Enhancing the State of Colorado Election Process
RFP CDOS-UVS-2013-01, Business Proposal
December 4, 2013 COPY

ELECTION
Systems & Software

maintaining voter confidence. enhancing the voting experience.

Enhancing the State of Colorado Election Process

RFP CDOS-UVS-2013-01

Business Proposal

December 4, 2013 COPY

State of Colorado Uniform Voting System
Request for Proposal (RFP) Cover Sheet

SEALED RESPONSES MUST BE MAILED OR DELIVERED TO:
Colorado Department of State
Attn: Al Davidson
1700 Broadway
Suite 200
Denver, CO 80290

SOLICITATION NUMBER:	CDOS-UVS-2013-01
DEADLINE DATE AND TIME:	**December 4, 2013 at 5:00 PM MOUNTAIN TIME**
PURCHASING CONTACT:	Al Davidson
PHONE NUMBER:	303-895-2200, ext. 6361 (for delivery questions only)

BIDDERS MUST SUBMIT ONE (1) ORIGINAL AND NINETEEN (19) COPIES OF THE PROPOSAL AND ONE ELECTRONIC COPY FOR BOTH THE BUSINESS PROPOSAL AND COST PROPOSAL. BIDDERS MUST COMPLETE THE BELOW INFORMATION.

F.E.I.N.	47-0617567
DELIVERY DATE	December 3, 2013
AUTHORIZED SIGNATURE	Thomas E Burt
TYPED/PRINTED NAME	Thomas E. Burt
TITLE	President and COO
COMPANY NAME	Election Systems & Software, LLC
ADDRESS	11208 John Galt Blvd.
CITY/STATE/ZIP	Omaha, NE 68137
CONTACT FOR CLARIFICATIONS	Bryan Hoffman
CONTACT TITLE	Vice President of Corporate Sales
PHONE NUMBER	320-267-4631
FAX NUMBER	402-970-1291
EMAIL ADDRESS	bjhoffman@essvote.com

IMPORTANT: THE FOLLOWING INFORMATION MUST BE ON THE OUTSIDE OF THE RFP SUBMITTAL ENVELOPE AND/OR PACKAGE. SEE THE RFP FOR MORE DETAILED INSTRUCTIONS.

<VENDOR NAME>
RFP # CDOS-UVS-2013-01 <BUSINESS OR COST> PROPOSAL
DUE ON DECEMBER 4, 2013 AT 5:00PM MDT
PACKAGE # OF #

Please be advised that telegraphic or electronic responses (Fax, Western Union, Telex, etc.) cannot be accepted as a sealed proposal. Bidders are urged to read the RFP documents thoroughly before submitting a response.

This Proposal Cover Sheet **must** be signed by a representative of the vendor who is legally authorized to bind the vendor to their proposal. Vendors will be required to submit confirmation of their F.E.I.N. number prior to any issuance of Contracts, Purchase Orders, or payments resulting from this RFP.

RETURN THIS SHEET WITH THE PROPOSAL

ELECTION Systems & Software

maintaining voter confidence. enhancing the voting experience.

December 2, 2013

Mr. Al Davidson, Uniform Voting Systems Program Manager
Colorado Department of State
1700 Broadway, Suite 200
Denver, CO 80290

Dear Mr. Davidson:

Election Systems and Software, LLC ("ES&S") and its preceding companies have been privileged to provide election hardware, software, support and services to jurisdictions across the State of Colorado for many years. As the leading voting system vendor in the U.S., we are pleased to respond to this RFP for a Uniform Voting System for the State of Colorado.

ES&S has the technology and proven record to successfully support the deployment and maintenance of a statewide Uniform Voting System. We currently support 19 statewide deployments. This demonstrates that we have the experience and resources to provide the equipment, staff, training, and support for such a large undertaking.

ES&S is proposing a UVS solution to address all eight categories of the RFP Appendix B-System Requirements Table. We have provided all of the requested materials in our RFP submission, including our Business Proposal and Cost Proposal, as well as the necessary appendices to support our response.

ES&S acknowledges receipt of all modification notices to this RFP, including Amendments 1 & 2, and the "Questions and Answers" document.

ES&S does not have any current/pending projects with State of Colorado, nor does ES&S intend to use any subcontractors for the work performed with this project.

There are currently no known conflicts of interest which would affect ES&S' ability to perform its obligations under any resulting agreement with the State of Colorado.

ES&S has provided several references in **Section 4.0**, and has given its permission for those references to release certain information to the State of Colorado.

Except for those limited itemized items set forth herein which ES&S requests the opportunity to discuss with the State in the event it is the successful responder, ES&S shall fully comply with all work requirements, general contract requirements, and other terms and conditions specified within this RFP.

ES&S has included the following limited itemized suggestions for alternative language in response to the certain terms and conditions or otherwise has requested the opportunity to further discuss the following items with the State in order to find mutually agreeable language in the event ES&S is the successful responder. ES&S fully understands that the State is under no obligation to accept any of ES&S' proposed changes and we have made every effort to fully comply with all requirements of the RFP and be responsive.

Section 2 – Administrative Information, 2.9 Acceptance of RFP Terms
A proposal submitted in response to this RFP constitutes a binding offer. The original signature of an officer of the Vendor legally authorized to execute contractual obligations indicates acknowledgment of this condition. A submission in response to this RFP acknowledges acceptance by the Vendor of all terms and conditions including compensation, as set forth in this RFP. A Vendor must identify clearly and thoroughly any variations between its proposal and the RFP, including the RFP appendices. Failure to do so will constitute a waiver of any rights to subsequently modify the terms of performance, except as outlined or specified in this RFP.

ES&S RESPONSE:

ES&S acknowledges this provision and has included limited suggestions for alternative language in response to certain terms and conditions or otherwise requested the opportunity to further discuss certain items with the State in the event it is the successful responder. ES&S fully understands that the State is under no obligation to accept any wording changes which we may have submitted in our proposal and we have made every effort to fully comply with all requirements of the RFP and be responsive.

2.24 Agreement Type
The services provided and work performed pursuant to this RFP shall be performed in accordance with the terms of a negotiated contract with the selected Vendor. A boilerplate contract is provided as part of this RFP in RFP Appendix G – State Contract Template, which will be used as a basis for contract negotiations and contract finalization between CDOS and the Vendor.
At the time of this RFP release, it is anticipated that each county will purchase the UVS using county funds. It is possible, in a future session, that the Colorado State legislature could appropriate monies to supplement or purchase the UVS for counties. If each county purchases the UVS using county funds, the expectation is that the county will prepare a formal county purchase order or agreement with the selected UVS Vendor and that the CDOS contract with the UVS Vendor will be included as a part of the County purchase order or agreement. The County purchase order/agreement will include quantities and models of hardware/software being purchased, amounts of support needed from the Vendor, and pricing contained in the CDOS and Vendor negotiated contract.

ES&S RESPONSE:

ES&S acknowledges this provision and has included with its proposal ES&S' standard Voter Tabulation System and Services Agreement ("ES&S' Standard Agreement") at **Appendix A**. ES&S has included its Standard Agreement for the State's review and requests that certain mutually agreed upon provisions contained therein, including ES&S software licensing terms be included in the final contract to be negotiated by the parties.

Appendix D – Statement of Work
Track 4 – Contractor Support
Deliverable: Warranty Period Support
Purpose: This deliverable includes services provided by Contractor as specified in their warranty agreement.
Updated: No

Specification: This deliverable will include a warranty agreement from the Contractor, which specifies all the services included under the warranty agreement. Pricing will be in the contract Pricing Agreement.

ES&S RESPONSE:

ES&S has included a copy of its standard Voter Tabulation System and Services Agreement ("ES&S' Standard Agreement") at **Appendix A** which contains ES&S' standard warranty provisions for the CDOS review.

Deliverable: Voting Equipment Maintenance Support
Purpose: This deliverable includes services provided by Contractor as specified in their maintenance agreement.
Updated: No
Specification: This deliverable will include a maintenance agreement from the Contractor, which specifies all the services included under the maintenance agreement. Pricing will be in the contract Pricing Agreement.

ES&S RESPONSE:

ES&S has included a copy of its standard Voter Tabulation System and Services Agreement ("ES&S' Standard Agreement") at **Appendix A** which contains ES&S' standard maintenance provisions for the CDOS review.

Appendix G – State Contract Template
7. PAYMENTS TO CONTRACTOR
B. Payment
iii. Available Funds-Contingency-Termination
The State is prohibited by law from making commitments beyond the term of the State's current fiscal year. Therefore, Contractor's compensation beyond the State's current Fiscal Year is contingent upon the continuing availability of State appropriations as provided in the Colorado Special Provisions. If federal funds are used to fund this Contract, in whole or in part, the State's performance hereunder is contingent upon the continuing availability of such funds. Payments pursuant to this Contract shall be made only from available funds encumbered for this Contract and the State's liability for such payments shall be limited to the amount remaining of such encumbered funds. If State or federal funds are not appropriated, or otherwise become unavailable to fund this Contract, the State may terminate this Contract immediately, in whole or in part, without further liability in accordance with the provisions hereof.

ES&S RESPONSE:

ES&S acknowledges this provision and requests that in the event of a termination for the non-appropriation of funds, ES&S be paid for all equipment and software delivered and services performed up through the effective date of termination.

15. REMEDIES
Termination for Cause and/or Breach
i. Obligations and Rights

To the extent specified in any termination notice, Contractor shall not incur further obligations or render further performance hereunder past the effective date of such notice, and shall terminate outstanding orders and subcontracts with third parties. However, Contractor shall complete and deliver to the State all Work, Services and Goods not cancelled by the termination notice and may incur obligations as are necessary to do so within this Contract's terms. At the sole discretion of the State, Contractor shall assign to the State all of Contractor's right, title, and interest under such terminated orders or subcontracts. Upon termination, Contractor shall take timely, reasonable and necessary action to protect and preserve property in the possession of Contractor in which the State has an interest. All materials owned by the State in the possession of Contractor shall be immediately returned to the State. All Work Product, at the option of the State, shall be delivered by Contractor to the State and shall become the State's property.

ES&S RESPONSE:

ES&S acknowledges this provision and requests clarification that only such Work Product as specifically created by ES&S for the State or any applicable County under the resulting Contract shall be owned by the State or the County. All pre-existing and other Work Product shall remain the property of ES&S.

iii. Damages and Withholding

Notwithstanding any other remedial action by the State, Contractor shall remain liable to the State for any damages sustained by the State by virtue of any breach under this Contract by Contractor and the State may withhold any payment to Contractor for the purpose of mitigating the State's damages, until such time as the exact amount of damages due to the State from Contractor is determined. The State may withhold any amount that may be due Contractor as the State deems necessary to protect the State against loss, including loss as a result of outstanding liens, claims of former lien holders, or for the excess costs incurred in procuring similar goods or services. Contractor shall be liable for excess costs incurred by the State in procuring from third parties replacement Work, Services or substitute Goods as cover.

ES&S RESPONSE:

ES&S acknowledges this provision and requests that the State only withhold those payments which are the subject to the alleged breach. ES&S requests that the State remit all other payments associated with deliverables which have been satisfactorily performed by ES&S in accordance with the terms of the Contract.

B. Early Termination in the Public Interest

iii. Payments

If this Contract is terminated by the State pursuant to this §15(B), Contractor shall be paid an amount which bears the same ratio to the total reimbursement under this Contract as Contractor's obligations that were satisfactorily performed bear to the total obligations set forth in this Contract, less payments previously made. Additionally, if this Contract is less than 60% completed, the State may reimburse Contractor for a portion of actual out-of-pocket expenses (not otherwise reimbursed under this Contract) incurred by Contractor which are directly attributable to the uncompleted portion of Contractor's obligations hereunder; provided that the sum of any and all reimbursement shall not exceed the maximum amount payable to Contractor hereunder.

ES&S RESPONSE:

ES&S acknowledges this provision and requests that in the event of a termination under Section 15(B), ES&S be paid for all equipment and software delivered and services satisfactorily performed up through the effective date of termination.

17. RIGHTS IN DATA, DOCUMENTS, AND COMPUTER SOFTWARE

Any software, research, reports, studies, data, photographs, negatives or other documents, drawings, models, materials, or Work Product of any type, including drafts, prepared by Contractor in the performance of its obligations under this Contract shall be the exclusive property of the State and, all Work Product shall be delivered to the State by Contractor upon completion or termination hereof. The State's exclusive rights in such Work Product shall include, but not be limited to, the right to copy, publish, display, transfer, and prepare derivative works. Contractor shall not use, willingly allow, cause or permit such Work Product to be used for any purpose other than the performance of Contractor's obligations hereunder without the prior written consent of the State.

ES&S RESPONSE:

ES&S acknowledges this provision and agrees that items set forth in Section 17 which ES&S specifically prepares for the State under the Contract shall be owned by the State. However, ES&S requests clarification that all pre-existing items, including all pre-existing Work Product of ES&S shall, at all time, be owned by ES&S. ES&S agrees to work with the State to appropriately identify those items to be owned by the State and those items which will be owned by ES&S.

19. GENERAL PROVISIONS

F. Indemnification

Contractor shall indemnify, save, and hold harmless the State, its employees and agents, against any and all claims, damages, liability and court awards including costs, expenses, and attorney fees and related costs, incurred as a result of any act or omission by Contractor, or its employees, agents, Subcontractors, or assignees pursuant to the terms of this Contract; however, the provisions hereof shall not be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protection, or other provisions, of the Colorado Governmental Immunity Act, CRS §24-10-101 et seq., or the Federal Tort Claims Act, 28 U.S.C. 2671 et seq., as applicable, as now or hereafter amended.

ES&S RESPONSE:

ES&S generally agrees to the indemnification requirements of this Section 19(F), to the extent that indemnification is required against claims or lawsuits due to the negligent or willful acts, errors or omissions of ES&S, its agents, employees, officers, directors, shareholders or subcontractors. ES&S requests that it shall have control over the defense of such claims and lawsuits, subject to the State's or applicable County's rights to participation and approval. The State shall remain responsible for any losses or damages caused by the negligent or willful acts, errors or omissions of itself, its agents, employees, officers, directors, subcontractors or other persons under its control. ES&S' total liability under any resultant contract with the State or applicable County shall be limited to the total amount to be paid by the State or applicable County to ES&S under the contract. Neither party shall likewise be liable to the other for any indirect, incidental, punitive, special, exemplary or consequential damages arising out of or

relating to the contract.

20. COLORADO SPECIAL PROVISIONS
E. 5. COMPLIANCE WITH LAW.
Contractor shall strictly comply with all applicable federal and State laws, rules, and regulations in effect or hereafter established, including, without limitation, laws applicable to discrimination and unfair employment practices.

ES&S RESPONSE:

ES&S acknowledges this provision and warrants to the State that, at the time of delivery, the proprietary ES&S equipment and software leased, sold and/or licensed pursuant to the terms of a mutually agreed upon contract with the State will comply with all applicable requirements of state election laws and regulations that are mandatory and effective as of the effective date of any resulting contract between ES&S and the State. ES&S will further warrant that during the agreed upon warranty period and thereafter so long as the State is currently subscribing and has paid for post-warranty maintenance and support services, the proprietary ES&S equipment and proprietary ES&S licensed software will be maintained or upgraded by ES&S in such a way as to remain compliant with all applicable state election laws and regulations. For purposes of this warranty, "Maintained or upgraded" shall mean only such changes to individual items of the ES&S licensed software (but not the ES&S equipment) as are technologically feasible and commercially reasonable in ES&S' discretion. The State shall be responsible for the cost of any replacements, retrofits or modifications to the ES&S equipment contracted for under any resulting contract that may be developed and offered by ES&S in order for such ES&S equipment to remain compliant with applicable laws and regulations. The State shall also be solely responsible for the cost of any third party items that are required in order for the ES&S equipment and/or ES&S licensed software to remain compliant with applicable laws and regulations.

SUMMARY

ES&S is the recognized leader in the election market. Through ongoing development and introduction of innovative election products, ES&S has emerged as the leading provider of end-to-end, fully integrated voting systems solutions. You can understand why more jurisdictions have chosen to lease or purchase their voting equipment, software, and election services products from ES&S.

Thank you for considering our response. We appreciate the opportunity to present our election-proven voting system to you and look forward to a continued partnership with you and your staff. As President and COO, I am authorized to commit ES&S to the work proposed in our response. If you have any questions, please feel free to contact me directly at (402) 970-1110, or our Vice President of Corporate Sales, Bryan Hoffman, at (320) 267-4631.

Very Respectfully,

Thomas E. Burt
President and COO

Enhancing the State of Colorado Election Process

Request for Proposal for a Uniform Voting System

Business Proposal

	State of Colorado Request for Proposal Cover Sheet
	Transmittal Letter
	Table of Contents
Section 1.0	**Executive Summary**
Section 2.0	**Company Overview**
Section 3.0	**Company Financial Status**
Section 4.0	**Relevant Business Experience**
Section 5.0	**Prior Proposals**
Section 6.0	**Project Approach:** **Section 6.1 Project Management** **Section 6.2 UVS Software** **Section 6.3 UVS Hardware** **Section 6.4 Database** **Section 6.5 Data Migration** **Section 6.6 Test Strategy** **Section 6.7 Training** **Section 6.8 Implementation** **Section 6.9 Support**
Section 7.0	**Sample Reports**
Section 8.0	**Sample Project Artifacts:** **State of Maine Initial Project Work Plan** **State of Michigan Voting System Project Plan**
Section 9.0	**General Questions**
Section 10.0	**Preliminary Project Schedule and Staffing Plan**
Section 11.0	**Proposed Staffing** **Key Personnel Experience Statements**
Section 12.0	**UVS System Requirements** **Section A: Election Management Services (EMS)** **Section B: Polling Location Ballot Scanning and Tabulation Equipment** **Section C: Central Ballot Scanning and Tabulation Equipment** **Section D: Electronic Voting Equipment**

Section E: Automated Ballot Envelope Scanning & Signature Verification

Section F: Mail Ballot Tracking

Section G: Vendor Training & Support

Section H – Miscellaneous Requirements

ES&S Appendices

Appendix A ES&S Standard Agreement
Appendix B State of Colorado Good Standing Certificate
Appendix C 2012 Audited Financial Statements **(CONFIDENTIAL binder)**
Appendix D 2010/2011 Audited Financial Statements **(CONFIDENTIAL binder)**
Appendix E Voting System Security Specification **(CONFIDENTIAL binder)**
Appendix F Sample set of Audit Reports (Appendix B, Section H-1 Note 4)
Appendix G EVS 5.2.0.0 Certification Documentation

Section 1.0 – Executive Summary

At Election Systems and Software, LLC ("ES&S") our mission is to *maintain voter confidence and enhance the voting experience.* We achieve that goal by providing voting systems designed to meet the needs of our customers.

To accomplish the objectives that you have laid out in this RFP, you need a partner who has driven this road before—someone you know and trust -- someone with a ***proven track record of large-scale voting system implementations*** and decades of election experience across the U.S.—***someone like ES&S***.

ES&S has a proven record of supporting statewide uniform voting systems. We currently support 19 statewide deployments. This demonstrates that we have the experience and resources to provide the equipment, staff, training, and support for such a large undertaking.

At ES&S we have the unique ability to provide **all** of your elections needs **or** just a portion. We have the ability and willingness to work with you to help customize the solution that fits Colorado voters rather than a solution designed to fit "anywhere USA". We would be honored to be selected to serve as the provider of a uniform voting system specifically designed to meet the needs of Colorado voters.

Our Solution For The State Of Colorado

Based on your RFP requirements and our proficient evaluation of the best fit solution to meet your needs, ES&S is submitting a proven voting system solution for your consideration. ES&S is unique in the fact that we are the only vendor who is proposing a proven system to the State of Colorado — proven with more than 15,000 DS200 precinct scanners in use today. No other vendor in the world can come close to matching this experience. We are providing the State of Colorado a solution that you can trust.

ES&S has provided information on the following proposed products:

- ✓ DS200® Digital Precinct Tabulator and Scanner.
- ✓ DS850® Digital High Speed Central Scanner and Tabulator.
- ✓ ExpressVote®
- ✓ AutoMARK® ballot marking device for voters with disabilities.
- ✓ AES Incoming solution
- ✓ Electionware® election management system software.

THE ES&S DS200® PRECINCT TABULATOR AND SCANNER

The centerpiece to our solution is the DS200 precinct-based digital scanner. The DS200 combines the very best attributes of a paper-based system with the flexibility and efficiency of a digital environment. It uses the latest in digital scanning technology – state-of-the-art, precise, high resolution ballot image sensors that simultaneously scan both sides of a ballot, in any orientation. As a result, cast vote records and ballot images can be stored on a removable USB flash drive, giving you the ability to tabulate results and later review ballot images for write-ins and voter intent resolutions. Unlike other precinct-based paper ballot tabulators on the market, the DS200 is designed with flexibility to support a wide range of ballot configurations and designs. It allows for more efficient accumulation and transmission of votes, directly from the polling place.

THE DS200 HAS ACHIEVED CERTIFICATION FROM THE EAC, AND IN THE FOLLOWING STATES: ALABAMA, ARIZONA, FLORIDA, IDAHO, INDIANA, IOWA, ILLINOIS, MAINE, MINNESOTA, MISSISSIPPI, MONTANA, NEW JERSEY, NEW MEXICO, NEW YORK, NORTH CAROLINA, OHIO, TENNESSEE, UTAH, VIRGINIA, WASHINGTON, WISCONSIN AND WYOMING.

With the most accurate and reliable digital scan technology available, the DS200 features:

- ✓ **Large LCD display** – Our 12.1" LCD display enhances voter, election staff, and citizen election worker interfaces and usability. It provides immediate feedback and instructions to the voter in the language that they select.
- ✓ **Intelligent Mark Recognition (IMR®)**– The DS200 employs patented image scanning technology to quickly process ballots formatted in a variety of lengths and accurately discriminate between valid voter marks and extraneous ballot elements such as smudges, spills, and perforations.
- ✓ **Patented Contact Image Sensors** – ES&S collaborated with Ricoh Engineering of Tustin, California to design our patented CIS read heads – this state-of-the-art technology enables users to obtain fast, accurate election results.
- ✓ **2005 VVSG** – The DS200 is designed to meet all the requirements of the more rigorous 2005 VVSG standards. The DS200 has received certification approval from the U.S. Election Assistance Commission (EAC).

THE ES&S DS850® HIGH-SPEED CENTRAL COUNT SCANNER AND TABULATOR

With the increase in mail and other absentee ballot voting across the U.S., a high-speed central counter is becoming a critical part of any voting system solution. ES&S offers **the industry's fastest high-speed ballot scanner**, the ES&S DS850. Key features include:

- ✓ **High-speed sorting —** The DS850 can scan more than 300 14-inch double-sided ballots per minute – even folded ballots with full sorting options enabled. The DS850's three unique output bins allow programmable ballot sorting without compromising speed.

- **Folded ballot processing —** The DS850 was designed with a series of patent-pending **TruGrip™** composite rollers that apply constant control to folded ballots throughout the entire process.
- **User-friendly design and operation—** The DS850 features a user-friendly software interface on an easy-to-use 15-inch LCD color touch screen display.
- **Patented Intelligent Mark Recognition (IMR)** World-class image capture and processing capability integrated with ES&S' patented IMR solution to deliver fast, accurate election results.
- **Patented S-curve design —** With the patented (US Patent # 8,261,984) S-curve transport design, the DS850 provides the real-time sorting of ballots at speeds previously achieved only by non-image-based OMR systems, while keeping the unit more compact and maneuverable.

ES&S AutoMARK® Voter Assist Terminal

The AutoMARK Voter Assist Terminal is designed for jurisdictions that want all voters, including disabled voters, to utilize a paper ballot voting system. The AutoMARK assists the disabled voting community to mark an optical scanned ballot when the voter is visually impaired, physically disabled, or more comfortable reading or hearing instructions and choices in an alternative language.

The touch screen and navigational keypad buttons are interconnected and can be used to complete all required operations. On the touch screen interface, various colors and accessibility-enhancing effects have been chosen to prompt and guide the voter. These digital buttons meet all applicable guidelines regarding size and readability. The navigational keypad has been tested and modified through consultation with special needs groups. The keys are arranged to allow for an intuitive voting session. Each key has both Braille and printed text labels designed to indicate function and a related shape to help the voter determine its use.

The ES&S ExpressVote®

ExpressVote combines paper-based voting with touch screen to create a breakthrough in voting solutions. The ExpressVote can be used in early vote centers and on Election Day in precincts or in vote centers. No longer must election officials guess the number of ballots to print — instead, a Vote Session Activator™ card is printed with a barcode which determines the ballot style presented on the touch screen.

Accommodating to various election needs, this system can serve all voters, even those with special needs, allowing voters to vote autonomously with tabulation done in the exact same manner. A feature-

rich system, ExpressVote is for people with or without visual impairments, hearing issues, and physical accommodations.

The ExpressVote is the first of its kind Universal Voting System that can operate in an early voting setting, Election Day, vote center, and as a fully compliant ADA voting solution. Key features include:

- **Vote session activator —** The voter receives a voting session activator card to begin the process. The ExpressVote reads a barcode indicating which ballot style is presented to the voter. Once all selections are made, a readable record is produced, which can be tabulated on the DS200 or DS850.
- **Easy to set up and use —** One-step startup and poll closing procedure makes the ExpressVote an ideal device for poll workers. The intuitive design offers streamlined simplicity for all voters, poll workers, and election staff.
- **Controlled and reduced costs —** Traditional ballot printing costs can be reduced significantly by eliminating the need and expense for pre-printed paper ballots. With low operation and maintenance fees, budgeting for recurring expenses becomes easy with the ExpressVote.
- **Touch screen interface —** The touch screen and navigational keypad buttons are interconnected and can be used to complete all required operations. On the touch screen interface, various colors and accessibility-enhancing effects have been chosen to prompt and guide the voter. These digital buttons meet all applicable ADA guidelines regarding size and readability.

THE ES&S AVES INCOMING SOLUTION

The AVES incoming solution simplifies your procedures by adding automation to the Ballot Envelope Scanning and Signature Verification process. This service provides you with a small desktop device for quick and accurate envelope processing. In a single pass, this system automatically marks a time stamp on each envelope, and provides an audit trail to be imported into the SCORE VR system. For signature verification purposes, the AVES solution gives you options from manual digital resolution to automated system resolution. Using ES&S' solution dramatically reduces errors and saves time and money from hiring temporary staff to complete these tasks. Key features include:

- ✓ **Automated Signature Capture -**This system automates the signature capture process, saving the customer time and money and increases accuracy avoiding human error.
- ✓ **Signature Recognition -** Automated signature recognition saves time and personnel expenses. Even manual signature recognition saves time and money with the VoteRemote desktop scanner.
- ✓ **Tracking -** In response to voter inquiries you can research their vote status to determine if the cast ballot was returned. Each envelope received a date/time stamp for easy retrieval to assist with chain of custody requirements.

After the Vote-by-Mail packets are entered into the USPS, Colorado Counties will experience the power of Voter Trace, a web application utilized to track voter's mail packets through USPS.

Counties will be able to track a voter's packet by his or her name or voter ID. Statistics and reports are also available to provide updates on the Election's mail progress.

ES&S ELECTIONWARE® ELECTION MANAGEMENT SYSTEM SOFTWARE

ES&S Electionware and Election Reporting Manager (ERM) make up ES&S' election management system (EMS) software. The ES&S EMS solution provides end-to-end election management activities. ES&S' EMS software enables users to create an election information database, format ballots, program ballot scanning equipment, create voice files, and count ballots and generate results reports. ES&S software products allow users to customize and scale election processes to meet the needs of any size jurisdiction within the jurisdiction.

Electionware is a fully integrated election management software application that allows customers to carry out election management tasks through a single uniform user experience. It has a powerful and intuitive user interface and a single, common relational database.

Benefits of Electionware include:

- ✓ **Ease of use:** Electionware is an intuitive, easy-to-use EMS software application that eliminates wasted effort on unnecessary tasks.
- ✓ **Single user interface:** The multi-function modules are delivered through a single user interface, streamlining access to, and management of, information. Common database and customer-specific settings provide seamless movement between modules, simplifying execution of key tasks.
- ✓ **Online help system:** Electionware contains an interactive and comprehensive online help system.
- ✓ **Multi-user interface:** Multi-user Electionware functionality enables large jurisdictions to use authorized election personnel to simultaneously create precinct memory storage devices and enter information for the DS200, DS850, ExpressVote, and ERM. Additionally, the multi-user functionality in Electionware allows multiple teams of election officials to simultaneously work on different elections.
- ✓ **Security:** Electionware incorporates the very latest in election security, including heightened audit controls and change management processes that are in built in to make sure your election data is safe and secure.

SUMMARY

Our solution provides State of Colorado with a **reliable, cost-effective, state-of-the-art** voting system that will meet the needs of State Of Colorado voters for many years. It is designed with the future in mind. As technology continues to develop, our proposed solution has the ability to adapt. ES&S has development ideas that will enhance the voting system we are proposing today to extend the expected life of your system. We look forward to the opportunity to provide the State of Colorado with ES&S' unparalleled election service and support through this new voting system. Thank you for your consideration.

Section 2.0 – Company Overview

5.3.4 Company Overview

In this document you will provide information about your company; its capabilities, why it should be selected for this project; evidence of company stability, ability to perform required work for this project, number of years in business, number of employees, employees with voting systems experience, and company locations, including any offices in Colorado. You may provide any additional information that demonstrates the strengths your company can bring to this project.

You must indicate the company form of organization (i.e., partnership, non-profit corporation, Colorado Corporation, Non-Colorado Corporation, or some other structure). Non-Colorado corporations must register as a foreign corporation to conduct business in Colorado and appoint a resident agent to receive process. You must certify that your company has a Certificate of Good Standing or Certificate of Existence to do business in Colorado. Proof of the certification must be provided upon request by CDOS.

If the proposing company is owned or controlled by a parent company, the name, main office address and parent company's tax identification number must be provided. The tax identification number of the company proposing to the RFP must be provided in the Proposal Cover Sheet requested in *RFP Section 5.3.1 State of Colorado Request for Proposal Cover Sheet*.

This section should also include the following:

1) A brief statement of understanding and compliance with the terms and conditions as set forth in *RFP Section 2 Administrative Information*.

2) A statement of understanding of the work and system requirements associated with the Uniform Voting System project. It is important that your company understand the size and scope of this project.

3) Any information you wish to add that is pertinent to your company doing business with the State of Colorado.

4) Disclosure of non-U.S. ownership of all or any portion of your company.

ES&S Response

Election Systems & Software, LLC ("ES&S") understands the work and system requirements associated with the State of Colorado Uniform Voting System project, including the size and scope of this project. ES&S is the largest elections-only company in the world and has been providing election equipment and services for more than 43 years. We have completed over 1,200 state and county-level installation projects similar to the optical scan voting system we are proposing for CDOS.

We provide our large customer base with the most expansive list of products and services than any other election company. Our list includes: complete voting systems, full training and support options, ballot layout/coding/voice file production, equipment maintenance and services, on-site support for pre-election testing and Election Day activities, 24/7 technical and customer support,

project management and implementation services, voter registration services and support, ballot printing, vote by mail packet processing and mail services, electronic ballot delivery software and services, electronic poll book sales and services, and voting system consumables and supplies.

At ES&S, we recognize the incredible responsibility we have in servicing state and local government election processes around the world. ES&S is the world's most experienced provider of total integrated election management solutions. No other voting system vendor can compare to the financial stability and customer base of ES&S. ES&S is a well-capitalized, professionally managed company, capable of continuously sustaining high-quality development and support to our customers for the long term. We have installed more than 300,000 voting systems worldwide and supported more than 50,000 elections during the past decade.

Today, not only do we work with many of the same customers we've served for more than four decades, but our business has grown to serve 41 states and over 60 percent of the 3,140 county governments in the United States.

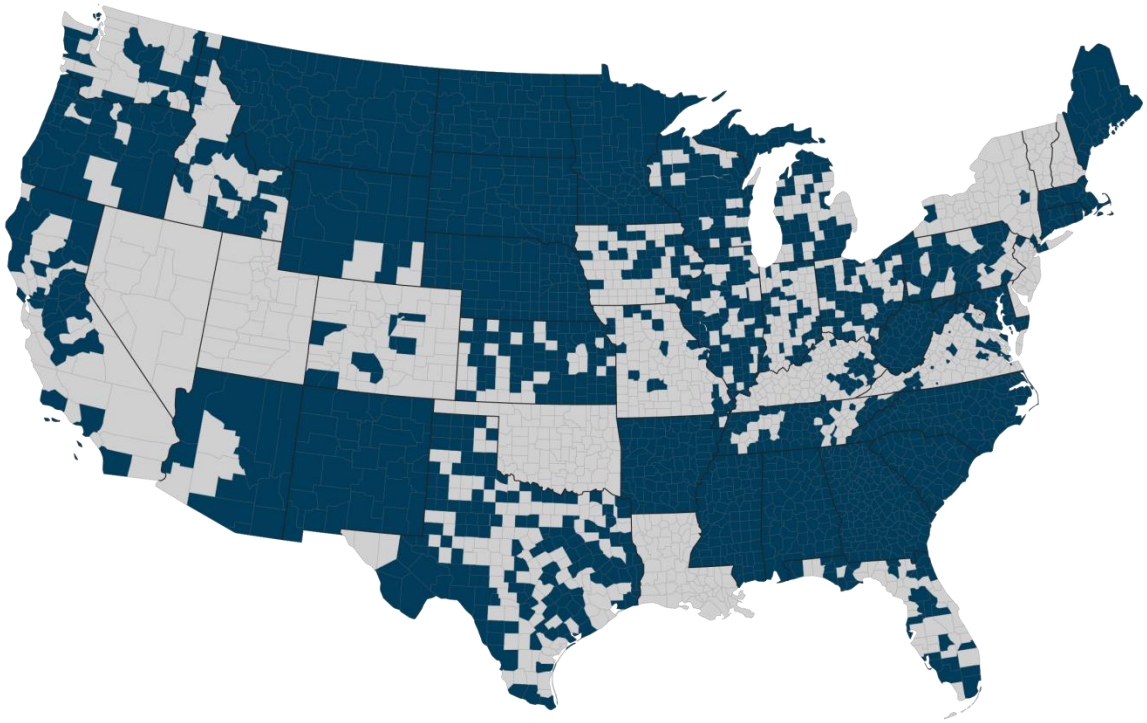

Figure 2.1 ES&S Market Share

ES&S is a privately owned Delaware limited liability company that entered the elections industry in 1969. The company was initially incorporated in 1979 as American Information Systems and subsequently incorporated as ES&S in 1997 upon its acquisition of the elections division of Business Records Corporation. On September 2, 2009, ES&S acquired the assets of Premier Election Solutions and Premier-Canada. Effective October 1, 2011, Premier was merged

with and into ES&S and ES&S changed its form of legal entity from a C-corporation to a Delaware limited liability company.

ES&S is certified to do business in the State of Colorado. A copy of our Certificate of Good Standing is located at **Appendix B**.

ES&S maintains a staff of more than 450 election professionals. Our company headquarters is located in Omaha, Nebraska and is staffed by over 200 full time employees. **Every ES&S employee** is trained and certified to provide on-site election support. In order to achieve our vision of greater efficiency and accessibility to our customers, we have employees positioned from coast to coast to ensure we maintain voter confidence and enhance the voting experience for all our customers. The company maintains ten facilities across the United States, and two Canadian field offices in Pickering, Ontario and Vancouver, British Columbia.

Figure 2.2 ES&S Operating Locations

ES&S is in a unique position in the voting industry having successfully installed our voting solutions in thousands of jurisdictions from the smallest township to the largest cities and counties across the U.S. ES&S has extensive experience managing voting system project implementations ranging in size from small municipalities in Wisconsin to large metropolitan jurisdictions like New York City.

In the last eight years alone, we have successfully completed statewide vote tabulation system implementations in 19 states and have significant experience implementing voting solutions in large metropolitan jurisdictions like New York City, Los Angeles County, Washington DC, San Francisco, Dallas County, Cuyahoga County, and Miami-Dade County.

ES&S has completed successful installations of statewide voting systems in Alabama, Arkansas, Georgia, Idaho, Iowa, Maine, Maryland, Minnesota, Mississippi, Montana, Nebraska, New

Mexico, North Carolina, North Dakota, Rhode Island, South Carolina, South Dakota and West Virginia.

Except for those limited itemized items (set forth in our Transmittal Letter) which ES&S requests the opportunity to discuss with the State in the event it is the successful responder, ES&S understands and shall fully comply with the terms and conditions as set forth in RFP Section 2 Administrative Information.

Section 4.0 - Relevant Business Experience

You must provide adequate detail, including contacts of any state where you performed a multijurisdictional implementation of your product and served as the prime contractor. A minimum of three references should be submitted. Each implementation referenced must be in production and serve as the official system for the respective election jurisdictions. Information provided for additional implementations is encouraged. If you have implemented your proposed system in all jurisdictions (statewide) for a state, include the implementation as part of the required references.

Each referenced implementation must include both a primary and secondary client contact person, with name, current telephone, fax number and email address for each. For each referenced project, describe if the project was completed on time and within the original bid amount. If not, identify and explain any time and cost overages. Additionally, disclose any litigation you have been involved with over contract performance. CDOS reserves the right to contact and verify the quality of products and services and the degree of satisfaction with your performance, with any clients with whom you have been known to have conducted business.

Each reference should include the following information:
1) Description of the project
2) Reference contact information
3) Project timeline from start to finish (planned and actual)
4) Contract performance issues, if any
5) Quantity, type and version of voting equipment and software installed
6) Poll worker training provided
7) Election staff training provided
8) Support provided for early voting, election day voting and post-election activities
9) Any problems reported regarding election results accuracy and, if so, how handled
10) Any problems reported regarding equipment availability and, if so, how handled
11) Description of project management services you provided to the project

If the product you are proposing has not been implemented in a production environment (e.g. pending certification, implementation in process, etc.), please provide whatever information you can for this section regarding your business experience in the voting arena.

ES&S Response

ES&S has been producing and supporting voting system implementations for over 30 years and has gained valuable experience in understanding the intricacies and dependencies involved with these projects. With over 1,500 voting system project implementations completed in the last decade alone, ES&S is the industry leader in helping our customers implement a new voting system in their jurisdictions.

ES&S understands that good communication and attention to detail are required to be successful in projects of this size and magnitude. To address this, ES&S has developed resources and

processes that help assure successful product implementations. ES&S maintains the industry's most experienced team of voting system implementation and support experts, and realizes that each jurisdiction is unique, with its own unique challenges and complexities. ES&S understands the importance of recognizing these complexities early in the project to ensure that if adjustments are needed they are made in a timely manner so that the project remains on course. This deep understanding of project scope and project planning involved with elections emphasizes the knowledge and proficiency that is provided by ES&S.

Following are six multijurisdictional implementations that showcase ES&S' experience and expertise.

Implementation Reference #1:

Client Organization Name and Address	**STATE OF GEORGIA** 2 Martin Luther King Jr. Drive Suite 802 Floyd West Tower Atlanta, Georgia 30334
Project Description	The State of Georgia purchased a complete turnkey election solution for all 159 of its jurisdictions. The purchase included software, hardware and services.
Primary Contact Name, Telephone, Fax Number and Email Address	Linda Ford, Director, Elections Division Tel: 404-656-2871 Fax: 404-651-9531 lford@sos.ga.gov
Secondary Contact Name, Telephone, Fax Number and Email Address	Michael Barnes, Director, Center for Election Systems (Kennesaw State University) Tel: 770-423-6900 Fax: 770-423-6905 Email: mbarne28@kennesaw.edu
Secondary Contact Name, Telephone, Fax Number and Email Address	Cam-Anh Le, Deputy Director of Elections, Legal Counsel Elections Division Tel: 404-656-2871 Fax: 404-656-0513 Email: elections@sos.ga.gov
Project Timeline Start to Finish (Planned and Actual)	Planned: May 2002 – November 2002 Actual: May 2002 – November 2002
Within Original Bid Amount?	Yes
Contract Performance Issues (Including Litigation	We have been a provider and partner with the State of Georgia since 2002. We are pleased to say that we have

Involvement)	never been involved or engaged in any form of litigation or contract dispute with the State of Georgia.
Quantity, Type and Version of Voting Equipment and Software Installed	Implementation of 26,575 TSX units, 695 AVOS and 7052 ExpressPolls (GEMS version 1.18.24)
Poll Worker Training Provided	We worked with the State to provide poll worker training services. In some areas we conducted "Train the Trainer" training which allowed a county official to conduct their own training and in other areas we provided all of the training for a particular jurisdiction.
Election Staff Training Provided	We trained the election staff personnel in all 159 counties.
Support Provided for Early Voting, Election Day Voting and Post-Election Activities	Yes, during the initial service period of the contract all of these services were provided as part of the contract. Today, the vast majority of the counties are self sufficient in this area, however, we continue to offer a full suite of support services for those customers who desire to obtain additional resources to support their own county staff.
Any Problems Reported Regarding Election Results Accuracy and, if so, How Handled	There have been no confirmed election results accuracy issues. From time to time a constituent or candidate may raise concerns over the use of DRE technology in the State of Georgia, however, to date the system has performed with complete accuracy.
Any Problems Reported Regarding Equipment Availability and if so, How Handled	There have been zero equipment availability issues in the State of Georgia for the last 13 years. At ES&S it is our goal is to fully sustain our clients' hardware throughout the entire life of the product.
Description of Project Management Services Provided to the Project	During the contact inception, a full range of services were provided to the project including training, testing, voter education, ballot layout, ballot printing, L&A support, etc. Today, 13 years later, we continue to employ a full time ES&S associate who resides in the State of Georgia for the sole purpose of serving as direct resource for the State and its counties. This dedicated resource is provided at no cost to the State.

Implementation Reference #2:

Client Organization Name and Address	**STATE OF NEBRASKA** 1445 K Street Suite 2300 Lincoln, Nebraska 68508
Project Description	Statewide Implementation of M650 Central Scanners, M100 Precinct Scanners and AutoMARK ADA ballot marking devices.
Primary Contact Name, Telephone, Fax Number and Email Address	Neal Erickson, Director Tel: 402-471-4127 Fax: 402-471-7834 Email: neal.erickson@sos.ne.gov
Secondary Contact Name, Telephone, Fax Number and Email Address	Becky Richter, Election Official Tel: 402-471-4168 Fax: 402-471-7834 Email: becky.richter@sos.ne.gov
Project Timeline Start to Finish (Planned and Actual)	Planned: October 2005 – November 2006 Actual: October 2005 – November 2006
Within Original Bid Amount?	Yes
Contract Performance Issues (Including Litigation Involvement)	None
Quantity, Type and Version of Voting Equipment and Software Installed	Implementation of 69 M650 Central Scanners, 172 M100 Precinct Scanners, and 1366 AutoMARK ADA ballot marking devices (installed UNITY version 2.4.3, current UNITY version 3.0.1.1)
Poll Worker Training Provided	We provided "Train the Trainer" sessions to the counties, as requested in the bid.
Election Staff Training Provided	We provided regional hardware and software training sessions as requested in the bid.
Support Provided for Early Voting, Election Day Voting and Post-Election Activities	Yes, regional support personnel were provided in 2006.
Any Problems Reported Regarding Election Results	None

Accuracy and, if so, How Handled	
Any Problems Reported Regarding Equipment Availability and if so, How Handled	None
Description of Project Management Services Provided to the Project	The ES&S Project Manager handled overall planning of equipment delivery, installation and training as well as coding events for the 2006 cycle.

Implementation Reference #3:

Client Organization Name and Address	**STATE OF NORTH DAKOTA** 600 E. Boulevard Avenue Department 108 Bismarck, North Dakota 58505
Project Description	Statewide Implementation of M650 Central Scanners, M100 Precinct Scanners and AutoMARK ADA ballot marking devices.
Primary Contact Name, Telephone, Fax Number and Email Address	Jim Silrum, Election Official Tel: 701-328-3660 Fax: 701-328-2992 Email: jsilrum@nd.gov
Secondary Contact Name, Telephone, Fax Number and Email Address	Lee Anne Oliver, Elections Specialist Tel: 701-328-4146 Fax: 701-328-3413 Email: loliver@nd.gov
Project Timeline Start to Finish (Planned and Actual)	Planned: Phase 1: 2004 election cycle Phase 2: 2006 election cycle Actual: Phase 1: 2004 election cycle Phase 2: 2006 election cycle
Within Original Bid Amount?	Yes
Contract Performance Issues (Including Litigation Involvement)	None
Quantity, Type and Version of Voting Equipment and Software	Implementation of 600 M100 Precinct Scanners, 600 AutoMARK ADA ballot marking devices, and 54 UNITY Suite licenses (installed UNITY version 2.4.3, current

Installed	UNITY version 3.2.1.2)
Poll Worker Training Provided	Yes
Election Staff Training Provided	Yes
Support Provided for Early Voting, Election Day Voting and Post-Election Activities	Yes, varying by county needs
Any Problems Reported Regarding Election Results Accuracy and, if so, How Handled	None
Any Problems Reported Regarding Equipment Availability and if so, How Handled	None
Description of Project Management Services Provided to the Project	ES&S Project Manager handled overall planning of equipment delivery, installation and training, as well as coding events for the implementation.

Implementation Reference #4:

Client Organization Name and Address	**HENNEPIN COUNTY, MINNESOTA** 300 S. Sixth Street Minneapolis, Minnesota 55487
Project Description	Implementation of DS850 Central Scanners, DS200 Precinct Scanners and Electionware software.
Primary Contact Name, Telephone, Fax Number and Email Address	Ginny Gelms, Interim Elections Manager Tel: 612-348-9289 Fax: 612-348-2151 Email: Virginia.gelms@co.hennepin.mn.us
Secondary Contact Name, Telephone, Fax Number and Email Address	Kristin Reid, Voting System Specialist Tel: 612-596-7153 Fax: 612-348-2151 Email: Kristin.reid@co.hennepin.mn.us
Project Timeline Start to Finish (Planned and Actual)	Planned: Ongoing - began June 2013, contract terminates December 2019 Actual: Ongoing - began June 2013, contract terminates

	December 2019
Within Original Bid Amount?	Yes
Contract Performance Issues (Including Litigation Involvement)	No
Quantity, Type and Version of Voting Equipment and Software Installed	1 DS850, 24 DS200 Precinct Scanners, originally implemented at UNITY version 3.4.0.1 and then upgraded to Electionware version 5.1.0.0 with BOD solution
Poll Worker Training Provided	Conducted "Train the Trainer" training at customer locations.
Election Staff Training Provided	Yes
Support Provided for Early Voting, Election Day Voting and Post-Election Activities	Yes
Any Problems Reported Regarding Election Results Accuracy and, if so, How Handled	None
Any Problems Reported Regarding Equipment Availability and if so, How Handled	None
Description of Project Management Services Provided to the Project	ES&S oversaw hardware delivery and acceptance testing, conducted and coordinated Election Staff training for county and city staff, assisted with Logic & Accuracy testing, Election Day and post election support for RCV.

Implementation Reference #5:

Client Organization Name and Address	**STATE OF SOUTH DAKOTA** 500 E. Capitol Avenue Suite 204 Pierre, South Dakota 57501
Project Description	Statewide implementation of M650 Central Scanners, M100 Precinct Scanners and AutoMARK ADA ballot marking devices.
Primary Contact Name,	Brandon Johnson, Senior Elections Coordinator

Telephone, Fax Number and Email Address	Tel: 605-773-5003 Fax: 605-773-6580 Email: brandon.johnson@state.sd.us
Secondary Contact Name, Telephone, Fax Number and Email Address	Jason Gant, Secretary of State Tel: 605-773-3537 Fax: 605-773-6580 Email: jason.gant@state.sd.us
Project Timeline Start to Finish (Planned and Actual)	Planned: November 2005 – November 2006 Actual: November 2005 – November 2006
Within Original Bid Amount?	Yes
Contract Performance Issues (Including Litigation Involvement)	None
Quantity, Type and Version of Voting Equipment and Software Installed	28 M650 Central Scanners, 48 M100 Precinct Scanners, and 658 AutoMARK ADA ballot marking devices (installed UNITY version 2.4.3, current version 3.0.1.1)
Poll Worker Training Provided	ES&S provided "Train the Trainer" sessions to the counties so each county could train their own poll workers.
Election Staff Training Provided	ES&S provided 18 regional training sessions at nine locations with hands-on practice with all equipment.
Support Provided for Early Voting, Election Day Voting and Post-Election Activities	Yes, support personnel stationed throughout the state
Any Problems Reported Regarding Election Results Accuracy and, if so, How Handled	None
Any Problems Reported Regarding Equipment Availability and if so, How Handled	None
Description of Project Management Services Provided to the Project	The ES&S project manager (and part-time assistant) facilitated the overall planning, communication, management and coordination of ES&S services and contract adherence. Responsibilities included gathering of customer requirements, development of a mutual project calendar and statement of work, written and verbal status updates, change

	order management, training coordination, ES&S staff coordination, contract milestone achievement and acceptance sign-off, invoicing, etc.

Implementation Reference #6:

Client Organization Name and Address	**STATE OF SOUTH CAROLINA** 2221 Devine Street Suite 105 Columbia, South Carolina 29250
Project Description	Statewide implementation of M650 Central Scanners, M100 Precinct Scanners and iVotronic ADA devices.
Primary Contact Name, Telephone, Fax Number and Email Address	Marci Andino, Director Tel: 803-734-9001 Fax: 803-734-9366 Email: marci@elections.sc.gov
Secondary Contact Name, Telephone, Fax Number and Email Address	Howard Snider, Director of Voter Services Tel: 803-734-9060 Fax: 803-734-9366 Email: hsnider@elections.sc.gov
Project Timeline Start to Finish (Planned and Actual)	Planned: June 2004 – November 2006 Actual: June 2004 – November 2006
Within Original Bid Amount?	Yes. We are proud to say that the project came in under budget.
Contract Performance Issues (Including Litigation Involvement)	None
Quantity, Type and Version of Voting Equipment and Software Installed	11 M650 Central Scanners, 50 M100 Precinct Scanners, and 9,923 iVotronics (installed UNITY version 2.4.2, current UNITY version 3.0.1.1)
Poll Worker Training Provided	Yes
Election Staff Training Provided	Yes
Support Provided for Early Voting, Election Day Voting and Post-Election Activities	Yes

Any Problems Reported Regarding Election Results Accuracy and, if so, How Handled	None
Any Problems Reported Regarding Equipment Availability and if so, How Handled	None
Description of Project Management Services Provided to the Project	ES&S used a tiered approach with one State project manager and one assistant State project manager, three regional project managers, and 15 project managers that handled three to four counties each. We provided the coding, training and support for all counties.

Section 5.0 – Prior Proposals

5.3.7 Prior Proposals

Vendor must disclose any voting system projects in which the Vendor has submitted bids or proposals (as prime or sub) for consideration by a state or territory between July 2008 and the date of this RFP.

Vendors proposing a solution to a single element (e.g. Mail Ballot Tracking solution) of this RFP shall identify proposals in which the vendor offered similar bids or proposals in the past 5 years. At a minimum, this information must include:

1) State or territory

2) Contact name, telephone and email address

3) Date proposal submitted

4) Result of your bid

5) Brief description of your proposal

ES&S Response

Please see the listing below.

State or Territory	Contact Name	Telephone	Email Address	Date Proposal Submitted	Result of Bid	Brief Description of Proposal
Commonwealth of Virginia	Ebony Beaver	(804) 786-8425	ebony.beaver@dgs.virginia.gov	10/3/2013	Pending award	Statewide vote tabulation system pricing agreement.

State or Territory	Contact Name	Telephone	Email Address	Date Proposal Submitted	Result of Bid	Brief Description of Proposal
State of New Mexico	Terry Davenport	(505) 470-1428	Terry.Davenport3@state.nm.us	7/30/2013	Lost	Statewide vote tabulation system pricing agreement. Replace existing Model 100, Model 650, and software in 33 counties.
State of Maine	Julie Flynn	(207) 624-7650	julie.flynn@maine.gov	8/20/2013	Won	Statewide lease of voting equipment. Five year contract. Replaced existing Eagles with 400-DS200 tabulators and software.
Virgin Islands	John Abramson, Jr.	(340) 773-1021	abramsonjohn1@hotmail.com	11/22/2011	Won	Replace existing 203-Shouptronic DRE devices with DS200 optical scan tabulation system and software.
State of Michigan	Tom Luitje	(517) 241-2541	luitjet@michigan.gov	4/26/2011	Won	8-yr contract for Extended Warranty and Support for over 1,600 state jurisdiction vote tabulation system.
District of Columbia	Cliff Tatum	(202) 727-6511	ctatum@dcboee.org	1/15/2010	Won	Replace existing vote tabulation system with new 175-optical scan, 200-DRE, and software.
State of Oklahoma	Laura Bybee	(405) 522-1037	laura_bybee@dcs.state.ok.us	10/12/2010	Lost	2,800-DS200, 2,650-plastic ballot boxes, 2,500 UVC, 5-DS850, 92-Electionware licenses, plus services

State or Territory	Contact Name	Telephone	Email Address	Date Proposal Submitted	Result of Bid	Brief Description of Proposal
State of Maryland	Donna Wiltshire	(410) 269-2863	dwiltshire@elections.state.md.us	9/4/2009	Bid Cancelled by State	2083-DS200, 34-M650, Unity EMS -Statewide

Section 6.0 – Project Approach; 6.1 Project Management

CDOS envisions a multi-year conversion to the new UVS. Colorado counties have voting equipment supplied by various vendors over the past several years. Some counties are in more urgent need to convert to the new UVS than others. This need, along with budget considerations, will influence the implementation scheduling of the new UVS.

Provide your proposed approach to managing the effort of converting all Colorado counties to a new UVS. Your approach, at a minimum, should address the following aspects of the Colorado UVS project.

5.3.8.1 Project Management

Describe the approach to project management that you propose for managing the Colorado UVS project. You may use *RFP Appendix D – Statement of Work, Track 1: Project Management* as a guide.

ES&S RESPONSE

The ES&S Project Team will manage the project pursuant to the Project Management Institute's project management principles. The team will utilize industry and PMBOK best practices and will be supported by a strong team of subject matter experts, security experts, Certified Project Management Professionals (PMPs), certified technicians, technical liaisons and various other resources to provide quality support and sound project management. Where appropriate, the ES&S Project Team will also incorporate practices, procedures and tools in accordance with other project management methodologies specified by the State of Colorado. The ES&S PMO approach to elections project management emphasizes simplicity, consistency and clarity in project reporting, ensuring all project stakeholders are regularly updated and have easy access to critical project information.

The project will initiate with a series of kick-off meetings to finalize specific details around the various project deliverables. The result of this effort will be a Draft Project Plan that will be provided to the State for review and feedback. Ultimately the Project Plan will be finalized, and then subsequently updated throughout the life of the project. Additional details regarding the ES&S project management plan and approach are included in the Preliminary Project Plan included in **Section 10.0, Preliminary Project Schedule and Staffing Plan**.

Section 6.0 – Project Approach; 6.2 UVS Software

CDOS envisions a multi-year conversion to the new UVS. Colorado counties have voting equipment supplied by various vendors over the past several years. Some counties are in more urgent need to convert to the new UVS than others. This need, along with budget considerations, will influence the implementation scheduling of the new UVS.

Provide your proposed approach to managing the effort of converting all Colorado counties to a new UVS. Your approach, at a minimum, should address the following aspects of the Colorado UVS project.

5.3.8.2 UVS Software

Provide a detailed description of the software proposed for the Colorado UVS. Describe your desired process for clarifying requirements and determining gaps between your software solution and the system requirements of CDOS.

ES&S Response

The ES&S proposed Election Management Software is powerful, intelligent, and efficient. The objectives underlying every line of code in these products are security, usability, and productivity. Security is achieved through conformance to VVSG 2005 Standards, integrated warning and alerts; user roles; and data encryption and digital signatures. Usability is achieved through a single common interface, well known patterns, immediate feedback, and integrated help solutions. Productivity is gained from automation vs. repetition, reuse of previous elections, built in election and ballot templates, and streamlined processes.

Ideally for any requirements gaps elicitation, ES&S will meet with both State of Colorado representatives and county users to ensure that we obtain a complete understanding of the state and county needs; and to determine the best implementation to fulfill those needs. One of the intrinsic strengths of ES&S is our commitment to our clients throughout the life of our products. It is our practice to maintain an ongoing communication with users, and to hold user group focus meetings where we demonstrate solution prototypes and gather feedback before the final implementation of product changes. These face to face meetings with hands-on product demonstrations have proven to be an excellent way to truly comprehend user requirements. This process is utilized for both software and hardware products, and includes product owners, development architects, and subject matter experts. The process has proven to be extremely productive for ES&S and our customers at both the state and county levels.

OUR PROPOSED SOFTWARE FOR STATE OF COLORADO

Intelligent by design, **Electionware,** ES&S' integrated, election management system solution, found in EVS 5.2.0.0, provides end-to-end election management activities through a powerful and intuitive user interface. Built on strengths of 40+ years of election software development experience, its efficient and flexible design enables jurisdictions of all sizes to effectively manage their elections.

Electionware is modular and customizable; depending upon the licenses applied to the program, components can be turned on and off based on user profiles and equipment types.

Organized as a collection of features/actions based on work flow of elections, the user will find Electionware easy to learn and master due to the familiar and conventional windows design.

Electionware is a fully integrated election management software application that allows customers to carry out election management tasks through a single uniform user experience. It has a powerful and intuitive user interface and a single, common relational database.

Electionware offers an efficient and flexible user experience that supports small to large jurisdictions. It is designed for a range of user types – from advanced frequent users to novice infrequent users. Electionware also was designed to address as well as incorporate election trends such as early voting, vote centers, electronic ballot image handling, and adjudication.

Electionware uses automation instead of repetition. Reuse of previous election data instead of duplicative data entry, and built-in election and ballot templates instead of recreating ballot templates each new election, enables election administrators to create error-free elections in less time. It also has integrated warning and alerts and configurable levels of security based on the customer requirements.

Electionware – created to be an intelligent application of customizable components – is made up of groups and modules. The Electionware groups contain several complementary functions called modules and are defined by workflow. Electionware modules are a set of functions specific to the workflow and can be distributed separately, depending on customer setup.

ELECTION SETUP

The election definition is set up through the Electionware **Capture** module. The Capture module provides a single-entry database that stores all of a jurisdiction's poll, office and candidate information. The Capture module is used in conjunction with the rest of Electionware and other EMS software to format and print ballots, program ballot scanning equipment, and produce Election Day reports.

Capture enables you to add languages (including audio), add language groups, add a party, add polls and registered voters, add district types and districts, assign polls to districts, add headings, add contests, add voting locations and assign polls to them and generate ballot styles via the Manage menu bar.

Capture's Tools menu bar enables you to select your equipment, set election preferences, import election data, import and export ballot translations, edit election options, set user preferences and more.

Once this process is completed and proofed, ballot styles are automatically created and assigned to the respective polls. The election files are then created and used by the various vote tabulation devices and the Results Accumulation and Reporting subsystem. Users can print all required reports of poll, district/ward combinations, contest and ballot style listings, etc. from the Capture module.

The Capture module generates ballot styles based on information entered by the user. Ballots are coded with the following information:

- Ballot Style ID.
- Poll Number.
- Split Number.
- Party Number or Ballot Type.

After entering information for an initial election, it can be recalled and edited for all elections that follow. Once the election definition tasks are complete, the user continues to the other modules within Electionware to complete election set up activities.

PROOFING REPORTS

Multiple reports are available for proofreading in Electionware. Capture reports include the Poll Reports – reports that provide district and language group information; District Reports – poll and contest heading information; Voting Location Reports – summary and detail reports with voting location information; Ballot Style Reports – polls by style and style by polls reports detailing various ballot style information; and Data Verification Reports – various data verification information such as missing languages and missing translation reports.

To assist with audio product, the **Accessible Ballot** module generates a Missing Ballot Data Report and Missing Ballot Audio Files. These reports detail the data and audio that is still needed in order to have a complete audio election.

Configure reports include equipment settings reports for the DS200 as well as the Jurisdiction Ballot Style Listing and Ballot Detail Listing Report. The Package module has two reports to help with media management: the Media Creation Log Report and the Election Media by Voting Location report.

BALLOT DESIGN AND HARDWARE CONFIGURATION – ELECTIONWARE

Building on the strengths of ES&S' other EMS applications, Electionware's other modules make the administration of elections easier – and more efficient – than ever before.

Modules such as **Paper Ballot** enable you to import database information from the Capture module, and create various ballot types based upon the information in the election database. Using flexible options such as style sheets, users are able to create variable stylistic elements such as candidate, race, and heading information, as well as ballot graphics, and elector instructions.

Modules such as **Element Library** and **Accessible Ballot** enable you to create instructional and ballot audio for accessible users. Additionally, these same modules can be used to import

translations. Using these two modules, you will be able to create both visual and audio instructional elements for your accessible equipment, as well as visual and audio information for the ballot information (e.g. contests and candidates) as well. Using the scripts produced by these two modules, audio files can be created with ease. Additionally, the font and various other characteristics of the ballot can be changed to reflect how you want them to appear for the on-screen ballot associated with your accessible equipment.

Configure Equipment enables you to configure various aspects of tabulation equipment, and enables configurations to be changed in order to better meet your election needs. Additionally, using this module in conjunction with that of the **Package** module, all of the information entered in previous modules is used to create election data for your election, as well as create election media to be used in conjunction with your election tabulation equipment.

Lastly, the **Acquire** and **Produce** modules can be used to import ballot images from tabulators, review ballot images, as well as produce various reports to be utilized and reviewed after the close of Voting Day.

The Acquire module automatically generates results files in a data folder when results are loaded into Election Reporting Manager. Machine and results media status reports can then be printed from this Electionware module.

Election officials use the Produce module to:

- View and filter the list of provisional and non-provisional ballots included in loaded results.
- Process provisional ballots by flagging them as accepted or rejected, or escalated for further review.
- View, save and print HTML and XML versions of the Election Summary Results report.
- View, save and print machine logs.

BENEFITS OF ELECTIONWARE

✓ **Ease of use –** Electionware is an intuitive, easy-to-use EMS software application that does just what a customer wants . . . eliminating wasted effort on unnecessary tasks.

✓ **Single user interface –** Most of the multi-function modules are delivered through a single user interface, streamlining access to, and management of, information. Common database and customer-specific settings provide seamless movement between modules, simplifying execution of key tasks.

✓ **Online help system –** Electionware contains an interactive and comprehensive help system. With characteristics such as multimedia and updatable content, Electionware provides election personnel with extensive supplemental information and support.

✓ **Multi-user interface –** Multi-user Electionware functionality enables large jurisdictions to use authorized election personnel to simultaneously create poll media devices and enter information for the DS200, DS850, and ERM. Additionally, the multi-user functionality in Electionware allows multiple teams of election officials to simultaneously work on different elections. The Track Media Report can be used to determine poll media creation. This is a

great advantage to large jurisdictions, which are able to enter data and create media rapidly with many users as the events are recorded within the EMS.

- ✓ **Modernized technology, networked environment –** Electionware leverages the power of new technology, methods and networked environments that enables a multiple-user application.
- ✓ **Security –** Electionware incorporates the very latest in election security, including heightened audit controls and change management processes that are built in to make sure your election data is safe and secure.
- ✓ **Compliant with the latest voting systems standards –** Electionware meets known requirements of the U.S. Election Assistance Commission (EAC) 2005 Voluntary Voting Systems Guidelines.

The following is a summary of the organization of the Electionware Groups and Modules:

Election Definition – Define Group

Home module enables users to create and manage elections. The **Import Election Data** option can be used to import election data into the new election or to re-import election data into an already-existing election.

Capture module enables users to create the election database and manage elements such as wards, districts, poll places, contests and candidates. Using this information, the user can then generate ballot styles to be used in conjunction with other modules such as **Paper Ballot**.

Element Library module provides management for screen and audio system elements, such as party logos, election header graphics, and instructional elements such as system prompt translations and system prompt audio files.

Ballot Layout – Design Group

Paper Ballot is a desktop publishing tool that allows users to design and print ES&S digital scan paper ballots for the ballot scanning systems. **Paper Ballot** uses ballot style information created in the Capture module to display the WYSIWYG ballots. Users can then apply typographic formatting (font, size, attributes, etc.) to individual components of the ballot using style sheets. Additionally, text and graphic frames can also be added to the ballot for the inclusion of political party graphics, or necessary election instructions.

Accessible Ballot module provides the ability to format screen elements and create audio files for the AutoMARK Voter Accessible Terminal. These screen and audio elements provide the accessible voter with privacy and security, ensuring an efficient voting experience.

Configuring Equipment and packaging data – Deliver Group

Configure module sets up the parameters of how the election equipment (tabulators and/or ballot marking devices) will work. Here users can configure settings and security for the devices being used. Users can then generate the files and data that need to be placed on the tabulator or ballot marking device.

Package module packages and transfers the election definition to the appropriate media devices. This module enables you to create media for all of your tabulators and ballot marking devices.

Print module allows the user to print ballot on demand ballots at the election office and Early Voting poll locations.

Results Reporting – Results Group

Acquire module allows the user to load election results files, and view, print and export details about the loaded results. It can also be used to clear loaded results. Details about media storage devices encoded for the election can be viewed or exported to file. Election Properties and Acquire Status can be viewed in the Status tab. In addition, the Media Status and Machine Log Reports can be generated, viewed, saved to file and/or printed. If required, loaded results for a selected media storage device can be cleared from the database, or all loaded results can be cleared from the database.

Produce module enables the user to view and filter the list of ballot records included in loaded results, print ballot scan images and facsimiles, export the ballot records table or a set of ballot images and Cast Vote Records (CVRs); view, print and save ballot images and CVRs; view, print and save the Election Summary Results report in HTML or XML format.

Customer Definition – Manage Group

Set Up module provides customer definition and profile management, as well as user access management. The user also has the ability to set election code security strength, add state and municipality jurisdictions, and view User Reports, Admin Audit Event Reports, Election Audit Events Reports and an Access Codes Report.

Results Reporting – Election Reporting Manager

Election Reporting Manager (ERM) is ES&S' election results reporting program. ERM is used to generate paper and electronic reports for poll workers, candidates and the media.

ERM is designed to display updated election totals on a monitor as ballot data is tabulated. Report editing features enable the user to read data from a variety of ballot scanners, customize report formats, and generate accurate election results.

ERM is designed to support a wide range of ES&S ballot scanning equipment and can produce reports for both central count systems and poll-count systems. ERM also has the ability to output file formats for use in other systems.

The DS200 tabulator can report the results by precinct, by machine, and by vote convenience center.

Describe the programming language(s), along with version numbers, used to develop your system's software.

ES&S RESPONSE

ES&S Application(s)	Programming Language	Version Number
Election Reporting Manager (ERM) Utilities	C/C++	Visual Studio 2010
Election Reporting Manager (ERM)	COBOL	RMCobol v. 12.06
DS200	Java, C	Java is 1.6u27, C/C++ is gcc 4.0.3
DS850	C++	gcc compiler, version 4.0.3.
ExpressVote	C#, VB.NET, C++	Visual Studio Professional 2008 SP1, C# 3.0, VB.NET 9.0, .NET Compact Framework 3.5
Electionware	Java, C++, SQL	Java 1.6, Visual Studio 2010, PostgreSQL 9.1
Balotar Ballot on Demand	C++	1).NET Version - 3.5 2)Visual Studio - 2008 3)C# - 3.0

If your proposed application utilizes any 3rd party software, please identify such and explain how you will work with the 3rd party to resolve any problems.

ES&S RESPONSE

The election management system includes the following COTS software:

ELECTION MANAGEMENT SYSTEM		
Election Management System Software		
Windows 7 Professional	Microsoft Corporation	64-bit, SP-1
Windows Server 2008 R2	Microsoft Corporation	64-bit
Microsoft Patches (WSUS Offline Utility)	Microsoft Corporation	8.6
Symantec Endpoint Protection - Small Business Edition 2013	Symantec	12.1.3 (64-bit)
Adobe Acrobat Standard	Adobe	11

All required COTS is commonly used operating system or application software. ES&S customer support is the first point of contact for any issues encountered with ES&S configured systems. ES&S customer support representatives will assist with resolving any issues with installed third party items.

Describe your position on access to application source code by CDOS.

ES&S RESPONSE

ES&S does not provide its customers with access to its source code, however, ES&S maintains in escrow with Iron Mountain Intellectual Property Management, Inc., a copy of all program source code developed and used for our proprietary software and firmware, as well as any changes, modifications or updates to the source code. ES&S' tabulation customers are agreeable to this arrangement and it is our hope that this escrow policy would satisfy the State's needs as well. Should ES&S cease operations and become unable to maintain and support our proprietary software and firmware while under an obligation to do so, the State and/or its Counties who have entered into agreements with ES&S shall have the right to obtain the source code to the extent necessary to enable the State and/or its Counties to use ES&S' proprietary software and firmware in accordance with the terms of the final contract. Because the source code is key to the continued operation of ES&S' business and constitutes a trade secret, ES&S cannot otherwise agree to a release of the source code directly to the State or its Counties. ES&S will provide a copy of its software (in object code) to the State and/or its Counties for its use in conducting elections in the State.

Describe your position on escrowing your software. Also describe any processes, such as hash

ES&S RESPONSE

As a minimum, ES&S maintains escrows for all projects with Iron Mountain Intellectual Property Management, Inc. The following are included in each escrow:

- A copy of all program source code developed and used for our proprietary software and firmware.
- Documentation that identifies the Commercial-Off-The-Shelf (COTS) tool-set (Operating Systems, Compilers, etc.) that must be acquired in order to create the executable software and firmware.
- Documentation that describes the build procedure to follow when creating the executable software and firmware from the proprietary software and firmware.
- A technical data package (TDP) that includes the relevant Functional Descriptions, Hardware and Software Designs, and User Guides.

For federal (Election Assistance Commission – EAC) certified projects, each escrow will also include the following:

- A copy of all proprietary software and firmware as created using the program source code, COTS, and build procedure from above.
- Hard drive images captured as part of the build procedure.
    - Build Environment – COTS tool-set only
    - Loaded Source Code – Build Environment with program source code added
    - Created Executables – Loaded Source Code and the created proprietary software and firmware

During the EAC Certification process, all files are transferred from ES&S to the EAC approved Voting System Test Lab (VSTL) through a Secure File Transfer Protocol (SFTP) site. The SFTP site ensures that all information sent is encrypted using FIPS 140-2 compliant algorithms and cannot be modified during the transfer process. All file verification is performed by using 256-bit Secured Hash Algorithm (SHA-256) functions.

Section 6.0 – Project Approach; 6.3 UVS Hardware

CDOS envisions a multi-year conversion to the new UVS. Colorado counties have voting equipment supplied by various vendors over the past several years. Some counties are in more urgent need to convert to the new UVS than others. This need, along with budget considerations, will influence the implementation scheduling of the new UVS.

Provide your proposed approach to managing the effort of converting all Colorado counties to a new UVS. Your approach, at a minimum, should address the following aspects of the Colorado UVS project.

5.3.8.3 UVS Hardware

Provide a detailed description of the hardware proposed for the Colorado UVS. Describe your desired process for clarifying requirements and determining gaps between your hardware solution and the system requirements of CDOS.

ES&S Response

Ideally for any requirements gaps elicitation, ES&S will meet with both State of Colorado representatives and county users to insure that we obtain a complete understanding of the state and county needs; and to determine the best implementation to fulfill those needs. One of the intrinsic strengths of ES&S is our commitment to our clients throughout the life of our products. It is our practice to maintain an ongoing communication with users, and to hold user group focus meetings where we demonstrate solution prototypes and gather feedback before the final implementation of product changes. These face to face meetings with hands-on product demonstrations have proven to be an excellent way to truly comprehend user requirements. This process is utilized for both software and hardware products, and includes product owners, development architects, and subject matter experts. The process has proven to be extremely productive for ES&S and our customers at both the state and county levels.

Our proposed system for the State of Colorado, EVS 5.2.0.0, contains hardware comprised of the DS200 precinct scanner, DS850 high-speed central count, AutoMARK Voter Assistance Terminal, and ExpressVote voting device.

OUR PROPOSED HARDWARE FOR STATE OF COLORADO

DS200 Precinct Scanner

The DS200 – ES&S' leading edge precinct-based paper ballot scanner – combines the security, auditability and voter confidence of paper ballot voting with the increased accuracy and flexibility of a digital image scanner. The result of more than 40 years experience designing precinct-based optical scanning technology, the DS200's simple interface is supported by powerful digital image scan technology.

Figure 6.3.1 DS200 Precinct Scanner and Tabulator

To cast an official ballot, the voter selects the language they desire for screen instructions, inserts their marked paper ballot (or activation card for the ExpressVote), in any orientation, into the DS200 input slot, and follows the easy-to-read instructions, displayed in their language of choice, on the terminal's large 12-inch LCD touch screen.

The terminal scans the entire ballot (front and back), interprets voter selections and either accepts the ballot, adding votes to the system tally; or identifies and alerts the voter to any exception condition (undervotes, overvotes, blanks) with large, easy-to-read system messages and audible alerts. The DS200 provides instructions for resolving any ballot issue, vastly improving voter oversight and accountability and dramatically reducing the number of invalid ballots cast during your election.

DS200 — ADVANCED DIGITAL SCAN TECHNOLOGY

After a voter inserts a ballot, precise patented sensors simultaneously scan both sides of the ballot paper for the voter's selection marks. As the DS200 tabulates ballot choices, the scanner stores the cast vote record and a high-resolution image of the entire ballot to the inserted USB flash drive.

With the most accurate and reliable digital scan technology available, the DS200:

- ✓ **Safeguards voter intent —** The system captures and retains digital images of every scanned ballot for auditing and adjudication.
- ✓ **Ensures accurate results —** Patented image scanning technology provides exceptional mark recognition capabilities.
- ✓ **Accommodates flexible ballot design —** Advanced image technology provides unprecedented freedom in ballot format, supporting more length, width, ballot target and ballot graphic customization options than ever before.

DS200 — Security and Reliability

Like all ES&S ballot tabulation equipment, the DS200 is constructed using rugged, durable materials designed to withstand the wear and tear of frequent shipping to and from polling places. The terminal includes physical security features such as locking panels and security seals to secure sensitive components and election files, and a key-locked case for transport and shipping.

From concept to construction, ES&S adheres to industry-leading standards for quality and security. Designed to meet the rigorous security standards of the U.S. Election Assistance Commission (EAC) 2005 Voluntary Voting System Guidelines, the DS200 operating system controls, limits and detects unauthorized access to all critical system components. The system also implements state-of-the-art safeguards against losses of system integrity, availability, confidentiality and accountability. In addition, ES&S encrypted all DS200 data and operating code to prevent malicious tampering.

Additional security features include:

- ✓ **Data and system validation —** The DS200 provides easy validation for all resident firmware against certified versions and generates detailed audit and event logs to support system vetting.
- ✓ **Strong physical access controls —** Uniquely shaped keyed locks, security seals, and security screws eliminate system tampering during storage, transport and use. The DS200 includes a counterfeit ballot detection feature to reject unauthorized ballots.
- ✓ **Cancelled ballot identification —** The system prints a cancellation stamp on valid, cast ballots, preventing poll workers from accidentally scanning the same ballot twice.

DS200 — Features, Functions and Benefits

Table 1, following, provides key features and benefits of the DS200.

Feature	Function	Benefits
Proven technology	• ES&S based development of the DS200 on the Model 100 precinct-based ballot counter platform – a system with a 15-year record of proven, reliable operation and more than 33,000 Model 100 units in use around the world.	The DS200 is an intelligent, advanced, integrated solution. It features the latest digital image technology available on the market.

Feature	Function	Benefits
Security	• The DS200 carrying case (top portion of ballot box) can be sealed and locked with a key. • The USB media access door can be locked and secured with tamper-evident seals. • The device cannot be powered up without the control key (controlled by election manager). • The ES&S DS200 election definition is stored on a USB flash drive that is inside a locked compartment. The flash drive itself can employ a wire-type seal to add tamper evidence. The compartment door remains locked throughout the Election Day, and the flash drive will remain sealed in the DS200 until the time to download the encrypted and digitally signed results. • Both prior to and after use, additional seals can be used to secure the DS200 itself, as well as all ballot box compartments. • All administrative menu functions are security code protected. Password strength is user configurable. • System can print a cancellation stamp on valid cast ballots to prevent accidental/intentional dual scanning. • All data is digitally signed and encrypted.	DS200 security features ensure that only authorized election personnel can access ballots and the unit's USB memory stick, which is *critical to the integrity of any voting system.*
Second chance voting	• Detects and identifies blank, overvoted and undervoted ballots. • Displays a warning message on the terminal's large text 12-inch LCD display and plays an audible alerts. • Option to return ballot to voters when an error is detected is customizable during system configuration.	The DS200 includes ballot review functions designed to drastically reduce invalid ballots and *ensure that every ballot represents the voter's intent.*

Feature	Function	Benefits
Flexible ballot formatting	• Supports standard ballot sizes (11”, 14”, 17”, 19”). Also supports ExpressVote activation card sizes. • Grants complete control of all ballot elements including fonts, text size and alignment. • Accepts ballots in portrait and landscape format. • DS200 ballot layout software develops camera-ready artwork directly from the application. • Fully supports multiple ballot languages. • Supports response target placement on either the right or left of selection text.	The DS200 offers unprecedented freedom for ballot customization and formatting.
Extensive reporting capability	• Produces a Configuration, Ballot Status Accounting, and Zero Report at the opening of polls. • Produces a Results Report and Audit Log (if desired) at the poll closing. • Supports the option to suppress poll-closing reports.	The DS200 *secures all vote totals* before opening the polls, and generates extensive printed records of all system activity on Election Day.
Internal thermal printer	• Integrated printer generates system printouts on 3.15-inch wide thermal paper. • Drop-in paper rolls allow poll workers to change paper rolls in seconds. • Thermal printing technology eliminates ink/ribbon costs, maintenance and downtime.	The DS200 prints terminal-level vote totals and system audit reports directly from the terminal, enabling election officials to quickly report results to election central.

Feature	Function	Benefits
Reliability	• Internal battery supplies a minimum of 2 hours continuous use in the event of power failure. • Environmentally friendly, internal lithium ion battery requires no special maintenance. • Seamless transition from AC to DC power. • Check and charge batteries without turning the unit on. • Stores all votes and election configuration files to an external USB flash drive (up to 8 GB). If a terminal fails, poll workers simply transfer the stick to a back up unit and seamlessly continue voting. • Backup USB flash drive available to store all vote data from primary drive at poll closing. • ES&S systems are designed to meet a target Mean Time Before Failure (MTBF) rate of 163 hours.	The DS200 backup memory and power supply ensure that *no votes are ever lost* due to power loss or equipment failure. The battery obtains its charge automatically from the system's power supply with no poll worker intervention required to switch from AC to DC power. Results storage to an external solid-state flash memory device (USB flash drive) prevents power surges or terminal malfunctions from effecting recorded results.

DS200 —
FLEXIBLE BALLOT – BALLOT SIZE AND TARGET CAPABILITIES

Unlike other poll-based paper ballot counters, the DS200 supports a wide range of ballot styles and designs — allowing you to dictate the size and format of your ballot rather than your ballot scanning equipment. The following chart illustrates the benefits the DS200's flexible ballot features.

DS200 flexible ballot — supported features
• Supports paper width of 8.5 inches
• Supports ballot page lengths of 11, 14, 17, and 19 inches (with 1 or 2 inch stubs)
• Accepts ballots formatted in portrait or landscape orientation.
• Supports target area with check marks, Xs, or slashes to the right or left of selection.

DS200 — BATTERY SPECIFICATIONS

The DS200 uses an environmentally friendly, internal lithium ion battery that requires no special maintenance. Batteries can be checked and charged without turning the unit on. The battery obtains its charge automatically from the system's power supply, and no poll worker intervention required to switch from AC to DC power.

The DS200 is capable of operating on battery backup power for at least three hours and much longer depending upon the actual volume of usage in the polling place.

The unit's backup memory and power supply ensure that no votes are ever lost due to power loss or equipment failure.

Figure 6.3.2 DS200 backup battery

ES&S AutoMARK® VAT (Voter Assisted Terminal)

The AutoMARK Voter Assist Terminal is designed for jurisdictions that want all voters, including disabled voters, to utilize a paper ballot voting system. The AutoMARK assists the disabled voting community to mark an optical scanned ballot when the voter is visually impaired, physically disabled, or more comfortable reading or hearing instructions and choices in an alternative language.

Blind Voter Using Headphones to Vote Unassisted

The ES&S AutoMARK VAT System

The touch screen and navigational keypad buttons are interconnected and can be used to complete all required operations. On the touch screen interface, various colors and accessibility-enhancing effects have been chosen to prompt and guide the voter. These digital buttons meet all applicable guidelines regarding size and readability. The navigational keypad has been tested and modified through consultation with special needs groups. The keys are arranged to allow for an intuitive voting session. Each key has both Braille and printed text labels designed to indicate function and a related shape to help the voter determine its use.

- Arrow keys are used to indicate up, down, left, and right.
- The square key serves as an "enter" key.
- The diamond-shaped key allows for the screen to be turned on or off.
- The round key is used to repeat audio instructions.
- Two sets of long oval keys are used to vary the volume and tempo of audio instructions.

Regardless whether the voter uses the touch screen or audio interface, changes can easily be made throughout the voting process by simply navigating back to the appropriate screen and selecting the change.

ES&S AutoMARK — Features, Functions and Benefits

Table 1, following, provides key feature and benefits of the ES&S AutoMARK:

Features	Functionality	Benefits
HAVA Compliant Optical Scan Voting	• Multiple user interfaces including touch screen, Braille-embossed keypad, sip-and-puff tube, foot pedal, or other 2-way switch; • Audio ballots via text-to-speech or .wav files; • Voter selected speed, tone; • High-visibility on-screen ballots; and • Voter-selected font size and contrast settings.	The ES&S AutoMARK VAT allows blind, low-vision, and limited-dexterity voters to privately listen to instructions and ballot choices in a volume, tone, and speed level comfortable to them, able to cast their vote unassisted, thereby maintaining their privacy and anonymity.
Real-Time Paper Trail	• Marks conventional optical scan paper ballots; and • Processes ballots cast by disabled voters at the same time and in the same manner as all other ballots cast on Election Day.	The ES&S AutoMARK VAT is the only voting system available in today's market that allows jurisdictions to maintain hard copies of ballots marked on ADA-compliant systems.
Privacy and Accuracy	• Multiple user interfaces — including visual, audible, tactile-touch and sip-and-puff — allow a disabled voter to make ballot selections unassisted; and • Allows blind and low-vision voters to re-insert ballots prior to casting for confirmation that choices were marked as they intended to vote.	The ES&S AutoMARK VAT ensures accessibility for all voters, and that blind or low-vision voters can vote with complete privacy and anonymity.
Summary Page Verification Process	• Presents voters with the option to review choices, modify / change selections, or fill in any skipped races prior to the ballot printing; • Unique software applications ensure that only the proper number of candidates is chosen for each race.	The ES&S AutoMARK VAT reduces the risk of undervoting and prevents overvoting, marginally marked, and incorrectly marked ballots.
Multilingual Capability	• Multiple languages can be stored on a single machine for use with both audio and visual ballots.	The ES&S AutoMARK VAT ensures that all citizens in a diverse population exercise their

Features	Functionality	Benefits
	• AutoMARK supports any language created by studio voices or synthetic language software utilities.	privilege to vote unassisted in their native language.
Absentee, Early and Provisional Voting	• Contains all ballots within a jurisdiction; • Provisional voting is supported; and • Absentee voters can use the ES&S AutoMARK at pre-determined locations.	The ES&S AutoMARK VAT simplifies the process of providing ADA compliant advance, absentee, and provisional voting jurisdiction-wide without changing existing optical scan equipment or processes.
Poll Opening and Closing	• No special procedures required for opening or closing polls; and • Audit logs provide operational information and time / date stamps for printed ballots.	The ES&S AutoMARK VAT makes it easy for poll workers to set up an ADA-compliant voting station for limited vision or dexterity voters.

ExpressVote®

ExpressVote combines paper-based voting with touch screen to create a breakthrough in voting solutions. Used in early vote centers and on Election Day in precincts or in vote centers, the ExpressVote handles it all. No longer must election officials guess the number of ballots to print — instead, a Vote Session Activator™ is printed with a barcode which determines the ballot style presented on the touch screen.

Accommodating to various election needs, this system can serve all voters, even those with special needs, allowing voters to vote autonomously with tabulation done in the exact same manner. A feature-rich system, ExpressVote is for people with or without visual impairments, hearing issues, and physical accommodations.

Figure 6.3.3 ExpressVote voting device

MULTIPURPOSE STATE-OF-THE-ART TECHNOLOGY

ExpressVote is an early voting, Election Day and ADA solution. This device is built for high-volume in-person early voting, in addition to allowing people with disabilities to privately and independently cast their vote.

- **Vote session activator —** The voter receives a voting session activator card to begin the process. The ExpressVote reads a barcode indicating which ballot style is presented to the voter. Once all selections are made, a readable record is produced, which can be tabulated on the DS200 or DS850.
- **Easy to set up and use —** One-step start-up and poll closing procedure makes the ExpressVote an ideal device for poll workers. The intuitive design offers streamlined simplicity for all voters, poll workers and election staff.
- **Innovative design –** Complete and total independence is maintained while the voter casts their own record. A voter's selection changes will not spoil their voting session.
- **Controlled and reduced costs —** Traditional ballot printing costs can be reduced significantly by eliminating the need and expense for pre-printed paper ballots. With low operation and maintenance fees, budgeting for recurring expenses becomes easy with the ExpressVote.

EXPRESSVOTE — ACCESSIBILITY

The touch screen and navigational keypad buttons are interconnected and can be used to complete all required operations. On the touch screen interface, various colors and accessibility-enhancing effects have been chosen to prompt and guide the voter. These digital buttons meet all applicable guidelines regarding size and readability.
The navigational keypad has been tested and modified through consultation with special needs groups. The keys are arranged to allow for an intuitive voting session. Each key has both Braille and printed text labels designed to indicate function and a related shape to help the voter determine its use.

Regardless whether the voter uses the touch screen or audio interface, changes can easily be made throughout the voting process by simply navigating back to the appropriate screen and selecting the change.

ES&S has a strong development history of innovative solutions for people with disabilities. From concept to construction, ES&S adheres to industry-leading standards for quality and design. ExpressVote meets and exceeds the more rigorous 2005 Voluntary Voting Systems Guidelines for usability, accessibility and security requirements

EXPRESSVOTE — VOTER FLOW

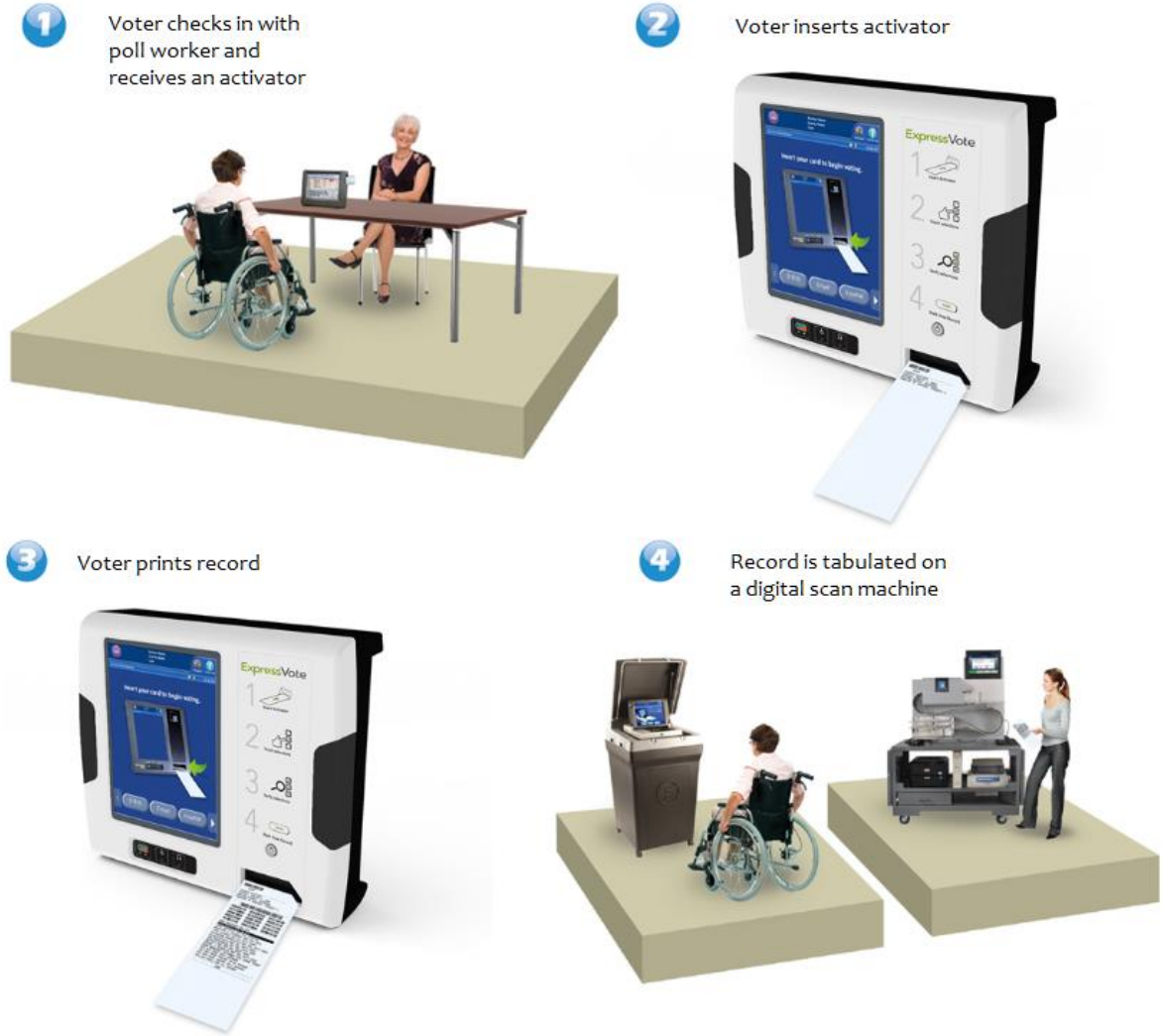

Figure 6.3.4 ExpressVote Voter Flow

EXPRESSVOTE — FEATURES, FUNCTIONS AND BENEFITS

Features	Functionality	Benefits
Accessibility	• Multiple user interfaces including touch screen, Braille-embossed keypad, sip-and-puff tube, foot pedal or other two-way switch. • Audio voting session via text-to-speech or .wav files. • Voter selects speed, tone and volume. • High-visibility on-screen ballots. • Voter-selected font size and contrast settings.	The ExpressVote allows blind, low-vision, and limited-dexterity voters to privately listen to instructions and selections in a volume, tone and speed level comfortable to them, able to cast their vote unassisted, thereby maintaining their privacy and anonymity.
Verifiable vote record	• Marks paper record used for tabulating by the DS200 digital precinct scanner or DS850 high-speed central count scanner. • More densely populated card (24 columns) vs. current 3 columns on a conventional ballot, saving time, pages and traditional ballot printing costs.	Allows jurisdictions to maintain hard copies of vote records marked on ADA-compliant systems.
Internal thermal printer	• Integrated printer generates vote record on 4 ½-inch x 11, 14, 17 and 19-inch paper. • Thermal printing technology eliminates ink/ribbon costs, maintenance and downtime.	Eliminates ink and toner expenses.
Summary page verification process	• Presents voters with the option to review choices, modify/change selections, or fill in any skipped races prior to printing the record. • Unique software applications ensure that only the proper number of candidates is chosen for each race.	Reduces the risk of undervoting and prevents overvoting, marginally marked, and incorrectly marked selections.
Multilingual capability	• Multiple languages can be stored on a single machine for use with both audio and visual voting sessions.	Ensures that all citizens in a diverse population exercise their privilege to vote in their native

Features	Functionality	Benefits
		language.
Poll opening and closing	• No special procedures required for opening or closing polls. • Audit logs provide operational information and time/date stamps for printed vote records.	Easy for poll workers to set up and close down.

DS850 Central Scanner

The DS850 is the sixth-generation, industry-leading central count tabulator built from the knowledge gained from 40+ years of central count election experience. The DS850 combines high-speed digital imaging technology with configurable ballot sorting to deliver unmatched ballot throughput (300 14-inch ballots per minute) – even with sorted ballots. In addition, the DS850 was designed by Election Systems & Software, LLC (ES&S), the leader in election technology, to provide complete physical and system security, auditability and accuracy.

Figure 6.3.5 DS850 Central Scanner

With a 15-inch LCD touch screen display and a clear, easy-to-use user interface, scanning ballots on the DS850 is as simple as placing the stack of ballots on the scanner and pressing **START**. The DS850 can be completely configured using ES&S' Electionware® software, which downloads the scanner's configuration settings as part of the digitally signed and encrypted election definition. These settings can also be configured directly on the machine through access code-protected administration screens. Status and settings are clearly displayed on the large touch screen display, and the user interface prompts the operator at every step – greatly reducing learning time, as well as questions and errors.

SUPERIOR BALLOT HANDLING AND SORTING WITH TRUGRIP®

With three configurable output bins, the DS850 is capable of separating ballots based on multiple criteria – including overvotes, blanks, write-ins, and undervotes – all without any loss of throughput. In addition, ES&S' TruGrip ballot handling system features:

✓ **Motorized input tray** — The motorized input tray provides constant pressure throughout the scanning of a large stack of ballots – even on folded ballots. This provides consistent ballot processing throughout the run.

- **Advanced pick mechanism** — Five pick rollers, along with counter-rotating belts, provide unparalleled reliability in processing even folded and damaged ballots and virtually eliminate double feeds.
- **Motorized main output tray** – Reliably outstacks even folded ballots, greatly reducing jams.
- **S-curve design** — With the patented (US Patent # 8,261,984) S-curve transport design, the DS850 provides the real-time sorting of ballots at speeds previously achieved only by non-image-based OMR systems, while keeping the unit more compact and maneuverable. In addition, double rollers in the transport and triple rollers in the imaging area mean the ballots are fully controlled throughout the process, and are reliably imaged for later tabulation.

DS850 — ACCURACY AND SECURITY

The DS850 Central Count Scanner and its partner, the DS200® Precinct Scanner, provide full image-based scanning with unparalleled accuracy by using ES&S' patented Intelligent Mark Recognition (IMR).

From concept to construction, ES&S adheres to industry-leading standards for quality and security. Designed and federally certified to meet the rigorous security standards of the 2005 Voluntary Voting System Guidelines, the DS850 operating system controls, limits and detects unauthorized access to all critical system components. The system also implements state-of-the-art safeguards against losses of system integrity, availability, confidentiality and accountability.

Additional security features include:

- **Data and system validation** — The DS850 provides easy validation for all resident firmware against certified versions and generates detailed audit and event logs to support system vetting. In addition, it validates and accepts only data that contains the proper digital data encryption and signing.
- **Strong physical access controls** — The DS850 secures all data ports behind clear plastic lockable and sealable access doors. All critical hardware components can be locked and sealed as well. This level of physical security on a central counter scanner is unmatched in the industry.
- **Role-based access codes** — The DS850 provides access codes that allow access for operator and administrative roles.
- **Full logging for complete auditability** – The DS850 provides options for both real-time printed and electronic logging of all activity performed, with the ability to reprint logs on demand or export electronic logs for complete review.

DS850 — Features, Functions and Benefits

Table 1, following, provides key features and benefits of the DS850.

Feature	Function	Benefits
Proven technology	• The same industry-leading ballot processing technology that powers the DS200 is shared with the DS850, including our patented IMR technology, plus tabulation algorithms built over generations of ballot scanning systems	The DS850 and its partner DS200 provide the highest level of accurate, consistent results across the family of ballot tabulators.
Flexible ballot formatting	• Supports standard ballot sizes, including ExpressVote activation cards. • Grants complete control of all ballot elements including fonts, text size and alignment. • Accepts and scans ballots in all orientations. • Fully supports multiple ballot languages. • Supports target placement on either the right or left of selection text.	The DS850 offers unprecedented freedom for ballot customization and formatting with flexible options for scanning at the highest throughput in the industry.
Extensive reporting capability	• The DS850 laser printer is capable of generating a variety of results, status and system reports quickly. • The DS850 audit log printer satisfies requirements for log printing in real time.	The DS850 allows for simple, quick reporting directly from the machine.
Reliability	• With the attached Uninterruptable Power Supply (UPS), the system is capable of finishing runs that are started and as needed, automatically shutting down without data corruption. Battery status is displayed at all times. • Long-life belts and rollers mean fewer failures and replacements over the life of the machine.	Designed specifically for elections, the DS850's rugged, long-life construction and back-up power system allow for fewer problems during election night ballot counting.

Feature	Function	Benefits
Throughput	• Industry-leading throughput of 235-19", 258-17", 303-14", or 368-11" ballots per minute. • No stopping or slowdown with full sorting enabled. • Superior handling of folded and damaged ballots.	With unmatched speed and sorting, even with folded ballots, the DS850 will provide the highest throughput of any imaged-based election scanner on the market, meaning faster results on election night.
Security	• All data ports and critical system components secured behind lockable, sealable doors. • Configurable access code protection of all operations of the application. • Full logging capabilities with options for real-time printed audit log that can even be enabled to prevent operation if the audit printing fails. • Use of digital encryption and signing of key configuration and data files for complete integrity of the election and results.	DS850 security features ensure the highest level of physical and system-level security for the central count environment.
Ease of use	• Large, adjustable, integrated 15" LCD touch screen display and a clear, simple, easy-to-use user interface provide for fewer mistakes and fewer questions, even in the stress of the busiest election night.	As easy as "load and press," the DS850 continues ES&S' long tradition of reliable, easy-to-use election systems.

Provide specifications for each of the hardware devices you are proposing for the UVS.

ES&S RESPONSE

The features for the DS200, AutoMARK, ExpressVote and DS850 concerning security, storage and transportation of the units, and weight and dimensions of the devices are presented below:

DS200 SPECIFICATIONS

Unit dimensions	5.5" H (Screen stowed) x 14" W x 16" D 13.5"H (Screen deployed) x 14 W" x 16"D 23 pounds including internal battery

Screen dimensions	Diagonal size – 12.1 inches Screen resolution – 800 x 600
Storage Relative Humidity **Operational Relative Humidity**	10% to 85% Relative Humidity 10% to 50% Relative Humidity
Operating Temperature **Storage Temperature**	+60 to +100 Fahrenheit 0 to +120 Fahrenheit
DS200 Storage and Transport Case (serves as top of plastic ballot box)	27''x24"x8 29 pounds

AutoMARK SPECIFICATIONS

Unit dimensions	7.5" H x 20.8" W x 26.0" D (LCD stowed) 17.6" H x 20.8" W x 26.0" D (operational) 40 pounds with internal battery
Display Screen	Diagonal Size – 15 inches Viewing Area (Width) – 8.9 inches Viewing Area (Height) – 11.9 inches
Screen Resolution	768 x 1024
Storage Temperature and Humidity	+50 to +104 degrees Fahrenheit Between 10% and 85% non-condensing humidity
Operational Temperature and Humidity	-4 to +140 degrees Fahrenheit Between 10% and 50% non-condensing humidity
Storage and Transport Carrying Case	32 pounds

EXPRESSVOTE SPECIFICATIONS

Unit dimensions	Operational: 19” H x 5.5” W x 17” D LCD stowed: 22.5” H x 17” W x 11” D 20 lbs. including internal battery
Screen dimensions **Screen Resolution**	Color 15” LCD touch screen display 786 x 1024
Storage Relative Humidity **Operational Relative Humidity**	10% to 85% Relative Humidity 10% to 50% Relative Humidity
Operating Temperature **Storage Temperature**	+50 to +104 degrees Fahrenheit -4 to +140 degrees Fahrenheit
Storage Information	Designed to nest, units may be stacked four-high

DS850 SPECIFICATIONS

DS850 unit dimensions	37” H X 41” W X 21” D 200 pounds
DS850 storage and transport cart	30” H X 48” W X 24” D 190 pounds (empty weight)
Operational Temperature & Humidity	+50 to +95 degrees Fahrenheit Less than 95% non-condensing humidity
Storage Temperature & Humidity	-4 to 140 degrees Fahrenheit 10% to 88% humidity

Describe prescribed preventative maintenance schedules for each of your hardware devices.

ES&S RESPONSE

After the initial Warranty period, ES&S offers three hardware extended maintenance warranty packages available to the State of Colorado. Each of the plans provides different levels of preventative, corrective, and remedial maintenance services. A description of each of the packages follows:

Gold Maintenance Program: Under the Gold plan, ES&S provides a routine preventative maintenance service event each year. Our Gold Maintenance Program provides extended coverage for phone support, parts, on-site repairs, and an annual visit for preventive

maintenance. Our ES&S service technicians carry diagnostic programs, specialized tools, an ample inventory of certified spare parts, and test ballots allowing them to service and test the product according to the hardware specifications and the maintenance agreement. Under this maintenance plan, hardware repairs are covered when failures are considered to be system related.

The annual routine preventative maintenance service event includes the cleaning and lubrication of each unit of equipment and all labor and parts (except consumables items such as printer cartridges, paper rolls, batteries, removable memory devices, or marking instruments).

Silver Maintenance Program: Includes the same core features offered with the Gold Maintenance Plan, with the difference being a one routine preventative maintenance service event during a two year period (instead of a one year period).

Core features for both the Gold and Silver coverage plans include the use of certified replacement parts, technical help desk support, priority status for repair services, software and firmware upgrades, repairs made by trained and certified technicians, and one simple annual invoice that provides you peace of mind at budget time.

Bronze Maintenance Program: Provides for remedial maintenance services which are performed at ES&S' Omaha, Nebraska depot location unless such remedial services are required for ten (10) or more products at any given time. In the latter case, the locality may elect to have such services provided at its designated location. Under ES&S' Bronze coverage plan, the county is billed annually with a single invoice. In addition, there is no routine preventative maintenance service events associated with the Bronze Package.

Both during the warranty period and so long as the County maintains a hardware and software maintenance and support agreement with ES&S, the County will have access to the ES&S Help Desk support. The ES&S Help Desk is available to the County to answer any questions or issues which may arise with the use of ES&S' proprietary hardware or software.

Section 6.0 – Project Approach; 6.4 Database

CDOS envisions a multi-year conversion to the new UVS. Colorado counties have voting equipment supplied by various vendors over the past several years. Some counties are in more urgent need to convert to the new UVS than others. This need, along with budget considerations, will influence the implementation scheduling of the new UVS.

Provide your proposed approach to managing the effort of converting all Colorado counties to a new UVS. Your approach, at a minimum, should address the following aspects of the Colorado UVS project.

5.3.8.4 Database

Provide information regarding the database utilized by your proposed UVS application. Please address the following:
1) Database system being proposed, including version identification, and any supporting capabilities (e.g., utilities, special backup considerations);

ES&S Response

Election Reporting Manager (ERM)	.dat file
Electionware (next generation EMS)	Postgres SQL 9.2

Postgres is an ANSI SQL:2008 compliant powerful, enterprise class open source object-relational database system with a proven architecture for reliability, data integrity, and correctness. The database server and the administration tools are bundled with the installer of Electionware. No separate purchase or external setup of the database server is required outside of the Electionware installation procedure. pgAdminIII, the database administration tool that is installed as part of the server has functionality to backup and restore databases. Any file system level backup methods can be used as well. Electionware itself has backup and restores capabilities built in as well. Postgres is a virtually maintenance free database server in the installed configuration for Electionware.

2) Describe any techniques used by your proposed system to secure the data in the database and in any other data files;

ES&S RESPONSE

On the Electionware database server, all the security access codes and SFTP user passwords are stored using AES encryption using an election specific AES key.

Using system hardening scripts the Postgres data directories are protected from users and are accessed only by the non-admin postgres service user account.

The final access permissions for a shared resource are determined by considering both the NTFS permissions and the sharing protocol permissions, and then applying the more restrictive permissions.

The SFTP user account passwords are exported to the SFTP server in an XML and all the passwords are stored as SHA-256 hashes in the XML.

The security access codes setup in Electionware is sent to the tabulators on a Qualification Media in the form of SHA-256 hashes.

During election creation a unique FIPS RNG generated AES key and an election specific Public/Private key pair are generated. The election definition sent to the devices on the Election Media is encrypted using a password based derived key of the Election Access Code and signed by the election specific private key.

The election specific AES key sent to the tabulators on the Qualification Media is used to encrypted data from the tabulators to the EMS. In addition to encryption, all encrypted data is further signed using a machine specific private key generated during the Qualification process on the tabulator. The incoming Election Media containing results are first sign verified before to ensure authenticity and then decrypted for results accumulation.

3) Describe any database backup and disaster recovery plans you provide;

ES&S RESPONSE

DS200

During a voting session, encrypted ballot images and encrypted voter selections are saved to the flash drive installed under a security access door of the DS200. When the scanned data of the ballot is written to the flash drive it is verified against the internal scanned data of the DS200 to verify data integrity. The County may opt to further backup the flash drive's data using an application, such as the Windows File Manager and later restore it to a like formatted device.

Should the DS200 Hardware fail during a voting session, the flash drive of the faulty DS200 may be moved to a replacement DS200 and voting can continue without disruption or loss of any vote data.

The DS200 backup memory and power supply ensure that no votes are ever lost due to power loss or equipment failure. The internal battery supplies a minimum of 2 hours continuous use in

the event of power failure. The battery obtains its charge automatically from the system's power supply with no Officer intervention required to switch from AC to DC power.

AutoMARK

The AutoMARK is a ballot marking device which only prints vote selections on an inserted paper ballot. Its primary use is for voters with disabilities. It does not tabulate or record votes, therefore there is no data to backup. All log information is saved on the removable Compact Flash memory card. The CF card can be moved to a backup unit if required.

DS850

During scanning, ballot data is collected in RAM and upon completion of the run, the ballot data is stored to a temporary folder on the internal hard disk drive. In the event of a shutdown event, the machine can be powered up and operation resumed from the point before the shutdown. When the operator chooses to save a batch, the ballot data is moved from the temporary location and stored in a saved folder where the data is marked as available for aggregation. The DS850 uses an uninterruptable power supply (UPS) to allow a run to complete and the unit to be shutdown in a controlled manner by the user action or automatically before power is lost.

Vote data can be backed up to a stick from which a results collection can be done in the case of a hardware failure.

Electionware

Electionware has a true backup and recovery system built into the Home module. From the Navigator window, the user can right-click an election (unopened election) and backup the election to a location of their choosing. In order to restore the election, the user need only select it from a list of backed up elections and click **Restore**. The only item the user needs is the backup code that they used to backup the election originally.

Election Reporting Manager (ERM) backs up the election data in its own database when the flash drive data is read into this application. The County may also further back up the data by copying the database files to a storage device of their choice using Windows File Manager. Instructions can be found in the operators guide.

Disaster Recovery

Disaster recovery for the ES&S election setup and tabulation software applications should be consistent with the disaster recovery plan for the other mission-critical data applications used by the State and/or County's IT department. This should include off-site backup storage and the possible availability of off-site systems that contain the applications or can be quickly configured with the applications from previously prepared system images. The availability of high-speed data links would provide for electronic processes and eliminate the need for manual handling and control.

Should the DS200 or the DS850 experience a media failure, the election administrator would rescan the ballots. In the event of a device failure, data checkpoints are taken at the end of every cast ballot so that a new device can be brought up and media from the original device can be placed into it, allowing voting to restart at the point of the last cast ballot's completion.

ES&S will work with the State to determine the best methods for backing up the data, as well as a tailoring a disaster recovery plan according to industry best practices and State guidelines.

4) Describe the technical requirements of county computers used to store the database;

ES&S RESPONSE

Desktop/Notebook: Windows 7 64-bit with Service Pack 1. The processor must support standard PC x86 logic, integer, and floating point arithmetic functionality. Minimum processor configuration: dual core, 2.0GHz. Minimum ram: 4 GB, and recommend RAM is 8GB.

The Election Definition for the DS200 and AutoMARK is created with a Windows OS application, Electionware, which runs on a Windows 7 platform.

Server (Optional: used to store vote and ballot image data):

Microsoft Server 2008 R2 Standard 64-bit software

Minimum: dual core processor, Recommended: quad core processor

8GB RAM Minimum, 16GB RAM Recommended

5) State your affirmation that CDOS or County will be sole owner and custodian of all election related data in the system you provide and shall have the unrestricted right to access and use this data without interference by or assistance from you.

ES&S RESPONSE

With respect to subsection 5 of Section 5.3.8.4, ES&S acknowledges and affirms that the CDOS or County shall be the sole owner and custodian of all election related data provided by the CDOS and/or County and used in the system provided by ES&S in the event it is the successful responder. In addition, the CDOS or County shall have the unrestricted right to access and us the foregoing date without interference by or assistance from ES&S.

Section 6.0 – Project Approach; 6.5 Data Migration

CDOS envisions a multi-year conversion to the new UVS. Colorado counties have voting equipment supplied by various vendors over the past several years. Some counties are in more urgent need to convert to the new UVS than others. This need, along with budget considerations, will influence the implementation scheduling of the new UVS.

Provide your proposed approach to managing the effort of converting all Colorado counties to a new UVS. Your approach, at a minimum, should address the following aspects of the Colorado UVS project.

5.3.8.5 Data Migration

Describe your approach to data migration, including how data mapping between systems will be defined, cleansing/reformatting of data, testing and the final conversion to the production environment during implementation rollout. For example, explain how counties will be able to convert jurisdictional data from their existing Election Management System (EMS) to the EMS in your system.

ES&S Response

The ES&S department, "Data Conversion Services (DCS)", is staffed with highly skilled resources familiar with a variety of extract, transform, and load techniques and tools. DCS's primary tool set for data migration is Microsoft SQL. Utilizing SQL Server Integration Services (SSIS), DCS is able to migrate data to a predefined Common Data Format. During data migration, a series of data integrity checks are executed to ensure the data being migrated meets standards of quality, consistency, and accuracy. For example, should every state and federal candidate require a 3 digit ID value to be utilized for election night statewide reporting, ES&S can validate that each county's EMS candidate data meets all state defined parameters.

Once in the ES&S Common Data Format, multiple ES&S products and services are able to call the data for the production environment. ES&S is willing and able to provide any jurisdiction or vendor the preferred data format for consumption by ES&S. Should the jurisdiction or vendor not be able to provide the defined format, ES&S would only require the data to be output in CSV format with appropriate documentation to explain any data links and relationships. ES&S would then migrate the data to the Common Data Format.

Procedurally, ES&S recommends the following sequence of events to ensure success. ES&S will request sample data from each applicable jurisdiction at 120 days before the election. The ES&S Data conversion Services teams then creates the appropriate SSIS packages to migrate the data to the Common Data Model and testing is conducted to ensure all production services operate

correctly. The jurisdiction is provided sample data from DCS for their own testing and validation. Once approved, ES&S now has an SSIS package that can be utilized to quickly transform any additional database updates.

Describe the type and level of Colorado support desired during data migration efforts.

ES&S Response

ES&S requests the participating counties to be able to load data to ES&S. ES&S will provide each jurisdiction login credentials to a secure file transfer protocol in order to upload their data to ES&S. Once data has been migrated to the ES&S Common Data format by DCS, ES&S will provide the county a set of files for their own testing.

Providing data, responding to any questions on the origin data formatting, and performing a level of validation checking is the only support ES&S requires.

Identify any EMS of a competitor from which you have successfully converted data into your EMS.

ES&S Response

ES&S is able to convert data from any source system provided the data can be provided in a delimited form with defined headers. The conversion of data from disparate source systems to one singular model is the essence of the ES&S DCS conversion process. To date, DCS has been able to successfully convert and load data from current and legacy voter registration and election management systems.

DCS has proven its ability to convert data from multiple versions of Unity and GEMS.

Section 6.0 – Project Approach; 6.6 Test Strategy

CDOS envisions a multi-year conversion to the new UVS. Colorado counties have voting equipment supplied by various vendors over the past several years. Some counties are in more urgent need to convert to the new UVS than others. This need, along with budget considerations, will influence the implementation scheduling of the new UVS.

Provide your proposed approach to managing the effort of converting all Colorado counties to a new UVS. Your approach, at a minimum, should address the following aspects of the Colorado UVS project.

5.3.8.6 Test Strategy

Provide a description of your proposed test standards and methods used to ensure the new UVS is working properly in each county installation. The description must address test plan creation, test case or script generation, test phases, the execution of the test plan, and proposed participation by CDOS/County staff.

You may use RFP Appendix D – Statement of Work, Track 1: Project Management Test Strategy Plan section as a guide.

ES&S Response

All deliverables, objectives, documents, and project outcomes will require approval. The ES&S Project Team will work with State of Colorado to finalize each deliverable within the Project Plan and the corresponding test plans, approval procedures and documentation required. The ES&S Team will provide examples and consultation regarding all User Acceptance Test procedures, with the State of Colorado having ultimate and final discretion regarding the processes that determine system acceptance. The State will be allowed ample time to review and provide input for all elements of the Project Plan. State of Colorado approval will be required prior to the provision of any deliverable or distribution of any schedule of deliverables. Once a testing and acceptance strategy is fully defined, ES&S will then work with each county to complete the testing, acceptance, and documentation requirements for each respective county implementation. The County will be an active participant in the testing of the system to assure that they are comfortable with the system installation and functionality. CDOS staff may be involved to the extent they desire.

Section 6.0 – Project Approach; 6.7 Training

CDOS envisions a multi-year conversion to the new UVS. Colorado counties have voting equipment supplied by various vendors over the past several years. Some counties are in more urgent need to convert to the new UVS than others. This need, along with budget considerations, will influence the implementation scheduling of the new UVS.

Provide your proposed approach to managing the effort of converting all Colorado counties to a new UVS. Your approach, at a minimum, should address the following aspects of the Colorado UVS project.

5.3.8.7 Training

The expectation of CDOS is that Counties will require training for various categories of UVS users.

Describe the proposed content and delivery of your training. Include information about the typical class size and duration of training. Also, describe any self-paced training products you may provide.

ES&S RESPONSE

ES&S has 40+years of experience training thousands of customers in the effective, efficient use of election systems. We have successfully completed implementations in multiple statewide plans. We've worked with a diversity of jurisdictions from the smallest counties to the largest City in the United States where 40,000 poll workers were trained. Although individual client plans vary by the product solution and needs of the client, ES&S confidently recommends a standard approach that can be customized for individual clients.

Overview of Training for State of Colorado

The training for State of Colorado County staff and poll workers will encompass key learning outcomes that will focus on the success of the training participant in operating the new equipment and software. Courses will be a combination of classroom and online (WebEx) courses primarily offered at the local county or state facilities. The training classes can also be offered at the ES&S corporate office located in Omaha, NE. ES&S limits the number of students in the hardware operations courses to 20 and software courses to 10 participants to minimize the student to instructor ratio and allow as much hands on to the new voting equipment as possible.

The curriculum for the hardware courses reinforces the procedural steps that the student will have to perform to be successful on Election Day. Software courses expose the students to all

facets of using the application for ballot layout, programming, and reporting functions. Students will be provided up to date training documentation that is easy to understand and can be used by the student when questions arise. On-going training can be conducted by County trainers who have completed the ES&S Train-the-Trainer (TTT) curriculum. The TTT course is typically completed in one day, but can vary depending on the training being conducted. The County trainer will have plenty of opportunity to practice teaching to their peers to gain confidence, knowledge, and feedback on their performance.

Provided below is an overview of the courses recommended for State of Colorado.

Training Type	Course Description	Intended Audience	Course Duration	Typical Class Size
DS200, DS850, AutoMARK and ExpressVote Hardware Operations User Courses	This course introduces **Election Personnel** to the DS200 Precinct Ballot Tabulator and DS850, as well as the AutoMARK and ExpressVote. Successful participants gain the knowledge, skills and abilities to operate the systems. Covered topics include: • In-depth overview of the systems. • Pre-election preparation requirements. • Election Day operations. • Troubleshooting procedures.	Circuit Clerk, Election Commissioners, Election Office staff, IT personnel, and poll workers	2 days	Recommendation is no less than 1 piece of equipment per every 2 participants. Hardware classes have a maximum participant number of 20.

Training Type	Course Description	Intended Audience	Course Duration	Typical Class Size
Train-the-Trainer Course (Prerequisite: Hardware Operations Courses)	This course introduces **Election Personnel** to the training techniques supporting the DS200 and DS850 voting systems. Successful participants gain the knowledge, skills and abilities to train Poll Workers in how to operate ES&S' DS200 Precinct Optical Scan Tabulator. Covered topics include: • Pre-training preparation. • Overview of the DS200 Tabulator (and other hardware) • Election Day operations, including poll opening/closing and voting procedures. • Troubleshooting procedures. • Training simulation and practice.	County training staff	2 days	Train-the-Trainer classes have a maximum participant number of 10. Allows the County trainers to train poll workers.
Election Reporting Manager (ERM) User Course	This course introduces **Election Staff** to ES&S' Election Reporting Manager (ERM). Successful participants gain the knowledge, skills and abilities to allow the individual to perform basic system functions, including: • Generating and displaying customized election reports in either paper or electronic formats.	County Election Office staff, IT personnel	1 day	Software classes have a maximum participant number of 10.

Training Type	Course Description	Intended Audience	Course Duration	Typical Class Size
Electionware EMS Software User Course	This course introduces **Election Staff** to ES&S' Electionware. Successful participants gain the knowledge, skills and abilities to allow the individual to perform basic system functions in order to: • Build and maintain election databases. • Lay out ballots. • Program election tabulation equipment. • Review ballot images in Electionware • Transmit election results. • Generate reports of multiple types.	County Election Office staff, IT personnel	4 days	Software classes have a maximum participant number of 10.
AVES Incoming Solution	This course introduces **Election Personnel** to the AVES Incoming Solution. Successful participants gain the knowledge, skills and abilities to operate the systems. Covered topics include: • AcccScan/AdminView Software • AVES Scanner Operations • Envelope Handling • Troubleshooting procedures	County Election Office staff, IT personnel	1 day	Classes have a maximum participant number of 10.

ES&S Training Approach

When implementing a new election system, Initial Training must be a primary consideration. There are many different approaches to this challenge. ES&S measures the success of new installations by the ability of our clients to more efficiently manage their election process using our systems. Our comprehensive training program has been developed to promote a strong level of competency for all intended users. A series of training modules has been developed that provide successful participants of your election team with the skills to perform necessary operations. Well-written training documentation that is easy to understand and can be referred to at a later date, when needed, will be provided to each participant who attends training.

While we have developed a standard curriculum approach, we believe a key element in a successful implementation is the appropriate customization and integration of our training to incorporate the laws, regulations, and procedures unique to the State and to the County. ES&S will work with the State of Colorado election staff to develop a training plan that is current and relevant to you.

The curriculum is designed using theory and methods that are optimal for adult learning. Course instruction utilizes audio, visual and hands-on demonstrations and exercises. The manuals and job aids are designed to complement the course instruction and provide simulation of election activities. The evaluation of the course and transfer of knowledge has been completed in a number of fashions. Customized job aids and testing materials can be developed to meet the individualized needs of the County.

At ES&S, we know the successful implementation and continuous operation of any new voting system directly hinges on an effective training program for election personnel and voters. Knowing that training stands as the most critical component of any installation and support plan for the election system, ES&S takes great pride in providing our clients extensive, world-class voter system training programs. ES&S will also be there for you when your team requires on-going training to refresh them on the procedures to safely and efficiently operate the equipment and software.

ES&S training is designed to provide hands-on instruction to election staff responsible for the administration and management of the proposed system. ES&S recommends conducting training in a facility that allows attendees access to the system for hands-on instruction. The optimum class size for equipment operations training is no more than 20 participants per class. The optimum class size for Train-the-Trainer and software training is smaller. These programs have a suggested maximum of 10 participants.

ES&S will provide the CDOS and individual county clerks' offices with training which will allow them to comfortably operate and use the hardware and software delivered with the proposed system.

ES&S provides easy to use, well-written Pre-Election and Election Day training documents for each training participant. These training documents are available for all equipment and software classes for all types of participants.

Define the support and accommodations you need from CDOS or a County to support your training efforts.

ES&S RESPONSE

ES&S recommends conducting training in a facility that allows attendees access to the system for hands-on instruction and will work with the CDOS and/or the County to locate suitable training facilities based on the type training being scheduled. The CDOS/County would be responsible for ensuring that the equipment is unpacked, set up and ready for the training event, as well as ensure that all equipment used in the training event has been Logic & Accuracy tested prior to training.

Section 6.0 – Project Approach; 6.8 Implementation

CDOS envisions a multi-year conversion to the new UVS. Colorado counties have voting equipment supplied by various vendors over the past several years. Some counties are in more urgent need to convert to the new UVS than others. This need, along with budget considerations, will influence the implementation scheduling of the new UVS.

Provide your proposed approach to managing the effort of converting all Colorado counties to a new UVS. Your approach, at a minimum, should address the following aspects of the Colorado UVS project.

5.3.8.8 Implementation

The RFP Statement of Work includes change management, deployment and user training as deliverables within Implementation. Describe your approach and experience on prior implementations and your proposed approach to implementation on the Colorado UVS project.

ES&S Response

ES&S has worked with a wide range of jurisdictions to implement local and statewide voting systems. Although each implementation is unique, ES&S takes a consistent approach in several regards:

- An ES&S Project Manager will be assigned and will serve as the central point of contact and hold ultimate responsibility for project deliverables.
- The ES&S Project Manager will work with the jurisdiction early in the implementation to develop detailed schedules and plans as well as to identify potential risks.
- The ES&S Project Manager will provide status updates and reporting on a frequency determined by the State.
- ES&S will develop and maintain various documentation throughout the life of the project to assure proper record-keeping and communication.

The basis for the scope of the project will begin with the contract between ES&S and the State of Colorado. The contract defines specific deliverables, requirements, and milestones which will be detailed and tracked in the Project Plan. The Project Plan will help organize and schedule each of the implementation, service, maintenance, and support deliverables which will be documented by the ES&S Project Team under direction of the State of Colorado.

Change Control Procedures will define procedures for submitting, approving, tracking and verifying all changes to the services and scope of the overall project. Change Implementation

Notices will be utilized to request and track changes to the project scope and any previously agreed upon product or service deliverables. The Change Control Procedures will be developed and maintained by the ES&S Project Team under the direction of the State of Colorado.

Section 6.0 – Project Approach; 6.9 Support

CDOS envisions a multi-year conversion to the new UVS. Colorado counties have voting equipment supplied by various vendors over the past several years. Some counties are in more urgent need to convert to the new UVS than others. This need, along with budget considerations, will influence the implementation scheduling of the new UVS.

Provide your proposed approach to managing the effort of converting all Colorado counties to a new UVS. Your approach, at a minimum, should address the following aspects of the Colorado UVS project.

5.3.8.9 Support

This RFP solicits post-implementation support from the Vendor in each of the following support areas:
1) Warranty Period Support
2) Maintenance Support
3) Election Setup Support
4) Election Processes Support
5) Post-Election Support

Indicate your approach to the various areas of support and your recommendations as to how support should be structured, if different from how described in the *RFP Appendix D – Statement of Work, Track 4: Contractor Support*. Describe the support activities included in each support area. Provide a table which includes the various categories included in your typical Service Level Agreements for each support area and the recommended levels of service values (e.g. response time, staffing levels).

ES&S Response

Following the implementation phases of the project, ES&S will provide the level of maintenance and support desired by the CDOS and Counties. Should increases or decreases in support be desired by the CDOS or Counties, ES&S will accommodate. ES&S maintains a talent and personnel program that allows for surge and seasonal staffing flexibility based upon project needs. The principal on-going support activities fall in to these categories:

Warranty Support
During the warranty period, ES&S will provide warranty services based on the agreement between ES&S and the State.

Voting Equipment Maintenance Support
Following the warranty period, ES&S will provide remedial and preventative maintenance services based on the agreement between ES&S and the State.

Election Setup Support
ES&S will work with the State to develop a plan that defines the support provided to each County to assist in Election Setup on the new UVS. Deliverables will include Election and Ballot setup support, equipment preparations, and L&A testing support.

Election Processes Support
ES&S will work with the State to develop a plan that defines the support provided to each County to assist in Election processes execution on the new UVS. Deliverables will include Mail Ballot Delivery/Return Support, as well as early voting and Election Day support.

Post-Election Support
ES&S will work with the State to develop a plan that defines the support provided to each County to assist in post-election activities on the new UVS.

Support Area	Service Category/Type	Typical Service Level
Warranty Support	Repairs/Maintenance	As needed
Warranty Support	Help Desk Support	7am to 7pm central and 24/7 during election critical times
Maintenance Support	Repairs/Maintenance	Preventative or remedial. Remedial repairs completed within approx. 72 hours.
Maintenance Support	Help Desk Support	7am to 7pm central and 24/7 during election critical times
Maintenance Support	Software/Firmware Maintenance	Upgrades/bug-fixes on an agreed upon schedule
Election Setup Support	Election/Ballot Setup	1-7 days depending on county size
Election Setup Support	Voting Equipment Prep + Logic and Accuracy Testing	1-7 days depending on county size
Election Processes Support	Mail Ballot Delivery/Return	Support as needed
Election Processes Support	Early Voting Support	On-site and remote support available
Election Processes Support	Election Day Support	On-site and remote support available
Post-Election Support	TBD	As needed

An assumption is that some Contractor support will be onsite and that some support can be provided by Contractor help desk personnel. Describe the process associated with your support help desk in managing questions and issues from the UVS users. Describe the automation tools you utilize to track help desk metrics. Include a discussion of your help desk configuration, normal and peak election hours of operation, and expected response time.

ES&S Response

ES&S has included pricing information for on-site support in the **Cost Proposal** binder of our response. Outside of on-site support, ES&S offers multiple support channels to assist customers with issues and concerns ranging from simple "how-to" questions to complex functional inquiries.

- **Toll-free support –** Customer support is available by telephone, fax or e-mail to our ES&S Help Desk. Our dedicated toll-free customer support telephone number is 877-ESS-VOTE (877-377-8683, then press the appropriate number for support). The support line is open 24 hours a day. Representatives monitor the line from 7 a.m. to 7 p.m. Central time, Monday through Friday. We have a team of very experienced hardware and software support technicians who will comfortably guide you to an issue resolution.
- **E-mail support –** Customers can also communicate directly with their dedicated CSM or specialized ES&S support and technical representatives via e-mail.
- **FAX support –** Facsimile support is available to our Help Desk at (402) 970-1267.
- **Customer portal –** Each customer will be provided a user name and password to access the ES&S customer portal. The portal contains copies of all user documentation to include Standard Operating Procedure manuals and technical bulletins. In addition, the portal provides access to ES&S Election Services forms, RMA request forms, and a link to the ES&S Supply Store.
- **WebEx support –** ES&S Technical Support uses WebEx as our remote desktop assistance tool to provide over-the-shoulder assistance when needed.

ES&S Help Desk

ES&S will provide support to the State and Counties through our National Help Desk in Omaha, NE. The ES&S National Help Desk operates from 7 a.m. to 7 p.m. Central time, Monday - Friday. Customers requiring assistance should place a call to our Help Desk via a toll-free number (1-877-377-VOTE). During the weeks leading up to our customer's important election events, our National Help Desk is on call 24x7 by phone, email, cell phone, or facsimile. Our ES&S National Help Desk technicians can answer any question regarding hardware or software. No question is too hard and we will stay with you until you feel comfortable about the answer.

Customers requiring assistance outside these hours may call their ES&S dedicated Customer Service Manager's cell phone 7x24 for assistance. Our goal is to make ourselves available to anyone on your staff when you need us.

Customers can expect to receive a reply or callback immediately from their Customer Service Manager (CSM) or the Help Desk during peak election activity, or within 4 hours during non-election periods.

ES&S utilizes a tiered escalation process to identify, track and resolve system problems. Initial notification of an issue is accomplished when a customer notifies an Omaha-based Technical Support Representative on our toll-free number, email, or facsimile.

Upon notification, the ES&S representative will enter the support ticket into our automated issue tracking system known as Team Track and then immediately gather the necessary information and data to reproduce the issue and either offer a process solution or escalate the issue to 2nd and 3rd level support. The support representative will attempt to resolve the issue while the customer is on the phone or e-mail using all available resources. If successful, the ticket is closed. If the support call results in the discovery of a product issue (bug), a workaround is provided to the customer and the ticket is escalated to a software engineering team for resolution.

If during the course of the call or the process of resolving the issue, ES&S recognizes the need to dispatch on-site support to the client location, the ES&S representative will initiate a process to dispatch support to the location. This process allows issues to be resolved in a timely and reasonable manner during peak and non-peak election periods.

In the future, certain areas of UVS support may be transitioned from the Contractor to CDOS or a third-party (e.g. local university). Please state your willingness to participate in executing a transition plan should this occur and any experience you have in such a transition.

ES&S Response

Election Systems and Software has had the pleasure of working with Kennesaw State University's Center for Election Systems for the past several years. We have found this relationship to be successful for us, the State of Georgia and most importantly for our customers in Georgia. ES&S has the knowledge, ability and willingness to support these types of third party support arrangements and would be pleased to work with the State of Colorado in transitioning to such a plan at the direction of the Secretary of State's office.

Section 7.0 – Sample Reports

5.3.9 Sample Reports

You must provide a list of the various reports available from your proposed system, as well as examples of those reports. At a minimum, provide the first and last page of each report.

ES&S Response

The following reports are provided as a part of the baseline system. Due to the RFP page limit restrictions, we have provided examples of as many reports as possible (noted below) following this section.

Electionware

Capture:
Precincts by District *(example provided)*
Precincts by Language Group
Districts By Precinct *(example provided)*
Headings Report
Rotations Report
Poll Place by Summary
Poll Place by Detail *(example provided)*
Precincts by Style
Styles by Precinct
Missing Language Translations
Field Length Exceeded *(example provided)*

Element Library:
Missing ExpressVote System Translations
Missing ExpressVote System Audio
Missing AutoMARK System Translations *(example provided)*
Missing AutoMARK System Audio *(example provided)*

Accessible Ballot:
Missing Ballot Data
Missing Ballot Audio Files *(example provided)*

Configure Equipment:
DS200 Settings Report *(example provided)*
DS850 Settings Report *(example provided)*
AutoMARK Settings Report *(example provided)*

ExpressVote Settings Report
Jurisdiction Ballot Style Listing
Ballot Detail Listing Report *(example provided)*

Package
Media Creation Log Report
Election Media by Poll Place *(example provided)*
Media Not Created *(example provided)*

Acquire:
Machine Log *(example provided)*
Media Loaded Status *(example provided)*
DS200 Transmitted Results Status
DS850 Networked Results Status

Report:
Add Summary Reports
Add Canvass Reports
Double Vote Statistics
Overvote statistics

Produce:
Results Report
Double Vote Report

Setup:
User Report *(example provided)*
Admin Audit Events Report
Election Audit Events Report *(example provided)*
Access Codes Report *(example provided)*

ERM

Precinct
- Precinct Report *(example provided)*
- Precinct Report with Group Detail

Election
- Election Summary Report *(example provided)*
- Election Summary Report with Group Detail

Canvass
- Numbed Key Canvass *(example provided)*
- Numbered Key - Statistics Only
- Numbered Key-Districts Only
- Numbered Key-Districts Turnout Only (CA Specific)
- Candidate Name Heading *(example provided)*
- Name and District Totals

Standard
Election Day A/V Combined
Block Style
Jurisdictional
Local Office
Precincts Counted/Not Counted
Precincts Completed
DS200 Precincts Processed Listing
Log
System Log
Results Correction Log *(example provided)*
650 Network Server Log

DS200

Ballot Status Accounting Report *(example provided)*
Zero Totals *(example provided)*
Event Log Report
Configuration Report *(example provided)*
Results Report *(example provided)*

DS850

Zero Report *(example provided)*
Results Report
Election Detail
Election Public
Precinct by Precinct Detail
Precinct by Precinct Public
Batch/Bin Report
Not Processed (Top Bin)
Processed with Write-ins (Middle Bin)
Processed (Bottom Bin)
Precincts Processed Report
Precincts Processed *(example provided)*
Precincts Not Processed
System Readiness Report *(example provided)*

Precincts by District

Example Election

October 31, 2013

ElectionWare County, ElectionWare State

Precinct ID	Precinct Name	
Happyville School (School)		Total Precincts: 2
0001 - 02	Precinct 1 SPLIT 2	
0002 - 02	Precinct 2 SPLIT 2	

Total Reporting Precincts: 2

Cheerful Valley School District (School)		Total Precincts: 2
0001 - 01	Precinct 1 SPLIT 1	
0002 - 01	Precinct 2 SPLIT 1	

Total Reporting Precincts: 2

<ElectionWide> (<ElectionWide>)		Total Precincts: 4
0001 - 01	Precinct 1 SPLIT 1	
0001 - 02	Precinct 1 SPLIT 2	
0002 - 01	Precinct 2 SPLIT 1	
0002 - 02	Precinct 2 SPLIT 2	

Total Reporting Precincts: 2

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Districts by Precinct

Example Election

October 31, 2013

ElectionWare County, ElectionWare State

District ID	District Name	District Type	
0001 - 01 Precinct 1 SPLIT 1			Total Districts: 1
SCHCHER	Cheerful Valley School District	School	
0001 - 02 Precinct 1 SPLIT 2			Total Districts: 1
SCHHAPP	Happyville School	School	
0002 - 01 Precinct 2 SPLIT 1			Total Districts: 1
SCHCHER	Cheerful Valley School District	School	
0002 - 02 Precinct 2 SPLIT 2			Total Districts: 1
SCHHAPP	Happyville School	School	

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Poll Place Detail

Example Election

October 31, 2013

ElectionWare County, ElectionWare State

Poll Place ID	Poll Place Name	Precinct Name	
Election day Poll Places			Totals: 2
CITYHALL	City Hall	Precinct 1 SPLIT 1	
		Precinct 1 SPLIT 2	
CTYLIB	City Library	Precinct 2 SPLIT 1	
		Precinct 2 SPLIT 2	
Absentee/Early Poll Places			Totals: 1
EV	Early Voting	Precinct 2 SPLIT 1	
		Precinct 1 SPLIT 1	
		Precinct 1 SPLIT 2	
		Precinct 2 SPLIT 2	

Total Poll Places: 3

Total Reporting Precincts: 2

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Field Lengths Exceeded

Example Election

October 31, 2013

ElectionWare County, ElectionWare State

Field Name	Input Value	Exceeds Limit By
Contest Title	Referendum on Questions with Lots of Text	1
Contest Short name	Referendum on Questions with Lots of Text	1
Contest Long Name	Referendum on Questions with Lots of Text	2

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Missing AutoMARK System Translations

11/25/2013 03:11PM

ElectionWare County
Example Election
October 31, 2013

Prompt Text	Language
Please Insert Your Ballot	Spanish
Please insert your ballot and then wait for the ballot to be scanned, which may take up to 30 seconds. The audio will be silent while scanning.	Spanish
Display screen is on	Spanish
Display screen is off	Spanish
Exit now and your ballot will not be marked	Spanish
Are you sure you want to exit?	Spanish
Exit now and your ballot will not be marked. Press the left arrow key to return to voting. Press the right arrow key to exit and receive your unmarked ballot.	Spanish
Press the left arrow key to return to voting. Press the right arrow key to exit and receive your unmarked ballot.	Spanish
Thank you for using the AutoMARK(TM) Voter Assist Terminal. Please remove your unmarked ballot.	Spanish
Please remove your unmarked ballot. Thank you for using the AutoMARK Voter Assist Terminal.	Spanish
CONTINUE VOTING	Spanish
Paper misfeed. Please contact an election official.	Spanish
Paper misfeed. Please contact an election official.	Spanish
Your ballot has not been recognized. Please try again or contact an election official for assistance. Please double-check that you are inserting only a single ballot.	Spanish
Your ballot has not been recognized. Please try again or contact an election official for assistance. Please double-check that you are inserting only a single ballot.	Spanish
DONE	Spanish
Select a language	Spanish
Press the down arrow key to scroll through languages. Use the square select key to select a language. If you wish to exit the system and return your unmarked ballot, press the left arrow key.	Spanish
You have selected	Spanish
Official Ballot	Spanish
Official Ballot	Spanish
You are Voting Ballot Style	Spanish
Voting Instructions	Spanish
The AutoMARK Voter Assist Terminal is designed to help you mark your optical scan ballot. Touch the NEXT arrow button in the lower right hand corner of the screen to view the first contest. Touch the name of a candidate or choice to make your selection. If write-in's are allowed, you will be presented with an on-screen keyboard to enter a write-in candidate's name. You may use the BACK arrow button in the lower left hand corner of the screen to return to the previous screen. Once you have made your selections, a summary screen will be displayed. From there you can verify your selections before having your ballot marked.	Spanish
Voting Instructions. The AutoMARK Voter Assist Terminal is designed to help you mark your optical scan ballot. This system will guide you through each contest in the ballot and present each choice. Once you have made your selections, you can review your selections and then choose to have your ballot marked. Your ballot will then be returned to you to be deposited into a ballot box. The keypad on your right is used to interact with the AutoMARK and to make your selections. You will find four arrow keys and a center select button. In addition to the arrow keys, there are four vertical keys to the right of the arrow keys. The bottom toggle key will adjust audio volume. The next toggle key will adjust the speed of the synthesized speech. The round button will repeat the last spoken phrase. Holding the round button until there is a beep will pause the audio. Tapping the round button again will resume the audio. The top diamond key will turn the display screen on or off for privacy. Pressing the right arrow key will move to the next contest. Pressing the left arrow key will move to the previous contest. Pressing the down arrow key will move to the next candidate or choice within a contest. Pressing the up arrow key will move to the previous candidate. When you hear the name of	Spanish

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Prompt Text	Language
the candidate or choice that you wish to select, press the square select key in the center of the arrow keys. If you need additional assistance, please alert an election official. To exit without marking your ballot, press the diamond-shaped screen button four times in a row. Press the right arrow key now to hear the first contest. Press the round repeat key to hear these instructions again.	Spanish
NEXT	Spanish
BACK	Spanish
HIGH CONTRAST	Spanish
ZOOM	Spanish
EXIT	Spanish
RETURN BALLOT	Spanish
Next contest	Spanish
Use the down arrow key to hear the name of each candidate or choice listed. Use the select key to make your selection. Use the right arrow key to move to the next contest. Use the left arrow key to go back to the previous screen.	Spanish
has been deselected	Spanish
Use the down arrow key to hear the name of each candidate or choice listed. Use the select key to make your selection. Use the right arrow key to return to the summary screen.	Spanish
You have attempted to vote for a greater number of candidates than are permitted in this contest. You must first deselect at least one of the candidates you have selected before selecting another.	Spanish
You have attempted to vote for a greater number of candidates than are permitted in this contest. You must first deselect at least one of the candidates you have selected before selecting another. Press the select key or the left arrow to return to the contest.	Spanish
Selected	Spanish
Write-in	Spanish
ALERT!	Spanish
You did not view all candidates or choices. Do you want to view the rest of the choices?	Spanish
YES. Return to contest.	Spanish
NO. Proceed to next contest.	Spanish
Alert. You did not hear all candidates or choices on the current contest. To go back and hear the rest, press the left arrow key. To proceed on to the next contest, press the right arrow key.	Spanish
ALERT!	Spanish
You have attempted to move from the current contest without viewing all candidates or choices. You are required to view all candidates before proceeding. Please select okay to return to the contest screen and then use the flashing MORE button to scroll through all choices.	Spanish
Alert. You have attempted to move from the current contest without hearing all candidates or choices. You are required to listen to all candidates before proceeding. Please use the left arrow key or the select key to return to the contest screen and then use the up and down arrow keys to scroll through the list of candidates or choices.	Spanish
CANCEL WRITE-IN	Spanish
BACKSPACE	Spanish
SPACE	Spanish
Cancel write in	Spanish
backspace	Spanish
space	Spanish
You have chosen to input a write-in candidate. Use the up and down arrows on the key pad to scroll through the letters. Use the select key to select a letter. Hyphen, space and backspace appear after the Z. Use backspace to remove a letter. At any time, you can press the round repeat key to hear the letters you have selected so far. When you are finished, press the right arrow key to return to the	Spanish

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Prompt Text	Language
contest and select this write-in candidate. To cancel and return to the contest without selecting this write-in candidate, press the left arrow key. Press the down arrow now to begin moving through the alphabet. To repeat these instructions, press the round repeat key.	Spanish
write-in has been cancelled.	Spanish
Your write-in candidate has been selected	Spanish
UNDER-VOTE	Spanish
You have selected fewer than the number of candidates or choices you are permitted to select for this contest. You can return to the contest to vote for additional candidates or choices, or you can confirm your desire to under-vote by continuing on to the next contest.	Spanish
RETURN TO THIS CONTEST	Spanish
CONTINUE TO NEXT CONTEST	Spanish
Alert. You have selected fewer than the number of candidates or choices that you are permitted to select for this contest. If you wish to return to this contest and select additional candidates or choices, please press the left arrow key. If you wish to confirm your desire to under-vote, you can continue on to the next contest by pressing the right arrow key.	Spanish
Overvote	Spanish
Summary of Selections	Spanish
Your selections for each contest are indicated below. To change your selections, touch the box representing that contest. To confirm your selections and mark your ballot, touch "NEXT" at the bottom of the screen.	Spanish
This is the Summary Screen. Use the up and down arrow keys to scroll through each contest and hear your selections. If you wish to modify a selection, use the select key to return to that contest. If you are satisfied with your selections, press the right arrow key to proceed.	Spanish
This is the Verification Summary Screen. Use the up and down arrow keys to scroll through each contest and hear your selections. When you are finished, press the right arrow key to eject your ballot. If you wish to change your selections, you will need to do that manually or request an unmarked ballot from an election official for use in the AutoMARK.	Spanish
Your selections for each contest are indicated below. Your ballot has already been marked and cannot be changed by the AutoMARK. When you are finished reviewing your selections, press the RETURN BALLOT button below to eject your ballot. If you are unsatisfied with your selections, you will need to modify them manually or request an unmarked ballot from an election official for use in the AutoMARK.	Spanish
To mark your ballot, press the button below. Your ballot will be marked in accordance with your selections and returned to you for deposit into a tabulator or ballot box.	Spanish
If you wish to mark your ballot now, press the square select key. Your ballot will be marked in accordance with your selections and returned to you for deposit into a tabulator or ballot box. If you wish to change a selection, use the left arrow key to return to the summary screen. If you wish to exit without marking your ballot, use the left arrow key until you hear the exit message and then follow the instructions. Your blank ballot will be returned to you.	Spanish
Your ballot is now being processed.	Spanish
Your ballot is now being processed. Please wait. The printing process should take about 15 seconds. Your ballot will then be returned to you for insertion into the tabulator or ballot box. Please wait.	Spanish
Thank you for using the AutoMARK(TM) Voter Assist Terminal. Please remove your ballot and deposit it into the tabulator or ballot box.	Spanish
REMOVE BALLOT	Spanish
Thank you for using the AutoMARK Voter Assist Terminal. Please remove your ballot and deposit it into the tabulator or ballot box. If you need assistance, please alert an election official.	Spanish
The ballot you have inserted has already been marked. If you thought you were using an unmarked ballot, please select EXIT to return your ballot. Then contact an election official for a new ballot. If you would like to review the selections on this ballot, press the NEXT arrow button to view a summary page. Note that you will not be able to use the AutoMARK to change any of these selections.	Spanish

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Prompt Text	Language
The ballot you have inserted has already been marked. If you thought you were using an unmarked ballot, please press the left arrow key to return your ballot. Then contact an election official for a new ballot. If you would like to review the selections on this ballot, press the right arrow key for the summary page. Note that you will not be able to use the AutoMARK to change any of these selections.	Spanish
No Selection Made	Spanish
No Selection Made	Spanish
Cancel Write-In	Spanish
Mark Ballot	Spanish
Hyphen	Spanish
Loading your language	Spanish
Loading your language...	Spanish
MORE	Spanish
Scroll Up	Spanish
The screen has been turned off for privacy. Use the diamond-shaped key on the keypad to turn the screen back on.	Spanish
Scroll Down	Spanish
You have reached the top of the selection list.	Spanish
There are no choices	Spanish
You have reached the bottom of the list. Please press the right arrow key to proceed to the next screen.	Spanish
There is one choice	Spanish
There are	Spanish
choices	Spanish
Scanning, please wait...	Spanish
You have returned to the summary screen.	Spanish
Alert! A problem has occurred. Please notify an election official.	Spanish
Alert! A problem has occurred. Please notify an election official.	Spanish
Overvote	Spanish
CONTINUE VOTING	Spanish
CONTINUE TO NEXT CONTEST	Spanish
RETURN TO THIS CONTEST	Spanish
Yes	Spanish
No	Spanish
Write-In	Spanish
You have now fully voted this contest. Press the right arrow key to continue to the next screen.	Spanish
You have selected one candidate.	Spanish
You have selected	Spanish
ALERT. The preceding race requires you to vote for an exact number of candidates. You have voted for fewer than the number allowed. You can go back to the race to select the exact number of candidates, or you may skip that race and move on to the next race. If you choose to continue, your selections for that race will NOT be recorded.	Spanish
ALERT. The preceding race requires you to vote for an exact number of candidates. You have voted for fewer than the number allowed. You can use the left arrow key to go back to the race to select	Spanish

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Prompt Text	Language
the exact number of candidates, or you may use the right arrow key to skip that race and move on to the next race. If you choose to skip the race, your selections for that race will NOT be recorded. Press the right or left arrow key now.	Spanish
ALERT. No inputs have been received for the past five minutes. Please click OKAY below if you need more time.	Spanish
ALERT. No inputs have been received for the past five minutes. Please press the square ENTER key in the middle of the keypad if you need more time.	Spanish
You have reached the maximum write-in length.	Spanish
You have reached the maximum write-in length. Use BACKSPACE to change your entry or choose OK to accept it as it is.	Spanish
Note: You have removed selection of a candidate that was selected by your Straight Party choice. As a result, the Straight Party selection has also been removed. This removal will not affect the selection of any candidate in any other contest. They will remain selected unless you manually remove them. Press the center, select key to continue.	Spanish
Straight Party Selection	Spanish
Note: You have removed selection of a candidate that was selected by your Straight Party choice. As a result, the Straight Party selection has also been removed. This removal will not affect the selection of any candidate in any other contest. They will remain selected unless you manually remove them. Press OK to continue.	Spanish
Write-In	Spanish
Alert! If you wish to exit the write-in screen and cancel your entry, press the right arrow key. Otherwise, press the left arrow key.	Spanish
Alert! If you wish to exit the write-in screen and keep your entry, press the right arrow key. Otherwise, press the left arrow key.	Spanish
Alert! If you wish to exit the write-in screen and cancel your entry, press the right arrow key. Otherwise, press the left arrow key.	Spanish
Alert! If you wish to exit the write-in screen and keep your entry, press the right arrow key. Otherwise, press the left arrow key.	Spanish
Alert! You cannot select the same candidate twice for this contest. If you wish to vote for the same candidate in a different party, please de-select your previous choice and select your candidate in the desired party. Press the OK button to return to the contest.	Spanish
Alert! You cannot select the same candidate twice for this contest. If you wish to vote for the same candidate in a different party, please de-select your previous choice and select your candidate in the desired party. Press the center, select key to return to the contest.	Spanish
Previous Contest	Spanish
Alert! Changing your Straight Party selection will remove candidate selections in Partisan contests and replace these selections with candidates affiliated with this new party selection where allowed. To cancel this chenge, press RETURN TO THIS CONTEST. To accept the new selection press OK.	Spanish
Alert! Changing your Straight Party selection will remove candidate selections in Partisan contests and replace these selections with candidates affiliated with this new party selection where allowed. To cancel this chenge, press the left arrow key. To accept the new selection press the right arrow key.	Spanish
Team Write-in - Line 1	Spanish
Team Write-in - Line 2	Spanish
You have chosen to input a write-in candidate. Use the up and down arrows on the key pad to scroll through the letters. Use the center, select key to select a letter. Hyphen, space and backspace appear after the Z. Use backspace to remove a letter. At any time, you can press the round repeat key to hear the letters you have selected so far. If this is the first line for the team write-in, press the right arrow key to go to the write-in screen for the second line. If this is the second line for the team write-in, press the right arrow key to return to the contest and select this team write-in. To cancel and return to the contest without selecting this team write-in or to return to the first line of the write-in, press the left arrow key. Press the down arrow now to begin moving through the alphabet. To repeat these instructions, press the round repeat key.	Spanish
Next	Spanish

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Prompt Text	Language
Verify Marked Ballot	Spanish
Summary of Marked Ballot	Spanish
Summary of Marked Ballot	Spanish
Your ballot will now be automatically cast into secure container at back of machine for subsequent counting.	Spanish
Your ballot will now be automatically cast into a secure container at back of machine for subsequent counting.	Spanish
Cast Ballot	Spanish
Remove Ballot or Auto-Cast Ballot	Spanish
Present Voter with Marked Ballot	Spanish
Auto-Cast Ballot into Secure Container	Spanish
Press the right arrow key to place the marked ballot into a secure container. Press the left arrow key to have the marked ballot returned to you.	Spanish
Present Voter with Marked Ballot	Spanish
Auto-Cast Ballot into Secure Container	Spanish
To mark your ballot, press the button below. Your ballot will be marked in accordance with your selections. You will then be presented with a summary of the marked ballot.	Spanish
If you wish to mark your ballot now, press the center select button on the keypad. Your ballot will then be marked in accordance with your selections. You will then be presented with a summary of your marked ballot. If you wish to change a selection, use the left arrow button to return to the summary screen. If you wish to exit without marking your ballot, use the left arrow button until you hear the exit message, then follow the instructions. Your blank ballot will be returned to you.	Spanish
Your ballot is now being processed. Please wait. The printing process should take about 15 seconds. You will then be presented with a summary screen of what has been marked on the ballot. Please wait.	Spanish
Do you wish to hear the selections marked on this ballot? If YES, press the center SELECT button on the keypad. If NO, press the right arrow button on the keypad.	Spanish
Audio Summary	Spanish
Audio Playback in progress	Spanish
Press RIGHT arrow button on keypad or NEXT arrow button to SKIP AUDIO PLAYBACK	Spanish
Do you wish to hear the selections marked on this ballot? If yes, press the center select button on the keypad. If no, press the right arrow button on the keypad.	Spanish
Audio summary	Spanish
Audio playback in progress	Spanish
Press the right arrow button on the keypad or next arrow button.	Spanish
Mark Ballot	Spanish
Full-Face Ballot image - Press NEXT to continue	Spanish
A representation of the paper ballot is being displayed on the screen. Please press the right arrow button to continue	Spanish
OK	Spanish
Alert! Removing your selection in this contest will also remove any candidate votes in the associated replacement contest. To keep your original selections in these contests, press RETURN TO THIS CONTEST. To accept the changes, press OK.	Spanish
Alert! Removing your selection in this contest will also remove your candidate votes in the associated replacement contest. To keep your original selections in these contests, press the left arrow key. To accept the changes, press the right arrow key.	Spanish
Alert! Changing your Party Preference selection will select a new Party ballot. This will result in the removal of all candidate selections in all contests associated with your previous party choice and voting will be limited to the contests that are associated with your new party choice. If you want to	Spanish

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Prompt Text	Language
keep your previous Party ballot and candidate selections, press RETURN TO THIS CONTEST. To accept the changes, press OK.	Spanish
Alert! Changing your Party Preference selection will select a new Party ballot. This will result in the removal of all candidate selections in all contests associated with your previous party choice and voting will be limited to the contests that are associated with your new party choice. If you want to keep your previous Party ballot and candidate selections, press the left arrow key. To accept the changes, press the right arrow key.	Spanish

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Missing AutoMARK System Audio

11/25/2013 03:12PM

Translation Text	Language	Filename
Please insert your ballot and then wait for the ballot to be scanned, which may take up to 30 seconds. The audio will be silent while scanning.	English	Prompt_1_2.wav
Display screen is on	English	Prompt_1_3.wav
Display screen is off	English	Prompt_1_4.wav
Exit now and your ballot will not be marked. Press the left arrow key to return to voting. Press the right arrow key to exit and receive your unmarked ballot.	English	Prompt_1_7.wav
Press the left arrow key to return to voting. Press the right arrow key to exit and receive your unmarked ballot.	English	Prompt_1_8.wav
Please remove your unmarked ballot. Thank you for using the AutoMARK Voter Assist Terminal.	English	Prompt_1_10.wav
Paper misfeed. Please contact an election official.	English	Prompt_1_13.wav
Your ballot has not been recognized. Please try again or contact an election official for assistance. Please double-check that you are inserting only a single ballot.	English	Prompt_1_15.wav
Press the down arrow key to scroll through languages. Use the square select key to select a language. If you wish to exit the system and return your unmarked ballot, press the left arrow key.	English	Prompt_1_18.wav
You have selected	English	Prompt_1_19.wav
Official Ballot	English	Prompt_1_21.wav
Voting Instructions. The AutoMARK Voter Assist Terminal is designed to help you mark your optical scan ballot. This system will guide you through each contest in the ballot and present each choice. Once you have made your selections, you can review your selections and then choose to have your ballot marked. Your ballot will then be returned to you to be deposited into a ballot box. The keypad on your right is used to interact with the AutoMARK and to make your selections. You will find four arrow keys and a center select button. In addition to the arrow keys, there are four vertical keys to the right of the arrow keys. The bottom toggle key will adjust audio volume. The next toggle key will adjust the speed of the synthesized speech. The round button will repeat the last spoken phrase. Holding the round button until there is a beep will pause the audio. Tapping the round button again will resume the audio. The top diamond key will turn the display screen on or off for privacy. Pressing the right arrow key will move to the next contest. Pressing the left arrow key will move to the previous contest. Pressing the down arrow key will move to the next candidate or choice within a contest. Pressing the up arrow key will move to the previous candidate. When you hear the name of the candidate or choice that you wish to select, press the square select key in the center of the arrow keys. If you need additional assistance, please alert an election official. To exit without marking your ballot, press the diamond-shaped screen button four times in a row. Press the right arrow key now to hear the first contest. Press the round repeat key to hear these instructions again.	English	Prompt_1_26.wav
NEXT	English	Prompt_1_27.wav
BACK	English	Prompt_1_28.wav
HIGH CONTRAST	English	Prompt_1_29.wav
ZOOM	English	Prompt_1_30.wav
RETURN BALLOT	English	Prompt_1_32.wav
Next contest	English	Prompt_1_33.wav
Use the down arrow key to hear the name of each candidate or	English	Prompt_1_34.wav

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Translation Text	Language	Filename
with a summary screen of what has been marked on the ballot. Please wait.	Spanish	Prompt_2_158.wav
Do you wish to hear the selections marked on this ballot? If yes, press the center select button on the keypad. If no, press the right arrow button on the keypad.	Spanish	Prompt_2_163.wav
Audio summary	Spanish	Prompt_2_164.wav
Audio playback in progress	Spanish	Prompt_2_165.wav
Press the right arrow button on the keypad or next arrow button.	Spanish	Prompt_2_166.wav
Mark Ballot	Spanish	Prompt_2_167.wav
A representation of the paper ballot is being displayed on the screen. Please press the right arrow button to continue	Spanish	Prompt_2_169.wav
OK	Spanish	Prompt_2_196.wav
Alert! Removing your selection in this contest will also remove your candidate votes in the associated replacement contest. To keep your original selections in these contests, press the left arrow key. To accept the changes, press the right arrow key.	Spanish	Prompt_2_199.wav
Alert! Changing your Party Preference selection will select a new Party ballot. This will result in the removal of all candidate selections in all contests associated with your previous party choice and voting will be limited to the contests that are associated with your new party choice. If you want to keep your previous Party ballot and candidate selections, press the left arrow key. To accept the changes, press the right arrow key.	Spanish	Prompt_2_201.wav

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Missing Ballot Audio Files

11/25/2013 03:20PM

ElectionWare County
Example Election
October 31, 2013

Label Type	English Text	Language	Filename	Alt ID1
English				
Heading	Municipal	English	Head_1_15_1.wav	
Heading	School	English	Head_1_16_1.wav	
Heading	Referendi	English	Head_1_29_1.wav	
Contest Summary	Mayor Vote for One	English	Cont_1_18_0.wav	
Contest Summary	Precinct Alderman Precinct 1 Vote for One	English	Cont_1_21_0.wav	
Contest Summary	Precinct Alderman Precinct 2 Vote for One	English	Cont_1_22_0.wav	
Contest Summary	School Board Member Happyville School Vote for One	English	Cont_1_24_0.wav	
Question Contest Summary	Referendum on Questions with Lots of Text	English	Text_1_26_0.wav	
Question	Referendum on Questions with Lots of Text	English	Text_1_26_1.wav	
Candidate	Yes	English	Cand_1_27_1.wav	
Candidate	No	English	Cand_1_28_1.wav	
Candidate	Ima Leader	English	Cand_1_30_1.wav	
Candidate	Purple Party	English	Pty_1_30_1.wav	
Candidate	Yura Stinkhead	English	Cand_1_31_1.wav	
Candidate	Orange Party	English	Pty_1_31_1.wav	
Candidate	Anders Anderson	English	Cand_1_32_1.wav	
Candidate	Baker Bakerson	English	Cand_1_33_1.wav	
Candidate	Carl Carlson	English	Cand_1_34_1.wav	
Candidate	Danny Danielson	English	Cand_1_35_1.wav	
Candidate	Emmy Emilson	English	Cand_1_36_1.wav	
Candidate	NONPARTISAN	English	Pty_1_36_1.wav	1
Candidate	Fanny Funderson	English	Cand_1_37_1.wav	
Number	3	English	Nbr3Lang1.wav	
Number	2	English	Nbr2Lang1.wav	
Number	1	English	Nbr1Lang1.wav	

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Option	Setting
Settings Last Changed	
User ID	admin
Date and Time	11/01/2013 03:41PM
Tabulation Settings	
Straight Party	Not Applicable
Election Type	General/Other
Polling Place Options	
Allow Re-opening of Polls	Selected
Required Password on Poll Close	Not Selected
Ballot Handling Options Before Ballot Is Cast	
Undervoted Ballot	Query Voter Preference
Overvoted Ballot	Query Voter Preference
Blank Ballot	Query Voter Preference
Cross Over Voted Ballot	N/A
Unreadable Marks on Ballot	Always Reject
Allow Display of Affected Contests	Selected
Allow Ballot Handling Override	Not Selected
ExpressVote Card Handling	Always Accept ExpressVote Cards
Ballot Handling Options After Ballot Is Cast	
Images to Save	All Images
Diverter Installed	Not Selected
Identify Write-ins	Not Selected
Evaluate Unmarked Write-ins	Not Selected
Identify Write-in Overvotes	Not Selected
Identify Blank Ballots	Not Selected
Reporting Options	
Level	Poll and Precinct
Format	Public
Zero Report Quantity	1
Results Report Quantity	1
Candidate Print Order	Home Rotation Order
Include Machine Event Log	Not Selected
Combine Overs and Unders as Blank	Not Selected
Count Overvotes as 1 (multi vote for)	Selected
Automatically Print Ballot Style Accounting Report	Selected

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Option	Setting
Settings Last Changed	
User ID	admin
Date and Time	10/31/2013 09:59AM
Tabulation Settings	
Straight Party	Not Applicable
Election Type	General/Other
Polling Place Options	
Allow Re-opening of Polls	Selected
Required Password on Poll Close	Selected
Ballot Handling Options Before Ballot Is Cast	
Undervoted Ballot	Query Voter Preference
Overvoted Ballot	Query Voter Preference
Blank Ballot	Query Voter Preference
Cross Over Voted Ballot	N/A
Unreadable Marks on Ballot	Always Reject
Allow Display of Affected Contests	Selected
Allow Ballot Handling Override	Not Selected
ExpressVote Card Handling	Always Accept ExpressVote Cards
Ballot Handling Options After Ballot Is Cast	
Images to Save	All Images
Diverter Installed	Not Selected
Identify Write-ins	Not Selected
Evaluate Unmarked Write-ins	Not Selected
Identify Write-in Overvotes	Not Selected
Identify Blank Ballots	Not Selected
Reporting Options	
Level	Poll
Format	Public
Zero Report Quantity	1
Results Report Quantity	1
Candidate Print Order	Home Rotation Order
Include Machine Event Log	Not Selected
Combine Overs and Unders as Blank	Not Selected
Count Overvotes as 1 (multi vote for)	Not Selected
Automatically Print Ballot Style Accounting Report	Not Selected

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DS850 Settings

Example Election

October 31, 2013 ElectionWare County, ElectionWare State

Option	Setting
Settings Last Changed	
User ID	admin
Date and Time	2013-10-31 09:59:11.04
Tabulation Settings	
Straight Party	Not Applicable
Election Type	General/Other
Bin Options	
Top Bin Configuration	Not Processed
Middle Bin Configuration	Processed
Bottom Bin Configuration	Processed
Top Bin Report Format	Long
Middle Bin Report Format	Long
Bottom Bin Report Format	N/A
Number of Top Bin Reports	0
Number of Middle Bin Reports	0
Number of Bottom Bin Reports	0
Ballot Handling Options	
Evaluate Unmarked Write-ins	Not Selected
Write-ins	Processed (Middle Bin)
Overvotes	Processed (Bottom Bin)
Undervotes	Processed (Bottom Bin)
Blank	Processed (Bottom Bin)
Unclear Marks	Processed (Bottom Bin)
Crossovers	N/A
Invalid ID	Not Processed (Top Bin)
Unreadable	Not Processed (Top Bin)
No Exceptions	Processed (Bottom Bin)
Ballot Image Save Options	
Save to Results Media	All Processed Images
Audit Log	
Real-time Audit Log	Not Selected
Allow override to continue scanning	Not Selected
Results Reports	
Require Authorization For Results	Not Selected
Format	Public
Count Overvotes as 1 (multi vote for)	Not Selected
Combine Overs and Unders as Blank	Not Selected
Network Settings Last Changed	
User ID	admin
Date and Time	2013-10-31 09:59:11.04
Network Settings	
Network Enabled	Not Selected

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Internal SFTP Server IP Address	N/A

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AutoMARK Settings

Example Election

October 31, 2013 ElectionWare County, ElectionWare State

Option	Setting
Settings Last Changed	
User ID	admin
Date and Time	11/01/2013 01:00PM
Tabulation Settings	
Straight Party	Not Applicable
Election Type	General/Other
Vote Session Properties	
Alert voter if all Contest choices have not been displayed	Selected
Alert voter of undervote condition	Not Selected
Force voter to view all Contest choices	Not Selected
Deselect Straight Party Candidates in Contest if manually re-voted	Not Selected
Audio Properties	
Non-Audio Election	Not Selected
Ballot Properties	
Ballot Margins Top/Bottom	11
Test Print -X Offset	8
Test Print -Y Offset	-3
Write-In Properties	
Write-In Line Length	40
Write-In Line Wrap	0
Write-In Text by Oval -X Offset	10
Write-In Text by Oval -Y Offset	-1
Terminal Properties	
Use Party Graphics	All Party Candidates

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Ballot Detail Listing

11/27/2013 08:56AM

ElectionWare County
Example Election
October 31, 2013

Note: You must hold the ballot in a portrait orientation to validate the row and column values in this report.

Ballot Style: 1 - ED Precinct 1 SPLIT 1

Precinct ID	Precinct Name
0001-01	Precinct 1 SPLIT 1

Order	Vote For	Term	Contest	Rotation	Candidate	Row	Col
1	1	4	Mayor	1	PUR Ima Leader	10	9
					ONG Yura Candidate	14	9
					Write-in	18	9
2	1	4	Precinct Alderman Precinct 1	1	PUR Anders Anderson	28	9
					ONG Carl Carlson	32	9
3	1		Referendum on Questions with Lots of Text	1	Yes	46	9
					No	47	9

Ballot Style: 2 - ED Precinct 1 SPLIT 2

Precinct ID	Precinct Name
0001-02	Precinct 1 SPLIT 2

Order	Vote For	Term	Contest	Rotation	Candidate	Row	Col
1	1	4	Mayor	1	PUR Ima Leader	10	9
					ONG Yura Candidate	14	9
					Write-in	18	9
2	1	4	Precinct Alderman Precinct 1	1	PUR Anders Anderson	28	9
					ONG Carl Carlson	32	9
3	1	4	School Board Member Happyville School	1	Emmy Emilson	43	9
					Frank Franklin	46	9
4	1		Referendum on Questions with Lots of Text	1	Yes	15	17
					No	16	17

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Ballot Detail Listing

11/27/2013 08:56AM

Note: You must hold the ballot in a portrait orientation to validate the row and column values in this report.

Ballot Style: 3 - ED Precinct 2 SPLIT 1

Precinct ID	Precinct Name
0002-01	Precinct 2 SPLIT 1

Order	Vote For	Term	Contest	Rotation	Candidate	Row	Col
1	1	4	Mayor	1	PUR Ima Leader	10	9
					ONG Yura Candidate	14	9
					Write-in	18	9
2	1	4	Precinct Alderman Precinct 2	1	PUR Bea Bakerson	28	9
					ONG Danny Danielson	32	9
3	1		Referendum on Questions with Lots of Text	1	Yes	46	9
					No	47	9

Ballot Style: 4 - ED Precinct 2 SPLIT 2

Precinct ID	Precinct Name
0002-02	Precinct 2 SPLIT 2

Order	Vote For	Term	Contest	Rotation	Candidate	Row	Col
1	1	4	Mayor	1	PUR Ima Leader	10	9
					ONG Yura Candidate	14	9
					Write-in	18	9
2	1	4	Precinct Alderman Precinct 2	1	PUR Bea Bakerson	28	9
					ONG Danny Danielson	32	9
3	1	4	School Board Member Happyville School	1	Emmy Emilson	43	9
					Frank Franklin	46	9
4	1		Referendum on Questions with Lots of Text	1	Yes	15	17
					No	16	17

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Election Media by Poll Place

Example Election

October 31, 2013 ElectionWare County, ElectionWare State

For DS equipment the latest Data Version number is 4.

DS200 Election Media

Poll Place Name	Media ID	Data Version	Media Serial Number	Audio Enabled	Media Creation Date
City Hall					Total Media: 1
	1	4	07B91613139C	No	11/26/2013 09:26AM

Total Poll Places: 1

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Media Not Created

Example Election

October 31, 2013 ElectionWare County, ElectionWare State

DS200 Election Media

Poll Place Name	Poll Place ID	Alternate ID
City Library	CTYLIB	N/A
Early Voting	EV	N/A

Total Poll Places Without DS200 Election Media : 2

DS850 Election Media

Poll Place Name	Poll Place ID	Alternate ID
City Hall	CITYHALL	N/A
City Library	CTYLIB	N/A
Early Voting	EV	N/A

Total Poll Places Without DS850 Election Media : 3

AutoMARK Compact Flash

Poll Place Name	Poll Place ID	Alternate ID
City Hall	CITYHALL	N/A
City Library	CTYLIB	N/A
Early Voting	EV	N/A

Total Poll Places Without AutoMARK Election Media : 3

ExpressVote Election Media

Poll Place Name	Poll Place ID	Alternate ID
City Hall	CITYHALL	N/A
City Library	CTYLIB	N/A
Early Voting	EV	N/A

Total Poll Places Without ExpressVote Election Media : 3

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Machine Log Report

11/26/2013 09:47AM

ElectionWare County
Test Election 2014
October 29, 2013

Date and Time	Log Entry Text
Machine Serial Number	PRECINCT 1 - Media-1 - 0110340767
2013/10/30 08:16:28	Election media created
2013/10/30 08:20:33	Motherboard EPIA-EK
2013/10/30 08:21:02	Election loaded
2013/10/30 08:21:05	All data paths and memory locations OK
2013/10/30 08:21:06	Printing 1 copy of Configuration Report
2013/10/30 08:21:07	User canceled printing Configuration Report
2013/10/30 08:21:08	DS200/UVC not plugged in
2013/10/30 08:21:09	Attempting to Open Poll
2013/10/30 08:21:11	Open process complete.
2013/10/30 08:21:12	Keys detected on poll media 0110340767
2013/10/30 08:21:13	Poll opened
2013/10/30 08:21:17	Printing 1 copy of Zero Totals Report
2013/10/30 08:21:19	User canceled printing Zero Totals Report
2013/10/30 08:21:23	Attempting to enter Voting Mode
2013/10/30 08:21:24	Entering voting mode
2013/10/30 08:21:32	Vote Session Started
2013/10/30 08:21:35	IMR Log Characteristic Point Status Init 24 New 24
2013/10/30 08:21:39	Ballot images stored
2013/10/30 08:21:39	Voting session complete
2013/10/30 08:21:41	Vote Session Started
2013/10/30 08:21:43	IMR Log Characteristic Point Status Init 24 New 24
2013/10/30 08:21:45	Ballot images stored
2013/10/30 08:21:45	Voting session complete

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Date and Time	Log Entry Text
2013/10/30 08:21:47	Vote Session Started
2013/10/30 08:21:50	IMR Log Characteristic Point Status Init 24 New 24
2013/10/30 08:21:51	Ballot images stored
2013/10/30 08:21:51	Voting session complete
2013/10/30 08:21:54	Vote Session Started
2013/10/30 08:21:56	IMR Log Characteristic Point Status Init 24 New 24
2013/10/30 08:21:58	Ballot images stored
2013/10/30 08:21:58	Voting session complete
2013/10/30 08:22:00	Vote Session Started
2013/10/30 08:22:02	IMR Log Characteristic Point Status Init 24 New 24
2013/10/30 08:22:04	Ballot images stored
2013/10/30 08:22:04	Voting session complete
2013/10/30 08:22:06	Vote Session Started
2013/10/30 08:22:08	IMR Log Characteristic Point Status Init 24 New 24
2013/10/30 08:22:10	Ballot images stored
2013/10/30 08:22:10	Voting session complete
2013/10/30 08:22:12	Vote Session Started
2013/10/30 08:22:14	IMR Log Characteristic Point Status Init 24 New 24
2013/10/30 08:22:16	Ballot images stored
2013/10/30 08:22:16	Voting session complete
2013/10/30 08:22:18	Vote Session Started
2013/10/30 08:22:20	IMR Log Characteristic Point Status Init 24 New 16 Changepoint (648,1441,FRONT) > Init 16 New 16
2013/10/30 08:22:22	Ballot images stored

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Machine Log Report

11/26/2013 09:47AM

Date and Time	Log Entry Text
2013/10/30 08:22:22	Voting session complete
2013/10/30 08:22:24	Vote Session Started
2013/10/30 08:22:27	IMR Log Characteristic Point Status Init 16 New 24 Changepoint (632,2397,FRONT) > Init 24 New 24
2013/10/30 08:22:28	Ballot images stored
2013/10/30 08:22:28	Voting session complete
2013/10/30 08:22:31	Vote Session Started
2013/10/30 08:22:33	IMR Log Characteristic Point Status Init 24 New 24
2013/10/30 08:22:35	Ballot images stored
2013/10/30 08:22:35	Voting session complete
2013/10/30 08:22:37	Vote Session Started
2013/10/30 08:22:39	IMR Log Characteristic Point Status Init 24 New 24
2013/10/30 08:22:40	Ballot images stored
2013/10/30 08:22:40	Voting session complete
2013/10/30 08:22:43	Vote Session Started
2013/10/30 08:22:45	IMR Log Characteristic Point Status Init 24 New 24
2013/10/30 08:22:46	Ballot images stored
2013/10/30 08:22:46	Voting session complete
2013/10/30 08:22:54	Attempting to Close Poll
2013/10/30 08:23:05	Close process complete.
2013/10/30 08:23:07	Collection process complete.
2013/10/30 08:23:14	Poll closed
2013/10/30 08:23:15	Printing 1 copy of Voting Results Report
2013/10/30 08:24:14	Completed printing Voting Results Report

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Media Status Report

11/26/2013 09:48AM

ElectionWare County
Test Election 2014
October 29, 2013

Media Loaded

Poll Place Name	Poll Place ID	Equipment Type	Media Serial Number	Media Load Time	ExpressVote Ballots	Total Ballots
PRECINCT 1	1				0	12
		DS200	07C711130690	10/30/2013 08:30AM	0	12

Total Poll Places: 1

Media Not Loaded

Poll Place Name	Poll Place ID	Equipment Type	Media Serial Number	Media Load Time	ExpressVote Ballots	Total Ballots

Total Poll Places: 0

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User Report

11/26/2013 09:06AM

ElectionWare County
Example Election
October 31, 2013

User Id	First Name	Last Name	Active	Created	Last Login
admin	ElectionWare	Administrator	true	10/31/2013 09:39AM	11/26/2013 08:52AM
ZZimmerman	Zander	Zimmerman	false	11/26/2013 09:06AM	None

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Election Audit Events Report

11/26/2013 09:15AM

ElectionWare County
Example Election
October 31, 2013

Event	Description	Timestamp	User Id	Module
Info	Running report: Election Audit Events Report	11/26/2013 09:15:36AM	admin	Setup
Info	Running report: Election Audit Events Report	11/26/2013 09:14:34AM	admin	Setup
Info	Running report: Election Audit Events Report	11/26/2013 09:14:06AM	admin	Setup
Info	Running report: User Report	11/26/2013 09:06:28AM	admin	Setup
Info	Running report: User Report	11/26/2013 09:03:34AM	admin	Setup
Verbose	Done.	11/26/2013 08:57:39AM	admin	Configure
Verbose	Generating Report...	11/26/2013 08:57:39AM	admin	Configure
Info	Running report: ExpressVote Settings Report	11/26/2013 08:57:39AM	admin	Configure
Verbose	Done.	11/26/2013 08:56:29AM	admin	Configure
Verbose	Generating Report...	11/26/2013 08:56:29AM	admin	Configure
Info	Running report: AutoMARK Settings Report	11/26/2013 08:56:29AM	admin	Configure
Info	Configure Equipment module activated.	11/26/2013 08:56:21AM	admin	Configure
Verbose	Open Election: Finding Election...	11/26/2013 08:54:26AM	admin	Home
Verbose	Open Election: Finding Jurisdiction...	11/26/2013 08:54:26AM	admin	Home
Verbose	Open Election: Finding Customer...	11/26/2013 08:54:26AM	admin	Home
Info	Election Opened: Example Election	11/26/2013 08:54:26AM	admin	Home

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Access Codes

11/26/2013 09:20AM

ElectionWare County
Example Election
October 31, 2013

Warning: This report contains election sensitive information. To protect the security of your election, do not distribute this report and keep it in a secure location.

DS/ExpressVote/RAS Security		
Code Type	Code	Last Saved
Election Code	El3ction	11/26/2013 09:20AM
Qualification Code	Qu@lQu@l	11/26/2013 09:20AM
Override Code	0verride!	11/26/2013 09:20AM
Administration Code	AAdmin1!	11/26/2013 09:20AM

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Run Date:11/26/13 11:40 AM

0001 1 BELLEFONTE NORTH

	VOTES	PERCENT
REGISTERED VOTERS - TOTAL	0	
BALLOTS CAST - TOTAL	0	

STRAIGHT PARTY
VOTE FOR NOT MORE THAN 1

REPUBLICAN PARTY	0	
DEMOCRATIC PARTY	0	
GREEN PARTY	0	
INDEPENDENT PARTY	0	
Over Votes	0	
Under Votes	0	

JUDGE OF THE SUPERIOR COURT
VOTE FOR NOT MORE THAN 1

VIC STABILE	0	
JACK MCVAY, JR.	0	
WRITE-IN	0	
Over Votes	0	
Under Votes	0	

DISTRICT ATTORNEY
VOTE FOR NOT MORE THAN 1

STACY PARKS MILLER	0	
WRITE-IN	0	
Over Votes	0	
Under Votes	0	

JURY COMMISSIONER
VOTE FOR NOT MORE THAN 1

HOPE P. MILLER	0	
RUTH L. LUSE	0	
WRITE-IN	0	
Over Votes	0	
Under Votes	0	

DISTRICT JUDGE MAGISTERIAL DISTRICT 49-3-02
VOTE FOR NOT MORE THAN 1

KELLEY GILLETTE-WALKER	0	
WRITE-IN	0	
Over Votes	0	
Under Votes	0	

MAYOR BELLEFONTE
VOTE FOR NOT MORE THAN 1

TOM WILSON	0	
WRITE-IN	0	
Over Votes	0	
Under Votes	0	

COUNCIL - BLFT - WARD 1 WARD 1 BELLEFONTE
VOTE FOR NOT MORE THAN 2

	VOTES	PERCENT
JOSEPH BEIGLE	0	
BARRY SPICER	0	
SHEILA STEVER	0	
WRITE-IN	0	
Over Votes	0	
Under Votes	0	

TAX COLLECTOR BELLEFONTE
VOTE FOR NOT MORE THAN 1

DEBRA A. BURGER	0	
WRITE-IN	0	
Over Votes	0	
Under Votes	0	

SCHOOL DIRECTOR (2YR INTERIM) BELLEFONTE SCHOOL DISTRICT
VOTE FOR NOT MORE THAN 1

JENNA MOOREHEAD	0	
WRITE-IN	0	
Over Votes	0	
Under Votes	0	

SCHOOL DIRECTOR BELLEFONTE SCHOOL DISTRICT
VOTE FOR NOT MORE THAN 4

RODNEY E. MUSSER	0	
MICHAEL B. DANNEKER	0	
CHARLES CHIP T. AIKENS, III	0	
KEITH B. HAMILTON	0	
BECKY ROCK	0	
JEFF STEINER	0	
WRITE-IN	0	
Over Votes	0	
Under Votes	0	

JUDGE OF ELECTION 1 BELLEFONTE NORTH (Prec-0001)
VOTE FOR NOT MORE THAN 1

WRITE-IN	0	
Over Votes	0	
Under Votes	0	

INSPECTOR OF ELECTION 1 BELLEFONTE NORTH (Prec-0001)
VOTE FOR NOT MORE THAN 1

WRITE-IN	0	
Over Votes	0	
Under Votes	0	

Run Date:11/26/13 11:40 AM

	VOTES	PERCENT
PRECINCTS COUNTED (OF 90)	0	
REGISTERED VOTERS - TOTAL	0	
BALLOTS CAST - TOTAL	0	

STRAIGHT PARTY
VOTE FOR NOT MORE THAN 1
(WITH 0 OF 90 PRECINCTS COUNTED)

REPUBLICAN PARTY	0	
DEMOCRATIC PARTY	0	
GREEN PARTY	0	
INDEPENDENT PARTY	0	
Over Votes	0	
Under Votes	0	

JUDGE OF THE SUPERIOR COURT
VOTE FOR NOT MORE THAN 1
(WITH 0 OF 90 PRECINCTS COUNTED)

VIC STABILE	0	
JACK MCVAY, JR.	0	
WRITE-IN	0	
Over Votes	0	
Under Votes	0	

DISTRICT ATTORNEY
VOTE FOR NOT MORE THAN 1
(WITH 0 OF 90 PRECINCTS COUNTED)

STACY PARKS MILLER	0	
WRITE-IN	0	
Over Votes	0	
Under Votes	0	

JURY COMMISSIONER
VOTE FOR NOT MORE THAN 1
(WITH 0 OF 90 PRECINCTS COUNTED)

HOPE P. MILLER	0	
RUTH L. LUSE	0	
WRITE-IN	0	
Over Votes	0	
Under Votes	0	

DISTRICT JUDGE MAGISTERIAL DISTRICT 49-1-01
VOTE FOR NOT MORE THAN 1
(WITH 0 OF 10 PRECINCTS COUNTED)

CARMINE W. PRESTIA, JR.	0	
WRITE-IN	0	
Over Votes	0	
Under Votes	0	

DISTRICT JUDGE MAGISTERIAL DISTRICT 49-2-01
VOTE FOR NOT MORE THAN 1
(WITH 0 OF 17 PRECINCTS COUNTED)

	VOTES	PERCENT
LESLIE A. DUTCHCOT	0	
WRITE-IN	0	
Over Votes	0	
Under Votes	0	

DISTRICT JUDGE MAGISTERIAL DISTRICT 49-3-02
VOTE FOR NOT MORE THAN 1
(WITH 0 OF 23 PRECINCTS COUNTED)

KELLEY GILLETTE-WALKER	0	
WRITE-IN	0	
Over Votes	0	
Under Votes	0	

DISTRICT JUDGE MAGISTERIAL DISTRICT 49-3-05
VOTE FOR NOT MORE THAN 1
(WITH 0 OF 9 PRECINCTS COUNTED)

SUSAN BARDO	0	
STEVEN LACHMAN	0	
WRITE-IN	0	
Over Votes	0	
Under Votes	0	

MAYOR BELLEFONTE
VOTE FOR NOT MORE THAN 1
(WITH 0 OF 5 PRECINCTS COUNTED)

TOM WILSON	0	
WRITE-IN	0	
Over Votes	0	
Under Votes	0	

MAYOR CENTRE HALL
VOTE FOR NOT MORE THAN 1
(WITH 0 OF 1 PRECINCTS COUNTED)

RAYMOND C. HANKINSON	0	
WRITE-IN	0	
Over Votes	0	
Under Votes	0	

MAYOR HOWARD BORO
VOTE FOR NOT MORE THAN 1
(WITH 0 OF 1 PRECINCTS COUNTED)

ROBERT L. YEARICK	0	
WRITE-IN	0	
Over Votes	0	
Under Votes	0	

NUMBERED KEY CANVASS

RUN DATE:11/26/13 11:41 AM

Any County, CO
General Election
November 5, 2013

REPORT-EL52 PAGE 0001

WITH 0 OF 90 PRECINCTS REPORTING

	VOTES	PERCENT
JUDGE OF THE SUPERIOR COURT		
VOTE FOR NOT MORE THAN 1		
01 = VIC STABILE	0	
02 = JACK MCVAY, JR	0	
03 = WRITE-IN	0	
04 = OVER VOTES	0	
05 = UNDER VOTES	0	
DISTRICT ATTORNEY		
VOTE FOR NOT MORE THAN 1		
06 = STACY PARKS MILLER	0	
07 = WRITE-IN	0	
08 = OVER VOTES	0	
09 = UNDER VOTES	0	

	VOTES	PERCENT
JURY COMMISSIONER		
VOTE FOR NOT MORE THAN 1		
10 = HOPE P. MILLER	0	
11 = RUTH L. LUSE	0	
12 = WRITE-IN	0	
13 = OVER VOTES	0	
14 = UNDER VOTES	0	

	01	02	03	04	05	06	07	08	09	10	11	12	13	14
0001 1 BELLEFONTE NORTH	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0002 2 BELLEFONTE NORTHEAST	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0003 3 BELLEFONTE SOUTH	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0004 4 BELLEFONTE SOUTHEAST	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0005 5 BELLEFONTE WEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0006 6 CENTRE HALL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0007 7 HOWARD BORO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0008 8 MILESBURG	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0009 9 MILLHEIM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0010 10 PHILIPSBURG 1ST WARD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0011 11 PHILIPSBURG 2ND WARD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0012 12 PHILIPSBURG 3RD WARD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0013 13 PORT MATILDA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0014 14 SNOW SHOE BORO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0015 15 RUSH NORTH CENTRAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0016 16 SC NORTH	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0017 17 SC NORTHEAST	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0018 18 SC NORTHWEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0019 19 SC SOUTH 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0020 20 SC SOUTH 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0021 21 SC SOUTHEAST	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0022 22 SC SOUTH CENTRAL 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0023 23 SC SOUTH CENTRAL 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0024 24 SC EAST 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0025 25 SC EAST 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0026 26 SC EAST 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0027 27 SC EAST 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0028 28 SC EAST CENTRAL 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0029 29 SC EAST CENTRAL 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0030 30 SC EAST CENTRAL 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0031 31 SC WEST 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0032 32 SC WEST 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0033 33 SC WEST CENTRAL 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0034 34 SC WEST CENTRAL 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0035 35 UNIONVILLE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0036 36 BENNER NORTH	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0037 37 BENNER SOUTH	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0038 38 BOGGS EAST	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0039 39 BOGGS WEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0040 40 BURNSIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0041 41 COLLEGE NORTH	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0042 42 COLLEGE SOUTH	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0043 43 COLLEGE EAST	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0044 44 COLLEGE WEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0045 45 CURTIN NORTH	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NAME HEADING CANVASS

Any County, CO
General Election
November 5, 2013

RUN DATE:11/26/13 11:41 AM

JUDGE OF THE SUPERIOR COURT

WITH 0 OF 90 PRECINCTS REPORTING

VOTE FOR NOT MORE THAN 1

	JAMES CARBIL	WRITE-IN	OVERVOTES	UNDERVOTES
0001 1 BELLEFONTE NORTH	0	0	0	0	0
0002 2 BELLEFONTE NORTHEAST	0	0	0	0	0
0003 3 BELLEFONTE SOUTH	0	0	0	0	0
0004 4 BELLEFONTE SOUTHEAST	0	0	0	0	0
0005 5 BELLEFONTE WEST	0	0	0	0	0
0006 6 CENTRE HALL	0	0	0	0	0
0007 7 HOWARD BORO	0	0	0	0	0
0008 8 MILESBURG	0	0	0	0	0
0009 9 MILLHEIM	0	0	0	0	0
0010 10 PHILIPSBURG 1ST WARD	0	0	0	0	0
0011 11 PHILIPSBURG 2ND WARD	0	0	0	0	0
0012 12 PHILIPSBURG 3RD WARD	0	0	0	0	0
0013 13 PORT MATILDA	0	0	0	0	0
0014 14 SNOW SHOE BORO	0	0	0	0	0
0015 15 RUSH NORTH CENTRAL	0	0	0	0	0
0016 16 SC NORTH	0	0	0	0	0
0017 17 SC NORTHEAST	0	0	0	0	0
0018 18 SC NORTHWEST	0	0	0	0	0
0019 19 SC SOUTH 1	0	0	0	0	0
0020 20 SC SOUTH 2	0	0	0	0	0
0021 21 SC SOUTHEAST	0	0	0	0	0
0022 22 SC SOUTH CENTRAL 1	0	0	0	0	0
0023 23 SC SOUTH CENTRAL 2	0	0	0	0	0
0024 24 SC EAST 1	0	0	0	0	0
0025 25 SC EAST 2	0	0	0	0	0
0026 26 SC EAST 3	0	0	0	0	0
0027 27 SC EAST 4	0	0	0	0	0
0028 28 SC EAST CENTRAL 1	0	0	0	0	0
0029 29 SC EAST CENTRAL 2	0	0	0	0	0
0030 30 SC EAST CENTRAL 3	0	0	0	0	0
0031 31 SC WEST 1	0	0	0	0	0
0032 32 SC WEST 2	0	0	0	0	0
0033 33 SC WEST CENTRAL 1	0	0	0	0	0
0034 34 SC WEST CENTRAL 2	0	0	0	0	0
0035 35 UNIONVILLE	0	0	0	0	0
0036 36 BENNER NORTH	0	0	0	0	0
0037 37 BENNER SOUTH	0	0	0	0	0
0038 38 BOGGS EAST	0	0	0	0	0
0039 39 BOGGS WEST	0	0	0	0	0
0040 40 BURNSIDE	0	0	0	0	0
0041 41 COLLEGE NORTH	0	0	0	0	0
0042 42 COLLEGE SOUTH	0	0	0	0	0
0043 43 COLLEGE EAST	0	0	0	0	0
0044 44 COLLEGE WEST	0	0	0	0	0
0045 45 CURTIN NORTH	0	0	0	0	0
0046 46 CURTIN SOUTH	0	0	0	0	0
0047 47 FERGUSON NORTH 1	0	0	0	0	0
0048 48 FERGUSON NORTH 2	0	0	0	0	0

MANUAL CHANGES LOG LISTING
RUN DATE:11/26/13 11:49 AM

ELECTION ID: 110513

PRECINCT	CANDIDATE	USER	DATE	TIME	GRP	OLD	NEW
0001 1 BELLEFONTE NORTH	VOTERS		11-26	11:46 am	2	0	976,288
			11-26	11:46 am	2	0	0
			11-26	11:48 am	2	0	1,234
	BALLOTS CAST - TOTAL		11-26	11:46 am	2	0	100
	REPUBLICAN PARTY		11-26	11:46 am	2	0	5
	DEMOCRATIC PARTY		11-26	11:46 am	2	0	10
	GREEN PARTY		11-26	11:46 am	2	0	15
	INDEPENDENT PARTY		11-26	11:46 am	2	0	20
	UNDER VOTES		11-26	11:46 am	2	0	50
	VIC STABILE		11-26	11:46 am	2	0	15
	JACK MCVAY, JR		11-26	11:46 am	2	0	10
	WRITE-IN		11-26	11:46 am	2	0	5
	OVER VOTES		11-26	11:46 am	2	0	1
	UNDER VOTES		11-26	11:46 am	2	0	69
	STACY PARKS MILLER		11-26	11:46 am	2	0	83
	WRITE-IN		11-26	11:46 am	2	0	2
	UNDER VOTES		11-26	11:46 am	2	0	15

*** BALLOT STATUS ACCOUNTING REPORT ***
9:07 AM October 24, 2007
Unit S/N: 0107380021

ANY CITY
2006 GENERAL ANY STATE
1 POLL 1
Election Date: September 06, 2008
Poll Opened Date: November 12, 2007
Poll Opened Time: 3:48 PM
Poll Closed Date: November 12, 2007
Poll Closed Time: 3:49 PM
Public Count: 10

Poll Voting Report

Total Ballots: 10

Ballots for Code00001-01-010
Ballots for Code00002-01-011
Ballots for Code00003-01-012
Ballots for Code00004-01-010
Ballots for Code00005-01-011
Ballots for Code00006-01-012
Ballots for Code00007-01-010
Ballots for Code00008-01-011
Ballots for Code00009-01-012
Ballots for Code00010-01-010
Ballots for Code00011-01-011

*** END OF REPORT ***

ZERO TOTALS REPORT
7:10 AM November 06, 2007
Unit Serial Number: 0107380003

ANY COUNTY
2006 GENERAL ANY STATE
1 POLL 1
Election Date: November 06, 2007
Poll Opened Date: November 06, 2007
Poll Opened Time: 7:10 AM
Poll Closed Date: No
Poll Closed Time: No
Public Count: 0

Poll Voting Report

Total Ballots: 0

GOVERNOR AND LT. GOVERNOR
Number to Vote For 1

REP WILLIAM SULLIVAN	0	
DEM STEPHEN MASSIMILIAN	0	
CON DOUGLAS STONE		0
LIB ANNE NEET		0
SWK FRANK L. MATTHEWS		0
SLB ROBERT MARSH	0	
LAB CHRISTOPHER R. RICHARDSON		0
COM THOMAS REISS	0	
COU WILLIAM MALICKI	0	
FRE WILLIAM RHODES	0	
Write-in		0

COMPTROLLER
Number to Vote For 1

REP MICHAEL SANTARCANGELO		0
DEM CHERYL SIMON	0	
CON PETER F. SAXTON	0	
LIB FRANKLIN MARGO		0
SWK EUGENE RUFF	0	
SLB ARTHUR SALAMACK		0
LAB THOMAS TURNER	0	
COM KENNETH INTERLICCHIO		0
Write-in		0

WE, THE UNSERSINGED DO HEREBY CERTIFY
THAT THE ABOVE RESULTS ARE A TRUE AND
ACCURATE ACCOUNT OF ALL BALLOTS COUNTED
AND THAT ALL COUNTERS WERE ZERO (0) WHEN
THE POLLS OPENED AND THAT THE ELECTION WAS
HELD IN ACCORDANCE WITH THE LAWS OF THE STATE.

ELECTION JUDGE

ELECTION JUDGE

ELECTION JUDGE

ELECTION JUDGE

ELECTION JUDGE

01 ANYCOUNTY POLL
UNITY Serial Number: 0101010111

END OF REPORT

*** CONFIGURATION REPORT ***
9:40 AM January 18, 2011
Unit Serial Number: 0107370046

VOTING DEVICE INFORMATION

HARDWARE CONFIGURATION
Current Time Date:
9:40 AM January 18, 2011
Time Zone: America/Chicago
Diverter Status: Not Detected
Touch Screen: OK
Power Source: AC
Battery Charge: 100%
Modem Status: Not Detected
Universal Voting Console: Not Detected

STORAGE
Available System Log Storage: 22 MB
Available Ballot Storage: 1751 MB
Available Backup Storage: 0 MB

FIRMWARE
Paper Processing Engine: 2.4.0.0x
Hardware Abstraction Engine: 2.4.0.0x
Tabulation Engine: 2.4.0.0x
Scanning Engine: 2.4.0.0x
Presentation Engine: 2.4.0.0x
Scanner Firmware: 2.13.0.0a
Power Management Firmware: 1.2.2.0a
Operating System Version: 2.4.0.0x
Firmware Last Updated On:
Unknown
Protected Count: 0

ELECTION QUALIFICATION INFORMATION
Election Name: TULSA
Election Date: 2010-12-31
Election Qualification Code: 05b1e725

ELECTION LOADED

ELECTION STATUS
Poll Opened Date: January 11, 2011
Poll Opened Time: 4:31 PM
Poll Closed Date: January 11, 2011
Poll Closed Time: 4:44 PM
Poll Status: Closed
Public Count: 1

ELECTION INFORMATION
Jurisdiction Name:
TULSA
Election Description:
TULSA
Election Date: December 31, 2010
Poll Place ID/Name:
863/Poll 001
Election Type: GENERAL
Number of Precincts: 1

BALLOT INFORMATION
Ballots By: Style
Ballot Height: 17.0
Ballot Width: 8.5
Ballot Rows: 62
Ballot Columns: 24
Ballot Art Work: DSIM
Target Type: oval

ELECTION SETTINGS
Ability to Re-open: Yes
Number of Zero Tapes to Print: 1
Number of Result Tapes to Print: 1
Print Event Log on Close: No
Transmit Results on Close: No
Report Detail: Media
Report Level: Poll
Candidate Sort Order:
Default Candidate Order
Single Over-Vote: No
Combine Over and Under Votes: No
Save Ballot Images: All

EXCEPTION BALLOT SETTINGS
Blank Ballots: Query
Over-voted Ballots: Query
Under-voted Ballots: Query
Marginal Marks: Reject
Cross-over Ballots: Query

DIVERTER SETTINGS
Diverter Installed: No
Identify Write-in Overvotes: No
Identify Blank Ballots: No
Identify Write-ins: No

*** END OF REPORT ***

VOTING RESULTS REPORT
10:44 AM January 18, 2011
Unity Serial Number: 010738001

AnyCounty USA
AnyCounty USA
01 AnyCounty Poll
Election Date: July 04, 2011
Poll Opened Date: July 04, 2011
Poll Opened Time: 8:00 AM
Poll Closed Date: July 04, 2011
Poll Closed Time: 9:00 PM
Public Count: 11

Poll Voting Report

Total Ballots: 11

FOR PRESIDENT

Number to Vote For	1
REP-ABRAHAM LINCOLN	3
DEM-ANDREW JACKSON	0
LIB-GEORGE WASHINGTON	6
Write-in	0

FOR GOVERNOR

Number to Vote For	1
REP-ED MCMAHON	3
DEM-JOHNNY CARSON	7
LIB-MERV GRIFFIN	0
Write-in	0

FOR COUNTY CLERK

Number to Vote For	1
REP-ELVIS PRESLEY	5
DEM-WLADZIU VALENTINO LIBERACE	1
LIB-KAREN CARPENTER	4
Write-in	0

QUESTION 1:

FOR	6
AGAINST	4

WE, THE UNDERSIGNED, DO HEREBY CERTIFY THAT THE ABOVE RESULTS ARE A TRUE AND ACCURATE ACCOUNT OF ALL BALLOTS COUNTED AND THAT ALL COUNTERS WERE ZERO (0) WHEN THE POLLS OPENED AND THAT THE ELECTION WAS HELD IN ACCORDANCE WITH THE LAWS OF THE STATE.

_____
Election Judge

_____
Election Judge

_____
Election Judge

_____
Election Judge

01 AnyCounty Poll
Unity Serial Number: 0107380011

END OF REPORT

Zero Report

Machine #: 850942001
02/02/2010 16:02:25

BMW DEMO
BMW (English Only) DEMO
11/02/2010 11:14:18

First Ballot Date Time:
Last Ballot Date Time:

Ballots Cast Total: 0

Contest	Votes
BEST AUTOMOBILE MANUFACTURER	
(Vote For 1)	
BMW	0
MERCEDES	0
GENERAL MOTORS	0
HONDA	0
FERRARI	0
JAGUAR	0
FORD	0
VOLVO	0
Write-In	0
Over Votes	0
Under Votes	0
Total	**0**
BEST VOCAL ARTIST	
(Vote For 2)	
FRANK SINATRA	0
ELVIS	0
PATSY CLINE	0
JANIS JOPLIN	0
BUDDY HOLLY	0
BARRY WHITE	0
BILLIE HOLIDAY	0
STEVIE RAY VAUGHAN	0
"MAMA" CASS ELLIOT	0
Write-In	0
Write-In	0
Over Votes	0
Under Votes	0
Total	**0**
BEST ICE-CREAM FLAVOR	
(Vote For 1)	
CHOCOLATE	0
STRAWBERRY	0
VANILLA	0
Write-In	0
Over Votes	0
Under Votes	0
Total	**0**

Zero Report

Machine #: 850942001
02/02/2010 16:02:25

BMW DEMO
BMW (English Only) DEMO
11/02/2010 11:14:18

First Ballot Date Time:
Last Ballot Date Time:

Ballots Cast Total: 0

Contest	Votes
PROPOSITION 1	
(Vote For 1)	
YES	0
NO	0
Over Votes	0
Under Votes	0
Total	**0**
PROPOSITION 2	
(Vote For 1)	
YES	0
NO	0
Over Votes	0
Under Votes	0
Total	**0**

Precincts Processed

Machine #: 8509420003

ElectionWare County
Florida Demo 2013
04/17/2013

11/26/2013 11:12:22

First Ballot Date Time:	11/20/2013 08:19:19	Total Sheets Processed:	189
Last Ballot Date Time:	11/26/2013 11:11:14	Total Ballots Cast:	131

Precincts Processed: 3 of 198 (1.52%)

Code	Precinct	Sheet Count
0001	101	143
0005	105	32
0007	107	14

*** SYSTEM READINESS REPORT ***
12:10:50 Tue Dec 21 2010
Unit Serial Number: 0304050607

VOTING DEVICE INFORMATION

HARDWARE CONFIGURATION
Current Time Date: 12:10:50 Tue Dec 21 2010
Time Zone: America/Chicago
Processor: : Intel(R) Core(TM)2 Duo CPU E6400 @ 2.13GHz
Total RAM: 4009 MB
Available RAM: 3841 MB
RAM Test Status: OK
Camera Interface: OK
Touch Screen: OK
Report Printer: OK
Battery: OK
Power Source: AC
Battery Charge: 100

STORAGE
Total Data Storage: 938901 MB
Available Data Storage: 890987 MB
Data Storage Device Status: OK

FIRMWARE
DS850 Firmware Version: 2.1.0.0j

Master Control Program: Running
Tabulation Engine: Running
Presentation Engine: Running

Protected Count: 15164

ELECTION LOADED

ELECTION STATUS
Election Name: VARINSTR
Election Date: 2006-01-16
Election EQC: Secret

*** END OF REPORT ***

Section 8.0 – Sample Project Artifacts

5.3.10 Sample Project Artifacts

Provide sample project artifacts, such as a project plan (schedule and planning documents), from a Voting System project in which you have participated and you consider to be representative of your work, the quality of your work, and the level of communication and detail that you provide. At your request, these materials will be treated as confidential. These sample artifacts may be used to assess the format and detail you may provide if selected in Colorado. Respondents are encouraged to organize, label, title or describe these materials to indicate their content and purpose if it is not clearly apparent in the materials. Where page limitations are a restriction, you may consider providing a table of contents and excerpts.

ES&S RESPONSE

ES&S has provided the following artifacts following this section.

- State of Maine Initial Project Work Plan
- State of Michigan Extended Service Project Plan

Ballot Scanning & Tabulation System Implementation Project

Initial Project Work Plan

ES&S – Project Management Office

Version	Description	Changed By	Date
1.0	First draft	Adam Carbullido	08/10/12
2.0	Proposal draft (preliminary plan)	Adam Carbullido	08/18/12
3.0	Draft work plan	Adam Carbullido	09/09/12
3.1	Draft work plan	Carbullido/Wesley	09/19/12
3.2	Draft work plan submitted to Maine Elections Division	Adam Carbullido	10/04/12

Table of Contents:

1. Statement of work
2. Project management approach
3. Key Personnel, Stakeholders, and Project Organization Chart
4. Project planning and scope / change control
5. Project schedule
6. Communication management approach
7. Staffing management approach
8. Risk management approach
9. Post-implementation support

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1. Statement of Work

The objective of the project is to successfully implement and support a ballot scanning and tabulation system in the State of Maine. The system will be required to meet or exceed compliance with all federal and local laws and will be implemented in accordance with any and all contracts between Election Systems and Software (ES&S) and the State of Maine.

The ES&S Project Team will work with the State of Maine Elections Division to implement a precinct-level system for use in approximately 125 to 250 of Maine's municipalities and the election management software to allow the Elections Division to create ballots and program removable memory devices for use with the tabulators. The project includes the provision of all equipment, software, warranty, maintenance, license, support, staffing, and service deliverables defined and necessary to implement the ballot scanning and tabulation system and specified by the contract(s) between the State of Maine and ES&S.

2. Project Management Approach

The ES&S Project Team will manage the project pursuant to the Project Management Institute's project management principles. The team will utilize industry and PMBOK best practices and will employ its vast network of Subject Matter Experts, Certified Project Management Professionals, and various other resources to provide quality support and sound project management. The team will develop and utilize this Project Work Plan to detail the various aspects of the project and to guide the collective efforts of each of the project stakeholders. The State of Maine Elections Division will be provided ample time to review the Project Work Plan. The ES&S Project Team will work with the Elections Division to modify the plan until it is mutually agreeable, at which point the plan will be considered final.

3. Key Personnel, Stakeholders, and Project Organization Chart

3.1. Key Personnel

3.1.1. Project Manager

The lead Project Manager (PM) will serve as the principal point of contact for the Elections Division and will maintain responsibility for overall contract performance including delivery, implementation, training, quality management, and transitional, operational, and maintenance services. The lead PM will be in charge of day-to-day management of the Project Team and all ES&S resources involved in the project as well as overseeing the execution and provision of all project deliverables. This individual will coordinate and organize communication between all project stakeholders and all of the various work categories within the overall project. The lead Project Manager will utilize the ES&S network of supplemental and Associate Project Managers as necessary throughout the project. The ES&S Project Manager has full access and designated control over a team of resources throughout the ES&S organization and is empowered to make decisions as necessary to assure ES&S meets its commitments and is able to meet or exceed the expectations of the Elections Division.

3.1.2. Technical Project Lead

The Technical Project Lead will provide the necessary EMS and technical expertise to assure successful support and knowledge transfer to Elections Division staff. The Technical Project Lead will manage all of the software, EMS, and network configuration aspects of the project including, but not limited to, installation, acceptance, ballot creation, and programming of removable media.

3.1.3. Trainers and Technicians

ES&S will provide certified and experienced Trainers and Technicians to provide support services for various project activities on an as-needed basis. Depending on specific needs, some training and technical activities can be completed remotely while others will require on-site support.

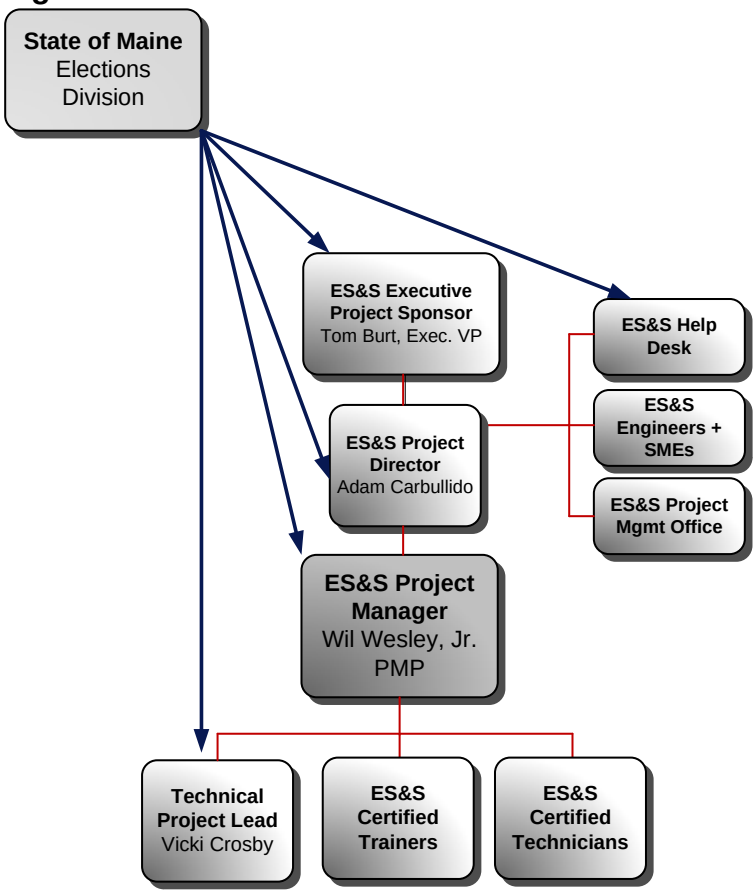
3.1.4. Project Director and Executive Sponsor

An ES&S Director will be assigned to facilitate the corporate and administrative level aspects of the project. The Project Director will take an active role in monitoring project activity and providing overall project direction, issue escalation, and support. ES&S will also designate an executive-level sponsor to the project for additional oversight and support.

3.2. Key Stakeholders and Contact Information

Title/Role	Name	Phone	Email
ES&S Project Manager	Wil Wesley, Jr. PMP	954-770-9638	wgwesley@essvote.com
ES&S Technical Lead	Vicki Crosby	484-319-2834	vcrosby@essvote.com
ES&S Project Director	Adam Carbullido	402-707-7134	ajcarbullido@essvote.com
ES&S COO, Executive Sponsor	Tom Burt	402-970-1110	teburt@essvote.com
ES&S Training Director	Colleen Haack	402-970-1164	cmhaack@essvote.com
ES&S Software Help Desk		877-377-8683	software@essvote.com
ES&S Hardware Help Desk		877-377-8683	hardware@essvote.com
State Contact(s)			
State Contact(s)			
State Contact(s)			
State Contact(s)			
State Contact(s)			
State Contact(s)			

3.3. **Initial Project Organizational Chart**



4. Project Plan and Change/Scope Control

The basis for the scope of the project will begin with the contract between ES&S and the State of Maine. The contract defines the high-level deliverables, requirements, and milestones. This Plan defines the specific hardware, software, and service deliverables which will be documented by the ES&S Project Team under direction of the Elections Division throughout the project.

4.1. Project Deliverables

1. 0 Project Initiation and Project Management	Owner	Complete?
1.1 Official Contract Start	ES&S/Maine	✓
1.2 Conduct Implementation Kick-Off Meeting	ES&S/Maine	✓
1.2.1 Identify Phase 1 Participants	Maine	✓
1.2.2 Finalize Schedule	ES&S/Maine	
1.2.3 Finalize Acceptance Plans	ES&S/Maine	
1.3 Provide Status Updates + Ongoing Prj Mgmt	ES&S	
2.0 Tabulation system Delivery and Acceptance		**Complete?**
2.1 Deliver Election System Equipment		
2.1.1 Phase 1 Delivery to Central Location	ES&S	
2.1.2 Phase 2 Delivery to Central Location	ES&S	
2.2 Deliver and Install EMS- SW and HW		
2.2.1 Deliver EMS Software	ES&S	
2.2.2 Provide EMS Installation Support	ES&S	
2.3 Conduct Training		
2.3.1 Conduct EMS (software) Training	ES&S	
2.3.2 Provide Initial Product and Training Documents	ES&S	
2.3.3 Provide “Train-the-Trainer” Training	ES&S	
2.3.4 Conduct Municipality Training	Maine	
2.4 Acceptance, Validation, Certification		
2.4.1 Complete Phase 1 User Acceptance Test	ES&S/Maine	
2.4.2 Complete Phase 2 User Acceptance Test	ES&S/Maine	
3.0 General Election Support		**Complete?**
3.1 Complete EMS Coding/Testing Services	ES&S	
3.2 Print and Deliver Ballots	ES&S	
3.3 Deliver Memory Devices to Municipalities	ES&S	
3.4 Conduct Logic & Accuracy Testing	Municipalities	
3.5 Conduct 2012 Primary Election	ES&S, Elections Division, Municipalities	

4.2. Delivery Plans

4.2.1. DS200 Deliveries

ES&S will deliver the DS200 in 2 phases. In both phased the D200s will be delivered to a central location specified by the Elections Division

4.2.2. Unity EMS Delivery

The Unity EMS software will be delivered by CD. The CD will include all of the necessary files to install the software on PC meeting the specified minimum requirements. ES&S will provide on-site support to assist with the EMS installation.

4.3. Acceptance/Verification Procedures

4.3.1. DS200 Acceptance Test Procedure Overview

ES&S will provide the Election Division with a recommended set of acceptance testing procedures and work with the Division to enhance the procedures until mutually acceptable.

4.3.2. Unity EMS Acceptance Test Procedure Overview

ES&S will provide the Election Division with a recommended set of acceptance testing procedures and work with the Division to enhance the procedures until mutually acceptable.

4.4. Change Control Procedures

Any changes to the scope of the project or the deliverables specified in this plan or the contract between ES&S and the State of Maine will require a Change Request submitted by the requestor to the ES&S Project Manager. The ES&S Project Manager will review the Change Request with the appropriate parties and respond with proposed plans and any requirements necessary to implement the request. Change Notices will be used to clearly identify and communicate changes to the project plan.

5. Project Schedule

5.1. Initial High-Level Project Schedule

Task/Activity	Owner(s)	Start	End	9/17	9/24	10/1	10/8	10/15	10/22	10/29	11/5	11/12	
1.0 Project Initiation and Project Management													
1.1 Official Contract Start	ES&S, Maine	9/18/2012	9/18/2012										
1.2 Conduct Implementation Kick-Off Meeting	ES&S, Maine	9/28/2012	9/28/2012		✓								
1.2.1 Identify Phase 1 Participants	ES&S, Maine	9/28/2012	9/28/2012		✓								
1.2.2 Finalize Phase 1 Schedule	ES&S, Maine	9/28/2012	9/28/2012										
1.2.3 Finalize Acceptance Plans	ES&S, Maine	9/28/2012	9/28/2012			✓							
1.3 Provide Status Updates + Ongoing Prj Mgmt	ES&S Project Manager	10/1/2012	TBD		✓	✓							
2.0 Tabulation system Delivery and Acceptance													
2.1 Deliver Election System Equipment													
2.1.1 Phase 1 Delivery to Central Location	ES&S	10/9/2012	10/9/2012										
2.1.2 Phase 2 Delivery to Central Location	ES&S	TBD	TBD										
2.2 Deliver and Install EMS- SW and HW													
2.2.1 Deliver EMS Software	ES&S	10/9/2012	10/12/2012										
2.2.2 Provide EMS Installation Support	ES&S	TBD	TBD										
2.3 Conduct Training													
2.3.1 Conduct EMS (software) Training	ES&S, Elections Division	TBD	TBD										
2.3.2 Provide Initial Product and Training Docs	ES&S	10/1/2012	10/1/2012										
2.3.3 Provide “Train-the-Trainer” Training	ES&S Certified Trainer	10/8/2012	10/12/2012										
2.3.4 Conduct Municipality Training	Elections Division	10/15/2012	10/26/2012										
2.4 Acceptance, Validation, Certification													
2.4.1 Complete Phase 1 User Acceptance Test	ES&S, Elections Division	10/1/2012	10/12/2012										
2.4.2 Complete Phase 2 User Acceptance Test	ES&S, Elections Division	TBD	TBD										
3.0 General Election Support													
3.1 Complete EMS Coding/Testing Services	ES&S	9/24/2012	10/5/2012		✓	✓							
3.2 Print and Deliver Ballots	ES&S	9/24/2012	10/5/2012		✓	✓							
3.3 Deliver Memory Devices to State	ES&S	10/1/2012	10/5/2012										
3.4 Conduct Logic & Accuracy Testing	Municipalities	10/16/2012	10/29/2012										
3.5 Conduct 2012 Primary Election	ES&S, Elections Division, Municipalities	11/6/2012	11/6/2012								◊		

5.2. Work Breakdown Structure

5.2.1. Primary Work Categories

5.2.1.1. Project Initiation and Project Management (1.0)

The Project Team will employ a methodical and simple approach to defining detailed work elements utilizing proven project methodologies and documentation. Defining specified project milestones and maintaining accurate documentation will allow for continuity assurance and clear communication of project information.

5.2.1.2. Tabulation System Delivery and Acceptance (2.0)

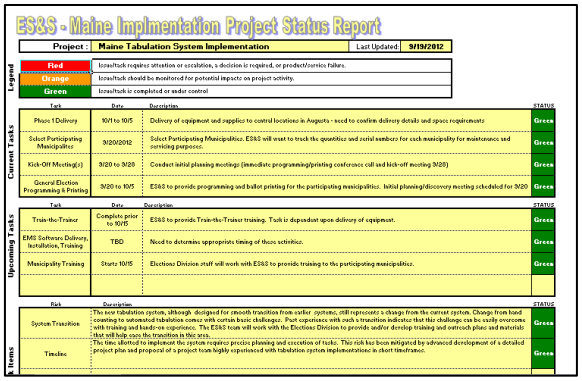
This category of activity will include the delivery, acceptance, and/or installation of all hardware, software, and related services required to implement the tabulation system. Each task and deliverable in this work category will require formal acceptance and detailed activity logging. Training and knowledge transfer activities represent an important aspect of this project and play a central role in the overall success of the tabulation system implementation. The ES&S Project Team will work closely with the Elections Division to clearly define all training and outreach support activities.

5.2.1.3. General Election Preparation, Support, and Execution (3.0)

The final work category will be the actual preparation and execution of all necessary election activity. This category will include activities such as EMS configuration, ballot creation, logic and accuracy testing and programming/delivery of memory devices.

6. Communication management approach

The ES&S Project Team will deploy a multi-channel approach to communication management. In addition to regular, periodic status reports that detail the status of all project deliverables and activities, the Project Manager will utilize reporting tools and periodic stakeholder meetings. Each of these communication methods, in addition to any methods preferred by the Elections Division, will be used to assure all involved parties are up-to-date and able to identify any outstanding risks or jeopardized tasks. A detailed Communication Plan will be developed and maintained within the Final Project Work Plan.



ES&S - Maine Implementation Project Status Report

Project :	Maine Tabulation System Implementation	Last Updated:	9/19/2012

Legend

Red	Issue/task requires attention or escalation, a decision is required, or product/service failure.
Orange	Issue/task should be monitored for potential impacts on project activity.
Green	Issue/task is completed or under control

Current Tasks

Task	Date	Description	STATUS
Phase 1 Delivery	10/1 to 10/5	Delivery of equipment and supplies to central locations in Augusta - need to confirm delivery details and space requirements	Green
Select Participating Municipalities	9/20/2012	Select Participating Municipalities. ES&S will want to track the quantities and serial numbers for each municipality for maintenance and servicing purposes.	Green
Kick-Off Meeting(s)	9/20 to 9/28	Conduct initial planning meetings (immediate programming/printing conference call and kick-off meeting 9/28)	Green
General Election Programming & Printing	9/20 to 10/5	ES&S to provide programming and ballot printing for the participating municipalities. Initial planning/discovery meeting scheduled for 9/20	Green

Upcoming Tasks

Task	Date	Description	STATUS
Train-the-Trainer	Complete prior to 10/15	ES&S to provide Train-the-Trainer training. Task is dependent upon delivery of equipment.	Green
EMS Software Delivery, Installation, Training	TBD	Need to determine appropriate timing of these activities.	Green
Municipality Training	Starts 10/15	Elections Division staff will work with ES&S to provide training to the participating municipalities.	Green

Risks & Issues

Risk	Description	STATUS
System Transition	The new tabulation system, although designed for smooth transition from earlier systems, still represents a change from the current system. Change from hand counting to automated tabulation comes with certain basic challenges. Past experiences with such a transition indicates that this challenge can be easily overcome with training and hands-on experience. The ES&S team will work with the Elections Division to provide and/or develop training and outreach plans and materials that will help ease the transition in this area.	Green
Timeline	The time allotted to implement the system requires precise planning and execution of tasks. This risk has been mitigated by advanced development of a detailed project plan and proposal of a project team highly experienced with tabulation system implementations in short timeframes.	Green

The project status reports will be provided by the ES&S Project Manager for the duration of the project, on a frequency determined by the Elections Division. The report will clearly define all completed, current, and upcoming activity as well as the overall health of the project. Each task, deliverable and risk will be rated and color-coded for quick interpretation of project status.

7. Staffing Management Approach

The ES&S Project Team will be supported by sufficient Project Managers, ES&S tabulation system specialists, trainers, instructional designers, subject matter experts and documentation writers necessary to complete a successful implementation. In addition to the assigned project team, ES&S will also make arrangements to supply local partner and contractor resources at the request of the Elections Division. At any time that the Elections Division requests additional staff or resources from ES&S, the Project Team will be able to tap its deep reserves of project professionals, tabulation system experts, and certified technicians in order to support project efforts.

8. Risk Management Approach

The ES&S Project Team will monitor the risks throughout the project using a risk register. The register will be included with in the weekly status report and will include each of the known risks, their current status and indication whether the risk has become elevated. Early in the project, the ES&S Project Manager will meet with the Election Division to review and identify risks and subsequently develop risk mitigation plans. Some of the basic initial identified risks are:

8.1. **Ballot Scanning / Tabulation System Transition**

The new tabulation system, although specifically designed for a smooth transition from earlier tabulation systems, still represents a change from the current system in place today. Changes such as the transition to oval-style ballots and adaptation to a new Election Management System will need to be addressed. Past experience with such a transition indicates that this challenge can be easily overcome with training and hands-on experience. The ES&S team will work with the Elections Division to provide and/or develop training and outreach plans and materials that will help ease the transition in this area.

8.2. **Timeline**

The time allotted to implement the system requires precise planning and execution of tasks. This risk has been mitigated by advanced development of a detailed project plan and proposal of a project team highly experienced with tabulation system implementations in short timeframes.

9. Post-Implementation Support

Following the implementation phases of the project, ES&S will provide the level of maintenance and support desired by the Elections Division. The implementation will be executed in such a way that allows the Elections Division flexibility to determine which ongoing responsibilities should be covered by ES&S and/or Elections Division staff. Based on the determination of the Election Division, ES&S will provide all necessary training and knowledge transfer to allow the Elections Division to perform any or all of the ongoing support responsibilities. Should increases or decreases in the support be desired by the Election Division, ES&S will accommodate. ES&S maintains a talent and personnel program that allows for surge and seasonal staffing flexibility based upon project needs. The principal post-implementation support activities fall in to these categories:

9.1. **Equipment Maintenance**

Both routine preventative maintenance and remedial repair maintenance will be required for the entire life cycle of the tabulation system. It is important that a plan be established early in the project to assure the hardware components and equipment continue to operate at an efficient and satisfactory level.

9.2. **Training**

ES&S has recognized that basic ongoing training effort is recommended to maintain a high-level of understanding with the tabulation system. Employee turnover can be common and a long-term and ‘refresher’ training strategy will help mitigate risks associated with such turnover. Ongoing training responsibilities could potentially be handled by existing Elections Division staff or ES&S Training Services could be utilized to meet, or help meet this need.

9.3. **Software Maintenance and Support**

From time to time, software support and enhancements may be needed by the Elections Division. This support could be in the form of troubleshooting, guidance, best-practices, or refresher assistance as well as software enhancements and upgrades. ES&S will work with the Elections Division to develop and prepare for an appropriate post implementation support and maintenance program.

Michigan Voting System Extended Service Project

Project Plan

Table of Contents:

1. Statement of work and deliverable descriptions
2. Project management
3. Project organizational structure and chart
4. Project schedule
5. Work Breakdown Structure (WBS)
6. Staffing Plan for centralized preventative maintenance
7. Time-phased Work Schedule
8. Communication management
9. Risk management
10. Work acceptance strategy
11. Scope management and change control
12. Project constraints and boundaries
13. Project Gantt Charts (summary and detailed)

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1. Initial Statement of Work

The objective of the project is to provide maintenance and warranty services to the voting systems in the State of Michigan. The ES&S Project Team will work with the State of Michigan to provide all services and deliverables defined and specified by the contract between ES&S, the State of Michigan, and the various Michigan counties and local jurisdictions.

Deliverables

1.1. Service, Warranty and Maintenance—Tabulators, VATs, and related EMS

1.1.1. Tabulator and VAT system hardware, firmware maintenance and support

This deliverable shall include all activity and support required to maintain the voting system including technical (help-desk) support with access to a tiered escalation support system that includes Subject Matter Experts and Technical Software and Hardware Engineers.

1.1.2. EMS software maintenance and support

This deliverable includes the availability of software installations and Election Management System technical help desk support.

1.1.3. Upgrades, new releases and maintenance patches

This deliverable includes the provision and support of the installation of new versions of software and firmware in addition to enhancement and bug-fix support.

1.2. Preventative Maintenance (Tabulators/VATs only)

1.2.1. Biennial (every two years) preventative maintenance package

This deliverable includes biennial maintenance events where ES&S Certified Technicians perform a specific series of preventative maintenance steps on each of the designated VATs and tabulators. The ES&S Project Team will work with the State of Michigan to develop an overall Preventative Maintenance schedule. Prior to performing the preventative maintenance visits, the ES&S Project Team will coordinate with each jurisdiction to assure all logistics are arranged.

1.3. Technical Support Response Requirements

1.3.1. Help Desk Telephone Support

The ES&S Project Team includes a Help Desk staffed with trained technicians specifically trained in Michigan voting system hardware, software and firmware as well as the specific election laws and rules in Michigan. The Help Desk always provides responses within one business day and will be made available by toll-free number. Callers will have access to live technicians during regular business hours (local Michigan time) and after-hours on, and around, Election Days.

1.3.2. Equipment Repair and Replacement

This deliverable includes all activity required to repair or replace voting system equipment. The ES&S Project Team will have immediate access to certified replacement parts and will assure that only certified parts and components are used in the repair and/or replacement of Michigan voting system equipment. The ES&S Project Team will make every attempt to complete repairs within ten business days or in time for Election Day, whichever is less. When time to complete repairs is not available, ES&S will provide access to loaner equipment.

1.3.3. Reporting Requirements

1.3.3.1. Monthly Status Reports

The ES&S Project Team will provide bi-weekly status reports in a format approved by the State. The report will include a summary of completed and planned service and warranty, project and risk activity updates, and any open issues and/or problems. The reports will be provided to the Contract Compliance Inspector, State Project Manager, and any other parties designate by the State of Michigan.

1.3.3.2. Issue Tracking Reports

In addition to issues tracked with the Monthly Status Report, the ES&S Project Team will provide the State of Michigan with access to reports from TeamTrack, the ES&S issue management system used to track Help Desk calls and issues. When issues are identified that may affect multiple jurisdictions, the ES&S Project Team will distribute Technical Bulletins that will serve as advisories in a format and method approved by the State. The ES&S Project Team will also keep the State apprised and will advise of any external issues that may be pertinent and/or appropriate.

1.4. Support Personnel (ES&S Project Team)

1.4.1.1. Project Management

Project Manager, Kathy Dornan will lead the ES&S Project Team and will serve as the principal point of contact with the State, counties and local jurisdictions. The ES&S Project Manager will coordinate all of the activities and personnel assigned to the project and create all reports required by State. The ES&S Project Manager's responsibilities include, at a minimum:

Manage all defined responsibilities in the Scope of Services
Manage subcontractors, if any
Develop the project plan and schedule, and update as needed
Serve as the point person for all project issues
Coordinate and oversee the day-to-day project activities of the project team
Assess and report project feedback and status
Escalate project issues, project risks, and other concerns
Review all project deliverables and provide feedback
Proactively propose/suggest options and alternatives for consideration
Utilize change control procedures
Prepare project documents and materials

1.4.1.2. Single-Point-of-Contact (SPOC)

Kathy Rogers, Vice President of Governmental Relations, is the designated SPOC responsible for supporting the management of the Contract, facilitating dispute resolution, and advising the State of performance under the terms and conditions of the Contract.

1.4.1.3. Certified Technicians

Trained and Certified ES&S Technicians are located in various areas of the state to meet the counties' and local jurisdictions' service and maintenance needs and to conform with response time requirements. The ES&S Project Team will work with counties and local jurisdictions to establish mutually agreeable timeframes and locations for repairs and preventative maintenance services. While performing these services, technicians will communicate with the designated jurisdiction representative, provide staff with a

completed work checklist, and notify the jurisdiction of any outstanding issues and the plan for resolving the issues.

All ES&S Certified Technicians:

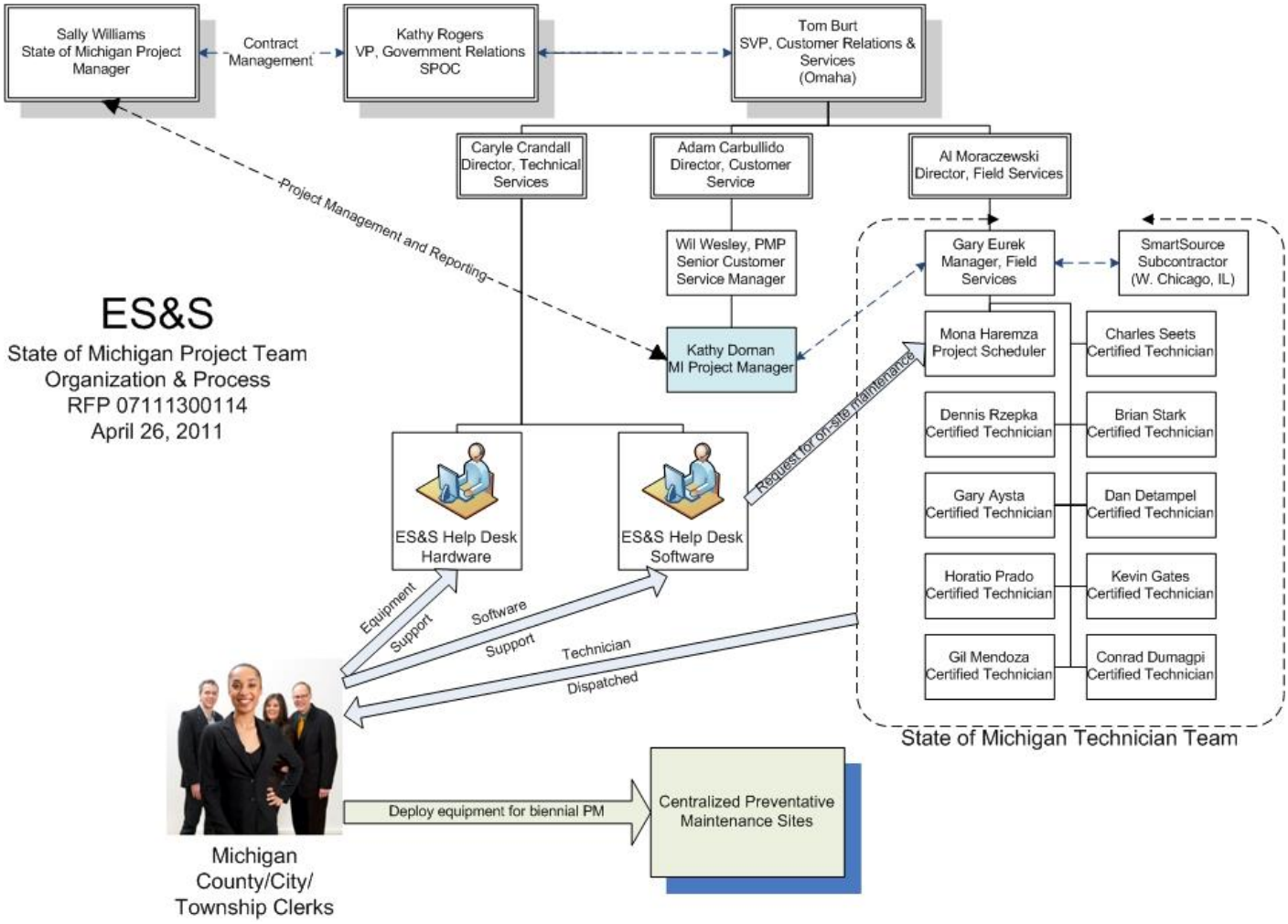
Are trained, professional and experienced in the maintenance and repair of tabulators, VATs, firmware and EMS software; and capable of replacing malfunctioning equipment in county/local jurisdiction offices, storage facilities and/or the polling place.
Have reliable dedicated transportation of sufficient size to accommodate the transport of voting equipment as needed.
Maintain a reasonable supply of certified manufacturer replacement parts and components necessary to repair malfunctioning equipment and return it to service.
Have cellular telephones or other means of real-time communication, and will provide this information to the designated jurisdiction representatives.

2. Project Management Approach

The ES&S Project Team will manage the project pursuant to the Project Management Institute's project management principles. The team will utilize industry and PMBOK best practices and will employ its vast network of Subject Matter Experts, Certified Project Management Professionals, Certified Technicians and various other resources to provide quality support and sound project management. Where appropriate, the ES&S Project Team will employ practices, procedures, and tools in accordance with the State Unified Information Technology Environment (SUITE) and other Project Management Methodologies specified by the Michigan Department of Information Technology and the State of Michigan. The ES&S approach to Elections Project Management emphasizes simplicity, consistency, and clarity in project reporting; assuring all project stakeholders are regularly updated and have easy access to critical project information.

3. Project Organization Structure and Chart

3.1. Initial Project Organizational Chart



3.2. Key Personnel

3.2.1. Project Manager

The lead Project Manager (PM) will maintain responsibility for overall contract performance. The lead Project manager will be in charge of day-to-day coordination of the ES&S Project Team and all ES&S resources involved as well as overseeing the execution and provision of all project deliverables. This individual will coordinate and organize communication between all project stakeholders for all of the various work categories within the overall project. The lead Project Manager will utilize the ES&S network of supplemental and Associate Project Managers as necessary throughout the project. ES&S has designated the MI Customer Service Manager, Kathy Dornan, as the Project Manager for the State of Michigan extended services, maintenance, and warranty contract. She is highly experienced in election project management, experienced with the State of Michigan voting systems, and will be the primary contact for the State, counties, and jurisdictions.

3.2.2. Single-Point-of-Contact (SPOC)

ES&S has designated Kathy Rogers, Vice President of Governmental Relations, as the individual to manage the contract, contract resolution, and to be responsible for advising the State of performance under the terms and conditions of the contract.

3.2.3. ES&S Certified Technicians

The ES&S Project Team will include Certified Technicians. Each technician is trained and certified to specific quality standards and is retained under an annual training and testing program. The ES&S team will consist of several local technicians and the ability to draw from a regional and nationwide network of Certified Technicians and Subject Matter Experts to meet any surge staffing or election needs.

3.2.4. Software and Hardware Support Engineers (Help Desk)

The ES&S Project Team includes a Help Desk staffed with trained hardware and software support technicians and engineers specifically trained in Michigan voting system hardware, software and firmware as well as the specific election laws and rules in Michigan.

3.2.5. Field Services Manager

Gary Eurek, the ES&S Field Services Manager, will manage the deployment of certified technicians, work order processing, scheduling, and work order prioritization. Gary's involvement with the project will include coordinating the execution of agreed upon maintenance schedules and applying expertise gained from years of experience in Michigan voting system maintenance and support.

3.2.6. Project Scheduler

ES&S has designated Mona Haremza as the Project Scheduler. Mona will be responsible for coordinating and scheduling maintenance activity between the local jurisdictions, counties, and technicians. Mona will add significant value and experience to the ES&S Project Team by applying years of experience in coordinating on-site repair and maintenance activity in the State of Michigan.

3.2.7. Sr. Customer Service Manager

The Sr. Customer Service Manager, Willie Wesley, will provide project guidance, communication support, and escalation support to the lead Project Manager. As the Sr. Customer Service Manager for the State of Michigan, Wil's focus is upon assuring quality project execution and satisfactory fulfillment of all project and contract deliverables.

4. Project Schedule and Milestones

As soon as feasible, a Project Schedule will be included as a part of this Project Plan and the project team will utilize reporting mechanisms to update and track actual project activity for the duration of the project. These mechanisms will assure communication of project status and activity to all stakeholders including clear identification of implementation phase gateways, major milestones, and critical paths. Initial critical paths can be reviewed in the Gantt Chart included with this Plan.

4.1. Initial High-Level Project Schedule

Name	Start	Finish

1.0 Project Initiation and Management	7/1/2011	6/30/19
Contract Award	06/2011	6/30/19
Orientation Meeting	8/15/11	8/15/11
Bi-Weekly Project Manager Status Reporting	8/31/11	6/30/19
Periodic Issue Reporting	8/31/11	6/30/19
2.0 Software Maintenance and Help-Desk Support	**7/1/2011**	**6/30/19**
Help-Desk Support	7/1/2011	6/30/19
+Upgrade support and training	7/1/2011	6/30/19
3.0 Election Support + Hardware Maintenance	**7/1/2011**	**6/30/19**
+2012 Election Maintenance, Repairs and Support	7/1/11	12/31/12
+2013 Election Maintenance, Repairs and Support	1/1/13	12/31/13
+2014 Election Maintenance, Repairs and Support	1/1/14	12/31/14
+2015 Election Maintenance, Repairs and Support	1/1/15	12/31/15
+2016 Election Maintenance, Repairs and Support	1/1/16	12/8/16
+2017 Election Maintenance, Repairs and Support	1/1/17	12/7/17
+2018 Election Maintenance, Repairs and Support	1/1/18	12/31/18
+2019 Election Maintenance, Repairs and Support	1/1/19	6/30/19

5. Initial Work Breakdown Structure

5.1. Primary Work Categories

5.1.1. Project Initiation, Reporting and Management (WBS 1.0)

The Project Team will employ a methodical and simple approach to defining detailed work elements utilizing proven project methodologies and documentation. Defining specified project milestones and maintaining accurate documentation will allow for continuity assurance and effective communication of project information.

5.1.2. Software Maintenance and Help-Desk Support (WBS 2.0)

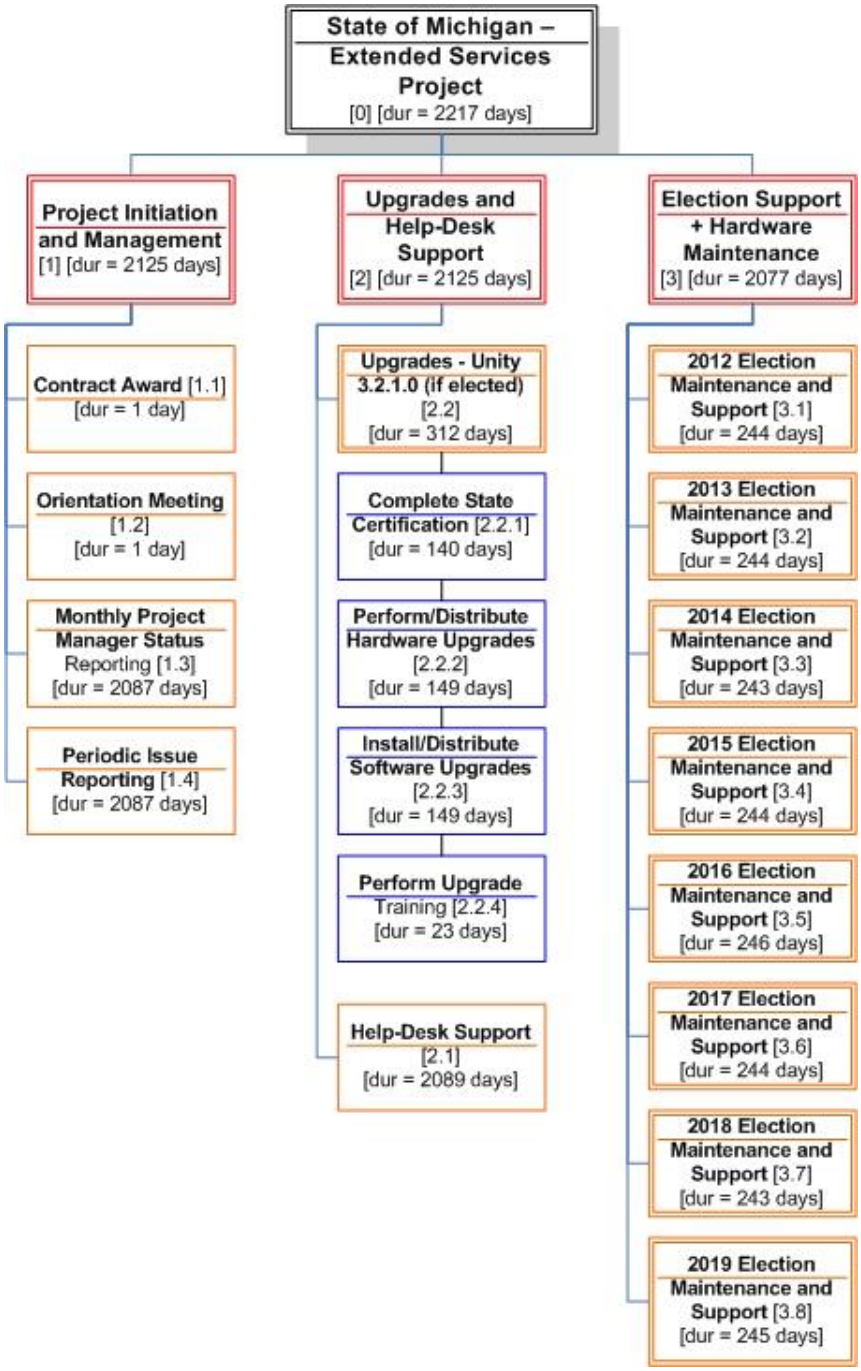
This work category includes all activity involved with the maintenance, support, and upgrade of all voting system software and firmware. The ES&S Project Team will work with the State to implement the required levels of maintenance and support defined by the contract.

5.1.3. Election Support and Hardware Maintenance (WBS 3.0)

This category of activity includes the delivery of all maintenance services for all components of the voting system as well as election readiness activities. Each task and deliverable in this work category will require formal acceptance and detailed activity logging. The ES&S Project Team will work with the State of Michigan and the counties and local jurisdictions to define a mutually agreeable work schedule. Execution of the schedule will commence upon approval from all entities. Schedule preparation/determination will be on-going and will be submitted to the State for approval as part of the bi-weekly report and meeting.

5.2. Summary Work Breakdown Structure

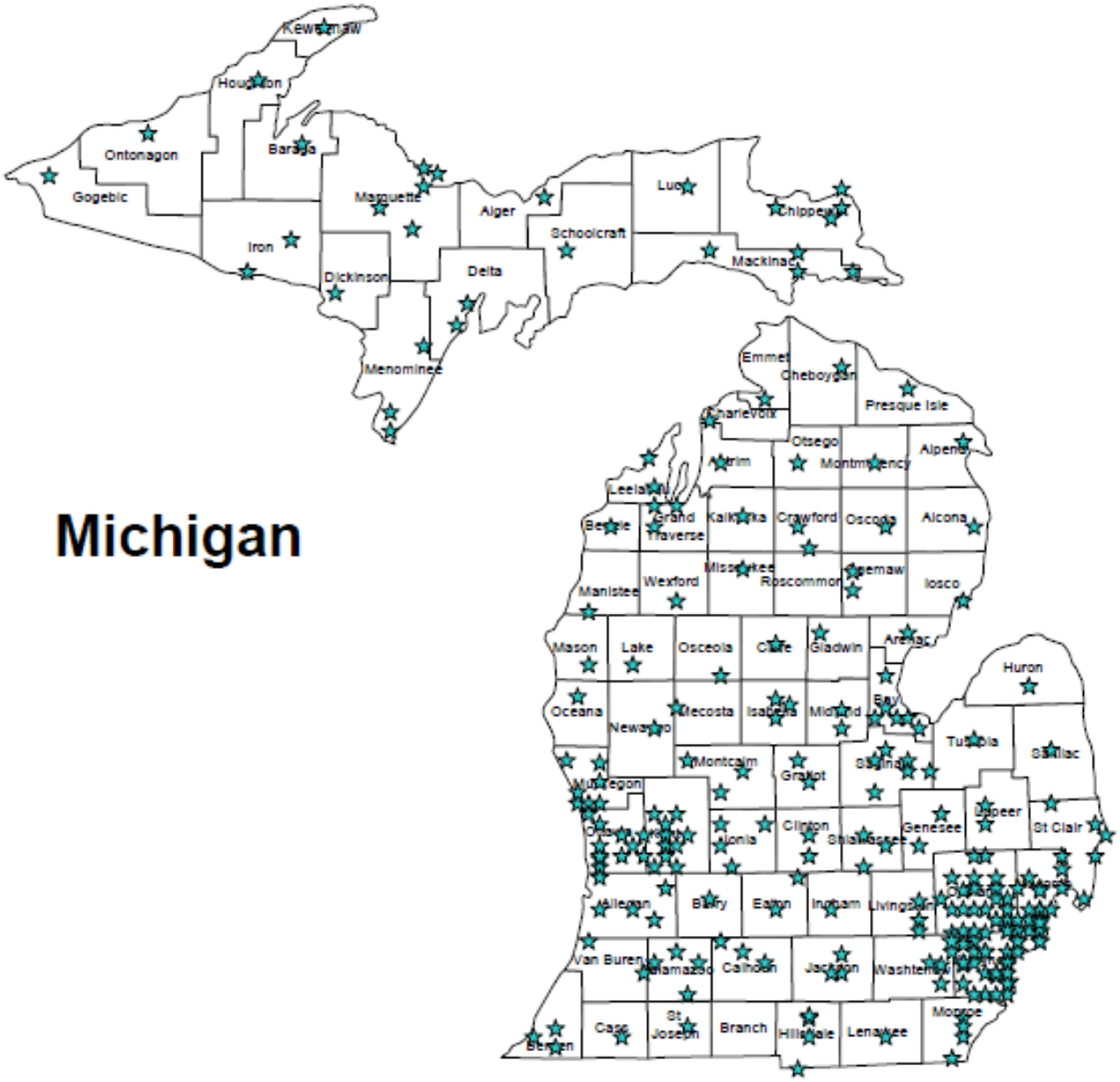
The initial implementation of the project will focus upon defining a specific preventative maintenance schedule and developing a communication and reporting plan. Defining and executing tasks in these main categories will assist in the achievement of the project objectives.



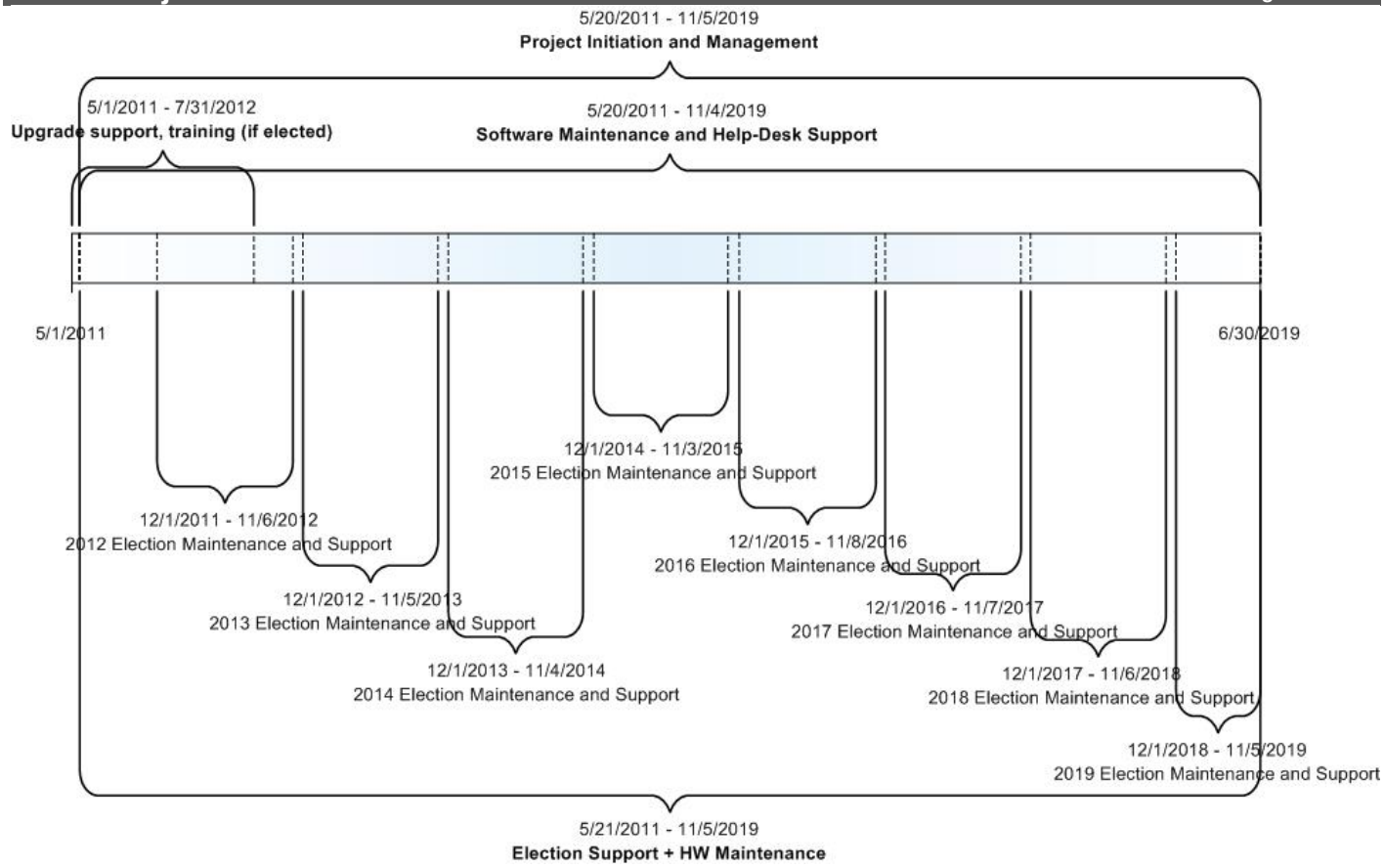
6. Centralized preventative maintenance staffing plan

The ES&S Project Team will apply their years of experience in staffing, scheduling, and performing preventative and remedial/repair maintenance in the State of Michigan to assure all contract requirements are met or exceeded. Planning will begin with the presentation of a high-level Preventative Maintenance schedule to the State of Michigan. Upon review and approval by the State, the ES&S Project Team will begin coordinating service with the local jurisdictions. The ES&S Project Team has identified an initial 255 centralized locations throughout the State. These locations have been carefully selected and coordinated in collaboration with the various jurisdictions throughout Michigan. These locations can be used to develop the initial plan, and will be adapted as work is coordinated with the local jurisdictions. The ES&S Project Team will anticipate changes to the work location plan and will remain flexible to jurisdiction needs and constraints. Prior to arriving at any customer locations, the ES&S Certified Technician will contact the jurisdiction to coordinate their arrival.

6.1. Centralized Preventative Maintenance Locations

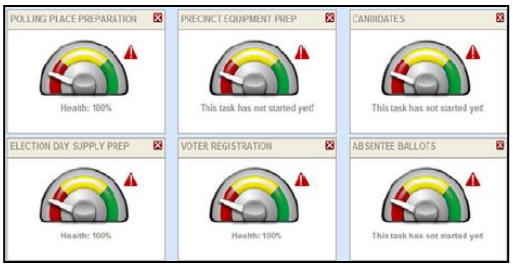


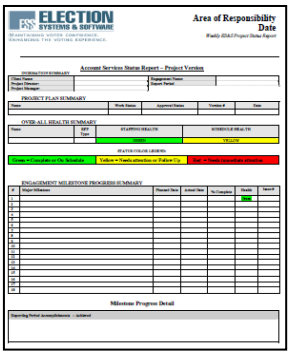
7. Time-phased Work Schedule



8. Communication management approach

The ES&S Project Team will deploy a multi-channel approach to communication management. In addition to providing periodic status reports that detail the status of all project deliverables and activities, the Project Manager will utilize web-based tools and periodic stakeholder meetings. Each of these communication methods, in addition to any methods preferred by the State of Michigan, will be used to assure all resources are up-to-date and to identify any outstanding risks or jeopardized tasks.





The project status report will be provided by the ES&S Project Manager for the duration of the project. The report will clearly define all completed, current, and upcoming activity as well as the overall health of the project. Each task and risk will be rated and color-coded for quick interpretation of project status.

9. Scope Management and Change Control

The basis for the scope of the project will begin with the contract between ES&S and the State of Michigan. The contract defines specific deliverables, requirements, and milestones which will be detailed and tracked in the required reporting documents, which will be approved by the State of Michigan.

Change Implementation Notices will be utilized to request and track changes to the project scope and any previously agreed upon product or service deliverables. The Change Control Procedures will be developed and maintained by the ES&S Project Team under direction from the State of Michigan.

10. Project Constraints and Boundaries

The primary project constraints will be the applicable federal and state laws, regulations, acts, and initiatives that govern the voting system and the activities required to service the system, including certification and verification. The secondary constraints include the availability of resources, equipment, component parts and materials within the timeframes needed to complete activity. To assure that the constraints do not adversely affect the desired outcomes of the project, the ES&S Project Team will work diligently with the State of Michigan in planning project activity, mitigating potential risks, and adhering to strict quality management procedures.

The plan for managing project constraints and monitoring project boundaries will be included in the Project Plan and will include plans for assuring products and processes are not adversely affected by the project constraints. The constraints will be tracked throughout the project using a Risk Register while periodic reports from the Project Manager will assist in communicating their potential affect on dependent activities. Initial constraints include:

10.1. Time

Imposed and existing deadlines must be monitored throughout the project. Detailed scheduling and contingency planning will aid in managing this constraint.

10.2. Funding

The project is constrained by the funding available to acquire resources, products and services. Precise planning and maximization of available resources will help assure project demands do not exceed funding constraints.

10.3. Personnel

Trained and experienced personnel resources will be needed to support a successful project. Lack of such trained resources could impose a risk to a project of this size. Although personnel constraints must be managed and monitored, ES&S has developed a resource pool and staffing strategy that essentially eliminates the risk that this constraint imposes.

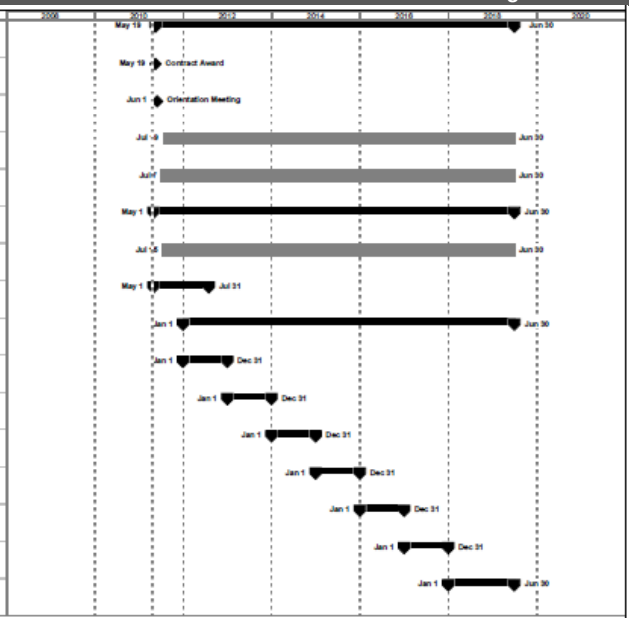
11. Work Acceptance

All deliverables, objectives, documents, and project outcomes will require approval. The ES&S Project Team will work with the State of Michigan to define each deliverable within the Project Plan and the corresponding approval procedures and documentation required. The State will be allowed ample time to review and provide input for all elements of the Project Plan and State approval will be required prior to the provision of any deliverable or distribution of any schedule of deliverables.

12. Project Gantt Chart

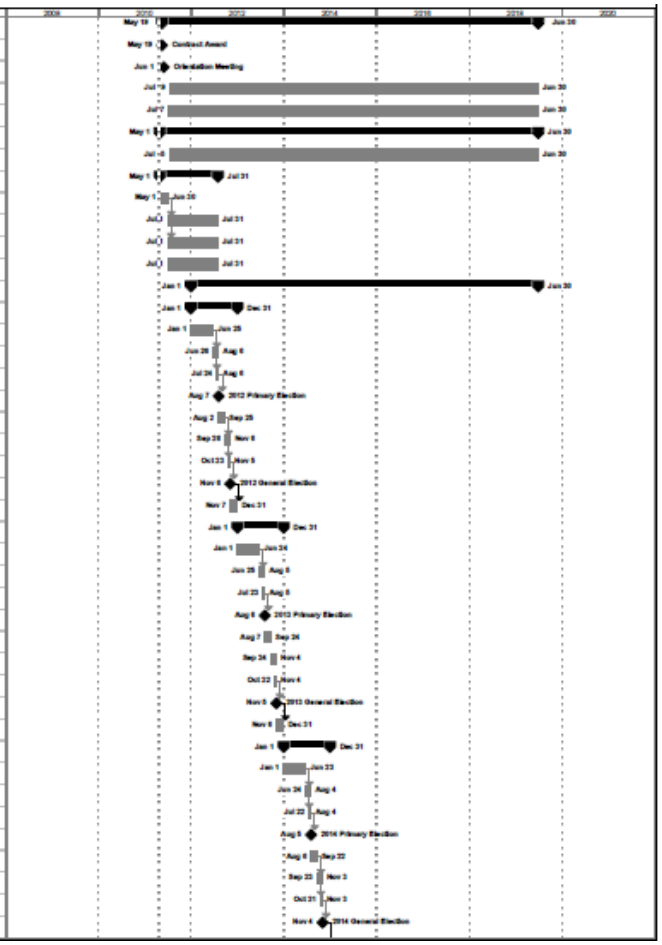
12.1. Gantt Chart (Summary roll-up)

Task Name	% Complete	Start	Finish
Project Initiation and Management	**0%**	**Thu 5/19/11**	**Sun 6/30/19**
Contract Award	0%	Thu 5/19/11	Thu 5/19/11
Orientation Meeting	0%	Wed 6/1/11	Wed 6/1/11
Monthly Project Manager Status Reporting	0%	Tue 7/19/11	Sun 6/30/19
Periodic Issue Reporting	0%	Thu 7/7/11	Sun 6/30/19
Software Maintenance and Help-Desk Support	**0%**	**Sun 5/1/11**	**Sun 6/30/19**
Help-Desk Support	**0%**	**Fri 7/15/11**	**Sun 6/30/19**
Upgrade Support and Training (if elected)	**0%**	**Sun 5/1/11**	**Tue 7/31/12**
Election Support + Hardware Maintenance	**0%**	**Sun 1/1/12**	**Sun 6/30/19**
2012 Election Maintenance and Support	**0%**	**Sun 1/1/12**	**Mon 12/31/12**
2013 Election Maintenance and Support	**0%**	**Tue 1/1/13**	**Tue 12/31/13**
2014 Election Maintenance and Support	**0%**	**Wed 1/1/14**	**Wed 12/31/14**
2015 Election Maintenance and Support	**0%**	**Thu 1/1/15**	**Thu 12/31/15**
2016 Election Maintenance and Support	**0%**	**Fri 1/1/16**	**Sat 12/31/16**
2017 Election Maintenance and Support	**0%**	**Sun 1/1/17**	**Sun 12/31/17**
2018/19 Election Maintenance and Support	**0%**	**Mon 1/1/18**	**Sun 6/30/19**

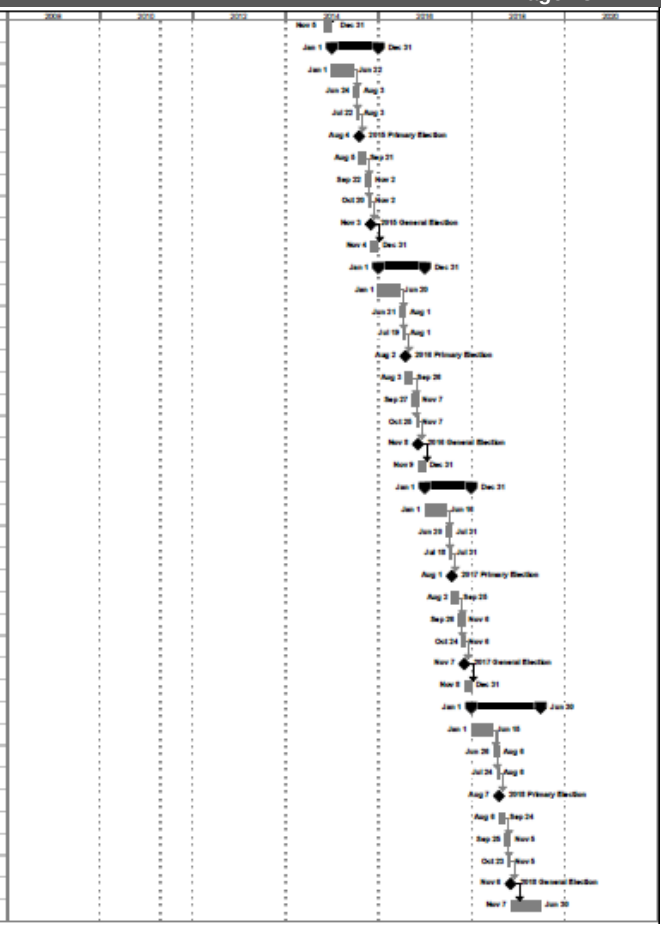


12.2. Gantt Chart (Detailed expanded)

Task Name	% Complete	Start	Finish
Project Initiation and Management	**0%**	**Thu 5/19/11**	**Sun 6/30/19**
Contract Award	0%	Thu 5/19/11	Thu 5/19/11
Orientation Meeting	0%	Wed 6/1/11	Wed 6/1/11
Monthly Project Manager Status Reporting	0%	Tue 7/19/11	Sun 6/30/19
Periodic Issue Reporting	0%	Thu 7/7/11	Sun 6/30/19
Software Maintenance and Help-Desk Support	**0%**	**Sun 5/1/11**	**Sun 6/30/19**
Help-Desk Support	**0%**	**Fri 7/15/11**	**Sun 6/30/19**
Upgrade Support and Training (if elected)	**0%**	**Sun 5/1/11**	**Tue 7/31/12**
Complete Testing and State Certification	0%	Sun 5/1/11	Thu 6/30/11
Perform/Distribute Hardware Upgrades	0%	Fri 7/1/11	Tue 7/31/12
Install/Distribute Software Upgrades	0%	Fri 7/1/11	Tue 7/31/12
Perform Upgrade Training	0%	Fri 7/1/11	Tue 7/31/12
Election Support + Hardware Maintenance	**0%**	**Sun 1/1/12**	**Sun 6/30/19**
2012 Election Maintenance and Support	**0%**	**Sun 1/1/12**	**Mon 12/31/12**
2012 Pre-Election Maintenance/Repairs	0%	Sun 1/1/12	Mon 6/25/12
2012 Primary Election 30-Day Readiness Period	0%	Tue 6/26/12	Mon 8/6/12
2012 Primary Election Critical Period (Loaner Units Avail.)	0%	Tue 7/24/12	Mon 8/6/12
2012 Primary Election	0%	Tue 8/7/12	Tue 8/7/12
2012 Pre-Election Repairs	0%	Thu 8/2/12	Tue 9/25/12
2012 General Election 30-Day Readiness Period	0%	Wed 9/26/12	Tue 11/6/12
2012 General Election Critical Period (Loaner Units Avail.)	0%	Tue 10/23/12	Mon 11/5/12
2012 General Election	0%	Tue 11/6/12	Tue 11/6/12
2012 Post-Election Repairs	0%	Wed 11/7/12	Mon 12/31/12
2013 Election Maintenance and Support	**0%**	**Tue 1/1/13**	**Tue 12/31/13**
2013 Pre-Election Maintenance/Repairs	0%	Tue 1/1/13	Mon 6/24/13
2013 Primary Election 30-Day Readiness Period	0%	Tue 6/25/13	Mon 8/5/13
2013 Primary Election Critical Period (Loaner Units Avail.)	0%	Tue 7/23/13	Mon 8/5/13
2013 Primary Election	0%	Tue 8/6/13	Tue 8/6/13
2013 Pre-Election Repairs	0%	Wed 8/7/13	Tue 9/24/13
2013 General Election 30-Day Readiness Period	0%	Tue 9/24/13	Mon 11/4/13
2013 General Election Critical Period (Loaner Units Avail.)	0%	Tue 10/22/13	Mon 11/4/13
2013 General Election	0%	Tue 11/5/13	Tue 11/5/13
2013 Post-Election Repairs	0%	Wed 11/6/13	Tue 12/31/13
2014 Election Maintenance and Support	**0%**	**Wed 1/1/14**	**Wed 12/31/14**
2014 Pre-Election Maintenance/Repairs	0%	Wed 1/1/14	Mon 6/23/14
2014 Primary Election 30-Day Readiness Period	0%	Tue 6/24/14	Mon 8/4/14
2014 Primary Election Critical Period (Loaner Units Avail.)	0%	Tue 7/22/14	Mon 8/4/14
2014 Primary Election	0%	Tue 8/5/14	Tue 8/5/14
2014 Pre-Election Repairs	0%	Wed 8/6/14	Mon 9/22/14
2014 General Election 30-Day Readiness Period	0%	Tue 9/23/14	Mon 11/3/14
2014 General Election Critical Period (Loaner Units Avail.)	0%	Tue 10/21/14	Mon 11/3/14
2014 General Election	0%	Tue 11/4/14	Tue 11/4/14



Task Name	% Complete	Start	Finish
2014 Post-Election Repairs	0%	Wed 11/5/14	Wed 12/31/14
2015 Election Maintenance and Support	**0%**	**Thu 1/1/15**	**Thu 12/31/15**
2015 Pre-Election Maintenance/Repairs	0%	Thu 1/1/15	Mon 6/22/15
2015 Primary Election 30-Day Readiness Period	0%	Wed 6/24/15	Mon 8/3/15
2015 Primary Election Critical Period (Loaner Units Avail.)	0%	Wed 7/22/15	Mon 8/3/15
2015 Primary Election	0%	Tue 8/4/15	Tue 8/4/15
2015 Pre-Election Repairs	0%	Wed 8/5/15	Mon 9/21/15
2015 General Election 30-Day Readiness Period	0%	Tue 9/22/15	Mon 11/2/15
2015 General Election Critical Period (Loaner Units Avail.)	0%	Tue 10/20/15	Mon 11/2/15
2015 General Election	0%	Tue 11/3/15	Tue 11/3/15
2015 Post-Election Repairs	0%	Wed 11/4/15	Thu 12/31/15
2016 Election Maintenance and Support	**0%**	**Fri 1/1/16**	**Sat 12/31/16**
2016 Pre-Election Maintenance/Repairs	0%	Fri 1/1/16	Mon 6/20/16
2016 Primary Election 30-Day Readiness Period	0%	Tue 6/21/16	Mon 8/1/16
2016 Primary Election Critical Period (Loaner Units Avail.)	0%	Tue 7/19/16	Mon 8/1/16
2016 Primary Election	0%	Tue 8/2/16	Tue 8/2/16
2016 Pre-Election Repairs	0%	Wed 8/3/16	Mon 9/26/16
2016 General Election 30-Day Readiness Period	0%	Tue 9/27/16	Mon 11/7/16
2016 General Election Critical Period (Loaner Units Avail.)	0%	Tue 10/25/16	Mon 11/7/16
2016 General Election	0%	Tue 11/8/16	Tue 11/8/16
2016 Post-Election Repairs	0%	Wed 11/9/16	Sat 12/31/16
2017 Election Maintenance and Support	**0%**	**Sun 1/1/17**	**Sun 12/31/17**
2017 Pre-Election Maintenance/Repairs	0%	Sun 1/1/17	Fri 6/16/17
2017 Primary Election 30-Day Readiness Period	0%	Tue 6/20/17	Mon 7/31/17
2017 Primary Election Critical Period (Loaner Units Avail.)	0%	Tue 7/18/17	Mon 7/31/17
2017 Primary Election	0%	Tue 8/1/17	Tue 8/1/17
2017 Pre-Election Repairs	0%	Wed 8/2/17	Mon 9/25/17
2017 General Election 30-Day Readiness Period	0%	Tue 9/26/17	Mon 11/6/17
2017 General Election Critical Period (Loaner Units Avail.)	0%	Tue 10/24/17	Mon 11/6/17
2017 General Election	0%	Tue 11/7/17	Tue 11/7/17
2017 Post-Election Repairs	0%	Wed 11/8/17	Sun 12/31/17
2018/19 Election Maintenance and Support	**0%**	**Mon 1/1/18**	**Sun 6/30/19**
2018 Pre-Election Maintenance/Repairs	0%	Mon 1/1/18	Fri 6/15/18
2018 Primary Election 30-Day Readiness Period	0%	Tue 6/26/18	Mon 8/6/18
2018 Primary Election Critical Period (Loaner Units Avail.)	0%	Tue 7/24/18	Mon 8/6/18
2018 Primary Election	0%	Tue 8/7/18	Tue 8/7/18
2018 Pre-Election Repairs	0%	Mon 8/6/18	Mon 9/24/18
2018 General Election 30-Day Readiness Period	0%	Tue 9/25/18	Mon 11/5/18
2018 General Election Critical Period (Loaner Units Avail.)	0%	Tue 10/23/18	Mon 11/5/18
2018 General Election	0%	Tue 11/6/18	Tue 11/6/18
2018/19 Post-Election Repairs	0%	Wed 11/7/18	Sun 6/30/19



Section 9.0 – General Questions

5.3.11 General Questions

The following is a list of questions regarding various aspects of the UVS functionality and the UVS project. Please provide detailed answers to these questions. Note: Do not include any cost information in this section of the RFP.

1) What staff support from CDOS and counties do you envision needing during the implementation of the UVS in a county? Identify each resource by location (CDOS or county), role or responsibility, technical skills needed, suggested expertise in years, and any clarifying comments.

ES&S Response

ES&S will work to implement the project in a manner that causes minimal changes and disruption to current State and County staff and operations. Technical skills required to operate the system are similar or less than the technical skill requirements of current systems deployed in the State of Colorado. No new or specialized skills should be required from the CDOS or Counties.

Upon the initiation of the project in each county, ES&S will seek to kick-off the project with the various County stakeholders. CDOS involvement at this point is not necessary since implementation processes will have been defined earlier in the project. CDOS is welcomed to participate, but should they choose not to, the ES&S will provide regular and detailed status updates to assure CDOS staff are aware of all county-level activity. Once implementation activity begins, each County will need to actively participate in several steps of the implementation, including:

- Delivery – ES&S will deliver equipment and software to the locations designated by the County, however, County staff will need to oversee delivery to assure it's conducted in the manner preferred by the County.
- Acceptance Testing – To assure the County is satisfied with the delivery and operability of the system, they will likely want to actively participate in acceptance testing. CDOS involvement is welcomed but not required.
- System Training – Each County will need to actively participate in the various training sessions required.

2) How many county implementations do you feel you could support simultaneously?

ES&S Response

ES&S could fully support the entire state implementing the system simultaneously. However, ES&S recommends a phased implementation approach whenever possible. Our experience has

proven that implementing a phased cross-section of small, medium, and large counties as an initial implementation group will allow for modifications and adjustments to be made prior to implementing the remainder of the State.

3) What is your coverage, terms, and duration for warranties of the hardware, software, and other deliverables provided pursuant to this RFP?

ES&S Response

ES&S provides a one (1) year warranty on its proprietary equipment and software. Such warranty provides that ES&S will repair or replace any component of our proprietary equipment or software which, while under normal use and service, (a) fails to perform in accordance with its documentation in all material respects, or (b) is defective in material or workmanship. ES&S also warrants that its proprietary equipment and software will operate in conjunction with all third party equipment and software that meets ES&S' specifications, provided elsewhere in this Proposal. The specific warranty terms and conditions are set forth in ES&S' Standard Agreement included with ES&S' proposal at **Appendix A**.

4) What is your coverage, terms, and duration for maintenance of the hardware components of your UVS solution?

ES&S Response

Upon the expiration of the warranty and at the CDOS or County's option, ES&S will provide maintenance and support of ES&S' proprietary equipment and software purchased and licensed under a resultant contract with the CDOS or County after the expiration of their respective warranties. The terms and conditions under which such maintenance services are provided are set forth in ES&S' Standard Agreement included with ES&S' proposal at **Appendix A**. The optional maintenance includes both remedial and preventive maintenance services, including all labor and parts (except consumables). The duration of any such maintenance arrangement will be mutually agreed to by the parties.

5) What is your coverage, terms, and duration for licensing of the software components of your UVS solution?

ES&S Response

ES&S will provide the CDOS or County with a license to its proprietary software and documentation for an initial one-year period. Thereafter, ES&S will continue to license its software to the CDOS or County for consecutive one-year periods upon the payment of the applicable software license, maintenance and support fee by the CDOS or County. ES&S' software license provides for the use and reproduction of the software and documentation by and within the County licensing the ES&S software, for the sole purposes of defining and conducting elections and tabulating and reporting election results of elections conducted within the County. In order to protect its valuable intellectual property rights in its proprietary software, ES&S must retain the ability to terminate the license if the County takes any action that endangers those

rights, such as reverse engineering, modifying or creating derivative works of the software or allowing any third parties to access or use the software. The specific terms of ES&S' software license is set forth in ES&S' Standard Agreement included with ES&S' proposal.

6) Are updates and modifications to the UVS because of legislative mandates a part of your support agreement or are they custom enhancements?

ES&S Response

Generally any updates and/or modifications to the UVS hardware or software as a result of changes in local or State law are custom enhancements subject to additional charge and not part of ES&S' maintenance and support agreement. ES&S does warrant to the CDOS and/or County that, at the time of delivery, the proprietary ES&S equipment and software leased, sold and/or licensed pursuant to the terms of a mutually agreed upon contract with the CDOS and/or County will comply with all applicable requirements of state election laws and regulations that are mandatory and effective as of the effective date of any resulting contract between ES&S and the CDOS and/or County. ES&S will further warrant that during the agreed upon warranty period and thereafter so long as the CDOS and/or County is currently subscribing and has paid for post-warranty maintenance and support services, the proprietary ES&S equipment and proprietary ES&S licensed software will be maintained or upgraded by ES&S in such a way as to remain compliant with all applicable state election laws and regulations. As stated above, modifications arising out of changes in local or state law will result in an additional charge. For purposes of this warranty, "Maintained or upgraded" shall mean only such changes to individual items of the ES&S licensed software (but not the ES&S equipment) as are technologically feasible and commercially reasonable in ES&S' discretion. The CDOS and/or County shall be responsible for the cost of any replacements, retrofits or modifications to the ES&S equipment contracted for under any resulting contract that may be developed and offered by ES&S in order for such ES&S equipment to remain compliant with applicable laws and regulations. The CDOS and/or County shall also be solely responsible for the cost of any third party items that are required in order for the ES&S equipment and/or ES&S licensed software to remain compliant with applicable laws and regulations.

7) What is the certification status of each component within your proposed solution? Include a matrix showing the following:

- **Component Identification**
- **Federal certification date**
- **The federal certification standard currently met (e.g. 2005 VVSG)**
- **Any state certifications**
- **Projected certification date and standard if not currently certified**
- **Projected certification date and standard for a future planned upgraded certification**

ES&S RESPONSE

Hardware /Software Component	Component Ident.	Federal Cert. Date	Federal Cert. Standard Currently Met	State Certifications	Projected Cert. Data & Standard	Projected Cert. Date & Standard for Future Planned Upgraded Certification
DS200 (EVS 5.2.0.0 release version number)	2.1.2.0.0*	7/21/09	2005	AL, AZ, FL, IA, ID, IL, ID, MN, MS, MT, NC, NJ, NM, NY, OH, TN, UT, VA, WA, WI, WV, WY	N/A	7/21/14 (2005) (EVS 5.2.0.0 release anticipated federal certification date)
DS850 (EVS 5.2.0.0 release version number)	2.10.0.0*	10/31/12	2005	AL, AZ, FL, IA, ID, IN, MN, MS, MT, NC, NJ, NM, NY, OH, TN, UT, VA, WA, WV, WY	N/A	7/21/14 (EVS 5.2.0.0 release anticipated federal certification date)
AutoMARK	1.8.6.0 (EVS 5.2.0.0 release version number)	8/27/04	2005	AK, AL, AZ, CA, DE, FL, IA, ID, IL, IN, KS, KY, MA, MI, MN, MO, MS, MT, NC, ND, NE, NJ, NM, NY, OH, OR, PA, SD, TN, TX, UT, VA, WA, WI, WV, WY	N/A	7/21/14 (2005) (EVS 5.2.0.0 release anticipated federal certification date)
ExpressVote	1.4.0.0 (EVS 5.2.0.0 release version	TBD	N/A (Not yet certified)	N/A (Not yet certified)	7/21/14 (2005)	TBD

	number)					
ElectionWare	4.6.0.0 (EVS 5.2.0.0 release version number)	5/16/13	2005	AL, AZ, FL, ID, MN, MS, NM, NY, TN, WA, WV	N/A	7/21/14
ERM	8.11.0.0 (EVS 5.2.0.0 release version number)	6/21/01	2005	AL, AR, AZ, CA, CO, DC, FL, IA, ID, IL, IN, KS, KY, MI, MN, MO, MS, MT, NC, ND, NJ, NM, NY, OH, OR, PA, SC, TN, TX, UT, VA, WA, WI, WV, WY	N/A	7/21/14 (2005) (EVS 5.2.0.0 release anticipated federal certification date)

*Please note, all states listed are not running newest version and may be running versions not 2005 certified.

8) What features of your proposed solution exist to ensure ballot secrecy? Please describe those features.

ES&S RESPONSE

The voter's privacy and anonymity are preserved during the process of recording, verifying and auditing ballot choices. The DS200 does not display any information that may reveal the identity of the voter or contents of the voter's ballot while reading, verifying and auditing ballots.

Figure 9.1 ES&S privacy sleeve

The DS200 stores ballots cast information using randomly generated 64-bit IDs, guaranteeing that each voter's selections remain anonymous. Neither the IDs nor the ballot summary data appear in the audit log, thus further ensuring voter anonymity. Additionally, all data files for every ballot cast are saved with the same timestamp which makes it impossible to determine the order in which ballots were cast.

Voters mark their paper ballots in the privacy of a voting booth, and then place their ballots into an optional privacy sleeve to transport it to the DS200. The ballot is passed through the DS200 for tabulation, then immediately is dropped into the locked and sealed integrated ballot box.

ES&S sells several types of voting booths that provide a private and secure environment for voters to mark a paper ballot. In addition, ES&S sells ballot privacy sleeves that may be used to ensure ballot secrecy as the voter transports a ballot from the voting booth to the DS200.

An optional privacy curtain is available for the ES&S AutoMARK; the curtain sets on the table and surrounds the sides, back and top of the ES&S AutoMARK to provide privacy to the voter. If an ES&S AutoMARK VAT table is used, the privacy curtains snap into slots on the VAT table.

Finally, the ES&S AutoMARK includes the ability to blacken the LCD screen during the time a sight disable voter is completing an audio voting session or it could be blackened when a poll worker approaches the voter to answer a question.

9) What is your organizational chain-of-command for escalating problems needing resolution?

ES&S Response

ES&S offers multiple support channels to assist customers with issues and concerns ranging from simple "how-to" questions to complex functional inquiries.

- **Toll-free support –** Customer support is available by telephone, fax or e-mail to our ES&S Help Desk. Our dedicated toll-free customer support telephone number is 877-ESS-VOTE (877-377-8683, then press the appropriate number for support). The support line is open 24 hours a day. Representatives monitor the line from 7 a.m. to 7 p.m. Central time, Monday through Friday. We have a team of very experienced hardware and software support technicians who will comfortably guide you to an issue resolution.
- **E-mail support –** Customers can also communicate directly with their dedicated CSM or specialized ES&S support and technical representatives via e-mail.
- **FAX support –** Facsimile support is available to our Help Desk at (402) 970-1267.
- **Customer portal –** Each customer will be provided a user name and password to access the ES&S customer portal. The portal contains copies of all user documentation to include Standard Operating Procedure manuals and technical bulletins. In addition, the portal provides access to ES&S Election Services forms, RMA request forms, and a link to the ES&S Supply Store.
- **WebEx support –** ES&S Technical Support uses WebEx as our remote desktop assistance tool to provide over-the-shoulder assistance when needed.

ES&S Help Desk

ES&S will provide support to the State and Counties through our National Help Desk in Omaha, NE. The ES&S National Help Desk operates from 7 a.m. to 7 p.m. Central time, Monday - Friday. Customers requiring assistance should place a call to our Help Desk via a toll-free number (1-877-377-VOTE). During the weeks leading up to our customer's important election events, our National Help Desk is on call 24x7 by phone, email, cell phone, or facsimile. Our ES&S National Help Desk technicians can answer any question regarding hardware or software. No question is too hard and we will stay with you until you feel comfortable about the answer.

Customers requiring assistance outside these hours may call their ES&S dedicated Customer Service Manager's cell phone 7x24 for assistance. Our goal is to make ourselves available to anyone on your staff when you need us.

Customers can expect to receive a reply or callback immediately from their Customer Service Manager (CSM) or the Help Desk during peak election activity, or within 4 hours during non-election periods.

ES&S utilizes a tiered escalation process to identify, track and resolve system problems. Initial notification of an issue is accomplished when a customer notifies an Omaha-based Technical Support Representative on our toll-free number, email, or facsimile.

Upon notification, the ES&S representative will enter the support ticket into our automated issue tracking system known as Team Track and then immediately gather the necessary information and data to reproduce the issue and either offer a process solution or escalate the issue to 2nd and 3rd level support. The support representative will attempt to resolve the issue while the customer is on the phone or e-mail using all available resources. If successful, the ticket is closed. If the support call results in the discovery of a product issue (bug), a workaround is provided to the customer and the ticket is escalated to a software engineering team for resolution. This process allows issues to be resolved in a timely and reasonable manner during peak and non-peak election periods.

10) What purchase options do your company offer (e.g. payment in full upon delivery, financing, leasing)?

ES&S Response

ES&S is capable of providing an array of purchase options that include payment in full upon delivery. Milestone-based payments, multi-year installment purchase plans, and lease to own programs.

11)What is the maximum number for each of the following items that your Election Management System allows:

- **Precincts**
- **Contests**
- **Candidates**
- **Political Parties**
- **Ballot Styles**
- **Precincts per Ballot Style**
- **Ballot Styles per Precinct**
- **Other limitations?**

ES&S Response

ES&S election set up and tabulation software can handle the following:

- Maximum number of Precincts (in an election): At least 9,900.
- Maximum number of Contests (allowed in an election): Depends on election content (limited by 21,000 maximum counters*)
- Maximum number of Candidates (allowed per election): Depends on election size (limited by 21,000 maximum counters*)
- Maximum number of Political Parties: 75 for a General Election, 19 for Primary Election (including nonpartisan party)
- Maximum number of Ballot Styles: 9900. There is no limit on the number of precincts per ballot style or ballot styles per precinct, as long as the total number of ballot styles does not exceed 9900 per election

*The election is limited to 21,000 counters. A counter is an element of tabulation. Every contest in the election has a minimum of four counters associated with it including one candidate. Each additional candidate in a contest adds one counter. Every ballot statistic (i.e. Ballots cast total, registered voters total, ballots cast Republican, etc.) adds two counters for each statistic. In a non Primary election, there is a minimum of six counters required. As a result, maximum contests and candidates are interdependent with each other.

12)What interface capabilities, with the CDOS voter registration system (SCORE), can your Election Management Software provide?

ES&S Response

EVS 5.2.0.0 has a very flexible import system through which it can loosely integrate with the CDOS Voter Registration system for importing data to setup the election. Election Reporting Manager and the EXP utility have the capability to export results data in XML format that can be used to integrate with the County or the State's result reporting system.

Is there a defined extract format for precinct and district definitions, registration statistics, and candidate or contest information that is or may be made compatible with SCORE?

ES&S Response

All election data can be displayed in a table view and exported to Microsoft Excel or .csv formatted files.

What interface data formats are available (e.g. EML, XML, CSV, and ASCII)?

ES&S Response

Input files can be formatted as fixed length fields or can be delimited. Both ASCII and Unicode formats can be imported, which provides support for multi-byte character languages such as Chinese. Header rows can be used to define the table and field names of the information contained in the import files.

13) What are the security features and capabilities of your proposed system and processes? Include the following areas in your response to this question:

- **How do you protect the audit logs (e.g., encryption, hashing)?**

ES&S RESPONSE

The EMS applications and the database server are in a closed network in a physically secure location. Access to Electionware is access controlled through individual user names and strong passwords (8 character minimum). There are also various Windows roles that allow the user to perform only the authorized functions based on their role. All private data and access codes at rest are stored encrypted in the database using 256 bit AES encryption. Every event on the EMS is logged to the audit log database which is only accessed by the application.

All data in motion to and from the EMS to the tabulators are both encrypted and signed. For every election a public/private key pair and a 256 bit AES key is created and the election data going from the EMS to the tabulators are encrypted and signed by the election private key. Each tabulator during the qualification procedure for an election generates its own public/private key pair and all data originating from the tabulators are also encrypted by the election AES key and signed by their individual private keys.

The logs maintained by the tabulator are just signed and not encrypted.

Before the tabulator media is read into the EMS, the data contents are first sign verified and decrypted before processing.

There are four different access codes that allow different functions on the tabulator:

Election Access Code: Used to allow the user access to basic election functions such as opening and closing and printing of reports.

Administrator Access Code: Used to allow the user access to system maintenance, settings and diagnostic functions of the tabulator.

Override Access Code: Used to allow the user access to perform privileged functions such as re-opening of polls or changing election settings for that election.

Qualification Access Code: Used to qualify a tabulator for this election. It is also used by ERM to setup the results database and results processing.

Before any action can be performed on the tabulators, the user is first authorized by the Election Access Code and, based on action selected, the user may be prompted with a different access code.

Results transmission from the DS200 using wired/wireless telecommunication is accomplished using Secure File Transfer Protocol (SFTP). For this purpose, during the creation of an election media, a unique username and randomly generated strong password is created. During results transmission the DS200 uses this restricted (push only) SFTP login account to securely transfer the results data packet to the SFTP server in the DMZ. A pull-only SFTP user account is used by ERM to pull the results data posted by the tabulators foe sign verification, decryption and further processing.

Similar to the DS200, if the DS850s are networked, for every DS850 a SFTP user account with a strong system generated password is created. The DS850 uses this SFTP user account to transfer results to the SFTP Server on the Internal Network.

- **Does your system documentation contain suggested security auditing procedures? If so, please provide.**

ES&S Response

Yes. Part of the Technical Data Package provided with each system release is the ES&S System Security Specification. This specification includes the recommended system hardening and security procedures as well as the Software Validation Procedures. The Software Validation Procedures allows each jurisdiction to audit the ES&S installed applications against a known, valid list of hashes for each executable. The list of known hashes is provided by a trusted source and is then compared to the hashes of the installed products using these documented procedures.

Please see the attached **Voting System Security Specification** document in **Appendix E** for further details. Due to the nature of this material, we have provided this document separately from our proposal in the **CONFIDENTIAL** binder and ask that this document be considered **CONFIDENTIAL-PROPRIETARY**.

- **Do you provide an executable application whitelist with digitally signed programs?**

ES&S Response

Authorized access to whitelisted programs is controlled using Windows Software Restriction Policies along with Access Control Lists (ACL)s for files and directories security provided by the Windows NTFS (New Technology File System). Hardening scripts provided apply these controls to the EMS system.

- **How does your system prevent unauthorized, non-whitelisted applications from running?**

ES&S Response

Unauthorized access for non-whitelisted applications programs is controlled by Windows Software Restriction Policies along with Access Control Lists (ACL)s for files and directories security provided by the Windows NTFS (New Technology File System). Hardening scripts provided apply these controls to the EMS system.

- **What specific hardening procedures and standards are your voting devices held to?**

ES&S Response

Hardening:

ES&S provides comprehensive procedures and self-executing scripts to disable all non-essential PC functions. During the secure system setup, the following protections are applied:

- The windows Operating system is installed.
- The system BIOS is hardened and BIOS access rights restricted.
- Windows updates are applied using an offline utility.
- Scripts are run that include the following hardening steps:
  - Registry settings are added or modified to disable non-essential system functions.
  - Non-essential Windows services are deactivated.
  - Account policies are configured.
  - Local policies are configured.
  - Software restriction policies are configured.
  - Networking is disabled.
  - Non-essential windows components are removed.
- Windows Event logs are set into an automatic backup and clear state. The logs that are automatically backed up are created in the normal windows systems directory must be archived with all the elections archives since they contain evidence of the activities executed on the machine during the given election cycle. The system administrator is responsible for moving these logs into the election archive as directed by the Election Administrator for the County.
- Virus protection is installed.
- Necessary COTS and proprietary applications are installed.
- User accounts and passwords are created.

Standards:
The system must meet the security audit performed by the VSTL as a requirement for certification. As a condition of certification, the EAC also requires the system meet the security settings found in the United States Government Configuration Baseline (USGCB) document.

· What database encryption mechanisms are used by your system for data at rest and in transit? Please describe, in detail, all uses of data encryption/decryption in your proposed solution.

ES&S RESPONSE

On the Electionware database server, all the security access codes and SFTP user passwords are stored using AES encryption using an election specific AES key.

Using system hardening scripts, the Postgres data directories are protected from users and are accessed only by the non-admin Postgres service user account.

The final access permissions for a shared resource are determined by considering both the NTFS permissions and the sharing protocol permissions, and then applying the more restrictive permissions.

The SFTP user account passwords are exported to the SFTP server in an XML and all the passwords are stored as SHA-256 hashes in the XML.

The security access codes setup in ElectionWare is sent to the tabulators on a Qualification Media in the form of SHA-256 hashes.

During election creation a unique FIPS RNG generated AES key and an election specific Public/Private key pair are generated. The election definition sent to the devices on the Election Media is encrypted using a password based derived key of the Election Access Code and signed by the election specific private key.

The election specific AES key sent to the tabulators on the Qualification Media is used to encrypt data from the tabulators to the EMS. In addition to encryption all encrypted data is further signed using a machine specific private key generated during the Qualification process on the tabulator. The incoming Election Media containing results are first sign verified before to ensure authenticity and then decrypted for results accumulation.

The EMS applications and the database server are in a closed network in a physically secure location and hence the communication between the EMS client application and the Postgres database server is not encrypted.

The DS850 also on the inside network communicates the results data to the SFTP Server on the EMS server using the SFTP protocol.

Election Reporting Manager uses SFTP to read the modemed in results from the SFTP server in the DMZ. The DS200 tabulator also uses the SFTP protocol to modem the results data to the SFTP server in the DMZ.

The DS200 first signs the results data to be transmitted using the machine specific private key and then bundles the files into a zip file and then encrypts the zip file using the election specific AES key and then transmits the encrypted zip file over SFTP. SSH-2 File Transfer Protocol (SFTP) is a network protocol that provides file access, file transfer. A secure channel using a Secure Shell protocol (SSH), is used where the server has already authenticated the client, and the identity of the client user is available to the protocol.

All encryption and signing of data is conducted using a FIPS 104-2 compliant, NIST CAVP certified crypto module.

- **What password features are included in your proposed solution (e.g., complexity, reuse)?**

ES&S RESPONSE

The ElectionWare application requires users to have an 8 character password and generates SFTP user passwords which must be at least 8 characters and no more than 16 characters in length.

- Passwords are case sensitive.
- Passwords must contain at least one character from three of following four classes:
  - Upper Case
  - Lower Case
  - Numeral

- Symbol

The EMS Servers and Workstations require each user to be identified to Windows via its User Credentials system. The hardening process establishes strong user credential settings that conform to industry best practices.

- Each user must have his/her own credentials.
- User passwords must be constructed in accordance with the following complexity rules:
  - Not contain the user's account name or parts of the user's full name that exceed two consecutive characters.
  - Be at least 12 characters in length.
  - Contain characters from three of the following four categories:

– English uppercase characters (A through Z).

– English lowercase characters (a through z).

– Base 10 digits (0 through 9).

– Non-alphabetic characters (for example, !, $, #, %).

- Non-keyboard characters such as symbols are not allowed.
- User passwords are never stored in the clear.
- Each user must be assigned to a specific user group which determines the functions that the user is allowed to execute.
- The Windows configuration is set to use FIPS-compliant configuration for the design and implementation of the application password encryption algorithms.
- User passwords expire every 90 days.

· Is there any remote communication technology associated with your proposed solution? If so, explain.

ES&S RESPONSE

The future upgrade includes adding the remote communications technology both dialup and wireless supported by our other products to this product release. The future EMS network is based on the proposed technology architecture. The EMS system includes a Windows 2008 R2 Server and Windows 7 Professional Workstations. The Workstations can be either desktop or laptop computers. The Workstations are then connected to the server using a gigabit switch.

The current closed loop LAN was given top priority when adding the wireless and wired data communications to the network architecture. In order to support the wireless and wired communications, a Demilitarized Zone (DMZ) was setup to host an SFTP Server. The DMZ configuration includes a Cisco ASA 5505 firewall and a Windows 2008 R2 Communications Server. This Server hosts both a SFTP and a Syslog Server. This Server may also host a Routing and Remote Access (RAS) Server if wired (dialup) communications is used.

The firewall supports three VLANs, Outside (Internet), Inside (EMS Network), and DMZ (SFTP Server). The firewall has a specialized configuration, which only allows: 1) the SSH protocol

between the Internet and DMZ, 2) the SSH protocol between the DMZ and the EMS Network, 3) the Network Time Protocol (NTP) to set its internal clock, and 4) logging to a Syslog server resident on the Server in the DMZ.

The DS200 Tabulators use wireless modems to connect to the SFTP Server via the Internet. In order to logon to the SFTP Server, each DS200 Tabulator is given a unique User ID and Password. The SFTP Server is configured to only allow the DS200 to push (send) data to the SFTP Server. The DS200 Tabulators are not allowed to pull data from the SFTP Server. The DS200 Tabulators may also use wired (dialup) modems to connect to the SFTP Server via the RAS Server. When using wired modems, before the DS200 Tabulator can communicate to the SFTP Server, it must first authentication with the RAS Server using Windows User ID and Password Authentication.

The Regional Results Transfer application allows results files accumulated on DS200 media devices at remote polling locations to be sent to Election Central from Regional Results Transfer sites. The Regional Results Transfer application runs on a Window 7 PC. The network options include Ethernet, dialup, wireless mobile broadband and MiFi (mobile WiFi).

In order to pull data into the EMS Network, an SFTP Client is installed on one of the ERM Workstations within the EMS Network. The SFTP Server is configured to only allow the SFTP Client to pull (receive) data from the SFTP Server in the DMZ. The SFTP protocol used by both SFTP Server and SFTP Client is FIPS 140-2 compliant. Attached is a network diagram and a list containing hardware configurations and the required COTS software for the proposed system.

The DS850 can be connected to the EMS network to an SFTP Server hosted on the EMS Server. Each DS850 is given a unique User ID and Password. The SFTP Server is setup so that the DS850 transmitted data is stored directly into the proper election data folder on the EMS Server.

- **What processes are you using for source code review and compiler security verification?**

ES&S RESPONSE

All ES&S source code is stored and archived on File Servers within the secure ES&S internal network infrastructure. Access to these source code repositories is limited to the ES&S developers assigned to the respective products and members of the ES&S Configuration Management Group. All changes made during the ES&S product development process goes through a peer review process whereby all source code is manually verified before being introduced as permanent changes to the system.

During the EAC Certification process, whenever source code is transferred to the EAC approved Voting System Test Lab (VSTL) to enable the source code review process, it is done using a Secure File Transfer Protocol (SFTP) between ES&S and the VSTL. The SFTP ensures that all information sent is encrypted using FIPS 140-2 compliant algorithms and cannot be modified during the transfer process.

Source code is never installed on the customer systems. Only the VSTL built product Installs, consisting of executable object code, are installed on the end-user systems. ES&S and the VSTL provide hash checking protocol to ensure that the installed object code matches the code built by the VSTL.

The compilers and the COTS components used to build the system are also directly downloaded by the VSTL and hash verified before they are used to build the build environment.

- **What independent security audits has your proposed system received?**

ES&S Response

The testing of ES&S's external and internal test infrastructure was performed by Continuum from April 16, 2012 to April 20, 2012. This project was conducted in three phases. The first phase focused on performing an external penetration test to determine ES&S' exposure to attacks from malicious outsiders. This was followed by an internal penetration test phase to assess ES&S' exposure to an attack by a malicious user without credentials. The final phase of the assessment consisted of a war dialing and external penetration test of targeted test modems to determine ES&S' exposure to attacks from malicious outsiders. Client side exploits, in-depth web application manipulation, and denial of service attacks were not included in the scope of the project.

Overall, the security of the reviewed test systems at ES&S was found to be positive. It is apparent that security was a key consideration in the design of the test system and that appropriate steps were taken in the configuration and implementation of the environment.

14) What post-election audit capabilities are provided by your system and what processes or procedures do you offer to support a post-election audit, including a risk limiting audit?

ES&S Response

Overview

Each product in the ES&S proposed voting system has detailed operational audit logs that contain time-stamped events that are product specific. The EMS applications also make use of the encrypted Windows Event Log through the ES&S Event Log Service. This provides sufficient information to allow the auditing of all operations in the work flow of putting on an election. This includes all election data entry or import, ballot layout and producing ballot ready artwork, setup of ADA ballot for visual and audio use, preparing election definition media for all tabulation and voting units, voting and tabulating all ballots, aggregating and reporting all results and creating an export files for use in state reporting, website display, providing to media or other external use. In addition, there are recommending auditing procedures using normal system outputs and capabilities that can be used to confirm accurate system operation or with a risk limiting audit.

Procedural Auditing and Risk Limiting Audit Capabilities

Election results are auditable as they flow through the system from the pollworker signed and designated official precinct results tape through the uploaded results in ERM and to any exported results files. Not only can results be compared to the official source tape but, by including overvotes and undervotes in the comparison, results can be cross-footed to the ballots cast relevant to each office.

The proposed election system has functionality that enables procedures to be used to support a risk limiting audit. A graphical image of the front and back and a cast vote record (CVR) of the tabulated content is stored for every tabulated ballot. ElectionWare can upload all of this data into the database and allow the simultaneous display of the image and CVR of any desired ballot. A table view list of all or any subset of ballots is listed that makes desired ballot selection convenient and easy. This allows a view to authenticate the tabulation from the image. These images and CVRs can also be exported. In addition, ElectionWare provides the ability to create and export Microsoft Excel file containing a record (row) for all or a subset of CVRs and a column for all or desired contest selections. Using standard Excel techniques, this allows an independent Excel based recount of any or all contests for confirmation of any or all of the EVS system aggregation of results.

ElectionWare EMS System Audit Log

All activity, including application errors, log to the ElectionWare internal database or to the encrypted Windows Event Log through the ES&S Event Log Service.

User logs record each activity including type, date, time, ES&S application, user ID and in the case of the ERM, the computer name.

DS200 System Audit Log

A system audit log (that stores machine specific audit items) is kept in the NVRAM and is also shadowed on the DS200 Election Media. This log contains such items as number of system halts, last power on, and other system audit items.

DS850 System Audit Log

An election event log that records each critical event (operator action, system response to each operator action, standard status messages, exceptions and error events, etc.) is generated and maintained by the DS850. Each event recorded includes a date/time stamp.

AutoMARK System Diagnostic Log

The AutoMARK uses diagnostic logs to record and report the date and time of normal and abnormal events, system status, and degree of operability. The diagnostic log is only used for hardware and software diagnosis. Log content has no record of election results nor should the log be included in any recount considerations.

15) To what extent, if any, do the hardware and software products you are proposing to Colorado meet the requirements of Section 508 of the Rehabilitation Act of 1973 and subsequent amendments to that Act?

ES&S Response

The ES&S AutoMARK and ExpressVote were designed to meet the varying accessibility needs of voters with disabilities and to comply with the Federal Voting System Standards, HAVA legislation, and the Americans with Disabilities Act. The solutions are Section 508 compliant to ensure the maximum accessibility for voters with disabilities.

The ES&S AutoMARK was designed to operate on any third party table (meeting disability standards) or the optional ES&S AutoMARK voting table, and all critical operations required by the voter take place at the front of the terminal. With the terminal near the edge on a compliant table, voters with visual and mobility disabilities may access the key areas – the ballot entry point, the Braille-embossed navigation pad, and the touch screen.

Voters using the ES&S AutoMARK and ExpressVote are offered many audio ballot options. ES&S has worked with disability groups to determine the clarity of the audio messages, feedback and instructions. The ES&S AutoMARK and ExpressVote are HAVA-compliant by offering the following:

- Multiple ballot navigation and selection methods including touch-screen, Braille-embossed keypad, sip and puff tube, foot pedal or any other two-position switch;
- Audio presentation in real voice or text to speech created .wav files;
- Tempo and volume controls for adjusting audio ballot presentation;
- Vibrant ballot display; and
- Ballot zoom and high-contrast (white text on black background) display options.
- Voting angle display can be changed to accommodate all voters regardless of disability

16) What products or services do you provide in the areas of Voter Education and Voter Outreach? This is an informational question only.

ES&S Response

ES&S will work with the State and Counties to develop public outreach/voter education materials and media to best meet the needs of the State and Counties. Examples of typical programs and materials we have implemented include:

- How-to pamphlets and posters
- Voting quick-start guide for the DS200
- Printed promotional mailers
- PSAs
- Interactive “How-To” videos for the DS200 and AutoMARK
- Interactive “How-To” web-based multimedia
- Mobile demonstrations of voting equipment
- Public demonstrations of voting equipment (in conjunction with voter registration drives)

Section 10.0 – Preliminary Project Schedule and Staffing Plan

5.3.12 Preliminary Project Schedule and Staffing Plan

The Vendor selected to fulfill this RFP may need to begin the effort shortly after contract execution, as there may be one or more counties interested in implementing or piloting a new system for the November 2014 election. The exact number of initial UVS counties has not been determined as of the issuance of this RFP.

You must propose a Preliminary Project Schedule and Staffing Plan, as described in *RFP Appendix D – Statement of Work, Track 1: Project Management*. For the purposes of responding to this section of the RFP, you shall develop your schedule and staffing plan for implementing the UVS in a large Colorado Target County within a 50-mile radius of the Denver metro area. For sizing purposes, the target county statistics are:

- **350,000 Registered Voters**
- **12 Early Voting Locations**
- **24 Election Day Voting Locations**
- **All Registered Voters will be issued ballots by mail; however the voters may choose to vote in person.**

This section must provide a project organization chart of proposed project personnel, listed by name and position on the project. It must also describe relationships between your organization and any subcontractors. The qualifications of proposed staff are addressed in *RFP Section 5.3.13 Proposed Staffing*.

The Preliminary Project Schedule shall provide a roadmap of tasks, resources, and timing necessary to complete the work in the target county. The Preliminary Project Schedule shall include but not be limited to the following:

1) Tasks with scheduled start and completion dates

2) Milestones

3) Personnel assignments and estimated duration for each task. Time must be listed for:

a) Your personnel

b) Required CDOS or County election program personnel (please define needed skill types or business area)

c) Required technical personnel.

ES&S Response

ES&S has provided a Preliminary Work Plan and Staffing Plan for the State of Colorado following this section.

State of Colorado – Uniform Voting System (UVS)
Preliminary Project Implementation Plan

ES&S – Project Management Office [PMO]

Version	Description	Changed By	Date
0.5	First draft	Adam Carbullido	10/29/13
1.0	Review draft	Adam Carbullido	11/02/13
2.0	Final review draft	Linda Bennett	11/07/13
3.0	Final Bid Version	Adam Carbullido	11/15/13

Table of Contents:

1. Initial Statement of Work
2. Scope of Work (Summary of Deliverables)
3. Project Team
4. Project Management Approach
5. Initial Project Schedule
6. Staffing Plan and Approach
7. Communication Management Approach
8. Risk Management Approach
9. Scope Management and Change Control
10. Project Assumptions
11. Project Constraints and Boundaries
12. Test Strategy and Work Acceptance
13. Training Strategy
14. Project Closure
15. On-Going Support
16. Sample Large County Implementation Schedule and Staffing Plan

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1. Initial Statement of Work

The objective of the project is to successfully implement a statewide Uniform Voting System (UVS) in the State of Colorado. The system will provide Colorado Deportment of State (CDOS) authorized components for election management, ballot production, vote tabulation, automated signature verification, electronic ballot adjudication, and ballot tracking. Criteria for determining a successful implementation will be defined within a documented agreement between the State of Colorado and Election Systems and Software, LLC. (ES&S). The agreement will specify the services, deliverables, and acceptance requirements of the project. An ES&S Project Manager will be assigned to the State of Colorado and will serve as the main point of contact and the primary ES&S representative responsible for coordinating each of the project deliverables. The ES&S Project Manager will be supported by a team of ES&S resources committed to the successful implementation of the UVS in the State of Colorado. This preliminary project plan will form the basis for the Project Plan, which will be created within the first 30 days of the project and will be the overall guiding document for the project. This preliminary plan provides an initial outline of project objectives, project management approach, key deliverables, risks, assumptions, parties involved, overall timeframes, and the delivery strategy for the project.

2. Scope of Work (Summary of Deliverables)

2.1. Project Management

2.1.1. Project Plan – Upon contract award, the ES&S Project Manager will update this preliminary plan with additional details and present a proposed Project Plan to the State. The State will be provided time to review and provide input before the plan is complete. Throughout the duration of the project, the ES&S team will continue to update the plan under the direction and supervision of the State. Initial plans and details regarding several aspects of the Project Plan are contained within this Preliminary Project Plan. Additional information and details will be added following the start of the project. Elements of the Project Plan will include:

- 2.1.1.1. Project Schedule
- 2.1.1.2. Risk Management Plan
- 2.1.1.3. Issue Management Plan
- 2.1.1.4. Staffing Plan
- 2.1.1.5. Budget
- 2.1.1.6. Change Control Plan

2.1.2. Status Reports/Reporting – The ES&S Project Manager will report project activity in the form and frequency recommended by ES&S, and ultimately determined by the State of Colorado. The reports will summarize key information related to the status and health of the project. Throughout the project, the ES&S Project Manager will host status update and key stakeholder meetings to communicate project status and address stakeholder questions on a frequency determined by the State.

2.1.3. Project Website

2.1.4. Test Strategy Plan

2.1.5. Training Plan

2.1.6. Security Plan

2.1.7. Organizational Change Management Plan

2.2. Hardware/Software/Support Procurement

2.2.1. Colorado UVS Hardware/Software/Support Catalog

2.2.2. County Procurement Plan

2.2.3. County/Contractor Purchase Order/Agreement

2.2.4. System Shipment Acceptance Document

2.2.5. Old Equipment Disposal Plan

2.2.6. Old Equipment Disposal Agreement Signoff

2.3. Implementation

2.3.1. UVS Requirements Document

2.3.2. Organization Change Management Results

- 2.3.2.1. Warehouse Process Document
- 2.3.2.2. Election Setup Processes Document
- 2.3.2.3. Early Voting Processes Document
- 2.3.2.4. Election Day Voting Processes Document
- 2.3.2.5. County Administrative Processes Document
- 2.3.2.6. State Elections Division Administrative Processes Document

2.3.3. Election Hardware Production Deployment
2.3.4. Election Training Execution
2.3.4.1. Software Training Execution
2.3.4.2. Hardware Training Execution
2.3.4.3. Election Office Operations Training Execution
2.3.4.4. Polling Location Operations Training Execution
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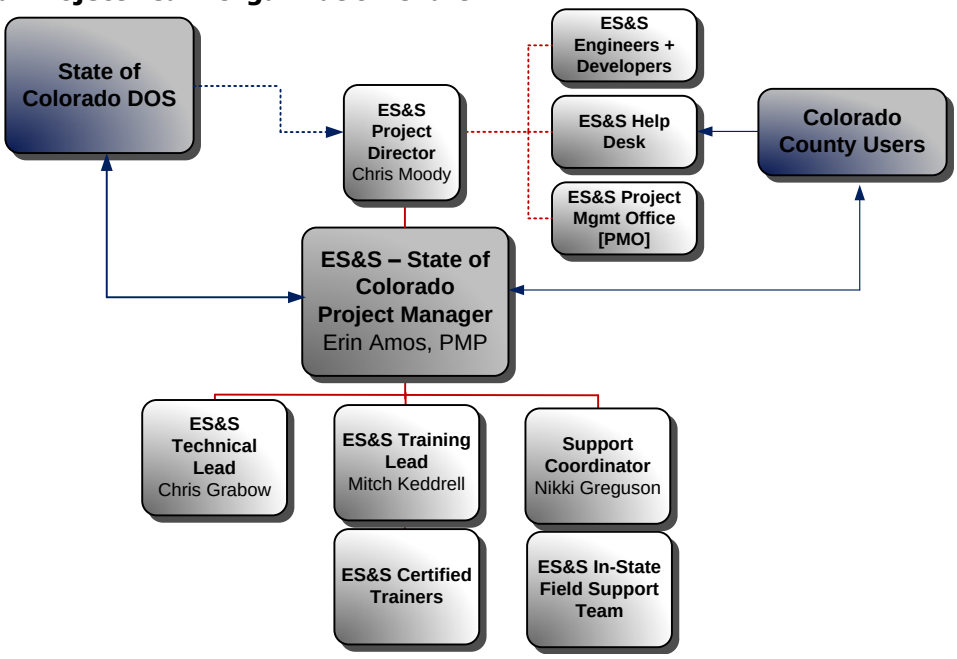
2.4.5. Post-Election Support

3. Project Team

3.1. Initial Project Team Organization Chart



3.2. Proposed Project Roles

3.2.1. ES&S Project Manager

An ES&S Senior Project Manager, certified by the Project Management Institute (PMI), will lead the ES&S Project Team and will simplify communication channels by serving as the principal point of contact to the State of Colorado. The ES&S Project Manager will hold single-point accountability for coordination of the activities and personnel assigned to the project on behalf of ES&S and provide all status reporting required by the State.

3.2.2. ES&S Executive Project Director

An ES&S Executive Project Director will be assigned to the project and will serve as an escalation point and project sponsor to the State of Colorado and the ES&S Project Team.

3.2.3. ES&S Technical Project Lead

An ES&S advanced Technical Lead will be assigned to the project to assure all technical requirements are met to the satisfaction of the State of Colorado. The Technical Lead will bring technical and election system implementation experience to the project. Additional responsibilities include:

3.2.4. ES&S Help Desk Technical Support Team

The ES&S Project Team includes a Help Desk staffed with experienced hardware and software support technicians and engineers specifically trained to support the State of Colorado's UOCAVA Ballot Delivery and Tracking System. The ES&S Help Desk utilizes a systematic 3-tiered escalation process to assure that all issues and questions, whether minor or major, are quickly addressed by the appropriate subject matter experts. The Help Desk team has direct

access to Tier 3 product engineers, system administrators, and software developers and is available 24x7 during election critical periods.

3.2.5. ES&S Field Support Team
ES&S will leverage its existing in-state support network to provide county-level support and assistance throughout the implementation and on-going phases of the project.

3.2.6. ES&S Tier 3 Support and Development
The Tier 3 Support team includes product engineers, system administrators, and software developers. As needed, the ES&S Project Team and the State of Colorado will have access to Tier 3 ES&S resources capable of addressing advanced requests, questions, or issues. These same resources will be responsible for the development and deployment of system changes, including any updates or enhancements.

3.3. Proposed Project Team Members

Role	Name	ES&S Relation
Project Director	Chris Moody	Full-time
Project Manager	Erin Amos	Full-time
Technical Project Lead	Christopher Grabow	Full-time
Training Project Lead	Mitch Keddrell	Full-time
Customer Support Coordinator	Nikki Greguson	Full-time

3.4. Staffing Plan and Approach

In addition to the defined project personnel members, ES&S will also employ a field support team to assist with various tasks and support needs of the 88 counties in Colorado. The field support team is experienced with the State of Colorado, its counties, and its elections and will be well-positioned to assure a successful implementation. The ES&S Project Team will also be supported by sufficient Project Managers, ES&S system specialists, trainers, instructional designers, subject matter experts and documentation writers necessary to complete a successful implementation. In addition to the assigned project team, ES&S will also make arrangements to supply local partner and contractor resources at the request of the State. At any time that the State requests additional staff or resources from ES&S, the Project Team will be able to tap its deep reserves of project professionals, tabulation system experts, and certified technicians in order to support project efforts.

4. Project Management Approach

The ES&S Project Team will manage the project pursuant to the Project Management Institute's project management principles. The team will utilize industry and PMBOK best practices and will be supported by a strong team of subject matter experts, security experts, Certified Project Management Professionals (PMPs), certified technicians, technical liaisons and various other resources to provide quality support and sound project management. Where appropriate, the ES&S Project Team will also incorporate practices, procedures and tools in accordance with other project management methodologies specified by the State of Colorado. The ES&S PMO approach to elections project management emphasizes simplicity, consistency and clarity in project reporting, ensuring all project stakeholders are regularly updated and have easy access to critical project information.

5. Project Schedule and Milestones

Each of the project deliverables will be detailed in the Project Plan. The Plan will define the tracking and communication methods that will be used to monitor the status of deliverables and milestones. A detailed schedule will be included in the Project Plan and the project team will utilize reporting mechanisms to update and track actual project activity, as well as forecast task completions, for the duration of the project. These mechanisms will ensure communication of project status and activity to all stakeholders, including clear identification of implementation phase gateways, major milestones and critical paths.

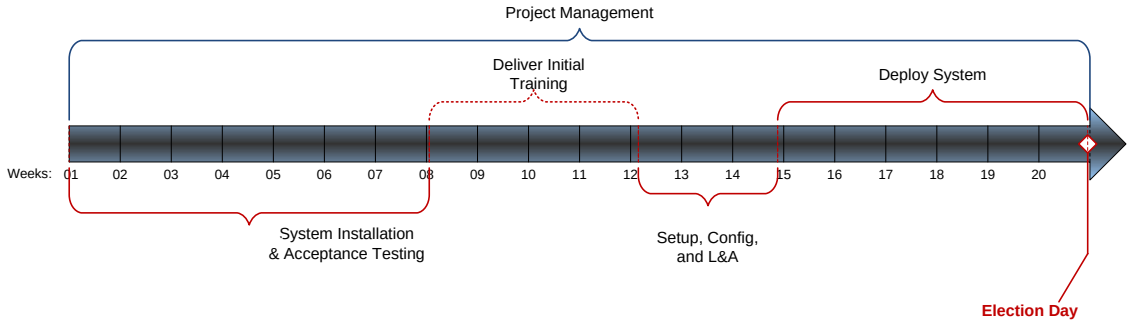
5.1. Initial High-Level Project Schedule

Project Management	Duration / Frequency	Description	Owner(s)
Contract award	Milestone	The project will initiate with the award of the contract.	ES&S, State of Colorado
Kick-off meeting(s)	1-5 days	Following contract execution, the ES&S team will meet with key personnel and stakeholders to solidify project	ES&S Project Team

		plan details.	
Deliver project and system documentation	1 day	Initial project plans and documentation will be provided early in the project.	ES&S Project Team
Finalize training plan	1 day	The ES&S Training Project Lead will work with Maricopa County to develop a comprehensive training and knowledge transfer plan	ES&S Training Project Lead
Project reporting	Duration of project	On a frequency determined by the State of Colorado, the ES&S Project Team will provide detailed status updates and reporting.	ES&S Project Manager
Hardware/Software/Support Procurement	**Duration / Frequency**	**Description**	**Owner(s)**
Develop Pricing Catalog	TBD	ES&S will work with the State to develop a catalog with hardware and software pricing for the counties.	ES&S, State of Colorado
County Procurement Plan	TBD	ES&S will develop a simplified plan/process to work with each county on the procurement of their system.	ES&S, State of Colorado, Counties
Receive Purchase Orders	TBD	Following the completion of pricing and procurement plans, ES&S will begin to accept POs from counties.	ES&S, Counties
Shipping + Delivery	TBD	ES&S will work with the each individual county to develop a delivery plan and schedule.	ES&S, Counties
Old Equipment Disposal	TBD	ES&S will work with each county to assist in the disposal of their old equipment.	ES&S Counties
Implementation + Training	**Duration / Frequency**	**Description**	**Owner(s)**
Complete System and Acceptance Testing	1-5 days	Throughout the delivery phase, system and unit level testing will be completed. Once all system components have been delivered, an end-to-end system integration test will be completed. ES&S will provide suggestions and guidance on the system test but ultimate acceptance requirements and procedures will be determined and approved by the State.	ES&S, State of Colorado, Counties
Complete on-site training	1-5 days	ES&S will provide on-site training for users to provide a hands-on training experience at each county location. ES&S will provide hardware, software, elections office operations, polling place operations, and voter training.	ES&S, State of Colorado, Counties
Complete refresher training	½ day	Periodically as needs demand, ES&S will support any refresher training efforts.	ES&S, State of Colorado, Counties
Election Setup and On-going Vendor Support	**Duration / Frequency**	**Description**	**Owner(s)**
Data collection and system configuration	1-5 days	Live data will be imported in to the Election Management System and basic election configuration steps will be completed.	ES&S, Counties
Setup and L&A testing	1-5 days	Pre-election setup will be completed and verification and L&A will be conducted prior to full system deployment. Testing can begin prior the finalization of VR data to confirm data integrity, feature functionality, configuration options, and hardware/accessory performance.	ES&S, Counties
System Deployment	1-5 days	As soon as ballot and voter data is loaded and system is configured, the system can be deployed for the election.	ES&S, State of Colorado, Counties
Provide Election Support	~60 days	During the critical period prior to, during, and after Election Day, ES&S will assure that essential support resources are available and committed to project success.	ES&S
Provide On-Going Help Desk and Technical Support	TBD	The ES&S will adjust its support plan based on the direction of the State of Colorado and will accommodate any variance in support needs throughout implementation and on-going phases.	ES&S, State of Colorado

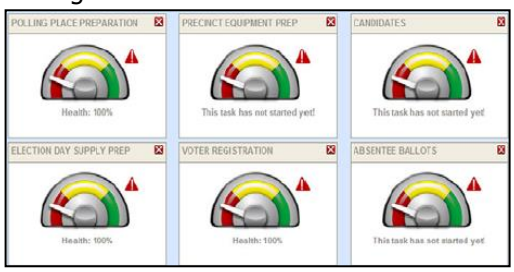
Provide Software Maintenance and Support	TBD	Initial support will be based upon the agreement between ES&S and the State of Colorado. Should changes to the maintenance and support plan be requested, the ES&S Project Manager will implement change procedures to adapt the plan and accommodate the needs of the State.	ES&S, State of Colorado
Post-Election Support	TBD	ES&S will provide support to the State and Counties following each election.	ES&S

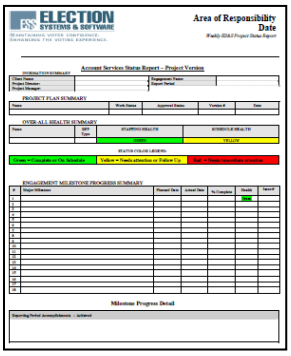
5.2. Work Schedule (Time-Phased)



6. Communication Management Approach

The ES&S Project Team will deploy a multi-channel approach to communication management. In addition to providing periodic status reports that detail the status of all project deliverables and activities, the Project Manager will utilize Web-based tools and conduct periodic stakeholder meetings. Each of these communication methods, in addition to any methods preferred by the State of Colorado, will be used to help ensure that all stakeholders are up-to-date and to aid in monitoring risks to help identify risk mitigation strategies. A detailed communication plan will be developed and maintained within the overall Project Plan. The project status report will be provided by the ES&S Project Manager for the duration of the project. The report will clearly define all completed, current and upcoming activity as well as the overall health of the project. Each task and risk will be rated and color-coded for quick interpretation of project status.





7. Risk Management Approach

The ES&S Project Team will develop and utilize a comprehensive Risk Management Plan in order to manage all potential risks throughout the project. Early in the project, the ES&S Project Team will meet with the State of Colorado's staff to identify potential project risks and develop initial mitigation strategies. Following this meeting, the ES&S Project Team will expand the identification of these risks and develop detailed plans for avoiding potentially negative effects of the identified and unidentified risks. Throughout the project, the ES&S Project Manager will maintain a Risk Register to track and communicate the status of identified risks and their respective mitigation strategies Throughout the project, ES&S will collaborate with the CDOS UVS project manager to compare identified risks. Some of the initial primary risks include:

7.1. Registration and Preparation Timelines

The very nature of this project involves completing activities in a small time window. The election date is fixed, resulting in zero flexibility to accommodate delays. In order to achieve successful deployment of the system, it is imperative that data be made available at the scheduled times. Certain ballot and voter data are required for the system to be tested and ultimately deployed. Any delays in provision of such data can delay the ultimate deployment of the system. The ES&S Project Team will work diligently with the State of Colorado to solidify a mutually agreeable schedule of tasks and ensure that all stakeholders are fully aware of their obligations in achieving project success. In some cases, extenuating circumstances could impose

delays on the availability of ballot or voter data. For these potential scenarios, ES&S will work with the State of Colorado to develop mitigation and backup plans to provide the maximum possible system functionality at the earliest possible date and will expedite tasks and utilize additional resources wherever it may benefit the process.

7.2. Ballot Rules and Regulations

A dynamic environment of changing rules and regulations surrounding the delivery, printing, return, tracking and tabulation of ballots will require monitoring and contingency planning throughout the duration of the project. The proposed system is highly adaptable and should functional changes be required, the ES&S team will work with the State of Colorado to scope change requirements and quickly implement system updates.

7.3. Certification and Voting System Compliance

State and federal voting system certification requirements also have the potential for impacting the project. The ES&S Team will utilize its expertise with the state and federal certification processes to mitigate any potential risks imposed by system certification and compliance.

7.4. System Availability and Connectivity

Aspects of the project require system connectivity and reliable accessibility. The system is designed with state-of-the-art redundancies and simplified protocols to accommodate a broad range of risks posed by reliance on an electronic-based solution. End-user requirements are designed to prevent usability barriers at the end-user level.

8. Scope Management and Change Control

The basis for the scope of the project will begin with the contract between ES&S and the State of Colorado. The contract defines specific deliverables, requirements, and milestones which will be detailed and tracked in the Project Plan. The Project Plan will help organize and schedule each of the implementation, service, maintenance, and support deliverables which will be documented by the ES&S Project Team under direction of the State of Colorado.

8.1. Key Aspects of the Project Plan:

8.1.1. Specified Project Deliverables – delivery, service maintenance deliverables.
8.1.2. Formal Acceptance/Verification Procedures – process, criteria, documentation.
8.1.3. Success Requirements – key inputs, conditions, capabilities, and expectations.
8.1.4. Service, Support and Maintenance Plans – detailed milestones, critical paths.
8.1.5. Change Control Procedures – process for making changes to project scope.

The Change Control Procedures will define procedures for submitting, approving, tracking and verifying all changes to the services and scope of the overall project. Change Implementation Notices will be utilized to request and track changes to the project scope and any previously agreed upon product or service deliverables. The Change Control Procedures will be developed and maintained by the ES&S Project Team under the direction of the State of Colorado.

9. Project Assumptions

Project Assumptions will be defined, detailed, and rated within the Project Management Plan. Each assumption will be assessed for confidence-level, potential lead time implications, and weight of potential impact on the overall project. Initially defined assumptions include:

9.1. Project resources will be available if and when they are required
9.2. Hardware, parts, and 3rd party components will be available as needed
9.3. Order lead times will be met and delivered upon as expected
9.4. Gov't regulations will not change in ways that drastically affect the project outcome
9.5. Project scope will be limited and changes will not be imposed without due process

Each of these assumptions, and additional assumptions defined in the Project Plan will be monitored and managed throughout the life of the project.

10. Project Constraints and Boundaries

The primary project constraints will be the applicable federal and state laws, regulations, acts and initiatives that involve the system and the activities required to maintain the system, including certification and verification. The secondary constraints include the availability of resources, equipment, component parts and materials within the timeframes needed to complete necessary activity. To ensure that the constraints do not adversely affect the desired outcomes of the project, the ES&S Project Team will work diligently with the State of Colorado in planning project activity, mitigating potential risks, and adhering to strict quality management procedures.

The plan for managing project constraints and monitoring project boundaries will be included in the Project Plan and will include plans for assuring products and processes are not adversely affected by the project constraints. The constraints will be tracked throughout the project using a Risk Register while periodic reports from the Project Manager will assist in communicating their potential impact on dependent activities. Initial constraints include:

10.1. Time

The ultimate project constraints are existing election and ballot availability deadlines that must be monitored throughout the project. Detailed scheduling and contingency planning will aid in managing this constraint. Absolute deadlines include UOCAVA ballot deadlines, various registration deadlines, early voting dates, election dates, and post election reporting deadlines.

10.2. Funding

The project is constrained by the funding available to acquire resources, products and services. Precise planning and maximization of available resources will help ensure project demands do not exceed funding constraints.

10.3. Personnel

Trained and experienced personnel resources will be needed to support a successful project. Lack of such trained resources could impose a risk to the success of the project. Although personnel constraints must be managed and monitored, ES&S has developed a resource pool and staffing strategy that essentially eliminates the risk that this constraint imposes.

11. Testing and Work Acceptance Strategy

All deliverables, objectives, documents, and project outcomes will require approval. The ES&S Project Team will work with State of Colorado to finalize each deliverable within the Project Plan and the corresponding test plans, approval procedures and documentation required. The ES&S Team will provide examples and consultation regarding all User Acceptance Test procedures, with the State of Colorado having ultimate and final discretion regarding the processes that determine system acceptance. The State will be allowed ample time to review and provide input for all elements of the Project Plan. State of Colorado approval will be required prior to the provision of any deliverable or distribution of any schedule of deliverables. Once a testing and acceptance strategy is fully defined, ES&S will then work with each county to complete the testing, acceptance, and documentation requirements for each respective county implementation. The County will be an active participant in the testing of the system to assure that they are comfortable with the system installation and functionality. CDOS staff may be involved to the extent they desire.

12. Training Strategy

Successful knowledge transfer and effective training are critical components to the success of the project. An emphasis on hands-on training, customized curriculum, and instruction design will improve the effectiveness and long-term viability of the project. Training content will be developed to address a broad range of learners and learning styles. A Training Plan will be developed with the guidance from the State and in collaboration with each County. This training plan will address training needs for the implementation as well as the on-going training needs of the end-users.

13. Project Closure

Following the conclusion of each election cycle or county implementation, the ES&S Project Manager will work with the State of Colorado to detail any lessons learned and begin next-cycle preparations. Any system or process adjustments required will be documented and implemented at this time.

14. On-Going Support

Following the implementation phases of the project, ES&S will provide the level of maintenance and support desired by the CDOS and Counties. Should increases or decreases in support be desired by the CDOS or Counties, ES&S will accommodate. ES&S maintains a talent and personnel program that allows for surge and seasonal staffing flexibility based upon project needs. The principal on-going support activities fall in to these categories:

14.1. Warranty Support

During the warranty period, ES&S will provide warranty services based on the agreement between ES&S and the State.

14.2. Voting Equipment Maintenance Support

Following the warranty period, ES&S will provide remedial and preventative maintenance services based on the agreement between ES&S and the State.

14.3. Election Setup Support

ES&S will work with the State to develop a plan that defines the support provided to each County to assist in Election Setup on the new UVS. Deliverables will include Election and Ballot setup support, equipment preparations, and L&A testing support.

14.4. Election Processes Support

ES&S will work with the State to develop a plan that defines the support provided to each County to assist in Election processes execution on the new UVS. Deliverables will include Mail Ballot Delivery/Return Support, as well as early voting and Election Day support.

14.5. Post-Election Support

ES&S will work with the State to develop a plan that defines the support provided to each County to assist in post-election activities on the new UVS.

15. Target (Large) County Implementation Schedule and Staff Plan

15.1. Sample Schedule

ID	Task/Activity	Owner(s)	Duration	Wk1	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Election
1.0	**Project Initiation and Project Management**												
1.1	Official Project Start	ES&S, County	1 day										
1.2	Conduct Implementation Kick-Off Meeting	ES&S, County	1 day										
1.3	Provide Status Updates + On-going Proj Mgmt	ES&S Manager	Ongoing										
2.0	**Delivery and Implementation**												
2.1	Provide Initial Product and Training Doc.	ES&S	1 day										
2.2	Deliver Hardware to County Location	ES&S	1-3 days										
2.3	Deliver and Install Software at County Location	ES&S	2 days										
2.4	Complete System Acceptance Testing		2-4 days										
2.5	Conduct Hardware + Operations Training	ES&S Trainer, County	1 day										
2.6	Conduct EMS (software) Training	ES&S Trainer, County	5 days										
3.0	**First Election Support**												
3.1	Complete EMS Configuration	ES&S Tech Lead, County	3-7 days										
3.2	Create Ballot PDFs and Activate BOD	ES&S Tech Lead, County	1 day										
3.3	Conduct Logic & Accuracy Testing	ES&S Tech Lead, County	2-4 days										
3.4	Program Memory Devices (USB sticks)	ES&S Tech Lead, County	1 day										
3.5	Conduct First Election/Early Voting	ES&S, County											

See section 3 of this document for proposed staffing plan and project roles/assignments.

State of Colorado – Uniform Voting System (UVS)
Preliminary Project Implementation Plan

ES&S – Project Management Office [PMO]

Version	Description	Changed By	Date
0.5	First draft	Adam Carbullido	10/29/13
1.0	Review draft	Adam Carbullido	11/02/13
2.0	Final review draft	Linda Bennett	11/07/13
3.0	Final Bid Version	Adam Carbullido	11/15/13

Table of Contents:

1. Initial Statement of Work
2. Scope of Work (Summary of Deliverables)
3. Project Team
4. Project Management Approach
5. Initial Project Schedule
6. Staffing Plan and Approach
7. Communication Management Approach
8. Risk Management Approach
9. Scope Management and Change Control
10. Project Assumptions
11. Project Constraints and Boundaries
12. Test Strategy and Work Acceptance
13. Training Strategy
14. Project Closure
15. On-Going Support
16. Sample Large County Implementation Schedule and Staffing Plan

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1. Initial Statement of Work

The objective of the project is to successfully implement a statewide Uniform Voting System (UVS) in the State of Colorado. The system will provide Colorado Deportment of State (CDOS) authorized components for election management, ballot production, vote tabulation, automated signature verification, electronic ballot adjudication, and ballot tracking. Criteria for determining a successful implementation will be defined within a documented agreement between the State of Colorado and Election Systems and Software, LLC. (ES&S). The agreement will specify the services, deliverables, and acceptance requirements of the project. An ES&S Project Manager will be assigned to the State of Colorado and will serve as the main point of contact and the primary ES&S representative responsible for coordinating each of the project deliverables. The ES&S Project Manager will be supported by a team of ES&S resources committed to the successful implementation of the UVS in the State of Colorado. This preliminary project plan will form the basis for the Project Plan, which will be created within the first 30 days of the project and will be the overall guiding document for the project. This preliminary plan provides an initial outline of project objectives, project management approach, key deliverables, risks, assumptions, parties involved, overall timeframes, and the delivery strategy for the project.

2. Scope of Work (Summary of Deliverables)

2.1. Project Management

2.1.1. Project Plan – Upon contract award, the ES&S Project Manager will update this preliminary plan with additional details and present a proposed Project Plan to the State. The State will be provided time to review and provide input before the plan is complete. Throughout the duration of the project, the ES&S team will continue to update the plan under the direction and supervision of the State. Initial plans and details regarding several aspects of the Project Plan are contained within this Preliminary Project Plan. Additional information and details will be added following the start of the project. Elements of the Project Plan will include:

- 2.1.1.1. Project Schedule
- 2.1.1.2. Risk Management Plan
- 2.1.1.3. Issue Management Plan
- 2.1.1.4. Staffing Plan
- 2.1.1.5. Budget
- 2.1.1.6. Change Control Plan

2.1.2. Status Reports/Reporting – The ES&S Project Manager will report project activity in the form and frequency recommended by ES&S, and ultimately determined by the State of Colorado. The reports will summarize key information related to the status and health of the project. Throughout the project, the ES&S Project Manager will host status update and key stakeholder meetings to communicate project status and address stakeholder questions on a frequency determined by the State.

2.1.3. Project Website

2.1.4. Test Strategy Plan

2.1.5. Training Plan

2.1.6. Security Plan

2.1.7. Organizational Change Management Plan

2.2. Hardware/Software/Support Procurement

2.2.1. Colorado UVS Hardware/Software/Support Catalog

2.2.2. County Procurement Plan

2.2.3. County/Contractor Purchase Order/Agreement

2.2.4. System Shipment Acceptance Document

2.2.5. Old Equipment Disposal Plan

2.2.6. Old Equipment Disposal Agreement Signoff

2.3. Implementation

2.3.1. UVS Requirements Document

2.3.2. Organization Change Management Results

- 2.3.2.1. Warehouse Process Document
- 2.3.2.2. Election Setup Processes Document
- 2.3.2.3. Early Voting Processes Document
- 2.3.2.4. Election Day Voting Processes Document
- 2.3.2.5. County Administrative Processes Document
- 2.3.2.6. State Elections Division Administrative Processes Document

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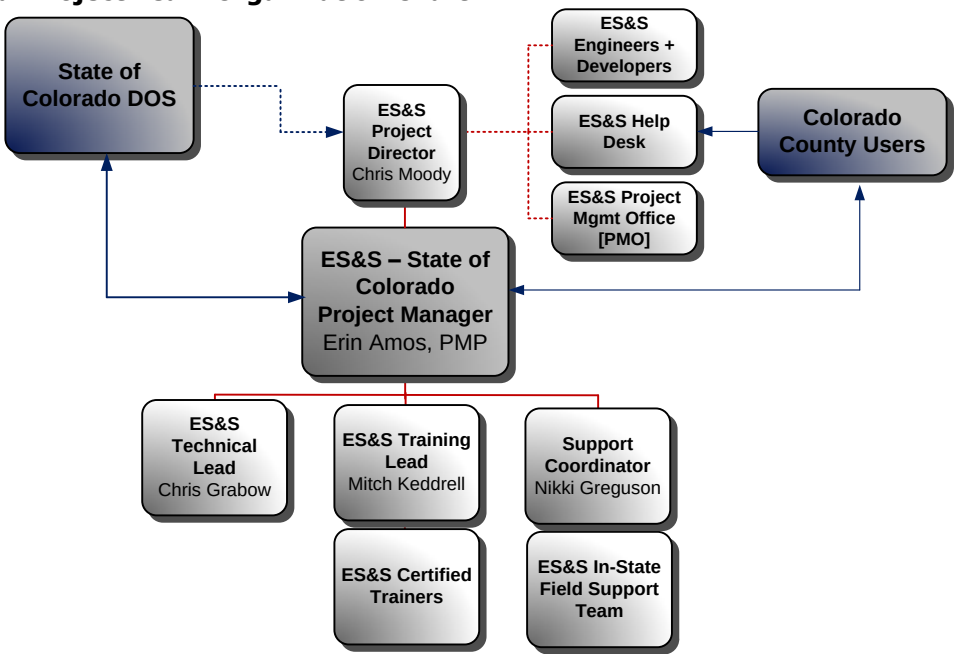

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The ES&S Project Team will manage the project pursuant to the Project Management Institute's project management principles. The team will utilize industry and PMBOK best practices and will be supported by a strong team of subject matter experts, security experts, Certified Project Management Professionals (PMPs), certified technicians, technical liaisons and various other resources to provide quality support and sound project management. Where appropriate, the ES&S Project Team will also incorporate practices, procedures and tools in accordance with other project management methodologies specified by the State of Colorado. The ES&S PMO approach to elections project management emphasizes simplicity, consistency and clarity in project reporting, ensuring all project stakeholders are regularly updated and have easy access to critical project information.

5. Project Schedule and Milestones

Each of the project deliverables will be detailed in the Project Plan. The Plan will define the tracking and communication methods that will be used to monitor the status of deliverables and milestones. A detailed schedule will be included in the Project Plan and the project team will utilize reporting mechanisms to update and track actual project activity, as well as forecast task completions, for the duration of the project. These mechanisms will ensure communication of project status and activity to all stakeholders, including clear identification of implementation phase gateways, major milestones and critical paths.

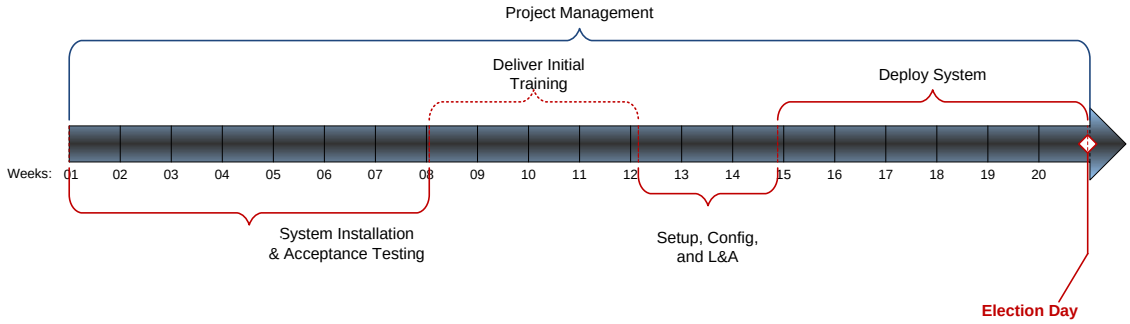
5.1. Initial High-Level Project Schedule

Project Management	Duration / Frequency	Description	Owner(s)
Contract award	Milestone	The project will initiate with the award of the contract.	ES&S, State of Colorado
Kick-off meeting(s)	1-5 days	Following contract execution, the ES&S team will meet with key personnel and stakeholders to solidify project	ES&S Project Team

		plan details.	
Deliver project and system documentation	1 day	Initial project plans and documentation will be provided early in the project.	ES&S Project Team
Finalize training plan	1 day	The ES&S Training Project Lead will work with Maricopa County to develop a comprehensive training and knowledge transfer plan	ES&S Training Project Lead
Project reporting	Duration of project	On a frequency determined by the State of Colorado, the ES&S Project Team will provide detailed status updates and reporting.	ES&S Project Manager
Hardware/Software/Support Procurement	**Duration / Frequency**	**Description**	**Owner(s)**
Develop Pricing Catalog	TBD	ES&S will work with the State to develop a catalog with hardware and software pricing for the counties.	ES&S, State of Colorado
County Procurement Plan	TBD	ES&S will develop a simplified plan/process to work with each county on the procurement of their system.	ES&S, State of Colorado, Counties
Receive Purchase Orders	TBD	Following the completion of pricing and procurement plans, ES&S will begin to accept POs from counties.	ES&S, Counties
Shipping + Delivery	TBD	ES&S will work with the each individual county to develop a delivery plan and schedule.	ES&S, Counties
Old Equipment Disposal	TBD	ES&S will work with each county to assist in the disposal of their old equipment.	ES&S Counties
Implementation + Training	**Duration / Frequency**	**Description**	**Owner(s)**
Complete System and Acceptance Testing	1-5 days	Throughout the delivery phase, system and unit level testing will be completed. Once all system components have been delivered, an end-to-end system integration test will be completed. ES&S will provide suggestions and guidance on the system test but ultimate acceptance requirements and procedures will be determined and approved by the State.	ES&S, State of Colorado, Counties
Complete on-site training	1-5 days	ES&S will provide on-site training for users to provide a hands-on training experience at each county location. ES&S will provide hardware, software, elections office operations, polling place operations, and voter training.	ES&S, State of Colorado, Counties
Complete refresher training	½ day	Periodically as needs demand, ES&S will support any refresher training efforts.	ES&S, State of Colorado, Counties
Election Setup and On-going Vendor Support	**Duration / Frequency**	**Description**	**Owner(s)**
Data collection and system configuration	1-5 days	Live data will be imported in to the Election Management System and basic election configuration steps will be completed.	ES&S, Counties
Setup and L&A testing	1-5 days	Pre-election setup will be completed and verification and L&A will be conducted prior to full system deployment. Testing can begin prior the finalization of VR data to confirm data integrity, feature functionality, configuration options, and hardware/accessory performance.	ES&S, Counties
System Deployment	1-5 days	As soon as ballot and voter data is loaded and system is configured, the system can be deployed for the election.	ES&S, State of Colorado, Counties
Provide Election Support	~60 days	During the critical period prior to, during, and after Election Day, ES&S will assure that essential support resources are available and committed to project success.	ES&S
Provide On-Going Help Desk and Technical Support	TBD	The ES&S will adjust its support plan based on the direction of the State of Colorado and will accommodate any variance in support needs throughout implementation and on-going phases.	ES&S, State of Colorado

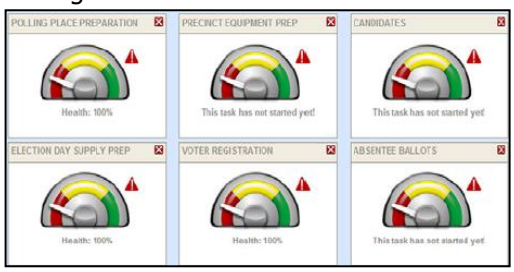
Provide Software Maintenance and Support	TBD	Initial support will be based upon the agreement between ES&S and the State of Colorado. Should changes to the maintenance and support plan be requested, the ES&S Project Manager will implement change procedures to adapt the plan and accommodate the needs of the State.	ES&S, State of Colorado
Post-Election Support	TBD	ES&S will provide support to the State and Counties following each election.	ES&S

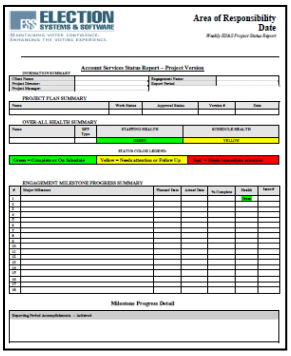
5.2. Work Schedule (Time-Phased)



6. Communication Management Approach

The ES&S Project Team will deploy a multi-channel approach to communication management. In addition to providing periodic status reports that detail the status of all project deliverables and activities, the Project Manager will utilize Web-based tools and conduct periodic stakeholder meetings. Each of these communication methods, in addition to any methods preferred by the State of Colorado, will be used to help ensure that all stakeholders are up-to-date and to aid in monitoring risks to help identify risk mitigation strategies. A detailed communication plan will be developed and maintained within the overall Project Plan. The project status report will be provided by the ES&S Project Manager for the duration of the project. The report will clearly define all completed, current and upcoming activity as well as the overall health of the project. Each task and risk will be rated and color-coded for quick interpretation of project status.





7. Risk Management Approach

The ES&S Project Team will develop and utilize a comprehensive Risk Management Plan in order to manage all potential risks throughout the project. Early in the project, the ES&S Project Team will meet with the State of Colorado's staff to identify potential project risks and develop initial mitigation strategies. Following this meeting, the ES&S Project Team will expand the identification of these risks and develop detailed plans for avoiding potentially negative effects of the identified and unidentified risks. Throughout the project, the ES&S Project Manager will maintain a Risk Register to track and communicate the status of identified risks and their respective mitigation strategies Throughout the project, ES&S will collaborate with the CDOS UVS project manager to compare identified risks. Some of the initial primary risks include:

7.1. Registration and Preparation Timelines

The very nature of this project involves completing activities in a small time window. The election date is fixed, resulting in zero flexibility to accommodate delays. In order to achieve successful deployment of the system, it is imperative that data be made available at the scheduled times. Certain ballot and voter data are required for the system to be tested and ultimately deployed. Any delays in provision of such data can delay the ultimate deployment of the system. The ES&S Project Team will work diligently with the State of Colorado to solidify a mutually agreeable schedule of tasks and ensure that all stakeholders are fully aware of their obligations in achieving project success. In some cases, extenuating circumstances could impose

delays on the availability of ballot or voter data. For these potential scenarios, ES&S will work with the State of Colorado to develop mitigation and backup plans to provide the maximum possible system functionality at the earliest possible date and will expedite tasks and utilize additional resources wherever it may benefit the process.

7.2. Ballot Rules and Regulations

A dynamic environment of changing rules and regulations surrounding the delivery, printing, return, tracking and tabulation of ballots will require monitoring and contingency planning throughout the duration of the project. The proposed system is highly adaptable and should functional changes be required, the ES&S team will work with the State of Colorado to scope change requirements and quickly implement system updates.

7.3. Certification and Voting System Compliance

State and federal voting system certification requirements also have the potential for impacting the project. The ES&S Team will utilize its expertise with the state and federal certification processes to mitigate any potential risks imposed by system certification and compliance.

7.4. System Availability and Connectivity

Aspects of the project require system connectivity and reliable accessibility. The system is designed with state-of-the-art redundancies and simplified protocols to accommodate a broad range of risks posed by reliance on an electronic-based solution. End-user requirements are designed to prevent usability barriers at the end-user level.

8. Scope Management and Change Control

The basis for the scope of the project will begin with the contract between ES&S and the State of Colorado. The contract defines specific deliverables, requirements, and milestones which will be detailed and tracked in the Project Plan. The Project Plan will help organize and schedule each of the implementation, service, maintenance, and support deliverables which will be documented by the ES&S Project Team under direction of the State of Colorado.

8.1. Key Aspects of the Project Plan:

8.1.1. Specified Project Deliverables – delivery, service maintenance deliverables.
8.1.2. Formal Acceptance/Verification Procedures – process, criteria, documentation.
8.1.3. Success Requirements – key inputs, conditions, capabilities, and expectations.
8.1.4. Service, Support and Maintenance Plans – detailed milestones, critical paths.
8.1.5. Change Control Procedures – process for making changes to project scope.

The Change Control Procedures will define procedures for submitting, approving, tracking and verifying all changes to the services and scope of the overall project. Change Implementation Notices will be utilized to request and track changes to the project scope and any previously agreed upon product or service deliverables. The Change Control Procedures will be developed and maintained by the ES&S Project Team under the direction of the State of Colorado.

9. Project Assumptions

Project Assumptions will be defined, detailed, and rated within the Project Management Plan. Each assumption will be assessed for confidence-level, potential lead time implications, and weight of potential impact on the overall project. Initially defined assumptions include:

9.1. Project resources will be available if and when they are required
9.2. Hardware, parts, and 3rd party components will be available as needed
9.3. Order lead times will be met and delivered upon as expected
9.4. Gov't regulations will not change in ways that drastically affect the project outcome
9.5. Project scope will be limited and changes will not be imposed without due process

Each of these assumptions, and additional assumptions defined in the Project Plan will be monitored and managed throughout the life of the project.

10. Project Constraints and Boundaries

The primary project constraints will be the applicable federal and state laws, regulations, acts and initiatives that involve the system and the activities required to maintain the system, including certification and verification. The secondary constraints include the availability of resources, equipment, component parts and materials within the timeframes needed to complete necessary activity. To ensure that the constraints do not adversely affect the desired outcomes of the project, the ES&S Project Team will work diligently with the State of Colorado in planning project activity, mitigating potential risks, and adhering to strict quality management procedures.

The plan for managing project constraints and monitoring project boundaries will be included in the Project Plan and will include plans for assuring products and processes are not adversely affected by the project constraints. The constraints will be tracked throughout the project using a Risk Register while periodic reports from the Project Manager will assist in communicating their potential impact on dependent activities. Initial constraints include:

10.1. Time

The ultimate project constraints are existing election and ballot availability deadlines that must be monitored throughout the project. Detailed scheduling and contingency planning will aid in managing this constraint. Absolute deadlines include UOCAVA ballot deadlines, various registration deadlines, early voting dates, election dates, and post election reporting deadlines.

10.2. Funding

The project is constrained by the funding available to acquire resources, products and services. Precise planning and maximization of available resources will help ensure project demands do not exceed funding constraints.

10.3. Personnel

Trained and experienced personnel resources will be needed to support a successful project. Lack of such trained resources could impose a risk to the success of the project. Although personnel constraints must be managed and monitored, ES&S has developed a resource pool and staffing strategy that essentially eliminates the risk that this constraint imposes.

11. Testing and Work Acceptance Strategy

All deliverables, objectives, documents, and project outcomes will require approval. The ES&S Project Team will work with State of Colorado to finalize each deliverable within the Project Plan and the corresponding test plans, approval procedures and documentation required. The ES&S Team will provide examples and consultation regarding all User Acceptance Test procedures, with the State of Colorado having ultimate and final discretion regarding the processes that determine system acceptance. The State will be allowed ample time to review and provide input for all elements of the Project Plan. State of Colorado approval will be required prior to the provision of any deliverable or distribution of any schedule of deliverables. Once a testing and acceptance strategy is fully defined, ES&S will then work with each county to complete the testing, acceptance, and documentation requirements for each respective county implementation. The County will be an active participant in the testing of the system to assure that they are comfortable with the system installation and functionality. CDOS staff may be involved to the extent they desire.

12. Training Strategy

Successful knowledge transfer and effective training are critical components to the success of the project. An emphasis on hands-on training, customized curriculum, and instruction design will improve the effectiveness and long-term viability of the project. Training content will be developed to address a broad range of learners and learning styles. A Training Plan will be developed with the guidance from the State and in collaboration with each County. This training plan will address training needs for the implementation as well as the on-going training needs of the end-users.

13. Project Closure

Following the conclusion of each election cycle or county implementation, the ES&S Project Manager will work with the State of Colorado to detail any lessons learned and begin next-cycle preparations. Any system or process adjustments required will be documented and implemented at this time.

14. On-Going Support

Following the implementation phases of the project, ES&S will provide the level of maintenance and support desired by the CDOS and Counties. Should increases or decreases in support be desired by the CDOS or Counties, ES&S will accommodate. ES&S maintains a talent and personnel program that allows for surge and seasonal staffing flexibility based upon project needs. The principal on-going support activities fall in to these categories:

14.1. Warranty Support

During the warranty period, ES&S will provide warranty services based on the agreement between ES&S and the State.

14.2. Voting Equipment Maintenance Support

Following the warranty period, ES&S will provide remedial and preventative maintenance services based on the agreement between ES&S and the State.

14.3. Election Setup Support

ES&S will work with the State to develop a plan that defines the support provided to each County to assist in Election Setup on the new UVS. Deliverables will include Election and Ballot setup support, equipment preparations, and L&A testing support.

14.4. Election Processes Support

ES&S will work with the State to develop a plan that defines the support provided to each County to assist in Election processes execution on the new UVS. Deliverables will include Mail Ballot Delivery/Return Support, as well as early voting and Election Day support.

14.5. Post-Election Support

ES&S will work with the State to develop a plan that defines the support provided to each County to assist in post-election activities on the new UVS.

15. Target (Large) County Implementation Schedule and Staff Plan

15.1. Sample Schedule

ID	Task/Activity	Owner(s)	Duration	Wk1	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Election
1.0	**Project Initiation and Project Management**												
1.1	Official Project Start	ES&S, County	1 day										
1.2	Conduct Implementation Kick-Off Meeting	ES&S, County	1 day										
1.3	Provide Status Updates + On-going Proj Mgmt	ES&S Manager	Ongoing										
2.0	**Delivery and Implementation**												
2.1	Provide Initial Product and Training Doc.	ES&S	1 day										
2.2	Deliver Hardware to County Location	ES&S	1-3 days										
2.3	Deliver and Install Software at County Location	ES&S	2 days										
2.4	Complete System Acceptance Testing		2-4 days										
2.5	Conduct Hardware + Operations Training	ES&S Trainer, County	1 day										
2.6	Conduct EMS (software) Training	ES&S Trainer, County	5 days										
3.0	**First Election Support**												
3.1	Complete EMS Configuration	ES&S Tech Lead, County	3-7 days										
3.2	Create Ballot PDFs and Activate BOD	ES&S Tech Lead, County	1 day										
3.3	Conduct Logic & Accuracy Testing	ES&S Tech Lead, County	2-4 days										
3.4	Program Memory Devices (USB sticks)	ES&S Tech Lead, County	1 day										
3.5	Conduct First Election/Early Voting	ES&S, County											

See section 3 of this document for proposed staffing plan and project roles/assignments.

State of Colorado – Uniform Voting System (UVS)
Preliminary Project Implementation Plan

ES&S – Project Management Office [PMO]

Version	Description	Changed By	Date
0.5	First draft	Adam Carbullido	10/29/13
1.0	Review draft	Adam Carbullido	11/02/13
2.0	Final review draft	Linda Bennett	11/07/13
3.0	Final Bid Version	Adam Carbullido	11/15/13

Table of Contents:

1. Initial Statement of Work
2. Scope of Work (Summary of Deliverables)
3. Project Team
4. Project Management Approach
5. Initial Project Schedule
6. Staffing Plan and Approach
7. Communication Management Approach
8. Risk Management Approach
9. Scope Management and Change Control
10. Project Assumptions
11. Project Constraints and Boundaries
12. Test Strategy and Work Acceptance
13. Training Strategy
14. Project Closure
15. On-Going Support
16. Sample Large County Implementation Schedule and Staffing Plan

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1. Initial Statement of Work

The objective of the project is to successfully implement a statewide Uniform Voting System (UVS) in the State of Colorado. The system will provide Colorado Deportment of State (CDOS) authorized components for election management, ballot production, vote tabulation, automated signature verification, electronic ballot adjudication, and ballot tracking. Criteria for determining a successful implementation will be defined within a documented agreement between the State of Colorado and Election Systems and Software, LLC. (ES&S). The agreement will specify the services, deliverables, and acceptance requirements of the project. An ES&S Project Manager will be assigned to the State of Colorado and will serve as the main point of contact and the primary ES&S representative responsible for coordinating each of the project deliverables. The ES&S Project Manager will be supported by a team of ES&S resources committed to the successful implementation of the UVS in the State of Colorado. This preliminary project plan will form the basis for the Project Plan, which will be created within the first 30 days of the project and will be the overall guiding document for the project. This preliminary plan provides an initial outline of project objectives, project management approach, key deliverables, risks, assumptions, parties involved, overall timeframes, and the delivery strategy for the project.

2. Scope of Work (Summary of Deliverables)

2.1. Project Management

2.1.1. Project Plan – Upon contract award, the ES&S Project Manager will update this preliminary plan with additional details and present a proposed Project Plan to the State. The State will be provided time to review and provide input before the plan is complete. Throughout the duration of the project, the ES&S team will continue to update the plan under the direction and supervision of the State. Initial plans and details regarding several aspects of the Project Plan are contained within this Preliminary Project Plan. Additional information and details will be added following the start of the project. Elements of the Project Plan will include:

- 2.1.1.1. Project Schedule
- 2.1.1.2. Risk Management Plan
- 2.1.1.3. Issue Management Plan
- 2.1.1.4. Staffing Plan
- 2.1.1.5. Budget
- 2.1.1.6. Change Control Plan

2.1.2. Status Reports/Reporting – The ES&S Project Manager will report project activity in the form and frequency recommended by ES&S, and ultimately determined by the State of Colorado. The reports will summarize key information related to the status and health of the project. Throughout the project, the ES&S Project Manager will host status update and key stakeholder meetings to communicate project status and address stakeholder questions on a frequency determined by the State.

2.1.3. Project Website

2.1.4. Test Strategy Plan

2.1.5. Training Plan

2.1.6. Security Plan

2.1.7. Organizational Change Management Plan

2.2. Hardware/Software/Support Procurement

2.2.1. Colorado UVS Hardware/Software/Support Catalog

2.2.2. County Procurement Plan

2.2.3. County/Contractor Purchase Order/Agreement

2.2.4. System Shipment Acceptance Document

2.2.5. Old Equipment Disposal Plan

2.2.6. Old Equipment Disposal Agreement Signoff

2.3. Implementation

2.3.1. UVS Requirements Document

2.3.2. Organization Change Management Results

- 2.3.2.1. Warehouse Process Document
- 2.3.2.2. Election Setup Processes Document
- 2.3.2.3. Early Voting Processes Document
- 2.3.2.4. Election Day Voting Processes Document
- 2.3.2.5. County Administrative Processes Document
- 2.3.2.6. State Elections Division Administrative Processes Document

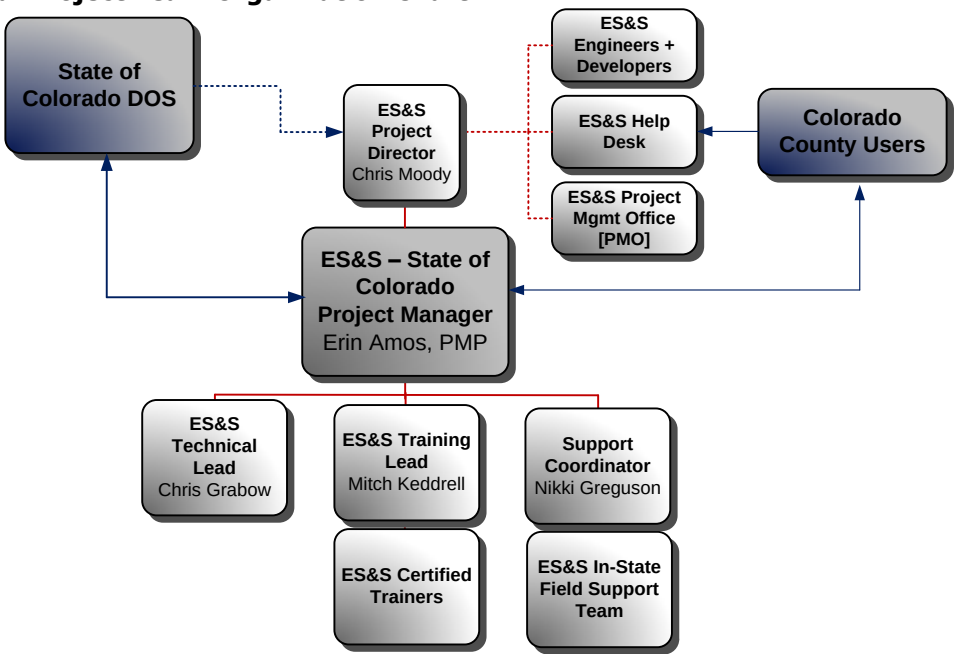
2.3.3. Election Hardware Production Deployment
2.3.4. Election Training Execution
2.3.4.1. Software Training Execution
2.3.4.2. Hardware Training Execution
2.3.4.3. Election Office Operations Training Execution
2.3.4.4. Polling Location Operations Training Execution
2.3.4.5. Voter Training Execution

2.4. Contractor Support

2.4.1. Warranty Period Support
2.4.2. Voting Equipment Maintenance Support
2.4.3. Election Setup Support
2.4.4. Election Processes Support
2.4.5. Post-Election Support

3. Project Team

3.1. Initial Project Team Organization Chart



3.2. Proposed Project Roles

3.2.1. ES&S Project Manager

An ES&S Senior Project Manager, certified by the Project Management Institute (PMI), will lead the ES&S Project Team and will simplify communication channels by serving as the principal point of contact to the State of Colorado. The ES&S Project Manager will hold single-point accountability for coordination of the activities and personnel assigned to the project on behalf of ES&S and provide all status reporting required by the State.

3.2.2. ES&S Executive Project Director

An ES&S Executive Project Director will be assigned to the project and will serve as an escalation point and project sponsor to the State of Colorado and the ES&S Project Team.

3.2.3. ES&S Technical Project Lead

An ES&S advanced Technical Lead will be assigned to the project to assure all technical requirements are met to the satisfaction of the State of Colorado. The Technical Lead will bring technical and election system implementation experience to the project. Additional responsibilities include:

3.2.4. ES&S Help Desk Technical Support Team

The ES&S Project Team includes a Help Desk staffed with experienced hardware and software support technicians and engineers specifically trained to support the State of Colorado's UOCAVA Ballot Delivery and Tracking System. The ES&S Help Desk utilizes a systematic 3-tiered escalation process to assure that all issues and questions, whether minor or major, are quickly addressed by the appropriate subject matter experts. The Help Desk team has direct

access to Tier 3 product engineers, system administrators, and software developers and is available 24x7 during election critical periods.

3.2.5. ES&S Field Support Team
ES&S will leverage its existing in-state support network to provide county-level support and assistance throughout the implementation and on-going phases of the project.

3.2.6. ES&S Tier 3 Support and Development
The Tier 3 Support team includes product engineers, system administrators, and software developers. As needed, the ES&S Project Team and the State of Colorado will have access to Tier 3 ES&S resources capable of addressing advanced requests, questions, or issues. These same resources will be responsible for the development and deployment of system changes, including any updates or enhancements.

3.3. Proposed Project Team Members

Role	Name	ES&S Relation
Project Director	Chris Moody	Full-time
Project Manager	Erin Amos	Full-time
Technical Project Lead	Christopher Grabow	Full-time
Training Project Lead	Mitch Keddrell	Full-time
Customer Support Coordinator	Nikki Greguson	Full-time

3.4. Staffing Plan and Approach

In addition to the defined project personnel members, ES&S will also employ a field support team to assist with various tasks and support needs of the 88 counties in Colorado. The field support team is experienced with the State of Colorado, its counties, and its elections and will be well-positioned to assure a successful implementation. The ES&S Project Team will also be supported by sufficient Project Managers, ES&S system specialists, trainers, instructional designers, subject matter experts and documentation writers necessary to complete a successful implementation. In addition to the assigned project team, ES&S will also make arrangements to supply local partner and contractor resources at the request of the State. At any time that the State requests additional staff or resources from ES&S, the Project Team will be able to tap its deep reserves of project professionals, tabulation system experts, and certified technicians in order to support project efforts.

4. Project Management Approach

The ES&S Project Team will manage the project pursuant to the Project Management Institute's project management principles. The team will utilize industry and PMBOK best practices and will be supported by a strong team of subject matter experts, security experts, Certified Project Management Professionals (PMPs), certified technicians, technical liaisons and various other resources to provide quality support and sound project management. Where appropriate, the ES&S Project Team will also incorporate practices, procedures and tools in accordance with other project management methodologies specified by the State of Colorado. The ES&S PMO approach to elections project management emphasizes simplicity, consistency and clarity in project reporting, ensuring all project stakeholders are regularly updated and have easy access to critical project information.

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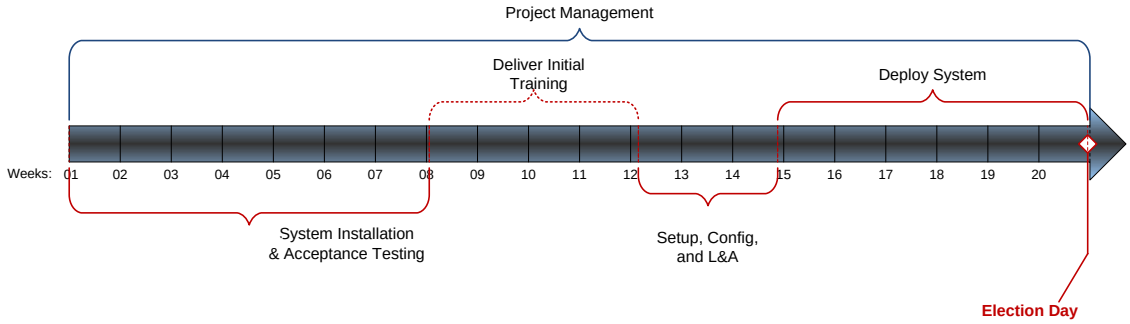
Provide Election Support	~60 days	During the critical period prior to, during, and after Election Day, ES&S will assure that essential support resources are available and committed to project success.	ES&S
Provide On-Going Help Desk and Technical Support	TBD	The ES&S will adjust its support plan based on the direction of the State of Colorado and will accommodate any variance in support needs throughout implementation and on-going phases.	ES&S, State of Colorado

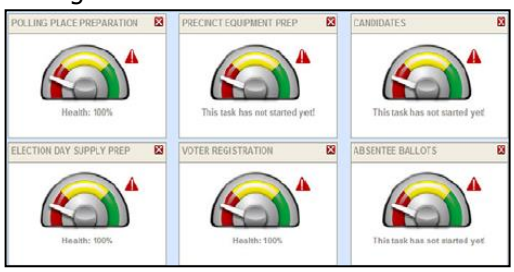
Provide Software Maintenance and Support	TBD	Initial support will be based upon the agreement between ES&S and the State of Colorado. Should changes to the maintenance and support plan be requested, the ES&S Project Manager will implement change procedures to adapt the plan and accommodate the needs of the State.	ES&S, State of Colorado
Post-Election Support	TBD	ES&S will provide support to the State and Counties following each election.	ES&S

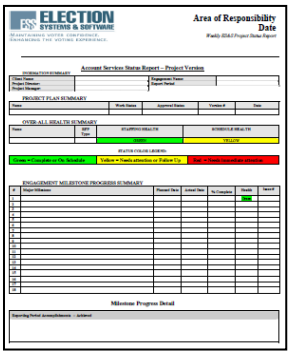
5.2. Work Schedule (Time-Phased)



6. Communication Management Approach

The ES&S Project Team will deploy a multi-channel approach to communication management. In addition to providing periodic status reports that detail the status of all project deliverables and activities, the Project Manager will utilize Web-based tools and conduct periodic stakeholder meetings. Each of these communication methods, in addition to any methods preferred by the State of Colorado, will be used to help ensure that all stakeholders are up-to-date and to aid in monitoring risks to help identify risk mitigation strategies. A detailed communication plan will be developed and maintained within the overall Project Plan. The project status report will be provided by the ES&S Project Manager for the duration of the project. The report will clearly define all completed, current and upcoming activity as well as the overall health of the project. Each task and risk will be rated and color-coded for quick interpretation of project status.





7. Risk Management Approach

The ES&S Project Team will develop and utilize a comprehensive Risk Management Plan in order to manage all potential risks throughout the project. Early in the project, the ES&S Project Team will meet with the State of Colorado's staff to identify potential project risks and develop initial mitigation strategies. Following this meeting, the ES&S Project Team will expand the identification of these risks and develop detailed plans for avoiding potentially negative effects of the identified and unidentified risks. Throughout the project, the ES&S Project Manager will maintain a Risk Register to track and communicate the status of identified risks and their respective mitigation strategies Throughout the project, ES&S will collaborate with the CDOS UVS project manager to compare identified risks. Some of the initial primary risks include:

7.1. Registration and Preparation Timelines

The very nature of this project involves completing activities in a small time window. The election date is fixed, resulting in zero flexibility to accommodate delays. In order to achieve successful deployment of the system, it is imperative that data be made available at the scheduled times. Certain ballot and voter data are required for the system to be tested and ultimately deployed. Any delays in provision of such data can delay the ultimate deployment of the system. The ES&S Project Team will work diligently with the State of Colorado to solidify a mutually agreeable schedule of tasks and ensure that all stakeholders are fully aware of their obligations in achieving project success. In some cases, extenuating circumstances could impose

delays on the availability of ballot or voter data. For these potential scenarios, ES&S will work with the State of Colorado to develop mitigation and backup plans to provide the maximum possible system functionality at the earliest possible date and will expedite tasks and utilize additional resources wherever it may benefit the process.

7.2. Ballot Rules and Regulations

A dynamic environment of changing rules and regulations surrounding the delivery, printing, return, tracking and tabulation of ballots will require monitoring and contingency planning throughout the duration of the project. The proposed system is highly adaptable and should functional changes be required, the ES&S team will work with the State of Colorado to scope change requirements and quickly implement system updates.

7.3. Certification and Voting System Compliance

State and federal voting system certification requirements also have the potential for impacting the project. The ES&S Team will utilize its expertise with the state and federal certification processes to mitigate any potential risks imposed by system certification and compliance.

7.4. System Availability and Connectivity

Aspects of the project require system connectivity and reliable accessibility. The system is designed with state-of-the-art redundancies and simplified protocols to accommodate a broad range of risks posed by reliance on an electronic-based solution. End-user requirements are designed to prevent usability barriers at the end-user level.

8. Scope Management and Change Control

The basis for the scope of the project will begin with the contract between ES&S and the State of Colorado. The contract defines specific deliverables, requirements, and milestones which will be detailed and tracked in the Project Plan. The Project Plan will help organize and schedule each of the implementation, service, maintenance, and support deliverables which will be documented by the ES&S Project Team under direction of the State of Colorado.

8.1. Key Aspects of the Project Plan:

8.1.1. Specified Project Deliverables – delivery, service maintenance deliverables.
8.1.2. Formal Acceptance/Verification Procedures – process, criteria, documentation.
8.1.3. Success Requirements – key inputs, conditions, capabilities, and expectations.
8.1.4. Service, Support and Maintenance Plans – detailed milestones, critical paths.
8.1.5. Change Control Procedures – process for making changes to project scope.

The Change Control Procedures will define procedures for submitting, approving, tracking and verifying all changes to the services and scope of the overall project. Change Implementation Notices will be utilized to request and track changes to the project scope and any previously agreed upon product or service deliverables. The Change Control Procedures will be developed and maintained by the ES&S Project Team under the direction of the State of Colorado.

9. Project Assumptions

Project Assumptions will be defined, detailed, and rated within the Project Management Plan. Each assumption will be assessed for confidence-level, potential lead time implications, and weight of potential impact on the overall project. Initially defined assumptions include:

9.1. Project resources will be available if and when they are required
9.2. Hardware, parts, and 3rd party components will be available as needed
9.3. Order lead times will be met and delivered upon as expected
9.4. Gov't regulations will not change in ways that drastically affect the project outcome
9.5. Project scope will be limited and changes will not be imposed without due process

Each of these assumptions, and additional assumptions defined in the Project Plan will be monitored and managed throughout the life of the project.

10. Project Constraints and Boundaries

The primary project constraints will be the applicable federal and state laws, regulations, acts and initiatives that involve the system and the activities required to maintain the system, including certification and verification. The secondary constraints include the availability of resources, equipment, component parts and materials within the timeframes needed to complete necessary activity. To ensure that the constraints do not adversely affect the desired outcomes of the project, the ES&S Project Team will work diligently with the State of Colorado in planning project activity, mitigating potential risks, and adhering to strict quality management procedures.

The plan for managing project constraints and monitoring project boundaries will be included in the Project Plan and will include plans for assuring products and processes are not adversely affected by the project constraints. The constraints will be tracked throughout the project using a Risk Register while periodic reports from the Project Manager will assist in communicating their potential impact on dependent activities. Initial constraints include:

10.1. Time

The ultimate project constraints are existing election and ballot availability deadlines that must be monitored throughout the project. Detailed scheduling and contingency planning will aid in managing this constraint. Absolute deadlines include UOCAVA ballot deadlines, various registration deadlines, early voting dates, election dates, and post election reporting deadlines.

10.2. Funding

The project is constrained by the funding available to acquire resources, products and services. Precise planning and maximization of available resources will help ensure project demands do not exceed funding constraints.

10.3. Personnel

Trained and experienced personnel resources will be needed to support a successful project. Lack of such trained resources could impose a risk to the success of the project. Although personnel constraints must be managed and monitored, ES&S has developed a resource pool and staffing strategy that essentially eliminates the risk that this constraint imposes.

11. Testing and Work Acceptance Strategy

All deliverables, objectives, documents, and project outcomes will require approval. The ES&S Project Team will work with State of Colorado to finalize each deliverable within the Project Plan and the corresponding test plans, approval procedures and documentation required. The ES&S Team will provide examples and consultation regarding all User Acceptance Test procedures, with the State of Colorado having ultimate and final discretion regarding the processes that determine system acceptance. The State will be allowed ample time to review and provide input for all elements of the Project Plan. State of Colorado approval will be required prior to the provision of any deliverable or distribution of any schedule of deliverables. Once a testing and acceptance strategy is fully defined, ES&S will then work with each county to complete the testing, acceptance, and documentation requirements for each respective county implementation. The County will be an active participant in the testing of the system to assure that they are comfortable with the system installation and functionality. CDOS staff may be involved to the extent they desire.

12. Training Strategy

Successful knowledge transfer and effective training are critical components to the success of the project. An emphasis on hands-on training, customized curriculum, and instruction design will improve the effectiveness and long-term viability of the project. Training content will be developed to address a broad range of learners and learning styles. A Training Plan will be developed with the guidance from the State and in collaboration with each County. This training plan will address training needs for the implementation as well as the on-going training needs of the end-users.

13. Project Closure

Following the conclusion of each election cycle or county implementation, the ES&S Project Manager will work with the State of Colorado to detail any lessons learned and begin next-cycle preparations. Any system or process adjustments required will be documented and implemented at this time.

14. On-Going Support

Following the implementation phases of the project, ES&S will provide the level of maintenance and support desired by the CDOS and Counties. Should increases or decreases in support be desired by the CDOS or Counties, ES&S will accommodate. ES&S maintains a talent and personnel program that allows for surge and seasonal staffing flexibility based upon project needs. The principal on-going support activities fall in to these categories:

14.1. Warranty Support

During the warranty period, ES&S will provide warranty services based on the agreement between ES&S and the State.

14.2. Voting Equipment Maintenance Support

Following the warranty period, ES&S will provide remedial and preventative maintenance services based on the agreement between ES&S and the State.

14.3. Election Setup Support

ES&S will work with the State to develop a plan that defines the support provided to each County to assist in Election Setup on the new UVS. Deliverables will include Election and Ballot setup support, equipment preparations, and L&A testing support.

14.4. Election Processes Support

ES&S will work with the State to develop a plan that defines the support provided to each County to assist in Election processes execution on the new UVS. Deliverables will include Mail Ballot Delivery/Return Support, as well as early voting and Election Day support.

14.5. Post-Election Support

ES&S will work with the State to develop a plan that defines the support provided to each County to assist in post-election activities on the new UVS.

15. Target (Large) County Implementation Schedule and Staff Plan

15.1. Sample Schedule

ID	Task/Activity	Owner(s)	Duration	Wk1	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Election
1.0	**Project Initiation and Project Management**												
1.1	Official Project Start	ES&S, County	1 day										
1.2	Conduct Implementation Kick-Off Meeting	ES&S, County	1 day										
1.3	Provide Status Updates + On-going Proj Mgmt	ES&S Manager	Ongoing										
2.0	**Delivery and Implementation**												
2.1	Provide Initial Product and Training Doc.	ES&S	1 day										
2.2	Deliver Hardware to County Location	ES&S	1-3 days										
2.3	Deliver and Install Software at County Location	ES&S	2 days										
2.4	Complete System Acceptance Testing		2-4 days										
2.5	Conduct Hardware + Operations Training	ES&S Trainer, County	1 day										
2.6	Conduct EMS (software) Training	ES&S Trainer, County	5 days										
3.0	**First Election Support**												
3.1	Complete EMS Configuration	ES&S Tech Lead, County	3-7 days										
3.2	Create Ballot PDFs and Activate BOD	ES&S Tech Lead, County	1 day										
3.3	Conduct Logic & Accuracy Testing	ES&S Tech Lead, County	2-4 days										
3.4	Program Memory Devices (USB sticks)	ES&S Tech Lead, County	1 day										
3.5	Conduct First Election/Early Voting	ES&S, County											

See section 3 of this document for proposed staffing plan and project roles/assignments.

Erin Amos
Customer Service Manager

Erin Amos has over 10 years of experience in elections and Customer Service. Erin's skills include managing customer projects, implementing new processes, onsite customer support, customer training, and election programming. Erin is part of a diverse team of Customer Service Managers, giving her access to an assortment of resources that allows her to provide customized solutions for each client.

Professional Qualifications

- Advanced knowledge of Colorado election processes and laws; as well as Wyoming, California, and Texas.
- Experience managing projects in various customer accounts and internally.
- ES&S Peak Award recipient for start-to-finish implementation of a new product line in Texas.

Relevant Experience

- Project Manager for the first "live" election in the nation utilizing the new DS850 digital central scanner in the city of Colorado Springs.
- Provides ongoing customer service and support for both Election Systems & Software (ES&S) and the former Premier Election Solutions (PES) suites of election products.
- Extensive experience in ballot programming, hardware maintenance, certification, training, and election support in a number of states.

Technical Skills & Education

- B.A., Industrial Design, The Art Institute of Colorado
- Project Management Certificate, Colorado State University

Client References

- **Carla Gomez, County Clerk**
  Saguache County, Colorado
  719-655-2512
  cgomez@saguachecounty-co.gov

- **Melanie Woodward, County Clerk**
  Alamosa County, Colorado
  719-589-6681
  mwoodward@alamosacounty.org

- **Renea Vitto, County Clerk**
  Natrona County, Wyoming
  307-235-9206
  rvitto@natronacounty-wy.gov

- **Dawn Criddle, Elections Administrator**
  Woo d County, Texas
  903-763-2400
  dgoldthorn@mywoodcounty.com

Chris Moody
Senior Customer Service Manager

Chris has 15 years of experience in the Election Service / Customer Service fields at ES&S. His experience ranges from Layout and Coding, Customer Hardware/Software installations, Hardware/Software upgrades, Project Management and Team Management of multiple projects or statewide projects.

Professional Qualifications

- Regional Election Services Manager 1998-2004
- Director Election Services 2004 – 2006
- Regional Account Manager 2006-2008
- Manager Election Services 2008-2013
- Senior Customer Service Manager 2013 – Present

Relevant Experience

- Managed large statewide installs of Hardware and Software (Texas)
- Managed the implementation of a HAVA voting system in 148 counties in Texas, including shipment, installation, configuration, and services.
- Managed multiple Customer Service Managers within a Region (Texas, New Mexico, Arizona, Colorado, Kansas and Arkansas)
- Led team of Customer Service Managers tasked with post HAVA service activity. Care and maintenance of pre-installed HAVA systems and managed on-going support plans for upcoming elections.
- Managed statewide hardware firmware upgrades along with software upgrades (Texas)
  -Post HAVA, new versions of Hardware/Firmware/Software were certified to allow users to have additional functionality of their existing HAVA systems.
  -Managed the implementation of the upgrades in 148 counties.
- Manage all services surrounding the state of Texas (Layout, Coding, Printing, Voice Files and Supplies)

Technical Skills & Education

- Level 1 certificate for Level 1 Customer Maintenance (BTC126H) from the Lucent Technology Lab in Dallas.
- Computer Drafting and Architecture courses, Oklahoma State University/Okmulgee.
- Computer Science courses at Richland College and Eastern Oklahoma State College.

References

The following individuals may be contacted to discuss Chris's performance in supporting their projects.

Jacque Callanen, Election Administrator
Bexar County, TX
Phone: 210-335-0305

Email: jcallanen@bexar.org

Oscar Villareal, Election Administrator
Webb County, TX
Phone: 956-523-4050
Email: ovillarreal@webbcountytx.gov

Shelly Coston, County Clerk
Bell County, TX
Phone: 254-933-5177
Email: ovillarreal@webbcountytxshelley.coston@co.bell.tx.us

Christopher Grabow
Technical Systems Supervisor

Qualifications

- Seven+ years of experience in election coding and support.
- Successfully managed multiple implementations of different systems involving acceptance testing, training, data conversion, project management, and support.
- Experienced with a variety of different election software and hardware systems.

Current Responsibilities

- Technical Systems Supervisor – Manage installation and configuration
- Customer Service Manager for the states of Kansas, Iowa, and Missouri
- Project Manager for Will County, IL implementation

Relevant Experience

- Customer Service Manager in the States of Iowa, Kansas and Missouri (2010-Present)
- Project Manager for Will County, IL (2010 – Present)
- Manages a team of technical employees for installation, implementation and configurations
- Consultant for several project managers implementing poll book based systems in numerous jurisdictions throughout the country
- Maintains expert knowledge of all Election Systems & Software (ES&S) election products

Education and Certification

- ITT Technical Institute – Omaha, Nebraska

Client References

Nancy Schultz Voots – County Clerk
Will County, IL
Phone: 815-740-4615
Email: NVoots@willcountyillinois.com
Project Management and Election Support

Jolene Keck – Deputy Clerk/Election Official
Riley County, KS
Phone: 785-565-6201
Email: jkeck@rileycountyks.gov
Project Management and Election Support

KS SOS Election Office– Bryan Caskey
State of Kansas
Phone: 785-296-3488

Email: Bryan.Caskey@sos.ks.gov
Customer Service and Project Management

Mitch Keddrell
Technical and Training Manager

Mitch has more than 11 years of election system support and implementation experience that includes assistance with statewide voting systems implementations and working with voting jurisdictions of all sizes across the United States. In his 11 years working with elections, he has managed and executed responsibilities involved with many aspects of voting system implementations and operations.

Professional Qualifications

- Lead Technical and Training Manager for the 2005 Mississippi voting system implementation.
- On-site experience: Supported more than 300 Government, Union, and Private elections, training events, and projects at various levels.

Relevant Experience

- Lead Training Manager for the Mississippi implementation of DRE's, Optical Scanners, and Election Management System. Responsible for outlining and creation of the training program for local support personnel and State and County Officials.
- Lead Technical Manager for the Mississippi implementation of DRE's, Optical Scanners, and Election Management System. Responsible for the ES&S technicians, repairs of voting equipment and the Election Management Systems servers within the State.
- Regional Manager for Prince George, Calvert, Charles and St. Mary Counties during the Maryland statewide implementation. Responsible for coordination of all services for the implementation of the project.
- Provided a range of support and services to election jurisdictions across the country, including the State of Georgia, the State of Maryland, Shelby County TN, Manhattan and Queens Boroughs in New York, Story County Iowa, Cook County Illinois, Monroe County and Osceola County Florida.

Technical Skills & Education

- AAS Computer Network Technology, Hind Community College, Raymond, MS
- Extensive knowledge of Microsoft Server platforms (NT, 2000, 2003, 2008), Microsoft MCSE, CompTIA A+ and Network+ certifications

References

The following individuals may be contacted to discuss Mitch's performance in supporting their projects

Janette Nolan
Marion County, MS
Phone: 601-736-8246

Email: jnolan@co.marion.ms.us
Election coding, Staff GEMS training, equipment repairs and support.

Derwood Stanton
Carroll County, MS
662-464-5476
carrollclerk@duckwood.net
Election coding, Staff GEMS training, equipment repairs and support.

Susan Redford
Colonial Heights, VA
Phone: 804-520-9277
Email: redfords@colonialheightsva.gov
Electronic pollbook implementation, staff and poll worker training, election coding, pre-election along with election day and post election support.

Nikki Greguson
Customer Support Manager

Nikki has more than 8 years of election system support and implementation experience that includes assistance with statewide voting systems implementations and working with voting jurisdictions of all sizes across the United States. In her 8 years working with elections, she has managed and executed responsibilities involved with many aspects of voting system implementations and operations.

Professional Qualifications

- Customer Support Manager for ES&S including areas of onsite election support, Rental/Private Election support, ballot layout, programming and print support, data conversion support, customer service support and training support. (2012-2013)
- Customer support experience: Supported Government, Union, and Private elections, training events, and projects at various levels.

Relevant Experience

- Customer Support Manager for Maine DS200 Implementation. Support included on site support, ballot layout support, programming and print support. This includes continued customer support to all 225 municipalities for onsite support, ballot layout programming and print support. State level support included but not limited all of the above. (2012-2013)
- Customer Support Manager for Massachusetts AutoMark Implementation. Support included onsite support, ballot layout, programming and print support. This includes continued customer support to all 351 municipalities for onsite support, ballot layout programming and print support. State level support included but not limited to all of the above. (2007-2013)
- Statewide Training Coordination for Voter Registration Implementation in Arkansas, Nebraska and Kansas. (2005-2006)

Technical Skills & Education

- South Dakota State University, Brookings, South Dakota
- Proficient skills in Microsoft Office Suite applications

References

The following individuals may be contacted to discuss Nikki's performance in supporting their projects

Bridget Simmons Murphy
Office of the Secretary of the Commonwealth of Massachusetts
Phone: 617-878-3085
Email: bridgetsimmonsmurphy@sec.state.ma.us
Ballot layout, programming, print support including customer support for municipalities

and at a state level.

Robert Hammonds
Director of Elections, AR
Phone: 501-683-3733
Email: rob.hammons@sos.arkansas.gov
Ballot layout, programming, print support including customer support for municipalities and at a state level.

Kristi Everett
Pottawattamie County, IA
Phone: 712-328-5700
Email: kristi.everett@pottcounty.com
Ballot layout, programming, print support

Section 12.0 – UVS System Requirements

System Requirements Tables for the following categories of requirements are contained in this Appendix B. Each category is stored in its own MS Word table. Each category is further divided into sub-categories. The major categories and category definitions are as follows:

A – Election Management System (EMS) – this category addresses the software needed to programmatically create an election, design ballots, program voting system configurations, view stored cast votes and ballot images for adjudication, and provide for system reports.

B – Polling Location Ballot Scanner and Tabulation Equipment – this category covers hardware and software used at a polling location to scan and tabulate ballots.

C – Central Ballot Scanner and Tabulation Equipment – this category includes hardware and software used at a central location to scan and tabulate ballots. This equipment is typically used for processing mail/absentee ballots in volume.

D – Electronic Voting Equipment – this category includes hardware and software that allow a voter to enter a vote by interfacing with an electronic device (e.g. touchscreen, touch controls, audible speech, sip and puff, paddles) rather than manually marking a ballot. By statute, the electronic voting equipment must generate a verifiable paper trail in the form of a printout or an actual machine marked ballot. The electronic voting equipment may or may not tabulate the votes. If the equipment is the type that marks a ballot, it is possible that the ballot will be scanned and tabulated by another piece of equipment. In this case, the machine marked paper ballot is the VVPAT.

E – Automated Ballot Envelope Scanning, and Signature Verification – this category includes hardware and software to scan ballot envelopes, capture an image of the envelope (including voter signature), and affix certain information to the envelope (e.g. date, time, county identifier). The signature verification function is typically software driven and performed without human intervention. When exceptions are encountered by the automated system, an authorized user can view the signature captured by the envelope scanner or physically view the actual envelope and compare the signature image with the signature maintained in the voter registration system.

F – Mail Ballot Tracking – this category addresses requirements for a mail ballot tracking system to be used by all counties in Colorado.

G – Vendor Training and Support – this category addresses training and support requirements of the voting system vendor.

H – Miscellaneous Requirements – this category identifies miscellaneous requirements related to auditing, voting system certification, testing of hardware/software, security, and system documentation.

The Requirements tables are set up to not allow rows to break across pages. If a vendor response is long enough to cause a table row to be longer than one page can handle, please change the Microsoft Word Row Property for that particular row to allow it to break across pages.

A vendor may respond to any or all of the Requirement Categories "A" through "F", depending on the products and services the vendor is offering to Colorado. For instance, a particular vendor may only be offering a Mail Ballot Tracking system and; therefore, would only respond to the Mail Ballot Tracking category "F". Another example might be a vendor who only wants to propose an Electronic Voting Equipment solution and; therefore, would only respond to the Electronic Voting Equipment category "D".

Any vendor who responds to one or more of the Requirement Categories "A" through "F" must also, where applicable, complete the Requirement Categories of "G" for Vendor Training and Support and "H" for Miscellaneous Requirements.

ES&S RESPONSE

ES&S has provided responses for Systems Requirements Tables A-H. For those responses requiring an extended response and/or graphics, we have provided an "Additional Comments" section for each respective table.

Section 12.0 - UVS System Requirements Table: Appendix B, Section A – Election Management System (EMS)

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM A – ELECTION MANAGEMENT SYSTEM (EMS)				
Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Election Creation	A-1	Allow county and state election officials the ability to generate and maintain an administrative database containing the definitions and descriptions of political subdivisions and offices within their jurisdiction.	1	ES&S's Election Management System, Electionware, has a single database for the entire election that stores all of the jurisdiction's precinct, office, and candidate information. This data is then used by county or state election officials to define the image of the ballot and is also used on equipment screens and reports as well as for election reporting functions. This single repository of data ensures that the same information is used throughout the election process. Electionware also protects against improper data entry or retrieval. Data is verified for correctness at the time it is either imported or entered and during the creation of ballot styles and candidate positions.
Election Creation	A-2	Provide definition for separate ballot styles that reflect different combinations of contests that are included depending on place of residence of the voter or similar administrative criteria.	1	Electionware is used to create ballot styles. Each of these ballot styles will consist of only the contests and questions that apply to a particular precinct or split. Contests and questions not associated with a particular precinct will not be included on the ballot style and therefore will only allow voters to cast votes on the contests in their particular precinct.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM A – ELECTION MANAGEMENT SYSTEM (EMS)				
Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Election Creation	A-3	Provide software capability for the creation of newly defined elections.	1	Electionware allows users to create a new election at any time. During the election design process, you may import or enter election data. You may apply data and or settings from previous elections using election templates. Alternatively users can create a new election from a previous election. This additional flexibility allows consistency in ballot layout and equipment settings.
Election Creation	A-4	Provide software capability for the retention of previously defined election setups.	1	Electionware allows elections to be easily backed up and restored. Electionware also allows the creation of election templates, which can include any election data or settings with the exception of access codes. Backups are digitally signed and stored at a location selected by the user. Templates are stored in the database application. The database may reside locally or on a server.
Election Creation	A-5	Provide software capability to copy, edit, and delete previously defined elections.	1	Each election can easily be backed up, stored and restored at any time. Electionware allows the flexibility of copying data and settings from a previous election with election templates. These templates can contain part or all of a previous election and can be edited as needed to keep them up to date. Elections and election templates can also be edited and deleted as needed using simple menu options.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM A – ELECTION MANAGEMENT SYSTEM (EMS)				
Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Election Creation	A-6	Generate all required master and distributed copies of the voting program in conformance with the definition of the ballot for each voting location and voting device, including devices required to facilitate mail-in voting and voters with disabilities.	1	The ES&S Election Management System generates all required formats of the ballot definition data for all voting locations and devices, including mail-in voting and accessible device voting. The election definition is contained in one system with one database for all equipment types.
Election Creation	A-7	Provide for all distributed copies of the voting program, resident or installed, in each voting device to include all software modules required to monitor system status and generate machine-level audit reports, to accommodate device control functions performed by voting location officials and maintenance personnel, and to accept and accumulate votes.	1	ES&S systems do not distribute software as part of the election specific information. All software/firmware is resident on each unit after installation and is only changed when a new version is installed. These functions are native to the installed software. Only the "election definition" (all needed election specific data) is created by the EMS and distributed on media.
Election Creation	A-8	Provide for a unified, integrated centralized database that allows global edits by authorized users. **Note:** Please describe how the system minimizes the need to update a particular data element in multiple locations for a change made to that data element anywhere within the database. For instance, removing a candidate that appears in multiple ballot styles or changing a voting location designation that appears in multiple places in the database.	1	ES&S's Election Management System, Electionware, has a single database for the entire election that stores all of the jurisdiction's precinct, office, and candidate information. Only authorized users can access Electionware with a user id and password set-up by the administrative user. Authorized user roles include Administrator; User; Ballot Producer; Media Creator; and Ballot Reviewer. Because Electionware utilizes a single, comprehensive database, changes to data elements are propagated across the system. For instance, any candidate or target position change is carried to all appropriate ballotstyles as soon as the change is saved.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM A – ELECTION MANAGEMENT SYSTEM (EMS)				
Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Election Creation	A-9	Provide a test mode which supports testing to validate the correctness of election programming for each voting device and ballot style and ensure that the ballot display corresponds with the installed election program.	1	The system allows a full functional testing and then zeroing of test results before live usage.
Election Creation	A-10	Be able to import electronically from the Secretary of State and counties in an agreed-upon format that contains, at a minimum, the following data: a. Full candidate name b. Candidate sequence, title and text of ballot questions, and voting language options c. Office name d. Contest name, including candidate name in case of retention contest e. Maximum number to vote for each office f. Party affiliation g. Number of eligible registered voters at the precinct h. Number of active registered voters at the precinct.	1	Electionware is able to import Languages; Parties; Precincts; District types/Districts; Offices/Contests; Questions; Candidates; Poll Places, Registered Voters, Precinct/Poll associations; Precinct/District associations; and translations. All of the attributes associated with this data, including alternate IDs; candidate full name, candidate sequence, ballot text, and vote-for can be included in the import or is automatically generated from the import data. Electionware supports updating registered voters for ballot determination and ERM allow updates of this information for use in turnout statistics calculation.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM A – ELECTION MANAGEMENT SYSTEM (EMS)				
Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Election Creation	A-11	Be able to export electronically to the Secretary of State and counties in an agreed-upon format that contains, at a minimum, the following information: a. Full candidate name b. Office name c. Contest name d. Number of votes for each candidate and ballot question e. Number of votes against each ballot question f. Number of undervotes in each contest g. Number of overvotes in each contest h. Number of people voting by precinct and by party affiliation (if applicable) i. Number of registered voters at the precinct level (by party affiliation, if applicable)	1	ES&S's state export files meet this requirement and can be customized if need be.
Election Creation	A-12	Allow EMS authorized users the ability to create custom voter instructions that may include images.	1	Administrative users may add authorized users with various functional options (Administrative, General User, Ballot Producer, Media Creator, Ballot Image Reviewer). Using Paper Ballot, an authorized user can apply voter instructions and graphic images to the ballot as needed. Users can customize the placement, font and wording. Paper Ballot allows the flexibility of using many different graphic files (*.bmp, *.jpg, *.gif, *.png, *.tif, etc). Users can also adapt voter instructions on the Accessible Ballot. Instructional wording such as **"Please insert ballot"** and other voter directions can be edited. Additionally, users may import custom graphics that will appear on the top of the DS200 and AutoMARK screens.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM A – ELECTION MANAGEMENT SYSTEM (EMS)				
Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Election Creation	A-13	Provide the flexibility to have an election created by an authorized user (vendor, county, state or other third party) and import or export as necessary.	1	An election created by a third party can be imported into the EMS, using the published import file specification. Data export is customizable and very flexible.
Election Creation	A-14	Accommodate multiple languages (English and Spanish required). **Note:** Please explain the capabilities of your system to handle multiple languages.	1	Electionware can accommodate multiple languages such as English, Spanish, Chinese, Korean, and Japanese. Users can display various languages based on the precinct level. For example, a jurisdiction could ensure certain precincts have English only whereas other precincts have English and Spanish. Multiple audio languages are supported (Chinese Mandarin and Chinese Cantonese). Translations can be imported similar to English data import, or users can enter all English data (contests, districts, referendum) and create a Ballot Translations spreadsheet. This spreadsheet is then translated by the jurisdiction or a professional translation service, and then easily imported into Electionware. The DS200 and AutoMARK will display language choices based on the election setup. The audio provided to the voter matches the language selected. Audio files for both English and translated languages can be quickly generated using a separate software application, Electionware Toolbox. These are then imported into Electionware in one simple step. Automatic validations for missing translations or audio files are generated prior to burning media for accessible devices.
Election	A-15	Allow for a mock election setup and	1	Prior to the live election, ES&S

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM A – ELECTION MANAGEMENT SYSTEM (EMS)				
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Creation		support for public use prior to the initiation of a live election.		recommends completing a Logic & Accuracy test using pre-marked test ballots to verify that the election definition accurately and reliably reads the pre-marked election test ballots. Test decks created by Electionware Toolbox will contain pre-calculated result totals to verify machine accuracy. Test deck totals are verified against the machine results reports. Once the user is satisfied with the accuracy of the voting machine, the test results are cleared from each DS200 Election USB flash drive prior to poll opening.
Election Creation	A-16	Allow for precinct numbers containing at least 10 digits/characters.	1	Precinct numbers assigned by the State may be up to 29 alphanumeric characters.
Ballot Creation	A-17	Provide for standard ballot layout prototypes to be edited for ease of election specification.	1	Electionware's Paper Ballot converts the information configured in the jurisdiction's election database into finished ballot layouts. At any time during the ballot creation process, users may save the ballot layout and use as a Ballot Template for future elections. This ensures standard ballot layouts from one election to the next. In addition, Electionware's Paper Ballot module provides a Best Practices ballot template as one ballot layout option. The best practices ballot template incorporates guidelines from EAC's "Effective Designs for the "Administration of Federal Elections Section 3: Optical scan ballots."
Ballot Creation	A-18	Provide an authorized user the ability to customize the standard ballot layouts.	1	Authorized users may edit the ballot layouts at any time. They can also create as many ballot templates as needed for future elections.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM A – ELECTION MANAGEMENT SYSTEM (EMS)				
Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Ballot Creation	A-19	Provide software capability for authorized users to create newly defined ballot layouts. The system will be designed so as to facilitate error-free definition of ballot layouts for electronic voting equipment and paper ballot optical scanning equipment. For example, the system should have the capability to report discrepancies between ballot layouts.		Our Election Management System software, Electionware, allows for one election setup to apply to multiple equipment types. Also at any time during the ballot creation process, you may create an Election Template that may be applied to future elections. These features allow consistency in ballot layout and equipment. Electionware ensures that the same election data displayed on the paper ballot is used for the Accessible Ballot. This alleviates discrepancies between the multiple equipment layouts.
Ballot Creation	A-20	Allow for creation of two-sided and multi-page ballots. **Note 1:** Please explain how your system handles the creation of multi-page ballots. **Note 2:** Please explain any built-in control your system has for preventing bleed-through ink from erroneously marking votes on both sides of a two-sided ballot.	1	**Note 1:** Electionware's Paper Ballot is used to create ballots. It allows multiple ballot sheets or pages. To add another sheet, the user would enter the Ballot Setup screen and simply select "Add" in the Ballot Sheets section. Different instructions and precinct/ballot style identifiers can be displayed on each sheet and side of the sheet. Contests and referendum can flow naturally from one side and sheet to the next, or they can be set to a specific side and sheet. **Note 2:** ES&S highly recommends the BIC Grip Roller Ball 0.7mm tip-Black (ES&S P/N 6100) pen for ballot marking ballots tabulated by the DS200. This pen dries quickly, is good for write-ins, the tip does not dry out, and it produces a solid mark without smearing or ballot bleed through.
Ballot Creation	A-21	Have the capability to reprogram, download, and reinstall a ballot for an electronic voting device or paper ballot optical scanner. **Note:** Please explain the process and procedure, with time frames, required to reprogram, download, and reinstall a ballot	1	In the event of a contest or candidate name change, since Electionware is a single database, the modification would be a single entry change. The paper ballots would then be

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM A – ELECTION MANAGEMENT SYSTEM (EMS)				
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		on the voting device in the event that there is a change to a name or contest on the ballot in the final few weeks before an election.		reprinted and any audio changes for the AutoMARK could be added. The media for the optical scanner and AutoMARK can be repackaged. Any previously packaged media would be displayed with a visual reminder if it has not been repackaged. Authorized users may also review the Media Creation Log Report. ES&S's general timeline for election preparation is as follows: **90 Days** - Submit site support request to ES&S **63 Days** - All forms are due to ES&S (excluding Candidate forms) **56 Days** - Candidate forms due to ES&S **46 Days** - Last day to give ballot proofs to Counties (strictly for military or overseas voting) **45 Days** - Absentee Voting begins **42 Days** - Certification Deadline **28 Days** - All ballot proofs must be signed off **21 Days** - Last day to deliver Election Day ballots **20 Days** - Advance or early voting begins **18 Days** - Last day for ES&S to ship coding materials **10 Days** - Software Installation for pre-election procedures **1 Day** - Early voting ends In the event of last minute changes, ES&S can supply revised ballot PDFs within 24 hours for re-approval by the customer. Once new ballots are produced, ES&S can recode and retest within 48 hours to deliver revised tabulator coding. These

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				timeframes can vary depending on the volume and complexity of the changes.
Ballot Creation	A-22	For each election, generate and maintain a contest title and candidate name database and provide for the production or definition of properly formatted ballot layouts for use on paper ballots and electronic voting devices. This database will assist the operator to design and edit ballot layouts for paper ballots and electronic voting devices with a minimum amount of repetitive tasks.	1	ES&S's Election Management System, Electionware, has a single database for the entire election that stores all of the jurisdiction's precinct, office, and candidate information. This data is then used to define the image of the ballot and is also used to display on the equipment printouts as well as for election reporting consolidation and reporting functions. This single method of data entry ensures that the same information is used throughout the election process. All paper ballot layout information is transferred to the accessible ballot layout, so there are no repetitive layout actions required. Electionware also protects against improper data entry or retrieval. Data is verified for correctness at the time it is either imported or entered and during the setting of ballot styles and positions. Many tasks are automated within Electionware. Contests are automatically generated based on party or district. Translations and audio files are imported with one simple step. Changes to ballot layout are automatically extended to all ballot styles impacted by the change. Text editing on the paper ballot layout screen automatically updates the database and other Electionware Modules. Deletion of a data element automatically includes all child elements. Repetitive tasks are streamlined or eliminated wherever possible.

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Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Ballot Creation	A-23	Provide a mechanism for the definition of the ballot, including the definition of the number of allowable choices for each office, contest, measure, and for special voting options such as write-in candidates. **Note:** Please state your solution's maximum number of potentially active voting positions (arranged to identify party affiliations if a primary election), offices and their associated labels and instructions, candidate names and their associated labels and polling instructions, and issues or measures and their associated text and instructions.	1	Ballot Style Generation in Electionware is very flexible, allowing the user to generate by precinct or by style and with or without grouping of splits. Electionware allows for each contest to independently contain its own number of allowable voter choices (Vote For Number). The description of each office's Vote For Number on the ballot can be entered once for all similar offices to alleviate duplicate data entry errors or each office's Vote For Phrase can be modified individually. This allows the flexibility needed for Jurisdictions to set up their ballots as required. The number of allowable choices for any type of contest is 175.
Ballot Creation	A-24	Provide for the retention of previously defined ballot layouts.	1	Previously defined ballot layouts are retained by using Paper Ballot Templates which can be saved at any time during the ballot layout process. Templates saved to a file may be applied to any other election. Additionally, multiple layouts for each election may be saved in the Electionware database. Paper Ballot Templates provide a convenient method of retaining previous election information.
Ballot Creation	A-25	Provide for the modification of previously defined ballot layouts, subject to additional security requirements, after an election has been defined.	1	Once a ballot layout has been defined and backed up, in order to restore the election, the user must enter a valid Restore Code. This can assist in creating additional security necessary to restore a previously defined election.
Ballot Creation	A-26	Provide for all voting options and specifications as provided for in the Colorado Revised Statutes, including the	2	The Electionware system provides full support for all voting options with the

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Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
		requirements for a recall election and instant runoff voting (IRV) (section 1-7-1003, C.R.S.). **Note:** Ranked Voting Methods, including IRV, are currently features used in local jurisdiction elections and not at the State or County level. However; since counties often conduct elections for local jurisdictions, please explain the capabilities of your system to create and process a ballot that contains one or more contests requiring a ranked voting and tabulation process.		exception of IRV. ElectionWare does enable IRV contest ballot layout, and after results are collected it generates an Microsoft Excel spreadsheet with Cast Vote Record (CVR) information. The IRV algorithm can be applied to the CVR export to determine contest winners when needed.
Ballot Creation	A-27	Generate sample ballots for each ballot style that will not be accepted or counted by a scanner.	1	Authorized users can edit the **Ballot Setup** feature in Paper Ballot and remove the Code Channel to create sample ballots. Without the Code Channel, the optical scanner will not process a paper ballot.
Ballot Creation	A-28	Generate a consolidated sample ballot containing all races, issues and questions.	2	This function is not currently supported in an automated fashion, but is planned for a future release. It could be accomplished manually by using a duplicate election database, by having a single precinct assigned to all the active districts in the election. This will create a consolidated ballot style containing all the contests in the election.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM A – ELECTION MANAGEMENT SYSTEM (EMS)				
Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Ballot Creation	A-29	Produce ballot content output for paper ballot printing, with the following capabilities: a. Accommodate non-proprietary print-ready format (e.g. PDF). b. Accommodate multiple stub sizes within same election. c. Accommodate multiple stubs on a ballot. d. Accommodate variable paper ballot stub sizes up to three inches. e. Customize paper ballots with sequential numbering and static fields on ballot stubs. f. Handle multiple font features. g. Handle special character sets associated only with non-English languages. **Note 1:** Please provide your ballot size capabilities and layout options. **Note 2:** Please provide information about your system's font capabilities (e.g. typefaces, sizes, kerning and leading, color, bolding, underscoring, and italics).	2	ES&S Electionware's PaperBallot module can accommodate all requirements except different stub sizes within the same election. Electionware provides you almost unlimited flexibility in the design and layout of your optical scan paper ballot. The ballot can be designed in grid landscape or portrait as well as the traditional multi-column portrait ballot. In a column portrait format, users can create various size columns. For example, ballot sides can be set to 1, 2, 3 or 4 columns wide. They can have some narrow columns mixed with a wider column. **Note 1:** ES&S tabulators support a variety of ballot sizes that include: 8.5" x 11", 8.5" x 14", 8.5" x 17", and 8.5" x 19". **Note 2:** Users may utilize any font saved on their system and set to any size needed. Various ballot contents can utilize kerning (both positive and negative) plus different formats such as bold, underscoring and italics or any combination.
Ballot Processing	A-30	Output ballot content to an election media device for use in equipment (electronic voting devices, scanners, tabulators, etc.).	1	Electionware's Package module saves the election definition to the appropriate media (thumb drive for optical scanner, compact flash for AutoMARK).

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Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Ballot Processing	A-31	Output ballot content to accommodate accessible voting, including adjustable audio and visual output. **Note:** Please detail capacity limits of data fields for accessible voting (e.g. font sizes, display options).	1	Electionware automatically lays out the accessible ballot based on ballot content on the Paper ballot. The user can override the text color (Amber, Black, Blue, Green, Red, White), font attribute (Bold, Normal) and text justification (left, center, right). Each language has a specific font assigned for it. Data field capacity limits are also handled on the device by truncating character strings if necessary. The EMS provides a validation and warning for data field limits.
Ballot Processing	A-32	Allow authorized users to electronically adjudicate ballots to reflect voter intent, while retaining the originally marked ballot image. **Note:** Please explain the process of ballot adjudication using your system.	3	Electronic Adjudication is not currently supported but is planned for a future release. Ballot images and cast vote records can be viewed and filtered (by precinct, poll, machine, write-ins, ballot exceptions, etc.) in Electionware's Produce module; some jurisdictions currently use this function for write-in accounting. Functionality also exists to export the ballot images and cast vote records, as well as the machine logs that accompany the results data into Electionware.
Vote Results Reporting	A-33	Report vote tally results by individual voting device. **Note:** For the purposes of this RFP, the Vote Results Reporting requirements are shown as part of the EMS. Some vendors may have a reporting module that is considered separate from their EMS and, if so, can explain that in their response to this requirement.	2	Individual machine reports can be derived in Election Reporting Manager if the election is specifically configured for that purpose; however machine level results are also available from the machine itself. Future reporting software will allow machine level reporting from the EMS.
Vote Results Reporting	A-34	Report vote tally results by contest jurisdiction-wide.	1	The Election Reporting Module allows for vote tally results by contest in an Election Summary Report.

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Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Vote Results Reporting	A-35	Report vote tally results by contest by precinct.	1	The Election Reporting Module allows for vote tally results by contest by precinct in a Precinct Summary Report.
Vote Results Reporting	A-36	Report the total votes for each candidate for each contest, as well as by candidate by precinct.	1	The Election Reporting Module allows for vote tally for each candidate in an Election Summary Report. Using the same module, the Precinct by Precinct report provides vote tallies for candidates on a precinct by precinct basis. Additionally, the DS200 report tapes printed after poll closing will provide a precinct by precinct breakout of candidate totals.
Vote Results Reporting	A-37	Report vote tally results by voting location.	2	The current version of Election Reporting Manager can report ballots by precinct. Each precinct is linked to a voting location or poll. Users can have one or more precincts in a poll. If a user would like to break out results by a certain poll, they can run a report selecting the appropriate precincts; however, the poll or voting locations do not have an automatic report in Election Reporting Manager. Reporting automatically by voting location or poll will be included in future releases.
Vote Results Reporting	A-38	Report vote tally results by ballot source (e.g. Early Vote, Election Day, Mail, and Provisional).	1	The Election Reporting Module allows for the creation of user defined individual groups. When reporting, the system can break out results tallies by the user defined group names (e.g. Early Vote, Election Day, Mail, and Provisional).

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM A – ELECTION MANAGEMENT SYSTEM (EMS)				
Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Vote Results Reporting	A-39	Report votes by ballot style.	2	The current version of Election Reporting Manager can report ballots by style, but only if there is one ballot style per precinct. Vote counts by Ballot Style are currently available in data exported from Electionware, and can be extracted and consolidated from the export using other tools. This feature will be included in reporting software in future releases.
Vote Results Reporting	A-40	Report votes by ballot batch.	3	This function is not currently supported but is a potential future enhancement. It can be accomplished manually on the tabulator by clearing results after each batch report is run.
Vote Results Reporting	A-41	Report votes by ballot style within precinct.	2	The current version of Election Reporting Manager can report ballots by style, but only if there is one ballot style per precinct. Vote counts by Ballot Style by Precinct are available in data exported from Electionware currently, and can be extracted and consolidated from the export using other tools. This feature will be included in reporting software in future releases.
Vote Results Reporting	A-42	Report undervotes and overvotes in each contest, with the option to exclude from reports.	1	The Election Reporting Module allows for reporting undervotes and overvotes in the Election Summary report. The reporting of undervotes and overvotes can be enabled or disabled through the reporting options.

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Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Vote Results Reporting	A-43	Provide the capability to report ranked-choice voting results.	1	Electionware enables the use of RCV voting with integrated support for ballot layout and CVR (cast vote record) generation upon tabulation. Post tabulation and results collection, ElectionWare exports an Excel file containing all CVR candidate selections. The RCV algorithm can be externally applied to determine contest winners when needed.
Vote Results Reporting	A-44	Report a summary of results in addition to the detailed Statement of Votes Cast reports.	1	The Election Reporting Module provides a complete summary of election results. Additionally, the summary report also contains a total for ballots cast during the election.
Vote Results Reporting	A-45	Report certified write-in candidate results in each contest with the ability to exclude from reports.	3	This feature is not currently supported, but will be included in future releases.
Vote Results Reporting	A-46	Import election night voter registration counts for Active and Total voters and report percent turnout relevant to vote tally for both Active and Total registrations.	2	The Election Reporting Manager allows for the import or manual entry of registered voter totals by precinct and reports turnout percent for that count, whether active or total, but only provides one turnout statistic. Future versions will support additional statistics.
Vote Results Reporting	A-47	Report and export each report in either PDF, XLS, TXT, EML, or CSV formats. **Note:** Please identify the formats available in your system.	2	Reports can be saved as HTML, LST and TXT formats. Users may create an XML file. In addition, by using the TXT file created by the system, you have the ability to convert the format to many of the formats listed (PDF, XLS, TXT, EML, or CSV). Although the (.eml) format is not currently supported in current versions, it may be included in future releases.

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Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Vote Results Reporting	A-48	Provide for Zero reports to be printed prior to first upload of voting results.	1	The Election Reporting module has the ability to print zero reports prior to the upload of voting results. Additionally, the DS200 can provide up to nine zero reports prior to being used for Election Day voting. Note that the number of zero reports produced by the DS200 is user defined.
Vote Results Reporting	A-49	Allow the capability to select any combination of reports to be run and logged at any time permissible.	1	The Election Reporting Module can be utilized to produce any combination of reports at any time as long as the production of said results is permissible. Report actions are logged.
Vote Results Reporting	A-50	Provide customization of report headers (e.g. "Unofficial" or "Final Unofficial"), contest labels and print layout. **Note:** Please explain any character limitations imposed by your system on labeling, reporting or exporting.	1	The Election Reporting Module allows for the customization of headers and/or contest labels. Report layout can be customized to include one or two columns. Character limits for the report headings are 30 characters per line for the right heading, the center heading, and the left heading. The center heading may contain up to three lines, and the right and left headings may contain up to nine lines.
Vote Results Reporting	A-51	Include creation date, time, and page numbers on all reports.	1	The Election Reporting Module includes the time, date, and page numbers on all reports.
Vote Results Reporting	A-52	When the total number of votes cast by voters on a specific ballot style/precinct or with a particular voting method or at a particular voting location is less than the currently allowed threshold of ten, the vote tallies for all such subgroups are to be reported in aggregations such that each category always contains at least ten, per section 1-8-308(b), C.R.S. This is also applicable to property owner ballots. **Note:** Please explain how your system will accommodate this requirement for all	2	This feature is partially supported using script files to control the precincts included in specific report types. When any results report is initiated, the user has the option to specify the contests to be included, the precincts to be included, or both. This is done via radio button selection and dropdowns on the tab are displayed when the report is selected. If the same sets of contests and/or

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Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
		reports to maintain voter privacy.		precincts are repeatedly used, instead of entering the information several times, the user can set up a new report template or select an existing one previously set up. The file can also contain customized report headers. These files, generically named script files, are the A01 files. Using this capability, the user can suppress printing of specific precinct reports and print summaries of the suppressed precinct results with titles to identify the content.
Vote Results Reporting	A-53	Allow the minimum threshold number of votes to be changed if the legal requirement changes. This requirement refers to section 1-8-308(b), C.R.S.	2	This is partially supported using script files for controlling the precincts included in specific report types and by printing replacement summary reports as described in A-52. Since this use of the threshold is not controlled by the system, handling a change in threshold only affects the user report control procedure.
Vote Results Reporting	A-54	Be able to include or exclude property owner ballot results from reports.	2	The Election Reporting Manager can exclude or include different precinct results. If the property owner ballots are tabulated as a separate precinct, this functionality would be considered to be currently supported.

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Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Vote Results Reporting	A-55	Provide an option to suppress a race or candidate from all reports, when either is withdrawn from the ballot.	2	The Election Reporting Module allows for the suppression of races or precincts from reports. For candidates, the timing of the candidate withdrawal impacts the actions available. If a candidate withdraws from a given race, and ballots can be re-printed, the candidate can be removed in Electionware and, by extension, in the tabulators. After final ballot printing, the candidate name may be manually removed from reports in Election Reporting Manager, and if there are votes, those votes can be manually removed or re-assigned as undervotes.
Vote Results Reporting	A-56	Provide an easily readable method to identify the candidate(s)/measure with the most votes in each contest. If more than one winner is possible, identify all winners. **Note:** Your system should have this feature as an option, so not used on partial results reports.	1	In the Election Reporting Module the user can select an option for the report to show candidates in vote order with percentages for each candidate. The Election Reporting Module also displays contest results in real time with contest leaders highlighted.
Vote Results Reporting	A-57	Have the capability to report political party designation for each candidate for partisan elections.	1	The Election Reporting Module produces a summary report that contains political party designations as well as candidate party affiliations. This information is also included in other reports produced by the system, such as the Precinct by Precinct report.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM A – ELECTION MANAGEMENT SYSTEM (EMS)				
Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Import/Export	A-58	Import/export ballot information and voter registration information files to be exchanged from/to Colorado's centralized statewide voter registration database (SCORE).	1	The Election Reporting Module's EXP utility is capable of producing a file that can be utilized by the State's voter registration database. Electionware can accept data from any third party system, and incorporates the use of alternate IDs for all major election data elements for this purpose. This import includes robust data validation and detailed indications at the import file line level for any potential data issue.
Import/Export	A-59	Display detailed upload status for each portable vote storage media unit (e.g. memory card) by polling location and counting center. **Note:** For example, users should be able to visually confirm an exact match between the physical portable vote storage media unit being uploaded and the unit identified by the EMS. (e.g. If an authorized user is uploading "Polling Location A, Memory Card 01", onscreen the user should be able to visually confirm that the system is uploading "Polling Location A, Memory Card 01." Please explain how your solution handles this scenario.	1	When Election Media is imported into the Election Reporting Module, the system confirms that the media device inserted into the computer is from the appropriate precinct by displaying the precinct number, number of votes, and time stamp on the screen. Additionally, Electionware continuously receives data from ERM and has enhanced media tracking information, including Poll Place, Device (Machine) Type, Media ID, Machine Serial Number, Loaded Media Time, Number of Sheets, Media Serial Number, Status (media upload), Created, Closed, First Ballot Cast Time, and Last Ballot Cast Time. This information can be exported at any time into an Excel spreadsheet. The Acquire module also includes status reports for DS200 transmitted results; and DS850 Networked results.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM A – ELECTION MANAGEMENT SYSTEM (EMS)				
Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Import/Export	A-60	Prevent the upload of wrong or duplicate portable vote storage media units. **Note:** Please explain your system's safeguards against errant or multiple uploads from portable vote storage media units and how to correct the problem if it should happen.	1	If incorrect or duplicate data is inserted into the Election Reporting PC, the system alerts the user immediately. In the case of incorrect data, the database is programmed to only accept election data from the election in question. Although this situation would be extremely rare (given that an incorrect election would typically be unable to count ballots from another election) the user would need to verify the election data present on the media, and if verified incorrect, insert the correct media into a machine and recount the ballots from the affected precinct. Once this process was completed, the correct media could be inserted in the ERM PC and reported normally. Where duplicate data is concerned, this situation is normally prevented by the fact that ERM processes and recognizes duplicate election data via the machine ID. If in the event two media devices are used on the same machine and in the same election, the information could be updated manually within ERM.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM A – ELECTION MANAGEMENT SYSTEM (EMS)				
Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Import/Export	A-61	Produce and print a list, at any time in the process, showing which portable vote storage media units have and which have not been uploaded.	1	The Election Reporting Module can provide a list of which precincts have been uploaded through the **Precincts Counted, Not Counted** report. This report displays the full list of precincts counted, as well as those not yet counted by the system. The precincts processed listing provides a listing of the machine serial numbers along with the precincts. In Electionware an extensive amount of additional information can be reported real-time; including: Poll Place, Device (Machine) Type, Media ID, Machine Serial Number, Loaded Media Time, Number of Sheets, Media Serial Number, Status (media upload), Created, Closed, First Ballot Cast Time, and Last Ballot Cast Time. This information can be exported at any time into an Excel spreadsheet. The Acquire module also includes status reports for DS200 transmitted results; and DS850 Networked results.
Import/Export	A-62	Save a report to a local or portable drive for transfer to a networked computer in a non-proprietary format.	1	The Election Reporting Module is able to produce reports in various formats. By copying the report file (.txt, .cvs, or .htm), the user can place the report onto a portable media device or networked drive, and the information can then be loaded on that device for use in a non-proprietary environment. All Electionware reports can be saved to any location.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM A – ELECTION MANAGEMENT SYSTEM (EMS)				
Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Import/Export	A-63	Display error messages and instructions to recover during importing and exporting operations.	1	The Election Reporting Module provides various error and instructional messages to the user through all aspects of the reporting process. These messages provide information regarding the nature of the message, as well as instructions for making corrections or necessary actions that must be taken. Electionware also includes extensive and detailed validation during date import and export. For instance, election data import validation describes the issue, and the line number of the import file where the issue exists.
Data Storage and Processing	A-64	Maintain election data in a secure environment. **Note:** Please describe how EMS data is stored and secured from unauthorized access and/or manipulation.	1	Both the Electionware and Election Reporting Manager systems are hardened systems that are separated from both public internet and network access (unless otherwise stipulated). Because these systems are additionally password protected via Microsoft Windows as well as the Electionware and ERM programs, as long as security protocols are adhered to, the systems are protected from unauthorized access or manipulation.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM A – ELECTION MANAGEMENT SYSTEM (EMS)				
Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Data Storage and Processing	A-65	Provide the capability for counties to upload, from election media, externally created election setup data.	1	The Electionware EMS provides the ability to upload election data from an external source. If appropriately formatted, the system is capable of importing files containing information such as contests, candidates, parties, and other pertinent election information. Electionware may be used externally and each election may be backed up to an EZIP file and restored on a different computer using the same version of Electionware.
Data Storage and Processing	A-66	Provide a means to upload vote count results to the EMS from vote collection/tabulation equipment.	1	All tabulation results can be uploaded to the Election Reporting Module directly from the poll media. Future versions will include both wireless and landline modem transmission capabilities. Electionware's Acquire Module is then set-up for real-time updates from the Election Reporting Module, which allows the user to use the data, cast vote records, and ballot images to adjudicate the election results. Optionally, ballot images can be brought into Electionware at a later time.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM A – ELECTION MANAGEMENT SYSTEM (EMS)				
Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Data Storage and Processing	A-67	Provide statistics of batches (e.g. number of ballots in each batch, number of batches pending, number of batches deleted, and number of batches saved). **Note:** Does your system have a batch size and/or number of batches limitation and, if so, what is it?	2	Users currently use media to separate and manage batches. They may save to as many USB media as required. Batch handing statistics enhancements will be introduced in future releases. Users currently use media to separate and manage batches. They may save to as many USB media as required. Batch handing statistics enhancements will be introduced in future releases. Even though there are not specific batch totals tracked when updating results from media, for each precinct whose results are updated from a given media, ERM logs the number of ballots added from the media and the new total number of ballots in the group from that precinct. This allows the number of ballots in the results updates to be tracked.
Data Storage and Processing	A-68	Have the ability to delete saved ballot batches from the system. **Note:** Please explain how your system manages batch accountability identification.	2	Users can choose to process or not process a batch of ballots that is saved to a USB media. Because batches are currently tied to media, identification is tied to media ID. I n future versions the media (batch) can be removed from the results by media stick.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM A – ELECTION MANAGEMENT SYSTEM (EMS)				
Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Data Storage and Processing	A-69	Have data backup capabilities. **Note:** Please explain any system data backup capabilities and protocols within your system.	1	The Electionware EMS has inherent options that allow for the backup and restoration of the election database. Using the **Backup Election** and the **Restore Election** options, you have the ability to backup and/or restore your election at any time. Although the Election Reporting Module does not contain a specified backup feature, the election information can be backed up by zipping up the appropriate election data from the "elecdata" folder of the reporting PC. Restoration is possible through extracting the appropriate election data to the elecdata folder.
Data Storage and Processing	A-70	Have redundancy capabilities. **Note:** Please explain any general and real time redundancy features.	1	Data redundancy is accomplished via backups. The data is also stored on the USB media. The paper ballot is another form of saved data. Additionally, Electionware can be configured in a client/server set-up, allowing several clients to manage/process data at the same time, for example, burning election media.

Section 12.0 - UVS System Requirements Table: Appendix B, Section B – Polling Location Ballot Scanning and Tabulation Equipment

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM B – POLLING LOCATION BALLOT SCANNING AND TABULATION EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**

Scanning	B-1	Accurately capture votes from paper ballots.
		Note 1: Please indicate the speed of your polling location ballot scanner.
		Note 2: Please describe how acceptance/rejection criteria for ballot marks are established for your polling location scanner.
		Note 3: Please explain how your polling location scanner is impacted by ballots containing fold creases or other irregularities.
			1	**Note 1:** The DS200 Precinct Scanner Tabulator completely processes a ballot in six seconds or less.
				
				Note 2: The DS200 can be programmed to accept, query the voter, or reject voted ballots that contain the following criteria:
				■ Overvoted contests
				■ Undervoted contests – can be set for some or all of the contests
				■ Blank
				■ Crossover (Open Primaries)
				■ Write-ins
				  ○ Oval Marked
				  ○ Oval Not Marked
				■ Unclear Marks
				
				The DS200 also rejects unreadable, invalid, and multifed ballots.
				
				Note 3: The DS200 has been uniquely designed to accept ballots that have been folded, ballots with stubs torn off, and otherwise damaged ballots. The paper transports on the scanner safely guide folded ballots through the read heads to avoid paper jams or misreads.

Scanning	B-2	Notify the voter or an authorized user of errors before accepting the ballot.	1	Error messages requiring intervention by an operator or precinct official are displayed unambiguously in easily understood text on the DS200's 12" LCD touch screen. The display gives the voter clear feedback and instructions on errors

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM B – POLLING LOCATION BALLOT SCANNING AND TABULATION EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				and allows them to cast the ballots as-is or return the ballot to be corrected or spoiled.
Scanning	B-3	Accept overvoted ballots, upon review, in a manner that allows the voter to review each case of an overvote, one case at a time, and to provide clearly understandable options to further review the ballot, or cast the ballot without further review if the voter chooses not to ask for a replacement ballot.	1	Please see the Section B Additional Comments section for response.
Scanning	B-4	Accept undervoted ballots, upon review, in a manner that allows the voter to review each case of an undervote, one case at a time, and to provide clearly understandable options to further review the ballot, or cast the ballot without further review.	1	Please see the Section B Additional Comments section for response.
Scanning	B-5	Handle, and reliably account for, multi-page ballots, including when the pages become separated from each other. Count votes regardless of the sequence that pages are scanned or if some pages are not scanned. **Note:** Please explain how your system reliably accounts for multi-page ballots, including when the pages become separated from each other.	1	The DS200 scans all ballot pages independently and is not sensitive to page order or missing pages in a multipage ballot.
Scanning	B-6	Display a Public Counter, which shows the number of ballot pages processed.	1	Please see the Additional Comments section for response.
Scanning	B-7	Display a Protective Counter showing the count of all ballot pages processed on the equipment, which is not reset after an election.	1	Please see the Additional Comments section for response.
Scanning	B-8	Accept ballots in any of the four possible orientations.	1	The DS200 is capable of scanning ballots in any orientation (portrait, landscape, backwards, upside down, etc.). In fact, the DS200 will scan ballots with opposing orientations (i.e. portrait on the front side and landscape on the back of the ballot). Both sides

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM B – POLLING LOCATION BALLOT SCANNING AND TABULATION EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				of the ballot are processed simultaneously with high-resolution scanners and the resulting ballot images are decoded by a proprietary recognition engine. Once voter selections are processed, the ballot is dropped into a secure ballot box.
Hardware	B-9	Display the unit serial number(s) of tabulation devices both physically and within any applicable software, logs, or reports.	1	Each scanner has a unique serial number both physically affixed to the outside of the unit and programmed into the unit making it available to the scanner firmware. This serial number is reported as part of the various reports generated by the scanner, including the configuration, results, and audit reports as well as included in the logging function. The serial number is also part of the results data written to removable media and is then consumed by the EMS reporting software.
Tabulation	B-10	Have the ability to write cast vote records to an election media device during operation that the EMS can disallow from being tabulated prior to the close of polls on Election Day. **Note:** Please describe the security your equipment provides for ensuring media is not removed until procedurally authorized.	1	Please see the Section B Additional Comments section for response.
Tabulation	B-11	Provide a secure means to upload vote count results to the EMS.	1	Results data is encrypted and signed and can be delivered using the USB media device. In addition, the DS200 handles secure data transmission via landline modem or one of 3 wireless providers (AT&T, Verizon, & Sprint).

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM B – POLLING LOCATION BALLOT SCANNING AND TABULATION EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Error Handling	B-12	Identify and reject ballots that are not valid. **Note:** Please explain how your system identifies ballots that have been printed on nonstandard paper or on a home printer.	1	The ES&S ballot uses a code channel with the particular ballot styles and or precincts that are valid for a particular election. Ballots that do not have valid code channel values for the particular election are sorted as invalid ballots.
Transportability	B-13	Be easily transported by one person. **Note:** Describe the transportability characteristics of your equipment (e.g. weight, width, height, wheels).	1	Please see the Additional Comments section for response.
Supplies	B-14	Provide dust-and-moisture-proof covers for transportation and storage purposes. **Note:** Please describe your equipment covers.	1	Please see the Additional Comments section for response.

Section 12.0 – UVS System Requirements Table: Section B – Polling Location Ballot Scanning and Tabulation Equipment, Additional Comments

Req. ID B-3 Accept overvoted ballots, upon review, in a manner that allows the voter to review each case of an overvote, one case at a time, and to provide clearly understandable options to further review the ballot, or cast the ballot without further review if the voter chooses not to ask for a replacement ballot.

ES&S Response

The DS200 indicates to the voter each contest that is overvoted and can report multiple conditions with multiple contests to the voter. An example would be a ballot that has two overvoted contests and three undervoted contests. The ballot can be cast as is or returned to the voter to correct or request a replacement ballot.

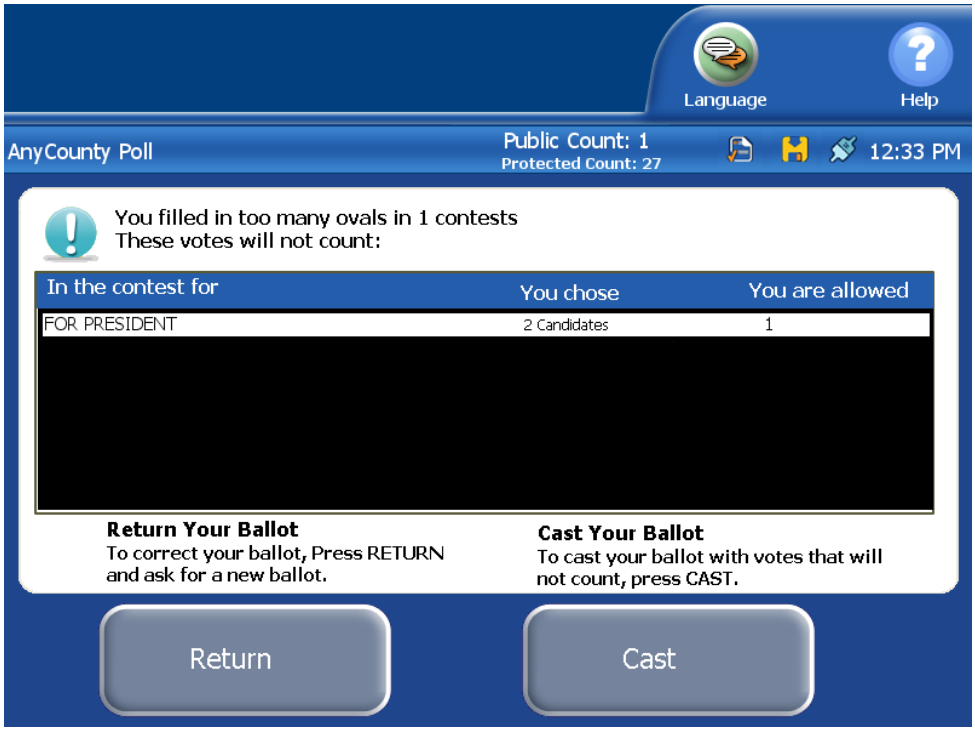


Figure 12.B1 DS200 Overvote Screen

Req. ID B-4 Accept undervoted ballots, upon review, in a manner that allows the voter to review each case of an undervote, one case at a time, and to provide clearly understandable options to further review the ballot, or cast the ballot without further review.

ES&S Response

The DS200 indicates to the voter each contest that is undervoted and can report multiple conditions with multiple contests to the voter. An example would be a ballot that has two overvoted contests and three undervoted contests. The ballot can be cast as is or returned to the voter to correct or request a replacement ballot.

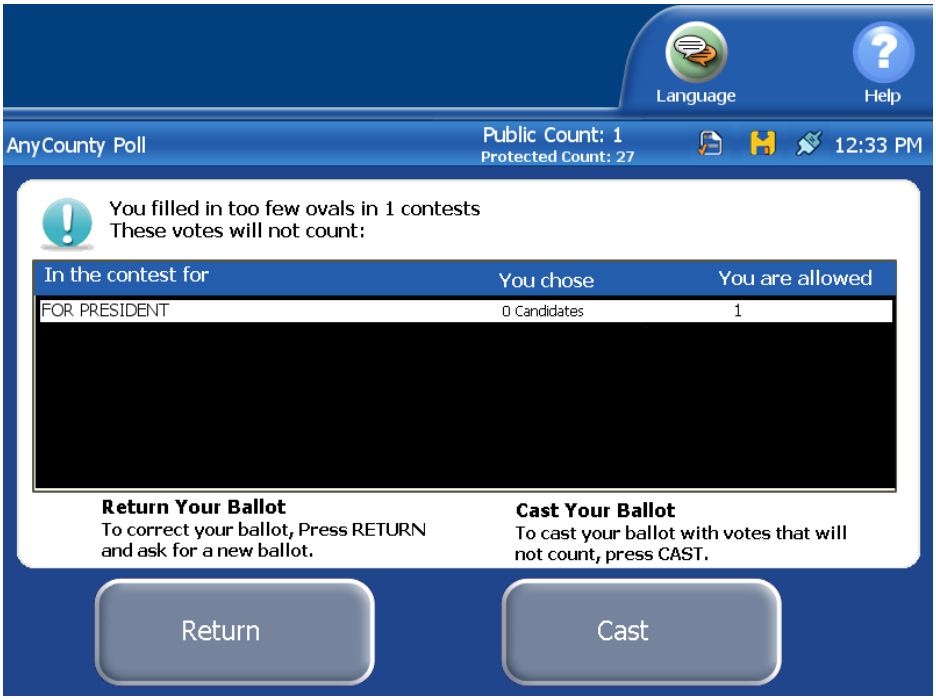


Figure 12.B2 DS200 Undervote Screen

Req. ID B-6 Display a Public Counter, which shows the number of ballot pages processed.

ES&S Response

The DS200 has a public counter conveniently located on the large LCD display screen. After the DS200 scans and securely stores a marked paper ballot, the system displays a confirmation message for the voter and then increments the public counter to confirm that the ballot has been counted and the totals have been added to the USB removable flash drive. See image below showing the location of the Public Count on the DS200.

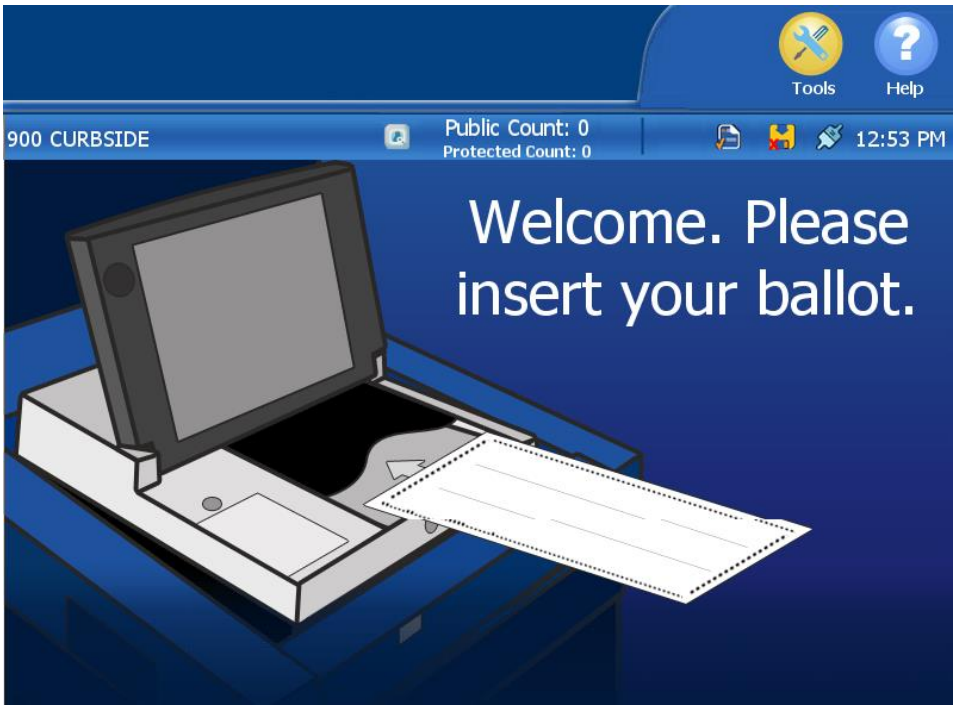
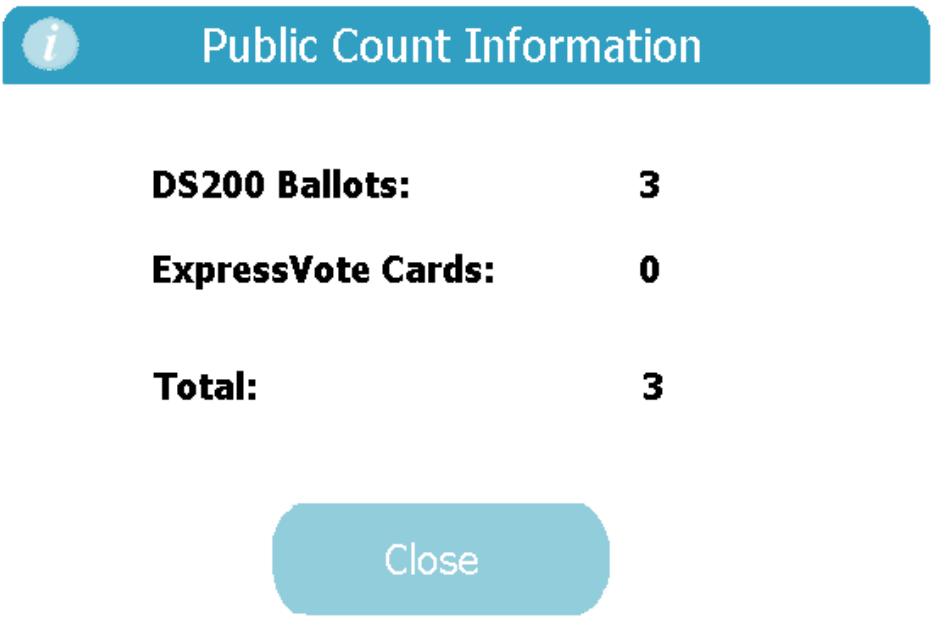


Figure 12.B3 DS200 Welcome Screen with Public Count



Req. ID B-9 Display a Protective Counter showing the count of all ballot pages processed on the equipment, which is not reset after an election.

ES&S Response

Yes. In addition to the public counter, the DS200 has a life cycle counter ("Protected Count") that is required by the EAC Voluntary Voting Systems Guidelines (VVSG). The Protected Count is not resettable and it measures the number of ballot pages accepted by the machine during its entire lifetime of use.

See the image in Req. ID B-6 showing the location of the Public and Protected Count on the DS200.

Req. ID B-10 Have the ability to write cast vote records to an election media device during operation that the EMS can disallow from being tabulated prior to the close of polls on Election Day.
Note: Please describe the security your equipment provides for ensuring media is not removed until procedurally authorized.

ES&S Response

Vote data is not readable by the EMS prior to the close of polls on the DS200.

Note: Physical access is controlled using lockable, sealable access doors behind which the USB media resides on the DS200. The USB flash drive containing the election definition and election totals is secured under a locked and sealed panel. A provision for a wire seal within the USB port provides an additional level of security. The DS200 also has the capacity for redundant storage of Election Day information. The USB flash drive used for redundant data storage is located in the back of the machine, and is sealed under a locked panel prior to Election Day.

Figure 12.B4 DS200 Seals

Req. ID B-13 Be easily transported by one person.
Note: Describe the transportability characteristics of your equipment (e.g. weight, width, height, wheels).

ES&S Response

The DS200 has two options for easy transport by a single person. The DS200 can be securely transported in its durable hard shell carrying case, or it can be transported on top the DS200 ballot box as an integral unit.

The DS200 carrying case is a secure, rain and dust resistant durable hard-sided carrying case. This transport case has luggage type wheels and telescoping spring-loaded handle for ease of transport. When transporting in this mode, the combined weight of the combined weight of the DS200 and carrying case is 52 pounds.

Alternatively, the tabulator, case, and ballot box can be delivered as an integral unit and easily maneuvered by a single individual on its wheels. The DS200 ballot box has four heavy duty caster wheels on the bottom and handles on the sides to aid in transporting the box. The DS200 ballot box is designed to be compact, portable, and easy to move. The DS200 ballot box is very durable and can absorb the shocks and impacts that are associated with surface transportation of the equipment. This configuration allows the user to deliver a DS200 to the polling location that has completed L&A testing and has been secured and ready for voting operation. This is the ES&S recommendation for transporting the DS200 to the polling locations. When transporting in this mode, the combined weight of the DS200 ballot box, carrying case, and e-bin is 86 pounds.

The base DS200 unit and transport case specs are as follows:

Voting Equipment/Hardware	Weight (lbs)	Dimensions
DS200	23 lbs. with internal battery	5.5” H (Screen stowed) x 14” W x 16” D
DS200 Storage and Transport Case (serves as top of plastic ballot box)	29 lbs.	27’’x 24”x8

Req. ID B-14 Provide dust-and-moisture-proof covers for transportation and storage purposes.
Note: Please describe your equipment covers.

ES&S Response

The DS200 carrying case is hard-sided, dust and moisture proof for transportation and storage of the unit, which allows for delivery separate from the ballot box or already mounted. The case

will protect the DS200 from water damage during storage, and has passed rain and dust tests in Florida certifications, which are above and beyond any other federal or state requirements. The DS200 carrying case can also be utilized as a storage container for the DS200 during non-election use. The carrying case has a fitted foam insert that snugly houses the DS200 and its power supply; has a telescoping spring-loaded handle, and two wheels for ease of transporting. The case has two large quarter turn clasps and a combination lock for security. The carrying case can be stacked five high.

Section 12.0 – UVS System Requirements Table: Appendix B, Section C – Central Ballot Scanning and Tabulation Equipment

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM C – CENTRAL BALLOT SCANNING AND TABULATION EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Scanning	C-1	Accurately scan paper ballots into identifiable and locatable batches. **Note 1:** Please indicate the speed of your central location ballot scanner. **Note 2:** Please explain how your central location scanner is impacted by ballots containing fold creases or other irregularities.	1	Please see the Section C Additional Comments section for response.
Scanning	C-2	Be capable of establishing single ballot batches.	1	The DS850 is capable of saving a batch with a single ballot.
Scanning	C-3	Retain an electronic image of each voted paper ballot in a non-proprietary format. **Note 1:** Please describe the format(s) you offer for ballot images. Also describe how your system handles adequate resolution of saved images relative to the paper original. **Note 2:** Please describe how each electronic image will retain its relationship to the voted paper ballot and any reduction in resolution or compression used before retention of the image.	1	The DS850 stores the front and back side image in a standard compressed TIFF image that can be viewed using COTS software. The ballot Cast Vote Record (CVR) contains the ballot vote data in a XML file that can be read with a COTS reader. **Note 1:** The image files can also be exported in a .pdf format for archival or public review. **Note 2:** Ballots should be physically stored in batches as scanned by the DS850. A batch report can be attached to batches to indicate the summary contents of the batches. The DS850 uses a G4 (lossless) compression of the native TIFF image from the scanner which causes no reduction in resolution when the image is stored for retention.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM C – CENTRAL BALLOT SCANNING AND TABULATION EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Scanning	C-4	Allow the authorized user to verify ballot quantities counted to ballots provided by batch prior to saving to the system.	1	Ballot counts for each bin are clearly displayed on the DS850 touchscreen display at all times.
Scanning	C-5	Allow the authorized user to verify ballot quantities counted to ballots provided by batch after saving to the system. .	1	After saving, a validation message indicates the number of ballots saved.
Scanning	C-6	Allow the authorized user to rerun a batch of ballots, if necessary, without impacting results to date.	1	Batches can be rerun before they are saved to the system.
Scanning	C-7	Have the ability to logically delete (not physically) saved ballot batches from the system. **Note:** Please explain how your system manages batch accountability identification.	2	The DS850 allows the deletion of ballots from a particular precinct. Deletion of a particular batch is in development and will be part of an upcoming release. The DS850 can automatically print reports that can be maintained with each physical batch and can be used to clearly identify the contents of the batches. Saved Batches are assigned a unique number which appears on batch summary and detail reports which can be printed and maintained with the physical batch of ballots to speed identification and retrieval for audits and recounts.
Scanning	C-8	Identify and segregate ballots or ballot images with overvotes for adjudication. **Note:** Please explain how your central count solution allows for physically locating a specific ballot in a batch of ballots.	1	The DS850 uses three configurable sorting bins to sort out counted or uncounted ballots without stopping or slowing throughput. A bin report reports the reason for each sorted or outstacked ballot down to the contest level for efficient review of the physical ballot. Such a report can be viewed on the screen or printed and sent with the ballots to be reviewed by an election official. Ballots can be sorted and counted or

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM C – CENTRAL BALLOT SCANNING AND TABULATION EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				sorted and not counted. In addition, ballot images can be reviewed in Electionware and filtered to display only ballots containing overvotes.
Scanning	C-9	Identify and segregate ballots or ballot images with write-ins for adjudication.	1	The DS850 uses three configurable sorting bins to sort out counted or uncounted ballots without stopping or slowing throughput. A bin report reports the reason for each sorted or outstacked ballot down to the contest level for efficient review of the physical ballot. Such a report can be viewed on the screen or printed and sent with the ballots to be reviewed by an election official. Ballots can be sorted and counted or sorted and not counted. In addition, ballot images can be reviewed in Electionware and filtered to display only ballots containing Write-ins. Electionware can also output a spreadsheet with an entry for each write-in found with the snippet of the image containing the voters' marks. Finally, the DS850 can optionally identify a write-in for which the oval was not marked.
Scanning	C-10	Identify and segregate, for adjudication, ballots or ballot images that cannot be read.	1	The DS850 uses three configurable sorting bins to sort out counted or uncounted ballots without stopping or slowing throughput. A bin report reports the reason for outstacking down to the contest level for efficient review of the physical ballot. Such a report can be viewed on the screen or printed and sent with the ballots to be reviewed by an election official. Unreadable ballots are always outstacked to the top bin for review.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM C – CENTRAL BALLOT SCANNING AND TABULATION EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Scanning	C-11	Identify and segregate, for adjudication, ballots or ballot images that are read as blank.	1	The DS850 uses three configurable sorting bins to sort out counted or uncounted ballots without stopping or slowing throughput. A bin report reports the reason for each sorted or outstacked ballot down to the contest level for efficient review of the physical ballot. Such a report can be viewed on the screen or printed and sent with the ballots to be reviewed by an election official. The Blank Ballots option on the oout-stacks ballots that do not contain any votes, have been marked with a non-standard marking device for the DS850, or have been marked improperly (for example, the voter circled the candidate's name instead of filling in the appropriate oval). Ballots can be sorted and counted or sorted and not counted. In addition, ballot images can be reviewed in Electionware and filtered to display only ballots that are blank.
Scanning	C-12	Provide information to an authorized user as to why a ballot was segregated.	1	A bin report indicates the reason the ballot was sorted or outstacked down to the contest level for efficient review of the physical ballot. Such a report can be viewed on the screen or printed and sent with the ballots to be reviewed by an election official.
Scanning	C-13	Assign a unique number to the batch of ballots and verify that the count is zero upon beginning a scan and giving a total number of ballot pages processed at the close of the batch scan.	1	The DS850 assigns a unique number to each batch. The DS850 scan screen allows the user to validate that there are no ballots yet scanned to a batch. It also provides clear counts of ballots in each bin scanned for the batch and reports the counts saved when the batch is completed via the user interface or optional automated bin reports.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM C – CENTRAL BALLOT SCANNING AND TABULATION EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Scanning	C-14	Handle scanning of both front and back page of a ballot when data is contained on back of ballot page.	1	The DS850 is capable scanning the front and back of the ballot. In fact, the DS850 will scan ballots with opposing orientations (i.e. portrait on the front side and landscape on the back of the ballot).
Scanning	C-15	Handle and reliably account for multi-page ballots, including when the pages become separated from each other. Count votes regardless of the sequence that pages are scanned or if some pages are not scanned. **Note:** Please explain how your system reliably accounts for multi-page ballots when pages are out of order or when all ballot pages are not returned, including when the pages become separated from each other.	1	The DS850 scans all ballot pages independently and is not sensitive to page order or missing pages in a multipage ballot.
Scanning	C-16	Accept ballots in any of the four possible orientations.	1	Yes, the DS850 is capable of scanning ballots in all four orientations. In addition, the DS850 is capable of scanning ballots with different orientations (the front side is portrait and the back side is landscape).
Scanning	C-17	Display publicly the number of ballot pages processed.	1	The DS850 displays the number of processed ballots (saved) and the number of ballots in the current (unsaved) batch at all times on the scan screen.
Scanning	C-18	Display a Protective counter showing the count of all ballot pages processed on the equipment, which is not reset after an election.	1	The DS850 has a protective counter, or life cycle counter, that is required by the EAC VVSG. The protective counter is not resettable and measures the number of ballot pages accepted by the product during its operational use.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM C – CENTRAL BALLOT SCANNING AND TABULATION EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Scanning	C-19	Allow the option to disable or enable the review of undervoted ballots.	1	The physical sorting of undervotes in real time can be set at the contest level as part of the election definition, allowing for undervote sorting of critical contests while not sorting for poorly voted contests. The undervote sorting can be turned on/off at any time via the DS850 settings screen. Such sort settings can also be password protected to prevent an unauthorized user from modifying the sort settings.
Hardware	C-20	Display the unit serial number(s) of tabulation devices both physically and within any applicable software, logs, or reports.	1	The unit Serial Number is on a permanent label on the side of the unit, is logged in the application log, and is printed on all reports generated by the DS850.
Tabulation	C-21	Accurately capture votes marked by a voter or a ballot marking device on a paper ballot without adjusting machine thresholds. **Note 1:** Please characterize the accuracy of your central ballot scanner in capturing voter intent. **Note 2:** Please describe how acceptance/rejection criteria for ballot marks are established for your central location scanner.	1	The DS850 uses patented IMR technology that does not depend on the need to manually adjust thresholds for particular machines or elections. Using our patent pending PTRAC algorithms, the ES&S tabulators identify the oval, subtract it out and then process only the voter's mark using ES&S patented IMR technology. IMR determines non-votes and votes using an upper and lower threshold. Marks that fall in an intermediate "unclear" threshold band get evaluated against many known marking patterns. This eliminates the need for adjustable thresholds, protects against variation in oval thicknesses caused by printing issues. The thresholds are permanently set to be very sensitive and still not greatly increase the number of ballots that require review, as well as greatly increasing the read success of poorly marked response areas. **Note 1**: The DS850 use of PTRAC and IMR make it the most accurate scanner on the market for correctly evaluating poorly or incompletely marked voter responses, greatly

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM C – CENTRAL BALLOT SCANNING AND TABULATION EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				reducing the number of ballots that must be evaluated by judges. **Note 2**: The fixed thresholds for determining whether the response is marked, not marked, or intermediate and requires mark recognition algorithms take into account the size of the oval, the minimum types of mark standard marking devices would make, and the resolution of the cameras being used. These thresholds and algorithms have been exhaustively tested using test ballots that significantly exceed the complexity of ballots required in certification and in use in the field to insure the highest accuracy possible.
Tabulation	C-22	Account for overvotes in every contest where overvotes occur. **Note:** Please explain how overvotes are handled by your system.	1	Ballots with contests containing overvotes can be sorted and the ballot processed or sorted and the ballot not processed. Overvoted contests result in no candidates getting votes for the particular contest, but the data is captured indicating which candidates were marked and that the contest was not tabulated because it was overvoted. These sorts can be setup in the election definition and later changed on the DS850 using an intuitive settings screen. Electionware can be set to filter for all ballots with overvotes to review the image and the CVR.
Tabulation	C-23	Account for undervotes in every contest where undervotes occur. **Note:** Please explain how undervotes are handled by your system.	1	As noted previously, sorting for undervotes can be enabled at a contest level as part of the election definition in the EMS. Ballots that contain undervoted contests can be sorted and counted or sorted and not counted. Undervote sorts can be turned off for all ballots using a settings screen that can be access code protected.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM C – CENTRAL BALLOT SCANNING AND TABULATION EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Tabulation	C-24	Have the ability to write cast vote records to an election media device during operation that the EMS can disallow from being tabulated prior to the close of polls on Election Day. **Note:** Please describe the security your equipment provides for ensuring media is not removed until procedurally authorized.	1	Cast vote records can be written to an election media for backup purposes without aggregation of vote data for reporting purposes which prevents the data from being read into the EMS system for the purposes of reporting. The aggregation of data is access code controlled and can be locked out until re-enabled by an administrator. The EMS software can also be password controlled to control access to results generation and reporting functions.
Tabulation	C-25	Provide a secure means to upload vote count results to the EMS.	1	The DS850 can transmit results data by either writing encrypted, digitally signed data to a USB media, or by transmitting the data via a closed, secure network to the EMS using sftp.
Error Handling	C-26	Identify and reject ballots that are not valid. **Note:** Please explain how your system identifies ballots that have been printed on nonstandard paper or on a home printer.	1	The ES&S ballot uses a code channel with the particular ballot styles and or precincts that are valid for a particular election. Ballots that do not have valid code channel values for the particular election are sorted as invalid ballots. The DS850 also indicates ballots that are too long or too short. The DS850 has a sensor designed to detect a particular ink which could be used to detect unauthorized ballots not produced by the jurisdiction. This functionality could be developed further if a jurisdiction is interested in implementing such a technology.
Error Handling	C-27	Continue ballot scanning while electronically or physically segregating and sorting ballots to user-identified categories that need additional attention. **Note 1:** Please describe how your system handles these situations: a. Ballots are unreadable by the scanner. b. Notifying an authorized user whether a ballot has been scanned successfully or not.	1 for all except 1c 2 (1c)	As noted in prior responses, the DS850 can sort or outstack ballots in real time without loss of throughput and at up to 3x the speed of a standard COTS scanner. Sorting without slowing down has shown to yield up to an additional 4x in throughput over a similar speed scanner that must stop to physically sort or outstack a ballot. This offers a solution that is up to 12x the

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM C – CENTRAL BALLOT SCANNING AND TABULATION EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
		c. Notifying an authorized user that a ballot has been previously scanned. d. Identifies where a voter marked the box for a write-in but did not write in a name, and where the voter did not mark the box but did enter a write-in candidate on the line. **Note 2:** Please describe how the relationship of paper ballot to ballot scan to cast vote record will be maintained when this physical or electronic sorting or segregation is taking place.		throughput of a COTS scanner that must stop. The DS850's three output bins can be configured to sort based on the following criteria: ■ Unreadable **(Note 1a)** ■ Ballot too long or too short ■ Invalid ballot ID ■ Invalid precinct ■ Unclear Marks ■ Blank ■ Undervotes ■ Overvotes ■ Write-ins **(Note 1d)** ○ Oval Marked ○ Oval Not Marked ■ Crossovers (Open Primaries) The DS850 can also detect multifeeds and either top picking or outstack the multiple ballots and continue scanning without slowing or stopping. **Note 1b:** Users have a clear understanding of whether a ballot has been counted or not based on the user interface, the bin to which the ballots were sent, on-screen reporting, and the optional printed bin reports. **Note 1c:** The DS850 has an imprinter which could be implemented in a future release to imprint the ballot ID number to allow tracking of multiple scans. ES&S can recommend best practices for ballot handling with the DS850 that have been successful in preventing the scanning of multiple ballots. **Note 1d:** As indicated in the sort criteria above, the DS850 can be configured by the Electionware Configure module to evaluate both write-ins with the ovals properly

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM C – CENTRAL BALLOT SCANNING AND TABULATION EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				marked and write-ins without the ovals marked. Write-ins for which the candidate has been written in the prescribed area but the oval has been marked can be recognized and either outstacked (not processed) or sorted (processed). Further, the Electionware Produce module can display the write-in area snippet for close evaluation. **Note 2:** Each ballot scanned has a front and back image file and a CVR. These files are given a unique index number as par t of the name. The Bin reports identify these ID ranges and with simple processes can be used to match a particular ballot paper to its corresponding image and CVR files.

Section 12.0 – UVS System Requirements Table: Section C – Central Ballot Scanning and Tabulation Equipment, Additional Comments

Req. ID C-1 Accurately scan paper ballots into identifiable and locatable batches.
Note 1: Please indicate the speed of your central location ballot scanner.
Note 2: Please explain how your central location scanner is impacted by ballots containing fold creases or other irregularities.

ES&S Response

The DS850 is able to scan ballots into batches and allows a report that can be maintained with the batch that identifies the batch.

Note 1: Please see below for operational speed of the DS850:

- 360 11" ballots /min
- 300 14" ballots/min
- 250 17" ballots/min
- 200 19" ballots/min

Note 2: The DS850 has been uniquely designed to accept ballots that have been folded. The DS850 uses a patented technology known as TruGrip™, to provide constant contact with each ballot. By using 22 axled, double-rollers, full control of the ballot is ensured from start to finish.

The DS850's TruGrip™ transport and motorized input and main output bins provide exceptional high speed scanning of folded and damaged ballots. The DS850 has successfully scanned in excess of 80,000 folded mail-in ballots for the City of Colorado Springs in several elections with excellent handling of the ballots, even when the ballots were damaged.

A close-up of the DS850 TruGrip rollers is shown below:

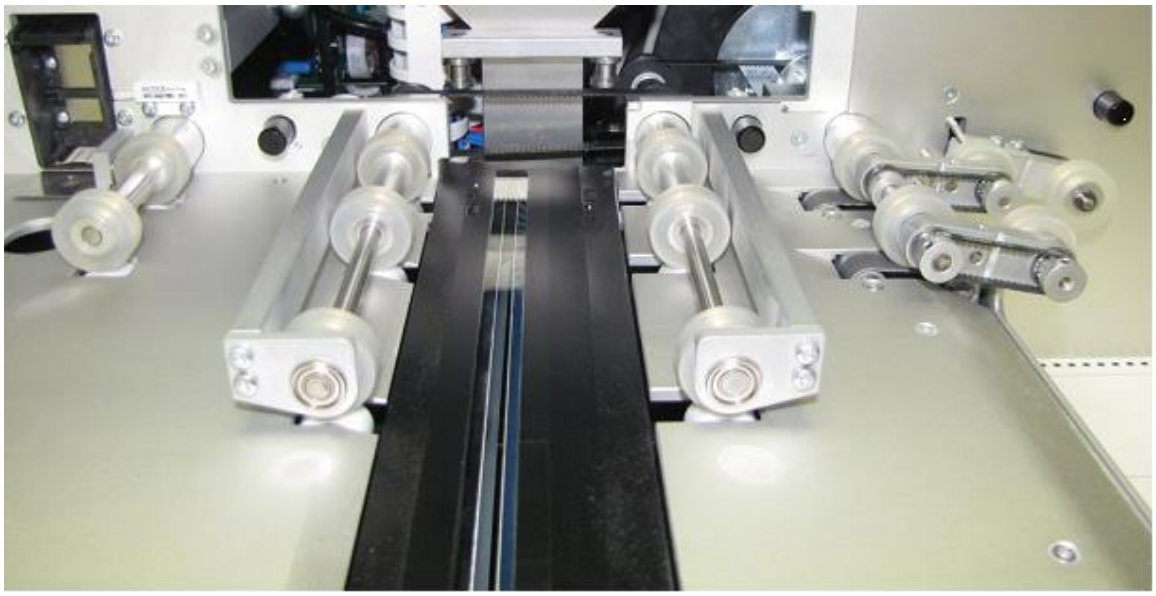


Figure 12.C.1 TrueGrip Rollers

Section 12.0 – UVS System Requirements Table: Appendix B, Section D – Electronic Voting Equipment

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Ballot	D-1	Display choices for the contests, (candidates and measures) of the election for each ballot style.	1	Every ballot is coded with a Ballot Style ID, which is defined in ElectionWare. The election definition will contain information about which ballot styles are acceptable for each polling place. The ballot style barcode is printed on the ExpressVote activation card which when inserted, will display the correct contests, candidates, etc. for each election.
Ballot	D-2	When activated for the voter, display prominent ballot identifiers, including precinct, party, and similar identifiers, in order to give the voter the opportunity to verify that they will be voting on the correct ballot.	1	The proposed solution provides full functionality for the requirement. Some configuration may be necessary. This functionality is considered part of the base solution cost.
Ballot	D-3	Record each voter's candidate and measure selections as the ballot is cast. **Note:** This requirement is not applicable to certain ballot marking devices that depend on a produced paper ballot being processed and tabulated elsewhere.	1	N/A - ExpressVote is a touch screen voting device that produces an optical scan paper record of the voter's ballot selections in human readable text including undervotes and write-ins, and is tabulated in a precinct scanner or central ballot scanner. Likewise, the ES&S AutoMARK is not a tabulator and therefore does not allow the voter to cast a ballot. The ES&S AutoMARK solution incorporates a paper ballot, which provides an easy-to-follow voting process – a ballot is marked by the ES&S AutoMARK and then the voter feeds it into a precinct scanner or central ballot tabulator.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Ballot	D-4	Have a public counter that displays the number of ballots cast or marked, depending on the functionality of the electronic voting equipment.	1	Neither the ExpressVote nor the AutoMARK, have publicly displayed counters but both keep a count of cards/ballots voted along with a lifetime counter.
Ballot	D-5	Make clear to the voter how to cast a ballot or print a marked ballot, such that the voter has minimal risk of doing so accidentally, but when the voter intends to cast the ballot or complete the ballot marking session, the action can be easily performed.	1	The ES&S AutoMARK is not a tabulator and therefore does not allow the voter to cast a ballot. The ES&S AutoMARK solution incorporates a paper ballot, which provides an easy-to-follow voting process – a ballot is marked by the ES&S AutoMARK and then the voter feeds it into a precinct tabulator. Voter "throughput" is a function of the voter's ability to listen/read through and understand the ballot, and then make their selections. On the AutoMARK, screens are intuitive and guide the voter through the voting session with easy-to read instructions and prompts. The ES&S AutoMARK touch screen is the main interface between the terminal and voter. The touch screen displays all ballot, language and font selections, system messages, instructions and terminal settings. When a voter touches a candidate name or target box on the screen, the choice highlights to indicate a valid selection. Touching the same box or area a second time cancels the selection. The ES&S AutoMARK will also alert the voter if a contest is undervoted and will not allow a contest to be overvoted. Voters can navigate forward and backward through the ballot on the ES&S AutoMARK and can change their selections at any time prior to the final marking of the ballot. This can be accomplished via the “BACK” and “NEXT” navigation commands on the bottom of the

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				AutoMARK display or by using the Braille-embossed navigation keys. After a voter navigates a complete ballot, the terminal generates a summary of selections in display and audio formats that the voter must approve before marking the final ballot. This ballot summary provides the opportunity to review and edit selections before committing votes to paper. Once satisfied with their selections, the voter selects "Mark Ballot" and the AutoMARK will mark and return the completed ballot to the voter. At that time, the voter transports the ballot to the DS200 scanner for tabulation. Once the ballot is inserted and accepted by the DS200, the vote is officially cast and recorded. The ExpressVote functions in a similar manner.
Ballot	D-6	Assure that the ballot marking device automatically returns to a state such the next voter cannot learn how the previous voter voted, once the paper ballot is printed.	1	All voter selectable features are automatically reset to default upon completion of the voting process and ejecting of the printed ballot or card.
Ballot	D-7	Allow voters, including voters with disabilities, to be able to review their write-in input to the ballot interface, edit that input, and confirm that the edits meet their intent. **Note:** Please describe how voters, including voters with disabilities, will be able to review their write-in input to the ballot interface, edit that input, and confirm that the edits meet their intent.	1	When a voter selects the write-in button for the ES&S AutoMARK, the terminal displays an emulated QWERTY keyboard for input of the write-in candidate's name. The candidate name then appears in place of the write-in line on the selected contest screen, on the ballot summary for the selected contest and on the paper ballot. After a voter navigates a complete ballot, the terminal generates a summary of selections in display and audio formats that the voter must approve before marking the final ballot. This ballot summary

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				provides the opportunity to review and edit selections before committing votes to paper. For the voter who is sight disabled and cannot utilize the QWERTY keyboard for input, all the same functions regarding write-in candidates are available through the audio interface.
Ballot	D-8	Provide a method by which voters with disabilities can choose the language of the ballot visually and through the audio interface. **Note:** Please describe how your electronic voting units provide a method by which voters with disabilities can choose the language of the ballot visually and through the audio interface.	1	After inserting their ballot or activation card into the AutoMARK or ExpressVote, a language screen will appear which allows the voter to select the language in which they wish to view and/or hear the audio ballot. A poll worker or authorized escort can assist the voter in inserting the ballot or activation card and choosing the language, if desired. The ES&S AutoMARK VAT or ExpressVote can provide recorded audio playback of each ballot style, in any language desired, in an election. The audio files can be generated by real voice or through our text to speech (TTS) utility. Languages available from the TTS utility include: English, Spanish, Korean, Chinese Mandarin, Japanese, Russian, Canadian French, and Cantonese. Ballot and voter instruction/message presentation in the language selected by the voter is in both audio and visual formats. (Note that write-in names are limited to use of the English alphabet).

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Hardware	D-9	Display a Protective counter showing the count of all ballots processed on the equipment, which is not reset after an election.		Since there is no tabulation, there is no Protective Counter in the AutoMARK or the ExpressVote. The AutoMark and ExpressVote do have a Lifetime Cycle counter that is used for diagnostic purposes that tracks the number of ballots that are printed. This counter can be accessed and printed from the terminal's administrative menu.
Hardware	D-10	Display the unit serial number(s) of tabulation devices both physically and within any applicable software, logs, or reports.	1	Although the AutoMARK and ExpressVote are not tabulators, both systems display serial numbers both physically and within any applicable software, logs, or reports.
Accessibility	D-11	Provide electronic voting equipment designed to allow for installation in a voting location accommodating access by voters with disabilities in compliance with the Americans with Disabilities Act (ADA), HAVA and all applicable federal and state laws that address accessibility to voting for persons with disabilities. **Note:** Please describe how your system's features comply with HAVA, ADA and other Federal and State laws that require accessibility for voters with a variety of disabilities, including visual or cognitive impairments. Identify the EAC standards your system meets.	1	The ES&S AutoMARK was designed to meet the varying accessibility needs of voters with disabilities and to comply with the Federal Voting System Standards, HAVA legislation, and the Americans with Disabilities Act. The ES&S AutoMARK was designed to operate on any third party table (meeting disability standards) or the optional ES&S AutoMARK voting table, and all critical operations required by the voter take place at the front of the terminal. With the terminal near the edge on a compliant table, voters with visual and mobility disabilities may access the key areas – the ballot entry point, the Braille-embossed navigation pad, and the touch screen. The ES&S AutoMARK is HAVA-compliant by offering the following: - Multiple ballot navigation and selection methods including touch-screen, Braille-embossed keypad, sip and puff tube, foot pedal or any other two-position switch;

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				Audio presentation in real voice or text to speech created .wav files; Tempo and volume controls for adjusting audio ballot presentation; Vibrant ballot display; and Ballot zoom and high-contrast (white text on black background) display options. The ExpressVote provides audio instructions in selectable languages for all its valid operations including how to navigate among contests, and how to adjust display and audio characteristics. Voters are able to get context-sensitive help directly from the system at any time during the voting session. The system meets the entire VVSG 2005 Section 3.2 - General Usability requirements; and all of section 3.3-Accessibility requirements. Additionally, the electronic device meets VVSG version 1.1, Section 3.2.2.1, (g) which allows the voter to verify the paper record using the same access features used by the voter to vote the ballot.
Accessibility	D-12	Meet the standards for accessible voting systems listed in section 1-5-704, C.R.S. The size of a ballot position and the font size of candidate information must be in accordance with Colorado Election Rules. **Note:** Please stipulate the maximum available positions on the voting device, based on such size of a ballot position and the font size of candidate information, to be used for an election.	1	**Note:** Maximum available positions on the device is determined by, and limited only by the EMS, not by the AutoMARK or ExpressVote.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Accessibility	D-13	Include a privacy enclosure or voting booth that contains the electronic voting device(s) designated for voters with disabilities and complies with the Americans with Disabilities Act Accessibility Guidelines (ADAAG) providing sufficient dimensions to allow access to voters who use wheelchairs. **Note:** Please explain how your voting device complies with all forward and side reach requirements of the ADA and ADAAG.	1	**Note:** The ES&S AutoMARK meets the requirements with all forward and side reach requirements of the Americans with Disabilities Act Accessibility Guidelines. The ES&S AutoMARK can be placed on any third party table or stand (meeting disability standards) or the optional ES&S AutoMARK voting table, allowing access to voters who use wheelchairs to slide their wheelchair under the table and have full access to the voting system. The ExpressVote voting device can be deployed in a voting booth which meets the unobstructed forward reach and unobstructed side reach requirements.
Accessibility	D-14	Include electronic voting units adaptable for voters with disabilities either through adjustability of the device or the voting booth or inclusion of an auxiliary device. The auxiliary device should also be lightweight and removable making it portable for use on a voter's lap or provide an alternative solution. **Note 1:** Please describe your accessible alternative input devices. List such devices and explain the operation of each device and how it accommodates voters with disabilities. **Note 2:** Please explain how your proposed system accommodates voters with visual disabilities. Include with the description how portions of the displayed ballot may be intensified and/or enhanced, in contrast and font size and then restored to the initial size. **Note 3:** Please explain how your electronic voting device can be repositioned to accommodate a variety of voters with disabilities. Include any information about the ability of the voter to independently adjust the	1	**Note 1:** Accessible alternative input devices that can be used include: (1) Any personal two-switch or Sip-n-puff assistive device for use by voters cannot make fine movements with their arms, hands, or fingers. (2) Navigation keypad is and an Audio-Tactile Interface that is light weight and can be held or used on a voters lap. The ATI keypad provides both audio and tactilely discernible controls for voter input and access to the full functionality of the visual ballot interface and on screen controls and content. Control functions include pause, repeat, increase or lower volume, and change the rate of speech without changing the pitch. **Note 2:** On the AutoMARK ADA device, voters can touch the ZOOM In/Out button on any screen to increase and decrease the size of the displayed text. The minimum adjustable font size is 11 pt. and a maximum font size of 26 pt.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
		device. **Note 4:** Is the voting screen glare-free regardless of positioning? **Note 5:** Please explain any magnifying capacity of the electronic voting device. **Note 6:** If your electronic voting unit uses an activation card, please explain how it may be used easily by voters, including voters with disabilities. **Note 7:** Please explain how your electronic voting unit adequately provides privacy for a voter who uses a wheelchair. **Note 8:** Please explain how a voter can verify the accuracy of the cast votes. **Note 9:** Please describe additional features of your system that are designed to accommodate voters with disabilities.		The ExpressVote accommodates voters with visual disabilities by providing the ability to display all information in font sizes 3.0-4.0 and up to 6.3mm-9.0mm by selecting "ZOOM". The contrast can be changed by selecting "CONTRAST". Re-selecting returns the display back to its original state. The device is designed at a minimum to meet all VVSG accessibility requirements. **Note 3:** The ES&S AutoMARK and ExpressVote systems grant voters full control over on screen ballot presentation. Voters can select options to zoom the ballot text for individual contests and change the screen display from full color to a high-contrast view (white text on black background) for voters with color blindness. Auditory functions can be adjusted through the tempo and volume controls. The terminal also has pause/resume audio capabilities. Additionally, the voting display angle can be changed to accommodate all voters regardless of disability. **Note 4:** Yes, the display screens for both the AutoMARK and ExpressVote are glare-free regardless of positioning. **Note 5:** Voters can touch the **ZOOM IN/OUT** button on any screen on the ES&S AutoMARK and the ExpressVote systems to increase and decrease the size of the displayed text. **Note 6:** The ExpressVote voting device uses a paper activation card

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				with a printed ballot style barcode. The paper orientation is visually discernible and also uses a cut corner as a tactile indicator for voters who are blind or visually impaired. The card is inserted into a large opening with Braille. **Note 7:** An optional privacy curtain is available for the ES&S AutoMARK; the curtain sets on the table and surrounds the sides, back and top of the ES&S AutoMARK to provide privacy to the voter. If an ES&S AutoMARK VAT table is used, the privacy curtains snap into slots on the VAT table. The voting booth includes adjustable angle privacy screens on both sides to provide secrecy for voters at any height. The privacy screen shields the ES&S AutoMARK and ExpressVote displays during voting and ensures voter privacy while marking a display ballot and prevents onlookers from viewing the ballot display. When properly set up with the privacy shield in place and the ballot inserted inside the AutoMARK, (or the activation card within the ExpressVote) all ballot information and input controls are visible only to the voter during the voting session. **Note 8:** The ballot (for the AutoMARK) or activation card (for the ExpressVote) becomes the ballot card on which the elector's votes are printed. The machine provides direct voter verification by optically scanning the printed ballot or card and re-displaying the contents to the voter visually and audibly, and does not rely on memory of the voters selections. **Note 9:** Auditory functions on both

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				the AutoMARK and ExpressVote can be adjusted through the tempo and volume controls. The terminal also has pause/resume audio capabilities. Both systems have an available port for a sip-n-puff device, foot pedal, or other two-position switch to facilitate unassisted voting for voters with mobility issues. Visual responses to sip-n-puff or switch inputs are nearly instantaneous. Audio response may lag slightly behind the input. The paddle provides a standard two-position switch interface for screen navigation. Clicking one side of the paddle cycles through options on the screen while clicking the other side of the paddle selects the highlighted option. For example, to navigate from one ballot page to the next, the voter would click the selection side of the paddle until the NEXT option is highlighted on screen – or presented audibly through the unit headphones – and then click the selection side of the paddle to navigate to the next ballot screen. The ExpressVote includes an AutoCAST feature that allows a voter without the use of their hands to deposit the printed ballot card into a secure container for subsequent tabulation by a poll worker after direct verification as described in Note 8 above.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Accessibility	D-15	Allow for importing of audio ballot content from an outside source (e.g. candidates or pre-recorded audio.). **Note:** Please explain the process and procedure, with time frames, required to re-program the audio read-back on the voting device in the event that there is a change to a name or contest on the ballot in the final few weeks before an election.	1	**Note:** The audio files are reprogrammed in the EMS at the time the ballot definition/election is created then saved to USB media.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Accessibility	D-16	Allow for a voter to change volume and/or speed of an audio ballot. **Note:** Explain how the voter can fast-forward through instructions and measure text.	1	Auditory functions on the ES&S AutoMARK can be adjusted through the tempo and volume controls. The terminal also has pause/resume audio capabilities. Voters can navigate forward and backward through the ballot on the ES&S AutoMARK and can change their selections at any time prior to the final marking of the ballot. This can be accomplished via the "BACK" and "NEXT" navigation commands on the bottom of the AutoMARK display or by using the Braille-embossed navigation keys. After a voter navigates a complete ballot, the terminal generates a summary of selections in display and audio formats that the voter must approve before marking the final ballot. This ballot summary provides the opportunity to review and edit selections before committing votes to paper. The ExpressVote has dedicated buttons for navigating the ballot, selecting choices, help, volume (up/down), speech tempo (increase/decrease) and repeat. It also has a pause button for the voter to use. The audio speed can be increased or decreased without changing the pitch of the voice on the audio file. **Note:** The voter is not required to listen to instructions and can simply skip any or all of the instruction. Or the voter could increase the tempo of the audio up to 200% if they wanted to listen in "Fast Forward" mode.
Accessibility	D-17	Provide for audio instructions for the ballot and a mechanism for voters with visual impairments to cast a ballot or print a marked ballot, either on the voting unit itself or on a separate	1	Voters using the ES&S AutoMARK and ExpressVote are offered many audio ballot options. ES&S has worked with disability groups to determine the ideal clarity of the

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
		device designed for this purpose. The process shall imitate the process used by sighted voters with the exception of the audio interface.		audio messages, feedback and instructions required for the disabled voter. ES&S will work with the State to develop audio ballots that meet voters' language and comfort needs. Key features of the audio presentation include: - Audio presentation in either real voice or text to speech created .wav files. - Tempo and volume controls for adjusting audio ballot presentation. - Multiple ballot navigation and selection methods including touch-screen, Braille-embossed keypad, sip and puff tube, rocker pedal, or any other two-position switch Voters with disabilities who mark their ballot on the AutoMARK or ExpressVote can cast their marked ballot in the DS200 with limited or no assistance. Ballot handling exceptions for ballots marked with either system are almost non-existent as the systems will not allow an overvoted contest and will challenge the voter if a contest is undervoted or left blank. In all cases, the disabled voter who marks their ballot on the AutoMARK or ExpressVote will be well aware of any ballot handling exceptions before submitting his/her ballot into the DS200 scanner.
Accessibility	D-18	Support an enlarged-print ballot screen image for voters with visual impairments. Following the casting of a vote or the printing of a marked ballot, the machine must reset to its initial state to accommodate the next voter.	1	The ballot (the list of all candidates, ballot issues, and ballot questions upon which an eligible elector is entitled to vote at an election) is displayed to the voter on screen. All voter selectable features are automatically reset to default upon completion of the voting process and ejecting of the printed ballot (AutoMARK) or card (ExpressVote).

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Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				The ES&S AutoMARK and ExpressVote systems enable voters with vision disabilities to mark a paper ballot or activation card independently, through the following features: - Image zooming - Image contrast adjustability - Braille-embossed keypad Both systems grant voters full control over on screen ballot presentation. The zoom and high contrast display options provide assistance for voters with low vision or color blindness. Voters can touch the **ZOOM IN/OUT** button on any screen to increase and decrease the size of the displayed text. Selecting the **HIGH CONTRAST** option on any screen toggles the display between high contrast mode – white text on a black background – and normal contrast – color – mode. After the voter has finalized their selections, the display options will automatically reset to initial size for the next voter. The terminal's touch screen controls and keypad buttons are interconnected. Voters may use either system to navigate the ballot at any time. The touch-screen navigation options meet all applicable guidelines for text size and readability and the physical keypad has been designed and tested with significant contributions from special needs groups. The keys are arranged and shaped to provide an intuitive voting session. Braille and printed text labels describe each key's function. • Arrow keys are used to indicate up, down, left, and right. • The square key serves as an

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Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				"enter" key. • The diamond-shaped key turns the screen on and off for audio only voting. • The round key repeats the last audio prompt. • Two sets of long oval keys control the volume and tempo of audio files. Voters can easily change ballot selections by navigating back to the appropriate contest and selecting the change.
Accessibility	D-19	Accommodate voters regardless of their ability to read.	1	Voters who are unable to read a ballot would be able to use the audio output feature on the ES&S AutoMARK or ExpressVote which features tempo and volume controls for adjusting the audio ballot presentation, as well as pause/resume capabilities. The ES&S AutoMARK and ExpressVote can scan the printed ballot and play an audio summary of the ballot for the voter to review.
Accessibility	D-20	Allow for connection of personal auxiliary devices, such as sip/puff or jelly switch devices. **Note:** Please describe such capabilities provided by your system.	1	The AutoMARK and ExpressVote have available ports that a voter can use to plug in their own personal auxiliary device at any time.
Ease of Use	D-21	Be designed so that actions performed by the voter, such as making a vote selection or changing a vote, are easily understood so that errors are prevented to the maximum extent possible, and so that recovery from an erroneous action is facilitated by the features of the system prior to casting the ballot or printing a marked ballot. **Note:** Please explain how your proposed system facilitates voter actions prior to casting a ballot or printing a marked ballot.	1	The AutoMARK and ExpressVote screens are intuitive and visually guide the voter through the voting session with easy-to read instructions and prompts. Additionally, the voter will have no fear of inserting the ballot into the AutoMARK incorrectly as the device will accept the ballot in any of the four orientations. Error messages on the AutoMARK are either displayed in the voter's selected language, or display the

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				international warning symbol if intended for the poll-worker or if a system general error is generated. The AutoMARK displays all errors in easily understood language text. If an error message is intended for an official, the international warning symbol is also used. The ExpressVote displays status and error messages on the terminal's color screen. Messages are displayed in full text or numeric format. All ExpressVote error messages requiring intervention by an operator or election staff at the voting location are displayed unambiguously in easily understood language text on the display. Any error messages will be displayed in that elector's language of choice. Situations that require elector or election worker interaction (ballot handling exception messages described above) are displayed clearly in plain text, and are supplemented with an audible warning signal. A confirmation screen provides clear feedback to the elector that their ballot has been successfully tabulated. To further prepare the voter prior to casting the ballot, the Counties can purchase large laminated posters or smaller voter outreach information cards that clearly show the steps to vote on the proposed devices. The small laminated cards contain step-by-step voting instructions that can be handed out to each voter at the polling location during check-in. Additionally, polling locations can be equipped with demonstration machines and ballots for voters and poll workers to vote a demo ballot prior to receiving their Official ballot. The Counties also can purchase videos with machine

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				demonstrations and play the videos in polling sites while the voter is waiting in line.
Ease of Use	D-22	Accommodate font sizes that are adjustable for ease of sight.	1	On the AutoMARK ADA device, voters can touch the ZOOM In/Out button on any screen to increase and decrease the size of the displayed text. The minimum adjustable font size is 11 pt. and a maximum font size of 26 pt. The ExpressVote accommodates voters with visual disabilities by providing the ability to display all information in font sizes 3.0-4.0 and up to 6.3mm-9.0mm by selecting "ZOOM". Contrast can be changed by selecting "CONTRAST".
Ease of Use	D-23	During the voting process or prior to casting the vote, display (visually or using audio, as applicable) a summary indicating the choices made or skipped.	1	Marked ballots inserted into the AutoMARK terminal generate an audio and display ballot summary to confirm that ballot selections were marked as intended. When all selections have been entered, the AutoMARK displays a summary of your selections on the **Summary of Selections** screen. The ExpressVote offers a **Summary Page** verification process that presents voters with the option to review choices, modify/change selections, or fill in any skipped races prior to printing the record. Its unique software applications ensure that only the proper number of candidates is chosen for each race. ExpressVote does not allow overvotes and can be programmed to accept or reject undervotes as well, depending on the jurisdiction's preferences.
Ease of Use	D-24	Allow the voter the ability to change a selection until the voter is satisfied with the choice at any time prior to the final casting of a ballot or printing a marked ballot.	1	On the AutoMARK, when a voter touches a candidate name or target box on the screen, the choice highlights to indicate a valid

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
		Note: Please explain here how your proposed voting system allows the voter to review and/or modify his/her selections before final casting of the vote or printing of the marked ballot.		selection. Touching the same box or area a second time cancels the selection. The ES&S AutoMARK will also alert the voter if a contest is undervoted and will not allow a contest to be overvoted. Voters can navigate forward and backward through the ballot on the ES&S AutoMARK and can change their selections at any time prior to the final marking of the ballot. This can be accomplished via the "BACK" and "NEXT" navigation commands on the bottom of the AutoMARK display or by using the Braille-embossed navigation keys. After a voter navigates a complete ballot, the terminal generates a summary of selections in display and audio formats that the voter must approve before marking the final ballot. This ballot summary provides the opportunity to review and edit selections before committing votes to paper. Once satisfied with their selections, the voter selects "Mark Ballot" and the AutoMARK will mark and return the completed ballot to the voter. At that time, the voter transports the ballot to the DS200 scanner for tabulation. Once the ballot is inserted and accepted by the DS200, the vote is officially cast and recorded. The ExpressVote offers a Summary Page verification process that presents voters with the option to review choices, and return to any of the contests to modify/change selections, correct any errors, or fill in any skipped races prior to printing the record. Its unique software applications ensure that only the proper number of candidates is chosen for each race.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Ease of Use	D-25	Provide a method for the voter to confirm the choices before casting the ballot or printing a marked ballot, signifying to the voter that casting or printing the ballot is irrevocable and directing the voter to confirm his/her intention to cast or print the ballot, and shall further signify to the voter that the ballot has been cast or printed after the voting session is complete..	1	On the AutoMARK, after a voter navigates a complete ballot, the terminal generates a summary of selections in display and audio formats that the voter must approve before marking the final ballot. This ballot summary provides the opportunity to review and edit selections before committing votes to paper. Once satisfied with their selections, the voter selects "Mark Ballot" and the AutoMARK will mark and return the completed ballot to the voter. At that time, the voter transports the ballot to the DS200 scanner for tabulation. Once the ballot is inserted and accepted by the DS200, the vote is officially cast and recorded. The ExpressVote offers a Summary Page verification process that presents voters with the option to review choices, modify/change selections, or fill in any skipped races prior to printing the record. Its unique software applications ensure that only the proper number of candidates is chosen for each race. ExpressVote does not allow overvotes and can be programmed to accept or reject undervotes as well, depending on the jurisdiction's preferences.
Ease of Use	D-26	Provide a means to demonstrate the operation of the electronic voting device to the voters.	1	There are a number of methods that we have implemented for customers that provide a means to demonstrate the operation of the AutoMARK and ExpressVote to the voter. Several of these could be classified as Voter Outreach, conducted days or weeks prior to the election, or poll site demonstrations, conducted while the voter is standing in line awaiting check-in. When demonstrations are

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Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				conducted as a part of Voter Outreach, methods of demonstrating operation include television/radio ads, town hall meeting demos, and Voter Outreach materials (palm cards, posters). These types of demonstrations are good, but not every voter will be exposed; therefore, some form of demonstration needs to be provided at the polling location. Examples we have used at polling locations include passing out instruction materials that can be read while the voter waits to check-in, and setting up one or more demo machines that voters can practice filling out a demo ballot and submitting it to a demo machine.
Ease of Use	D-27	Disallow a voter to overvote a contest and will enable the voter to correct the selections. **Note:** Please explain how your proposed system shall not allow a voter to overvote a contest and enable the voter to correct his or her selections.	1	The ES&S AutoMARK and ExpressVote systems will not allow a contest to be overvoted. The AutoMARK displays various pop-up screens to assist you through this process. For example, if you make more selections than allowed the **Over-Vote** pop-up screen will appear. The ExpressVote unit does not allow overvotes. Any attempt to overvote a multiple vote for a contest will prevent the selection and generate a warning prompting the voter to remove a selection prior to selecting another choice. In a vote for one contest, depending on the election definition setting, a new selection will either automatically remove the previous selection or behave the same as the multiple vote for contest.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Ease of Use	D-28	Warn voters that they have undervoted a contest and permit them to correct or accept the undervote. **Note:** Please explain here how your proposed system shall warn voters that they have undervoted a contest and permit them to correct or accept the undervote.	1	The ES&S AutoMARK and ExpressVote will alert the voter if a contest is undervoted by displaying an Under Vote alert screen and audio, notifying the voter they have selected fewer candidates or choices than allowed for a contest. Ballot handling rules programmed in ElectionWare determine how the systems' alert the voter when this situation occurs.
Ease of Use	D-29	Provide a means of recording the votes cast for write-in candidates for any contest that allows write-in candidates. This capability shall allow the entry of as many names of candidates as the voter is entitled to select for each contest in compliance with Colorado's Election Law. **Note:** Please explain how your proposed system allows for write-in votes for any authorized contest.	1	For the AutoMARK, when a voter selects the write-in target for a contest, the terminal displays an emulated QWERTY keyboard for input of the write-in candidate's name. The candidate name then appears in place of the write-in line on the selected contest screen, the ballot summary for the selected contest, and on the paper ballot. The ExpressVote supports the appropriate number of write-in votes for each contest with the write-in name input using the on-screen keyboard or accessible device.
Ease of Use	D-30	During election setup, provide an option to provide the voter with a list of certified write-in candidates.	4	The AutoMARK and ExpressVote systems have no knowledge of certified write-ins, thus neither system has this ability. Candidates are either on the ballot or can be written in by the voter by typing any name after selecting a write-in position in a contest. It is up to an election official to validate a write-in selection and to decide whether or not to count it. This is no different than how hand voted paper ballots are treated.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Ease of Use	D-31	Provide a screen response that will allow a voter to request a list of certified write-ins if the election setup provided that option.	4	The AutoMARK and ExpressVote have no knowledge of certified write-ins, thus neither system has this ability. Candidates are either on the ballot or can be written in by the voter by typing any name after selecting a write-in position in a contest. It is up to an election official to validate a write-in selection and to decide whether or not to count it. This is no different than how hand voted paper ballots are treated.
Ease of Use	D-32	Allow authorized users the ability to modify the voter instructions for an electronic or audio voting session.	1	ES&S has worked with disability groups to determine the ideal clarity of the audio messages, feedback and instructions required for the disabled voter. ES&S will work with the State to develop voter instructions that meet voters' language and comfort needs.
Ease of Use	D-33	Provide an authorized user an ability to reset screen calibration, including between uses in an election. **Note:** Please explain if your electronic voting equipment logs such calibration and produces any warnings when calibration needs to be reset.	1	Normally calibration of the AutoMARK is conducted as part of the pollsite setup for each election but can be completed at the pollsite if necessary to ensure voting accuracy. The system will provide a series of prompts for the poll worker to touch various locations on the screen to calibrate the system. The ExpressVote contains a screen calibration function in the Main Menu which is accessible only by an authorized user as the switch to activate the Main Menu resides behind a locked panel requiring a key to access. The ExpressVote provides direct user feedback via the touch screen interface during race selection in order to confirm touch screen calibration. Should it become apparent that intended selections are not being correctly registered calibration should be performed. Neither system produces a warning

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				when calibration needs to be reset.
Uninterrupted Operation	D-34	Provide, in case of power interruption, a means for voting operations to continue. This feature shall consist of either an un-interruptible power supply (UPS) or other means to keep electronic voting equipment active. **Note:** Please specify how your system will provide notice of power loss or low-battery state, so that election judges or election officials can take appropriate steps.	1	In the event of a power outage or other disaster (resulting in power loss), the ES&S AutoMARK is equipped with an internal battery pack that provides sufficient capacity to allow continuous operation after loss of A/C power for at least four (4) hours. The power supply automatically switches from the 12 VDC provided by the brick's supply to battery power when AC power is lost. The ExpressVote incorporates an internal battery back-up in order to allow voting to continue in the event of a power loss. **Note:** Both the AutoMARK and ExpressVote have visible LED light indicators to determine when running on external power or battery. An alert message is also displayed on the voter facing screen (and audio) if the battery level becomes low but will allow for the voter to complete their voting session. It will also display an alert message if the battery level gets to a very low state and will not allow for a voter to begin a session.
Uninterrupted Operation	D-35	Provide for continuous uninterrupted operation for a minimum of two hours in case of power failure. **Note:** Please specify how long your system will operate without an external power source and under what conditions. If the device does not have a battery backup, what size of UPS will be required to maintain operation for two hours?	1	Both the AutoMARK and the ExpressVote provide for continuous uninterrupted operation in the event of a power loss through the use of an internal battery back-up. The ES&S AutoMARK and ExpressVote are equipped with an internal battery pack that provides sufficient capacity to allow continuous operation after loss of A/C power for at least four (4) hours. The internal battery back-up has been thoroughly tested to meet and exceed the VVSG requirement of a minimum two hours battery

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				operation in the case of power loss. The ExpressVote employs the use of icons on the graphical user interface to distinguish between when the unit is operating on AC power as opposed to battery power. The ExpressVote also employs the use of diodes on the front panel to indicate the presence of AC power and battery state.
Uninterrupted Operation	D-36	In the event of the failure of an electronic voting unit, retain a record of all votes cast prior to the failure. **Note:** Please explain how your system retains and reports votes cast in the event of a loss of power.	1	The AutoMARK is a ballot marking device which only prints vote selections on an inserted paper ballot. It does not tabulate or record votes, therefore there is no need to retain a record of votes cast. Likewise, the ExpressVote is not a tabulator; it merely marks cards for tabulation in a precinct based tabulation device. Since the ExpressVote is not a tabulator and a paper record of the voters selections is retained there is no need to retain a record of votes cast.
Voter Verifiable Paper Trail	D-37	Include, with each voting device, the functionality of a Voter-Verified Paper Audit Trail (VVPAT) that meets all Federal and State Certification requirements. **Note 1:** Please explain how your proposed voting device complies with this requirement. **Note 2:** Explain if your proposed system has an alternate means of counting a non-ballot type of VVPAT for audit purposes. The alternative means can include but is not limited to the availability of bar codes and readers for the VVPAT.	1	**Note 1:** The paper ballot utilized with the AutoMARK is the voter-verifiable paper record of all votes cast and provides an audit trail that is available to jurisdictions in the event a recount, including manual recount, is required. The ExpressVote creates a paper record of all selections made by a voter during a given voting session. **Note 2:** The ExpressVote selections are printed in both 1 dimensional bar codes that can be read by any standard bar code reader and also in human readable format.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Voter Verifiable Paper Trail	D-38	Provide a means for voters with disabilities (visually impaired or unable to read) to review the VVPAT. **Note:** The review of the VVPAT by voters that cannot see or read the VVPAT requires a feature that enables read-back from the physical VVPAT.	1	The paper record can be reviewed by the visually impaired or the illiterate through the use of the AutoMARK or ExpressVote's audio interfaces. For the AutoMARK, after a voter navigates a complete ballot, the terminal generates a summary of selections in audio formats that the voter must approve before marking the final ballot. This ballot summary provides the opportunity to hear the selections for review and edit the selections before committing votes to paper. For the ExpressVote, the selections can be heard during the voting session, reviewed before the card is actually printed and post voting session, the card can be re-inserted, and re-scanned to re-confirm the voters' choices.
Voter Verifiable Paper Trail	D-39	Have the capability, if proposing a VVPAT solution that is not an official marked ballot, for the print on the VVPAT to be large enough and dark enough for voters to verify and for election judges to read easily during a recount. **Note:** Please explain the type of paper used to record the VVPAT and the characteristics of the paper impression to ensure ease of reading and fade resistance. For instance; 18 point font, bold and double spaced would be preferred.	1	The ExpressVote provides a printed card of the voter's selections in both 1 dimensional bar codes and human readable format in a fixed font, printed in black and white on thermal stock. Should the voter or poll worker be unable to read the selections on the card due to poor eyesight the card can be re-inserted into the ExpressVote where the Zoom (large text) and Contrast (white text on a black background) functions can be employed to verify selections.
Transportability	D-40	Be easily transported. **Note:** Describe the transportability characteristics of your electronic voting equipment (e.g. weight, width, height, wheels).	1	The AutoMARK carrying case comes equipped with a set of heavy duty rollers on the base of the unit and a telescoping handle that allows easy movement. On delivery day, the delivery team should roll each of the AutoMARK's to the delivery truck and then load them onto the truck stacking the cases five high, when necessary. Upon arrival at the

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM D – ELECTRONIC VOTING EQUIPMENT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				delivery location, the unit can be easily offloaded and moved into the designated storage location. The AutoMARK weighs 48 pounds and is 7.5” H x 20.8” W x 26” D. The AutoMARK carrying case weighs 36 pounds and is 14.1” H x 27.7” W x 37.7” D. The ExpressVote was designed to be a portable, tabletop type of device in order to allow for ease of transportation to/from the polling place. • **Unit Size – in use (WxDxH):** 19”x5.5”x17” (48.26 cm x14 cm x43 cm) • **Unit Size – stowed for transport or storage (WxDxH):** 22.5”x17”x11” (57 cm x43 cm x28 cm) • **Unit Weight:** <20 lbs (9 kg)

Section 12.0 – UVS System Requirements Table: Appendix B, Section E - Automated Ballot Envelope Scanning & Signature Verification

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM E – AUTOMATED BALLOT ENVELOPE SCANNING AND SIGNATURE VERIFICATION				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Mail Ballot Envelope Processing	E-1	Provide hardware with the capability to scan mail ballot envelopes and perform the following functions: a. Scan and capture voter ID barcode b. Scan and capture envelope and signature images c. Log envelope as received d. Endorse (customizable) & date/time stamp envelope e. Separate envelopes that may need manual intervention **Note 1:** Please provide information about your ballot envelope sorting equipment, including what versions are available for counties with various volumes of envelopes. Can your equipment perform all these above functions in a single pass? If not, please explain the number of passes required and the actions taken on each pass. **Note 2:** Please indicate if your solution has the capability, assuming envelope and ballot are designed properly, to determine the ballot style of the enclosed ballot.	1	**Note 1:** The AVES Envelope scanner, currently deployed in Colorado Springs, is able to perform the listed functions in a single pass. The AVES scanner is recommended for throughputs up to 3600 scanned envelopes per hour. Multiple scanners can be networked to a single server, allowing jurisdictions to add additional units to their Envelope Processing as volumes require. **Note 2:** With each voter associated to a ballot style in Score system, audit reports from the scanner can detail which ballot styles are returned based on scanned Voter IDs.
Mail Ballot Envelope Processing	E-2	Be capable of generating an output file, with voter ID and voter's envelope signature, to be matched with SCORE voter registration data and used in the Automated Signature Verification process.	1	The AVES software (AccuScan) has the SCORE voter registration database schema mapped to the output file from the Scanner. This enables the output file from the scanner to be imported into SCORE without any additional data conversion to be required. Signature images are also contained in the scanner extract so that all captured images, associated to the scanned voter ID, are also transmitted to

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM E – AUTOMATED BALLOT ENVELOPE SCANNING AND SIGNATURE VERIFICATION				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				SCORE.
Mail Ballot Envelope Processing	E-3	Be capable of updating the mail ballot envelope output file with status values (e.g. received, accepted, rejected) so that the SCORE system can use the output file to update voter registration records. **Note:** Please provide a list of code values your system assigns for ballot envelope processing status.	1	The following codes are capable of being output following an envelope scanning and signature verification. Code ranges 1-3 result from the initial envelope scan. Codes 4-10 are assigned by the User when reviewing the scanned images: 1 = Accepted 2 = Challenged 3 = Rejected Challenged envelope codes: 4 = Envelope Not signed (NS) 5 = Invalid Signature (IS) 6 = No Reference Signature On File (NOF) 7 = Signed by Other (SO) Rejected envelope codes: 8 = Deceased(D) 9 = Refused to Vote(R) 10 = Signed by Power Of Attorney(POA)
Mail Ballot Envelope Processing	E-4	Allow an authorized user the ability to update the disposition code for an envelope (e.g. from “challenged” to “good”).	1	The software enables the user to review the captured signatures and make determinations to alter the disposition code for an envelope.
Mail Ballot Envelope Processing	E-5	Be configurable for ballot envelope size and design.	1	The maximum envelope size is 6 inches tall by 9½ inches long. The minimum envelope thickness is 0.01 inches and the maximum envelope thickness is 0.13 inches.
Mail Ballot Envelope Processing	E-6	Be configurable for thickness detection.	1	The AVES scanner can be configured for the thickness.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM E – AUTOMATED BALLOT ENVELOPE SCANNING AND SIGNATURE VERIFICATION				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Mail Ballot Envelope Processing	E-7	Automatically separate envelopes when voter ID required into a separate stack or identify them electronically for easy separation.	4	The AVES Scanner sorts for envelopes that have been successfully scanned or unsuccessfully scanned (with two output bins). Using the scanner reports, one could cross reference the Voter ID Required list to determine the location of the envelopes.
Mail Ballot Envelope Processing	E-8	Have an option for sort/pass with the ability to customize sorting definition (e.g. style, precinct, district, unaccepted envelope, signature discrepancy and no signature). **Note:** Please explain the sort options available in your system.	4	The AVES Scanner sorts for envelopes that have been successfully scanned or unsuccessfully scanned (with two output bins).
Mail Ballot Envelope Processing	E-9	Provide a high-volume solution for counties with a large voter population. **Note 1:** Please specify the throughput capacity on your high-volume envelope processor. **Note 2:** County size by registered voter population is as follows: Large = Over 25,000 voters Medium = 10,000 – 25,000 voters Small = Fewer than 10,000 voters	1	**Notes 1 and 2:** The AVES scanner is scalable for all county sizes and has been a proven solution for jurisdictions with 4.7 million registered voters. The networked environment makes the system scalable for all volume needs.
Mail Ballot Envelope Processing	E-10	Provide a low-volume solution for counties with a small or medium voter population (see E-9 requirement Note 2). **Note:** Please specify the throughput capacity on your low-volume envelope processor.	1	The AVES scanner can accommodate counties with a small or medium voter population. The throughput is 3600 per hour per machine.
Mail Ballot Envelope Processing	E-11	Provide configurable reports for tray id, tray count and pieces status.	1	The AVES software has a variety of report formats to configure the captured data from processing of envelopes, including but not limited to tray id, tray count, and piece status.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM E – AUTOMATED BALLOT ENVELOPE SCANNING AND SIGNATURE VERIFICATION				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Automated Signature Verification	E-12	Provide tested/proven Automated Signature Verification (ASV) software, which can automatically compare a voter's ballot envelope signature with the SCORE voter registration signature based on a customer selected confidence determination. **Note:** Please provide any information about your system that might be an alternative to manual removal of the signature security tab on mail ballot envelopes.	1	The ES&S AVES Scanner utilizes the proven signature verification software, "SignatureXpert". The captured signature image is compared against the loaded SCORE database of signature images. The system enables the user to set a tolerance for the confidence of the signature compare. The system does not provide an alternative to manually removing the security tab.
Automated Signature Verification	E-13	Be configurable to meet or exceed a state established acceptance threshold for signature acceptance.	1	The system enables the user to set a tolerance for the confidence of the signature compare. ES&S can work with the CDOS Elections group to educate on the confidence parameter so they are able to determine the desired setting to propose.
Automated Signature Verification	E-14	Provide user activity log records that include full description of all human intervention during the ASV process.	1	Audit log records from the signature recognition software can be accessed by the user. Reports can be printed or exported.
Automated Signature Verification	E-15	Provide an audit function to verify the accuracy of machine accepted signatures.	1	Audit log records include the automated signature recognition confidence values for each signature scanned and compared. A record is also maintained if the user changes the signature validation status (i.e. User changes from "Challenged" to "Accepted"), thereby creating an audit trail on the events where human interaction varied from the machine's established threshold. The machine's threshold value is adjustable by user.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM E – AUTOMATED BALLOT ENVELOPE SCANNING AND SIGNATURE VERIFICATION				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Automated Signature Verification	E-16	Extract returned ballot envelopes for manual review when the signature does not meet the acceptance threshold level, is unreadable, or is missing.	4	The AVES Scanner sorts for envelopes that have been successfully scanned or unsuccessfully scanned (with two output bins). Scanned envelopes with signature compares that do not meet the specified threshold are marked in a list accessible from the software. These envelopes are then able to be extracted for further review by staff.
Automated Signature Verification	E-17	Create a record when the signature does not meet the acceptance threshold level. This record will be used to generate a letter when the signature cannot be manually verified. **Note:** Please explain your process for creating and using these records.	1	With the Export module of AVES software, we can provide the metadata file for signature images that did not meet the established threshold. This metadata file has the VoterID value, Status column (see response to E-3 for a list of codes), Received date, and other status indicators.

Section 12.0 – UVS System Requirements Table: Appendix B, Section F – Mail Ballot Tracking

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM F – MAIL BALLOT TRACKING				
Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Mail Ballot Tracking	F-1	Track a mail ballot envelope from the time it is prepared for the voter in an elections office or by a vendor, through every stage of the U.S. Postal Service mail delivery system.	1	ES&S offers its web service "Voter Trace" to capture and report the status of customer mail pieces. Voter Trace enables the jurisdiction to track a mail ballot package from the point it is created to the point of its verified delivery by the USPS.
Mail Ballot Tracking	F-2	Track a mail ballot through stages of the ballot acceptance process after return to the County by the voter. **Note:** Explain which processes within the Elections Office can be tracked by your system after the ballot envelope is received in that office.	1	The mail ballot packet has a barcode that contains the SCORE system VoterID. Once this barcode is scanned by the ES&S AVES Scanner, a record is created to identify the ballot packet as received. The AVES scanner record can be output for updating the SCORE systems with the packet status. Using the VoterID barcode, the packet can be tracked as 'Received', 'Accepted', 'Challenged', or 'Rejected' by the county. If there are other processes at the county, the barcode would enable the county to check the packet in and out of any step in their process.
Mail Ballot Tracking	F-3	Provide sufficient report capability for the election officials to ascertain the status of any and all mail ballots in each stage of the mail ballot process tracked by the system.	1	ES&S meets this requirement between its postal tracking interface "Voter Trace" in combination with the AVES scanner status reports, which identify the status of all mailed (Voter Trace) and returned (AVES scanner) voter packets.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM F – MAIL BALLOT TRACKING				
Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Mail Ballot Tracking	F-4	Provide a system whereby voters can "opt in" to receive messages about their ballot's status in the process.	2	ES&S has developed a web service that enables jurisdictions and voters alike to authenticate themselves and then review the status of their ballot packet. This service also has an automated messaging feature that automates status updates. Voters are able to opt in to receive ballot status messages. Final enhancements are to be completed prior to the February evaluation.
Mail Ballot Tracking	F-5	Provide a system whereby voters who have chosen to "opt in" to receive messages about their ballot's status in the process can choose to "opt out".	2	ES&S has developed a web service that enables jurisdictions and voters alike to authenticate themselves and then review the status of their ballot packet. This service also has an automated messaging featuring that automates status updates. Voters may opt in or out from receiving such messages. Final enhancements are to be completed prior to February evaluation.
Mail Ballot Tracking	F-6	Provide a messaging system that delivers messages via a website to voters who have requested notification about their ballot's status.	2	ES&S has developed a web service that enables jurisdictions and voters alike to authenticate themselves and then review the status of their ballot packet. Final enhancements are to be completed prior to February evaluation.
Mail Ballot Tracking	F-7	Provide a messaging system that delivers messages via email to voters who have requested notification about their ballot's status.	2	ES&S has developed a web service that enables jurisdictions and voters alike to authenticate themselves and then review the status of their ballot packet. This service also has an automated messaging featuring that automates status updates via email. Final enhancements are to be completed prior to February evaluation.
Mail Ballot Tracking	F-8	Provide a messaging system that delivers messages via text messaging to voters who have requested notification about their ballot's status.	2	ES&S has developed a web service that enables jurisdictions and voters alike to authenticate themselves and then review the status of their ballot packet. This service also has an automated messaging featuring that automates status updates via text message. Final enhancements are to be completed prior to February evaluation.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM F – MAIL BALLOT TRACKING				
Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Mail Ballot Tracking	F-9	Have sufficient capacity to provide the same level of service to as few as one or as many as 64 counties at the same time. (Estimate up to 4 million records if all counties are participating.)	1	The ES&S process is scalable to provide the same level of service to as few as one or as many as 64 counties at the same time. VoteRemote Outbound absentee ballot packet creation and Voter Trace packet tracking are both scalable and provide equal levels of functionality regardless of the number of users.
Mail Ballot Tracking	F-10	Be able to utilize all email and text messaging vendor systems in use in Colorado.	2	ES&S's team of data conversion specialists are well versed in translating data for use by third party vendors.
Mail Ballot Tracking	F-11	Provide each individual county the ability to personalize messages to its voters based on its elections setup, processes, etc.	2	ES&S has developed a web service that enables jurisdictions to customize their voter communications. Final enhancements are to be completed prior to February evaluation. ES&S will work with each jurisdiction at time of implementation to personalize their messages to voters.

Section 12.0 – UVS System Requirements Table: Appendix B, Section G – Vendor Training & Support

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM G – VENDOR TRAINING & SUPPORT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Hardware & Software Support	G-1	Include availability of vendor support personnel to assist in hardware and software installation and setup onsite.	1	Full details regarding the installations procedures and implementation process can be found within the Preliminary Project Plan in **Section 10, Preliminary Project Schedule and Staffing Plan**. To summarize, the project will initiate with a series of meetings to define deliverable specifics and finalize project dates, details, and deadlines. This discovery phase will finalize with a proposed Project Plan- a modified version of this preliminary plan- that will be proposed to the State for review, feedback, and eventual approval. Following completion of the Project Plan, implementation activities will begin immediately on the dates specified and agreed upon by the State. Delivery of equipment, software, training, acceptance testing, documentation, and other activities will occur. Throughout this and each phase of the project, the ES&S Project Manager will provide detailed status reporting in a format and on a timeline specified by the State. This reporting process will assure all project stakeholders are kept up-to-date regarding project activity and overall project status. The ES&S Project Manager and supporting ES&S team will work closely with the State, particularly for its first-use elections. Eventually, the State will gain increased independence and the project will turn over to an on-going

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM G – VENDOR TRAINING & SUPPORT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				support and maintenance phase. ES&S will work closely with the State to assure the appropriate level of support and services are provided throughout all phases of the project and beyond. At any time, ES&S is capable of tapping its deep reserves of local and nationwide voting system experts, Certified Project Managers, Certified Voting System Technicians, experienced Trainers, Engineers, and other resources to assure the State and its counties are always supported to the level requested and needed.
Hardware & Software Support	G-2	Include availability of vendor support personnel to assist in hardware and software installation and setup from a remote help desk.	1	ES&S offers a multitude of support channels to assist customers with issues and concerns ranging from simple "how-to" questions to complex functional inquiries. • **Toll-free support (ES&S Omaha) –** You may also call the ES&S Help Desk toll-free customer support telephone number 877-ESS-VOTE (877-377-8683, then press the appropriate number for support). The support lines are open 24 hours a day. Representatives monitor the line from 7 a.m. to 7 p.m. Central time, Monday through Friday. We have a team of very experienced hardware and software support technicians who will comfortably guide you to an issue resolution. • **E-mail support –** Customers can also communicate directly with their dedicated ES&S representative or specialized support and technical representatives via e-mail. • **FAX support –** Facsimile support is available to the ES&S Help Desk at (402) 970-1267.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM G – VENDOR TRAINING & SUPPORT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				• **Customer portal –** Each customer will be provided a user name and password to access the ES&S customer portal. The portal contains copies of all user documentation to include Standard Operating Procedure manuals and technical bulletins. In addition, the portal provides access to ES&S Election Services forms, RMA request forms, and a link to the ES&S Supply Store. • **WebEx support –** ES&S Technical Support uses WebEx as our remote desktop assistance tool to provide over-the-shoulder assistance when needed.
Training	G-3	Include availability of vendor supported onsite training personnel to train CDOS and County users.	1	ES&S is fully committed to being onsite to successfully lead you through CDOS and County user training. You will be supported by a handpicked project team. ES&S will work with CDOS to develop a training plan that incorporates initial and on-going hardware, software, and Train the Trainer (TTT) courses for a variety of audiences, including election staff, county technicians, and Officers. Our experienced project management team will be there with you every step of the way to guide you and train you so you become autonomous in the preparation and use of the voting equipment and software. Courses will be a combination of classroom and online (WebEx) courses. ES&S will work with CDOS and the counties to determine the ideal training location(s) for all parties concerned. On-going training can be conducted by County trainers who have completed the ES&S Train-the-Trainer (TTT) curriculum.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM G – VENDOR TRAINING & SUPPORT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				Please see **Section 6.0 Project Approach, 6.7 Training** for detailed training information.
Training	G-4	Include availability of self-study user training via the Internet or electronic media.	1	Self study training may be accomplished by utilizing the ES&S Customer Portal, which provides the user access to download all manuals and documents that pertain to the proposed solution.
Voting Period Support	G-5	Provide 24-hour available technical support for all system components beginning sixty days prior to an election and continuing until the completion of the official canvass (generally twenty days after an election). **Note:** Please describe your capability to provide extended support, beyond twenty days after an election, for circumstances such as a recount.	1	The ES&S National Help Desk operates from 7 a.m. to 7 p.m. Central time, Monday through Friday. Customers requiring assistance should place a call to our Help Desk via a toll-free number (1-877-377-VOTE). During the weeks leading up to our customer's important election events, our National Help Desk is on call 24x7 by phone, email, cell phone, or facsimile. Our ES&S National Help Desk technicians can answer any question regarding hardware or software. No question is too hard and we will stay with you till you feel comfortable about the answer. Customers requiring assistance outside these hours may call their ES&S dedicated Customer Service Manager's cell phone 7/24 for assistance. Our goal is to make ourselves available to anyone on your staff when you need us. Customers may also send a Help Desk request through e-mail or facsimile. Customers can expect to receive a reply or callback immediately from their Customer Service Manager (CSM) or the Help Desk during peak election activity, or within 4 hours during non-election periods. ES&S offers multiple support channels to assist customers with issues and concerns ranging from simple "how-to" questions to

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM G – VENDOR TRAINING & SUPPORT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				complex functional inquiries. • **Toll-free support –** Customer support is available by telephone, fax or e-mail to our ES&S Help Desk. Our dedicated toll-free customer support telephone number is 877-ESS-VOTE (877-377-8683, then press the appropriate number for support). The support line is open 24 hours a day. Representatives monitor the line from 7 a.m. to 7 p.m. Central time, Monday through Friday. We have a team of very experienced hardware and software support technicians who will comfortably guide you to an issue resolution. • **E-mail support –** Customers can also communicate directly with their dedicated CSM or specialized ES&S support and technical representatives via e-mail. • **FAX support –** Facsimile support is available to our Help Desk at (402) 970-1267. • **Customer portal –** Each customer will be provided a user name and password to access the ES&S customer portal. The portal contains copies of all user documentation to include Standard Operating Procedure manuals and technical bulletins. In addition, the portal provides access to ES&S Election Services forms, RMA request forms, and a link to the ES&S Supply Store. • **WebEx support –** ES&S Technical Support uses WebEx as our remote desktop assistance tool to provide over-the-shoulder assistance when needed.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM G – VENDOR TRAINING & SUPPORT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Hardware Parts and Supplies	G-6	Include hardware solutions for the UVS that are supported by a supply chain contingency plan. **Note:** Please provide an explanation of your supply chain contingency planning. The intent of this requirement is to assess the risk to Colorado of one or more of your suppliers not being able to provide needed components. Identify the depth of your supply chain (e.g. one, two, or more suppliers deep).	1	ES&S owns the designs for all of its go-forward equipment. These designs, coupled with its engineering and development staffs, affords ES&S the flexibility to not be tied to a single manufacturing partner. While ES&S believes in strong partnerships when contracting manufacturing builds, we have moved production to new firms to improve quality, costs and / or lead times. The deep technical understanding of the products allow ES&S to have this flexibility. Relationships with multiple manufacturing partners allows the option to second source given parts or components.
Hardware Parts and Supplies	G-7	Make equipment parts and supplies available through December 31, 2020.	1	ES&S stocks over $2,000,000 of available repair inventory (spare parts and subassembly inventory) in our Omaha warehouse to support the three product lines in our proposal (DS200, AutoMARK, ExpressVote and DS850). ES&S will ensure that parts and supplies necessary to support the proposed voting system will be available to State of Colorado. Our commitment to maintaining high inventory levels is supported through solid supply chain and inventory parts management systems. These include minimum buy commitments, lead time management policies. Our perpetual inventory system coupled with an ongoing supply chain assessment with our key manufacturers and suppliers provides our customers and field technicians with immediate access to our certified spare parts inventory. This is the primary reason that we suggest each jurisdiction maintain an ES&S warranty service contract – maintenance of a service and support contract guarantees availability of

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM G – VENDOR TRAINING & SUPPORT				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				service staff and a certified spare parts inventory.
Hardware Parts and Supplies	G-8	Not require royalty fees, user fees, or other charges or limitations on the printing of ballots designed or printed on vendor devices. Similarly, no fee or limitation shall be placed on any electronic file, report or representation of the vote produced by vendor devices or software.	2	Please note that we have had difficulty interpreting the spirit and intent of this requirement. With that as background, our response is as follows: It is normal and customary for ES&S to charge our customers for the production of ballots by our devices. This charge is in the form of a per-ballot fee, which we believe is the most equitable and rationale approach since the customer incurs this fee only when the transaction occurs. We also envision a transaction-related fee associated with the electronic delivery of a ballot to a voter. The actual fee that would apply is shaped by the products and services required of ES&S as set forth in this bid.

Section 12.0 – UVS System Requirements Table: Appendix B, Section H – Miscellaneous Requirements

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM H – MISCELLANEOUS REQUIREMENTS				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Auditing	H-1	Store sufficient data in an unalterable system audit log file to allow the auditing of all operations related to election setup, ballot creation, ballot tabulation, results consolidation and report generation. The audit log file shall contain: a. An identification of the program and version being run. b. An identification of the election file being used. c. A record of all options entered by the operator, including operator ID. d. A record of all actions performed by a subsystem of the system. e. A record of all tabulation and consolidation input. f. Audit log records that are created and maintained in the sequence in which operations were performed, with date/time stamps. **Note 1:** Please explain what audit trail techniques and audit reports are incorporated in your proposed system. **Note 2:** Please provide a list of all audit log files, the file location within the voting system, and the procedures to navigate to and retrieve them from the voting system. **Note 3:** Please describe steps needed to protect the audit logs from possible unintentional or intentional erasure or alteration. **Note 4**: Please provide a sample set of audit reports (system logs, etc.) from an election in a county with 200,000 or more registered voters (not necessarily in Colorado).	1	Please see Section H Additional Comments document.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM H – MISCELLANEOUS REQUIREMENTS				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Auditing	H-2	Accommodate random audits on electronic voting and tabulation devices.	N/A	N/A, as we are not proposing an electronic voting and tabulating device (DRE).
Auditing	H-3	Accommodate random audits on paper vote capture and tabulation devices.	1	Random audits are easily accomplished using the application logs and reports generated from the tabulators. In addition, EVS supports random recounts of particular precincts or contests by means of a simple recoding of the election and use of the DS850 to sort and identify particular ballots or to recount them to compare against the results from the election ballot scanning and tabulation. For support of Risk Limiting Audit support, please see section H-9.
Auditing	H-4	Log all activity on voting equipment including: when turned on/off, any errors, power failure, power restoration, when an error occurred and when an error was resolved.	1	The DS200 and DS850 log all activity on voting equipment including when turned on/off, any errors, power failure, power restoration, when an error occurred and when an error was resolved. The AutoMARK and ExpressVote include functionality to record system audit logs. These real-time logs are stored on each system's removable media. Logs can be accessed through the systems TEST mode.
Auditing	H-5	Run real time reports, when needed.	1	EVS 5.2.0.0 produces both pre-formatted reports and real-time querying and reporting of listed election data. Real-time reports can be filtered for any or all attributes and associations of any data element and then exported to an Excel spreadsheet. The DS850 provides for a robust set of real-time reports with options to preview, print or export. Role-based access codes can be used to protect access to key features, including reports to prevent unauthorized use or access.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM H – MISCELLANEOUS REQUIREMENTS				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				The DS200 also provides for such reports, with the exception of reports that are not allowed during the time when the polls are open. The ExpressVote and AutoMARK systems can produce current audit log reports on demand.
Auditing	H-6	Run post-election diagnostics on all auditable equipment in a manner that does not endanger the integrity of the election record. **Note:** Please explain your system's post-election diagnostic capabilities.	1	The DS850 and DS200 tabulators provide system reports that validate items such as the hardware, firmware and configuration of the tabulators. They also feature the ability to export the key static files for a hash check validation against the trusted version of firmware issued by the State. Finally, the systems can support a post election Logic & Accuracy test to validate that a known test deck still scans and tabulates are required. The ExpressVote and AutoMARK have the capability to run post-election diagnostics reports in the same manner as the DS200.
Auditing	H-7	Provide for adequate information to facilitate a recount under Colorado law.	1	Electionware provides a powerful means for restricting the election definition to a subset of contests or precincts specified for a particular recount. This definition can be loaded on the DS850 allowing for high speed sorting and/or recounting of the ballots in question.
Auditing	H-8	Have a permanent paper record of each vote for audit purposes.	1	The paper ballot utilized with the DS200, DS850 and the AutoMARK is the voter-verifiable paper record of all votes cast. It is the official ballot of record that is available to jurisdictions in the event a recount, including manual recount, is required. The ExpressVote creates a paper record of all selections made by a voter during a given voting session.
Auditing	H-9	Support a Risk Limiting Audit, as defined in section 1-7-515(5)(b), C.R.S.	2	EVS provides options to support various levels of risk limiting audits

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM H – MISCELLANEOUS REQUIREMENTS				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
		sufficient to audit the functionality of electronic and paper vote capture as well as vote tabulation devices. **Note 1:** Please describe how your proposed system supports the execution of a Risk Limiting Audit. **Note 2:** Does your solution place unique identifying numbers on ballots as they are scanned? **Note 3:** Section 1-7-515, C.R.S. stated that Colorado must begin risk-limiting audits in 2014, but was revised in the 2013 session to extend the start of the requirement to 2017.		both with existing functionality with minor future enhancements. **Note 1**: The simplest version of a risk limiting audit could be accomplished by using the ballot images for the ballots and the linked CVRs to audit the proper ballots. These ballots would be determined by a simple process using spreadsheet calculations. A full application for this purpose is under consideration to more fully automate the process before the required 2017 date. **Note 2:** Ballots given to the voter do not contain a unique identifier. ES&S believes this could be used to compromise vote privacy or give the perception that voter privacy is compromised. Once the voter has the ballot, the ExpressVote could easily implement a future option to imprint a random number on the voter summary card, which would then be scanned and allow the paper, image, and CVR to be linked. For all mail elections, the DS850 could implement the imprinter to allow the exact piece of paper to be located and matched up with the ballot image and CVR. **Note 3**: ES&S acknowledges Note 3 and would work with the State and particular jurisdictions to rollout such a system in a way that is best for each county.
Auditing	H-10	Incorporate a real time clock as part of the system hardware and all audit log record entries shall include a date/time stamp.	1	All components of the EVS system comply with this requirement.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM H – MISCELLANEOUS REQUIREMENTS				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Auditing	H-11	Use a real time clock that will continue to run during a power loss.	1	The DS200, DS850, AutoMARK, ExpressVote and EMS computers all contain real-time clocks that are battery-backed and will continue to run during a power outage.
Auditing	H-12	Print audit reports on the standard system hardcopy output device when the following conditions are met: a. The generation of an audit trail report does not interfere with the production of other output reports. b. The entries can be identified so as to facilitate their recognition, segregation and retention. c. The physical security of the audit record entries can be ensured.	1	All audit reports from the system can be printed on output devices under the conditions described.
Auditing	H-13	Create audit records during the election definition and ballot preparation phases showing completion of the baseline ballot layouts and any modifications to them, a description of the modifications and a date/time stamp.	1	Please see Section H Additional Comments document.
Auditing	H-14	Create audit records during the pre-election phase that include electronic and manual data entered and maintained by election personnel, election definitions, instances of all final ballot layouts and the ballot preparation edit event log.	1	The ElectionWare Election Audit Events Report displays detailed audit information. This report includes a comprehensive list of all changes to the ballot formats and can be run at any time for a specified date range. Samples of ballot formats can be created within the Paper Ballot module at any time in the pre-election process. The individual steps taken during the ballot layout are tracked and can be viewed in the Election Audit Events Report.
Auditing	H-15	Create audit records prior to the initiation of ballot counting to verify hardware and software status. These particular audit records shall include the identification of the software release, the identification of the election to be processed and the results of hardware and software diagnostic tests.	1	Please see Section H Additional Comments document.
Auditing	H-16	Create in-process audit records containing data documenting system		a. The DS200, DS850, ExpressVote

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM H – MISCELLANEOUS REQUIREMENTS				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
		operation during diagnostic routines and any machine generated error and exception messages. Examples of these audit records include: a. System startup diagnostic and status messages. b. Checks that pre-count reports show zeroes. c. The source and disposition of system interrupts resulting in entry into exception handling routines. d. All messages generated by exception handlers. e. The identification code and number of occurrences for each hardware and software error or failure. f. All operator actions. g. Notification of system login or access errors, file access errors and physical violations of security. h. Other exception events such as power failures, failure of critical hardware components, data transmission errors, and other types of operating anomalies.		and AutoMARK record diagnostic and status messages generated upon machine startup in the Audit Log. b. Printing of the zero total report is recorded in the DS200 Audit Log. This report cannot be printed unless the counters are zero and tabulation cannot be initiated. c. The hardware abstraction module of the DS200 handles all system interrupts and events from the different components of the system. Depending upon the severity of the event, this handler takes appropriate action and creates a log record as to the action taken. d. The DS200's firmware has exception handling built in for handling typed and runtime exceptions where possible. There is also a global exception handler that catches any unhandled exceptions and gracefully logs them. e. Yes. Each error or failure event type on the DS200 is given a unique error code. The error events are written to a digitally signed audit log that includes the code, timestamp, and error description. These audit logs are read into the EMS database Database queries can be used to determine the number of occurrences of each event. f. Yes. The DS200 and DS850 provide such audit logs for their reporting capabilities. Additionally, the ElectionWare EMS and ERM Reporting combination does provide audit records of all operator actions and system events that occurring during printing of voting data and in the preparation of the official canvass. g. The DS200 and DS850 log all pass code attempts, whether successful or failed, to the digitally signed audit

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM H – MISCELLANEOUS REQUIREMENTS				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				log. In addition, all user actions (e.g. administrative menu selections, open and close poll events, etc.), whether successful or failed, are also written to the audit log. Both the DS200 and DS850 have logging when the imaging heads are accessed. The DS850 provides additional alerts and logs access to the back service door. h. All critical event and exceptions are logged. If the system is not able to log an event of any type, the system requires the operator to do a forced shutdown to prevent activity from occurring when logging is not available.
Auditing	H-17	Provide an in-process audit report, for post-election use, consisting of data containing a record when each vote is initiated and each ballot is cast.	1	The DS200 stores an individual record of each ballot cast (a cast vote record) on the USB flash drive when the ballot is processed. Note that the DS200 records an entry for when each voting session starts and ends and when the session results in a ballot being cast, but does obscure the time stamps for ballot images and CVRs so as to ensure voter privacy by obscuring the vote order. This allows auditability and voter privacy. A user can print the contents of the Audit Log on the thermal printer built into the machine or from the Election Reporting Manager software application after a user has closed the polls and transferred the data from the memory device. The ExpressVote fully meets this requirement. The ExpressVote audit reports provide time stamp information to show when a card was printed and either returned to the voter or ejected in the back into a secure container.
Auditing	H-18	Print reports necessary to assist election officials in performing a manual count as required by Colorado	1	**Note 1:** The proposed ES&S system provides numerous reports to aid in

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM H – MISCELLANEOUS REQUIREMENTS				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
		election law and rules. **Note 1:** Please explain how your proposed system can create the reports necessary to allow election officials to perform and validate a manual count. **Note 2:** Please explain how, in the case of a recount, the election can be reconstructed ballot by ballot, while still maintaining voter privacy.		the performance of a manual recount, including ballot and precinct statistical reports that are available from the tabulators, EMS, and ERM reporting module. **Note 2:** There are several options to support a recount. Since all voted paper documents are the officially cast voter ballot, these can be reprocessed, ballot by ballot as the method of performing a partial or full recount. In addition, since a graphical image of the front and back and a cast vote record (CVR) of the tabulated content is stored for every tabulated ballot and stored on the unit's USB drive, Electionware can upload all of this data into the database and allow the simultaneous display of the image and CVR of any desired ballot. This allows the ballot tabulation to be manually confirmed ballot by ballot by viewing the image and confirming the tabulated selections. Electionware's ability to export an Excel file containing a record (row) for all or a subset of CVRs and a column for all or desired contest selections allows all the candidate selections contained in the exported records to be independently aggregated using the standard Excel count capabilities.
Auditing	H-19	Record audit log entries onto durable non-volatile storage.	1	For the DS200, audit log entries are written to the audit log, which is stored either to the DS200's internal Compact Flash card or, if available, to the removable USB media. For the DS850, the audit log is written to the internal hard disk drive and can then be exported to a USB media device. The ExpressVote records audit log

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM H – MISCELLANEOUS REQUIREMENTS				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				entries into a removable USB media. The AutoMARK records audit log onto a removable compact flash card.
Auditing	H-20	Export audit logs in formats suitable for use by elections officials and the public including common electronic formats (PDF, Excel, CSV, TXT, EML).	1	Audit logs from the hardware components can be exported in a common industry format, and additionally can be imported into Electionware and exported as a PDF.
Certification	H-21	Be certified or certifiable by the EAC, another state, or Colorado. **Note 1:** If not certified, please explain. **Note 2:** See section 1-5-601.5, C.R.S. for Colorado voting system certification compliance with federal regulations. RFP section 5.3.11 has a question on certification status of vendor proposed solutions.		**Notes 1:** The EVS 5.2.0.0 system will begin EAC Federal certification testing in December 2013 with a completion date expected in July 2014. The EVS 5.2.0.0 release contains upgrades to the currently federally certified AutoMARK, DS200, DS850 and Electionware along with adding the ExpressVote. **Note 2:** ES&S has provided a response to this question in the noted section.
Testing	H-22	Be configurable so as to be capable of performing the following functions on all system hardware/software, in compliance with current Colorado statutes and rules: a. Hardware test b. Logic and Accuracy Test c. Post-Election Audit d. Pre-Recount Logic and Accuracy Test e. And capable of performing the Colorado Risk Limiting Audit commencing no later than 2017.	1	The system does comply with requirements A through D and will be fully compliant with Requirement E by 2017 or earlier if required by a particular jurisdiction. **Note 2:** With the exception of the ExpressVote, all components of the EVS 5.2.0.0 release have been previously certified. The EVS 5.2.0.0 system provides upgrades to those components in addition to adding the ExpressVote.
Testing	H-23	Allow authorized user creation of scripted simulation Logic and Accuracy tests with various patterns (e.g. 1,2,3 or 1,1,1 or 1,2,3,4,5…). **Note:** Please explain how your system allows for pre-determined simulation for creating test ballots and electronic voting equipment test input.		The ES&S Toolbox application is used to create test-decks with ovals marked in a pattern selected by the user. The inputs for this function are a poll media and the ballot pdf. The printed test deck ballots are then run on the tabulator and tabulator reports are compared to a pre-printed results report from Toolbox. The test deck can be created in a 1to x pattern, with

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM H – MISCELLANEOUS REQUIREMENTS				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				blank and over voted ballots; and a watermark can be placed on the test ballots. ExpressVote has a "Test Ballot Print" utility that allows a user to vote a ballot pattern, and then print 1 to 500 cards with that same vote pattern. AutoMARK does not have the same capability and would be required to vote each ballot manually.
Testing	H-24	Have the capability to test ballot layouts to verify the allowable number of votes for a contest or question and the combinations of voting patterns permitted or required by the using jurisdiction.	1	The ES&S Toolbox allows the user to create pre-printed test decks with a 1 to x pattern, then to optionally include under voted and over voted ballots. Over voted ballots can either have all ovals marked, or one oval more than the vote for marked. The test deck function in Toolbox also creates a results report based on the marking algorithm selected. This report can be compared to the results report from the tabulator that scans the marked test deck. The ExpressVote has a "Test Ballot Print" utility that allows a user to vote a given pattern, and then the user can choose to reproduce from 1 to 500 cards with that same vote pattern automatically by repeatedly inserting blank cards. The AutoMARK does not have the same capability and would be required to vote each ballot manually.
Testing	H-25	Provide capability to permit diagnostic testing of all the major components within each electronic vote capture device.	1	Please see the Section H Additional Comments document.
Testing	H-26	Ensure non-contamination of voting data through tests of all data paths and memory locations to be used in actual vote recording.	1	When L&A testing is complete, each scanner should be cleared of all vote totals and the unit sealed for transport to the polling place. Validation that all test data has been expunged from each machine's USB Flash Drive is completed by running a Zero Report to check that all votes are cleared

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM H – MISCELLANEOUS REQUIREMENTS				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				from the machine's memory. The ExpressVote and AutoMARK also fully meet this requirement.
Testing	H-27	Provide evidence in an audit record that test data has been expunged.	1	On the DS200, DS850, and ERM, evidence that the votes were cleared and a Zero Report was created would be found in the Audit Log. This requirement does not apply to the ExpressVote or AutoMARK as neither systems store or save votes or ballot selection information. Audit logs do indicate when the "Test Ballot Print" utility is enabled and disabled.
Testing	H-28	Allow the ability to load and test audio ballots in electronic vote capture equipment.	1	Testing can be performed on the ExpressVote and AutoMARK by loading the election and utilizing audio ballot voting.
Testing	H-29	Provide the ability to print all necessary reports for proofing the results of logic and accuracy testing.	1	The system provides the standard set of Zero and Results reports that meet this requirement.
Security	H-30	Provide an environment whereby all databases and data are maintained with provisions for operational security, access control and auditability. **Note 1:** Please describe the authentication protocols for access to the EMS database and your system's processes for providing operational security and auditability. **Note 2:** System security must not obstruct authorized access to event or audit logs, and printing or exporting of reports.	1	**Note 1:** Access to Electionware is controlled by a username and password for each user. There are four different roles that a user account may be assigned to (Administrator, Election User, Ballot Producer, Media Creator, BallotReviewer). Each user account is protected with a strong eight character minimum password with at least three of the four character groups. The administrator can set the password expiration policy as well for the user. Every user action is logged and all database tables have a "modified by" and "timestamp" column containing the user account that modified the record and when it was modified. All the tables have journal tables that

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM H – MISCELLANEOUS REQUIREMENTS				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
				capture the history of changes made to the contents of the tables. The database data directory is only accessible by the operating system administrator group and not by the regular user role. The data is accessed by the database server through a service account and thereby protecting the data files from being directly accessed. **Note 2:** As noted, all user actions are logged to the election log and also to an output window for the logged in user to have immediate access to the history of events that took place in that session. The Electionware Administrator role user accounts have access to the audit logs and can view/print the audit log report. The audit log report can be exported to different formats like PDF, RTF, HTML, XLS and CSV. The audit events can be filtered by date and time range, event types and sorted in ascending or descending order.
Security	H-31	Require two factor authentication for access to the EMS and all tabulation equipment. This means an authorized user will need a physical device (e.g. token, card) and something memorized (e.g. password) to access the software or equipment.	1	The hardware devices require a physical key to turn on the devices as well as an access code to access the application and operate the devices. The EMS currently relies on the physical security where the computer system is housed and authentication at the OS and application level. ES&S can provide additional physical controls for the EMS system as required to meet this requirement.
Security	H-32	Allow tamper evident seals to be placed on all equipment doors, openings, and data access points such that unauthorized access is either prevented or clearly indicated by the damage to or destruction of a seal. **Note:** Please describe the security offered by your proposed system relating	1	The plastic ballot box, with the carrying case installed, provides a variety of locations to lock and seal the ballot box to secure the DS200 and USB election definition flash drive during pre-Election and Election Day. Each of ballot box doors (official ballot compartment,

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM H – MISCELLANEOUS REQUIREMENTS				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
		to tamper evident seal placements.		emergency bin) can be locked and sealed to secure ballots in those compartments. When the carrying case including the DS200 is installed on top of the ballot box, an additional carrying case lock and 5 seal positions are available to secure the scanner and box from tampering with the scanner prior to poll opening. For the DS850, all ports are protected by lockable, sealable clear plastic doors to protect access and allow election officials to easily detect unauthorized access. All ExpressVote and AutoMARK ports, doors, openings and data access points are protected by lockable, sealable clear plastic doors to protect access and allow election officials to easily detect unauthorized access.
Security	H-33	Allow all access points to equipment to be visible and subject to oversight of seals, unless the access point is behind doors or a cover. Access points that are not visible should also accommodate tamper evident seals.	1	Please see the Section H Additional Comments document.
Security	H-34	Report unauthorized modifications to audit data or audit logs. **Note:** Please explain your system's capabilities to restrict user authorizations and access rights for creating, reading, modifying, and deleting audit data or logs.	1	The tables in the Electionware database are not directly accessible by the Electionware user accounts. All access to the audit tables are done through stored procedures which execute as the database administrator. The only stored procedures to access the audit tables are an insert procedure to add to the audit tables and a select procedure to read from the table. In addition to the database level security, the hardening of the operation system environment makes the database files inaccessible to the users. The data is only accessed through the Postgres database service listening on a TCP/IP socket.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM H – MISCELLANEOUS REQUIREMENTS				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Security	H-35	Allow for installation and auditing of a Trusted Build per Colorado Election Rules.	1	ES&S will allow for installation and auditing of a Trusted Build per Colorado Election Rules.
Documentation	H-36	Include a clear set of documented instructions for election judges to set up voting equipment. These instructions should be modifiable by county personnel.	1	ES&S will provide the Initial Training and its curriculum will cover the entire election process through the production of the final official canvass of the vote. The objective of the training is to prepare County Election personnel to operate the voting system without intervention from ES&S. This training (and corresponding documentation) will include instructions for election judges to set up voting equipment.
Documentation	H-37	Include documented instructions for troubleshooting any voting equipment issues that may arise.	1	ES&S will provide training to the election judges that will prepare them to be fully capable of conducting polling place and equipment operations with special emphasis on troubleshooting. Documentation will be provided for troubleshooting procedures.
Documentation	H-38	Include a complete set of User and Technical documentation.	1	ES&S has included a complete set of technical user documentation on a separate CD detailing the operation, installation, hardware, technical/descriptive literature, including schematic diagrams and technical reference manuals.

SYSTEM REQUIREMENTS TABLE for the COLORADO UNIFORM VOTING SYSTEM H – MISCELLANEOUS REQUIREMENTS				
Requirement Sub-Category	**Req. ID**	**UVS Requirement (The System will …)**	**Response Code**	**Vendor Response**
Documentation	H-39	Include current certification documentation and VSTL and/or state test reports.	1	EVS 5.2.0.0 is in the process of attaining federal certification and is currently being tested at the Voting System Test Laboratory (VSTL). This system is an upgrade to the federally certified EVS 5.0.0.0 release which was certified on May 16, 2013 to the 2005 VVSG Standards. Please see **Appendix G** for the documentation including VSTL Test Report, EAC Scope of Certification and State Certifications for that release.

Section 12.0 – UVS System Requirements Table: Appendix B, Section H – Miscellaneous Requirements, Additional Comments

Req. ID H-1 Store sufficient data in an unalterable system audit log file to allow the auditing of all operations related to election setup, ballot creation, ballot tabulation, results consolidation and report generation. The audit log file shall contain:

a. An identification of the program and version being run.

b. An identification of the election file being used.

c. A record of all options entered by the operator, including operator ID.

d. A record of all actions performed by a subsystem of the system.

e. A record of all tabulation and consolidation input.

f. Audit log records that are created and maintained in the sequence in which operations were performed, with date/time stamps.

ES&S Response

Each application has its own audit log to allow the auditing of all operations relating to the election setup, ballot creation, ballot creation, ballot tabulation, results consolidation and report generation.

The ES&S proposed voting system audit log provides sufficient information to allow the auditing of all operations related to ballot tabulation, results consolidation, and report generation. Specifically, it includes the following system audit capabilities:

DS200 System Audit Log

The DS200 meets most of the above audit log requirements. A system audit log (that stores machine specific audit items) is kept in the NVRAM and is also shadowed on the DS200 Election Media. This log contains such items as number of system halts, last power on, and other system audit items. The DS200 does not employ user ID's, but rather allow access based on roles for which access codes are issues by the administrator from the EMS.

DS850 System Audit Log

The DS850 meets most of the above audit log requirements. An election event log that records each critical event (operator action, system response to each operator action, standard status messages, exceptions and error events, etc.) is generated and maintained by the DS850. Each event recorded includes a date/time stamp. The DS850 does not employ user ID's, but rather

allow access based on roles for which access codes are issues by the administrator from the EMS.

AutoMARK System Log

The AutoMARK meets most of the above audit log requirements. The AutoMARK uses the Operations log to record and report the date and time of normal and abnormal events, system status, and degree of operability. There is also a Scan log to record scanner specific records and a Service log to record low level hardware anomaly records. These logs are only used for identifying software versions, tracking procedural operation and for hardware and software diagnosis. Since this unit does not tabulate and is only a ballot marking device. Log content has no record of election results nor should the log be included in any recount considerations. These logs are encoded and must use software to provide a human readable textural translation.

ExpressVote System Audit Log

The ExpressVote meets most of the above audit log requirements. ExpressVote includes functionality to record system audit logs. These real-time logs are stored on each system's removable media. Logs can be accessed through each system's TEST mode.

Electionware EMS System Audit Log

Electionware meets all of the above audit log file requirements. All activity, including application errors, log to the Electionware internal audit log database.

User logs record each activity including type, date, time, ES&S application, and user ID.

Election Reporting Manager Audit Log

Election Reporting Manager meets all of the above audit log file requirements. ERM creates an election specific log file when it creates a database for a new election. It records software versions and database created versions as well as all normal and abnormal application events including all precinct vote total updates. A separate log section is maintained for tracking manual entry results modifications on an entry by entry basis. This log is encoded and must use software to provide a human readable textural translation.

Note 1: Please explain what audit trail techniques and audit reports are incorporated in your proposed system.

ES&S Response

DS200

In addition to the audit log described previously that records all use operation and substantial application operations or errors, the DS200 has various configuration reports, ballot accounting reports, and results reports, all of which can be used forensically for auditing.

DS850

Similarly, the DS850 has various configuration reports, ballot accounting reports, and results reports, all of which can be used forensically for auditing , in addition to the audit log described previously that records all user operation and substantial application operations or errors.

AutoMARK and ExpressVote

To detect and record every event and unrecoverable system error condition, the AutoMARK and ExpressVote logs each exception to an operations log. Error conditions that the system cannot overcome are logged to the Operations log and initiate a graceful system shutdown. Specific lower level scanner related errors also produce a lower level detail record in the Scan log in addition to the record in the Operations log. Similarly, hardware detected issues will record a lower level detail record in the Service log. ES&S ballot marking devices do not execute time dependent or pre-programmed events.

Electionware EMS

Electionware logs all events, user actions and errors to the internal audit database when the audit database is not reachable the last audit event is written to the vendor's event log and the application shuts down gracefully. Each event log has a unique identifier, description, time stamp, user id, and modular identification. If the system encounters an error that cannot be overcome, EMS programs gracefully shut down and log the error to the system event log.

Election Reporting Manager

The Election Reporting Log provides a complete audit of normal and abnormal events including all user selection as well as tracking the precinct by precinct vote total updates and the results groups the totals were updated in. The log has the detail needed to forensically back track system operation to see occurrences leading up to the current state of the system.

Note 2: Please provide a list of all audit log files, the file location within the voting system, and the procedures to navigate to and retrieve them from the voting system.

ES&S Response

Each product in the system maintains its own log and has its own method of access. These are detailed below.

DS200

The signed audit logs are written to the log directory on the removable media. The audit log events can be accessed on the DS200 onscreen or through a printed report. When the media is read back into the EMS the audit logs are also retrievable from the EMS through a machine audit log report or exported in a comma separated format.

DS850

The audit logs for the DS850 are stored on the hard disk drive and are available only through the application. When the media is read back into the EMS the audit logs are also retrievable from the EMS through a machine audit log report or exported in a comma separated format.

AutoMARK

The AutoMARK has three log files located in the root directory of the CF card containing the election definition. These are the OP.ELF, SCN.ELF and SERVICE.ELF. The logs are accessed

through the service menu and can either be displayed or printed on ballot card stock. The logs are encoded and must use the AutoMARK firmware to translate them into displayable or printable form.

ExpressVote

The ExpressVote generates two audit logs during normal operation, Operations Log and System Log. The Operations Log resides on the USB media device. The systems log resides internally but can be easily exported and saved onto the USB media device. Both the Operations and Systems log can be viewed on the display screen. To navigate to the logs, switch the ExpressVote to Official mode. Press the button at the top right titled "Operations / System Log". Each log can be displayed newest entry first or oldest entry first. Press **Page Up** and **Page Down** to view all pages. Press **Export** to save the log to the USB media device. Exporting the Operations Log will overwrite the log already on the USB device.

Both logs can also be printed on 19 inch card stock directly from the ExpressVote. Both logs can be imported from the USB device into Electionware where they can be digitally verified as unaltered and decrypted for viewing, printing, or saved as text format.

Election Reporting Manager

Each election has an election specific log file, <electionname>.ALN, which is located in the \ELECDATA folder that is in the root directory of the drive being used as the server drive for the election files. This file is an encoded file and cannot be opened with an editor. An ERM menu selection is used to display or print the file content. The log report can be saved as a report image which can then be opened or printed by a text editor.

Electionware

ElectionWare has four different log handlers that log the audit events under different circumstances. The main audit repository for an election is the election audit log in the Electionware database. Until a connection is established to the Electionware database (mainly user login attempt events), the audit events are logged to the Windows Event Log. Once a connection is established to the database, there are two audit repositories, one in the admin database and one in the election database. Whenever an election is open , the events are logged into the election database. When an election is not open, the audit events are logged into the admin audit repository.

The audit repository is an audit schema in the Electionware admin database and each election's database. There is also an output window, where the audit events during that session of Electionware are logged to. This can be exported to a text file.

Otherwise the audit log is only accessible to the Electionware administrator user who can run the audit log report with a filter for a date and time window and event type. The audit tables are otherwise only accessible to the database administrator.

Note 3: Please describe steps needed to protect the audit logs from possible unintentional or intentional erasure or alteration.

ES&S Response

The EMS network environment is hardened with specific roles for different users to protect from potential intentional and unintentional alterations. Each product in the system maintains its own log and has its own security. These are detailed below.

DS200

The removable media where the audit log is stored is in a sealed, locked compartment. In addition, the audit log files are signed to detect any unauthorized alteration.

DS850

The audit logs for the DS850 are stored on the hard disk drive and are available only through the application. When exported, the file is still maintained on the machine and is the exported log is digitally signed and verified on export into the EMS.

AutoMARK

The records in the AutoMARK log files are encoded and not in textual form. A program must interpret the codes to convert it to user meaningful format.

ExpressVote

The removable media where the audit log is stored is in a sealed, locked compartment. In addition, the audit log files are signed to detect any unauthorized alteration.

Electionware

The EMS runs on a closed network and should be housed in a secure environment with the recommended user roles and access controls in place. In addition to physical security, Electionware is a secure system which allows the user access to the data only through the application to ensure data integrity and security.

The tables in the Electionware database are not directly accessible by the Electionware user accounts. All access to the audit tables are done through stored procedures which execute as the database administrator. The only stored procedures to access the audit tables are an insert procedure to add to the audit tables and a select procedure to read from the table. It is also recommended that the password for the system administrator and the database administrator are split between two individuals to ensure additional protection against intentional alteration.

Election Reporting Manager

The records in the ERM audit log file are encoded in a proprietary format. All ERM log entries are also written to the unalterable Windows event log and only accessible by the system administrator. They are in a relative file which has a propriety format. Any manual modification will render the file unusable.

Note 4: Please provide a sample set of audit reports (system logs, etc.) from an election in a county with 200,000 or more registered voters (not necessarily in Colorado).

ES&S Response

A sample set of audits is provided at **Appendix F**.

Req. ID H-13 Create audit records during the election definition and ballot preparation phases showing completion of the baseline ballot layouts and any modifications to them, a description of the modifications and a date/time stamp.

ES&S Response

Audit records created during the election definition and ballot preparation include records for the finalization of ballot layout and modifications to that finalization. These records incorporate a date/time stamp, include a description of the action and the module the action occurred in. Audit reports can be filtered by date, event type, and sorted by ascending or descending timestamps.

Following is an example of an audit record report showing ballot finalization:

Info	Save Document: Test ballot	11/18/2013 06:33:06PM	admin	Paper Ballot Application
Info	Update Frame: Default Frame	11/18/2013 06:33:22PM	admin	Paper Ballot Application
Info	Update Stylesheet: Default Office Heading Style	11/18/2013 06:33:35PM	admin	Paper Ballot Application
Info	Update Stylesheet: Default Candidate Style	11/18/2013 06:33:49PM	admin	Paper Ballot Application
Info	Save Document: Test ballot	11/18/2013 06:33:56PM	admin	Paper Ballot Application
Info	Export: Start of ballot layout finalization.	11/18/2013 06:34:09PM	admin	Paper Ballot Application
Info	Export: Success	11/18/2013 06:34:30PM	admin	Paper Ballot Application
Info	Save Template: C:\Users\clmiller\Desktop\My Documents\000 EW	11/18/2013 06:35:11PM	admin	Paper Ballot

Req. ID H-15 Create audit records prior to the initiation of ballot counting to verify hardware and software status. These particular audit records shall include the identification of the software release, the identification of the election to be processed and the results of hardware and software diagnostic tests.

ES&S Response

On power up, a configuration report is automatically printed to create a hard copy record of the relevant configuration and settings of the particular DS200. When opening the polls on election day, a ballot status accounting report, as well as a zero report print automatically for the poll worker indicating that the machines has been properly cleared and is ready for voting. The DS200 will not allow the polls to open or voting to commence unless it has passed all startup hardware and software status checks.

Sample Hardware Configuration Report

```
*** CONFIGURATION REPORT ***
9:40 AM January 18, 2011
Unit Serial Number: 0107370046

VOTING DEVICE INFORMATION

HARDWARE CONFIGURATION
Current Time Date:
  9:40 AM January 18, 2011
Time Zone: America/Chicago
Diverter Status: Not Detected
Touch Screen: OK
Power Source: AC
Battery Charge: 100%
Modem Status: Not Detected
Universal Voting Console: Not Detected

STORAGE
Available System Log Storage: 22 MB
Available Ballot Storage: 1751 MB
Available Backup Storage: 0 MB
FIRMWARE
Paper Processing Engine: 2.4.0.0x
Hardware Abstraction Engine: 2.4.0.0x
Tabulation Engine: 2.4.0.0x
Scanning Engine: 2.4.0.0x
Presentation Engine: 2.4.0.0x
Scanner Firmware: 2.13.0.0a
Power Management Firmware: 1.2.2.0a
Operating System Version: 2.4.0.0x
Firmware Last Updated On:
  Unknown
Protected Count: 0

ELECTION QUALIFICATION INFORMATION
Election Name: TULSA
Election Date: 2010-12-31
Election Qualification Code: 05b1e725

ELECTION LOADED

ELECTION STATUS
Poll Opened Date: January 11, 2011
Poll Opened Time: 4:31 PM
Poll Closed Date: January 11, 2011
Poll Closed Time: 4:44 PM
Poll Status: Closed
Public Count: 1

ELECTION INFORMATION
Jurisdiction Name:
  TULSA
Election Description:
  TULSA
Election Date: December 31, 2010
Poll Place ID/Name:
  863/Poll 001
Election Type: GENERAL
Number of Precincts: 1

BALLOT INFORMATION
Ballots By: Style
Ballot Height: 17.0
Ballot Width: 8.5
Ballot Rows: 62
Ballot Columns: 24
Ballot Art Work: DSIM
Target Type: oval

ELECTION SETTINGS
Ability to Re-open: Yes
Number of Zero Tapes to Print: 1
Number of Result Tapes to Print: 1
Print Event Log on Close: No
Transmit Results on Close: No
Report Detail: Media
Report Level: Poll
Candidate Sort Order:
  Default Candidate Order
Single Over-Vote: No
Combine Over and Under Votes: No
Save Ballot Images: All

EXCEPTION BALLOT SETTINGS
Blank Ballots: Query
Over-voted Ballots: Query
Under-voted Ballots: Query
Marginal Marks: Reject
Cross-over Ballots: Query

DIVERTER SETTINGS
Diverter Installed: No
Identify Write-in Overvotes: No
Identify Blank Ballots: No
Identify Write-ins: No

*** END OF REPORT ***
```

The DS850 similarly prints a System Readiness report at startup and performs all necessary hardware and software status checks to verify that the machine is ready for ballot scanning. A worker may reprint addition copies of this and any report. Additionally, the DS850 has ballot statistics reports, as well as a Zero Report, as well as on-screen indicators to validate to the user or administrator that the machine is ready for ballot scanning.

Req. ID H-22 Be configurable so as to be capable of performing the following functions on all system hardware/software, in compliance with current Colorado statutes and rules:

a. Hardware test

b. Logic and Accuracy Test

c. Post-Election Audit

d. Pre-Recount Logic and Accuracy Test

e. And capable of performing the Colorado Risk Limiting Audit commencing no later than 2017.

ES&S Response

ES&S will comply with items A-D; ES&S has technology which is capable of performing risk limiting type audits. If selected we would work with the State of Colorado to implement this technology.

Req. ID H-25 Provide capability to permit diagnostic testing of all the major components within each electronic vote capture device.

ES&S Response

Upon start up, the DS200 and DS850 automatically performs a series of internal system diagnostic checks. These checks are always executed on startup. If any of these checks fail, the failure is logged and system operation may be limited or disallowed.

Automatic self-tests include checking the scanner software, checking the printer, and other system checks. As noted, the DS200 and DS850 can generate and in some cases automatically print various reports including Configuration, Status, and Zero reports, which provide all the information needed to verify equipment readiness. Users also have the ability to print such reports on demand.

Additionally, all hardware devices have significant hardware diagnostic capabilities available via administrative menu options, allowing technicians to run and diagnose key hardware components.

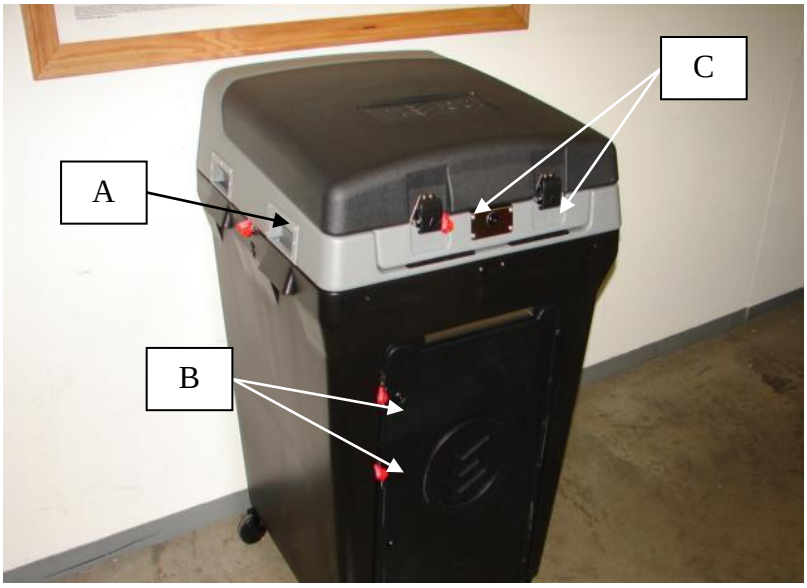
Req. ID H-33 Allow all access points to equipment to be visible and subject to oversight of seals, unless the access point is behind doors or a cover. Access points that are not visible should also accommodate tamper evident seals.

ES&S Response

The DS200 carrying case and ballot bin have a total of 5 locks and 9 possible locations for wire type seals. Before poll opening and after polls close, the DS200 and ballot bin can be secured as shown in the diagram. Note: At poll closing the USB flash drive containing vote, image, and audit log data will have been removed from the DS200 and delivered to election central. The cast ballots inside the ballot bin may or may not be present depending on County procedures.

A. To secure the carrying case to the bin, engage the locks on the sides of the bin between the handles, then place one seal on each side of the bin between the handles (2 seals).
B. To secure the ballot bin, ensure that both doors are locked and place one seal on each door (2 locks + 2 seals).
C. To secure the carrying case lid, secure both lid latches and lock the lid using the lock between the two latches. Place at least one seal at the lid latch. There are two locations for seals at the each latch. Only one seal should be necessary to secure the lid. (1 lock + 2 seals)
D. To secure the DS200 inside the carrying case, lock the front door and place a seal through the lock bracket. (1 lock + 1 seal)

Locations of the lock and seals on the DS200 and ballot bin shown below:



In addition to the locks and seals, the DS200 scanner can be further secured by tamper-proof evident and wire seals while in polls open operation. Specifically, a wire seal can be applied to the USB flash drive containing the election definition, vote results, images, and audit log data (see below). This wire seal is in addition to the access door lock and application of a tamper-proof seal (see below). Further, the rear access door containing the backup USB flash drive (if required) can be sealed the same as the front door.

All ExpressVote and AutoMARK ports, doors, openings and data access points are protected by lockable, sealable clear plastic doors to protect access and allow election officials to easily detect unauthorized access.