor on the day-to-day management of the VSAP Project.

County Seals: The current and former County Seals and Department logos.

County Stakeholder: An individual or group who has an interest in the VSAP Solution.

Critical Election Work Period: The twenty (20) days immediately prior to any election taking place in the County.

D

De Minimis: A change that is so minor that a full re-certification of the voting system or component is not expected. Determination is made by the California Secretary of State's office.

Deficiency or Defect: Something that is missing in a component.

Deliverable Approval Document ("DAD"): This document is required as part of the deliverable acceptance and payment processes and based on the template provided in Appendix E (Deliverable Expectations and Approval Documents) to the Statement of Work in order to obtain approval and acceptance of an deliverable. Every deliverable for which Contractor requests payment requires a signed DAD to support that payment request and must be submitted to support the accompanying invoice.

Deliverable Expectations Document ("DED"): This document is required as part of the deliverable expectation and acceptance processes and based on the template provided in Appendix E (Deliverable Expectations and Approval Documents) to the Statement of Work in order to obtain pre-approval on the expected contents of a deliverable prior to the Contractor starting work on said deliverable. Deliverables requiring a pre-approved DED are indicated in Appendix A (VSAP Deliverables Definition Table) to the Statement of Work.

Department: The Los Angeles County Department of Registrar-Recorder/County Clerk.

Deployment: The series of activities to make the VSAP Solution available for use.

Design for Manufacturing ("DFM"): The practice of designing products in such a way that they are easy and cost effective to manufacture. Also known as Design for Manufacture or Design for Manufacturability.

Design Stewards: The Person that provides professional consulting services, including design guidance regarding core design intent and research findings, to preserve the integrity of Phase 3 System Design and Engineering. Throughout the production engineering and manufacturing phases, the Design Stewards will also safeguard the original design intent as much as possible and help the County understand and resolve trade-offs between design intent and engineering and manufacturing constraints.

Design Validation Testing ("DVT"): Tests performed on engineering prototypes, built of components made using production tooling, to validate the tooled design meets predetermined specifications and requirements.

Design Validation Unit ("DVU"): A functional engineering prototype that proves the functionality of the Ballot Marking Device reference design. Five Ballot Marking Device DVUs were built in Phase 3 System Design and Engineering.

Disabling Device: Any "virus," "lockup," "time bomb," "key lock," "worm," "back door," or "Trojan Horse" device or program, or any disabling code, which has the potential or capability of compromising the security of County's Confidential Information or of causing any unplanned interruption of the operations of, or accessibility of the VSAP Solution or any component to the County or any user or which could alter, destroy, or inhibit the use of the VSAP Solution or any component, or the data contained therein.

Dispute Resolution Procedure: As described in Section 8.31 of the Contract.

Due Date: The date that anything is due, as specified in Exhibit B (Pricing Schedule).

E

Election Artifact ("EA"): The complete electronic archive of the election. It contains all input data, Cast Vote Records, results, rosters and logs for an election. Described in the System Connectivity section of the Software Solution Design Document.

Election Audio Package ("EAP"): An archive of the audio files used to drive the Ballot Marking Device audio interface. Described in the System Connectivity section of the Software Solution Design Document.

Election Contest and Ballot Management System ("ECBMS"): The software system that manages contest, candidate and other ballot layout information for an election. It is part of the current voting system and will be a part of the Election Management System. Described in the Election Management System section of the Software Solution Design Document.

Election Management System ("EMS"): A collection of software systems that manages voting operations for the County.

Election Operations Center ("EOC"): The location where equipment needed to set up a Vote Center is stored, maintained, prepared and deployed.

Electronic Pollbook ("ePollbook"): A device that contains and updates the digital roster that Vote Center staff use to check in a voter at a Vote Center. Electronic Pollbooks replace traditional paper rosters as the method for determining voter eligibility, identifying the appropriate ballot for the voter, crediting voter participation and capturing voter signatures. Vote Center staff can access the voter record database via laptop or tablet and the database can be hosted locally or accessed over a network.

Election System Manifest ("ESM"): A data package containing the descriptions, file paths and signatures for all of the files contained in the election archives. The Election System Manifest is calculated on the files that go in the Election Archive and is designed to allow for the individual verification of the files to ensure the integrity of the Election Archive content. Described in the System Connectivity section of the Software Solution Design Document.

Engineering Validation Testing ("EVT"): Tests performed on engineering prototypes to validate that the design of a product meets predetermined specifications and requirements.

EPB Voter Roster ("EVR"): A data package containing a list of the people eligible to vote in an election and (after the election has started) the list of people who have completed the voting process for that particular election. Described in the System Connectivity section of the Software Solution Design Document.

Error: The result of a process (within or between systems or as part of a workflow) that is not as expected, such as from a mistake in software code, processes not running in the correct sequence or an incorrectly defined user workflow.

Essential Election Work Period: The time period commencing sixty (60) days immediately prior to an election being held in the County and ending twenty-one (21) days immediately prior to an election being held in the County.

F

Field Guides to Ensuring Voter Intent ("FGEVI"): Field guides produced by the Center for Civic Design for designing usable and accessible elections, based on solid research and best practices.

Final Acceptance: Final Acceptance shall be deemed to have occurred when (i) the Secretary of State has approved the VSAP Solution for Full Rollout, (ii) all criteria listed in Section 3.21.1 of the Statement of Work have been achieved and (iii) the County has accepted the Final Acceptance Report (Deliverable 3.21.1 to the Statement of Work).

Force Majeure Event: Fires, floods, epidemics, quarantine restrictions, other natural occurrences, strikes, lockouts (other than a lockout by such party or any of such party's Subcontractors), change of law, freight embargoes, or other events beyond the control and without any fault or negligence of such party

Full Rollout: The point at which the VSAP Solution becomes the County's sole voting solution.

G

General Voting System Principles ("GVSP"): A set of 14 principles adopted to guide the acquisition and implementation of the new system and ensure that a new voting system for Los Angeles County meets the diverse needs of current and future Los Angeles County voters. The specific goal of these principles is to articulate the importance of: voter access to and interface with the voting system, voting system security and auditability, as well as the operational requirements for transporting, setting up, and operating the voting system. These principles are available online at: http://vsap.lavote.net/principles/

H

Hardware: Physical equipment, such as voting devices, scanners and printers.

Hardware Security Module ("HSM"): A Hardware security function capability of the Ballot Marking Device that secures and authenticates cryptographic signing keys to ensure the Ballot Marking Device is running the verified, official version of system software and calculate the Hashed Message Authentication Code for Selection Barcode Encoding string so that the Tally System can ensure that it can recognize Ballot Marking Device Ballots that have been marked on official Ballot Marking Devices. Described in the System Security section of the Software Solution Design Document.

Hashed Message Authentication Code ("HMAC"): A specific type of message authentication code involving a cryptographic hash function in combination with a secret cryptographic key. It is

used in various places in the new voting system to verify the data integrity and authenticity of data as described in the System Security section of the Software Solution Design Document.

Help America Vote Act ("HAVA"): A law passed in 2002 that establishes mandatory minimum standards for states to follow in several key areas of election administration.

I

Important Election Work Period: The time period commencing one-hundred and twenty (120) days immediately prior to an election being held in the County and ending sixty-one (61 days) immediately prior to an election being held in the County.

Independent Testing Authority ("ITA"): A laboratory, also known as a Voting System Test Lab, accredited by the Election Assistance Commission for the testing of voting systems against the Voluntary Voting System Guidelines as part of the certification process.

Intellectual Property ("IP"): Inventions (whether or not patentable), discoveries, ideas, know-how, works of authorship, including copyrights, patents, trade secrets, moral rights, any registrations or applications relating to any of the foregoing, whether now existing or hereafter created, developed, arising or otherwise coming into being, and all foreign equivalents of each and all of the foregoing.

Interactive Sample Ballot ("ISB"): A digital sample ballot in the form of a responsive website that voters can use to make selections before an election. The ISB creates a Poll Pass that voters can scan to load their pre-marked selections into a Ballot Marking Device to speed up their voting experience in the Vote Center. The ISB also delivers the capabilities for Remote Accessible Vote by Mail and Uniformed and Overseas Citizens Absentee Voting Act voting.

Interfaces: The boundary between two systems or components through which information is shared. Interfaces can be bidirectional or unidirectional.

IP Insurance Policy: The insurance policy described on Exhibit T to the Contract.

J

Jury Service Program: The County's ordinance entitled Contractor Employee Jury Service.

K

Key Deliverable: Any of the deliverables set forth in Appendix A (Deliverables Definition Table) to the Statement of Work.

Key Personnel: All persons employed in the roles included Appendix C (Contractor's Key Personnel) to the Statement of Work.

L

M

Maintenance and Support ("M&S"): The stage after the Warranty period in which the Contractor will fix deficiencies for the County on the basis of a fixed fee for a period of time.

Microcomputer Tally System ("MTS"): The current tally system that will be replaced in the new voting system.

M&S Closeout: The process at the end of the Maintenance and Support term, including any County-approved extensions, used to confirm that the deliverables and tasks of the Contract have been completed in order to formally close the Contract.

N

O

Option Term: The term for each time the County exercises its option to extend the Contract Term.

P

Parent Company: A Person that has at least a majority ownership interest in (or power to elect a majority of the board of directors or other governing body of) another Person or is otherwise able to control the operations and management of such Person.

Partner Support: Persons that may work with the County on VSAP components and other services outside the scope of this Contract (e.g., Design Stewards, Management Consultants, Tally Solution Developer) with which the Contractor will be expected to coordinate to accomplish its tasks and deliverables.

Person: An individual, corporation, partnership, limited liability company, association, trust or other entity or organization, including any governmental entity.

Personally Identifiable Information ("PII"): Any data that could potentially identify a specific Person.

Pilot: A trial or experimental use of the Voting Solutions for All People Solution prior to the full rollout in a Countywide election.

Poll Pass: A paper or digital artifact analogous to an airline boarding pass that is created by the Interactive Sample Ballot and used by a voter to transfer their pre-marked selections to a Ballot Marking Device.

Pool Dollars: The amount allocated under the Contract for the provision by Contractor of Additional Work, including Professional Services, approved by County in accordance with the terms of the Contract and Appendix F (Rates for Other Goods and Services) of the Statement of Work.

Precinct Ballot Reader ("PBR"): A component of the current InkaVote+ system used in precinct polling places to catch overvotes and blank ballots on manually marked ballots. The PBR will be made obsolete by the Ballot Marking Device in the new voting system.

Pre-Existing Claims: All intellectual property claims alleged by Election Systems & Software relating to the VSAP Solution, including assertions under U.S. Patent Numbers 8,991,701; 8,096,471; 7,753,273; and 9,240,085, but excluding claims alleged based on the Pre-Existing Rights or Pre-Existing Materials.

Pre-Existing Materials: Contractor's proprietary information, methodologies, software (including third party IP and open source software), firmware, designs, components, materials, concepts, or project tools developed without any connection or reference to the Services or related to the Contract.

Pre-Existing Rights: Any right, title, or interest in any Intellectual Property existing prior to the effective date of the Contract or developed outside of the performance of the Services related to this Contract, including what is described in Section 2.1.4 of the Contract.

Prime Contractor: The Contractor responsible for delivery of all of the Contractor In-Scope Components, which the County has entered into the Contract, whose work shall include the management of Subcontractors involved in providing such Contractor In-Scope Components.

Production Validation Testing ("PVT"): Tests performed on hardware units built on a production line to validate that the production tooling and processes are capable of consistently producing products that meet predetermined specifications and requirements in mass production.

Professional Services: Services which Contractor is not otherwise obligated to perform under the Contract, including but not limited to, consulting services, additional training and/or customizations.

Project Control Document ("PCD"): The project management document described in Section 1.1.2 of the Statement of Work that encompasses all activities related to the development, implementation, testing, certification and integration of the VSAP Solution. Activities included in the PCD reflect the Project through Maintenance and Support.

Project Information Library ("PIL"): A single online repository used to store, organize, track, control and disseminate all information and items produced during the VSAP Project.

Project Initiation Session Planning Materials: The agenda and presentation described in Section 1.1.3.1 of the Statement of Work that will be developed and used for the Project Initiation Session.

Project Initiation Session: The event described in Section 1.1.3.2 of the Statement of Work that will introduce County leadership and staff to the services covered by the Statement of Work, including the timelines, dependencies and nature of the work effort that will be required to implement the Statement of Work.

Project Management Institute® ("PMI"): A nonprofit membership organization for individuals in the project management profession.

Project Management Professional® ("PMP"): A certification offered by the Project Management Institute.

Project Orientation Materials: The materials described in Section 1.1.4 of the Statement of Work that will be developed and used for orienting new project team members to the goals, objectives and approach of the VSAP Project.

Proposal: The document submitted by Contractor that outlined its solution to meet the needs of the County as outlined in the RFP Phase 2 solicitation and the cost to do so.

Q

Quick Response (QR) Code: A two-dimensional barcode widely used for many purposes.

R

Registrar-Recorder/County Clerk ("Department"): The entity of the Los Angeles County government that is administering the Contract and responsible for providing essential records

management and County elections registrar functions. For more information visit https://www.lavote.net/

Release: A release is the distribution of the final packaged version of all components of a system with a defined list of the version of each component and the assumption that these versions of those components have been adequately tested to work together to perform the functions of the system.

Remote Accessible Vote by Mail ("RAVBM"): A mechanical, electromechanical, or electronic system and its software used for purpose of marking an electronic Vote by Mail ballot remotely, outside a polling location, for a voter with disabilities or a military or overseas voter who would then be required to print the paper ballot to be submitted to the elections official.

Replacement Product: Another similar product to which the County may transfer the license of the Pre-Existing Rights and Pre-Existing Materials, without cost or penalty.

Required Insurance: Contractor's own minimum insurance coverage terms, types, and limits satisfying the requirements specified in Sections 8.24 and 8.25 of the Contract.

S

Selection Ballot Record ("SBR"): A data package created during the Tally process that reflects the ballot as marked. It precedes the Tally-optimized Cast Vote Record, which reflects the ballot as stored and Tally-ready. Described in the System Connectivity and Tally sections of the Software Solution Design Document.

Selection Barcode Encoding ("SBE"): The format for the QR code data encoding used to record and transmit voter intent. This format is shared by the QR codes used to transfer data from the Interactive Sample Ballot to the Ballot Marking Device and the Ballot Marking Device to Tally. Described in the System Connectivity section of the Software Solution Design Document.

Software Solution Design Document ("SSDD"): A detailed account of the technical software architecture for the new voting system and its various components, data packages and supporting infrastructure.

State-Approved Testing Agency ("S-ATA"): An Independent Testing Authority approved by the California Secretary of State to conduct voting system certification tests for the State.

Statement of Work ("SOW"): Exhibit A to the Contract that describes all tasks, deliverables, services, and other work expected the Contractor shall fully perform, complete and deliver on time.

Subcontractor: A Person that is contracted by the Contractor to provide some or all of the product(s) and/or service(s) for the Voting Solutions for All People Solution under the Contractor's leadership and accountability.

Subject Matter Expert ("SME"): An expert in a given subject matter.

Subsidiary: With respect to any Person, any other Person which owns, directly or indirectly, stock or other equity interests having ordinary voting power to elect more than 50% of the board of directors or other governing body of such first Person.

Successor Event: An event where Contractor assigns the Contract, is acquired, or is otherwise controlled by another individual or entity.

Systems Integration Services: The services required to ensure seamless integration of all VSAP components and the overall VSAP Solution, including the identification and resolution of functional, security or technology issues related to the seamless integration of the BMD, BMG and ISB, and regression testing of all impacted components.

Systems Integrator: A vendor that brings together system components into a whole and ensures that the components function together as intended.

T

Tally Election Artifact ("TEA"): A superset of the Tally Results Report that also contains Cast Vote Records and ballot images. It should include the totality of all data generated by the Tally System that needs to be archived or used in audits, canvass, or system analysis. Described in the System Connectivity section of the Software Solution Design Documents.

Tally Layout Definition File ("TLDF"): The information that describes how the physical ballot layout is structured. Used by the Tally System as a mark-sense mask used to locate vote positions on Vote by Mail ballots for each ballot style. It must be used in concert with the Ballot Definition File. Described in the System Connectivity and Tally sections of the Software Solution Design Document.

Tally Results Report ("TRR"): Report that aggregates all of the election Cast Vote Records to compose the most detailed report that the Tally System will generate. Described in the System Connectivity and Tally sections of the Software Solution Design Document.

Tally System ("Tally"): A system of hardware and software that reads and captures the vote selections on ballots, applies required business rules and adjudications, tabulates the totals of votes, ballots cast and other metrics, and publishes the results the election. The Tally System also supports transparent auditing processes to ensure the accuracy and integrity of the election tally results.

U

Uniformed and Overseas Citizens Absentee Voting Act ("UOCAVA"): Act passed in 1986 ensuring military/uniformed service members and United States citizens living outside the territorial limits of the United States or the District of Columbia for reasons of employment, study programs or military service (including the spouse or dependents of one serving in the military) are eligible to register to vote and request a Vote by Mail (absentee) ballot. This act is administered by the Federal Voting Assistance Program.   For more information visit: http://www.fvap.gov/

Unit Testing: The method of software testing used to determine whether individual units of a project, such as a piece of source code or functionality, are tested to determine if they are ready for use.

User Acceptance Testing ("UAT"): The final phase of testing in which users test software using scenarios reflecting expected, regular user workflows.

User Experience: The interaction between a user and a set of applications, processes, content, hardware, services or other users.

User Interface: The technology, particularly the design of the technology, through which the user interacts with an application, process, content, service or other users.

V

Vote by Mail ("VBM"): The absentee voting option in which voters are mailed a ballot that they mark and then mail or drop off at an authorized location.

Vote Center: A polling location that enables any registered voter in the jurisdiction to vote the specific ballot style of that voter at the site. With the use of connected Electronic Pollbooks, the voter need not vote provisionally and can choose to vote at the vote center convenient that day regardless of location within the jurisdiction.

Voting Solutions for All People ("VSAP"): The project, previously known as the Voting Systems Assessment Project that was developed by the Department in 2009 to address an aging voting system and an increasingly large and complex electorate. The project seeks a collaborative approach to voting system design that will put voters at the center and maximize stakeholder participation. The project name was changed to Voting Solutions for All People in Fall 2017 to highlight the transition from an assessment to a branded solution implementation.

VSAP Hardware: All plans, diagrams, facilities, documentation, and tools relating to the hardware components of the VSAP Solution, as modified, maintained and supported by Contractor in accordance with the terms of this Contract.

VSAP Program ("Program"): The County's approach to coordinate all projects and activities related to implementing and supporting the Voting Solutions for All People vision.

VSAP Project ("Project"): The sum of the activities, tasks and deliverables expected to be completed by the Contractor prior to the Warranty period.

VSAP Solution ("Solution"): The full scope of Voting Solutions for All People components to be integrated and certified by the Contractor in collaboration with the County.

W

Warranty: The period after implementation and Final Acceptance in which the Contractor will guarantee at no extra cost to County that each Contractor in-scope component is free from all deficiencies, including by fixing any deficiencies that arise.

X

Y

Z

2.0   Acronyms

Acronym / Initialism	Meaning
ABB	Audio Ballot Booth
ABDF	Auxiliary Ballot Definition File
ACF	BMD Application Configuration File
ACS	Application Control System
BAM	Ballot Activation Mechanism
BCS	Ballot Control System
BDF	Ballot Definition File
BEH	BMD External Hardware
BEL	BMD Election Logs
BID	BMD Election Interaction Data
BIS	BMD Internal System
BLDF	Ballot Layout Definition File
BMD	Ballot Marking Device
BMG	BMD Manager
BPK	BMD Public Keys
BPM	Ballot Page Metadata
BSI	BMD System Image
BSP	Board Support Package
CA DOJ	California Department of Justice
CAPPAG	California Polling Place Accessibility Guidelines
CA SOS	California Secretary of State
CEO	Chief Executive Officer
COTS	Commercial Off-The-Shelf
CVR	Cast Vote Record
CVSS	California Voting System Standards
DCBA	Department of Consumer and Business Affairs
DCIO	Departmental Chief Information Officer
DFM	Design for Manufacturing
DISO	Departmental Information Security Officer
DOD	Department of Defense
DVT	Design Validation Testing
DVU	Design Validation Unit
DVBE	Disabled Veterans Business Enterprise
EA	Election Artifact
EAP	Election Audio Package
ECBMS	Election Contest and Ballot Management System
EMS	Election Management System
EOC	Election Operations Center
ESM	Election System Manifest
EVR	EPB Voter Roster
EVT	Engineering Validation Testing
FCC	Federal Communications Commission
FGEVI	Field Guides to Ensuring Voter Intent
FIPS	Federal Information Processing Standard
FRD	Functional Requirements Document

Acronym / Initialism	Meaning
GAIN	Greater Avenues for Independence
GROW	General Relief Opportunity for Work
GVSP	General Voting System Principles
HAVA	Help America Vote Act
HMAC	Hashed Message Authentication Code
HSM	Hardware Security Module
IIPP	Injury and Illness Prevention Program
IOTS	Industrial Off-The-Shelf
IP	Intellectual Property
ISB	Interactive Sample Ballot
ISO	Insurance Services Office, Inc.
ITA	Independent Testing Authority
L1HD	Level 1 Help Desk
L2HD	Level 2 Help Desk
LBSE	Local Small Business Enterprise
M&S	Maintenance and Support
MTS	Microcomputer Tally System
NDA	Non-disclosure Agreement
OS	Operating System
PBR	Precinct Ballot Reader
PCD	Project Control Document
PII	Personally Identifiable Information
PIL	Project Information Library
PMI	Project Management Institute
PMP	Project Management Professional
PVT	Production Validation Testing
QR	Quick Response
RAVBM	Remote Access Vote by Mail
RoHS	Restriction of Hazardous Substances Directive
S-ATA	State-Approved Testing Agency
SBE	Selection Barcode Encoding
SBR	Selection Ballot Record
SCF	BMD System Configuration File
SE	Social Enterprise
SIR	Self-Insured Retention
SME	Subject Matter Expert
SOM	System on Module
SOP	Standard Operating Procedure
SOS	California Secretary of State
SOW	Statement of Work
SSDD	Software Solution Design Document
TDD	Test-Driven Development
TEA	Tally Election Artifact
TLDF	Tally Layout Definition File
TRR	Tally Results report
UAT	User Acceptance Test or User Acceptance Testing
UI	User Interface

Acronym / Initialism	Meaning
UOCAVA	Uniformed and Overseas Citizens Absentee Voting Act
VBM	Vote by Mail
VSAP	Voting Solutions for All People
VSTL	Voting System Testing Lab
VVSG	Voluntary Voting System Guidelines

EXHIBIT R

PARENT GUARANTY

TO THE

VOTING SOLUTIONS FOR ALL PEOPLE (VSAP) IMPLEMENTATION AND SUPPORT SERVICES CONTRACT

EXHIBIT R

PARENT GUARANTY

This continuing PARENT GUARANTY (*"Guaranty"*) is entered into as of June ___, 2018 by each of the undersigned (each a *"Guarantor"* and collectively the *"Guarantors"*) in favor of **County of Los Angeles** (*"County"*).

RECITALS

A.   Concurrently herewith, County and Smartmatic USA Corporation, a Delaware corporation (*"Smartmatic"*), are entering into that certain Contract for Voting Solutions for All People (VSAP) Implementation and Support Services, dated as of the date hereof (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the *"VSAP Contract"*) pursuant to which Smartmatic has agreed to serve as a Prime Contractor for the VSAP Project, subject to the terms and conditions set forth therein. Capitalized terms used but not otherwise defined herein shall have the meanings given them in the VSAP Contract.

B.   In consideration of the agreement of County to grant Smartmatic the role of Prime Contractor for the VSAP Project, each Guarantor is willing on a joint and several basis to guaranty the payment by Smartmatic of all of its obligations thereunder, all as further set forth herein.

C.   Each Guarantor is a parent company of Smartmatic and will obtain substantial direct and indirect benefit from the VSAP Contract.

NOW, THEREFORE, to induce County to enter into the VSAP Contract, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, and intending to be legally bound, each Guarantor hereby represents, warrants, covenants and agrees as follows:

1. **Guaranty.**

    (a) **Unconditional Guaranty of Payment**. If Smartmatic does not perform its obligations under the VSAP Contract, Guarantors shall immediately pay all amounts due thereunder (including, without limitation, all indemnification obligations) and satisfy all of Smartmatic's payment obligations under the VSAP Contract (collectively, the *"VSAP Obligations"*).

    (b) **Separate Obligations**. The obligations hereunder are independent of the obligations of Smartmatic, and a separate action or actions may be brought and prosecuted against Smartmatic and/or any Guarantor whether action is brought against Smartmatic or whether Smartmatic be joined in any such action or actions. Each Guarantor waives, to the extent permitted by law, the benefit of any statute of limitations affecting its liability hereunder or the enforcement thereof. Each Guarantor's liability under this Guaranty is not conditioned or contingent upon the genuineness, validity, regularity or enforceability of the VSAP Contract.

(c) **Amendment of VSAP Contract**. Each Guarantor authorizes County, without notice or demand and without affecting its liability hereunder, from time to time to renew, extend or otherwise change the terms of the VSAP Contract or any part thereof.

(d) **Joint and Several Liability**. Each Guarantor and their respective successors and assigns shall be jointly and severally liable for the payment of the VSAP Obligations, notwithstanding any relationship or contract of co-obligation by or among the Guarantors or their respective successors and assigns.

2. **General Waivers**. Each Guarantor waives, to the extent permitted by law, any right to require County to proceed against Smartmatic and such Guarantor or any other Person or pursue any other remedy in County's power whatsoever. County may, at its election, exercise or decline or fail to exercise any right or remedy it may have against Smartmatic, without affecting or impairing in any way the liability of such Guarantor hereunder. Each Guarantor waives, to the extent permitted by law, any defense arising by reason of any disability or other defense of Smartmatic (other than payment in full of the VSAP Obligations) or by reason of the cessation from any cause whatsoever of the liability of Smartmatic. Each Guarantor waives, to the extent permitted by law, any setoff, defense or counterclaim that Smartmatic may have against County. Until all of the amounts that Smartmatic owes to County have been paid in full, (i) no Guarantor shall have a right of subrogation or reimbursement for claims arising out of or in connection with this Guaranty, (ii) no Guarantor shall have a right of contribution or other rights against Smartmatic, (iii) each Guarantor waives any right to enforce any remedy that County now has or may hereafter have against Smartmatic, and (iv) Guarantors waive, to the extent permitted by law, all rights to participate in any security now or hereafter held by County, except to the extent the VSAP Obligations have been paid in full and any Guarantor is exercising rights of subrogation. Each Guarantor waives, to the extent permitted by law, any defense arising out of the absence, impairment or loss of any right of reimbursement or subrogation or any other rights against Smartmatic. Each Guarantor waives, to the extent permitted by law, all presentments, demands for performance, notices of nonperformance, protests, notices of protest, notices of dishonor and notices of acceptance of this Guaranty and of the existence, creation or incurring of new or additional obligations. Each Guarantor assumes the responsibility for being and keeping itself informed of the financial condition of Smartmatic and of all other circumstances bearing upon the risk of nonpayment of any amounts due to County or nonperformance of any obligation of Smartmatic, warrants to County that it will keep so informed, and agrees that absent a request for particular information by any Guarantor, County shall have no duty to advise any Guarantor of information known to County regarding such condition or any such circumstances. Each Guarantor waives the benefit of California Civil Code Section 2815 permitting the revocation of this Guaranty as to future transactions and the benefit of California Civil Code Sections 2809, 2810, 2819, 2839, 2845, 2850 and 2899 with respect to certain suretyship defenses.

3. **Reinstatement**. If Smartmatic becomes insolvent or is adjudicated bankrupt or files a petition for reorganization, arrangement, composition or similar relief under any present or future provision of the United States Bankruptcy Code, or if such a petition is filed against Smartmatic, and in any such proceeding some or all of any VSAP Obligations are terminated or rejected or any obligation of Smartmatic is modified or abrogated, or if Smartmatic's obligations are otherwise avoided for any reason, each Guarantor agrees that its liability

hereunder shall not thereby be affected or modified and such liability shall continue in full force and effect as if no such action or proceeding had occurred. This Guaranty shall continue to be effective or be reinstated, as the case may be, if any payment must be returned by County upon the insolvency, bankruptcy or reorganization of Smartmatic or otherwise, as though such payment had not been made.

4. **Subordination of indebtedness**. Any indebtedness of Smartmatic now or hereafter held by any Guarantor is hereby subordinated to any indebtedness of Smartmatic to County; and upon demand by County following and during continuation of an Event of Default such indebtedness of Smartmatic to the respective Guarantor shall be collected, enforced and received by any Guarantor as trustee for County and be paid over to County on account of the indebtedness of Smartmatic to County but without reducing or affecting in any manner the liability of any Guarantor under the other provisions of this Guaranty.

5. **Payment of Expenses**. Each Guarantor agrees to pay reasonable documented out-of-pocket attorneys' fees and all other costs and expenses which may be incurred by County in the enforcement of this Guaranty. No terms or provisions of this Guaranty may be changed, waived, revoked or amended without County's prior written consent. Should any provision of this Guaranty be determined by a court of competent jurisdiction to be unenforceable, all of the other provisions shall remain effective. This Guaranty embodies the entire agreement between the parties hereto with respect to the matters set forth herein, and supersedes all prior agreements among the parties with respect to the matters set forth herein. No course of prior dealing among the parties, no usage of trade, and no parol or extrinsic evidence of any nature shall be used to supplement, modify or vary any of the terms hereof. There are no conditions to the full effectiveness of this Guaranty. County may assign this Guaranty without in any way affecting any Guarantor's liability under it. This Guaranty shall inure to the benefit of County and its successors and assigns. This Guaranty is in addition to the guaranties of any other guarantors of Smartmatic's liabilities to County.

6. **Representations, Warranties and Covenants**. Each Guarantor hereby represents and warrants to County that:

(a) the execution, delivery and performance by Guarantor of this Guaranty has been duly authorized, and does not (i) conflict with any of Guarantor's organizational documents, (ii) contravene, conflict with, constitute a default under or violate any material requirement of law, (iii) contravene, conflict or violate any applicable order, writ, judgment, injunction, decree, determination or award of any governmental authority by which Guarantor or any of its property or assets may be bound or affected, (iv) require any action by, filing, registration, or qualification with, or governmental approval from, any governmental authority (except such governmental approvals which have already been obtained and are in full force and effect) or (v) constitute an event of default under any material agreement by which Guarantor is bound;

(b) Guarantor has the [corporate] power to execute, deliver and perform this Guaranty and the execution, delivery and performance of this Guaranty has been duly authorized by all requite corporate action;

(c) this Guaranty is a valid and binding obligation of Guarantor, enforceable against Guarantor in accordance with its terms, except as the enforceability thereof may be subject to or limited by bankruptcy, insolvency, reorganization, arrangement, moratorium or other similar laws or principles of equity relating to or affecting the rights of creditors generally;

(d) there is no action, suit or proceeding affecting Guarantor pending or threatened before any court, arbitrator, or governmental authority, domestic or foreign, which may have a material adverse effect on the ability of Guarantor to perform its obligations under this Guaranty;

(e) Guarantor's obligations hereunder are not subject to any offset or defense against County or Smartmatic of any kind;

(f) after the incurrence of Guarantor's obligations under this Guaranty, the fair salable value of Guarantor's assets (including goodwill minus disposition costs) on a going concern basis exceeds the fair value of its liabilities; Guarantor is not left with unreasonably small capital after the transactions in this Guaranty or the VSAP Contract; and Guarantor is generally able to pay its debts as they mature; and

(g) Guarantor covenants, warrants, and represents to County that all representations and warranties contained in this Guaranty shall be true at the time of Guarantor's execution of this Guaranty.

Further, hereby incorporated by reference and made applicable to Guarantor are the representations and warranties in Section 8.3 of the VSAP Contract.

7. **Further Assurances**. Each Guarantor covenants and agrees to the following:

(a) Guarantor shall, at any time and from time to time, execute and deliver such further instruments and take such further action as may reasonably be requested by County to effect the purposes of this Guaranty; and

(b) If Guarantor forms a new subsidiary which is a direct or indirect parent company of Smartmatic, it shall cause such new subsidiary to become an Additional Guarantor (as defined below) pursuant to the process detailed in **Section 8** hereof.

8. **Additional Guarantors.** From time to time subsequent to the date hereof, additional Persons may become parties hereto, as additional Guarantors (each an "*Additional Guarantor*"), by executing a joinder of this Guaranty attached hereto as Appendix A ("*Joinder*"). Upon delivery of any such executed Joinder, notice of which is hereby waived by Guarantor, each such Additional Guarantor shall be a Guarantor under this Guaranty with the same force and effect, and subject to the same agreements, representations, guaranties, indemnities, liabilities and obligations as if such Additional Guarantor were an original signatory hereof. Guarantor expressly agrees that its obligations arising hereunder shall not be affected or diminished by the addition or release of any other Guarantor hereunder, nor by any election of County not to cause any Person otherwise obligated to become a Guarantor hereunder pursuant to the terms of this Guaranty to become an Additional Guarantor hereunder. This Guaranty shall be fully effective as to any Guarantor that is or becomes a party hereto regardless of whether any other

Person becomes or fails to become or ceases to be a Guarantor hereunder. Any Person's becoming an Additional Guarantor shall not require the consent of any other Guarantor and all of the obligations of each Guarantor under this Guaranty shall remain in full force and effect notwithstanding the addition of any Additional Guarantor to this Guaranty.

9. **Guarantor's Rights of Subrogation, Contribution, etc**. Until the VSAP Obligations (other than contingent indemnification obligations for which no claims have been asserted) shall have been paid in full in accordance with the VSAP Contract, each Guarantor hereby waives any claim, right or remedy, direct or indirect, that Guarantor now has or may hereafter have against Smartmatic or any of its assets in connection with this Guaranty or the performance by any Guarantor of its obligations hereunder, in each case whether such claim, right or remedy arises in equity, under contract, by statute, under common law or otherwise and including without limitation (a) any right of subrogation, reimbursement or indemnification that Guarantor now has or may hereafter have against Smartmatic with respect to the VSAP Obligations, (b) any right to enforce, or to participate in, any claim, right or remedy that County now has or may hereafter have against Smartmatic and (c) any benefit of, and any right to participate in, any collateral or security now or hereafter held by County. In addition, until the VSAP Obligations (other than contingent indemnification obligations for which no claims have been asserted) shall have been paid in full in accordance with the VSAP Contract, each Guarantor shall withhold exercise of any right of contribution Guarantor may have against any other guarantor of the VSAP Obligations. Each Guarantor further agrees that, to the extent the waiver or agreement to withhold the exercise of its rights of subrogation, reimbursement, indemnification and contribution as set forth herein is found by a court of competent jurisdiction to be void or voidable for any reason, any rights of subrogation, reimbursement or indemnification any Guarantor may have against Smartmatic or against any collateral or security, and any rights of contribution any Guarantor may have against any such other guarantor, shall be junior and subordinate to any rights County may have against Smartmatic, to all right, title and interest County may have in any such collateral or security, and to any right County may have against such other guarantor. If any amount shall be paid to any Guarantor on account of any such subrogation, reimbursement, indemnification or contribution rights at any time when all VSAP Obligations (other than contingent indemnification obligations for which no claims have been asserted) shall not have been paid in full, such amount shall be held in trust for County and shall forthwith be paid over to County to be credited and applied against the VSAP Obligations in accordance with the terms hereof.

10. **Governing Law; Personal Jurisdiction**. This Guaranty shall be governed by, and construed in accordance with, the laws of the state of California. Each Guarantor agrees and consents to the exclusive jurisdiction of the courts of the state of California for all purposes regarding this Guaranty and further agrees and consents that venue of any action brought hereunder shall be exclusively in the County; provided, however, that nothing in this Guaranty shall be deemed to operate to preclude County from bringing suit or taking other legal action in any other jurisdiction to enforce a judgment or other court order in favor of County. Each Guarantor and County expressly submit and consent in advance to such jurisdiction in any action or suit commenced in any such court, and each Guarantor and County hereby waive any objection that it may have based upon lack of personal jurisdiction, improper venue, or forum non conveniens and hereby consents to the granting of such legal or equitable relief as is deemed appropriate by such court. Except as otherwise provided in this Guaranty, all notices or demands

required or permitted to be given or made under this Guaranty shall be in writing and shall be hand delivered with signed receipt or mailed by first-class registered or certified mail, postage prepaid, addressed to the Parties as identified in Exhibits E (County's Administration) and F (Contractor's Administration) of the VSAP Contract, or, in the case of Guarantors, as identified on their signature page hereto. Addresses may be changed by any party giving ten days prior written notice thereof to the other party.

11. **Counterparts**. This Guaranty may be executed in counterpart signature pages, all of which taken together shall be deemed to be one original of this instrument.

[Signature pages follow]

IN WITNESS WHEREOF, the undersigned Guarantor has executed this Unconditional Secured Guaranty as of the date first written above.

SMARTMATIC INTERNATIONAL HOLDING B.V.

By _____

Name: Kim Wolters

Title: Managing Director

Address: Gustav Mahlerplein 25C, 1082 MS Amsterdam, The Netherlands

SGO CORPORATION LIMITED

By _____

Name: David C. Melville

Title: Company Secretary and Chief Counsel

Address: 88 Baker Street, 4th Floor, W1U 6TQ London, United Kingdom

SGO CORPORATION N.V.

By _____

Name: Robert H. Cook

Title: Secretary

Address: Schottegatweg Oost 44, Willemstad, Curacao

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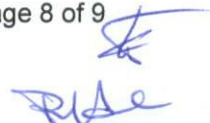
APPENDIX A

JOINDER AGREEMENT

1. **Joinder.** The undersigned _____, a _____ ("_____"), a parent company of Smartmatic USA Corporation ("*Smartmatic*"), for good and valuable consideration received and intending to be legally bound, agrees that, effective upon the date (the "*Joinder Effective Date*") this Joinder Agreement (this "*Joinder*") is executed and delivered to County (as defined below), _____ (a "*Joined Guarantor*") will become and be a Guarantor under, and does hereby join and become a party to that Parent Guaranty, dated as of June [___], 2018 (as may be amended, restated, amended and restated, supplemented, or otherwise modified from time to time, the "*Guaranty*"), by each Guarantor party thereto in favor of **County of Los Angeles** ("*County*") in connection with that Contract for Voting Solutions for All People (VSAP) Implementation and Support Services, dated as of June [___], 2018 ("*VSAP Contract*") by and between Smartmatic and County.

Joined Guarantor hereby (a) assumes, on a joint and several basis, all of the obligations and liabilities of a Guarantor, including, without limitation, joint and several liability for all of the VSAP Obligations pursuant to and in accordance with Section 1 of the Guaranty and (b) agrees to be bound in its own name by each of the representations, warranties and covenants set forth in the Guaranty. Without limiting the generality of the foregoing terms of this paragraph 1, Joined Guarantor hereby jointly and severally, together with the other Guarantors, agrees to immediately pay all amounts due thereunder (including, without limitation, all principal, interest and fees) and satisfy all of Smartmatic's payment obligations under the VSAP Contract, if Smartmatic does not perform its obligations under the VSAP Contract. Capitalized terms used but not otherwise defined in this Joinder have the meaning given to them in the Guaranty or the VSAP Contract, as the case may be.

2. **Restatement of Representations and Warranties in Guaranty.** Joined Guarantor, with respect to the representations and warranties set forth in Section 7 of the Guaranty, represents and warrants that each of such representations and warranties (after giving effect to this Joinder) is true, correct and complete as of the date hereof as to Joined Guarantor (except to the extent such representations and warranties expressly relate to another date or as specifically described therein in which case such representations and warranties are true, correct and complete as of such other date).

3. **Counterparts.** This Joinder may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, are an original, and all taken together, constitute one agreement.

[Signature pages follow]

IN WITNESS WHEREOF, the undersigned has duly executed and delivered this Joinder as of June ___, 2018.

_____, a _____

By _____

Printed Name:_____

Title:_____

Address for notices:

_____

_____

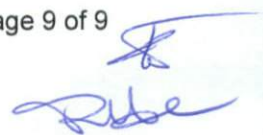Attn: Chief Financial Officer

Fax: _____

EXHIBIT S

PERFORMANCE BOND

TO THE

VOTING SOLUTIONS FOR ALL PEOPLE (VSAP) IMPLEMENTATION AND SUPPORT SERVICES CONTRACT

EXHIBIT S

[Form of] Performance Bond

Bond No._____

KNOW ALL BY THESE PRESENTS:

That we, Smartmatic USA Corporation, as principal (hereinafter referred to as "Principal"), and _____, as surety (hereinafter referred to as "Surety"), are held and firmly bound to the County of Los Angeles, as obligee (hereinafter referred to as "COUNTY"), in the amount of _____ Dollars ($_____) for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, Principal has by written agreement entered into a contract the ___ day of _____, 2018, with COUNTY for implementation and support of the VSAP Solution, hereinafter referred to as the "Agreement" and incorporated into this Performance Bond as if set forth fully herein;

THE CONDITION OF THIS PERFORMANCE BOND is that if Principal:

Performs the Agreement between Principal and COUNTY for the goods and services at the times and in the manner prescribed in the Agreement, and

1. Promptly makes payments to all claimants supplying Principal with goods, labor, materials, or supplies, used directly or indirectly by Principal in the prosecution of and providing the goods and services specified in the Agreement, and

2. Pays COUNTY all losses, damages, expenses, liquidated damages, costs in accordance with the Agreement, that COUNTY sustains because of default by Principal under the Agreement, and

3. Provides all goods and services, under the Agreement in the time and manner specified in the Agreement and such goods and services are accepted by COUNTY as provided for in the Agreement,

THEN THIS PERFORMANCE BOND IS RELEASED; OTHERWISE IT REMAINS IN FULL FORCE AND EFFECT.

The Performance Bond shall remain in full force and effect until (i) Final Acceptance (as identified in the Statement of Work, and described in the Agreement), or (ii) the written release of the obligation to maintain the Performance Bond by COUNTY in an amendment to the Agreement as provided thereby.

COUNTY shall provide written notice to Surety of a default by Principal and of County's intent to seek fulfillment of Surety's payment obligations under this Performance Bond. Upon receipt of such notice, Surety shall promptly (and in any event in no more than fifteen (15) days thereafter) release the funds available under the Performance Bond to COUNTY in their entirety, which funds shall be used by County as needed to remedy fully the default, including but not limited to:

1. Completing the Agreement in accordance with its terms and conditions; or

2. Obtaining a proposal(s) for performing the Agreement in accordance with its terms and conditions, and, at COUNTY's option, arrange for a contract between such proposer(s) and COUNTY; and

3. Paying COUNTY all losses, damages, liquidated damages, expenses, costs and attorney's fees including appellate proceedings, that COUNTY sustains as a result of default by Principal under the Agreement; and

4. In the event COUNTY fails to accept the VSAP Solution as described and provided for in the Agreement, repaying or refunding COUNTY the monies in the amount provided for in the Agreement.

No right of action shall accrue on this bond to or for the use of any person or corporation other than COUNTY named herein or the executors, administrators or successors thereof. This Performance Bond shall be enforceable against Surety, its successors and assigns.

No delay on the part of COUNTY in exercising any right, power or privilege under this Performance Bond or failure to exercise the same shall operate as a waiver of or otherwise affect any such right, power or privilege, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege.

Surety hereby waives all and any of the following:

(a)   notice of any change or amendment, to the Agreement, or to related subcontracts, purchase orders and other obligations (excluding any modifications that decrease the amount of time for Principal's performance, or decrease the amount of money being paid by COUNTY);

(b)   to the extent not required under this Performance Bond, all presentments, demands for performance, notices of non-performance (for avoidance of doubt, including warranty or support claims or requests, or informally noticed failures to approve work in accordance with Section 8.57 of the Agreement), protests, partial payment or non-payment of all or any part of the obligations guaranteed by this Performance Bond;

(c)   any right to require COUNTY to proceed against Principal or any other person, to proceed against, apply or exhaust any security held from any person for all or

any part of the obligations guaranteed by this Performance Bond, or to pursue any other remedy in COUNTY's power whatsoever;

      (d)   any defense arising by reason of the invalidity, illegality or lack of enforceability of the obligation to perform or pay all or any part of the obligations contained in the Agreement or guaranteed by this Performance Bond, or by reason of any lack of authority, or by reason of any act or omission of Principal or others which directly or indirectly results in the discharge or release of all or any part of the obligations guaranteed by this Performance Bond, whether by operation of law or otherwise;

      (e)   any defense based upon or arising out of any bankruptcy, insolvency, reorganization, moratorium, arrangement, readjustment of debt, liquidation or dissolution proceeding commenced by or against Principal or any other person, including any discharge of, or bar against collecting or otherwise enforcing performance of, all or any part of the obligations guaranteed by this Performance Bond (including any interest), in or as a result of any such proceeding.

Signed and sealed this _____ day of _____, 2018.

WITNESS:	**Smartmatic USA Corporation:**
By _____ Name _____ Title _____ Date _____	By _____ Name _____ Title _____ Date _____
WITNESS:	**Surety:**
By _____ Name _____ Title _____ Date _____	By _____ Name _____ Title _____ Date _____

Address for purposes of notice to Surety:

_____

_____

_____

Attention: _____

Facsimile: _____

EXHIBIT T

IP INSURANCE POLICY

TO THE

VOTING SOLUTIONS FOR ALL PEOPLE (VSAP) IMPLEMENTATION AND SUPPORT SERVICES CONTRACT

EXHIBIT T

IP Insurance Policy

Amount of Coverage	$30,000,000 - $50,000,000, to be determined at County's sole discretion.
Covered Items	Third party intellectual property infringement or misappropriation claims arising out of County IP (as presented to Contractor on or prior to January 2, 2018 in connection with RFP Phase 2 – Proposal Evaluation and Contractor Selection for VSAP Implementation and Support Services (#17-008)) used in the VSAP Solution, excluding the Pre-Existing Claims.
Deductible	To be determined at County's sole discretion.

ATTACHMENT II

Office of the CIO

CIO Analysis

DATE:

6/4/2018

William S. Kehoe
CHIEF INFORMATION OFFICER

SUBJECT:

NEW CONTRACT WITH SMARTMATIC USA CORPORATION FOR PRIME CONTRACTOR IMPLEMENTATION SERVICES UNDER THE VOTING SOLUTIONS FOR ALL PEOPLE (VSAP) PROJECT

CONTRACT TYPE:

☒ New Contract   ☐ Sole Source   ☐ Amendment to Contract #: Enter contract #.

SUMMARY:

Description: This Board Letter requests the Board of Supervisors (Board) to delegate authority to the Registrar Recorder/County Clerk (RR/CC), or designee, to execute a new Contract with Smartmatic USA Corporation (Smartmatic) to provide Prime Contractor services described under the Voting Solutions for All People (VSAP) project. The VSAP solution will go through testing and Secretary of State certification for full implementation for the 2020 Presidential Election cycle. The new Contract will be effective June 12, 2018, through March 31, 2027, with three two-year extensions through March 31, 2033.

The Board Letter also recommends delegated authority to execute future amendments, increase the original Contract Sum by no more than 10%, execute Change Notices with allocated pool dollars, issue written notices of termination of the Contract, and prepare/execute future amendments to reflect changes to legislation or changes to County Policy Terms and Conditions.

VSAP is a five-phase project to replace the County's current legacy voting systems (Inkavote Plus and Microcomputer Tally System) with an end-to-end solution that will transform the voting experience for Los Angeles County voters. The human-centered design of the new solution focuses on a new Ballot Marking Device, an improved Vote By Mail Ballot, a new Interactive Sample Ballot, and a new Tally System.

The Office of the CIO has been part of the VSAP Technical Advisory Committee since its inception and supports the VSAP project. This effort will allow RR/CC to decommission the Inkavote system that has been in place since 2003 and the Microcomputer Tally System that has been in place since the mid-1990s.

Contract Amount: $282,097,321

FINANCIAL ANALYSIS:

Contract Costs:

Contract Elements.. $ 253,677,723
  - **Hardware Manufacturing**
  - **Software Engineering**
  - **Implementation (integration, certification, training, help desk services)**
  - **Maintenance and Support**
  - **Estimated Taxes**

Pool Dollars.. $ 28,419,598
Maximum Contract Sum .... $ 282,097,321

Notes: The total cost of the Contract has been presented to the Chief Executive Officer. The funding request for FY 2018-19 was recommended for approval in Final Changes. Funding to finance future years will be requested through the annual budget process. RR/CC intends to fund VSAP with a combination of Net County Cost funding and external revenue.

RISKS:

1. Because of the innovative nature and broad scope of this project, there are risks in the areas of quality, cost and schedule. RR/CC has mitigated the quality risks by negotiating a very detailed Contract that incorporates hardware manufacturing, software engineering (agile development), implementation, and maintenance and support. As part of the Contract, the Contractor will be required to develop a Project Control Document (PCD) to guide the project. The PCD will include a detailed Project Schedule, Project Assumptions, Scope Management Plan, Schedule Management Plan, Change Management Plan, Risk and Issue Management Plan, Quality Control Plan, Resource and Staffing plan, Communications Plan, Closure Approach and a Deliverables Acceptance Process. The Contract also includes vendor Performance Bonds in the design phase ($42.5 million) and in the implementation phase ($85 million). Cost risks have been mitigated by making this a fixed-price, deliverables-based Contract. The Contract includes 211 deliverables in the implementation phase. Because of the very aggressive timeline, there are risks in the area of timely system certification and full implementation. RR/CC has mitigated these risks by developing a timeline of key deliverables with clearly defined liquidated damages and financial withholds.

2. Certification - before being used in any official election, the VSAP solution must be certified by the California Secretary of State's Office. To mitigate the risk of not having the system certified, RR/CC and the Contractor will engage an external voting system test lab to perform hardware and software pre-certification testing as the system is being developed. The target for the integrated system certification is July 2019. A mock election to test the system functionality will also be conducted in September 2019. RR/CC has developed a contingency strategy in case the system is not on schedule for full rollout for the March 2020 Presidential primary. The decision of whether to deploy the contingency strategy will be made 210 days before the Presidential primary.

3. Financial Stability of Smartmatic, USA – because of the limited footprint and revenue of Smartmatic USA, there is a risk about the Contractor's ability to engage the necessary resources to be successful. RR/CC, along with County Counsel and outside counsel (Sidley-Austin), received parental guarantees from three of Smartmatic USA's parent companies (Curacao, Netherlands and the UK), as well as substantial Performance Bonds.

4. Distributed Supply Chain – because the hardware component manufacturing will be done in Taiwan, hardware assembly and software load will be done in South Carolina (although the software development will be done in Culver City), and Acceptance Testing will be done in LA County, there

are logistical risks in the supply chain. RR/CC and County Counsel mitigated these risks by including language that protects the County to the degree possible in case of supply chain issues related to international trade issues.

5. Patent Infringement Claim – an existing voting system vendor has claimed that portions of the VSAP design infringe on its patented design. While this claim is ongoing, and a lawsuit has not been filed, RR/CC and County Counsel are mitigating this risk by engaging a law firm that specializes in patent law. Additionally, RR/CC and County Counsel have negotiated language in the Contract that provides some indemnification and an insurance policy against these types of claims.

6. System interfaces – because the software developed by the Contractor (Ballot Marking Device, Ballot Marking Device Manager and Interactive Sample Ballot) will need to integrate with software developed outside of this contract (Tally System and ePollbook), there are risks regarding compatibility. RR/CC and County Counsel mitigated this risk by incorporating language in the Contract that holds the Contractor accountable for all software integration.

7. Ownership of Intellectual Property (IP) – because RR/CC intends to have full ownership of the system, there were risks regarding the ownership of the IP related to VSAP. RR/CC, County Counsel and outside counsel negotiated into the contract that, except for pre-existing rights, anything developed, designed or provided by the Contractor in the course of providing the services shall be sole property of the County.

8. Security and Confidentiality – While no security risks have been identified, our office has confirmed that the Contractor will be contractually obligated to develop an end-to-end security plan to include: Compliance with the California Voting Systems Standards security standards, Supply Chain Management, Threat Modeling and Risk Assessment, Application Development Security Practices, User Policies and Procedures to protect systems, Incident Response Plan, Audit Event Log, Process to Monitor and Protect County Data and a Continuity Plan. Also, all software design and development shall be performed in the United States. Additionally, RR/CC has the right to approve or disapprove all Contractor staff performing work in this project. Each of the Contractor's staff performing work under this Contract, who is in a sensitive position, shall undergo and pass background investigation. Contractor shall maintain the confidentiality of all records, data and information. No work shall duplicate or disclose any data except as allowed in the Contract.

9. Readiness – because of the major changes associated with the VSAP implementation, there are risks around technical and operational readiness for the new environment. To mitigate these risks, RR/CC has engaged Gartner, Inc. to conduct a formal Readiness Assessment prior to system implementation, and quality assurance and risk assessment services throughout the project.

PREPARED BY:

_____   ___June 4, 2018___
HENRY BALTA, DEPUTY CHIEF INFORMATION OFFICER   DATE

APPROVED:

_____   __6/4/2018__
WILLIAM S. KEHOE, COUNTY CHIEF INFORMATION OFFICER   DATE