Voting System Qualification Test Report
Election Systems & Software, LLC
EVS Release 4.5.3.0, Version 2
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For Publication

Florida Department of State
Division of Elections
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Contents

Executive Summary

Election Systems & Software, LLC submitted an application requesting Florida certification of the *EVS Release 4.5.3.0, Version 2* voting system. This release is a modification to the *EVS 4.5.3.0, Version 1* release (certified on January 23, 2018, and revised as EVS 4.5.3.0, Version 1, Revision 1 on April 16, 2018).

EVS 4.5.3.0, Version 2 provides the following:

- A firmware change to the DS200® to address component manufacturer obsolescence.

- Hardware changes to the ExpressVote® universal ballot marking device to address component manufacturer obsolescence and improve manufacturability.

- Updated ExpressVote® Previewer software—which allows the election official to view ballot styles in the election management system (EMS)—corresponding to the county's ExpressVote® firmware version.

- The addition of a Verizon® 4G modem to the existing modem lineup for the DS200® precinct scanner.

- The addition of a new firewall box model and updated firewall software for the currently certified model to address component manufacturer obsolescence.

The voting system application submitted for certification is comprised of an election management system known as ElectionWare®; a precinct scanner (DS200®); two devices for Florida voters with disabilities—a precinct ballot marking device (AutoMARK®) and a vote capture device with a verifiable paper record that is digitally scanned for tabulation (ExpressVote®); and two models of high-speed central count scanners (Model DS850® and Model DS450®). Precinct results may be uploaded to the election management system manually or via wireless or landline modems.

The Bureau of Voting Systems Certification (BVSC) conducted the certification testing in two phases. Phase I consisted of verifying the setup of the two configurations of the election management system, restoration/import of four elections (presidential preference primary [PPP], general, primary, and municipal elections), a physical audit, and a functional audit. BVSC then conducted mock elections and election cycle events, such as loading the tabulators with the requisite media, opening and closing of polls, casting ballots, central count tabulation, and election night and post-election reporting. BVSC performed tests to verify compliance with standards for accessibility. Phase II consisted of conducting contest recounts, conducting mass ballot count testing for the DS200® scanner, and conducting additional tests as necessary to observe the voting system's capabilities.

Qualification test results affirm that the voting system under test, *EVS Release 4.5.3.0, Version 2*, met applicable requirements of the Florida Voting Systems Standards, Florida Statutes and Rules, and the Help America Vote Act for usability and accessibility. BVSC, therefore, recommends certification of the referenced voting system, provided the vendor has complied with conditional recommendations made in the Recommendations section of this report.

Introduction

Election Systems & Software, LLC (ES&S) submitted an application requesting Florida voting systems certification of the *EVS Release 4.5.3.0, Version 2* voting system. This release is a modification to the certified *EVS 4.5.3.0, Version 1* release (certified on January 23, 2018, and revised as *EVS 4.5.3.0, Version 1, Revision 1* on April 16, 2018).

EVS 4.5.3.0, Version 2 provides the following:

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- The addition of a Verizon® 4G modem to the existing modem lineup for the DS200® precinct scanner.

- The addition of a new firewall box model and updated firewall software for the currently certified model to address component manufacturer obsolescence.

The scope of the certification effort included verifying that the voting system under test met the applicable standards, rules, statutes, and federal laws for use in the state of Florida. Testing included qualification testing, regression testing on machines that did not change, such as the DS850®, DS450®, and AutoMARK®, and a mass ballot count test of the DS200®. A mass marking test was conducted on both hardware versions of the ExpressVote. Testing was completed on July 30, 2018.

System Overview

EVS 4.5.3.0, Version 2 is a paper-based voting system with an element for compliance with the Help America Vote Act (HAVA) provisions for precinct voting. The Florida certified voting system includes the EMS, a precinct scanner, Americans with Disabilities Act (ADA)-compliant accessibility devices, and central count scanners.

The EMS hardware platform is configured as either a stand-alone or a server/client configuration. The stand-alone configuration includes the election management system and the election results reporting manager; whereas, the server/client configuration includes one or more workstations (clients) which interconnect with a server. The system includes an option to upload election results wirelessly or using an analog modem.

The EMS software configuration includes:

- ElectionWare® – an election management system that integrates the jurisdiction, districts, contests, and candidate databases as the main pre-voting phase and post-voting phase that allows ballot images to be viewed. It provides the method to configure elections, create ballot design, add languages (including audio), export ballot/election definitions.

- Election Reporting Manager® – a client application used for integrating the acquisition, consolidation, and reporting of election results. Additional ERM clients can be configured to display scrolling results and over the Intranet.

- Regional Results Transfer – an optional application that allows results files accumulated on DS200® media devices at remote polling locations to be sent to the county's central office from sites around the county that collect several local, or "regional," precinct results. The results files are loaded from the DS200® media devices into the Regional Results Transfer station at each regional site, which in turn sends the results to the county's central office.

- ExpressLink® – an ancillary on-demand application that prints a voter's ExpressVote® activation card with the appropriate ballot style information (using the ExpressVote® Activation Card Printer). ExpressLink® can run in either a standalone mode or in monitor mode[1] where it monitors requests from a voter registration system over a shared network folder.

The voting equipment includes the DS200®, ExpressVote®, AutoMARK® Voter Assist Terminal, and two central count scanners—the DS850® and DS450®.

The DS200® is a voter interface device used to scan paper ballots. It is a precinct tabulator that can also be used for tabulating vote-by-mail ballots. This tabulator captures the voter's selections and digitally images the ballot. The DS200® uses a universal serial bus (USB) drive for downloading the election definition, provides an option to capture cast ballot images on the USB, and provides the election results on the USB. The results data can be directly uploaded into ERM or the DS200® can transmit results via secure wireless or analog network telecommunications into ERM.

The ExpressVote® is a voter interface device approved in Florida for use by voters with special needs. This system combines paper-based voting with touch screen technology to produce an independent voter-verifiable paper record that is digitally scanned for tabulation. The voter uses the ExpressVote® to navigate the ballot through touchscreen, physical keypad, assistive support peripherals such as a sip and puff device, or other assistive equipment such as a two-position switch. The ExpressVote® includes a mandatory vote summary screen that requires voters to confirm or revise selections prior to printing the summary of ballot selections using the internal thermal printer. Once printed, ES&S ballot scanners (such as the DS200®) process the vote summary card.

This certification provides a firmware upgrade to the existing ExpressVote® hardware version 1.0 (firmware version 1.4.3.1). It also introduces the ExpressVote® hardware version 2.1 (firmware version 2.4.1.0).

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[1] Monitor mode testing with voter registration systems is outside the scope of Florida certification testing.

The optional ExpressVote® rolling kiosk houses the ExpressVote®. This hard-sided enclosure provides voter privacy screens, angle adjustment to accommodate seated or standing voters, and a secure repository for marked ExpressVote® vote summary cards to be tabulated later.

The AutoMARK® Voter Assist Terminal (VAT) is a voter interface device that allows a voter to mark a blank, preprinted ballot or assists a voter with contest selections via visual display, audio, or both. The voter uses the AutoMARK® to navigate the ballot through touchscreen, physical keypad, assistive support peripherals such as sip and puff device, or other assistive equipment such as a two-position switch. Also, the voter can use the AutoMARK® to review a marked ballot and either to cast the ballot into an optical scan tabulator (like the DS200®) or, if available, to deposit the ballot into an attached ballot box, known as the AutoCAST™, for later tabulation.

The DS850® optical tabulator is a high-speed scanner for use with vote-by-mail ballot tabulation or contest/race recounts. The DS850® uses digital cameras to image paper ballots, capture voter selections on the image, and evaluate the results. It uses a USB drive for downloading the election definition, captures the cast ballot images on the USB, and provides the results on the USB. The results data are uploaded into ERM, either manually or through a closed local area network. The DS850® also uses two commercial off-the-shelf (COTS) printers, one for printing reports and the other for recording and printing an audit log.

The DS450® optical tabulator is very similar to the DS850. It is used for vote-by-mail ballot tabulation or contest/race recounts and employs the same technology for capturing ballot images, evaluating voter selections, downloading the election definition, and uploading results. The DS450® also uses two commercial off-the-shelf (COTS) printers, one for printing reports and the other for recording and printing an audit log.

Components under Review

The components of the voting system being reviewed for certification include the following:

- Upgraded ExpressVote® Previewer software (version 1.4.3.1)
- Upgraded ExpressVote® 1.4.3.1 (hardware version 1.0)
- New ExpressVote® 2.4.1.0 (hardware version 2.1)
- Upgraded DS200® precinct count tabulator 2.11.1.1 (new Verizon® 4G modem added to existing modem lineup)
- Additional Cisco ASA5506x firewall box
- Upgraded Cisco ASA 5505 ver. 9.1.7(23) firewall software (AnyConnect ver. 4.5.04029)

Conduct of Tests / Findings

The test objective was to verify that the *EVS Release 4.5.3.0, Version 2* voting system meets the applicable requirements of the Florida Voting Systems Standards (FVSS), Florida Statutes and Administrative Rules, and HAVA for usability and accessibility.

The FVSS qualification examination for this effort encompassed a physical and functional audit of the components under review. BVSC conducted additional tests to verify compliance with standards for sound pressure levels. In addition, BVSC conducted a mass ballot count test on the DS200® precinct count tabulator and mass marking test on the new ExpressVote® hardware version, as well as regression testing on other voting equipment to ensure that system modifications did not affect unchanged procedures.

Physical Audit

BVSC conducted a physical audit to verify that the voting system under test matched the specifications described in the application and the technical data package (TDP) documentation. The audit covered the election management system in both the standard and the standalone configurations, all precinct and central count scanners, and all accessible voting devices.

Findings:

BVSC found no issues with the setup of the ElectionWare® voting system configurations or the configurations of the scanners or accessible voting devices.

ES&S has provided, within the Technical Data Package (TDP), documents regarding security best practices. BVSC recommends that counties review and implement, as appropriate, vendor suggestions for security. Furthermore, BVSC recommends that counties take measures to harden their voting systems to provide additional layers of protection.

Functional System Audit

BVSC conducted a functional system audit to verify that all components of the voting system operated as described in the TDP.

Voting Equipment Menus – Administrative and Diagnostic Reports

BVSC performed a functional audit by testing all available menu options and administrative reports as well as systems functions in the course of testing.

Mock Elections

BVSC conducted mock elections incorporating multiple-card ballots of varying ballot lengths (11-inch to 19-inch). BVSC used four election types: presidential preference primary (PPP), municipal, primary, and general. The tests included both hand marked and machine marked ballots, as well as those cast via the accessible voting ballot marking devices (AutoMARK® and ExpressVote®), and used single-card and multi-card elections. All activities simulating an election were conducted using all equipment, from initial preparations and L&A, through voting, election night and precinct level reporting, as well as recounts and post-election audit activities. BVSC used ballot test decks and pre-determined results to compare to actual results.

Pre-Election Activities

Pre-election activities included verifying the coding of the election database for each of the four election types (PPP, municipal, primary, and general), preparing the election media, preparing the ballot test decks, preparing and validating the expected results, and preparing the voting equipment. A universal primary contest (UPC) was included in the primary election definition.

Election Activities

Election activities included opening polls, casting ballots using prepared test decks, and closing polls.

Post-Election and Reporting Activities

BVSC examined test results against expected results. Post-election activities included producing extensible mark-up language (XML) election night and precinct-level results files and generating system reports.

Activities included uploading election results and verifying results in the ERM by defined election group (vote-by-mail voting, early voting, Election Day voting, and provisional voting). BVSC uploaded results via direct upload and modeming.

As an ancillary component of the voting system, the XML file utility, which produces the partial and complete summary XML files and the 30-day precinct-level XML files, was examined in a separate environment using an in-house developed program to verify that the tool could produce these files as expected.

Findings:

The system performed as indicated in the vendor's TDP and in accordance with FVSS, Florida Statutes, and Administrative Rules.

Staff verified that the XML utility correctly produced the files in the specified XSD format and that the vote totals (candidate, total precinct votes, and total precinct groups) matched the report totals.

BVSC discovered, however, that the XML file utility operation is sensitive to the proper election group designation input by the county user. If the proper group naming convention is not followed, election results could be incorrectly grouped. Furthermore, the user guide was not clear on the naming convention parameters. BVSC worked with the vendor to update the Election Reporting Special Instructions Procedure Document to clarify the instructions for Florida counties.

The vendor followed BVSC's recommendation to immediately inform counties of the updated document, above, and of the necessity of following the group designation naming convention exactly as instructed. BVSC recommends that certification of this voting system is conditioned upon the Florida Overview Manual being updated to include a reference to the Election Reporting Special Instructions Procedure Document.

Precinct Count Tabulator Mass Ballot Count

BVSC conducted a mass ballot count on one DS200® precinct scanner using the 2012 Miami-Dade County General Election definition. The minimum requirement is a ballot count of 9,900 ballots on a single scanner. The test deck contained 360 two-card ballots (720 cards total). Staff ran the test deck through the DS200® fourteen times, for a total of 10,080 ballot images.

BVSC encountered two anomalies that required vendor response.

- **Poll re-open error message**. After 1,259 ballots, the poll was closed and the DS200® powered down for the night. The next day, an error message appeared and the tester was unable to open the polls.

- **Unresponsive "undervote" voter query screen**. When the tester inserted an undervoted ballot, the DS200® presented the "undervote" voter query screen and remained unresponsive to any input. The unit sat undisturbed for 14+ hours, during which time it processed the ballot.

The vendor reviewed BVSC's test results and analyzed the memory device. Two possible reasons for these anomalies were presented: 1. The DS200®'s USB hub could be defective or was not formatted with ES&S' preferred method; or 2. The Delkin USB memory device used for the MBC was an older generation of memory device which had been superseded by a newer generation of devices.

BVSC estimates that the probability of occurrence of these anomalies is within the FVSS standards of reliability. Furthermore, BVSC is working with the vendor to ensure that it sends immediate appropriate notification (in the form of a technical advisory bulletin) of the probability, impact, and mitigation of or response to these anomalies to its Florida customers.

BVSC conducted a second mass ballot count test using the same DS200® unit and same size media. The second mass ballot count test was successful, with no observed anomalies.

Although the DS200® unit functioned as expected during the second mass ballot count test and was within the acceptable reliability limits of the FVSS on the first mass ballot count test, this specific unit has been returned to the vendor for further diagnosis. If ES&S' examination of the DS200® reveals additional information, the Bureau will create an addendum to this report detailing the findings.

Specific details follow:

Table 1. Mass Ballot Count details for DS200®

Election definition used:	General Election
Ballot length:	19 inches
Number of scanner units used:	1
Number of test deck sets:	1
Number of runs per test deck:	14
Number of ballots per deck:	360
Number of cards per ballot:	2
Total number of ballots cast:	5,040 ballots x 2 cards each = 10,080 ballot images
Total number of vote targets:	293,832

Findings:

The DS200® passed the mass ballot count test. The tested DS200® met the acceptance criteria for the precinct count scanner mass ballot count. BVSC satisfactorily scanned 10,080 ballot images with 293,832 vote targets.

Acceptance criteria are shown in the table below:

Table 2. Acceptance Criteria for DS200®

DS200® Mass Ballot Count – Acceptance Criteria	Expected	Accepted
Did the memory registers overflow?	No	✓
Did the public counters increment appropriately?	Yes	✓
Did the tabulated results agree with predetermined vote totals?	Yes	✓
Number of errors (must not exceed 1 in 1,000,000 vote targets). An error is defined as a target scan that produces a result other than the expected result.	≤ 1/1M vote targets	✓
Number of multiple feeds (must not exceed 1 in 5,000 ballots). A multiple feed occurs when the machine pulls multiple ballots and does not "catch" the error.	≤ 1/5K ballots	✓
Number of incorrect rejections of ballots (must not exceed 3%)	≤ 3% total ballots	✓

BVSC recommends that the vendor further investigate the anomalies encountered in the first mass ballot count attempt, and produce technical advisory bulletins to inform the counties of the presence, probability, impact, and mitigation and response strategies to the anomalies documented above.

Contest Recounts

BVSC conducted a recount to verify compliance with sections 102.141(7) and 102.166(1), F.S., and Rule 1S-2.031, Florida Administrative Code (governing recount procedures). BVSC selected one countywide race and one district-wide race in the municipal election, and suppressed the results of all other races, as per rule. The recount was conducted using a DS200® precinct tabulator.

Findings:

BVSC found that the voting system under test complied with applicable statutes and standards. ElectionWare® allows the user to report results from only the affected races. Furthermore, a recount can be conducted on more than one race at a time, as demonstrated by processing both the countywide race and district-wide race in one recount.

Folded Ballots

Although Florida law and FVSS do not require this test, BVSC conducted a folded-ballot test to simulate the processing of vote-by-mail ballots. The objective was to observe the behavior of the DS200® tabulator when folded ballots are scanned.

BVSC created test decks using each election type, to utilize four different ballot lengths. Different fold types were included in each test deck.

The elections and ballot lengths were as follows:

- 11-inch (PPP election)
- 14-inch (municipal election)
- 17-inch (primary election)
- 19-inch (general election)

BVSC cast ballots into the DS200® and compared the results.

Findings:

The DS200® scanner operated as expected. It accepted all ballots it was programmed to accept and rejected ballots it was programmed to reject, such as overvoted, undervoted, and write-in[2] ballots.

Accessibility – Force

The force test is used to determine compliance with section 101.56062(1)(l), F.S., which requires that "the force required to operate or activate the controls must be no greater than 5 pounds of force." BVSC conducted the force test during an accessible-voting session on each of the two firmware versions of the

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[2] Write-ins are not included in primary election ballots; they were included in this test for observation purposes and to maximize test resources.

ExpressVote® (firmware versions 1.4.3.1 and 2.4.1.0). BVSC used a calibrated Dillon model GL digital force gauge and multiple voter input methods: the touchscreen and the audio tactile keypad.

Findings:

No measurement exceeded the maximum of 5 pounds of force. BVSC found that the ExpressVote® complied with section 101.56062(1)(l), F.S.

Accessibility – Sound Pressure Level

The sound pressure level test is conducted to verify conformance to section 101.56062(1)(g-i), F.S., which describes the sound pressure level standards for a voting system's audio voting features. BVSC conducted a sound pressure level test on the ExpressVote® (firmware versions 1.4.3.1 and 2.4.1.0). The ExpressVote® 1.4.3.1 underwent a firmware change since the last certification, whereas the ExpressVote® 2.4.1.0 is new to Florida. BVSC tested both ExpressVote® versions using the AVID brand audio headsets supplied by the vendor.[3]

BVSC used an ITU-T P.50[4] test signal that was incorporated into an election definition. The test signal replaced the initial sound file normally heard by a voter at the beginning of an accessible voting session. The election definition repeated the test signal as a loop. BVSC captured instrument readings for the duration of the loop.

Findings:

BVSC found that the ExpressVote® complies with the applicable statute. The results of the sound pressure level tests for the ExpressVote® are in the table below.

Table 3. Sound Pressure Level Test Results – ExpressVote® 1.4.3.1

	Sound Pressure Level Test Results – ExpressVote® 1.4.3.1			
	Average Maximum Volume (dBA)[5]	Average Default Volume (dBA)	Gain (dBA)[6]	Intermediate Level (dBA)[7]
Right Headphone	97.25	59.15	38.10	72.57
Left Headphone	101.85	63.52	38.33	75.73

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[3] The vendor's application for certification lists "AVID [brand] stock headphones" in the Component Version List. The TDP recommends "3.5mm" headphones (ExpressVote® Maintenance Manual, Firmware Version 1.4, Document Revision 1.0, September 15, 2017, pg. 8). The vendor supplied the following: AVID educational headphones (unmarked).

[4] ITU-T P.50 - "ITU-T" is the telecommunication standardization sector of the "ITU," which is the International Telecommunication Union. ITU is a United Nations specialized agency for information and communication technologies. The "P.50" represents one of their "P Series" objective transmission standards/measures used for testing the transmission quality of artificial voices.

[5] Must be greater than 97 dB (decibels weighted).

[6] Maximum volume minus default volume. Must be greater than 20 dB.

[7] Must be between (Default volume + 12 dB) and 97 dB.

Table 4. Sound Pressure level Test results – ExpressVote® 2.4.1.0

	Sound Pressure Level Test Results – ExpressVote® 2.4.1.0			
	Average Maximum Volume (dBA)[8]	Average Default Volume (dBA)	Gain (dBA)[9]	Intermediate Level (dBA)[10]
Right Headphone	100.36	76.96	23.39	92.47
Left Headphone	100.85	77.31	23.54	92.66

Accessibility – Voter Interface

BVSC verified that the ExpressVote® satisfies requirements for voter interface and interactions in accordance with applicable statutes and standards. Characteristics of the system such as ballot appearance, languages, input methods and feedback were examined.

Findings:

BVSC found that the ExpressVote® (versions 1.4.3.1 and 2.4.1.0) complied with applicable statutes and standards.

Simulated Failure / System Recovery

BVSC tested the ability of both the ExpressVote® (software versions 1.4.3.1 and 2.4.1.0) and the DS200® to shut down in a controlled manner according to specifications, and recover from a simulated systems failure when the equipment is disconnected from the electrical outlet.

For the ExpressVotes, BVSC staff powered up the unit and disconnected the AC adapter. The equipment was left running on battery power until the unit drained the battery and performed a shutdown operation. Ballots were marked at a rate of 10 ballots/hour during the test. BVSC reconnected the AC adapter and reviewed the audit log to determine the length of time the machine remained in a usable state before complete drainage of the battery power occurred. The tables below reflect the outcome of this test.

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[8] Must be greater than 97 dB (decibels weighted).
[9] Maximum volume minus default volume. Must be greater than 20 dB.
[10] Must be between (Default volume + 12 dB) and 97 dB.

Table 5. Battery Life Test Results – ExpressVote® 1.4.3.1

Battery Life Test Results – ExpressVote® 1.4.3.1		
	Battery Life per TDP	**Actual Battery Life**
ExpressVote® 1.4.3.1	At least 2 hours	4 hours 37 minutes

Table 6. Battery Life Test Results – ExpressVote® 2.4.1.0

Battery Life Test Results – ExpressVote® 2.4.1.0		
	Battery Life per TDP	**Actual Battery Life**
ExpressVote® 2.4.1.0	At least 2 hours	4 hours 1 minute

Table 7. Battery Life Test Results – DS200®

Battery Life Test Results – ExpressVote® 2.4.1.0		
	Battery Life per TDP	**Actual Battery Life**
DS200®	At least 2 hours	3 hours 49 minutes

Findings:

The battery pack for each tested device powered the device for longer than the stated minimum battery life. It is expected that in a real-world scenario, in which the unit would be utilized during the battery interval, battery power would drain quicker relative to the number of ballots processed.

Modems

BVSC tested the newly added Verizon® 4G modem and regression tested currently certified modems for the ability of the voting system to report and accumulate results from precinct scanners via modem communication. Staff used the PPP election definition and test deck from the PPP mock election, used earlier in this certification. Staff tested six DS200® precinct scanners, each using a different modem carrier or technology (landline, AT&T®, Sprint®, and Verizon® Wireless®).

Findings:

BVSC observed that the Verizon® 4G modem on the DS200® did not connect as readily as the other modems. During the two test cases, the Verizon® 4G modem did not detect enough "bars" [signal strength] for initial connectivity in the test location. After moving the DS200® unit to the hallway, or near a window, the modem detected adequate signal strength and modemed without incident.

BVSC recommends that counties:

- Conduct DS200® field testing in polling locations to ensure adequate signal strength is available for Verizon® 4G modems.

- Train poll workers in procedures for alternative election day reporting.

- Maintain the physical security of the precinct scanner and ballots in the event the tabulator must be relocated in order to transmit election results.

BVSC verified that the voting system performed as expected.

Source Code Review

Pro V&V performed the required source code review pursuant to U.S. Elections Assistance Commission (EAC) certification. The report referenced for this activity is: Pro V&V Letter dated 4/11/2018, Subject: ES&S EVS 4.5.3.0 V2 Source Code Review, Documentation Review, and Trusted Build. BVSC accepts Pro V&V's findings that the source code meets the requirements of the EAC 2005 VVSG.

Recommendations

During testing, staff encountered no issues that preclude certification of the *EVS Release 4.5.3.0, Version 2* voting system. It is important to note that while the items below enhance ease of usability, and possibly, the efficiency of the system, they do not have any bearing on the effectiveness of the voting system, its tabulation, or the accumulation of election results.

1. *Enhanced security.* Counties should review and implement, as appropriate, vendor suggestions for security. Furthermore, counties should take measures to harden their voting systems to provide additional layers of protection.

2. *4G modem site testing.* Counties should conduct DS200® field testing in polling locations to ensure adequate signal strength is available for Verizon® 4G modems. Furthermore, they should train poll workers in procedures for alternative election day reporting, and for maintaining the physical security of the precinct scanner and ballots in the event the tabulator must be relocated in order to transmit election results.

3. *Delkin USB memory devices causing DS200® non-responsiveness.* Counties should verify before use that the Delkin USB memory device is not an older generation of memory device which has since been superseded by a newer generation of devices. Subject to the outcome of further investigation by the vendor into the anomalies encountered in the first mass ballot count attempt reported herein, counties should expect technical advisory bulletins from the vendor informing them of the presence, probability, impact, and mitigation and response strategies to the anomalies documented in this report.

4. *Florida Overview Manual.* In order for certification of EVS Release 4.5.3.0, Version 2 voting system to be granted, the vendor should update the Florida Overview Manual to include a reference to the Election Reporting Special Instructions Procedure Document.

Conclusion

Qualification test results affirm that the voting system under test, *EVS Release 4.5.3.0, Version 2*, met applicable requirements of the Florida Voting Systems Standards, Florida Statutes and Administrative Rules, and HAVA for usability and accessibility. The Florida Division of Elections, Bureau of Voting Systems Certification, therefore, recommends certification of the referenced voting system, provided the vendor has complied with conditional recommendations made in the Recommendations section of this document.

Appendix A – Tables Index

Appendix B – Acronyms

ADA	Americans with Disabilities Act
BVSC	Bureau of Voting Systems Certification
CF	Compact Flash (memory cards)
COTS	Commercial off the Shelf (software/hardware)
EAC	U.S. Election Assistance Commission
EMS	Election Management System
ESS	Election Systems & Software, LLC
EVS	ElectionWare® Voting System
F.S.	Florida Statutes
FVSS	Florida Voting Systems Standards
GB	Gigabytes
HAVA	Help America Vote Act
LAN	Local Area Network
L&A	Logic and Accuracy (voting system test)
MB	Megabytes
PPP	Presidential Preference Primary election
TDP	Technical Data Package
USB	Universal Serial Bus
VVSG	Voluntary Voting Systems Guidelines
XML	Extensible Markup Language
XSD	XML Schema file

Appendix C – Component Version List Provided by Vendor

The Component Version List identifies the components of the system under test.

[Redacted pursuant to section 282.318, Florida Statutes, and to the U.S. Department of Homeland Security's designation of elections as a critical infrastructure.]

Florida Department of State
KEN DETZNER
Secretary of State