★ VIRGINIA ★
DEPARTMENT of ELECTIONS

Electronic Pollbook Certification Standard

March 25, 2026

Version 2.0

Change History

Version	Brief Description of Change	Date	Author
2.0	Adoption by State Board of Elections The primary change was the incorporation of EAC Voluntary Electronic Pollbook Certification Requirements 1.0 standards. Updates included, increase in vendor fee, increase in certification testing criteria and clarification of methodologies used, stronger audit processes, and addition of Role Based Access Control. Updates to the submission of the Technical Data Package.	03/25/2026	ELECT

Chapter 1: Introduction

1.1. Purpose of Procedures

These procedures provide a formal and organized process for vendors to follow when seeking state certification for an electronic pollbook (EPB) system in Virginia. To this end, these procedures are designed to:

1. Ensure conformity with Election Assistance Commission (EAC) electronic pollbook certification for standards and requirements (VEPBCR 1.0);
2. Ensure conformity with Virginia election laws relating to the acquisition and use of EPB systems;
3. Evaluate and certify EPB systems marketed by vendors for use in Virginia;
4. Evaluate and re-certify additional capabilities and changes in the method of operation for EPB systems previously certified for use in Virginia;
5. Standardize decertification and recertification of EPB systems;
6. Ensure that all electronic pollbooks operate properly and are installed and tested in compliance with State Board of Elections (SBE) procedures; and
7. Ensure accurate voter credit reports of all election results from jurisdictions that use each certified electronic pollbook system.

1.2. Specific Requirements

1. Compliance with the requirements contained in the EAC Voluntary Electronic Pollbook Certification Requirements (VEPBCR) 1.0.
2. Compliance with the Code of Virginia and the policies and regulations issued by the State Board of Elections (SBE) or Department of Elections (ELECT) must be substantiated through the State Certification Test conducted by an independent testing authority recognized by the National Institute of Standards and Technology (NIST); Voting System Testing Laboratories (VSTLs).
3. Any modification to the hardware, software, firmware, infrastructure, or any component of a certified EPB will invalidate the prior certification unless ELECT can review and provide an assurance to the SBE that the change does not affect the accuracy, reliability, security, usability, or accessibility of the system (see Appendix J: De Minimis Change Guideline).
4. An EPB shall not contain any of the following voter registration data:
    a. DMV Customer Number
    b. Full or Partial Social Security Number
    c. Birth Month and Day

1.3. Decertification

ELECT reserves the right to reexamine any previously certified EPB system for any reason at any time. Any EPB system that does not pass certification testing will be decertified. An EPB system that has been decertified by the SBE cannot be used for elections held in the Commonwealth of Virginia and cannot be purchased by localities to conduct elections.

In addition, the SBE reserves the right to decertify the EPB systems if the vendor does not comply with any of the following requirements:

1. Notify ELECT of any incident, anomaly or security-related breach experienced in an election jurisdiction, within 24 hours of knowledge. (See Appendix L).
2. Report to ELECT annually and within 30 calendar days of knowledge of any changes to Corporate Information (see Appendix L), including:
    a. Business Entity and Structure
    b. Parent and Subsidiary companies
    c. Capital or equity structure
    d. Control; identity of any individual, entity, partnership, or organization owning a controlling interest
    e. Investment by any individual, entity, partnership, or organization in an amount that exceeds 5% of the vendor's net cash flow from the prior reporting year
    f. Location of manufacturing facilities; including names of the third-party vendor(s) employed to fabricate and/or assemble any component part of the voting and/or tabulating system being submitted for certification, along with the location of all of their facilities with manufacturing capability
    g. Third-party vendors
    h. Good Standing status
    i. Credit rating
3. Submit any modifications to a previously certified EPB system to ELECT for review within 30 calendar days from modification; see Appendix H and Appendix L for appropriate reporting processes and requirements.
4. If the operating system or any component has reached or will reach the Last Date of Mainstream Support within 18 months, as defined in Appendix H, send an upgrade plan with target date(s) to ELECT:
    a. ELECT must receive the upgrade plan at least 12 months before the Last Date of Mainstream Support
    b. The Last Date of Mainstream Support cannot include any type of Extended Support, as defined in Appendix H

c. The EPB system may still automatically be decertified as defined in Appendix H

5. Update all software with the latest patching and vulnerability updates in alignment with Appendix E.

NOTE: The SBE reserves the right to require recertification when changes to regulations or standards, or both, occur.

1.4. Recertification

See Appendix F for ELECT's guidelines on when EPB systems must go through recertification.

Chapter 2: Basis for Certification

Pursuant to Code of Virginia §§24.2-404, 24.2-611, 24.2-629 and Administrative Code of Virginia §1VAC20-60-70, electronic pollbooks must comply with applicable state, federal, SBE and ELECT requirements, regulations, and policies. State certification testing will evaluate the design and performance of an EPB system to ensure compliance. ELECT will examine the essential system functions, operational procedures, user guides, documents, certification reports from other states, and reviews from product users.

Federal Compliance Testing is used to demonstrate the voting system adheres to all requirements set forth in the EAC VEPBCR. The certification of the system by the EAC is evidence of compliance. See HAVA, 52 USC §21081. State certification testing evaluates whether the electronic pollbook system complies with all applicable state requirements of the Code of Virginia and SBE and ELECT regulations and policies.

The EPB system must demonstrate accuracy, reliability, security, usability, and accessibility throughout all testing phases.

2.1. Federal Compliance Testing

EAC certification serves as evidence of compliance. All vendors must have their equipment hardware and software proposed for use in the Commonwealth certified by EAC. This is proven by presenting the EAC certificate of certification under VEPBCR 1.0 for the system and version the vendor is requesting to be certified by the Commonwealth. ELECT will make the final decision on compliance based on all available information. If there is evidence of a material non-compliance, ELECT will work with the vendor to resolve the issue.

The Commonwealth uses a specific request to certify process. This process includes submitting to ELECT two Microsoft Excel submission files (template provided by ELECT) and completed by the vendor. The submission file lists all required documents a vendor must submit with a request to certify. The submission file also provides a naming convention, document formatting requirements, and contents to be contained in each document, as well as the vendor specifying where in their documentation, they show written compliance for each objective ID and evaluation test assertion in the EPB standard. If the documents received do not follow the requirements in the submission file, the request will be sent back to the vendor for correction. The following documents shall be provided to ELECT:

1. A full copy of the Technical Data Package (TDP) submitted for EAC Federal compliance testing;

2. A copy of the Test Plan and Test Report used by the Voting System Test Laboratories (VSTL) in performing EAC certification testing or results of testing conducted by a federally certified VSTL to the applicable VEPBCR;
3. A release for provision to the VSTL allowing responses to requests for information from the Commonwealth of Virginia;
4. A release for provision to other states that decertified the system or prior versions of the system to respond to requests for information from the Commonwealth of Virginia;
5. The EAC VEPBCR 1.0 certificate, letter, and report of certification under VEPBCR 1.0; and
6. Any additional information ELECT believes is necessary to determine compliance with the applicable VEPBCR or Commonwealth of Virginia EPB Certification Standards.

2.1.1. EPB Hardware, Firmware, Infrastructure, or Component Elements

All equipment used in an EPB system shall be examined to determine its suitability for election use according to the appropriate procedures contained in this document. Equipment to be tested shall be identical in form and function with production units. Engineering or development prototypes are not acceptable. See Appendix G for hardware guidelines.

Any modification to existing hardware, firmware, infrastructure, or other components will invalidate the prior certification by the SBE unless ELECT can review and provide an assurance to the SBE that the change does not affect the accuracy, reliability, security, usability, or accessibility of the system. See Appendix J: De Minimis Change Guideline.

EPB systems generally utilize vendor-designed software operating on a variety of commercial-off-the-shelf hardware devices. Certification shall be provided to only similarly identical, and previously designated, hardware and operating systems at the time of certification.

2.1.2. EPB System Software Elements

EPB system software shall be examined and tested to ensure that it adheres to the performance standards specified in EAC VEPBCR 1.0 (see section 2.1). EPB Desktop applications must be compatible with all computers, devices, operating systems, and platforms as specified in the system requirements. See Appendix D for software requirement test assertions.

Any modifications to existing software will invalidate the prior certification by the SBE unless ELECT can review and provide an assurance to the SBE that the change does not affect the accuracy, reliability, security, usability, or accessibility of the system. See Appendix J: De Minimis Change Guideline.

2.2. State Certification Testing

State certification testing will evaluate the design and performance of an electronic pollbook submitted for certification to ensure that it complies with all applicable requirements in the Code of Virginia and SBE and ELECT regulations and policies. ELECT will examine the essential system functions, operational procedures, user guides, documents, and reviews from product users. Hash testing will be conducted to confirm that the application software submitted for certification is identical to the certified federal versions.

ELECT will evaluate the user experience with the current and prior versions of the electronic pollbook system and certification reports from other states. In addition, the security and reliability analysis of the product model will be reviewed to determine the usability of the EPB system for Virginia elections. Although successful EAC VEPBCR 1.0 certification must be accomplished before a system will be reviewed for certification by Virginia, ELECT's certification test plan and test assertions will require a vendor to test, demonstrate, or replicate, as part of Virginia's certification process, some test assertions or requirements completed for EAC VEPBCR 1.0 certification.

State Certification Testing will examine all system operations and procedures, including but not limited to:

1. Receive and process the voter registration and election information
2. Accurately maintain whole and separate count(s) of voters distinguishable by:
    a. Ballot Style (Voter's Party/primary, Precinct, Precinct Split)
    b. Curbside Voter or Outside Polls
    c. Challenged Voter
    d. Voter Status
    e. Provisional
    f. Absentees
    g. Early Votes
3. Provide an intuitive and easy to navigate user interface
4. Perform data and operational integrity safeguard tests including:
    a. Ability to add or remove new units without disturbing the existing units
    b. Power supply and battery life with an option to display power usage
    c. Display an appropriate message when the EPB device is operating at less than 20% of remaining power
    d. Display an appropriate error message when the EPB fails to check in a voter,
5. Capacity/Load Test Report to include the maximum number of voters that the configuration/network setting can handle

6. Performance Report to include the optimal duration of check-in process per voter,
7. System monitoring and notification of system errors, including:
    a. Perform a self-test for peripheral connectivity
    b. Visible display indicating power supply/battery life
    c. Visible display indicating system connections
8. Data preservation and redundancy to maintain a printable checklist format of the voter registration record and voter activity record on a removable storage. When one or all of the EPBs become inoperable, and there is not an alternate recovery means available, the removable storage must reflect the voter activity record at that moment and can be used to continue with the election
9. During an interruption of network connection, EPBs should retain and synchronize all voter activities upon restoration of connectivity
10. Support the industry standard for clean wipe method remotely and manually
11. Transaction Logging and Audit Reports including the following details:
    a. Log all changes to EPB post the initial download
    b. Transactions at the polling places
    c. Export logs in a readable format
    d. The EPB's audit log(s) must be encrypted, track all transactions and include a date/time stamp
12. All modules and data are cryptographic and are FIPS 140-2 v2 compliant including at rest and in transit
13. Comply with the NIST SP 800-63B or better digital identity guidelines for authentication and lifecycle management
14. Harden the EPB system using the vendor's procedures and specifications

2.3. Early Voting Connection Requirements

Pursuant to the Code of Virginia, §24.2-701.1, Virginia has a no-excuse absentee in person voting period, referred to as Early Voting. Local governing bodies can provide additional locations within their locality for all Early Voting activities. Each locality's electoral board will determine when to open additional established Early Voting locations. Any registered voter within each locality can vote at any one of the Early Voting locations within the specified period prior to Election Day. This requires each locality to have secure connectivity to the voter registration information (VRI) throughout the Early Voting period to:

1. Confirm the person is eligible to vote in the election;
2. Confirm the person has not previously voted in the election; and

3. Record voter history in real-time.

See Appendix K for an additional list of security-related requirements that are applicable only for those vendors choosing to host EPBs in the Cloud, as a part of their solution for managed connectivity to/from locality devices during this Early Voting period.

2.4. Delimit of Electronic Pollbook Vendors in Use

The Commonwealth of Virgina reserves the right to not accept submission of a request to certify or test and EPB, based upon the current number of EPBs already certified and in use in the Commonwealth. SBE will limit the number of EPBs available for use by localities to help facilitate better management and state coordination for security and quality control of EPB standards. For electronic pollbooks, the number of certified EPBs for use in the Commonwealth shall not exceed 4.

Chapter 3: Review and Approval Process

3.1. Summary of Process

The State certification is limited to the final products that have been used in full production environment and are available for immediate installation. The certification review process goes through six phases. At the end of each phase, ELECT will evaluate the results to determine the certification status.

Six Phases of the Certification Review Process:

1. Certification Request from Vendor
2. Preliminary Review
3. Technical Data Package (TDP) to VSTL
4. Certification Test Report from VSTL
5. On-Site Testing in Mock Election
6. Approval by the SBE

3.2. Certification Review Process

Phase 1: Certification Request from Vendor

A vendor will request a certification for either a specific EPB system, software, firmware, hardware, or modification to an existing certified EPB system. All parts of the certification package to the Commonwealth must be digital and OCR compliant. This request should include the following information:

1. EPB Certification Application Form, and certification request Excel submission files, signed by a company officer (See Appendix I);
2. Copies of documents substantiating completion of federal compliance testing, including evidence that the proposed electronic pollbook system has been certified under the latest version of the VEPBCR currently accepted for certification by the EAC or tested by a federally certified VSTL. (See Section 2.1);
3. Whether the proposed EPB system has ever been denied certification or had certification withdrawn in any state;
4. Eight copies of a brief overview description of the EPB system. Typical marketing brochures are usually sufficient for the description;
5. A list of all states where the proposed EPB system version is currently used;
6. The vendor will provide a check for $36,000 to cover the costs for the travel, expense and billable hours by the VSTL for the certification process. Refunds will

be provided to the vendor if the total of the VSTL's invoices is less than $36,000 and the refund amount is more than $100.00. Testing will take place at ELECT, Washington Building, 1100 Bank Street, Richmond, VA 23219. The VSTL technician will travel to Richmond. Certification may increase to one full week and 2 days. Beginning on a Monday of one week and ending on the Tuesday of the following week, i.e. a 7-day testing period. The 7-day cycle is inclusive of the one-day mock election. Testing with the VSTL will be conducted Monday through the following Monday, with the mock-election testing conducted on Tuesday. Electronic Pollbook system equipment for certification will be shipped to ELECT before certification begins and shipped back after it is complete;

a. Checks for $36,000 must be received by ELECT before the certification process can begin.
    i. Checks or money orders must be made payable to Treasurer of Virginia and mailed to: Voting Technology / ELECT, 1100 Bank Street, 1st Floor, Richmond, VA 23219
b. The additional requirements of EAC VEPBCR 1.0 necessitate more time for review by Virginia. It is anticipated that testing will require on average 6 days.

7. TDP must clearly identify all items required in the certification request (Excel submission files); and
    a. If the TDP is incomplete or the items in the package are not clearly identified, the entire package could be returned to the vendor.
    b. In that case, upon the receipt of the corrected TDP from the vendor, the evaluation of the EPB system will be rescheduled.
8. Corporate Information must clearly identify all items.
    a If the Corporate Information is incomplete or the items in the package are not clearly identified, the entire package may be returned to the vendor.
    a. In that case, the evaluation process will be rescheduled after the corrected package is received.

The certification process and the test assertions (objective evaluations) as provided in Appendix D: Test Assertions will be strictly followed. All systems must pass all test assertions. No variations or deviations will be allowed. It is the responsibility of the vendor to verify before requesting submission that the EPB system complies. If not, the EPB system will fail certification.

NOTE: The request package with the items above should be sent to the location indicated in Appendix B: Contacts.

Technical Data Package - (please review the excel files)

There are two excel files that vendors must submit with their request. If a vendor does not see the excel files, please request them from ELECT.

With the certification application comes two excel files that allow vendors to check off what is submitted. The excel file also explains that files and contents of files must meet a certain naming convention and have in them only the content expressed in the file name. It also allows a vendor to specify where in their documentation they specifically support an evaluation objective or test assertion. Vendors should review the excel files for more information. The TDP files vendors submit must be formatted with the proper naming convention listed on the excel file and have the accurate content in the file. If not, the full submission will be rejected.

The TDP must be fully digital, Optical Character Recognition (OCR) compliant, and contain the following items:

1. Change log. The TDP must have a document that clearly defines only the changes from the last EPB certified in the Commonwealth to the newer system being submitted for certification.
2. Hardware Schematic Diagrams: Schematic diagrams of all hardware.
3. Hardware Theory of Operations: Documentation describing the theory of operation of the hardware including power cords and backup battery.
4. System architecture with network and infrastructure connectivity: Documentation to include system architecture, network, and data flow diagrams and clearly specifying all applicable components, cloud services, and infrastructure connectivity.
5. Software Deviations: Include any exception(s) to the Security Content Automation Protocol (SCAP) checklist; document the reason there is an exception and the mitigating controls and tools in place to secure the system.
6. Software System Design: Documentation describing the logical design of the software:
    a. This documentation should clearly indicate the various modules of the software, such as:
        i. The list of functions
        ii. System flowchart
        iii. The interrelationships of modules
        iv. The list of data formats that the EPB system can import and export
    b. Clearly specify the operating system and version with:
        i. The Last Date of Mainstream Support, as defined in Appendix H
        ii. SHA256 hash value, and modification; the latest operating system version, security patches available, SHA256 hash value, and modification.

7. Software and Firmware Source Code: A copy of the EPB software and firmware source code including the operating system, directory structure of the source code, and a map to show how the source code was built into the final install files. The source code will be sent to the VSTL to review against EAC VEPBCR 1.0 standards. Vendor should supply the VSTL a report documenting that the code was reviewed to the EAC standards within the past year. If the operating system or any component has reached or will reach the Last Date of Mainstream Support within 18 months, as defined in Appendix H, vendor must send an upgrade plan with target date(s) to ELECT. The Last Date of Mainstream Support cannot include any type of Extended Support.
8. Vendors are required to state in a separate Excel file with their documentation, citation to where each requirement (test assertion/objective evaluation) is met. For instance, if a test assertion requirement is "be able to…", the vendor will supply the location in their documentation that evidences this requirement being met. This applies to all methods used in the certification process including testing, demonstration, or documentation. The vendor should have documentation to support any test assertion or evaluation objective regardless of the method that will be used to show evidence of compliance.
9. Independent Third-Party Application Penetration Analysis Report: An accredited application penetration test conducted, within the past 12 months, to analyze the system for potential vulnerabilities according to current industry standards. Potential vulnerabilities may result from poor or improper system configuration, known or unknown hardware or software flaws, or operational weaknesses in process or technical countermeasures. The test must involve active exploitation of security vulnerabilities of the EPB system, whether or not the vulnerabilities can be mitigated through compensating controls. Pursuant to Virginia Code § 24.2-625.1, the Penetration Analysis Report is confidential and excluded from inspection and copying under the Virginia Freedom of Information Act. If a penetration test has been conducted in another state within the past 12 months on the same version of the EPB system, then that may be submitted to fulfill this requirement.
10. Customer Maintenance, Repair & Troubleshooting Manual: Documentation that is normally supplied to the customer for use by the person(s) who will provide maintenance, repair, and troubleshooting of the system.
11. Operations Manual: Documentation that is normally supplied to the customer for use by the person(s) who will operate the system.
12. User Guide and Documents: The vendor should provide the following:
    a. A quick reference guide with detailed instructions for a precinct election officer to set up, use, and shut down the EPB system
    b. Clear model of EPB system architecture with the following documentations:
        i. End User Documentation

ii. System-Level and Administrator-Level Documentation
iii. Developer Documentation

c. Failsafe data recovery procedures for information in the EPB system.
d. ADA compliant training materials that:
   i Must be in written and video form, and
   ii Must be in a format suitable for use at a polling place as a simple ”how-to” guide.
e. If the operating system or any component (hardware, software, or both) has reached or will reach the Last Date of Mainstream Support within 18 months, as defined in Appendix H, send an upgrade plan with target date(s) to ELECT. The Last Date of Mainstream Support cannot include any type of Extended Support, as defined in Appendix H.
f. A list of customers who are using or have previously used the EPB system. Descriptions of any known incidents or anomalies involving the functioning of the EPB system, including how those incidents or anomalies were resolved with customer and date

13. Recommended Security Practices: CIS Security Best Practices, including:
    a. System Security Architecture
    b. System Event Logging
    c. System Security Specification
    d. Security Content Automation Protocol (SCAP)
    e. Cryptography
    f. Equipment and Data Security
    g. Network and Data Transmission Security
    h. Access control
    i. Authentication procedure
    j. Software
    k. Physical Security.
14. Standard Contract, Product Support and Service Level Agreement (SLA): Customer and Technical Support hours and contact information. The SLA should specify the escalation timeline and procedure with contact information. Vendor’s capacity to provide:
    a. On-Site Support and Technical Support within the SLA:
       i. On Election Day, defined as the start of the Early Voting period up to and including Election Day (See Appendix K)
       ii. Within 60 days before Election Day.

   b. Resolution to outstanding issue(s), repair, maintenance, and service requests within 30 days.

15. Maintenance Services, Pricing and Financing Options: A list of maintenance services with prices. Terms for replacing a component or EPB system. Available financing options for purchase or lease. A list of the general pricing and costs for purchasing the proposed electronic pollbook system.
16. Warranty: The vendor should provide a list of warranty specifications to include the following:
    a. The period and extent of the warranty
    b. Repair or Replacement
        i. The circumstances under which equipment is replaced rather than repaired
        ii. The method by which a user requests such replacement
    c. Warranty coverage and costs
    d. Technical documentation of all hardware and software that is used to certify that the individual component will perform in the manner and for the specified time,
17. Software License Agreement: Vendor must provide a consolidated source with details of the software license agreements of all procured software programs used in the creation, development, and continued support of the associated release and version being certified.
18. Test Data and Software: Vendor's internal quality assurance procedures, internal or external test data and reports, and software that can be used to demonstrate the various functions of the EPB system. Vendor should also verify that the versions of the applications submitted are identical to the versions that have undergone the certification testing, for example, hash testing tools.
19. Non-Disclosure Agreement or Oath between the Vendor and VSTL

NOTE: If the EPB system is certified, ELECT will retain the TDP for as long as the EPB system is marketed or used in the Commonwealth of Virginia.

Corporate Information

Corporate Information must contain the following items:

1. History and description of the business including the year established, products and services offered, areas served, branch offices, subsidiary and parent companies, capital and equity structure, identity of any individual, entity, partnership, or organization owning a controlling interest, and the identity of any investor whose investments have an aggregate value that exceeds more than 5% of the vendor's net cash flow in any reporting year.

2. Management and staff organization, number of full-time and part-time employees by category, and resumes of key employees who will assist Virginia localities in acquiring the system if it is authorized for use.
3. Certified financial statements for current and past three (3) fiscal years. If the vendor is not the manufacturer of the EPB system, then submit the certified financial statements of the manufacturer for the past three (3) fiscal years.
4. Bank Comfort Letter from the vendor's primary financial institution. If the vendor uses more than one financial institution, multiple Comfort Letters must be submitted.
5. Certificate of Good Standing issued within 2 months.
6. Credit rating issued within 2 months.
7. If publicly traded, index rating of business debt.
8. Gross sales in EPB products and services for the past three (3) fiscal years as a percentage of the vendor's total sales.
9. The location of all facilities with manufacturing capability; including names of the third-party vendor(s) employed to fabricate, assemble, or both, any component part of the EPB system being submitted for certification, along with the location of all of their facilities with manufacturing capability.
10. The location and servicing capability of each facility that will be used to service the EPB system for certification and the service limitation of the facility.
11. Quality assurance processes used in the manufacturing and servicing of the EPB system.
12. Configuration management processes used with the EPB system.

NOTE: If the EPB system is certified, ELECT will retain the Corporate Information for as long as the EPB system is marketed or used in Virginia. ELECT will sign a statement of confidentially for Corporate Information only.

Proprietary Information

Prior to or upon submission of its certification request, the vendor shall identify any information in both its request and accompanying materials that it believes should be treated as confidential and proprietary and the reasons such information should be treated as such.

"Identify" means that the information must be clearly marked and must include a justification as to why the information should be treated as confidential and proprietary information. A vendor shall not designate as proprietary information (a) the entire

certification request or (b) any portion of the certification request that does not contain trade secrets or proprietary information.

Pursuant to §2.2-3705.6(3), proprietary information is exempt from requests under the Virginia Freedom of Information Act (VFOIA). Records required to be released that contain both proprietary and non-proprietary information will be redacted before disclosure. ELECT cannot guarantee the extent to which any material provided will be exempt from disclosure in litigation. ELECT, however, agrees to provide the vendor with five (5) days' notice prior to disclosing such material to third parties so that the vendor can seek relief from a court prior to the disclosure of such materials by ELECT.

Phase 2: Preliminary Review

The Voting Systems Security Manager or designee will review the TDP, Corporate Information and other materials provided, and notify the vendor of any deficiencies. Certification of the EPB system will not proceed beyond this phase until the TDP and Corporate Information are complete.

The Voting Systems Security Manager, or designee, will notify the vendor to submit the following for evaluation:

1. Production working model of the EPB to run through all phases of testing, including:
    a. All hardware, software and firmware necessary to run the EPB;
    b. Software shall be provided in a format readable by the EPB hardware that is being submitted for certification;
    c. All commercial-off-the-shelf software and necessary drivers, including the operating system, any software applications for logging, reporting, printing, etc.;
    d. All peripheral devices, including those required for usability and Accessibility; and
    e. Any other components recommended by the manufacturer for use.
2. Copy of the test documents from prior VSTL certification testing, including Test Plan, Test Report, Test Procedures, and Test Cases.
3. A release for the VSTL to respond to any requests for information from ELECT.
4. A release to other states which have decertified the system or prior versions of the system to respond to any requests for information from ELECT.
5. Any other materials and equipment deemed necessary by ELECT.

The Voting Systems Security Manager, or designee, will conduct a preliminary analysis of the TDP and the EPB system with VSTL. The Voting Systems Security Manager, or

designee, will also review the Corporate Information and other materials to prepare an Evaluation Proposal, which includes:

1. Components of the EPB system to be certified;
2. Financial stability and sustainability of the vendor to maintain product support and contractual agreement for the EPB system; and
3. Preliminary analysis of TDP.

Phase 3: Technical Data Package to Voting Systems Test Laboratory

The vendor will submit the TDP to the Voting Systems Security Manager, who shall provide the TDP to the VSTL following review.

Phase 4: Certification Test Report from VSTL

The VSTL will work directly with the vendor and ELECT designee to complete all test assertions and test cases, and the Certification Test Report will be sent to ELECT upon completion.

Phase 5: On-Site Testing in Mock Election

Vendor will coordinate with the local jurisdiction to test the EPB system in a minimum of one polling place. With the vendor and a representative from ELECT present, at least one member of the Electoral Board and the General Registrar from the local jurisdiction will oversee the test of the system in a mock election. Alternately, ELECT has the discretion to perform a mock election, using the same process, on-site at the ELECT main building in Richmond, Virginia instead of a polling place; a general registrar and electoral board member must still be present.

Phase 6: Approval by the SBE

Based on the report from the VSTL, the results from the On-Site Testing, and other information in their possession, the SBE will decide whether to certify the EPB system for use in the Commonwealth of Virginia. The decision will be sent to the vendor.

3.3. Incomplete Certification Process

If the certification process is terminated, the vendor will forfeit all fees received by ELECT. Any certification process terminated under this provision must be re-initiated from Phase 1. The vendor is responsible for any outstanding balance due to ELECT before ELECT accepts subsequent requests from the vendor.

ELECT reserves the right to terminate the certification process when:

1. Vendor does not respond to a request from ELECT within 90 days;
2. ELECT issues any concerns regarding the certification;
3. The Vendor withdraws from the process;
4. The system fails the VSTL certification test;
5. The test lab cannot conduct the certification testing with the equipment on-hand; or
6. Failure of any step in the test assertions process during the certification week.

3.4. Catalog of Requirements

Requirements (objectives) in this standard have been updated to reflect cybersecurity reviews and updates from both Federal and State regulations to mitigate risks to EPBs. Requirements are organized to provide standardization and to align to Commonwealth of Virginia Security Standards (SEC 530-01.1 Controls and Objectives, (SEC-530)), EAC VEPBCR 1.0, and NIST 800-171A Rev. 2.

The requirements are organized into a well-defined structure and placed into categories named “control families”. There are twelve (12) families, each having a Control Family name and corresponding two-letter acronym. Each control family contains security controls or required functionality for the electronic pollbook system.

Assessment Criteria and Methodology

State certification testing will evaluate the design and performance of a vendor’s EPB system to ensure it complies with all applicable requirements in the Code of Virginia and SBE regulations and policies. ELECT will examine the essential system functions, operational procedures, user guides, documents, and reviews from product users. Hash testing will be conducted to confirm the application software is identical to the certified versions of federal compliance testing.

ELECT may evaluate the user experience with the current and prior versions of the EPB system and certification reports from other states. In addition, the security and reliability analysis of the product model will be reviewed to determine the usability of the EPB for Virginia elections. ELECT will also evaluate the testing results from the EAC VSTL that will be submitted as part of the Technical Data Package (TDP).

Assessment objectives identify the specific items being assessed and can include specifications, mechanisms, activities, and organization:

1. Specifications are document-based artifacts (e.g. network diagrams, security plans, requirements, administrator user guides, operator guides, and architectural designs) associated with the EPB submitted for certification.
2. Mechanisms are specific to hardware, software, and firmware safeguards employed within the EPB system.
3. Activities are protection-related actions supporting the EPB system that involves people (e.g. anti-virus updates, anti-malware updates, BIOS configuration, and access control mechanisms for the addition of users by an administrator).

Criteria

Assessment objectives are based on existing criteria in EAC VEPBCR 1.0, Code of Virginia, Administrative Code of Virginia, and HAVA, 52 USC §21081. The criteria are authoritative and provide the basis for the Virginia Electronic Pollbook System Certification Standard 2.0.

Methodology

To verify and validate and EPB meets the Virginia Electronic Pollbook Certification Standard 2.0 criteria, evidence must be provided demonstrating the EPB has fulfilled the objectives. Demonstrative evidence may be provided through the following:

Interview

Interviews of vendor staff may provide information to help the ELECT auditor gain insight into security objectives implementation.

Demonstration

Demonstrations, akin to testing, include review, inspection, observation, study, or analysis of objectives. The items used to demonstrate objectives include documents, mechanisms, or activities.

Common types of documents used as evidence may include but are not limited to:

a. Written policies, processes, and procedures;
b. Training materials;
c. Planning documents; and
d. System, network, and data flow diagrams.

This list of documents is not exhaustive or prescriptive.

Testing

Testing is an important part of the assessment process as it demonstrates what functionality and processes have or have not been built, integrated, or completed. Not all security objectives utilize testing to allow an entity to determine whether the requirement has been met.

Applying methodologies to criteria: Assessment

Each requirement in the Catalog of Requirements is determined to have been Met or Not Met through the application of one of the listed methodologies:

Test: all applicable objectives for the requirement must be tested leveraging technical methods to analyze expected outcomes.

Demonstration (DEMO): a demonstration of requirement implementation must be conducted by the VSSM and VSTL representative in conjunction with the vendor demonstrating conformity to the respective requirement.

Documentation (DOC): an examination of written information (documentation) in lieu of a demonstration or test will be specified in the Catalog of Requirements.

ELECT may require any test assertion that has a methodology marked as “Demo” or “Doc” to instead be completed as a test for verification of compliance.

Assessment Findings

The Assessment Findings - for each requirement there are two possible findings: MET or NOT MET.

MET: All applicable objectives for the requirement are satisfied based on evidence. All evidence must be in final form. Unacceptable forms of evidence include working papers, draft documentation, and unofficial or unapproved policies. Each test assertion or objective must be explicitly complied with based on the objective IDs and written descriptions. Vendors should pay close attention to the certification objectives and ensure their systems meet the requirements as stated. If the vendor has questions, they should contact ELECT.

NOT MET: One or more objectives of the requirements are not satisfied. For each requirement marked NOT MET, it is best practice to record statements that explain why and document the appropriate evidence showing that the vendor voting system does not conform fully to all the requirements. When any requirement, objective, or test assertion fails and is not met after the objective is tested for compliance, ELECT may stop the certification process at the point of failure. The vendor remains responsible for all payments and fees to the VSTL and ELECT.

Requirements Descriptions

This section provides detailed information and guidance for assessing requirements as described in this Standard.

Each security or functional control is identified by i) a Control Family name, ii) Control ID/Family ID number (1 -12), iii) Control Acronym, and iv) an Objective ID beginning with a two-letter identifier.

For example, AU-2.2-A.6 is a control in the Audit (AU) Control family. Each Objective ID is followed by an Objective and Evaluation Assertion (function or process the system must be able to do or the test assertion), the authority for the requirement (Code of Virginia, Virginia Administrative Code, VEPBCR 1.0), and the Methodology used to verify the Objective and Evaluation Assertion (test, demo, doc). The table below provides a snapshot of this structure.

Control Acronym	Control ID	Objective ID	Objective and Evaluation Assertion	Virginia Functional Need/ VVSG 2.0 Requirement	Virginia Requirement Description	Methodology: Test Demo Doc
AU	2	AU-2.2-A.6	The EPB must log all system errors and notify the user of errors that can be corrected by the user.	COV (System Requirement) electronic voting systems.	System monitoring and notification of system errors.	Test

Technical Standard Terms used in the Objective

There are several technical standard terms defined in Appendix A: Glossary. This appendix includes other definitions that may be useful for understanding the standard.

Appendices

Appendix A – Glossary

ADA – Americans with Disability Act (ADA) of 1990 broadly protects the rights of individuals with disabilities in employment, access to state and local government services, places of public accommodation, transportation, and other important areas of American life. The ADA also requires newly designed and constructed or altered state and local government facilities, public accommodations, and commercial facilities to be readily accessible to and usable by individuals with disabilities.

Anomaly – Any event related to the security or functioning of the EPB system that is out of the ordinary regardless of whether it is exceptional or not, a deviation from the norm.

De Minimis Change or ECO (Engineering Change Order) – A minimum change to a certified EPB system's hardware, software, TDP, or data. The nature of changes will not materially alter the system's reliability, functionality, capability, or operation. Under no circumstance shall a change be considered a De Minimis Change, if it has reasonable and identifiable potential to impact the system's performance and compliance with the applicable EAC and EPB Standard. Reference: EAC Testing & Certification Program Manual version 2.0 and Notices of Clarification.

Department of Elections (ELECT) – ELECT conducts the SBE's administrative and programmatic operations and discharges the board's duties consistent with delegated authority.

Election Assistance Commission (EAC) – The Help America Vote Act (HAVA) directs the U.S. Election Assistance Commission (EAC) to provide for the testing, certification, decertification, and recertification of voting system hardware and software by accredited laboratories. HAVA also introduces different terminology for these functions. Under the EAC process, test labs are "accredited" and voting systems are "certified." The term "standards" has been replaced with the term "*Guidelines*." As prescribed by HAVA, the EAC process was initially based on the 2002 Voting Systems Standards and will transition to the latest standards issued.

Election Officer – A registered voter in Virginia appointed by a local electoral board to serve at a polling place for any election. Officers of election must attend training conducted by the electoral board or the general registrar. Some of their duties on Election Day include identifying qualified voters and checking them in on the pollbooks; handing voters their correct ballots; telling voters

the proper procedure for inserting ballots into the voting machine; and, when applicable, providing a voter with a provisional ballot.

Electronic Pollbook (EPB) System– A system containing an electronic list of registered voters that may be transported and used at a polling place. This is the official list of registered voters eligible to vote in the election; it is used to verify a voter's eligibility to receive a ballot and captures voter history in real time to prevent double voting. The term "electronic pollbook system" refers to the total combination of mechanical, electro-mechanical, electronic and digital equipment (including the software, firmware, and documentation required to program, control, and support the equipment).

Help America Vote Act of 2002 (HAVA) – The Help America Vote Act (HAVA) of 2002 made reforms to America's voting process by establishing minimum standards for states regarding election administration. Title III of HAVA contains standards regarding voting systems, provisional voting and voting information, computerized statewide voter registration list, and requirements for first-time voters who register by mail. HAVA standards are critical to the operation of an election.

Incident – Any event related to the security or functioning of the EPB system that may have caused or caused an interruption to the Check-in process, Reporting process, or both.

Logic and Accuracy Testing – Logic and accuracy testing is an integral part of preparing for an election. Each machine (not a sampling of machines) that will be used in an election must be tested prior to that election to ensure it is programmed correctly and is functioning properly. The logic and accuracy test will also uncover any ballot printing or coding issues that may affect accurate and complete tabulation. Each machine should be tested with a sufficient number of ballots or votes to substantiate that each machine recorded the correct number of votes for each candidate. An electoral board member, a general registrar, or a designated representative must be present during this process and must certify the results from each machine. Form ELECT-633 must be submitted electronically to the Department of Elections after logic and accuracy testing is complete.

Precinct – Virginia Code §24.2-101 defines precinct as the territory designated by the governing body of a county, city, or town to be served by one polling place.

State Board of Elections (SBE) – The State Board consists of five members appointed by the Governor subject to confirmation by the General Assembly and is authorized to supervise and

coordinate the work of the county and city electoral boards and of the registrars to obtain uniformity in their practices and proceedings and legality in all elections.

Voting System Security Manager (VSSM) – Serves as the primary designated evaluation agent for ELECT and is responsible for oversight of voting systems and electronic pollbooks certification and security.

Voting Systems Test Laboratory (VSTL) – Test laboratory accredited by the EAC in accordance with HAVA as an independent, non-federal laboratory qualified to test voting systems and EPBs based on evaluations and recommendations by the National Institute of Standards and Technology (NIST).

Appendix B - Contacts

The certification request package should be sent to:

Virginia Department of Elections
ATTN: EPB System Certification
1100 Bank Street, 1st Floor
Richmond, Virginia 23219-3497

All other inquiries should be sent to: info@elections.virginia.gov

Appendix C – Local Validation of Certification on Purchase

It is the responsibility of both the vendor and the local jurisdiction to ensure that a voting system supplied or purchased for use in Virginia has been certified by the SBE. The vendor is required to submit any modifications to a previously certified EPB system to ELECT for review.

If any question arises related to the certification status of an EPB system in use in Virginia, ELECT shall verify whether the EPB system in use is identical to the certified EPB system.

Any unauthorized modifications to a certified EPB system may result in decertification by the SBE or bar the vendor from receiving future certification of EPB systems in Virginia.

Acceptance Test

As required by the Code of Virginia §24.2-629 (E) and the procurement process, the local jurisdiction with the assistance of state officials or consultants will conduct the Acceptance Test.

The local jurisdiction verifies the purchased or leased EPB system delivered is identical to the certified system and the EPB equipment and software are fully functional and compliant with the administrative and statutory requirements of the jurisdiction. The local jurisdiction may perform hash testing of application software and will send a letter to ELECT as required by the procurement process confirming the versions of software and models of EPB equipment received are identical to the certified system.

As part of the Acceptance Test the vendor will replicate its designed functionality as presented and tested during certification, including:

1. Mark voters as checked in, voted, and given a ballot only after specific actions.
2. Provide the user notification and display an appropriate instruction based on the voter status:
    a. Protected voters
    b. Inactive voters
    c. Absentee voters
    d. Voters out of precinct
    e. Voters who already voted.
3. Perform data and operational integrity safeguard tests including:
    a. Ability to add or remove new units without disturbing the existing units
    b. Power supply and battery life with an option to display power usage
    c. Display an appropriate message when the EPB device is operating at less than 20% of remaining power

   d. Display an appropriate error message when the EPB fails to check in a voter.
4. Performance Report to include the optimal duration of check-in process per voter.
5. System monitoring and notification of system errors, including:
   a. Perform a self-test for peripheral connectivity
   b. Visible display indicating power supply and battery life
   c. Visible display indicating system connections.
6. Comply with and enable voter and operator compliance with all applicable procedural, regulatory, and statutory requirements.
7. Produce an audit log.
8. Close the election and provide multiple secure files that can provide voter credit to the Voter Registration System.
9. Data preservation and redundancy to maintain a printable checklist format of the voter registration record and voter activity record on a removable storage. When any number of EPBs become inoperable, and there is not an alternate recovery means available, the removable storage must reflect the voter activity record from the moment of inoperability that can be used to continue with election.
10. During interruptions of network connectivity, EPBs should retain and synchronize upon restoration of connectivity all voter activities.
11. For EPBs to be used for Early Voting, secure reliable data transfers and display. appropriate message for each data transfer outside of closed network including electronic data management system, central server and cloud data service.
12. Transaction Logging and Audit Reports including the following details:
    a. Log all changes to EPB post the initial download
    b. Transactions at the polling places
    c. Export logs in a readable format
    d. The EPB's audit log(s) must be encrypted, track all transactions and include a date/time stamp.
13. All modules and data are cryptographic and are FIPS 140-2 v1 compliant including at rest and in transit.
14. Comply with the NIST SP 800-63B or better digital identity guidelines for authentication and lifecycle management.
15. Support the industry standard for clean wipe method remotely and manually.

Appendix D – Test Assertions

State Certification Audits must include examination of all system operations and procedures, including but not limited to the following Controls:

Control ID	Control Family Name	Control Acronym
1.	ADA and Accessibility	AA
2.	Audit	AU
3.	Back-up and Recovery	BR
4.	COTS Analysis	CA
5.	Election Management	EM
6.	Early Voting	EV
7.	Operations Manual	OM
8.	Reporting	RE
9.	System Integrity	SI
10.	System Monitoring	SM
11.	User Process	UP
12.	Voter Interaction	VI

The following test assertions will be executed by the ELECT designated VSTL.

Control Acronym	Control ID	Objective ID	Objective and Evaluation Assertion	Virginia Code / VEPBCR 1.0 Requirement (Functional Need)	Virginia/EAC VEPBCR 1.0 Requirement Description	Methodology; Test, Demo, Doc
AA	1	AA-1.1-A.1	The tests must include checking-in participant voters who represent the following:	1.1.4.1 (VEPBCR 1.0)	Usability testing with voters	Doc
AA	1	AA-1.1-A.2	General population	1.1.4.1-A (VEPBCR 1.0)	Usability testing with voters	Doc

AA	1	AA-1.1-A.3	Voters who are native speakers of the language being tested or for each language defined as being supported in the manufacturer's Doc	1.1.4.1-B (VEPBCR 1.0)	Usability testing with voters	Doc
AA	1	AA-1.1-A.4	Blind voters	1.1.4.1-C (VEPBCR 1.0)	Usability testing with voters	Doc
AA	1	AA-1.1-A.5	Voters with low vision	1.1.4.1-D (VEPBCR 1.0)	Usability testing with voters	Doc
AA	1	AA-1.1-A.6	Voters with limited dexterity	1.1.4.1-E (VEPBCR 1.0)	Usability testing with voters	Doc
AA	1	AA-1.1-A.7	EPB and the software must meet federal standards for accessibility, including: the version of Section 508 Information and Communication Technology (ICT) Final Standards and Guidelines, in effect as of January 18, 2018, and the WCAG 2.0 Level AA checkpoints included in that standard. As part of the overall e-poll book Doc, the manufacturer must include descriptions and instructions for all accessibility features that describe:	3.1 (VEPBCR 1.0)	Federal standards for accessibility and Accessibility Doc	Doc

AU	2	AU-2.2-A.1	The EPB must produce an audit log that records data that has been successfully transferred.	COV (Statutory Requirement)	§ 24.2-611(C) The Department shall incorporate safeguards to assure that the records of the election, including the pollbook, voter count sheets, or other alternative records, will provide promptly an accurate and secure record of those who have voted.	Test
AU	2	AU-2.2-A.2	The EPB must produce an audit log that records data that has been successfully transferred.	COV (Statutory Requirement)	§ 24.2-611(C) The Department shall incorporate safeguards to assure that the records of the election, including the pollbook, voter count sheets, or other alternative records, will provide promptly an accurate and secure record of those who have voted.	Test
AU	2	AU-2.2-A.3	The EPB must be able to correctly update and show changes in poll book due to supplemental or incremental voter registration file updates during EV.	COV (Functional Requirement)	Receive and process the voter registration and election information. EPB must be able to correctly update voter check-in and other information due to supplemental or incremental updates to the pollbook, during EV or for other	Test

					reasons supplemental or incremental updates are necessary.	
AU	2	AU-2.2-A.4	The EPB must provide a verification that the voter and election data are accurately loaded in the EPB.	COV (Functional Requirement)	Receive and process the voter registration and election information.	Test
AU	2	AU-2.2-A.5	The EPB must be able to have a report that provides statistics on the duration of voter check-in process and the maximum number of voters the configuration can handle.	COV (System Requirement)	Perform data and operational integrity safeguard tests. Performance report to include the optimal duration of check-in process per voter.	Doc
AU	2	AU-2.2-A.6	The EPB must log all system errors and notify the user of errors that can be corrected by the user.	COV (System Requirement)	System monitoring and notification of system errors.	Test
AU	2	AU-2.2-A.7	Records of election preparation (Audit trail of election data preparations)	COV (Audit Requirements)	Transaction Logging and Audit Reports. The EPB must have a transaction log containing the following:	Doc/Demo
AU	2	AU-2.2-A.8	Records of transactions in the polling place (Transactions at the polling places)	COV (Audit Requirements)	See requirement description, Audit, AU-2.2-A.7	Doc/Demo
AU	2	AU-2.2-A.9	Human-readable logs (View and export logs in a readable format)	COV (Audit Requirements)	See requirement description, Audit, AU-2.2-A.7	Test
AU	2	AU-2.2-B.10	Ability to export logs	COV (Audit Requirements)	See requirement description, Audit, AU-2.2-A.7	Test

AU	2	AU-2.2-B.11	Identify and manage security incidents and fraudulent activities (Identify and manage security incidents and fraudulent activities)	COV (Audit Requirements)	See requirement description, Audit, AU-2.2-A.7	Doc/Demo
AU	2	AU-2.2-B.12	Track and resolve operational problems (Track and resolve operational problems.)	COV (Audit Requirements)	See requirement description, Audit, AU-2.2-A.7	Doc/Demo
AU	2	AU-2.2-B.13	The EPB must provide a verification that the data loaded for the election was successful, accurate, and any discrepancies in the process handled.	COV (Audit Requirements)	Reconciliation of data load to EPB to handle exceptions and discrepancies.	Test
AU	2	AU-2.2-B.14	The EPB must be configured to log records of general system usage including, but not limited to:	2.6.1 (VEPBCR 1.0)	General system usage	Doc/Demo
AU	2	AU-2.2-B.15	Account management	2.6.1.1 (VEPBCR 1.0)	General system usage	Doc/Demo
AU	2	AU-2.2-B.16	User access and session information, including failed logins	2.6.1.2 (VEPBCR 1.0)	General system usage	Doc/Demo
AU	2	AU-2.2-B.17	Application extension	2.6.1.3 (VEPBCR 1.0)	General system usage	Doc/Demo
AU	2	AU-2.2-B.18	The EPB must be configured to log records including, but not limited to:	2.6.2 (VEPBCR 1.0)	Operational maintenance activity	Doc/Demo
AU	2	AU-2.2-B.19	Software updates or patching	2.6.2.1 (VEPBCR 1.0)	Operational maintenance activity	Doc/Demo
AU	2	AU-2.2-C.20	System startup and shutdown	2.6.2.2 (VEPBCR 1.0)	Operational maintenance activity	Doc/Demo
AU	2	AU-2.2-C.21	Changes in system configuration	2.6.2.3 (VEPBCR 1.0)	Operational maintenance activity	Doc/Demo

AU	2	AU-2.2-C.22	The EPB must be configured to log all application errors. The system Doc must contain descriptions of error codes and messages for use in troubleshooting.	2.6.3 (VEPBCR 1.0)	Application errors	Doc/Demo
AU	2	AU-2.2-C.23	The EPB must be configured to log records including, but not limited to:	2.6.4 (VEPBCR 1.0)	System Integrity	Doc/Demo
AU	2	AU-2.2-C.24	EDR alerts	2.6.4.1 (VEPBCR 1.0)	System Integrity	Doc/Demo
AU	2	AU-2.2-C.25	Antivirus alerts	2.6.4.2 (VEPBCR 1.0)	System Integrity	Doc/Demo
AU	2	AU-2.2-C.26	File integrity monitoring	2.6.4.3 (VEPBCR 1.0)	System Integrity	Doc/Demo
AU	2	AU-2.2-C.27	Physical tamper alerts (if applicable)	2.6.4.4 (VEPBCR 1.0)	System Integrity	Doc/Demo
AU	2	AU-2.2-C.28	The EPB must be configured to log the generation of all reports.	2.6.5 (VEPBCR 1.0)	Report generation	Doc/Demo
AU	2	AU-2.2-C.29	The EPB Doc must include a list of approved suppliers. If the supplier goes out of business or is purchased by another company, the e-poll book's Doc must be updated to include current information.	2.7.1 (VEPBCR 1.0)	List of Approved Suppliers	Doc/Demo

BR	3	BR-3.3-A.1	The EPB must maintain data preservation and redundancy so in the case where the EPB becomes inoperable the data that has been input can be retrieved.	COV (Statutory Requirement)	§ 24.2-611(F) In the event that the EPBs for a precinct fail to operate properly and no alternative voter list or pollbook is available, the officers of election, in accordance with the instructions and materials approved by the State Board, shall (i) maintain a written list of the persons EPB and (ii) provide to each person EPB a provisional ballot to be cast as provided in § 24.2-653.	Test
BR	3	BR-3.3-A.2	If network connectivity is lost, once restored all devices on the network must synchronize.	COV (System Requirement)	During an interruption of network connection, EPBs should retain and synchronize all voter activities upon restoration of connectivity.	Test
BR	3	BR-3.3-A.3	Any failure of a device cannot impact the remaining units.	COV (System Requirement)	EPBs should be configured to synchronize data within the defined network only. Disable connection to all unauthorized networks including publicly accessible network. Any external connectivity must be IP whitelisted.	Test

BR	3	BR-3.3-A.4	When one or all EPBs become inoperable, and if there is not an alternate recovery means available, then the removable storage must reflect the voter activity record at that moment and can be used to continue with election.	COV (System Requirement)	Data preservation and redundancy to maintain a printable checklist format of the voter registration record and voter activity record on a removable storage. When one or all the EPBs become inoperable, and if there is not an alternate recovery means available then the removable storage must reflect the voter activity record at that moment and can be used to continue with election.	Test
BR	3	BR-3.3-A.5	The total amount of internal memory storage on the system, and	1.5.2.1 (VEPBCR 1.0)	Memory Storage	Doc
BR	3	BR-3.3-A.6	Procedures to troubleshoot issues of insufficient memory.	1.5.2.2 (VEPBCR 1.0)	Memory Storage	Doc
BR	3	BR-3.3-A.7	In the event of a network failure or other interruption, Doc should outline how the e-poll book:	1.5.3 (VEPBCR 1.0)	Loss of Connectivity	Doc
BR	3	BR-3.3-A.8	Captures and saves voter activity, including:	1.5.3.1 (VEPBCR 1.0)	Loss of Connectivity	Doc
BR	3	BR-3.3-A.9	New Registrations (if applicable),	1.5.3.1-A (VEPBCR 1.0)	Loss of Connectivity	Doc
BR	3	BR-3.3-B.10	Voter Updates, and	1.5.3.1-B (VEPBCR 1.0)	Loss of Connectivity	Doc
BR	3	BR-3.3-B.11	Signature Updates.	1.5.3.1-C (VEPBCR 1.0)	Loss of Connectivity	Doc

BR	3	BR-3.3-B.12	Syncs with the poll list or other e-poll books, once connectivity is restored, and	1.5.3.2 (VEPBCR 1.0)	Loss of Connectivity	Doc
BR	3	BR-3.3-B.13	Reconnects with any hardware, including:	1.5.3.3 (VEPBCR 1.0)	Loss of Connectivity	Doc
BR	3	BR-3.3-B.14	Digital signature capturing devices,	1.5.3.3-A (VEPBCR 1.0)	Loss of Connectivity	Doc
BR	3	BR-3.3-B.15	Bar code capturing devices,	1.5.3.3-B (VEPBCR 1.0)	Loss of Connectivity	Doc
BR	3	BR-3.3-B.16	Printing devices,	1.5.3.3-C (VEPBCR 1.0)	Loss of Connectivity	Doc
BR	3	BR-3.3-B.17	Network devices (i.e. routers,	1.5.3.3-D (VEPBCR 1.0)	Loss of Connectivity	Doc
BR	3	BR-3.3-B.18	Network cards (if applicable).	1.5.3.3-E (VEPBCR 1.0)	Loss of Connectivity	Doc
BR	3	BR-3.3-B.19	In addition to the steps above, Doc should also include any troubleshooting steps a poll worker may take to verify the outage isn't localized to the device.	1.5.3.4 (VEPBCR 1.0)	Loss of Connectivity	Doc
BR	3	BR-3.3-C.20	The EPB contains Doc regarding procedures to resolve a system failure, which is defined as a problem either with hardware or operating system software that causes the system to perform abnormally.	1.5.6 (VEPBCR 1.0)	System Failure	Doc

CA	4	CA-4.4-A.1	The EPB Doc must detail controls used to determine if the system's software, firmware, hardware, or other system components are authentic and unaltered. For software or firmware, this must include hash validation procedures. For hardware, this must include details on identifying manufacturer-approved hardware through checking labeling, tamper evidence, or other characteristics.	2.7.2 (VEPBCR 1.0)	Authenticity of Components	Doc
CA	4	CA-4.4-A.2	The EPB Doc must detail the origin and ownership of any software, firmware, or hardware used within the system.	2.7.3 (VEPBCR 1.0)	Provenance of Devices	Doc
EM	5	EM-5.5-A.1	The EPB must have a feature that allows for the ease of creating and modifying messaging that will be used and seen by a user on the EPB and any canned instructions to be editable without requiring a software update.	COV (Functional Requirement)	Allows configuration of on-screen poll worker instructions and messages without software changes.	Test
EM	5	EM-5.5-A.2	The EPB must have a feature that allows for configuration of document name(s), or configuration of instructions on how to handle various check-in processes, prior to Election Day, without requiring a software update.	COV (Functional Requirement)	Allows configuration of document name(s) when a voter's status requires a document to be signed.	Test

EM	5	EM-5.5-A.3	The EPB must be customizable so changes in workflow requirements and/or the change State procedures in the voter check-in process can be accommodated.	COV (Functional Requirement)	Ability to customize workflow requirements according to the State and/or jurisdiction requirements and preferences.	Test
EM	5	EM-5.5-A.4	The EPB must display and automatically update the voter credits issued and synchronize with other units on a network.	COV (Functional Requirement)	Provides the user with a continuous on-screen voter check-in count, customizable by specific category.	Test
EM	5	EM-5.5-A.5	The EPB must have a verification screen that displays the:	COV (Functional Requirement)	Displays an opening screen to allow the user to confirm election date, polling place location, number of eligible voters, and zero voter check-in count prior to opening the polls.	Test
EM	5	EM-5.5-A.6	Election Date	COV (Functional Requirement)	See requirement description, Election Management, EM-5.5-A.5	Test
EM	5	EM-5.5-A.7	Polling Place Location	COV (Functional Requirement)	See requirement description, Election Management, EM-5.5-A.5	Test
EM	5	EM-5.5-A.8	Number of Voters for location	COV (Functional Requirement)	See requirement description, Election Management, EM-5.5-A.5	Test
EM	5	EM-5.5-A.9	Zero Voter checked in	COV (Functional Requirement)	See requirement description, Election Management, EM-5.5-A.5	Test

EM	5	EM-5.5-B.10	Time	COV (Functional Requirement)	See requirement description, Election Management, EM-5.5-A.5	Test
EM	5	EM-5.5-B.11	Battery Status	COV (Functional Requirement)	See requirement description, Election Management, EM-5.5-A.5	Test
EM	5	EM-5.5-B.12	Connectivity status, along with other devices connected	COV (Functional Requirement)	See requirement description, Election Management, EM-5.5-A.5	Test
EM	5	EM-5.5-B.13	Number of Voters checked-in	COV (Functional Requirement)	See requirement description, Election Management, EM-5.5-A.5	Test
EM	5	EM-5.5-B.14	The EPB must be able to retrieve a specific voter from a list of provided voters and issue voter credit.	COV (Functional Requirement)	Receive and process the voter registration and election information.	Test
EM	5	EM-5.5-B.15	The EPB must be networkable. Once networked together all EPB's must synchronize to the most current voter information.	COV (System Requirement)	During an interruption of network connection, EPBs should retain and synchronize all voter activities upon restoration of connectivity.	Test
EM	5	EM-5.5-B.16	Ability to add or remove new units without disturbing the existing units	COV (System Requirement)	Perform data and operational integrity safeguard tests. Performance report to include the optimal duration of check-in process per voter.	Test

EV	6	EV-6.6-A.1	Utilize security best practices for internet connectivity including network, wireless, and cloud services.	COV (Early Voting)	All vendors must comply with the policies, guidelines, and directives regarding Early Voting connection requirements as adopted and modified by the SBE from time to time. Early Voting Connection Requirements The following additional requirements exist if the EPB Vendor utilizes the cloud to host EPBs for locality access during the Early Voting period:	Doc
EV	6	EV-6.6-A.2	Utilize a cloud service provider (CSP) whose infrastructure and applications are NIST 800-53 certified through a third-party entity.	COV (Early Voting)	See requirement description, Early Voting, EV-6.6-A.1	Doc
EV	6	EV-6.6-A.3	Ensure that CSP SLA contains three major components: Service level objectives, Remediation policies, and penalties/ incentives related to NIST compliance, exclusions, and caveats.	COV (Early Voting)	See requirement description, Early Voting, EV-6.6-A.1	Doc
EV	6	EV-6.6-A.4	The connection via VPN must be FIPS 140-2 v2 certified, whether it is a dedicated SSLVPN or just a dedicated connection. If there is a dedicated connection, thorough Doc must be provided.	COV (Early Voting)	See requirement description, Early Voting, EV-6.6-A.1	Doc

EV	6	EV-6.6-A.5	If the EPB Vendor supplies the mobile devices, ensure compliance with NIST 800-53 in relation to these devices, as is done with the infrastructure.	COV (Early Voting)	See requirement description, Early Voting, EV-6.6-A.1	Doc
EV	6	EV-6.6-A.6	Storage, processing, migration, access control, and detection to and from the cloud must be NIST 800-53 compliant.	COV (Early Voting)	See requirement description, Early Voting, EV-6.6-A.1	Doc
EV	6	EV-6.6-A.7	Ensure the CSP is NIST certified by validating their credentials through their third-party certification provider. Ask for internal vulnerability/penetration testing reports, audit reports, incident reports, and evidence of remedial actions for any issues raised. Also, verify tracking of mitigating action-tracking mechanisms (POA&M tracking).	COV (Early Voting)	See requirement description, Early Voting, EV-6.6-A.1	Doc
EV	6	EV-6.6-A.8	Confirm the person is eligible to vote in the election	COV (Early Voting)	Pursuant to the Code of Virginia, §24.2-701.1, Virginia has a no-excuse absentee in person voting period, referred to as Early Voting. This requires each locality to have secure connectivity to the voter registration information (VRI) throughout the	Test

					Early Voting period to:	
EV	6	EV-6.6-A.9	Confirm the person has not previously voted in the election	COV (Early Voting)	See requirement description, Early Voting, EV-6.6-A.8	Test
EV	6	EV-6.6-B.10	Record voter history in real-time.	COV (Early Voting)	See requirement description, Early Voting, EV-6.6-A.8	Test
OM	7	OM-7.7-A.1	The EPB must include clear, complete, and detailed instructions and messages for setup, check-in, shutdown, and how to use accessibility features.	1.1.2 (VEPBCR 1.0)	Instructions for election workers	Doc
OM	7	OM-7.7-A.2	The Doc required for normal operation must be:	1.1.2.1 (VEPBCR 1.0)	Instructions for election workers	Doc
OM	7	OM-7.7-A.3	Presented at a level appropriate for election workers who are not experts in e-poll books and computer technology, and	1.1.2.1-A (VEPBCR 1.0)	Instructions for election workers	Doc
OM	7	OM-7.7-A.4	in a format suitable for use in the polling place.	1.1.2.1-B (VEPBCR 1.0)	Instructions for election workers	Doc
OM	7	OM-7.7-A.5	Printed procedural instructions, and on-screen instructions and messages must enable the election workers to verify that the e-poll book:	1.1.2.2 (VEPBCR 1.0)	Instructions for election workers	Doc
OM	7	OM-7.7-A.6	Has been set up correctly (setup),	1.1.2.2-A (VEPBCR 1.0)	Instructions for election workers	Doc
OM	7	OM-7.7-A.7	is in correct working order to check-in voters, and	1.1.2.2-B (VEPBCR 1.0)	Instructions for election workers	Doc
OM	7	OM-7.7-A.8	has been shut down correctly (shutdown).	1.1.2.2-C (VEPBCR 1.0)	Instructions for election workers	Doc

OM	7	OM-7.7-A.9	The EPB Doc must include information on tamper evident precautions, including:	2.2.4 (VEPBCR 1.0)	Document the application of tamper evident sealing	Doc
OM	7	OM-7.7-B.10	How and where to apply tamper evident sealing of the physical components of the system that contain voter or ballot information,	2.2.4.1 (VEPBCR 1.0)	Document the application of tamper evident sealing	Doc
OM	7	OM-7.7-B.11	How to apply tamper evident sealing to any opened or unused ports on the system, such as USB ports, power ports, headphone jacks, etc., and	2.2.4.2 (VEPBCR 1.0)	Document the application of tamper evident sealing	Doc
OM	7	OM-7.7-B.12	Any built-in tamper evident protections (lights, alarms, logging).	2.2.4.3 (VEPBCR 1.0)	Document the application of tamper evident sealing	Doc
RE	8	RE-8.8-A.1	The EPB provides a report that can be filtered by party. • Requirement above must be displayable on EPB for OE on election day, As well as a report capability through EPB management software.	COV (Statutory Requirement)	§24.2-530 All persons qualified to vote, pursuant to §§ 24.2-400 through 24.2-403, may vote at the primary. No person shall vote for the candidates of more than one party. Requirement must be displayable on EPB for OE on election day, As well as a report capability through EPB management	Test

RE	8	RE-8.8-A.2	The EPB must be able to produce a data output in a format deemed necessary by the Commonwealth of Virginia.	COV (Statutory Requirement)	§ 24.2-611(F) In the event that the EPBs for a precinct fail to operate properly and no alternative voter list or pollbook is available, the officers of election, in accordance with the instructions and materials approved by the State Board, shall (i) maintain a written list of the persons EPB and (ii) provide to each person EPB a provisional ballot to be cast as provided in § 24.2-653.	Test
RE	8	RE-8.8-A.3	All reports produced by the EPB must contain: Election Date	COV (Statutory Requirement)	§ 24.2-668(C) The data disc or cartridge containing the electronic records of the election, or, alternately, a printed copy of the pollbook records of those who voted, shall be transmitted, sealed and retained as required by this section, and otherwise treated as the pollbook for that election for all purposes subsequent to the election.	Test

					All reports produced by the EPB must contain election identification information.	
RE	8	RE-8.8-A.4	All reports produced by the EPB must contain: Date and Time of Report	COV (Statutory Requirement)	See requirement description, Reporting, RE-8.8-A.3	Test
RE	8	RE-8.8-A.5	All reports produced by the EPB must contain: Election/Name	COV (Statutory Requirement)	See requirement description, Reporting, RE-8.8-A.3	Test
RE	8	RE-8.8-A.6	All reports produced by the EPB must contain: Locality	COV (Statutory Requirement)	See requirement description, Reporting, RE-8.8-A.3	Test
RE	8	RE-8.8-A.7	All reports produced by the EPB must contain: Precinct	COV (Statutory Requirement)	See requirement description, Reporting, RE-8.8-A.3	Test
RE	8	RE-8.8-A.8	All reports produced by the EPB must contain: Login/Credentials of individual who ran report	COV (Statutory Requirement)	See requirement description, Reporting, RE-8.8-A.3	Test
RE	8	RE-8.8-A.9	The EPB reporting module should be configurable and customizable by a user with minimal system knowledge.	COV (Functional Requirement)	Users with minimal system knowledge should be able to configure and customize reports.	Test
RE	8	RE-8.8-B.10	The manufacturer must submit a report of the results of their usability tests, including effectiveness, efficiency, and satisfaction measures, as part of their Doc using ISO/IEC 25062:2006: Common	1.1.4.2 (VEPBCR 1.0)	Usability testing with voters	Doc

			Industry Format (CIF) for usability test reports.			
SI	9	SI-9.9-A.1	The EPB must require supervisor control to change the voter status from VOTED	COV (Statutory Requirement)	§ 24.2-651.1 Any person who offers to vote, who is listed on the pollbook, and whose name is marked to indicate that he has already voted in person in the election shall cast a provisional ballot as provided in § 24.2-653.	Test
SI	9	SI-9.9-A.2	The EPB must require supervisor control to change the voter status to absentee.	COV (Statutory Requirement)	§ 24.2-651.1 Any person who offers to vote, who is listed on the pollbook, and whose name is marked to indicate that he has already voted in person in the election shall cast a provisional ballot as provided in § 24.2-653.	Test
SI	9	SI-9.9-A.3	The removable media must be able to be sealed, transportable, and to retain information as required.	COV (Statutory Requirement)	§ 24.2-668(C) The data disc or cartridge containing the electronic records of the election, or, alternately, a printed copy of the pollbook records of those who voted, shall be transmitted, sealed and retained as required by this section, and otherwise treated	Test

					as the pollbook for that election for all purposes subsequent to the election.	
SI	9	SI-9.9-A.4	The EPB must require supervisor controls to change the absentee status of a voter.	COV (Statutory Requirement)	§ 24.2-711 Before the polls open, the officers of election at each precinct shall mark, for each person on the absentee voter applicant list, the letters "AB" (meaning absentee ballot) in the EPB record column on the pollbook.	Test
SI	9	SI-9.9-A.5	The EPB must provide the ability to select a reason for cancellation and provide an input for a supervisor password.	COV (Functional Requirement)	Allows user to cancel a voter check-in. Requires supervisor controls prior to cancellation of a voter check-in. Provides ability to select reason for cancellation.	Test
SI	9	SI-9.9-A.6	The EPB must be able to add, remove, update, and delete stored information.	COV (Functional Requirement)	Receive and process the voter registration and election information.	Test
SI	9	SI-9.9-A.7	The EPB must not be required for the voting system to perform any functions but may provide a digital code for the voter's ballot retrieval on Ballot Marking Devices.	COV (Functional Requirement)	EPBs cannot connect to a Voting System at any time.	Test

SI	9	SI-9.9-A.8	The EPB cannot connect to the voting system.	COV (Functional Requirement)	EPBs cannot connect to a Voting System at any time.	Test
SI	9	SI-9.9-A.9	System must have HASH test performed to verify the system being certified is the system presented in TDP for certification	COV (System Requirement)	Hash testing	Test
SI	9	SI-9.9-B.10	The EPB must have administrative options for higher level reporting on election operations.	COV (System Requirement)	Perform data and operational integrity safeguard tests. Performance report to include the optimal duration of check-in process per voter.	Test
SI	9	SI-9.9-B.11	The EPB must support the ability to shred all removable media and wipe EPB device using DoD 5220.22-M wiping standards.	COV (System Requirement)	Support the industry standard for clean wipe method remotely and manually. The system must use DoD 5220.22-M wiping standards	Doc/Demo
SI	9	SI-9.9-B.12	Upgrade to a Modern Operating System and keep it up to date	COV (System Requirement)	The EPB must employ the following management techniques. Utilize security best practices for internet connectivity including network, wireless, and cloud services.	Doc/Demo
SI	9	SI-9.9-B.13	Exercise Secure User Habits	COV (System Requirement)	See requirement description, System Integrity, SI-9.9-B.12	Doc/Demo

SI	9	SI-9.9-B.14	Leverage Security Software	COV (System Requirement)	See requirement description, System Integrity, SI-9.9-B.12	Doc/Demo
SI	9	SI-9.9-B.15	Safeguard against Eavesdropping	COV (System Requirement)	See requirement description, System Integrity, SI-9.9-B.12	Doc/Demo
SI	9	SI-9.9-B.16	Protect Passwords	COV (System Requirement)	See requirement description, System Integrity, SI-9.9-B.12	Doc/Demo
SI	9	SI-9.9-B.17	Limited Use of the Administrator Account	COV (System Requirement)	See requirement description, System Integrity, SI-9.9-B.12	Doc/Demo
SI	9	SI-9.9-B.18	Employ Firewall Capabilities	COV (System Requirement)	See requirement description, System Integrity, SI-9.9-B.12	Doc/Demo
SI	9	SI-9.9-B.19	Implement WPA2 on the Wireless Network	COV (System Requirement)	See requirement description, System Integrity, SI-9.9-B.12	Doc/Demo
SI	9	SI-9.9-C.20	Limit Administration to the Internal Network	COV (System Requirement)	See requirement description, System Integrity, SI-9.9-B.12	Doc/Demo
SI	9	SI-9.9-C.21	All modules and data are cryptographic and are FIPS 140-2 v2 compliant.	COV (System Requirement)	Comply with the latest encryption standard for all data including data-at-rest and data-in-transit. This requirement applies to all IT equipment including mobile and stand-alone.	Doc

SI	9	SI-9.9-C.22	The EPB's audit log must be encrypted, track all transactions, and include a date and time stamp.	COV (System Requirement)	Comply with the latest encryption standard for all data including data-at-rest and data-in-transit. This requirement applies to all IT equipment including mobile and stand-alone.	Doc/Demo
SI	9	SI-9.9-C.23	All passwords used by the EPB follow the NIST SP 800-63B Standard.	COV (System Requirement)	Comply with the NIST SP 800-63B or better digital identity guidelines for authentication and lifecycle management.	Doc
SI	9	SI-9.9-C.24	All passwords used by the EPB must allow upper case, lower case, numbers, and special characters.	COV (System Requirement)	Comply with the NIST SP 800-63B or better digital identity guidelines for authentication and lifecycle management.	Test
SI	9	SI-9.9-C.25	The same password cannot be reused within at least 10 subsequent password changes. The EPB has automated features that keep track of password reuse and enforces policy of no reuse within 10 subsequent passwords.	COV (System Requirement)	Comply with the NIST SP 800-63B or better digital identity guidelines for authentication and lifecycle management.	Test
SI	9	SI-9.9-C.26	The EPB requires passwords to be changed every 6 months. The EPB has automated feature that enforces passwords change policy of every 6 months.	COV (System Requirement)	Comply with the NIST SP 800-63B or better digital identity guidelines for authentication and lifecycle management.	Test

SI	9	SI-9.9-C.27	The EPB must provide the option to mask or unmask passwords at text entry.	COV (System Requirement)	Comply with the NIST SP 800-63B or better digital identity guidelines for authentication and lifecycle management.	Test
SI	9	SI-9.9-C.28	Centralization of all components	COV (System Requirement)	Comply with the Access Management best practices for System Administrator and Network Administrator. The EPB must employ the following management techniques:	Doc
SI	9	SI-9.9-C.29	Role Based Access Control	COV (System Requirement)	See requirement description, System Integrity, SI-9.9-C.28	Doc/Demo
SI	9	SI-9.9-D.30	Employ Zero Trust Identity Security	COV (System Requirement)	See requirement description, System Integrity, SI-9.9-C.28	Doc
SI	9	SI-9.9-D.31	Use the Principle of Least Privilege	COV (System Requirement)	See requirement description, System Integrity, SI-9.9-C.28	Doc/Demo
SI	9	SI-9.9-D.32	Orphaned Account Detection and Removal	COV (System Requirement)	See requirement description, System Integrity, SI-9.9-C.28	Doc
SI	9	SI-9.9-D.33	Multifactor Authentication	COV (System Requirement)	See requirement description, System Integrity, SI-9.9-C.28	Test
SI	9	SI-9.9-D.34	Notification of failed logon attempts	COV (System Requirement)	See requirement description, System Integrity, SI-9.9-C.28	Test
SI	9	SI-9.9-D.35	Notification of use of Privileged Accounts.	COV (System Requirement)	See requirement description,	Doc/Demo

					System Integrity, SI-9.9-C.28	
SI	9	SI-9.9-D.36	The EPB Vendor must provide a system hardening specification for the system.	COV (System Requirement)	Harden the EPB System using the vendor's procedures and specifications.	Doc
SI	9	SI-9.9-D.37	Assessed via automated scanning tools (i.e. CIS L1 benchmarks).	COV (System Requirement)	Harden the EPB System using the vendor's procedures and specifications.	Doc
SI	9	SI-9.9-D.38	The EPB must restrict all ports to only allow known system components to communicate with the EPB and not allow unknown devices to connect.	COV (System Requirement)	Restrict connections to EPBs from the specified devices such as the printer and authorized USB at the polling place. Reject all connections from other external devices.	Doc
SI	9	SI-9.9-D.39	The EPB must be networkable. Once networked together all EPB's must synchronize to the most current voter information.	COV (System Requirement)	EPBs should be configured to synchronize data within the defined network only. Disable connection to all unauthorized networks including publicly accessible network. Any external connectivity must be IP whitelisted.	Test

SI	9	SI-9.9-E.40	The EPB must not connect to unauthorized networks.	COV (System Requirement)	EPBs should be configured to synchronize data within the defined network only. Disable connection to all unauthorized networks including publicly accessible network. Any external connectivity must be IP whitelisted.	Test
SI	9	SI-9.9-E.41	The EPB must not allow connections that are not IP whitelisted.	COV (System Requirement)	EPBs should be configured to synchronize data within the defined network only. Disable connection to all unauthorized networks including publicly accessible network. Any external connectivity must be IP whitelisted.	Test
SI	9	SI-9.9-E.42	EPB effectively alerts others when the wireless state is activated on EPB device. (E.g. clearly visible indicator light on device, text alert, etc.)	COV (System Requirement)	When wireless is activated on an EPB device, there is a very visible means/mechanism that alerts others of this state.	Test
SI	9	SI-9.9-E.43	All vendors must comply with the policies, guidelines, and directives regarding software patching of EPB systems as adopted and modified by the SBE from time to time.	COV (Software Patching)	Software Patching Guidelines	Doc

SI	9	SI-9.9-E.44	Must be pre-formatted and blank per the DoD 5220.22-M wiping standard to prevent any preloaded software from being inadvertently installed on the system. The system must use DoD 5220.22-M wiping standards to create blank systems	COV (Hardware)	Hardware Guidelines Memory devices or USB drives provided with the EPB system or supplied to localities must follow these standards	Doc/Demo
SI	9	SI-9.9-E.45	Must be cryptographic and FIPS 140-2 v2 compliant	COV (Hardware)	Hardware Guidelines Memory devices or USB drives provided with the EPB system or supplied to localities must follow these standards	Doc
SI	9	SI-9.9-E.46	Must use SHA256 hashing algorithm or higher	COV (Hardware)	Hardware Guidelines Memory devices or USB drives provided with the EPB system or supplied to localities must follow these standards	Doc
SI	9	SI-9.9-E.47	Must comply with applicable Commonwealth information security standards	COV (Hardware)	Hardware Guidelines Memory devices or USB drives provided with the EPB system or supplied to localities must follow these standards	Doc
SI	9	SI-9.9-E.48	Must comply with applicable policies, guidelines, and directives as adopted and modified by the SBE from time to time.	COV (Hardware)	Hardware Guidelines Memory devices or USB drives provided with the EPB system or	Doc/Demo

					supplied to localities must follow these standards	
SI	9	SI-9.9-E.49	All vendors must comply with the policies, guidelines, and directives regarding software patching of EPB systems as adopted and modified by the SBE from time to time.	COV (Security Requirement)	Software Patching Guidelines	Doc
SI	9	SI-9.9-F.50	The EPB must have the ability to securely, accurately, effectively, and efficiently transmit and receive data electronically and communicate with the poll list server, typically through a secured web services framework designed by the manufacturer.	1.4.1 (VEPBCR 1.0)	Communication with voter registration systems	Test
SI	9	SI-9.9-F.51	EPBs require their users to develop a password with a minimum length of 11 characters, with 1 lower case letter, 1 upper case letter, 1 number, and 1 special character.	2.1.1 (VEPBCR 1.0)	Account Manager	Test
SI	9	SI-9.9-F.52	EPB must implement role-based access control (RBAC) with least privilege. Each role must be limited to the functions, processes, and data authorized for the specific role.	2.1.3 (VEPBCR 1.0)	Role-based access	Doc/Demo

SI	9	SI-9.9-F.53	EPB must enforce multi-factor authentication (MFA) for all privileged operations if the system has a multi-factor authentication option. Privileged operations can include account creation, deletion, permission modification, or when directly updating external databases such as voter registration databases. Additionally, Multifactor authentication does not mean having multiple passwords.	2.1.4 (VEPBCR 1.0)	Multi-factor authentication	Test
SI	9	SI-9.9-F.54	EPB must be configurable to enforce separation of duties as defined by the jurisdiction. For example, changes to voter information or system configurations may need to be authorized by two or more personnel to mitigate insider threats, depending on the jurisdictional requirements.	2.1.5 (VEPBCR 1.0)	Separation of duties	Doc/Demo

SI	9	SI-9.9-F.55	EPB must enforce the concept of least privilege for accounts to restrict both privileged and non-privileged accounts to permission level required to carry out the role assigned to the account. A poll worker should be prevented from making configuration changes on the system. The concept of least privilege should also be applied to administrators and supervisor groups and accounts.	2.1.6 (VEPBCR 1.0)	Least privileged	Doc/Demo
SI	9	SI-9.9-F.56	EPB must include session termination, device lock, and reauthentication functionality including:	2.1.7 (VEPBCR 1.0)	Session termination, device lock, and reauthentication	Test
SI	9	SI-9.9-F.57	a user-initiated or time-configurable automatic lockout when user is away from the system that can be defined and implemented by the jurisdiction	2.1.7.1 (VEPBCR 1.0)	Session termination, device lock, and reauthentication	Test
SI	9	SI-9.9-F.58	a configurable mechanism to automatically terminate a user session after a defined period of inactivity and lock the device that can be defined and implemented by the jurisdiction	2.1.7.2 (VEPBCR 1.0)	Session termination, device lock, and reauthentication	Test

SI	9	SI-9.9-F.59	requiring reauthentication of the authorized user after the session is terminated and the device locked;	2.1.7.3 (VEPBCR 1.0)	Session termination, device lock, and reauthentication	Test
SI	9	SI-9.9-G.60	the account lockout must include a standard or configurable screen when the system is locked to obscure any data presented on the screen when terminated.	2.1.7.4 (VEPBCR 1.0)	Session termination, device lock, and reauthentication	Test
SI	9	SI-9.9-G.61	EPB must be configured to lock after a configurable number of login attempts for 15 minutes or until an administrator or technician can unlock the account.	2.1.8 (VEPBCR 1.0)	Unsuccessful login attempts	Test
SI	9	SI-9.9-G.62	Each component of the EPB containing internal memory used to store voter or ballot information must enforce whole disk encryption.	2.2.2 (VEPBCR 1.0)	Device disk encryption	Doc
SI	9	SI-9.9-G.63	Each component of the EPB containing BIOS or other firmware interface must require authentication to access the device BIOS or other firmware interface. If passwords/ codes are used, they should follow strong password guidelines and be changed from any manufacturer defaults.	2.2.3 (VEPBCR 1.0)	Device BIOS or other firmware interface access	Test

SI	9	SI-9.9-G.64	EPB must include the functionality to remotely remove content or access from the device, whether it has data stored locally or access to cloud data. In addition to the functionality, the EPB must also include Doc on how to remotely secure a stolen or lost device with access to pertinent data. This requirement is only applicable to devices with wireless telecommunications.	2.2.5 (VEPBCR 1.0)	Document anti-theft controls, and emergency system decommissioning	Doc/Demo
SI	9	SI-9.9-G.65	EPB must implement an antivirus tool to detect and alert on malicious code.	2.3.2 (VEPBCR 1.0)	Antivirus tool	Doc/Demo
SI	9	SI-9.9-G.66	EPB must allow only authenticated system administrators to access and modify device configuration files.	2.3.3 (VEPBCR 1.0)	Authentication to access configuration file	Test
SI	9	SI-9.9-G.67	If EPB requires connection to a public network during election day voter check-in operations, the e-poll book must be configured to disallow connections to unapproved external networks. This may be accomplished through IP or MAC address allowing listing or other configurations where external network access is explicitly granted. Doc must clearly indicate what types of network access the EPB supports, including whether it is	2.4.2 (VEPBCR 1.0)	Disallow connections to unapproved external networks	Doc/Demo

			equipped with an Ethernet port.			
SI	9	SI-9.9-G.68	EPB must be configured to disallow connections to unapproved external devices. This requirement applies to devices that can be recognized as approved, e.g. only allowing connections to managed devices. Security Doc must be clear on how this requirement is satisfied.	2.4.3 (VEPBCR 1.0)	Disallow connections to unapproved external devices	Doc/Demo
SI	9	SI-9.9-G.69	EPB must only run applications that have been verified against an allowlist. This requirement helps ensure only authorized applications run on the EPB.	2.5.10 (VEPBCR 1.0)	Application allowlisting	Doc/Demo
SI	9	SI-9.9-H.70	EPB must protect the integrity and authenticity of the allowlist configuration files. If the allowlist is improperly modified, the software allowlisting mitigation can be defeated. The most common way of providing allowlist configuration file protection would be a digital signature.	2.5.11 (VEPBCR 1.0)	Integrity protection for software allowlists	Doc/Demo
SM	10	SM-10.10-A.1	Power supply and battery life with an option to display power usage	COV (System Requirement)	Perform data and operational integrity safeguard tests. Performance report to include the optimal duration of check-in process per voter.	Test

SM	10	SM-10.10-A.2	Continuous display of estimated time remaining on battery usage	COV (System Requirement)	Perform data and operational integrity safeguard tests. Performance report to include the optimal duration of check-in process per voter. Estimate of how long device will last at the current charge level, when on battery usage.	Test
SM	10	SM-10.10-A.3	Display appropriate message when the EPB device is operating at less than 20% of remaining power	COV (System Requirement)	Perform data and operational integrity safeguard tests. Performance report to include the optimal duration of check-in process per voter.	Test
SM	10	SM-10.10-A.4	Capacity/Load Test report to include the maximum number of voters an EPB device and its configuration setting can handle	COV (System Requirement)	Perform data and operational integrity safeguard tests. Performance report to include the optimal duration of check-in process per voter.	Doc
SM	10	SM-10.10-A.5	Performance Report to include the optimal duration of check-in process per voter	COV (System Requirement)	Perform data and operational integrity safeguard tests. Performance report to include the optimal duration of check-in process per voter. What is the duration it takes to check-in a voter.	Doc

SM	10	SM-10.10-A.6	Perform a self-test for peripheral connectivity	COV (System Requirement)	System monitoring and notification of system errors. Perform self-test for peripheral connectivity	Test
SM	10	SM-10.10-A.7	Visible display indicating power supply/battery life	COV (System Requirement)	System monitoring and notification of system errors. EPB must have battery status indicator	Test
SM	10	SM-10.10-A.8	Visible display indicating system connections.	COV (System Requirement)	System monitoring and notification of system errors.	Test
SM	10	SM-10.10-A.9	The expected life span of each battery and power supply;	1.5.1.2 (VEPBCR 1.0)	Batteries or power supply	Doc
SM	10	SM-10.10-B.10	A schedule for the replacement of each battery and power supply not later than thirty (30) days before the end of the expected life span of each battery;	1.5.1.6 (VEPBCR 1.0)	Batteries or power supply	Doc
SM	10	SM-10.10-B.11	Plans for the emergency replacement of batteries and power supplies that fail.	1.5.1.8 (VEPBCR 1.0)	Batteries or power supply	Doc

UP	11	UP-11.11-A.1	The name of a required document that must be used to facilitate a voter check-in, must be preloaded in EPB, or the Poll worker must be able to select from the voter check-in screen the name of document that the voter is required to sign or be given instructions on how to handle various election check-in processes.	COV (Statutory Requirement)	§24.2-651 If the person challenged refuses to sign the statement, he shall not be permitted to vote. If, however, he signs the statement, he shall be permitted to vote on the voting system in use at the precinct, unless he is required to cast a provisional ballot pursuant to § 24.2-651.1. When the voter has signed the statement and is permitted to vote, the officers of election shall mark his name on the pollbook with the first or next consecutive number from the voter count form, or shall enter that the voter has voted if the pollbook is in electronic form and shall indicate on the pollbook that he has signed the required statement in accordance with the instructions of the State Board.	Test
UP	11	UP-11.11-A.2	The EPB displays on-screen instructions.	COV (Functional Requirement)	At voter check in, provide notification of “inactive” voter status, including on-screen instructions and options for processing the “inactive” voter.	Test

UP	11	UP-11.11-A.3	The EPB allows selection of appropriate document name that the voter is required to sign or be given instructions on how to handle various election check-in processes. The name of a required document that must be used to facilitate a voter check-in, must be preloaded in EPB, or instructions given on how to handle various election check-in processes.	COV (Functional Requirement)	At voter check in, provide notification of "inactive" voter status, including on-screen instructions and options for processing the "inactive" voter.	Test
UP	11	UP-11.11-A.4	EPB must have the ability to manage the voter list and count by party in a primary election.	COV (Functional Requirement)	Maintain separate elections such as primary elections for multiple parties. Manage the voter list and counts by separate elections.	Test
UP	11	UP-11.11-A.5	Provide an intuitive and easy to navigate user interface	COV (Functional Requirement)	EPB system must demo accuracy, reliability, security, usability, and accessibility throughout	Test
UP	11	UP-11.11-A.6	Information should always be displayed on the EPB screen while poll is open: such as Election Date and items below:	COV (Functional Requirement)	Information should always be displayed on the EPB screen while poll is open:	Test
UP	11	UP-11.11-A.7	Battery Status	COV (Functional Requirement)	See requirement description, User Process, UP-11.11-A.6	Test
UP	11	UP-11.11-A.8	Connectivity status	COV (Functional Requirement)	See requirement description, User Process, UP-11.11-A.6	Test

UP	11	UP-11.11-A.9	Voter Checked-In Count	COV (Functional Requirement)	See requirement description, User Process, UP-11.11-A.6	Test
UP	11	UP-11.11-B.10	Average check-in time per voter check-in	COV (Functional Requirement)	See requirement description, User Process, UP-11.11-A.6	Test
UP	11	UP-11.11-B.11	Polling Place and Locality	COV (Functional Requirement)	See requirement description, User Process, UP-11.11-A.6	Test
UP	11	UP-11.11-B.12	Error Message(s) or Needs Attention count	COV (Functional Requirement)	See requirement description, User Process, UP-11.11-A.6	Test
UP	11	UP-11.11-B.13	EPB must complete a visual response or display in no more than 1 second or display an indicator that a response is still being prepared. This is to allow the user to quickly know action has been detected by the EPB and is being processed. The user does not get the sense of dealing with an unresponsive or "dead" system.	1.5.5 (VEPBCR 1.0)	System response time	Test
UP	11	UP-11.11-B.14	Warning alerts and instructions issued by EPB must be distinguishable from other information.	1.5.8 (VEPBCR 1.0)	Warnings, alerts, and instructions	Test
UP	11	UP-11.11-B.15	Warnings and alerts must clearly state, in plain language:	1.5.8.1 (VEPBCR 1.0)	Warnings, alerts, and instructions	Test
UP	11	UP-11.11-B.16	The nature of the issue or problem,	1.5.8.1-A (VEPBCR 1.0)	Warnings, alerts, and instructions	Test

UP	11	UP-11.11-B.17	whether the election worker has performed or attempted an invalid operation or whether the EPB has malfunctioned in some way, and	1.5.8.1-B (VEPBCR 1.0)	Warnings, alerts, and instructions	Test
UP	11	UP-11.11-B.18	the responses available to the election worker.	1.5.8.1-C (VEPBCR 1.0)	Warnings, alerts, and instructions	Test
UP	11	UP-11.11-B.19	Each step in an instruction or item in a list of instructions must be separated:	1.5.8.2 (VEPBCR 1.0)	Warnings, alerts, and instructions	Test
UP	11	UP-11.11-C.20	Spatially in visual formats, and	1.5.8.2-A (VEPBCR 1.0)	Warnings, alerts, and instructions	Test
UP	11	UP-11.11-C.21	with a noticeable pause in audio formats (if applicable).	1.5.8.2-B (VEPBCR 1.0)	Warnings, alerts, and instructions	Test
UP	11	UP-11.11-C.22	When an icon label is used in the electronic interface to convey information, indicate an action, or prompt a response, it must be accompanied by a corresponding label that uses text (if applicable).	1.5.9 (VEPBCR 1.0)	Icon Labels	Test
UP	11	UP-11.11-C.23	To ensure EPB presents the same initial appearance for each election worker, any adjustable settings of the EPB must automatically reset to the default setting when an election worker signs out. This requirement covers all settings that can be adjusted, including font size, color, contrast, audio volume, rate of speech, turning on or off audio or	3.2.1 (VEPBCR 1.0)	Reset to default settings	Test

			video, and enabling alternative input devices.			
UP	11	UP-11.11-C.24	The EPB must give the election worker the ability to restore the system to default settings while preserving the current state of any transaction or activity that the election worker is engaged in. This will allow a voter or election worker who has adjusted the system to an undesirable state to reset all settings with the information presented to the voter, including any data already entered.	3.2.2 (VEPBCR 1.0)	Reset by election worker	Test
UP	11	UP-11.11-C.25	Antiglare screen surface that shows no distinct virtual image of a light source or a means of physically shielding the display from such reflections such as an antiglare screen protector or shroud (if applicable).	3.2.13 (VEPBCR 1.0)	Electronic display screens	Test
UP	11	UP-11.11-C.26	Sound and visual cues must be coordinated so that sound cues are accompanied by visual cues. For example: The equipment might beep if the election worker or voter makes an error. If so, there must be an equivalent visual cue, such as the appearance of an icon or blinking element. Audio output must also support non-	3.4.1 (VEPBCR 1.0)	Sound cues	Test

			written languages, voters with low literacy, or voters with low vision.			
UP	11	UP-11.11-C.27	EPB must provide the option for synchronized audio output to convey the same information displayed visually to the election worker or voter. This requirement covers all information, including information entered by an election worker or voter unless the information is not easily readable, such as a voter's signature. This requirement applies to any audio output, whether it is recorded or generated as text-to speech. Any differences between audio and visual information are for functional purposes only, with variations only based on differences in the display format and interaction mode, especially for instructions.	3.4.3 (VEPBCR 1.0)	Audio synchronized	Test
UP	11	UP-11.11-C.28	Where provided, biometrics shall not be the only means for user identification or control. EXCEPTION: Where at least two biometric options that use different biological characteristics are provided, EPB shall be permitted to use biometrics as the only means for user identification or control.	403/3.1.1.1 (VEPBCR 1.0)	403 Biometrics	Test
UP	11	UP-11.11-C.29	Where provided, status indicators shall be discernable visually and by touch or sound.	409/3.1.1.1 (VEPBCR 1.0)	409 Status indicators	Test

VI	12	VI-12.12-A.1	The EPB must display the voter's birth year, but no other birthday information.	COV (Statutory Requirement)	§24.2-404(A)(7) If EPBs are used in the locality or electronic voter registration inquiry devices are used in precincts in the locality, the Department shall provide a regional or statewide list of registered voters to the general registrar of the locality. The Department shall determine whether regional or statewide data is provided. Neither the pollbook nor the regional or statewide list or registered voters shall include the day and month of birth of the voter but shall include the voter's year of birth.	Test
VI	12	VI-12.12-A.2	The EPB shall not contain Birth Month and Day	COV (Statutory Requirement)	An EPB shall not contain the following voter registration data:	Test

VI	12	VI-12.12-A.3	The EPB must not have a field to display partial or complete Social Security Numbers.	COV (Statutory Requirement)	§24.2-406(C) In no event shall any list furnished under this section contain the social security number, or any part thereof, of any registered voter, except for a list furnished to the Chief Election Officer of another state permitted to use social security numbers, or any parts thereof, that provides for the use of such numbers on applications for voter registration in accordance with federal law, for maintenance of voter registration systems.	Test
VI	12	VI-12.12-A.4	The EPB provides a mechanism to display name and consecutive number of a voter when they present themselves to vote.	COV (Statutory Requirement)	§24.2-611(B) Record the name and display consecutive number of the voter at the time he offers to vote. Enter EPB record for each voter and record each voter's name, including voters unable to enter the polling place, and for verify the accurate entry of the EPB record for each registrant on the Virginia Voter Registration System.	Test

VI	12	VI-12.12-A.5	The EPB provides a mechanism to input name and then display consecutive number of a voter when they present themselves to vote.	COV (Statutory Requirement)	See requirement description, Voter Interaction, VI-12.12-A.4	Test
VI	12	VI-12.12-A.6	The EPB shall automatically enter consecutive numbers from a given starting point.	COV (Statutory Requirement)	See requirement description, Voter Interaction, VI-12.12-A.4	Test
VI	12	VI-12.12-A.7	The EPB shall have the ability to indicate whether a voter voted "Outside Polls" or "OP.", often referred to as curb-side voting. The operator shall be allowed to notate independently or in conjunction with other notations set forth in these requirements. EPB shall have the ability to provide listings and counts of such voters.	COV (Statutory Requirement)	See requirement description, Voter Interaction, VI-12.12-A.4	Test
VI	12	VI-12.12-A.8	The EPB must provide notation capability, such that for a voter, an OOE can type text in a field, created for this purpose, and create a note that can be sorted, filtered, and viewed on screen and exported to a report, for various references.	COV (Statutory Requirement)	The operator shall be allowed to notate independently or in conjunction with other notations set forth in these requirements	Test
VI	12	VI-12.12-A.9	The EPB must have the capability to display an indication that a voter has been challenged.	COV (Statutory Requirement)	See requirement description, User Process, UP-11.11-A.1	Test

VI	12	VI-12.12-B.10	The EPB must have the functionality to identify a voter that cannot be processed as a regular voter (e.g. provisional, AB, etc.). This functionality must be configurable so that the election day reasons can be updated without a software update.	COV (Statutory Requirement)	See requirement description, User Process, UP-11.11-A.1	Test
VI	12	VI-12.12-B.11	The EPB must disable all check in options if the voter's status is VOTED.	COV (Statutory Requirement)	§ 24.2-651.1 Any person who offers to vote, who is listed on the pollbook, and whose name is marked to indicate that he has already voted in person in the election shall cast a provisional ballot as provided in § 24.2-653.	Test
VI	12	VI-12.12-B.12	The EPB must notify and provide user instructions for inactive, absentee and early voters ("AB").	COV (Statutory Requirement)	§ 24.2-711 Before the polls open, the officers of election at each precinct shall mark, for each person on the absentee voter applicant list, the letters "AB" (meaning absentee ballot) in the EPB record column on the pollbook.	Test
VI	12	VI-12.12-B.13	The EPB must have the ability to cancel a voter check-in.	COV (Functional Requirement)	Allows user to cancel a voter check-in. Requires supervisor controls prior to cancellation of a voter check-in. Provides ability to	Test

					select reason for cancellation.	
VI	12	VI-12.12-B.14	The EPB must have the functionality to identify a voter that cannot be processed as a regular voter, e.g. (inactive, provisional, AB, etc.).	COV (Functional Requirement)	At voter check in, provide notification of “inactive” voter status, including on-screen instructions and options for processing the “inactive” voter.	Test
VI	12	VI-12.12-B.15	The EPB must contain a feature that allows the user to look-up voter’s address to redirect them to the correct polling place.	COV (Functional Requirement)	Provides the voter address look-up to redirect voters to the correct polling place. Contains additional functionality to include driving directions.	Test
VI	12	VI-12.12-B.16	The EPB must contain a feature that includes driving directions or the address of the correct polling place.	COV (Functional Requirement)	Provides the voter address look-up to redirect voters to the correct polling place. Contains additional functionality to include driving directions.	Test

VI	12	VI-12.12-B.17	All search for voters must have the capability for an advanced search so results can be filtered on any combination of the following data:	COV (Functional Requirement)	Provides a variety of voter look-up capabilities, including first and last name, year of birth, address, District, and Voter ID. Enables each search to be filtered to reduce the number of records returned. Allows configuration of additional advanced search capabilities. All search for voters must have the capability for an advanced search so results can be filtered on any combination of the following data: last name, first name, year of birth, address, District and Voter ID.	Test
VI	12	VI-12.12-B.18	First Name look-up capability	COV (Functional Requirement)	See requirement description, Voter Interaction, VI-12.12-B.17	Test
VI	12	VI-12.12-B.19	Last Name look-up capability	COV (Functional Requirement)	See requirement description, Voter Interaction, VI-12.12-B.17	Test
VI	12	VI-12.12-C.20	Year of birth look-up capability	COV (Functional Requirement)	See requirement description, Voter Interaction, VI-12.12-B.17	Test

VI	12	VI-12.12-C.21	Address look-up capability	COV (Functional Requirement)	See requirement description, Voter Interaction, VI-12.12-B.17	Test
VI	12	VI-12.12-C.22	Precinct look-up capability	COV (Functional Requirement)	See requirement description, Voter Interaction, VI-12.12-B.17	Test
VI	12	VI-12.12-C.23	Split Precinct/District look-up capability	COV (Functional Requirement)	See requirement description, Voter Interaction, VI-12.12-B.17	Test
VI	12	VI-12.12-C.24	Voter ID look-up capability	COV (Functional Requirement)	See requirement description, Voter Interaction, VI-12.12-B.17	Test
VI	12	VI-12.12-C.25	Voter Status look-up capability	COV (Functional Requirement)	See requirement description, Voter Interaction, VI-12.12-B.17	Test
VI	12	VI-12.12-C.26	Ballot Style Voter's Party	COV (Functional Requirement)	See requirement description, Voter Interaction, VI-12.12-B.17	Test
VI	12	VI-12.12-C.27	Ballot Style Voter's Primary	COV (Functional Requirement)	Accurately maintain whole and separate count(s) of voters distinguishable by Ballot Style (Voter's Party/ primary, Precinct, and Precinct Split), Curbside Voter, Challenged Voter, Voter Status, Provisional, Absentees and Early Votes.	Test

VI	12	VI-12.12-C.28	Ballot Style Voter's Precinct	COV (Functional Requirement)	See requirement description, Voter Interaction, VI-12.12-C.27	Test
VI	12	VI-12.12-C.29	Ballot Style Voter's Precinct Split	COV (Functional Requirement)	See requirement description, Voter Interaction, VI-12.12-C.27	Test
VI	12	VI-12.12-D.30	Protected voter	COV (Functional Requirement)	See requirement description, Voter Interaction, VI-12.12-C.27	Test
VI	12	VI-12.12-D.31	Inactive Voter	COV (Functional Requirement)	See requirement description, Voter Interaction, VI-12.12-C.27	Test
VI	12	VI-12.12-D.32	Voter's out of precinct	COV (Functional Requirement)	See requirement description, Voter Interaction, VI-12.12-C.27	Test
VI	12	VI-12.12-D.33	Voter has already voted	COV (Functional Requirement)	See requirement description, Voter Interaction, VI-12.12-C.27	Test
VI	12	VI-12.12-D.34	Curbside Voter or Outside Polls	COV (Functional Requirement)	See requirement description, Voter Interaction, VI-12.12-C.27	Test
VI	12	VI-12.12-D.35	Challenged Voter	COV (Functional Requirement)	See requirement description, Voter Interaction, VI-12.12-C.27	Test
VI	12	VI-12.12-D.36	Early Voter(s)	COV (Functional Requirement)	See requirement description, Voter Interaction, VI-12.12-C.27	Test
VI	12	VI-12.12-D.37	Absentee (AB) Voter	COV (Functional Requirement)	See requirement description, Voter Interaction, VI-12.12-C.27	Test

VI	12	VI-12.12-D.38	Provisional Voter	COV (Functional Requirement)	See requirement description, Voter Interaction, VI-12.12-C.27	Test
VI	12	VI-12.12-D.39	Voter Status	COV (Functional Requirement)	See requirement description, Voter Interaction, VI-12.12-C.27	Test
VI	12	VI-12.12-E.40	DMV Customer Number	COV (Functional Requirement)	The EPB shall not contain the following voter registration data Must Not contain.	Test
VI	12	VI-12.12-E.41	The EPB must be able to scan the barcode from the Virginia State Issued IDs: Driver's License.	COV (Functional Requirement)	The EPB shall have the ability and the option to scan the barcode of a Virginia driver's license.	Test
VI	12	VI-12.12-E.42	Display appropriate error message when a voter is not counted	COV (System Requirement)	Perform data and operational integrity safeguard tests. Performance report to include the optimal duration of check-in process per voter.	Test
VI	12	VI-12.12-E.43	The EPB must be capable of maintaining a digital image of the voter's signature, which involves:	1.2.3 (VEPBCR 1.0)	Maintain digital signatures	Test
VI	12	VI-12.12-E.44	Capturing digital signatures,	1.2.3.1 (VEPBCR 1.0)	Maintain digital signatures	Test
VI	12	VI-12.12-E.45	Storing digital signatures, and	1.2.3.2 (VEPBCR 1.0)	Maintain digital signatures	Test
VI	12	VI-12.12-E.46	Reviewing or comparing a voter's signature to the image of one on file.	1.2.3.3 (VEPBCR 1.0)	Maintain digital signatures	Test

VI	12	VI-12.12-F.47	A printer, whether separated from or built-in to the EPB, must be capable of printing an acknowledgment that the voter may proceed with casting a vote, such as receipts, stickers for ballot cards, ballots, etc.	1.2.5 (VEPBCR 1.0)	Printing capabilities	Test

Appendix E – Software Patching Guidelines

All vendors must comply with the policies, guidelines, and directives regarding software patching of EPB systems as adopted and modified by the EAC and the SBE from time to time.

Appendix F – Recertification Guidelines

All vendors must comply with the policies, guidelines, and directives regarding recertification of EPB systems as adopted and modified by the SBE.

If there is evidence of material non-compliance, ELECT will work with the vendor to resolve the issue, and ultimately the SBE reserves the right to decertify the EPB system.

An EPB system that has been decertified by the SBE cannot be used for elections held in the Commonwealth of Virginia and cannot be purchased by localities to conduct elections.

Appendix G – Hardware Guidelines

Memory devices or USB drives provided with the EPB system or otherwise supplied to localities must follow these standards:

1. Must be pre-formatted and blank per the DoD 5220.22-M wiping standard or similar standard to prevent any preloaded software from being inadvertently installed on the systems.
2. The system must use DoD 5220.22-M wiping standards or similar standard to create blank systems.
3. Must be cryptographic and FIPS 140-2 v2 compliant.
4. Must use SHA256 hashing algorithm or higher.
5. Must comply with applicable Commonwealth information security standards.
6. Must comply with applicable policies, guidelines, and directives as adopted and modified by the SBE from time to time.

Appendix H – EPB System Modifications & Product End of Life Planning

EPB System Modifications

The process for reporting modification will be determined by ELECT based upon policies, guidelines, and directives as adopted and modified by the SBE from time to time.

Product End of Life Planning

"End-of-life" (EOL) is a term used with respect to products (hardware/software/component) supplied to customers, indicating that the product is in the end of its useful life, from the vendor's point of view, and a vendor stops sustaining it, i.e. vendor limits or ends support or production for the product.

Product support during EOL varies depending on the vendor. EOL can mean the vendor will no longer sustain the product but will provide some limited support for an identified duration or that a vendor will no longer provide maintenance, troubleshooting, or other support. For example, Extended Support is provided following end of Mainstream Support.

The definitions of Last Date of Mainstream Support and Extended Support, as applicable to decertification, recertification, and associated policies and procedures, will be determined by ELECT based upon policies, guidelines, and directives as adopted and modified by the SBE from time to time. Currently, the SBE defines the terms as follows:

Mainstream Support: The first phase of the product lifecycle; when support is complimentary
Extended Support: The phase following Mainstream Support, in which support is no longer complimentary
Last Date of Mainstream Support: The last day of Mainstream Support as provided by the vendor.

Policies and procedures applicable to decertification and recertification of EPB systems that contain software or hardware components that have reached or will reach the Last Date of Mainstream Support within 18 months, will be determined by ELECT based upon policies, guidelines, and directives as adopted and modified by the SBE from time to time.

An EPB system can be decertified even if an upgrade plan is submitted depending on the circumstances. For example if a vendor does not demonstrate progress in meeting an upgrade plan, the system could be decertified.

★ VIRGINIA ★
DEPARTMENT *of* ELECTIONS

Vendor Notification of "End of Life"

Complete this form (for the areas applicable), attach the upgrade plan and send it to:

Secretary of SBE, 1100 Bank Street, 1st Floor, Richmond, VA 23219

We have certified an EPB system with the SBE and have determined the product will reach "End of Life" status as indicated below.

Vendor_____Date:_____

Certified EPB System Impacted:_____

Certified Version(s):_____

DATE(S) FOR "END OF LIFE":

Product (Version/Components):_____

Operating System (Description):_____

Software (Version/Description):_____

REQUIRED END OF LIFE PLAN:

Vendor must submit an upgrade plan to the SBE 12 months in advance of "End of Life". The plan must include timeline(s), list of impacted localities, estimated cost for localities, if any, and VSTL report showing the upgrade(s) will ensure EPB systems continue to operate properly.

Proposed Plan Reviewed by:_____Date:_____

SBE Meeting Date: _____

EOL Upgrade Plan ☐ Approved ☐ REJECTED

Appendix I – EPB Certification Application Form

Certification ☐	Recertification ☐

The company officer or designee responsible for the EPB must complete and sign this form. By signing the form, the company agrees to a release for the VSTL and other states that may have decertified the EPB to respond to any questions by ELECT. This application must be included in the EPB Certification Request Package.

Name of Company:

_____

Name and Title of Corporate Officer:

_____

Contact Phone Number:

_____

Email Address:

_____

Primary Address of Company:

_____

City, State, Zip Code:

_____

Name of EPB System to be certified:

_____

Version Number of EPB System to be certified: _____

I reviewed and confirmed that the EPB being submitted meets the requirements of the Virginia EPB Certification Standard 2.0. The company will comply with additional requests in a timely manner to complete this certification.

Signature of Corporate Officer:_____ Date:_____

Appendix J – De Minimis Change Guideline

The SBE has adopted the EAC's De Minimis Change Guideline and applicable EAC Notice of Clarification of De Minimis Change Guidelines to manage a minimal hardware or software related change to a certified EPB system in a consistent and efficient manner.

De Minimis Changes should have the following general characteristics:

1. Update a discrete component of the system and not impact overall system functionality,
2. Do not affect the accuracy of the component or system,
3. Do not negatively impact the functionality, performance, accessibility, usability, safety, or security of a component or system,
4. Do not alter the overall configuration of the certified system,
5. Can be reviewed, tested, or both by VSTL personnel in a short amount of time (approximately less than 100 hours).

A vendor must submit the VSTL's endorsed package to ELECT for approval along with a copy of the EAC approval or determination. A proposed De Minimis Change may not be implemented to the certified EPB system until the change has been approved in writing by ELECT.

EAC Endorsement

The vendor must present the EAC determination, through a certificate or a letter of acceptance or approval for the specific de minimis change they are presenting for approval in the Commonwealth of Virginia.

VSTL Endorsed Changes

The vendor will forward to ELECT any change that has been endorsed as a De Minimis Change by the VSTL. The VSTL's endorsed package must include:

1. The vendor's initial description of the De Minimis Change, a narrative of facts giving rise to or necessitating the change, and the determination that the change will not alter the system's reliability, functionality, or operation.
2. The written determination of the VSTL's endorsement of the De Minimis Change. The endorsement document must explain why the VSTL, in its engineering judgment, determined that the proposed De Minimis Change meets the definition in this section and otherwise does not require additional testing and recertification.

VSTL Review

The vendor must submit the proposed De Minimis Change to a VSTL with complete disclosures, including:

1. Detailed description of the change.
2. Description of the facts giving rise to or necessitating the change.
3. The basis for its determination the change will not alter the system's reliability, functionality, or operation.
4. Upon request of the VSTL, the EPB system model at issue or any relevant technical information needed to make the determination.
5. Documentation of any potential impact to election officials currently using the system and any required notifications to those officials.
6. Description of how this change will impact any relevant system documentation.
7. Any other information the VSTL needs to make a determination.

The VSTL will review the proposed De Minimis Change and make an independent determination as to whether the change meets the definition of De Minimis Change or requires the EPB system to undergo additional testing as a system modification. If the VSTL determines that a De Minimis Change is appropriate, it shall endorse the proposed change as a De Minimis Change. If the VSTL determines that modification testing and recertification should be performed, it shall reclassify the proposed change as a modification. Endorsed De Minimis Change shall be forwarded to ELECT for final approval. Rejected changes shall be returned to the vendor for resubmission as system modifications.

ELECT's Action

ELECT will review the proposed De Minimis Change endorsed by a VSTL. ELECT has sole authority to determine whether any VSTL endorsed change constitutes a De Minimis Change under this section.

ELECT's Approval: ELECT shall provide a written notice to the vendor that ELECT accepted the change as a De Minimis Change. ELECT will maintain the copies of any approved De Minimis Change and track such changes.

ELECT's Denial: ELECT will inform the vendor in writing that the proposed change cannot be approved as a De Minimis Change. The proposed change will be considered a modification and requires testing and certification consistent with this Certification Standard.

De Minimis Change is not applicable to the EPB system currently undergoing the State Certification testing; it is merely a change to an uncertified system and may require an application update.

★ VIRGINIA ★
DEPARTMENT *of* ELECTIONS

Virginia State Board of Elections | Request for De Minimis Change

The SBE has adopted guidelines to manage hardware and software related changes to certified Voting Systems and Electronic Pollbook Systems. To request a De Minimis Change, the vendor sends a request to the Secretary of the State Board of Elections that includes the VSTL endorsed package for the De Minimis Change.

De Minimis Changes should have the following characteristics:

1. Update a discrete component of the system and not impact overall system functionality.
2. Do not affect the accuracy of the component or system.
3. Do not negatively impact the functionality, performance, accessibility, usability, safety, or security of a component or system.
4. Do not alter the overall configuration of the certified system.
5. Can be reviewed and tested by VSTL personnel in a short amount of time (approx. less than 100 hours).

Vendor description of the De Minimis Change:_____

_____

Description of the facts giving rise to or necessitating the change: _____

_____

Document any potential impacts to election officials currently using the system and any required notifications to those officials. _____

_____

☐ VSTL endorsed package included.

Signature of Company Officer:_____Date:_____

ELECT's Action:

Received by:_____Date: _____

Reviewed by:_____Date: _____

☐ APPROVED ☐ REJECTED

Vendor Notified of Status by:_____Date: _____

Appendix K – Early Voting Connection Requirements

The following additional requirements apply when the EPB Vendor utilizes cloud hosting of EPBs for locality access during the Early Voting period:

1. Utilize security best practices for internet connectivity including network, wireless, and cloud services.
2. Utilize a cloud service provider (CSP) whose infrastructure and applications are NIST 800-53 certified through a third-party entity.
3. Ensure that CSP Service Level Agreement contains three major components: service level objectives, remediation policies, and penalties/incentives related to NIST compliance, exclusions, and caveats.
4. The connection via VPN must be FIPS 140-2 v1 certified, whether it is a dedicated SSLVPN or just a dedicated connection. If there is a dedicated connection, thorough documentation must be provided.
5. If the EPB Vendor supplies the mobile devices, ensure compliance with NIST 800-53 in relation to these devices, as is done with the infrastructure.
6. Storage, processing, migration, access control, and detection to and from the cloud must be NIST 800-53 compliant.
7. Ensure the CSP is NIST certified by validating their credentials through their third-party certification provider. Ask for internal vulnerability/penetration testing reports, audit reports, incident reports, and evidence of remedial actions for any issues raised. Also, verify tracking of mitigating action-tracking mechanisms (POA&M tracking).

All vendors must comply with the policies, guidelines, and directives regarding Early Voting connection requirements as adopted and modified by the SBE from time to time.

Appendix L - Annual Voting System Vendor Certification

Certified EPB/Version:	Vendor:
Mailing Address:	Contact Person: Title: Telephone: Email:
For the period beginning_____and ending _____ Must be submitted annually **no later than January 31**.	

Pursuant to the Virginia Electronic Pollbook Certification Standard, Section 1.3. Decertification, Vendors are required to provide an annual certification that will allow ELECT to ensure they have accurate information on changes, incidents, upgrades, and corporate information.

*I certify the following:

a. Vendor has notified ELECT within 24 hours of all incidents, anomalies or security-related breaches experienced in an election jurisdiction, if any (if not, Vendor has attached all necessary supporting documentation to this Certification regarding such incident/anomaly/security-related breach).
b. Vendor has notified ELECT of all changes to Corporate Information within 30 calendar days of knowledge of changes, if any (if not, Vendor has attached all necessary supporting documentation to this Certification regarding any changes to Corporate Information).
c. Vendor has submitted any modifications to ELECT within 30 calendar days of modifications to the certified EPBs, if any (if not, Vendor has attached necessary documentation to this Certification regarding modifications and is actively pursuing compliance with the Standard, Section 1.3, and Appendix H).
d. Vendor has provided ELECT with an upgrade plan for all operating systems or components that have reached or will reach the Last Date of Mainstream Support within 18 months, if any (if not, Vendor has attached necessary documentation to this Certification regarding such systems or components and is actively pursuing compliance with the Standard, Section 1.3, and Appendix H).
e. Vendor has updated all software for the certified EPB with the latest patching and vulnerability updates (if not, Vendor has attached necessary supporting documentation to this Certification regarding necessary updates and is actively pursuing compliance with the Standard, Section 1.3, and Appendix E).

Name:	Title:
Signature:	Date:
Note: Please ensure all necessary supporting documentation is attached.	