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# **Election Systems and Software**

## **EVS 5.2.0.0**

### **Certification Report**

#### **Maryland State Board of Elections**

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Annapolis, MD 21401



MARYLAND STATE BOARD OF ELECTIONS  
ELECTION SYSTEMS AND SOFTWARE – EVS 5.2.0.0

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Date	Revision	Author
10/15/14	Initial	P. Aumayr
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## Introduction

Certification testing of the Election Systems and Software (ES&S) EVS 5.2.0.0 voting system was conducted at the Maryland State Board of Elections (SBE), in March 2014. The purpose of these tests was to determine the extent to which the EVS 5.2.0.0 voting system complies with the provisions of the Election Law Article of the Annotated Code of Maryland and the Code of Maryland Regulations (COMAR), Title 33.

ES&S applied for State certification in Maryland in January 2014. The contents of an application for certification are defined in COMAR 33.09.03, and are:

- Identification of the system.
- Overview of the system.
- List of other jurisdictions where the system is used.
- Qualification certification if testing is completed by an independent testing laboratory.
- Copy of certification of the System, if certified by another state.
- Application Fee.

ES&S submitted these items.

SBE forwarded a certification proposal to ES&S, as required by COMAR 33.09.04.01, and ES&S reviewed and accepted the proposal, authorizing SBE to proceed with the evaluation of the system.

COMAR 33.09.03.04 requires the applicant to submit a Technical Data Package, a Business Information Package, anti-bribery and anti-debarment affidavits, as well as voting equipment. These were all submitted.

Testing was conducted by staff from the Maryland State Board of Elections. Accessibility testing was carried out by the University of Baltimore. A public demonstration of the system, required by COMAR took place on September 16, 2014, also at the University of Baltimore.

## System Description

The system is the EVS 5.2.0.0(D-Suite) 4.14-A voting system, made by ES&S Voting Systems Inc. of Denver, Colorado. The system consists of the following components:

- EVS software version 5.2.0.0, including several client applications:
  - ElectionWare version 4.6.0.0.
  - Election Reporting Manager (ERM) version 8.11.0.0
  - Removable Media Service 1.4.5.0
  - Event Log Service 1.5.5.0
- DS200 Precinct Tabulator (HW 1.2 & HW 1.3) 2.12.0.0
- DS850 Central Tabulator (HW 1.0) 2.10.0.0
- ExpressVote (HW 1.0) 1.4.0.0



- ExpressVote Previewer 1.4.0.0
- ExpressPass 1.1.0.0

## Testing Setup

ES&S provided the following components to support the evaluation.

- Dell Server running EVS 5.2.0.0 Election Management System (EMS)
- 2 x DS200 Precinct Tabulators, software version 2.12.0.0.
- DS850 Central Tabulator (HW 1.0) 2.10.0.0 high speed optical scanner.
- 2 x Ballot boxes for use with DS200
- Laser printer for reports printing.
- ExpressVote ballot marking device 1.0 – software 1.4.0.0
- ExpressPass Printer, model 4200.
- ExpressVote controller, ADA paddles and headphones.
- SBE defined ballots, ExpressVote cards and test decks.

The system was pre-programmed by ES&S to SBE supplied specifications, prior to arrival in Maryland, for two elections, a primary and a general. These elections simulate a Maryland jurisdiction with typical Maryland ballots. The elections feature early voting, election day and absentee / provisional voting.

- The primary election used ballots for the two major political parties, as well as ballots for non-partisan voters where applicable. The ballots were 14 inches in length.
- The general election ballots, used by all voters, were also 14 inches in length.

Test decks were verified by Maryland voting system staff, who also hand marked ballots to be used in the test. The same ballots were used by both tabulators.

A DS200 precinct tabulator was provided for precinct and early voting center counting. The DS200 is a custom designed optical scanner, with a 12" LCD touchscreen interface. The voter marks his or her ballot with a pen or pencil and feeds it into an 8½" slot on the front of the scanner. The scanner is programmed with a USB memory device that is not accessible to the voter. When scanned, the ballot is scrutinized and feedback is displayed to the voter, such as notification of overvotes and undervote, on the LCD – with the voter being given the option to correct his or her ballot. If there are no notifications for review by the voter, the ballot drops into a secure ballot bin, and the voter is shown a message stating that the ballot has been counted.

A DS850 system was provided for central counting. The DS850 is also a custom built optical scanner, capable of processing up to 365 ballots a minute. The scanner has a 15" touchscreen interface and is capable of 'outsorting' ballots that require scrutinization or adjudication.

The ExpressVote is described by ES&S as a 'Universal voting System'. It is essentially a ballot marking device that allows voters to mark their ballots using a variety of methods,



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including touchscreen, keypad with synchronized audio, sip and puff and paddles. The ExpressVote is activated using a card printed on ExpressPass printer, which is connected to SBE's Electronic Pollbook.

The ElectionWare EMS software is a suite of proprietary programs that run on a Windows based computer.

- ElectionWare. This application is used for election definition and programming. The definition of districts, precincts, political offices, as well as contests and choices takes place in this application. It is here that ballots are generated, and results are received
- Election Reporting Manager. This application is used for the reporting and publishing election results.
- Removable Media Service. An application that runs in the background of the EMS client, to support the election and results USB media.
- Event Log Service. This is a Windows Service that runs in the background of any active ES&S Election Management software application to monitor the proper functioning of the Windows Event Viewer.



## **Compliance with the Election Law Article of the Annotated Code of Maryland.**

### **§ 9-102. Certification of voting systems.**

**(d) Standards for certification.- The State Board may not certify a voting system unless the State Board determines that:**

**(1) the voting system will:**

**(i) protect the secrecy of the ballot;**

**(ii) protect the security of the voting process;**

**(iii) count and record all votes accurately;**

**(iv) accommodate any ballot used under this article;**

**(v) protect all other rights of voters and candidates;**

**(vi) be capable of creating a paper record of all votes cast in order that an audit trail is available in the event of a recount, including a manual recount; and**

The EVS 5.2.0.0 system satisfies these requirements.

- The system does not collect voter information to establish voter identity. In addition, privacy of the ballot can be obtained with the use of privacy sleeves.
- Ballots, once cast, are maintained in a secure, lockable ballot box.
- All ballots scanned and tabulated by the system were counted accurately by all tabulators and EMS system used in this evaluation.
- The system is an optical scan based system. Ballots marked by the voter are the paper record, and may be used in a recount, including a manual recount.
- Ballots used in this evaluation were typical of those used in Maryland, and the capabilities of the system's EMS provide for ballots required in Maryland.

**(vii) provide a voter-verifiable paper record that:**

**1. is an individual document that is physically separated from any other similar document and not part of a continuous roll;**

**2. is sufficiently durable to withstand repeated handling for the purposes of mandatory random audits and recounts; and**



**3. uses ink that does not fade, smear, or otherwise degrade and obscure or obliterate the paper record over time;**

The EVS 5.2.0.0 system satisfies these requirements.

- Individual ballots are individual documents and are not part of any roll.
- Ballots used during the evaluation were handled and scanned multiple times, on different tabulators and were repeatedly handled throughout the process. These ballots are of sufficient durability. This includes ballots created by the ExpressVote.
- The ink of the ballots did not smear despite being repeatedly handled. The ink used for the ballots will not fade over a reasonable period of time.

**(2) the voting system has been:**

**(i) examined by an independent testing laboratory that is approved by the U.S. Election Assistance Commission; and**

**(ii) shown by the testing laboratory to meet the performance and test standards for electronic voting systems established by the Federal Election Commission or the U.S. Election Assistance Commission; and**

The EVS 5.2.0.0 system satisfies these requirements.

- The system was examined by National Technical Systems (NTS) (formerly Wyle Laboratories) of Huntsville, Alabama, a voting systems testing laboratory accredited by the US Election Assistance Commission (EAC). The system was shown by the laboratory to meet the 2005 Voluntary Voting System Guidelines, and consequently the system was certified to these standards by the EAC. The certification number is ESSEVS5200. The system has been certified since July 2014.

**(3) the public interest will be served by the certification of the voting system.**

SBE is anticipating replacing its current voting system in time for the 2016 Presidential Election. SBE wishes to ensure that certified replacement systems are available, and feels that having a system certified in the State serves the public interest.

**(e) Considerations for certification.- In determining whether a voting system meets the required standards, the State Board shall consider:**





**(1) the commercial availability of the system and its replacement parts and components;**

**(2) the availability of continuing service for the system;**

The EVS 5.2.0.0 is a new system in which ES&S has invested significant time and resources, although the DS200 and DS850 Scanners have been on the market for several years – with previous software versions installed. Some high profile jurisdictions using the DS200 units including New York City, the State of Maine, Broward County, FL and Cuyahoga County, OH. It is considered to be ES&S's 'flagship' product and ES&S has stated that it will continue to support it for many years.

**(3) the cost of implementing the system**

SBE has reviewed documentation from other jurisdictions, and the cost of implementing the EVS 5.2.0.0 system appears to be in line with SBE estimates of replacing the current voting system.

**(4) the efficiency of the system;**

In testing, it was found that a 14" ballot required approximately 4 seconds to process on the DS200. This is faster than the rate at which ballots are typically issued in a precinct. The DS850 central scanner counts up to 365 ballots per minute, faster than current methods of central counting in Maryland. It is anticipated that results reporting from the system would be more efficient than the current system, largely due to the reduction in equipment.

**(5) the likelihood that the system will malfunction;**

The NTS report test reports the testing of the DS200 unit for over 163 hours under various environmental conditions without failure. This is a requirement of the 2005 Voluntary Voting System Guidelines. For the EMS servers, ES&S proposes the use of redundant, backup hardware

No part of the system malfunctioned when being evaluated by SBE.

**(6) the system's ease of understanding for the voter;**

System evaluators and election officials have had no trouble in quickly learning how to vote on the system. Instructions for the voter were displayed on the screens for the voter.



During the public demonstration, 26 out of 40 voters felt that the DS200 was easy to use. 5 voters did not agree that it was easy to use, with the balance not expressed a preference.

For those voters using the ExpressVote, 13 of 19 voters felt that the system was easy to use, and no voters felt that the system was not easy to use with 6 voters not expressing an opinion either way.

**(7) the convenience of voting afforded by the system**

The system will support voting taking place during the early voting period in the State, on Election Day, and absentee and provisional voting.

The system supports voting by voters with a range of disabilities, through the use of the ExpressVote ballot marking devices, using visual and non-visual means.

It is also possible to use the ExpressVote system in lieu of a Ballot on Demand system in early voting.

**(8) the timeliness of the tabulation and reporting of election returns;**

Reporting of election results can take place in the polling place as soon as voting has ended. LBE results can be continuously updated as memory devices return from the polling place. Results can be transferred by modem to the EMS server.

**(9) the potential for an alternative means of verifying the tabulation**

The DS850 central counter can be used to verify election day results. Despite being slower and less reliable, the ballots may be also counted by hand if necessary. This satisfies the definition of an 'alternative means of verifying the tabulation'.

**(10) accessibility for all voters with disabilities recognized by the Americans with Disabilities Act; and**

The EVS 5.2.0.0 system meets the accessibility requirements of the 2005 Voluntary Voting System Guidelines.

**(11) any other factor that the State Board considers relevant**

The EVS 5.2.0.0 system meets requirements for the above considerations.



**(f) Voting system for persons with disabilities. -- A voting system selected, certified, and implemented under this section shall:**

**(1) provide access to voters with disabilities that is equivalent to access afforded voters without disabilities without creating a segregated ballot for voters with disabilities;**

- The ExpressVote unit allows a voter with a disability to print their ballot, using one of several methods including: touchscreen, audio access with a keypad, paddles and sip and puff. Voting can be carried out independently and in private.
- The printed ballot does need to be carried from the ExpressVote to the DS200 scanner and inserted. This could be an issue for those voters with limited use of their hands.
- The ballot printed by the ExpressVote is significantly different from those printed by a commercial printer and filled in by hand. The ExpressVote ballot is smaller, and prints only those candidates selected by the voter, not all candidates in a contest. According to an opinion issued by the Attorney General of Maryland on December 18, 2013 SBE could certify such a system if polling place procedures are in place to ensure that enough voters without disabilities use such a system that the ballots of voters with disabilities cannot be identified as such.

**(2) ensure the independent, private casting, inspection, verification, and correction of secret ballots by voters with disabilities in an accessible media by both visual and nonvisual means, including synchronized audio output and enhanced visual display; and**

- Using the ExpressVote unit, voters with disabilities can cast, inspect, verify and correct their ballot using several methods. These include a screen with enhanced visual capability as well as an audio ballot for use with a keypad (the ATI), paddles and sip and puff. The voter can do this independently, ensuring the ballot remains secret.

**(3) comply with both the Americans with Disabilities Act, P.L. 101-336, and the Help America Vote Act, P.L. 107-252, including accessibility standards adopted as part of the Voluntary Voting System Guidelines pursuant to the Help America Vote Act.**

The EVS 5.2.0.0 system meets the accessibility requirements of the 2005 Voluntary Voting System Guidelines.



## **Compliance with the Code of Maryland Regulations (COMAR)**

### **33.09.02 Minimum System Requirements**

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#### **.02 Voting Options.**

**A. In General. The voting system shall permit each voter to vote in any election:**

- (1) For all individuals and offices for which the voter is entitled to vote;**
- (2) For as many individuals for an office as the voter is entitled to vote for;  
and**
- (3) For or against any question on which the voter is entitled to vote.**

The EVS 5.2.0.0 system satisfies these requirements.

- The system is a paper based optical scanner system. Voters mark their ballots with a pen.
- For voters with disabilities, the ExpressVote can be used with visual and non-visual methods to mark ballots.

**B. Presidential and Gubernatorial Candidates. The voting system shall permit a voter in a:**

- (1) Presidential general election, to vote by one operation for electors for a pair of candidates for president and vice-president of the United States;  
and**
- (2) Gubernatorial election, to vote by one operation for a pair of candidates for governor and lieutenant-governor of Maryland.**

The EVS 5.2.0.0 system satisfies these requirements.

- The capabilities of the EMS ensure that election officials can comply with this requirement.
- Ballots feature a single oval to be filled in to vote for a pair of candidates for a president and vice-president or governor and lieutenant-governor.

**C. Write-In Option (General Elections). The voting system shall:**



**(1) Provide a method for write-in voting in general elections; and**

The EVS 5.2.0.0 system satisfies this requirement.

- Voters mark a write-in oval, and write in the name of their chosen candidate.

**(2) Report the number of votes cast in each contest in write-in voting positions.**

The EVS 5.2.0.0 system satisfies this requirement.

- The number of votes cast for write-in candidates are reported by the tabulators as well as the system's EMS.

**D. Adjustment for Primaries. In a primary election, the voting system shall be capable of adjustment so that a voter is:**

**(1) Able to vote for candidates seeking nomination by:**

**(a) The party with which the voter is affiliated, or**

**(b) A party that otherwise authorizes that voter's participation; and**

**(2) Precluded from voting for candidates seeking nomination by any other party.**

The EVS 5.2.0.0 system satisfies these requirements.

- For primary elections, the system generates separate ballots for different political party affiliations. These ballots feature only candidates authorized by that political party.
- Ballots are issued by Election Judges to voters according to their party affiliation and precinct.
- For the ExpressVote unit, ballot styles are activated according to their party affiliation and precinct.

**.03 Secrecy.**

**The voting system shall ensure voting in secrecy.**

The EVS 5.2.0.0 system satisfies this requirement.

- The system does not collect voter information to establish voter identity. In addition, privacy can be obtained with the use of privacy



sleeves for the ballots. Ballots do not feature any kind of number, code or other marking to tie the ballot to any individual.

#### **.04 Counters.**

**Each voting machine shall be equipped with a public counter that, during any period of voting, will show the total number of voters who have operated the machine during that period of voting**

The EVS 5.2.0.0 system satisfies this requirement.

- The DS200 tabulator features a public counter that shows the total number of ballots that have been cast.

#### **.05 Registering and Recording Votes.**

**A. In General. The voting system shall correctly register and record votes that have been properly voted.**

**B. Over-Voting or Improper Voting. The voting system may not count the votes in a contest that has been over-voted or otherwise improperly voted.**

**C. Misplaced Votes. In vote counting, the voting system shall ignore any mark that is not in a voting position:**

- (1) For a candidate whose name is on the ballot;**
- (2) Designated for write-in voting; or**
- (3) For a question printed on the ballot.**

The EVS 5.2.0.0 system satisfies these requirements.

- The system was tested with many ballots and ballot styles to confirm the accuracy of the optical scanners as well as the tabulation software.
- On the DS200, overvotes were notified to the voter and the options to return the ballot or accept the ballot were offered. Overvotes that were accepted were not counted. Voters were also notified of ballots which included undervotes with the option to return the ballot to the voter or to count the ballot as marked.
- Marks that are that are not in a voting position were ignored, except for the ballot's calibration zone – marks in this area may cause the ballot to be rejected. In such a case, a ballot would have to be re-issued.
- On the ExpressVote voters are prevented from overvoting, similar to a DRE unit.



## **.06 Ballot Totaling and Reporting.**

### **A. What To Be Reported. The voting system shall total and report:**

- (1) The number of ballots voted in an election;**
- (2) The number of votes cast for a candidate;**
- (3) The number of votes cast for or against a question;**
- (4) The number of undervotes in a contest; and**
- (5) In a primary election:**
  - (a) The number of ballots voted in each party's primary, and**
  - (b) The number of ballots voted in any nonpartisan ballot election.**

The EVS 5.2.0.0 system satisfies these requirements.

- Individual tabulators record and total all the required results on memory and back-up memory.
- Individual tabulator's print all required results on built-in thermal printers at the close of elections.
- The EMS totals all these required results and the system reports all these results.

### **B. How To Be Reported. For each of these items, the voting system shall report by:**

- (1) Precinct; and**
- (2) Groups of precincts (such as districts, wards, and countywide).**

The EVS 5.2.0.0 system satisfies these requirements.

- Individual tabulators report by individual precinct.
- The EMS reports by both precinct and groups of precincts.
- The capabilities of the EMS ensure election officials may generate reports featuring all required results data.

## **.07 Audit Trail Required.**

**The voting system shall be capable of providing an audit trail of all ballots cast so that, in a recount, the election can be reconstructed, starting with the individual votes of all eligible voters.**



The EVS 5.2.0.0 system satisfies this requirement.

- All paper ballots cast on the system are retained in the secure ballot bin.
- The system has the capability store images of each ballot cast on the memory device.
- All tabulators and the EMS system maintain an audit log for each election.

### **33.09.03 State Board Certification – Preliminary Submission**

#### **.01 Prerequisites to Application.**

**The State Board's evaluation and certification procedures are limited to voting systems:**

**A. That are beyond the prototype stage and available for installation and use within the time frame specified by the State Board; and**

**B. For which the qualification testing, as required by Election Law Article, §9-102(d)(2), Annotated Code of Maryland:**

**(1) Has been successfully completed; or**

**(2) Has not been completed, but the voting system vendor has provided:**

**(a) Documentation from the U.S. Election Assistance Commission that the voting system has been submitted for qualification testing; and**

**(b) A schedule that indicates completion within the time frame specified by the State Board.**

The EVS 5.2.0.0 system meets these requirements.

- The system has completed EAC certification testing to the 2005 Voluntary Voting System Guidelines.

**A. In General. The vendor of a voting system may apply to the State Board for evaluation and certification of the system for use in the State.**

**B. Identification of System, etc.**

**(1) The application shall specify clearly the specific equipment, hardware, firmware, and software for which certification is sought.**





**(2) Each model or version of a voting system requires a separate application.**

SBE has received the application for the EVS version 5.2.0.0. This is the only version of the system that has been submitted for evaluation.

**C. Overview of System. The application shall provide a brief overview description of the voting system. Marketing brochures may be used for this purpose.**

A system overview document was supplied to SBE.

**D. Use in Other Jurisdictions. The application shall include a list of all jurisdictions where:**

**(1) The exact system for which certification is being sought or a model or version of the system is in use, together with:**

**(a) The price that was charged to the jurisdiction for the system, and**

**(b) A breakdown of the per unit price and the price of any components;**

- At the time of application, there were no jurisdictions using the exact system application.
- The DS200 has been certified in 24 States.

**(2) The exact system for which certification is being sought or a model or version of the system has been but is no longer in use; and**

**(3) A request has been made for approval of the exact system for which certification is being sought or a model or version of the system, together with a statement of whether the request was granted, was denied, was withdrawn, or is pending.**

This information was supplied to SBE. The System is undergoing certification in the States of Florida, Wisconsin and Virginia.

**E. Qualification Certificate. The application shall be accompanied by a:**

**(1) Copy of the qualification certificate issued for the voting system; and**

**(2) Signed authorization directing the independent test agency that performed the qualification testing to:**

**(a) Submit the results of its testing directly to the evaluation agent; and**



**(b) Allow the evaluation agent or his or her designee full access to all test records and data.**

This information was supplied to SBE.

- A copy of the qualification certification, including the scope of certification was received by SBE, and is also available on the website of the US Election Assistance Commission.
- SBE has received the final NTS Test Report, including findings and recommendations.

**F. Certification Testing Transfer. If the voting system has successfully completed certification testing by or for another state, the application shall be accompanied by a:**

**(1) Copy of the certification issued for the voting system; and**

**(2) Signed authorization directing the agency that performed the certification testing to:**

**(a) Submit the results of its testing directly to the evaluation agent, and**

**(b) Allow the evaluation agent or his or her designee full access to all test records and data.**

At the time of application, no other jurisdiction had successfully completed certification testing.

**G. Application Fee. The application shall be accompanied by a nonrefundable application fee of \$5,000.**

SBE is in receipt of this fee.

**.03 Acknowledgment; Scheduling Start.**

**On receipt of an application for certification, the State Administrator shall promptly:**

**A. Acknowledge the application; and**

**B. Notify the applicant and local boards of when the evaluation will begin.**

SBE acknowledged the application, and the evaluation took place in March and April 2014.



#### **.04 Notice and Package Submissions.**

**A. Notice of Evaluation Agent. When the evaluation is ready to begin, the State Administrator shall notify the applicant of the name, address, and telephone number of the evaluation agent assigned to the application.**

The State Administrator notified the applicant on 11 February, 2014.

**B. Submissions to Agent. The applicant shall submit to the evaluation agent the:**

- (1) Technical data package required by Regulation .05 of this chapter; and**
- (2) Business information package required by Regulation .06 of this chapter.**

**C. Notice of Deficiency.**

**(1) The evaluation agent shall review the submissions and notify the applicant of any deficiency.**

**(2) The applicant shall correct all deficiencies before the certification process may proceed.**

These submissions were received.

- No deficiencies were identified, thus no corrections were required.

**D. Disposition of Submissions.**

**(1) If the application is denied or withdrawn, the technical data and business information packages submitted under this chapter shall be returned to the applicant.**

**(2) If the application is approved and the voting system certified, the technical data and business information packages shall be retained by the State Board for as long as the voting system is marketed or used in this State.**

The application was not denied nor withdrawn, thus the technical data and business information packages have been retained by SBE.

#### **.05 Technical Data Package.**



**A. Required Information—In General. The technical data package shall contain all documentation previously submitted for the qualification testing of the system, including each of the following:**

- (1) Hardware schematic diagrams;**
- (2) Hardware theory of operation;**
- (3) Customer maintenance documentation;**
- (4) Operations manual;**
- (5) Software source code (both in the form of a listing and in a machine-readable form on media acceptable to the evaluation agent);**
- (6) Software system design;**
- (7) Customer documentation; and**
- (8) The report and test results of the independent test agency.**

All of the above, with the exception of (5), were provided.

**B. Required Information—License and Warranty. The package also shall include:**

**(1) A list of all third-party software required to install or operate the system;**

This requirement was met.

- The installation and operation documentation included third party software that is required for use of the system.

**(2) The terms of the license agreements for all software identified under §B(1) of this regulation; and**

This requirement was not met.

- ES&S stated in their response that the licensing of third party software remains with the jurisdiction.

**(3) Warranty terms for the entire system, including all third-party software.**



This requirement was met.

- A software warranty was included and a sample hardware maintenance agreement was supplied. ES&S stated that the length of a hardware warranty is a negotiable item and would be ultimately included in a sales contract.

**C. Identification of Submissions. Each item in the package shall be clearly identified.**

All items submitted were clearly identified.

**.06 Business Information Package.**

**A. Scope. The information required by this regulation shall be provided separately for:**

**(1) The applicant's business; and**

**(2) If the applicant is not the manufacturer of the voting system, the manufacturer's business.**

**B. Required Information. The business information package shall include:**

**(1) History and description of the business, including:**

**(a) Year established,**

**(b) Products and services offered,**

**(c) Areas served,**

**(d) Branch offices,**

**(e) Subsidiaries,**

**(f) Parent companies, and**

**(g) Subsidiaries of parent companies;**

**(2) Management and staff organization, including:**

**(a) Number of full-time employees by category,**

**(b) Number of part-time employees by category, and**



**(3) The name and address of each:**

**(a) Officer of the business,**

**(b) Person who is known to have a beneficial interest (as defined in State Finance and Procurement Article, §13-221, Annotated Code of Maryland) in the business or any parent company;**

**(4) Financial history of business, including:**

**(a) A financial statement for each of the past 3 fiscal years,**

**(b) Gross sales in voting products and voting services for the past 3 fiscal years, and**

**(c) The percentage those sales represent of all sales of the business and its subsidiaries;**

**(5) Location and manufacturing capability of each facility that is or will be used to fabricate and assemble all or any part of the voting system for which certification is being sought;**

**(6) Location and servicing capability, including any service limitations, of each facility that is or will be used to serve the voting system for which certification is being sought; and**

**(7) The legal and financial relationship among all vendors and manufacturers of the voting system and its various components.**

**C. Required Affidavit. The package also shall include the affidavits required by Regulation .07 of this chapter.**

All the required information was submitted, and this requirement was met.

**D. Identification of Submissions. Each item in the package shall be clearly identified.**

Each item in the package was clearly labeled.

**.07 Anti-Bribery and Anti-Debarment Affidavits**

An Anti-Bribery and Anti-Debarment Affidavit was included as part of the Business Information Package.



## **General Comments**

### **Accessibility**

Accessibility testing took place in April 2014. The report from the University of Baltimore stated that the system can be deployed as is, assuming that detailed audio instructions can be included. ES&S has stated that this can be accomplished.

### **Public Demonstration**

COMAR 33.09.04.05 states that the State Administrator must provide a public demonstration of the system, and comments from the public must be solicited.

This demonstration took place on September 16, 2014. The results from a survey on the system, distributed by SBE were generally favorable. A summary of the survey results is attached as Appendix A.

### **Ballots.**

Ballots up to 8.5" x 19" can be accommodated, and ballots with few contests can be printed on one side only, with no need to print timing or other configuration marks on the reverse side. Ballots of more one card can be accommodated.

### **Marking Ballots.**

Ballots are marked by filling in an oval next to the chosen candidate's name. ES&S recommends using a black ballpoint pen. For this testing, ballots were marked in a number of ways, including with the recommended pen and other pens and pencils. A wide variety of marks were accepted, including crosses and check marks.



## **Summary of Findings.**

The EVS 5.2.0.0 Voting System as examined satisfies the requirements as set forth in the Election Law Article of the Annotated code of Maryland and the Code of Maryland Regulations, with the following exceptions:

- COMAR 33.09.05.05 A. (05). Software Source Code was not included. It should be noted that a source code review is carried out as part of federal certification, and this review was taking place at the time of the application for Maryland certification.
- COMAR 33.09.05. B. (02). Terms of license for third party software were not included. ES&S stated that they cannot be responsible for third party software not developed by ES&S.





## Appendix A.

A summary of the survey results of the public demonstration held on September 16, 2014

Voters not using accessible devices

Statement	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Not Applicable	Total Responses
I would like to use this voting system in an election.	2	5	10	13	9		39
There were too many steps in using this voting system.	3	12	5	11	3		34
I thought this voting system was easy to use.	0	5	9	20	6		40
The instructions for this voting system were difficult to understand.	5	21	7	7	0		40
The buttons or touchscreen were easy to use.	0	1	3	28	8		40
It was hard to move around the ballot with this system.	4	22	7	4	3		40
I think that most people could learn to use this voting system very quickly.	0	4	6	18	12		40
I found this voting system awkward or difficult to use.	7	19	4	9	1		40
I felt very confident that my vote was cast correctly with this voting system.	2	1	12	19	11		45
I would need help each time I used this voting system.	10	19	7	3	1		40
The ballot text was easy to read or hear.	0	2	8	20	6	3	39



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Casting my vote was easy.	0	3	4	25	8		40
Writing-in a candidate was easy.	1	1	8	19	6	5	40

Voters using accessible devices

Statement	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Not Applicable	Total Responses
I would like to use this voting system in an election.	0	4	1	7	8	0	20
There were too many steps in using this voting system.	2	7	3	6	1	2	21
I thought this voting system was easy to use.	0	0	6	8	5	0	19
The instructions for this voting system were difficult to understand.	4	9	3	3	0	4	22
The buttons or touchscreen were easy to use.	0	1	3	11	4	0	19
It was hard to move around the ballot with this system.	4	8	4	2	1	4	23
I think that most people could learn to use this voting system very quickly.	0	2	2	10	5	0	19
I found this voting system awkward or difficult to use.	3	8	5	3	0	3	22
I felt very confident that my vote was cast correctly with this voting system.	0	0	2	10	6	0	18



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I would need help each time I used this voting system.	3	12	2	2	0	3	22
The ballot text was easy to read or hear.	1	1	2	8	6	1	19
Casting my vote was easy.	0	0	5	6	8	0	19
Writing-in a candidate was easy.	0	1	2	9	4	0	16