CITY AND COUNTY OF SAN FRANCISCO
PILOT PROGRAM PLAN
NOVEMBER 8, 2022 STATEWIDE GENERAL ELECTION

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CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF ELECTIONS
John Arntz, Director

February 7, 2022

Honorable Dr. Shirley N. Weber, Secretary of State
California Secretary of State's Office
1500 11th Street
Sacramento, California 95814

RE: Application to conduct pilot program in San Francisco authorized under California Elections Code Section 19209

Dear Secretary Weber:

Enclosed is a proposed plan to conduct a pilot program in the City and County of San Francisco (City) under California Elections Code Section 19209 during the November 8, 2022, Statewide General Election.

This plan represents the City's application requesting your approval to conduct a pilot program using ballot marking devices and ballot scanner developed using open source software by the vendor VotingWorks. As described under Section 19209(d), the City is required to submit the enclosed program plan on or before February 8, 2022, which is within nine months of the election date.

This plan follows San Francisco Board of Supervisors President Shaman Walton's letter dated August 11, 2021, indicating the City will seek to implement a pilot program. Included within the plan is an overview of the steps the City will undertake to fulfill the requirements regarding the conducting of a pilot program with a voting system not yet certified by your office.

We look forward to collaborating with your office while meeting the requirements and completing the processes necessary to conduct this pilot program.

I will be glad to answer any questions or provide additional information.

Respectfully,

/s/

John Arntz, Director

I.   BACKGROUND/JUSTIFICATION

The pilot program will support policies set by San Francisco's Board of Supervisors and Elections Commission supporting open source voting systems. The San Francisco Board of Supervisors passed an ordinance, File Number 211303, authorizing the City's Director of Elections to submit this plan to the Secretary of State requesting approval to conduct a pilot program during the November 8, 2022, Statewide General Election (see Attachment 1).

II.   FACTS AND PROVISIONS/LEGAL REQUIREMENTS

California Elections Code Section 19209 "authorizes a governing board to provide for the experimental use of a voting system in one or more precincts without formally adopting the system and provides that the experimental use of the system at the election is valid for all purposes as if it were lawfully adopted." See Attachment 2 for full statement of Section 19209.

Accordingly, the City approved the above-mentioned ordinance authorizing a pilot program using ballot marking devices and ballot scanner in San Francisco to occur during the November 8, 2022, Statewide General Election, and requiring this plan be submitted to the Secretary of State for review within nine months of the election date (on or before February 8, 2022). After submission of this plan, the Secretary of State has three months to approve or reject the plan. This plan provides an overview of the pilot program using specifications known at this time.

Other provisions required by Elections Code Section 19209 include:

1. Meeting the requirements of regulations adopted by the Secretary of State for conducting pilot programs involving an open source voting system that is not certified for use in California.
2. Ensuring that the number of voting system units do not exceed fifty (50) percent of the estimated number of units that would be required for full deployment of the voting system at every polling place and early voting site in a statewide election throughout the jurisdiction;
3. Notifying the Secretary of State in writing of any defect, fault or failure of hardware, software or firmware within thirty (30) days of completion of the pilot program; and,
4. Implementing a risk-limiting audit or a full manual tally for ballots cast using the equipment involved in the pilot program. A "risk- limiting audit," as described, "means a procedure that ensures a large, predetermined minimum chance of requiring a full manual tally would show an electoral outcome that differs from the outcome reported by the voting system for the audited contest."

The VotingWorks System

To conduct the pilot program, the City will utilize three components of the open source voting system from the vendor VotingWorks: VxMark, VxBatch, and a VxBatch laptop. All three components are operated by the VxAdmin election management system. See Attachment 3 for images of these components.

The use procedures for the system, see Attachment 4, provide the following descriptions of the components:
1. VxMark is an accessible BMD with an attached printer that produces a voter-verifiable paper ballot. Specifically, it is a Lenovo Flex (or equivalent) laptop with VotingWorks VxMark open-source software installed on it, and the printer is an HP 404n printer. VxMark will be utilized as the in-person marking method for voters at the City Hall Voting Center.

2. VxBatch will be utilized for tabulating BMD (VxMark) printed ballots for the purpose of the partial risk-limiting audit only. Voters at City Hall Voting Center will use VxMark to mark, print, and verify their ballot. Voters will place printed ballots into envelopes and then insert the sealed enveloped into a ballot box located in the City Hall Voting Center. VotingWorks marked ballots will be copied to Dominion Voting Systems (Dominion) formatted ballots for central tabulation.

3. VxBatch: a central scanning laptop (HP Elitebook 840 or equivalent) used for rapidly scanning ballots in batch at a central location. A Fujitsu 7160 or 7800 scanner is connected to VxBatch for high-speed batch scanning.

4. VxAdmin: VxAdmin is the main tool for local election officials. It serves as an election management system (EMS), results tabulator, ballot on-demand printer, and central scanner. The VxAdmin laptop (HP Elitebook 840 or equivalent) is installed with VotingWorks VxAdmin open-source software. VxAdmin will be utilized for programming Ballot Marking Devices (BMDs) (VxMark) and reporting results for the purpose of the partial risk-limiting audit and manual tallies only.

Attachment 9 provides VotingWorks' application to the Secretary of State to approve the voting system components for the pilot program.

III. IMPLEMENTATION OF PILOT PROGRAM
A. Defining the election and creating ballots
B. Set up the election and ballot marking devices
C. Testing: Acceptance and Logic and Accuracy
D. Staging ballot marking device in City Hall Voting Center
E. Placement of scanner in central tabulation area
F. Voting process involving VotingWorks ballot marking device
G. Handling envelopes of ballots cast at the City Hall Voting Center
H. Transferring voter intent from VotingWorks ballots using Dominion ballot marking device
I. Personnel will scan Dominion ballots using scanners connected to the Dominion system
J. All votes cast on VotingWorks ballot marking device will be reported via remade Dominion ballots
K. Personnel will scan VotingWorks ballots on VotingWorks scanner

A. Defining the election and creating ballots
1. The Department of Elections (Department) will provide VotingWorks with the jurisdiction-specific information necessary to define the election and create ballots, including for ranked-choice voting contests. This information includes precinct, district, and ballot type relationships and content regarding candidates, contests, and ballot measures, and translations of content into Chinese, Filipino, and Spanish.
2. VotingWorks will set up the election in its system, which includes its election database, central scanner, and ballot marking device (BMD).

3. VotingWorks will create four versions of the audio ballots using the content provided by the Department.
   a. Cantonese
   b. Mandarin
   c. Filipino
   d. Spanish

B. Set up the election and ballot marking device
   1. After defining the election and creating ballots, VotingWorks will program its election management system and BMDs to conduct the election.
   2. VotingWorks will proof all settings and content and indicate the system and components are ready for Department review.
   3. Department personnel will proof the ballot content on the BMDs, including audio, and determine if the BMDs provide all ballot content and audio as required.
   4. VotingWorks will generate ballots for logic and accuracy testing representative of all ballot types to test the central scanner and results reporting for accuracy.

C. Testing: Acceptance and Logic and Accuracy
   1. VotingWorks intends to conduct acceptance testing of its election management system, ballot marking devices, and central scanner during logic and accuracy testing.
   2. After VotingWorks completes acceptance testing, Department personnel will conduct logic and accuracy testing using the test cards generated from the system. Department personnel will also review the ballot content that appears on the screens of the BMDs and which is available in audio formats.
   3. Logic and accuracy testing will include ranked-choice voting contests.

D. Staging ballot marking devices in City Hall Voting Center
   1. The Department customarily places two BMDs in its front office which is adjacent to the ground-floor foyer in which the Department organizes the Voting Center.
   2. The space inside the office allows for a more private voting session in relation to the space in the foyer which hosts voters in line to receive ballots, voters interacting with Department personnel, voting booths, media, etc.
   3. Since Elections Code section 19209 stipulates the number of units of the experimental system cannot exceed 50% of all equipment at a location, the Department intends to place one or two BMDs from VotingWorks in the front office space.
   4. Department personnel will apply tamper evident seals to the VotingWorks' BMDs during the times when voting does not occur.

E. Placement of scanner in central tabulation area
   1. Each election, the Department stages 16 central tabulators from Dominion in a secure room and will include one scanner from VotingWorks in this space as well.
   2. After logic and accuracy testing, the Department intends to keep the scanner in one location in the secure room.

F. Voting process involving VotingWorks ballot marking devices
1. The voting experience for voters who use the VotingWorks BMD will be similar to the experience of voters using the Dominion BMD.
2. The established practice to issuing ballots at the Voting Center is, after verifying voters' records or assisting people to register or update registration information, Department personnel will inform voters that they will be given a paper ballot unless the voters choose to use an accessible ballot marking device. This statement to voters aligns with the policy set by the San Francisco Elections Commission that all voters be provided with paper ballots unless they choose to use a ballot marking device.
3. If voters decide to use a ballot-marking device, the Department's personnel will inform voters that they can use the device provided by Dominion, or the device provided by VotingWorks as part of a pilot program.
4. For voters who choose to use the VotingWorks BMD, Department personnel will print a label stating the voters' registration information, attach the label to a return vote-by-mail envelope, and obtain a poll worker card and escort voters to the BMD.
5. At the VotingWorks BMD, Department personnel will insert the poll worker card, then select the ballot type appropriate for the voters, and also select a language, if necessary.
6. Voters will follow instructions provided on the screen or through headphones to navigate ballot content and vote.
7. When voters complete their sessions, voters will print their selections using a printer connected to the BMD.
8. Voters will place their printed ballots into the return envelopes, remove the tape covering the self-sealing adhesive, and insert the envelopes into a ballot box located near the BMDs.

G. Handling envelopes of ballots cast at the City Hall Voting Center.
1. Department personnel will transfer ballot boxes from the Voting Center to the ballot processing area in the Department where envelopes are scanned and signatures are captured for verification.
2. After signature verification, Department personnel will place envelopes into equipment that opens the envelopes to allow personnel to extract the ballots.
3. When Department personnel see a ballot generated from a BMD, personnel will place both the envelope and ballot in a tray designated for ballots needing review.
4. A manager or lead will review ballots placed into the trays and will separate the BMD printouts from other ballots.
5. A manager or lead will move the printouts to the "remake" teams who will transfer voter intent from the VotingWorks ballots using a Dominion BMD to obtain a printed ballot.
6. If VotingWorks BMD ballots are not separated from regular ballots during the extraction process, the personnel who prepare the regular ballot cards for scanning will observe the VotingWorks ballots and these personnel will place the VotingWorks printouts in a tray indicating items need review. Personnel will quickly notice the difference between the two ballots: the VotingWorks BMD printouts uses 8.5 X 11 inch office copy paper and regular ballots are 8.5 X 16 inches and printed on 90 pound card stock.
7. If VotingWorks BMD ballots are also not separated by the personnel who prepare ballot cards for scanning, the personnel who conduct a quality control review of ballot cards prior to scanning will likely observe such instances and will remove the VotingWorks printouts and place them in a tray for further review.

8. If any VotingWorks BMD ballots were not identified prior to the ballot scanning, the personnel who place ballots into the scanners would observe the VotingWorks ballots when handling cards prior to scanning. The BMD ballots would be separated and placed in tray indicating the need for review by a manager or lead.

H. Transferring voter intent from VotingWorks ballots using Dominion ballot marking devices
   1. The Department will incorporate the transfer of voter intent from the VotingWorks BMD ballots to Dominion BMD ballots (Attachment 5) into existing remake procedures.
   2. The Department assigns personnel to comprise the remake teams through an election cycle.
   3. The personnel assigned to the teams usually have worked with the Department during previous elections and understand not only the remake process, but understand and have been involved in most other processes regarding ballot handling and tabulation.
   4. For remaking VotingWorks BMD ballots, personnel will use Dominion BMDs to transfer voter intent onto ballots the Dominion system can tabulate and include in the official results reports.
   5. Managers or leads for the Ballot Distribution Division will bring the VotingWorks ballot printouts from the extraction area to the ballot remake area.
   6. The personnel who will transfer the intent from the VotingWorks ballots onto Dominion ballots will enter voters' selections into Dominion BMDs.
   7. After printing the Dominion BMD ballots, the remake personnel will write their initials, date, and a number that is sequential in relation to the remake at the bottom of both the Dominion printout and the VotingWorks printout.
   8. Each team maintains a sequential numbering of all ballot remakes during each day. This means the numbering at the bottom of the VotingWorks BMD printouts will be relative to the numbering sequences starting and ending with each day in the election cycle.
   9. After transferring voter intent, and initialing and numbering each printout, Department personnel will organize the VotingWorks' printouts separately from all Dominion ballots.
   10. The separated VotingWorks ballots will be organized in designated containers so that the ballots can be readily identified during the Official Canvass.
   11. During the Official Canvass, Department personnel will tabulate the VotingWorks ballots using the VotingWorks scanner included in the application to approve the voting system.
   12. The results reports generated from the VotingWorks system will only be used to verify that voter intent was appropriately transferred to Dominion ballots.
   13. The VotingWorks system will not provide official or unofficial results for the election and only votes tabulated using the Dominion system will be reported.

I. Personnel will scan Dominion ballots using scanners connected to the Dominion system
   1. Department personnel will scan the Dominion ballots to which voter intent was transferred from the ballots cast using the VotingWorks BMDs.
   2. Personnel will designate a container specifically for storing the Dominion ballots remade from VotingWorks ballots.
   3. The remade cards will be assigned batch numbers and included on the ballot manifest.

IV. Risk-limiting audit and manual tally
   A. California Elections Code Section 19209(e) may require the Department to apply risk-limiting auditing reviews of each contest on the ballot and voted using the VotingWorks BMD.
   B. If risk-limiting audits are necessary, the audit will follow the Secretary of State's regulation on risk-limiting audits, see Attachment 6.
   C. The Department would conduct a partial risk-limiting audit applying a 90% probability that the ballots will require a full manual count and using the ballots cast on the VotingWorks BMD.
   D. The audit would be conducted as a single-phase review since the audit will include all ballots cast on the VotingWorks BMD.
   E. The Department would utilize one ballot manifest for the risk-limiting auditing of the VotingWorks BMD ballots since all of this category of ballots will have been processed prior to the audit.
   F. The Department would incorporate the VotingWorks BMD ballots into the Department's ballot custody procedures, see Attachment 7.
   G. When using 10-sided dice to select precincts and batches for manual tallies during the Official Canvass, the Department would also randomly select the 20-digit seed number to input into the risk-limiting tool, see Attachment 8.
   H. The Department would also manually tally all votes transferred on ballots using the Dominion BMD and compare the manual tally to results reports generated by the VotingWorks central scanner.

 V.   Request to Alternatively Conduct Manual Tallies of all Ballots to Replace Risk-Limiting Audits
   A. The Department and VotingWorks request the Secretary of State to consider allowing a full manual tally of all ballots cast and tabulated in place of conducting risk-limiting audits.
   B. The number of ballots cast on the two VotingWorks BMDs in the City Hall Voting Center will be significantly fewer than the number of ballots customarily involved in risk-limiting audits in California.
   C. According to City policy, all voters who visit the Voting Center, and polling places, receive paper ballots unless voters choose to use an accessible BMD, which likely reduces the number of voters who would cast ballots on the VotingWorks BMDs.
   D. The Department will also provide Dominion BMDs at the City Hall Voting Center with which voters are already familiar and may choose to use even when informed of the pilot program involving the VotingWorks BMDs, possibly further reducing the number of ballots available to include in a risk-limiting audit.
   E. During the Official Canvass, the Department would manually tally all votes cast using the VotingWorks BMDs and compare the manually tallies to the results reports generated from the VotingWorks election management system.
   F. Also, the Department will manually tally all Dominion ballots onto which voter intent was transferred from ballots cast using the VotingWorks BMDs.
   G. The Department would compare the tallies from the ballots cast on the VotingWorks BMDs and then duplicated using the Dominion BMDs to ensure all votes were appropriately recorded and reported.
   H. If a discrepancy is observed between the ballots cast on the VotingWorks BMD and the report from the election management system, VotingWorks would seek to resolve the issue, and the Department would include a summary of the situation in an after-report submitted to the Secretary of State.

    I.   The Department would seek to resolve any discrepancies between the manual tallies of the VotingWorks ballots and the Dominion ballots on which Department personnel transferred voter intent. If personnel did not fully transfer voter intent, the Department would again duplicate the votes from the VotingWorks ballot onto a new Dominion ballot and apply the votes from this second ballot to the official results.

VI. Retention of ballots voted in the pilot program
    A.   The Department will retain all ballots used in the pilot program for 22 months as required under California Elections Code Section 17301 since federal contests will appear on the ballot for the election.
    B.   The record retention list will specify which boxes and pallets contain the voted and remade ballots.

FILE NO. 211303   ORDINANCE NO. 12-22

1   [Municipal Elections Code - Open Source Voting]

2

3   **Ordinance amending the Municipal Elections Code to require the Director of Elections**

4   **to submit information documenting the City's intended open source voting pilot**

5   **program to the California Secretary of State, on behalf of the Board of Supervisors,**

6   **and, upon approval of the Secretary of State, to implement such a system for use at the**

7   **November 8, 2022, election.**

8   NOTE: **Unchanged Code text and uncodified text** are in plain Arial font.
                          Additions to Codes are in _single-underline italics Times New Roman font_.
9   **Deletions to Codes** are in ~~_strikethrough italics Times New Roman font_~~.
                          Board amendment additions are in <u>double-underlined Arial font</u>.
10   **Board amendment deletions** are in ~~double-underlined Arial font~~.
                          Asterisks (*   *   *   *) indicate the omission of unchanged Code
11   subsections or parts of tables.

12

13   Be it ordained by the People of the City and County of San Francisco:

14

15   Section 1. The Municipal Elections Code is hereby amended by adding Article XII,

16   consisting of Sections 1200, 1201 and 1202, to read as follows:

17

18   _ARTICLE XII: OPEN SOURCE VOTING PILOT PROGRAM_

19   _SEC. 1200. FINDINGS._

20   _(a) Since 2007, the Board of Supervisors ("Board") has shown interest in developing and using_

21   _open source voting systems in the City and County of San Francisco ("the City"). In 2007, the City_

22   _adopted Resolution No. 330-07, supporting an investigation into the feasibility of an open source voting_

23   _system. In 2008, the City enacted Ordinance No. 268-08, creating a Voting Systems Task Force_

24   _("VSTF") that provided the City with recommendations on models for development of a voting system,_

25   _including proprietary, disclosed, and open source software and hardware. In June 2011, the VSTF_

1   *issued "Recommendations on Voting Systems for the City and County of San Francisco," a report*

2   *summarizing their recommendations. This report is available with the Clerk of the Board in File No.*

3   *110805. In 2014, the City adopted Resolution No. 460-14, committing the City to work with other*

4   *jurisdictions and organizations to create new voting systems using open source software. The*

5   *Elections Commission ("Commission") has also passed resolutions in support of open source voting in*

6   *2007, 2015, and 2018. These Commission resolutions are with the Clerk of the Board in the file for the*

7   *ordinance establishing this Article XII, File No. 211303.*

8   *(b) Under California Elections Code Section 19209, to conduct an open source pilot program,*

9   *the Board, without formally adopting a voting system, may provide for the experimental use of the*

10   *voting system in a pilot program held in one or more precincts at a single election. Among other*

11   *criteria, the voting system must meet the requirements of regulations adopted by the California*

12   *Secretary of State ("SOS"). Under the California Elections Code, the Board must submit to the SOS a*

13   *plan for the pilot program no later than nine months before the election at which the pilot program is*

14   *proposed to be conducted; after submittal of such a plan, the SOS would have up to three months to*

15   *approve or reject it. But, as of December 14, 2021, the SOS had not yet issued the regulations required*

16   *for any pilot program, as required by the California Elections Code.*

17   *(c) On November 12, 2021, the SOS distributed a public letter confirming that it has begun the*

18   *process of drafting the necessary regulations for a pilot program. This letter from the SOS is on file*

19   *with the Clerk of the Board in File No. 211303. The letter also explained that while regulations have*

20   *not yet been adopted, there are two available paths to move forward with an open source pilot*

21   *program. First, the City or the open source voting system provider may submit a voting system for*

22   *testing and review for certification by the SOS. Second, the City or the open source voting system*

23   *provider may outline and document the intended voting system equipment, implementation, and use,*

24   *and provide that information to the SOS for feedback.*

25

Supervisors Walton; Haney, Mandelman, Mar, Preston, Ronen
BOARD OF SUPERVISORS

1   *(d) As of December 14, 2021, the SOS had not approved a pilot program for an open source or*

2   *disclosed source voting system. The City is hoping to be the first to conduct a pilot program in*

3   *conjunction with a future election. Conducting this pilot program would advance the Board's and the*

4   *Commission's long-term goal of moving towards open source voting systems for City elections.*

5   ***SEC. 1201. DEFINITIONS.***

6   *For purposes of this Article XII, the following terms have the following meanings:*

7   *"Ballot marking device" shall mean voting equipment used by voters to record votes on paper*

8   *ballots.*

9   *"Disclosed source voting system" shall mean a voting system subject to licenses that allow the*

10   *public to review all of its source code and the ability to share all source code with other parties.*

11   *Disclosed source voting systems may incorporate software that has a proprietary license that would*

12   *restrict the users' ability to copy or modify its source code.*

13   *"Open source" shall mean the software's source code is available for use, study, re-use,*

14   *modification, enhancement, and re-distribution and is subject to one or more licenses approved by the*

15   *Open Source Initiative.*

16   *"Open source voting system" shall mean a voting system (a) whose software is open source;*

17   *and (b) whose electronic hardware is off-the-shelf and publicly available.*

18   *"Secretary of State" shall mean the California Secretary of State.*

19   *"Source code" shall mean the version of a computer program in which the programmer's*

20   *original programming statements are expressed in a source language (e.g. C++, C#, Visual Basic or*

21   *Java) which must be compiled or assembled and linked into equivalent machine-executable object*

22   *code, thereby resulting in an executable software program.*

23   *"Voting system" means a mechanical, electromechanical, or electronic system and its software,*

24   *or any combination of these used for casting a ballot, tabulating votes, or both. "Voting system" does*

25   *not include a remote accessible vote by mail system.*

1   *__SEC. 1202. SUBMISSION OF PLAN FOR INTENDED OPEN SOURCE VOTING PILOT__*

2   *__PROGRAM.__*

3   *(a) For the purposes of this Article XII, the intended open source voting pilot program shall*

4   *consist of a minimum of one open source ballot marking device that the City wishes to use at the City*

5   *Hall Voting Center for the November 8, 2022 Consolidated General Election. The Director of*

6   *Elections shall have discretion to decide if more than one ballot marking device will be utilized during*

7   *the open source pilot program and where to place the ballot marking device(s), based upon*

8   *accessibility, security, and staffing requirements. But, to the extent feasible, an open source ballot*

9   *marking device shall be available to any voter that wants to use the device at the City Hall Voting*

10   *Center.*

11   *(b) By no later than February 8, 2022, the Director of Elections shall submit information to the*

12   *SOS that describes a plan for the City's intended open source voting pilot program, as set forth in*

13   *subsection (a). The SOS must adopt regulations for open source voting pilots, and approve the City's*

14   *plan for the intended open source voting pilot program, in order for the Department of Elections to*

15   *deploy the open source ballot marking device(s) at the November 8, 2022 Consolidated General*

16   *Election for the public's use.*

17   *(c) The Director of Elections' plan for the intended open source voting pilot program shall*

18   *include information that outlines and documents the City's intended open source voting system*

19   *equipment, implementation, and use. The information shall include at a minimum: (a) a list of each*

20   *piece of hardware, software, and firmware that will be used and how each complies with the*

21   *requirements of California Elections Code Sections 19209 and 19212, and (b) draft use procedures on*

22   *how the system will be implemented and used by the Department of Elections and poll workers. The*

23   *use procedures shall conform to the SOS's template available on the SOS website. This template is on*

24   *file with the Clerk of the Board in File No. 211303.*

25

1   Section 2. Effective Date

2   This ordinance shall become effective 30 days after enactment. Enactment occurs

3 when the Mayor signs the ordinance, the Mayor returns the ordinance unsigned or does not

4 sign the ordinance within ten days of receiving it, or the Board of Supervisors overrides the

5 Mayor's veto of the ordinance.

6

7 APPROVED AS TO FORM:
DAVID CHIU, City Attorney

8

9 By: /s/_____
      ANA FLORES

10   Deputy City Attorney

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City and County of San Francisco

Tails

Ordinance

File Number: 211303   **Date Passed:** January 25, 2022

Ordinance amending the Municipal Elections Code to require the Director of Elections to submit information documenting the City's intended open source voting pilot program to the California Secretary of State, on behalf of the Board of Supervisors, and, upon approval of the Secretary of State, to implement such a system for use at the November 8, 2022, election.

January 10, 2022 Rules Committee - RECOMMENDED AS COMMITTEE REPORT

January 11, 2022 Board of Supervisors - PASSED ON FIRST READING

    Ayes: 11 - Chan, Haney, Mandelman, Mar, Melgar, Peskin, Preston, Ronen, Safai, Stefani and Walton

January 25, 2022 Board of Supervisors - FINALLY PASSED

    Ayes: 11 - Chan, Haney, Mandelman, Mar, Melgar, Peskin, Preston, Ronen, Safai, Stefani and Walton

File No. 211303

I hereby certify that the foregoing Ordinance was FINALLY PASSED on 1/25/2022 by the Board of Supervisors of the City and County of San Francisco.

Angela Calvillo
Clerk of the Board

London N. Breed
Mayor

2/4/22
Date Approved

City and County of San Francisco
Pilot Program Plan California Elections Code Section
November 8, 2022, Statewide General Election

Attachment 2

California Elections Code Section 19209:

(a)   For purposes of this section, the following terms have the following meanings:
   (1)   "Commercial off-the-shelf" means mass-produced, readily available hardware devices, including card readers, printers, or personal computers, and their firmware or software products, including operating systems, programming language compilers, or database management systems.

   (2)   "Incorrect in part" means a full manual tally of the votes cast on the pilot system would reveal rates of error in the pilot system tally that, if extrapolated to the entire contest, would alter the electoral outcome.

   (3)   "Partial risk-limiting audit" means a procedure that guarantees a large minimum chance of a full manual tally of the votes cast on the pilot system if the electoral outcome is incorrect in part.

   (4)   "Risk-limiting audit" means a procedure that ensures a large, predetermined minimum chance of requiring a full manual tally whenever a full manual tally would show an electoral outcome that differs from the outcome reported by the voting system for the audited contest.

(b) The governing board, without formally adopting a voting system, may provide for the experimental use of the voting system in a pilot program held in one or more precincts at a single election or, in the case of a special election, the special primary election and the special general election, if the voting system complies with either of the following:

   (1)   The voting system is certified or conditionally approved prior to its experimental use.
   (2)   The voting system meets all of the following requirements:

      (A)   Uses only software and firmware with disclosed source code, except for unmodified commercial off-the-shelf software and firmware.
      (B)   Meets the requirements of subdivision (b) of Section 19101.
      (C)   Meets the requirements of the regulations adopted by the Secretary of State pursuant to subdivision (g).
      (D)   Implements risk-limiting audits.

(c)   A voting system that meets all of the requirements of paragraph (2) of subdivision (b) need not be certified or conditionally approved prior to its experimental use in a pilot program if the number of voting system units deployed in the pilot program is limited to the number necessary to test and demonstrate the capabilities of the voting system in a limited number of precincts or locations, including a prudent number of reserve units to ensure that sufficient working units will be available to conduct the pilot program. In no event shall the number of voting system units exceed 50 percent of the estimated number of units that would be required for full deployment of the voting system at every polling place and early voting site in a statewide election throughout the jurisdiction. Capabilities that may be taken into account in determining

the number of voting system units reasonably necessary to test and demonstrate the capabilities of the voting systeminclude, but are not limited to, all of the following:

(1) The capability of the voting system to accommodate voting in all languages in which the jurisdiction is required to provide ballots under applicable state and federallaws.

(2) The capability of the voting system to accommodate voting by persons with a broad range of physical and cognitive disabilities, as required by applicable state and federal laws.

(3) The current and projected number of voting-eligible individuals in the jurisdiction.

(4) The geography and distribution of the population in the jurisdiction.

(d) No later than nine months before the election at which the pilot program of a voting system is proposed to be conducted, the governing board shall submit to the Secretary of State a plan for the pilot program. The Secretary of State shall approve or reject the plan no later than three months after receipt of the plan.

(e) The votes cast on a voting system during a pilot program pursuant to subdivision (b)shall be subject to risk-limiting audits.

(1) For each contest conducted entirely on the pilot voting system, the jurisdiction conducting the pilot program shall conduct a risk-limiting audit with at least a 90- percent chance of requiring a full manual tally of the contest whenever a full manual tally would show an outcome that differs from the outcome reported by the pilot voting system.

(2) For each contest conducted partially on the pilot voting system, the jurisdiction conducting the pilot program shall conduct a partial risk-limiting audit of the portion of the contest in which the voters cast their votes on the pilot voting system, with at least a 90-percent chance of requiring a full manual tally of all votes cast using the pilot voting system whenever the outcome is incorrect in part.

(3)(A) If a risk-limiting audit of a contest leads to a full manual tally of all of the ballots cast in the contest, then the contest outcome according to that manual tally shall become the official result.

(B) If a partial risk-limiting audit of a contest leads to a full manual tally of the ballots cast using the pilot voting system, the vote counts according to that manual tally shall replace the vote counts reported by the pilot voting system for the purpose of determining the official contest results.

(4) Risk-limiting audit procedures shall comply with all other requirements inregulations adopted by the Secretary of State pursuant to subdivision (g).

(f) Upon completion of the pilot program, the governing board shall notify the Secretaryof State in writing of any defect, fault, or failure of the hardware, software, or firmware ofthe voting system or

City and County of San Francisco
Pilot Program Plan California Elections Code Section
November 8, 2022, Statewide General Election

Attachment 2

a part of the voting system.

(g) A voting system pilot program shall not be conducted in a legally binding election without the prior approval of the Secretary of State. The Secretary of State shall adopt and publish regulations governing voting system pilot programs.

City and County of San Francisco
Pilot Program Plan California Elections Code Section
November 8, 2022, Statewide General Election

Attachment 3
Pilot Program Equipment

VxAdmin and attached printer

VxMark and attached printer

City and County of San Francisco
Pilot Program Plan California Elections Code Section
November 8, 2022, Statewide General Election

Attachment 3
Pilot Program Equipment

VxBatch and attached scanner (with BMD ballot)

VotingWorks San Francisco Open-Source Pilot Use Procedures

1. Introduction

The City and County of San Francisco intends to pilot VotingWorks, an open-source voting system, during the November 8, 2022 Consolidated General Election by giving voters in the City Hall Voting Center the option of using an accessible ballot marking device (VxMark).

VotingWorks source code and product documentation are available at the following links:
- [Source Code on GitHub](#)
- [Complete System Product Documentation](#)

1.1. System description and components

VotingWorks consists of two subsystems:

1. Central System, which includes all the equipment necessary at election central for on-demand ballot printing, election programming, central batch ballot scanning, and results tabulation.
2. Precinct System, which includes an accessible ballot marking device, a printer, and a voter-facing precinct scanner.

VotingWorks Central System includes two products:

1. VxAdmin: the main tool for local election officials, which programs elections, prints ballots, and aggregates results on election night.
2. VxCentralScan: a central scanner used for rapidly scanning ballots centrally.

VotingWorks Precinct System includes two products:

1. VxMark: an accessible ballot marking device and attached printer that produces a voter-verifiable paper ballot.
2. VxScan: a voter-facing precinct scanner that scans paper ballots and notifies voters of ballot issues for second-chance voting.

For the an open-source pilot, The City and County of San Francisco intends to utilize only three components:
1. VxAdmin: VxAdmin is the main tool for local election officials. It serves as an election management system (EMS), results aggregator, and ballot on-demand printer. The VxAdmin laptop (Lenovo Thinkpad L14 or equivalent) is installed with VotingWorks VxAdmin open-source software and can be optionally connected to a HP 404dn printer for printing ballots on-demand. VxAdmin can export PDFs of ballot styles for external printing by a certified printer.
   a. VxAdmin will be utilized for programming Ballot Marking Devices (BMDs) (VxMark) and reporting results for the purpose of the partial risk-limiting audit only.

2. VxMark: VxMark is an accessible BMD with an attached printer that produces a voter-verifiable paper ballot. Specifically, it is a Lenovo Flex (or equivalent) laptop with VotingWorks VxMark open-source software installed on it, and the printer is an HP 404n printer.
   a. VxMark will be utilized as the in-person marking method for voters at the City Hall Voting Center.
3. VxCentralScan: a central scanning laptop (Lenovo Thinkpad L14 or equivalent) used for rapidly scanning ballots in batch at a central location. A Fujitsu 7160 or 7800 scanner is connected to VxCentralScan for high-speed batch scanning depending on the volume of ballots.
   a. VxCentralScan will optionally be utilized for tabulating BMD (VxMark) printed ballots if a result report for the VotingWorks ballots is necessary for comparison to a hand tally to meet the manual recount requirement.

Voters at City Hall Voting Center will use VxMark to mark, print, and verify their ballot. Ballots will be cast into a ballot box at City Hall Voting Center like other ballots cast using the Dominion voting system in San Francisco. VotingWorks marked ballots will be copied to Dominion formatted ballots for central tabulation after close of polls.

VxAdmin and attached printer

VxMark and attached printer

VxCentralScan and attached scanner (with BMD ballot)

1.2. Terms and Definitions

VotingWorks system component terms and definitions are provided in Section 1.1.

VotingWorks uses smart cards to enable administrators and poll workers to access equipment functionality. There are two types of cards with specific terms:
1. *Admin Card*: these cards enable election administrators to access election administrator functionality.
2. *Poll Worker Card*: these cards enable poll workers to access poll worker functionality.

2. Ballot Definition

2.1. Overview

For the pilot, San Francisco will provide VotingWorks with the jurisdiction-specific information necessary to define and create ballots, including for ranked-choice voting contests. This information includes precinct, district, and ballot type relationships and content regarding candidates, contests, and ballot measures, and translations of content into Chinese, Filipino, and Spanish. VotingWorks will set up the election in its system, which includes the election database, central scanner, and ballot marking device.

The process of configuring ballot marking devices (VxMark) is explained in Section 4.

2.2. Paper and printing specifications

Hand-marked paper ballots are not included in the scope of this pilot. The only printing that will take place is printed of machine-marked ballots using VxMark. The VxMark attached printer accepts any letter sized paper and VotingWorks will provide 28lb (recommended) letter sized paper with equipment.

2.3. Layout requirements and specifications

All ballot layout is automatically generated by the VotingWorks system and no specifications need to be met by the election administrator. An example VxMark ballot format is shown below:

3. System Installation and Configuration

3.1. Hardware requirements and specifications

VotingWorks system currently requires use of specific hardware which VotingWorks personnel install VotingWorks software on. This hardware is:

1. VxAdmin: Lenovo Thinkpad L14 (or equivalent) laptop and HP404dn printer
2. VxCentralScan: Lenovo Thinkpad L14 (or equivalent) laptop and Fujitsu fi-7160 or fi-7800 scanner.
3. VxMark: Lenovo Flex 14 (or equivalent) laptop and attached HP404n printer.

Hardware specifications are also provided in the VotingWorks documentation [here](#).

3.2. Hardware and network set-up and configuration

Hardware will be configured by VotingWorks personnel upon delivery to San Francisco.

All hardware is offline; no hardware is networked.

3.3. Software installation and configuration

All software will be installed and configured by VotingWorks personnel upon delivery to San Francisco.

3.4. Acceptance Testing

For the pilot, acceptance testing will be conducted as part of logic and accuracy testing. Please see section 4.5 for documentation defining the use procedures for logic and accuracy testing.

3.5. Software and firmware upgrades

No updates will be applied to the system during the course of the pilot. If updates were to be performed, VotingWorks would perform a system update on-site on behalf of the customer.

4. Election Set-up and Definition

4.1. Programming and configuration of election management system/software, including audit records to be generated and retained

San Francisco will provide VotingWorks with the data required to produce an election definition in the VotingWorks format. The required ballot data necessary to create an election definition is as follows:

- Election metadata (title, jurisdiction, date, jurisdiction logo, etc.)
- District/precinct metadata (district names, precinct names, etc.)
- Party metadata (party names, ballot abbreviations, etc.)
- Candidate metadata (name, party affiliation, etc.)
- Contest metadata (contest name, contest type, ballot rotation rules, etc.)
- Contest and candidate mapping
- Contest and ballot style mapping
- Ballot style and precinct/district mapping
- Translated content for relevant metadata mapped to list of supported languages

VotingWorks personnel will configure VxAdmin with this file upon delivery to San Francisco.

If VxAdmin needs to be re-configured at any point in time, San Francisco can do so by importing the VotingWorks formatted election definition file from a USB drive and selecting *Select Existing Election Definition File* from the main Configure Election Manager screen.
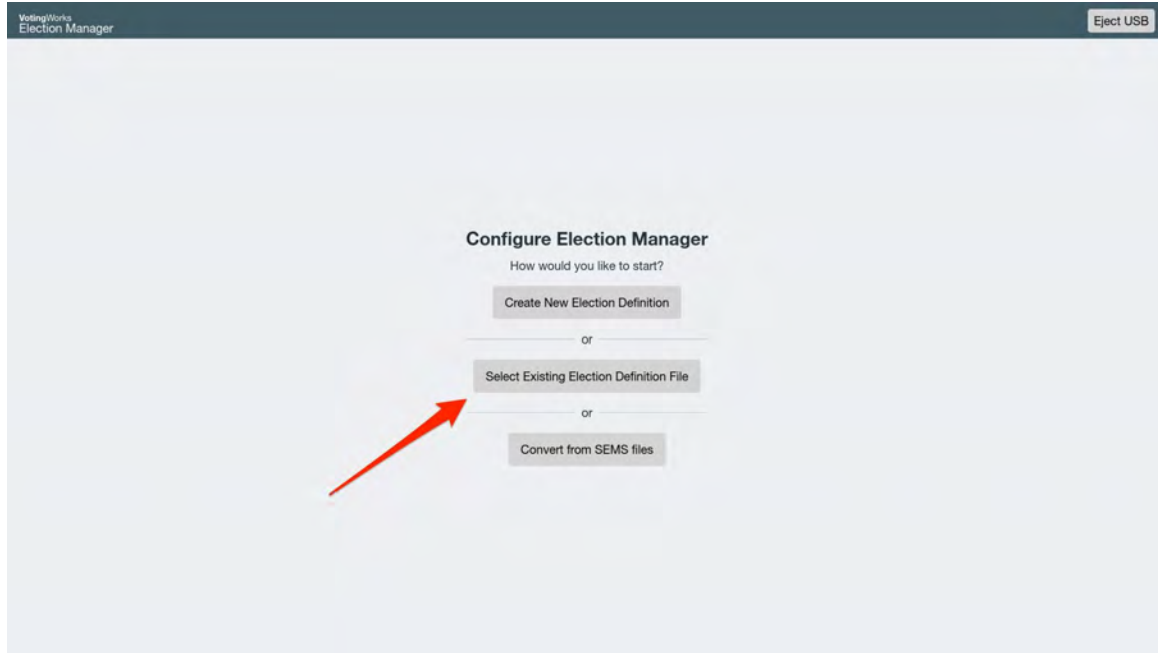
After configuration, all ballot styles are automatically presented on screen for proofing.
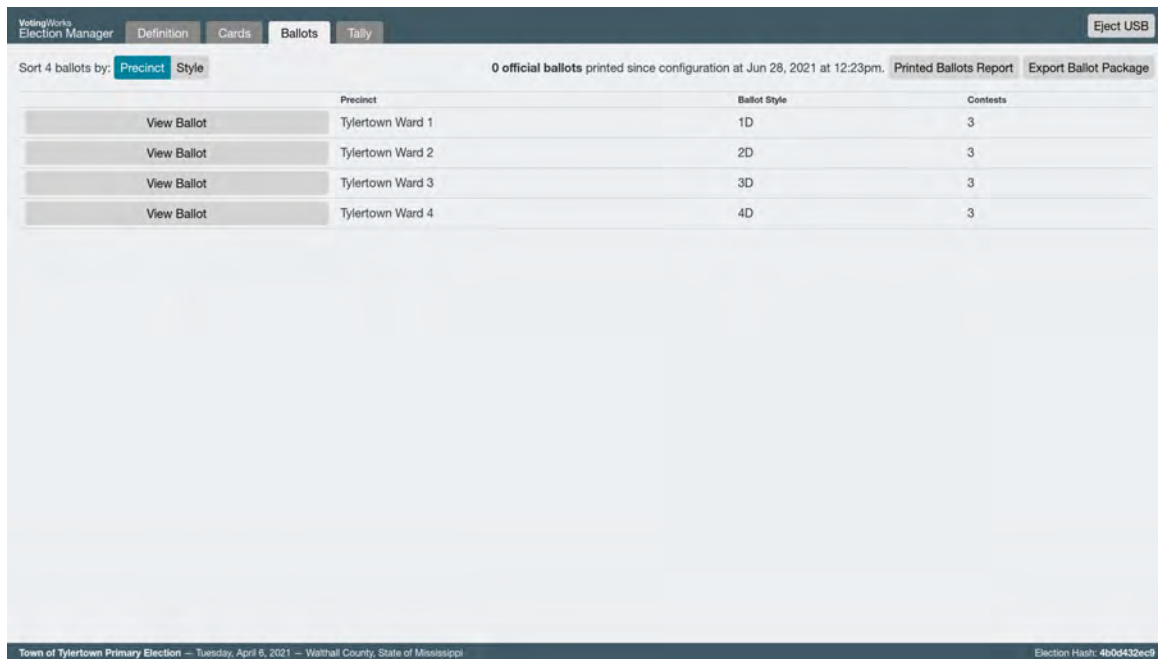
VxAdmin automatically generates an audit log of election programming activities that an election administrator can export to USB for further analysis as necessary based on audit log retention requirements.

4.2. Programming and configuration of vote recording/tabulation devices, including audit records to be generated and retained
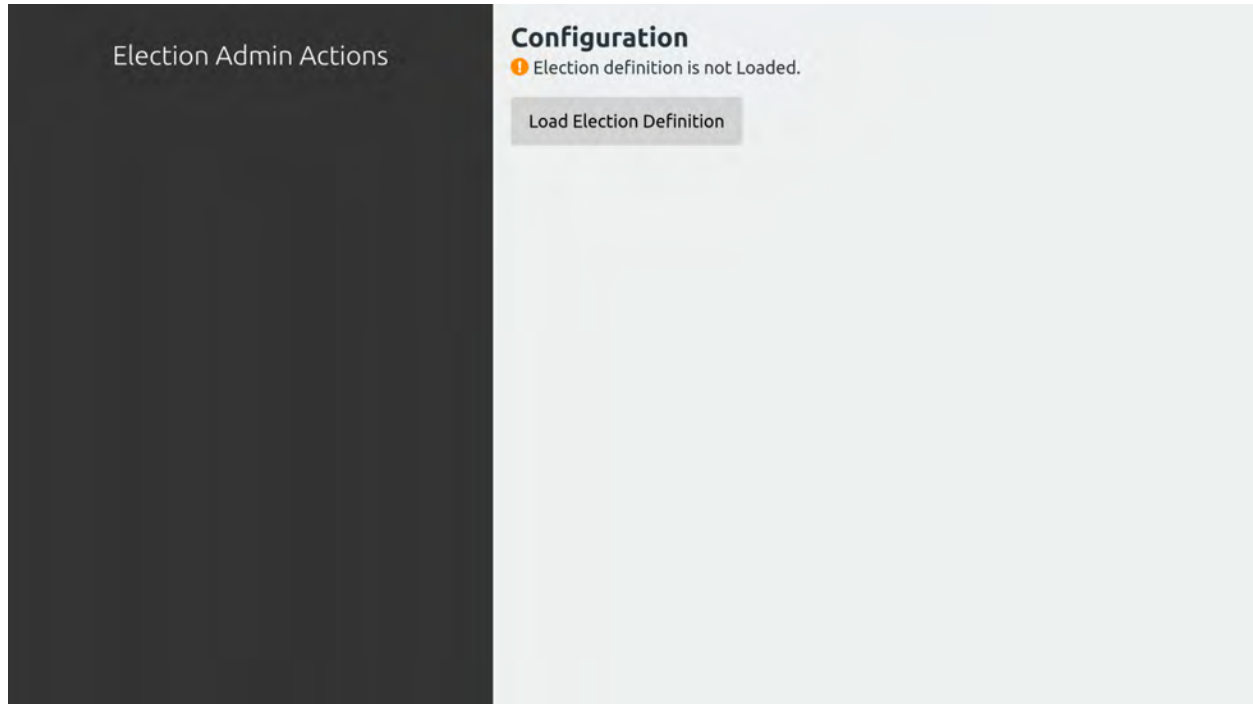
VxMark

VotingWorks will provide VxMark pre-configured with the election definition and will configure VxMark as part of the production process upon equipment delivery. The following steps can be performed if re-configuring is necessary.

To configure VxMark, an Admin Card first needs to be programmed with the election definition. VotingWorks will provide Admin Card(s) to San Francisco pre-programmed and additional cards can be programmed through instructions available in VotingWorks documentation [here](#).

First, turn on the VxMark. The following screen is shown:
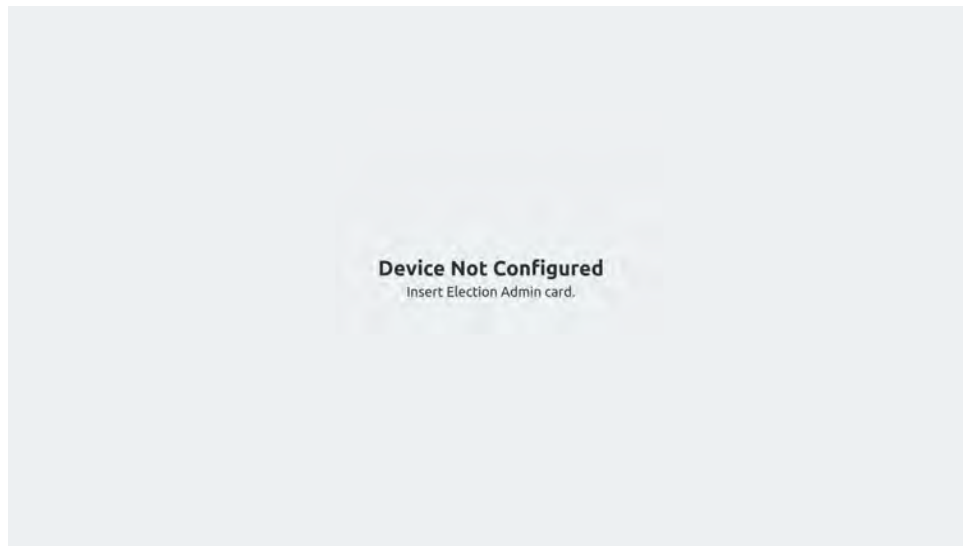
Insert an Admin Card into the card reader and the following screen will appear:

Tap *Load Election Definition* and the following screen is shown:
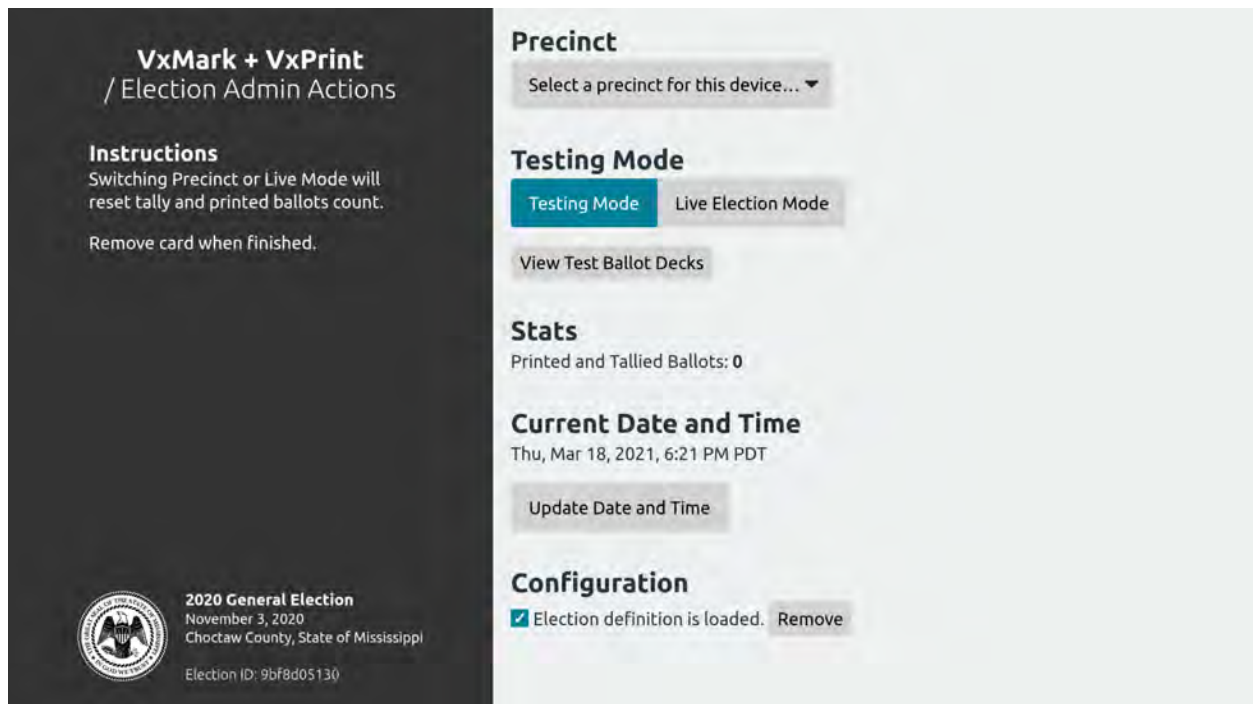
The VxMark should be configured for All Precincts as this will be used for any ballot style in a Voting Center. Select Testing Mode for L&A or select Live Election Mode for election operation.

Remove the Admin Card and the machine will be configured ready for use.

VxMark automatically generates an audit log of election programming activities that an election administrator can export to USB for further analysis as necessary based on audit log retention requirements.

VxCentralScan

VotingWorks will provide VxCentralScan pre-configured with the election definition and will configure VxMark as part of the production process upon equipment delivery. The following steps can be performed if re-configuring is necessary.

To configure VxCentralScan, you must first export the ballot package from VxAdmin to a USB drive. Navigate to the Ballots tab in VxAdmin and click Export Ballot Package:
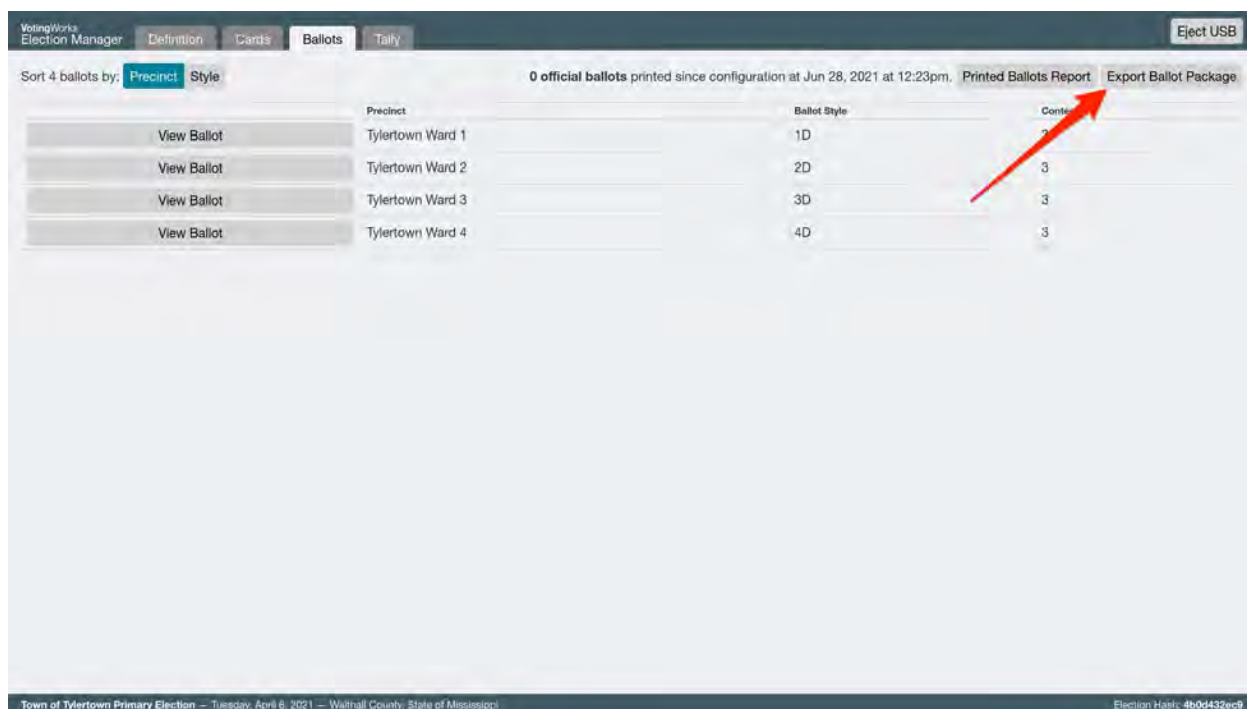
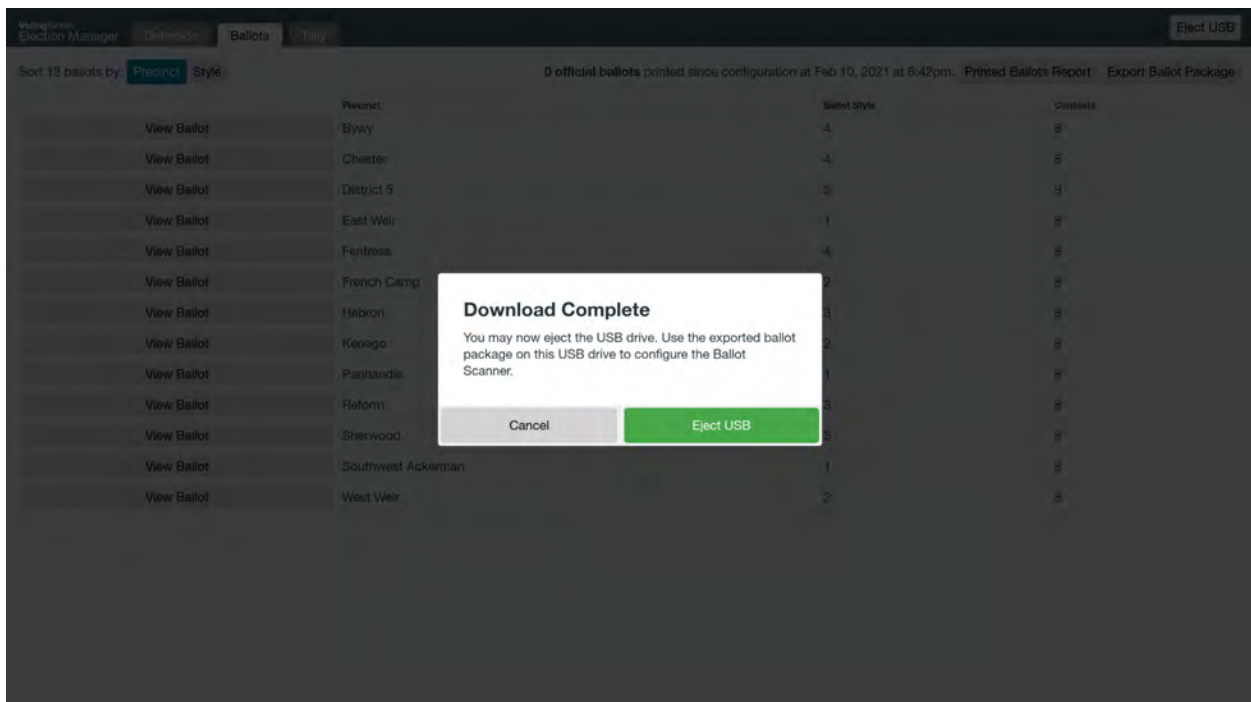You will be prompted to insert a USB drive:
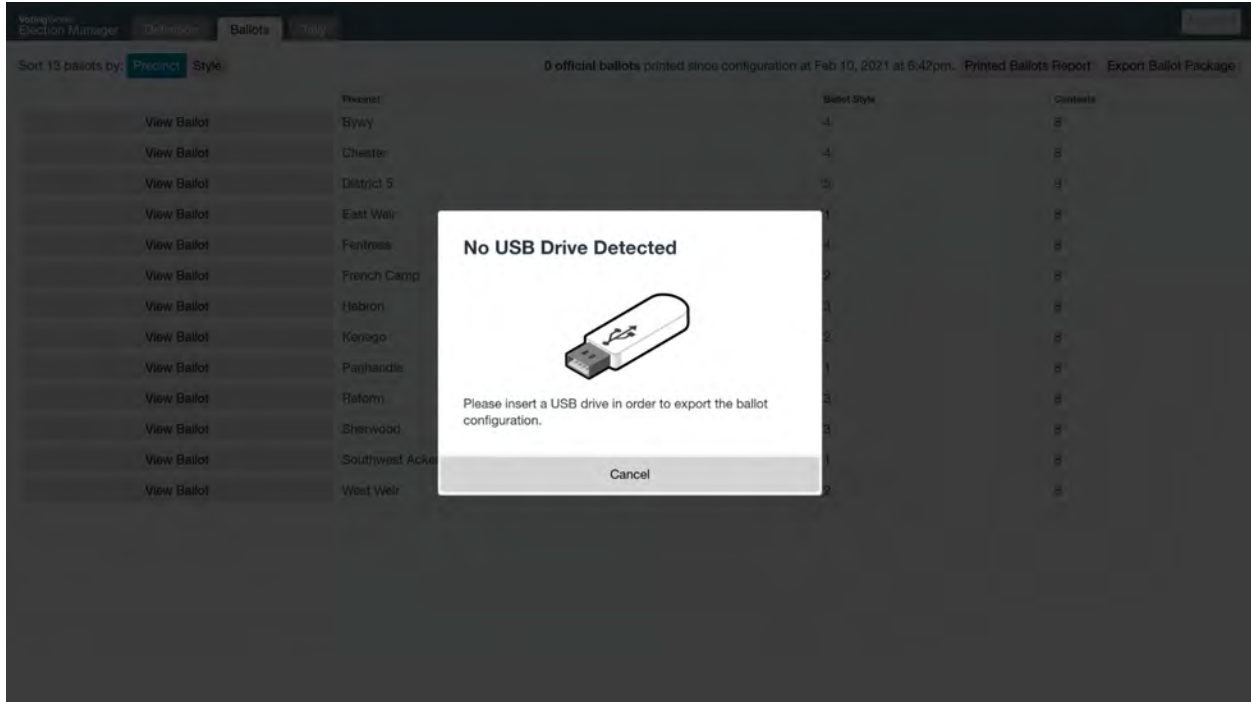
Once you insert a USB drive, the screen updates and prompts you to export the ballot package:
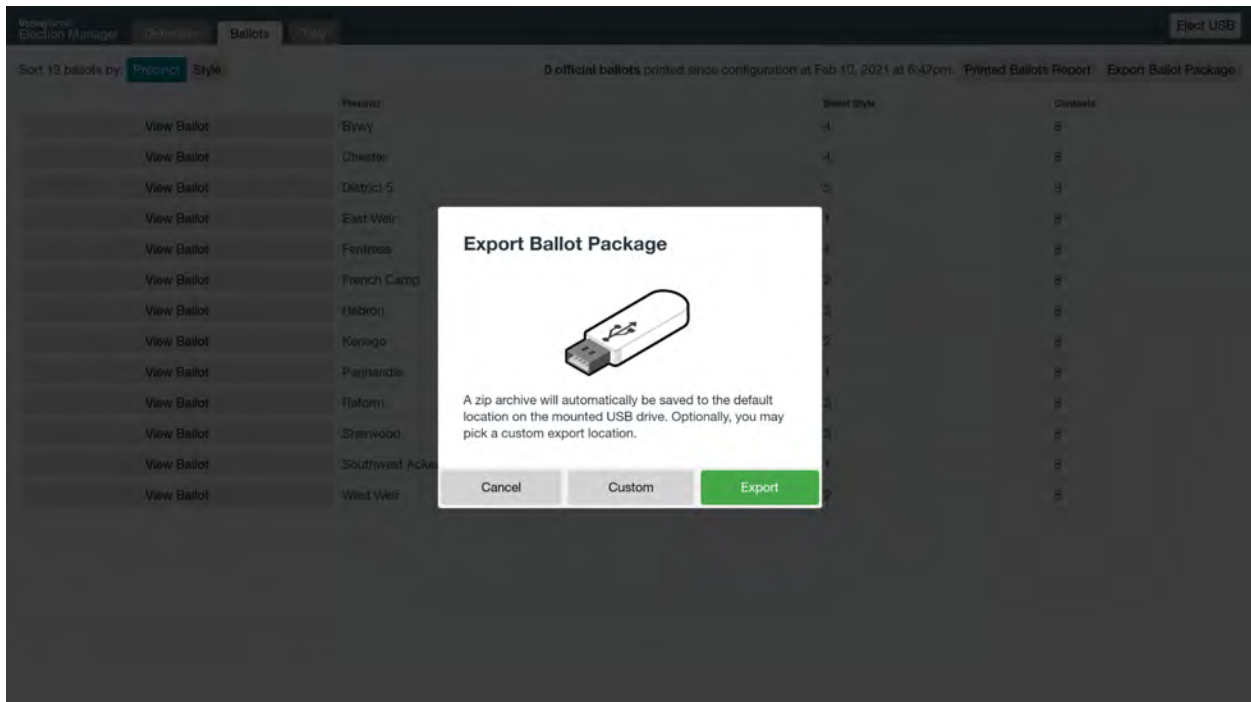
Just click Export and VxAdmin will generate the ballot package of all ballot styles, saving it automatically on the USB drive:
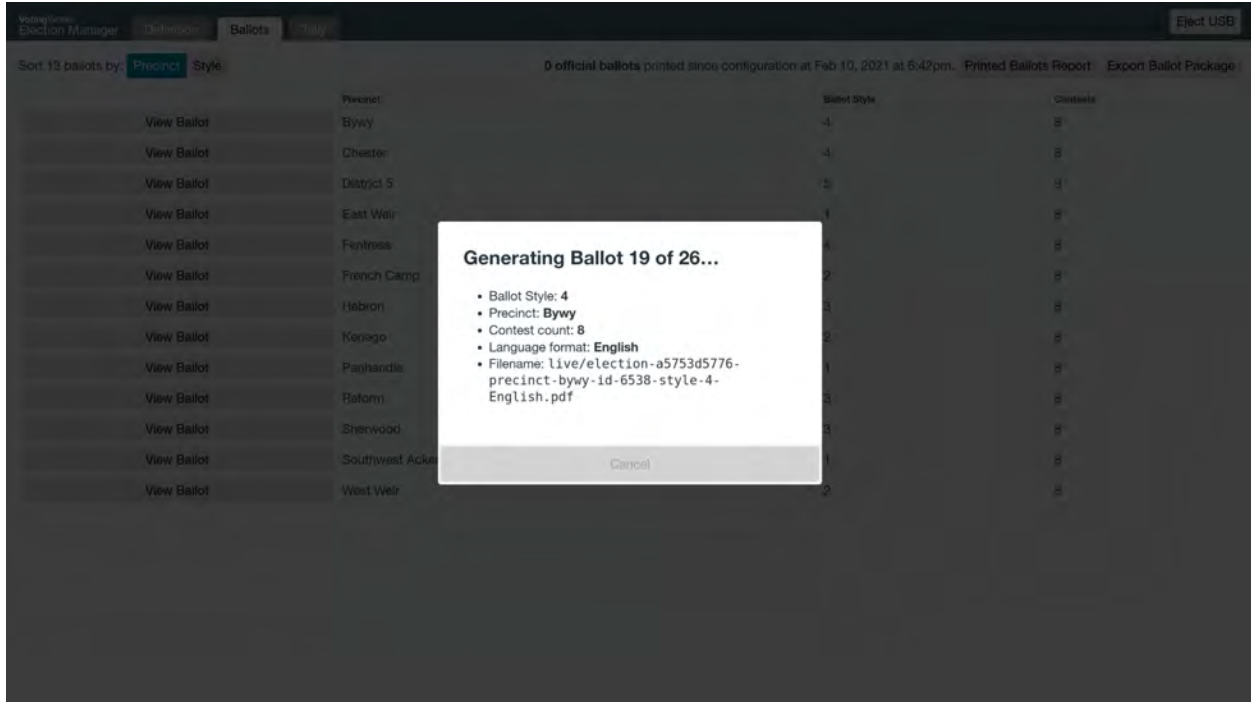
Once the file is saved, VxAdmin lets you know and prompts you to eject the USB drive:

Once you have the ballot package saved on a USB drive, you can transfer the file to VxCentralScan.

When turned on, the VxCentralScan laptop will boot to a Load Election Configuration screen, prompting you to insert a USB drive:
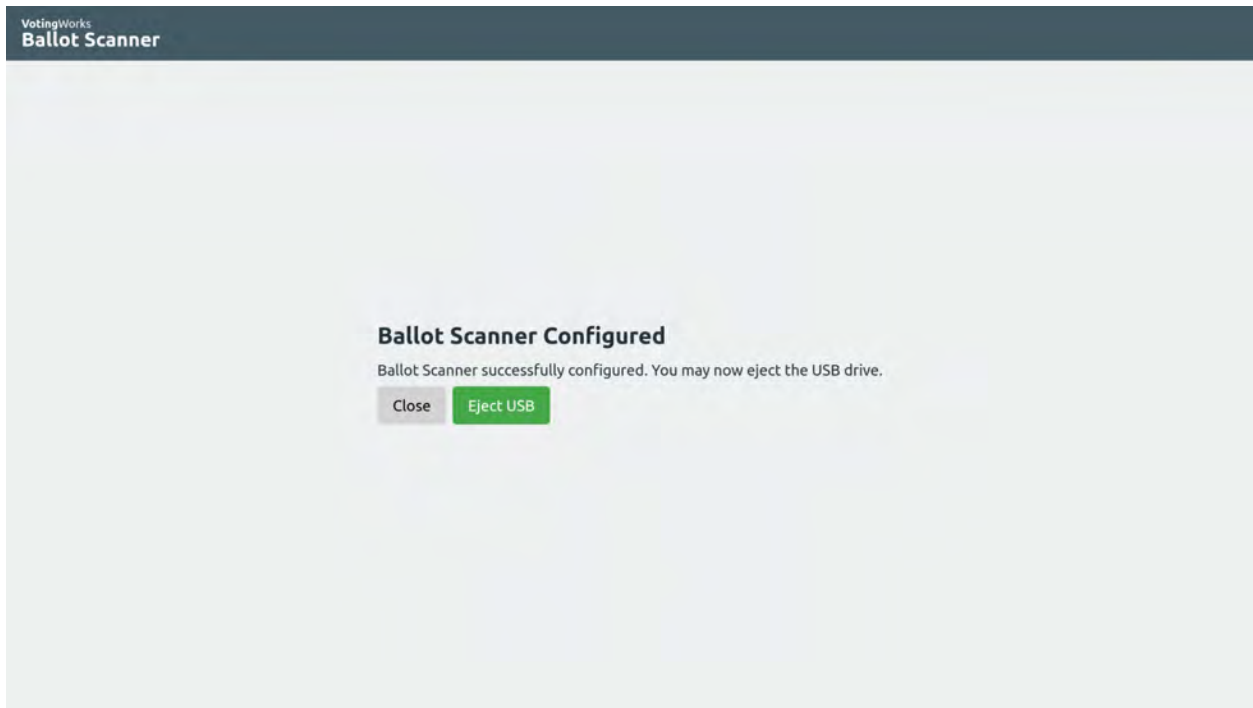

Insert the USB drive on which you just saved the ballot package from VxAdmin. After a few seconds, VxCentralScan displays all the ballot packages it finds on that USB drive:
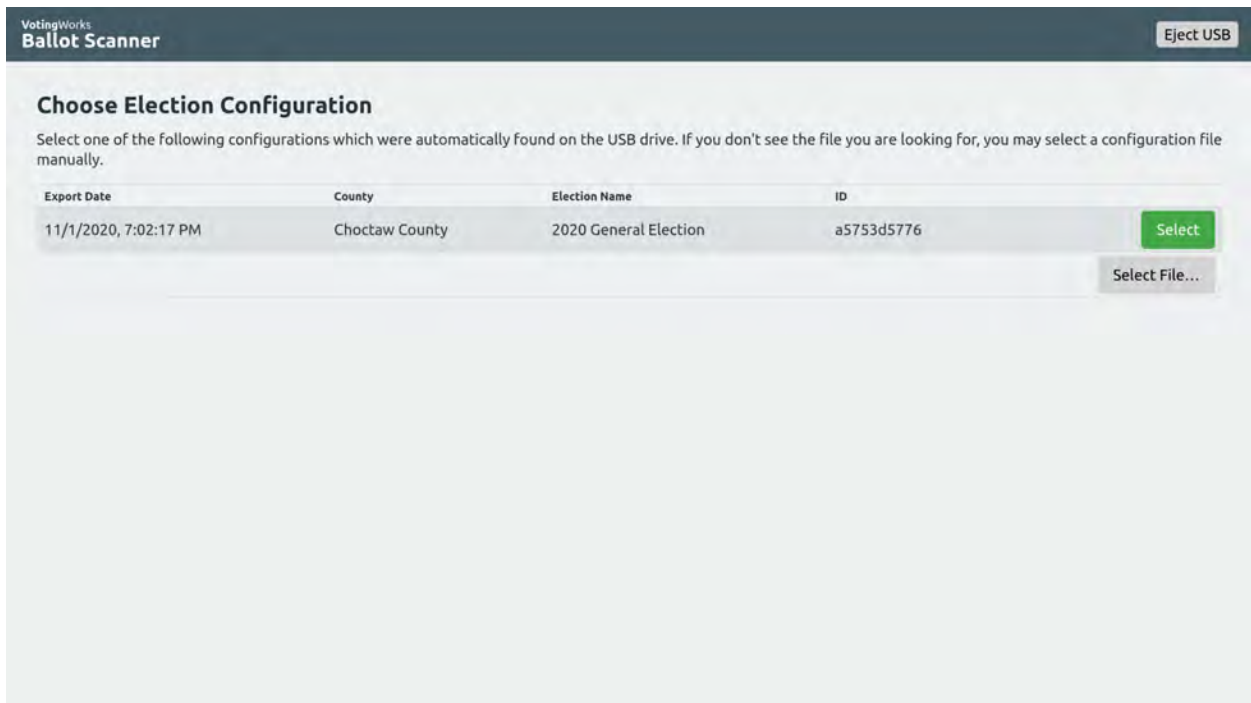
Select the ballot package you want. As the package loads, the screen will read Uploading ballot package # of # and VxCentralScan will iterate through the total number of ballot styles in the ballot package:

Uploading ballot package 11 of 26

- **Ballot Style:** 3
- **Precinct:** Sherwood
- **Test Ballot:** No
- **Languages:** en-US

When loading is complete, VxCentralScan prompts you to eject the USB drive:

VotingWorks
Ballot Scanner

Ballot Scanner Configured
Ballot Scanner successfully configured. You may now eject the USB drive.

Close   Eject USB

Then, the main VxCentralScan screen is shown. The screen will state that No ballots have been scanned. Election summary information (name, date, county, etc.) will be shown at the bottom of the screen.


4.3. System diagnostic testing procedures, including audit records to be generated and retained

VotingWorks includes built-in system diagnostic testing to confirm hardware and software status such as testing the connection of physical peripherals and access to power. Components automatically produce an audit log of the diagnostic tests performed that can be exported to USB for further analysis.

4.4. System proofing

For this pilot, the only proofing required is the proofing of the ballot content on VxMark. To proof a VxMark ballot, follow the following process to activate and vote on a VxMark itself.

First, insert a Poll Worker card to activate the appropriate ballot. After inserting a Poll Worker card, the Poll Worker Actions screen will show all available ballot styles under Choose Ballot Style.
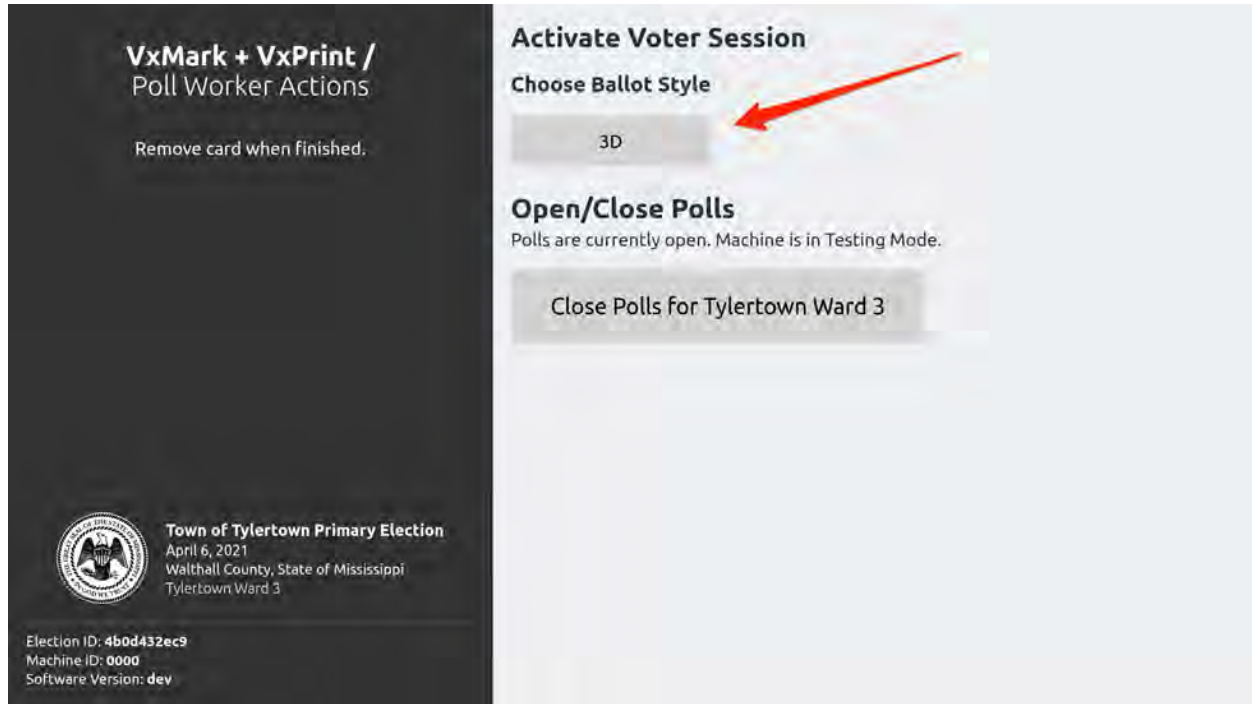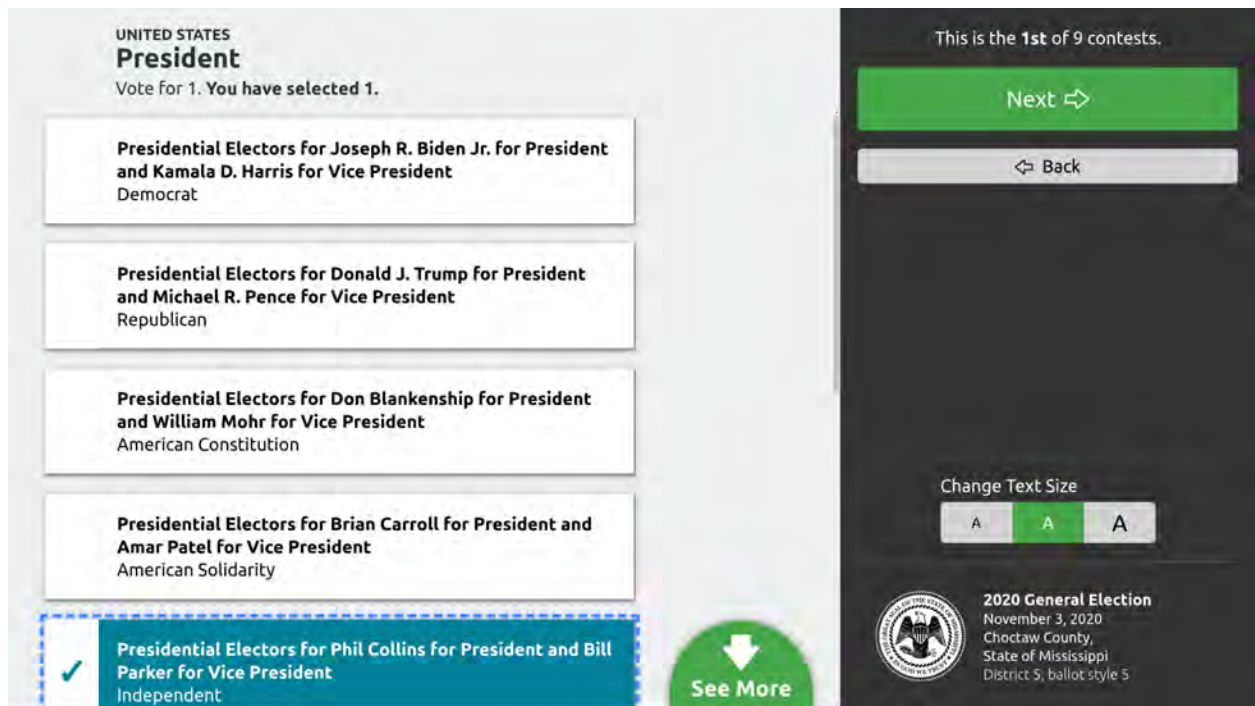
Tap the desired ballot style, and the screen changes to indicate that the VxMark has been activated with that ballot style:

Remove the Poll Worker card and you can begin "voting" to proof the ballot:

You may proof the ballot one contest at a time and proof the audio experience by listening to the audio ballot using the attached headphones.


This process can be performed for each ballot style to confirm ballot definition accuracy.

# 4.5. Logic and accuracy testing of system and components

4.5.1. Pre-conditions for performance of tests, including test decks

Before performing logic and accuracy testing, the VxMark test deck must first be printed using a configured VxMark unit.
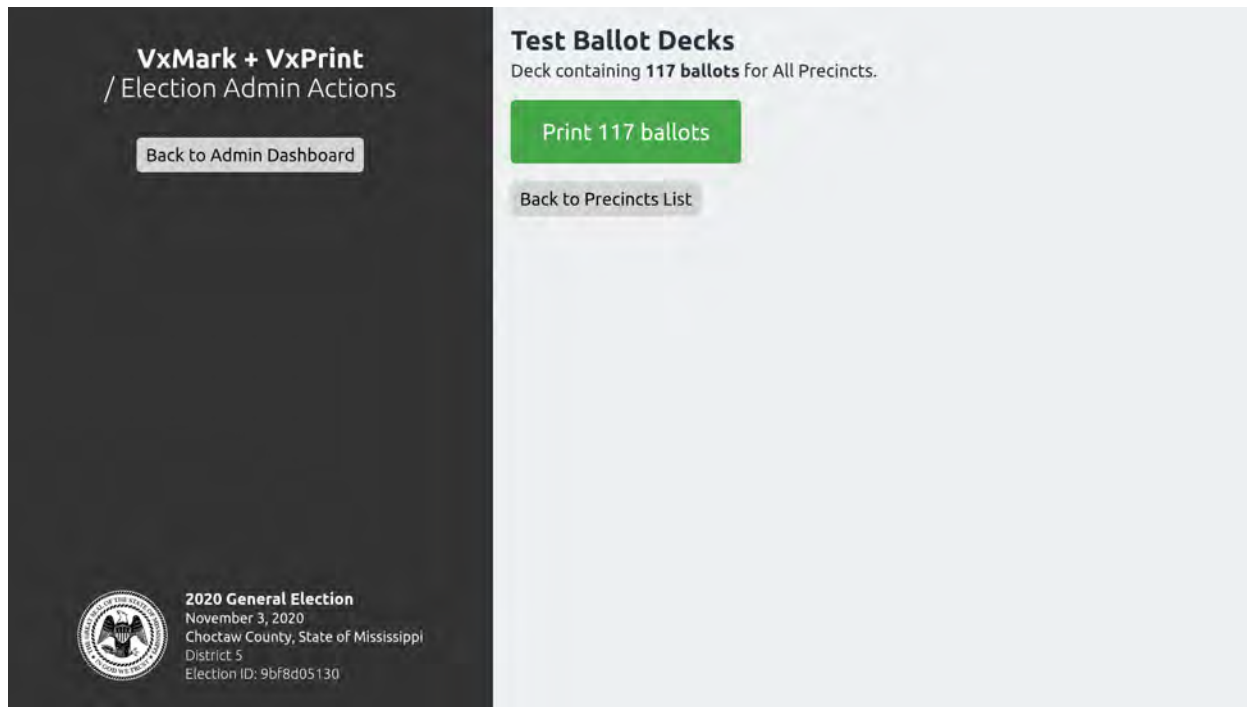
Turn on the VxMark and insert the Admin Card. The Admin screen will be presented.
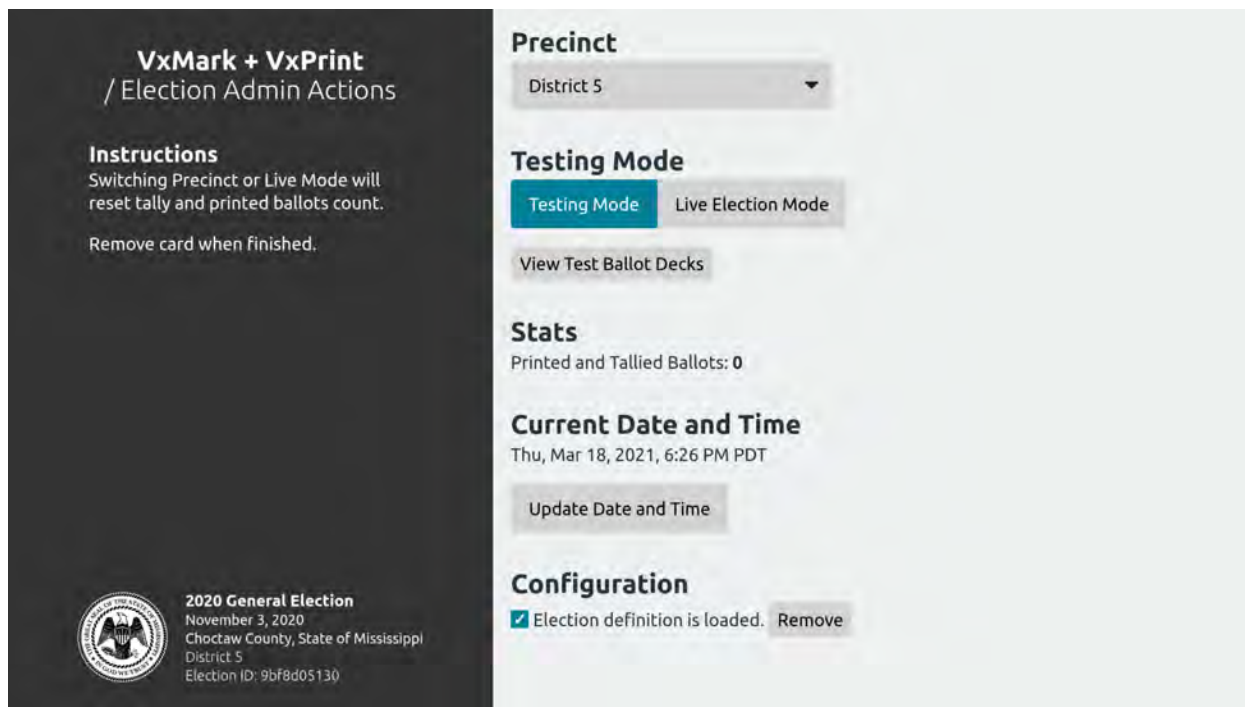
Tap View Test Ballot Decks, which then shows you a list of Test Ballot Decks.
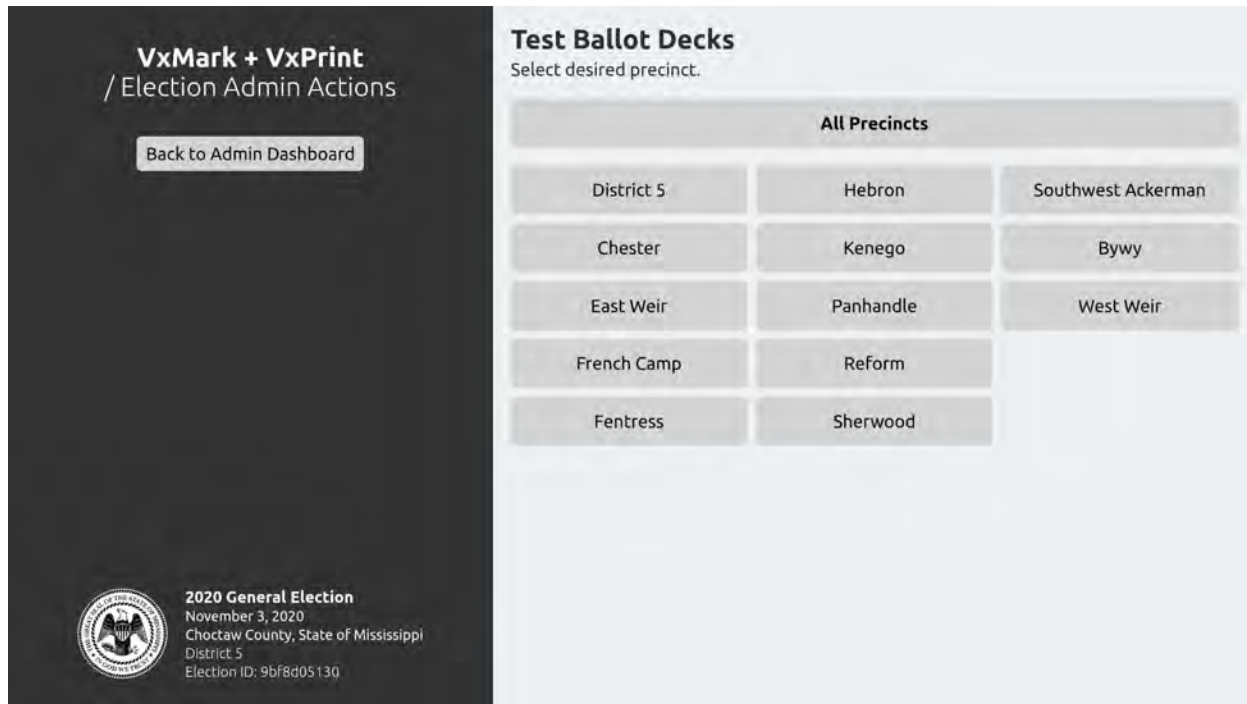
You can select All Precincts or choose a precinct, which then leads to the following screen.


The number of ballots depends on your number of precincts and ballot styles. Tap Print N ballots and the test deck will then print. Depending on your number of ballots, this may take a few minutes.

You now have a test deck of BMD ballots ready to scan.

Next, the Test Ballot Deck Tally needs to be printed from VxAdmin. The "Test Ballot Deck Tally" is the result we expect to see after scanning the test deck. To print the Test Ballot Deck Tally, first click the Tally tab and then click View Test Ballot Deck Tally:
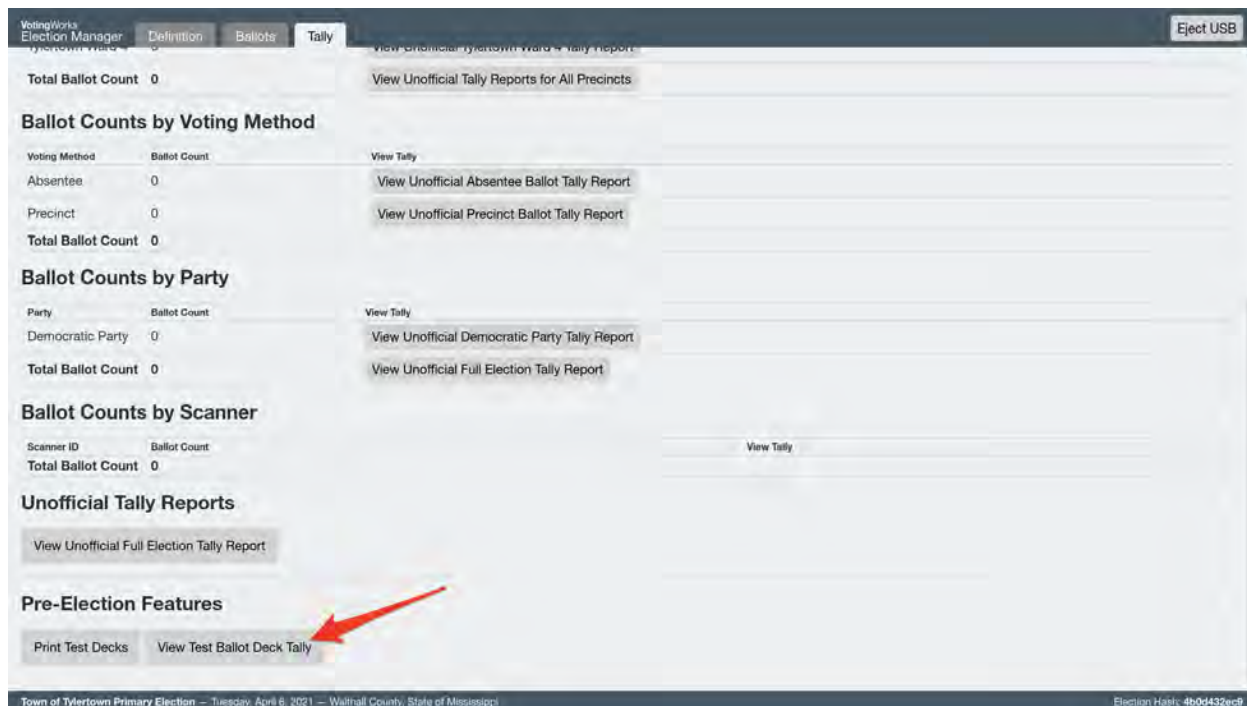
In the Test Ballot Deck Tally view, a list of precincts available for the election will appear. Click the name of the precinct you would like to print a test deck tally for or click All Precincts for the entire county:
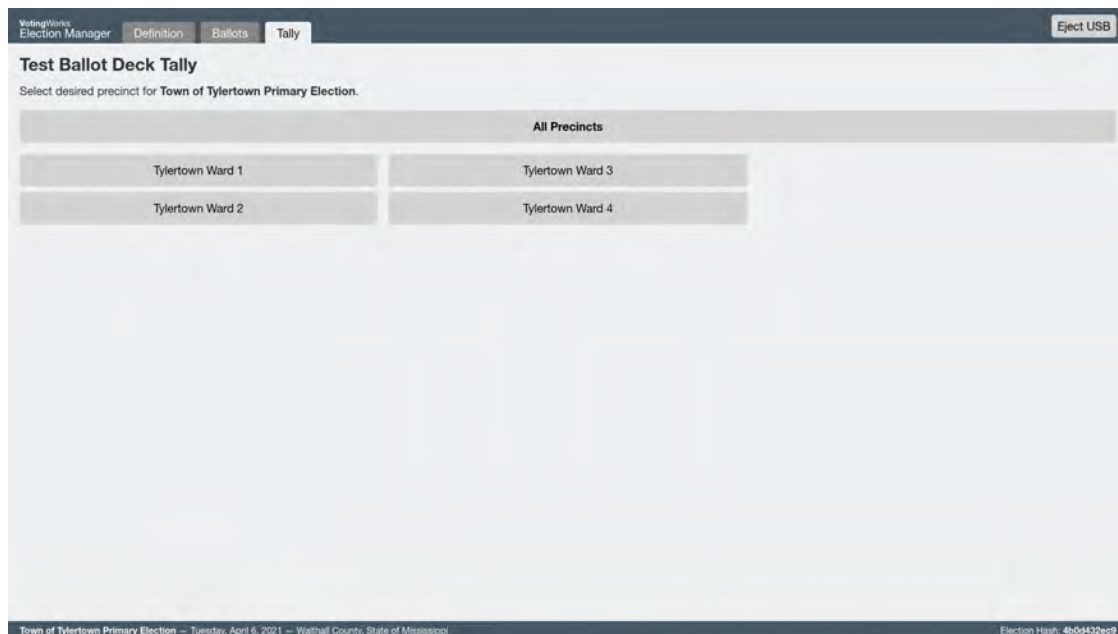
Confirm the election and precinct information and click Print Results Report:
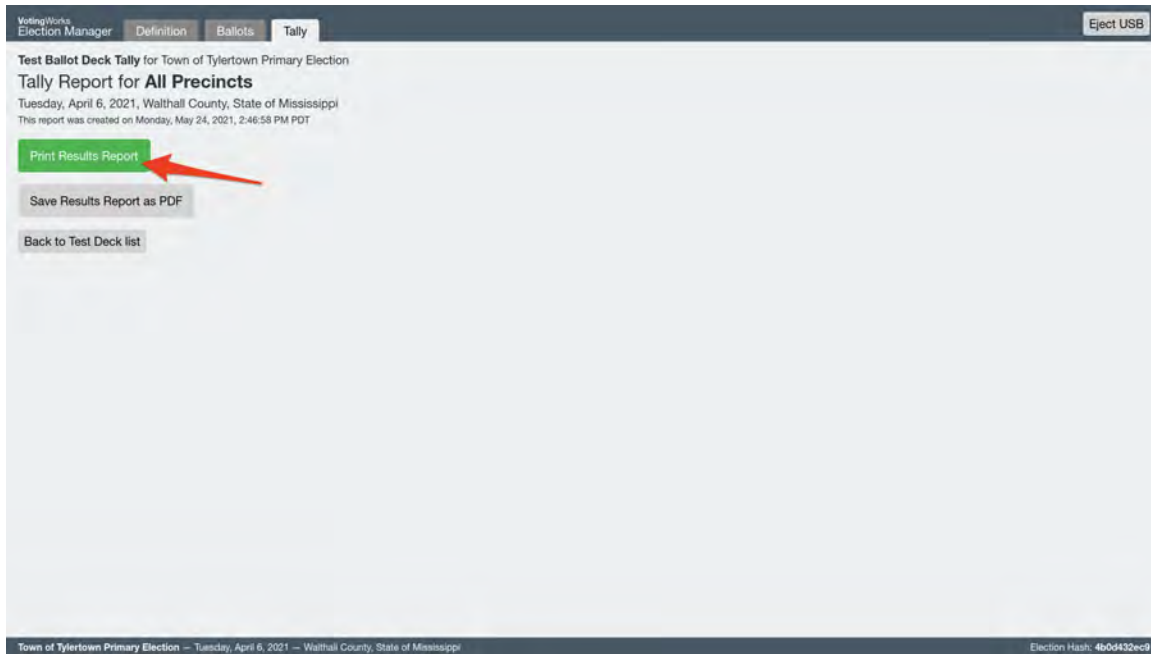
When printed, you can set aside the results report until test deck tabulation.

Finally, the Zero Report should be printed from VxAdmin before performing any tabulation. To print a confirmed zero report, click View Unofficial Full Election Tally and then the green Print Report button in the subsequent screen:
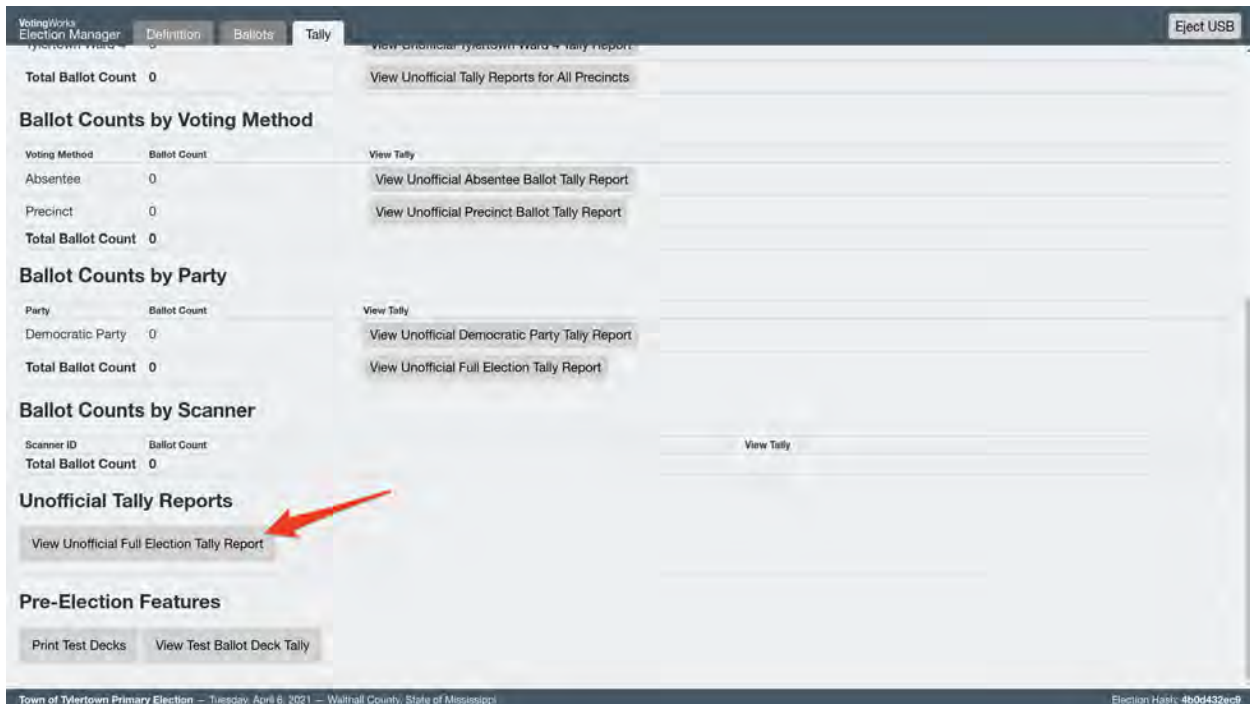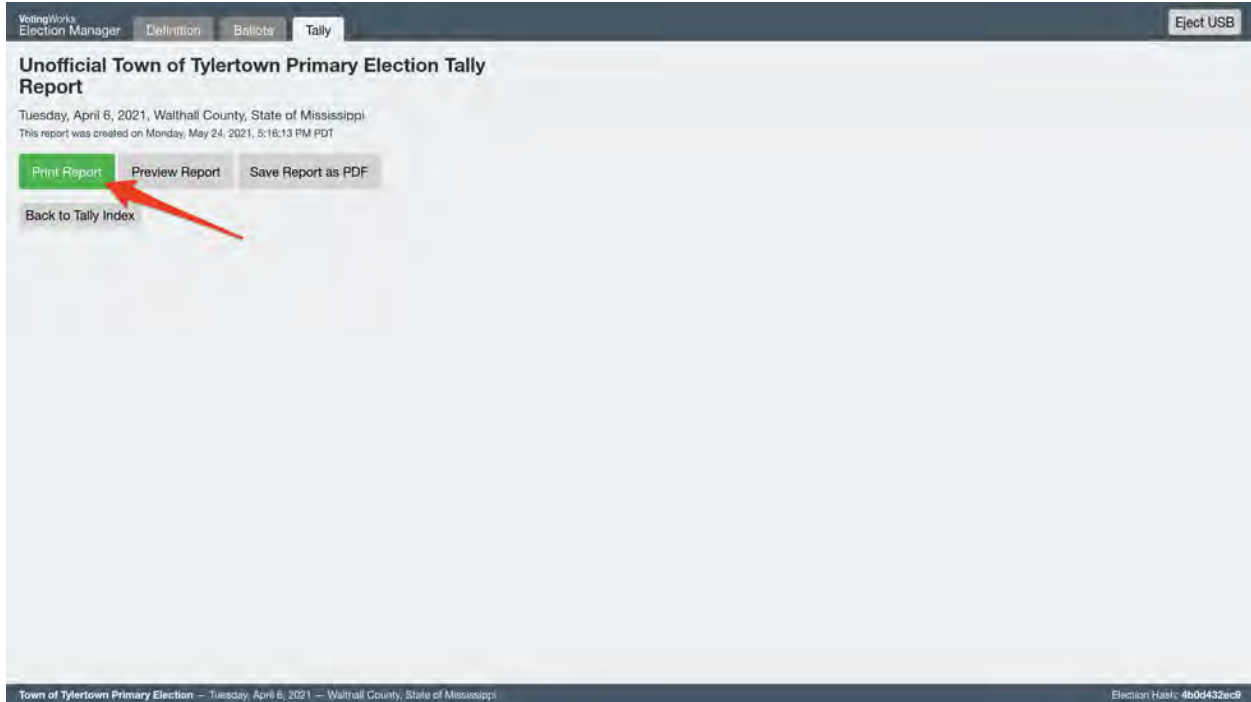
4.5.2. Accuracy Test procedures

VxMark Testing Checklist

- ☐ Confirm Election, Election ID, Date, Time, and Precinct (Admin Card)
- ☐ Confirm Printer has plenty of paper
- ☐ Confirm VxMark is in "Testing Mode" (Admin Card)
- ☐ Confirm Zero Report is all Zeros
- ☐ Open Polls on VxMark (Poll Worker Card)
- ☐ Confirm that all expected ballot styles show up as options at top of screen
- ☐ Run the Ballot Style Sub-Checklist for *each* ballot style
- ☐ For one of the ballot styles selected at random, confirm that the entire ballot can be filled out and printed using only the audio track over headphones and the accessible controller
- ☐ Change

Ballot Style Sub-Checklist:
- ☐ Confirm all expected contests appear in the correct order
- ☐ Confirm all candidate names appear and are spelled correctly
- ☐ Confirm each candidate / choice can be selected and deselected
- ☐ Confirm the review screen lists all contests
- ☐ At the review screen, for each contest
    - ☐ tap Change, leave blank, tap Review, confirming the contest is left blank

☐ tap Change, choose a write-in (if appropriate), tap Review, confirm the write-in appears

☐ tap Change, attempt to select more than the max number of choices, confirm you cannot

☐ tap Change, make a selection, tap Review

☐ Tap I'm Ready to Print My Ballot, and confirm the ballot prints.

☐ Confirm the printed ballot includes the selections made on screen (write down the selections from your review screen on this checklist to make this easier)

VxCentralScan Testing Checklist

☐ Combine VxMark test decks from each precinct into one batch of ballots.

☐ Connect VxCentralScan to its scanner

☐ Turn on the VxCentralScan laptop and the scanner

☐ Confirm that VxCentralScan is configured for the appropriate election

☐ Click Toggle to Test Mode from the Advanced menu

☐ Scan the test deck

☐ Confirm the count of scanned ballots is twice the number of ballots

☐ Export the CVR file to a USB Drive

☐ Scan the blank ballot

☐ Confirm it shows up as blank

☐ Choose Original Ballot Removed.

☐ Scan the overvoted ballot

☐ Confirm it shows up as an overvote

☐ Choose Original Ballot Removed.

☐ Click Toggle to Live Election Mode in the Advanced menu

VxAdmin Testing Checklist

☐ Insert USB Drive with the CVR file

☐ Click Import CVR Files under the Tally tab

☐ Import the CVR file

☐ Eject USB Drive

☐ Print the Unofficial Full Election Tally

☐ Confirm that the tallies match the Test Ballot Deck Tally

☐ Clear CVR files

4.5.3. Logic Test procedures

Ballot logic testing will be performed by San Francisco as part of the Ballot Proofing process. See section 4.4 for proofing instructions.

4.5.4. Retention of test materials

The jurisdiction should retain all test decks, printed ballots, result reports, and expected test deck tallies as well as the CVR file for as long after the election as required by law.

4.5.5. Logic and Accuracy Board and certification of testing

Accuracy tests shall be performed prior to Logic and Accuracy Certification to the Secretary of State and prior to Election Day. In the event of hardware failure and the component has been repaired, replaced or adjusted the accuracy test should be re-run.

4.6. Ballot tally programs

Ballot tally programs will not be placed in escrow for this pilot as the VotingWorks system will not be tabulating and reporting results for the semi-official or official results (see sections 7 & 8).

4.7. Election Observer Panel

San Francisco will not modify its election observer panel procedures for this pilot and will implement the current procedures in use for their Dominion voting system.

4.8. Hardware maintenance and preparation for use

Hardware maintenance is unnecessary for the implementation of the one-time pilot as VotingWorks personnel will ensure hardware is prepared before first use.

5. Polling Place Procedures

5.1. Precinct supplies, delivery and inspection

San Francisco will deliver and inspect Voting Center supplies according to their procedures.

The only required supplies are the VxMark ballot marking device and attached printer as well as a ballot box.

5.2. Polling place set-up (including equipment setup)

VxMark can be set up in just a couple of minutes. Before you start, confirm that you have the black VxMark case, its associated printer, and enough table space to comfortably fit both.

Place Equipment on Table

You can place the printer to the left or right of the black case:

Set Up Printer

Connect the printer to power by connecting the plugging one end of the power cable into an outlet and the other end into the back of the printer. Turn the printer on by pressing the power button on the front in the top-right corner:

Unpack VxMark

Pop open the black case by lifting the latches on the side and front. Within the case you'll see the touchscreen and, around it, the different components of the VxMark:

1. Headphones in the travel pouch on top of the screen. Remove the pouch and set it aside for now.

2. Accessible Controller in the lower-left compartment. Remove it and set it beside the case to the left.
3. Power Adapter in the upper-left compartment. Remove the adapter and plug it into an outlet.
4. Printer USB Cable in the mid-right compartment. Connect this to the back of the printer.
5. Card Reader in the lower-right compartment. Leave this alone, it stays put.

Packed VxMark

Connected VxMark

Set Up the Privacy Shield

Behind the top layer of foam there is a privacy shield. Remove the privacy shield, set it up around the touchscreen, and replace the top foam. You can route the cables through the back corners of the privacy shield:

Plug in the Headphones

Remove the headphones and plug them into the audio outlet on the accessible controller:
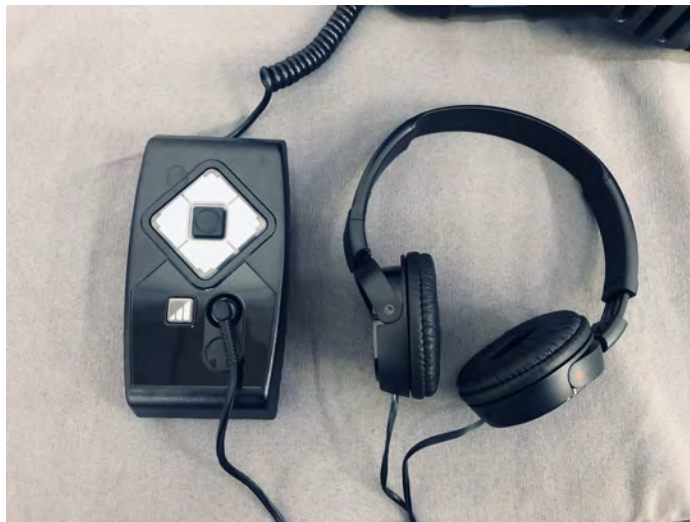
You can place the empty travel pouch behind the privacy shield.

Turning On VxMark

The power button is located in the middle-right compartment next to the printer cable. To find it, run your finger along the side of the screen. Press the power button firmly for 1 second and then release. You should see the card reader and accessible controller light up within 3-5 seconds.
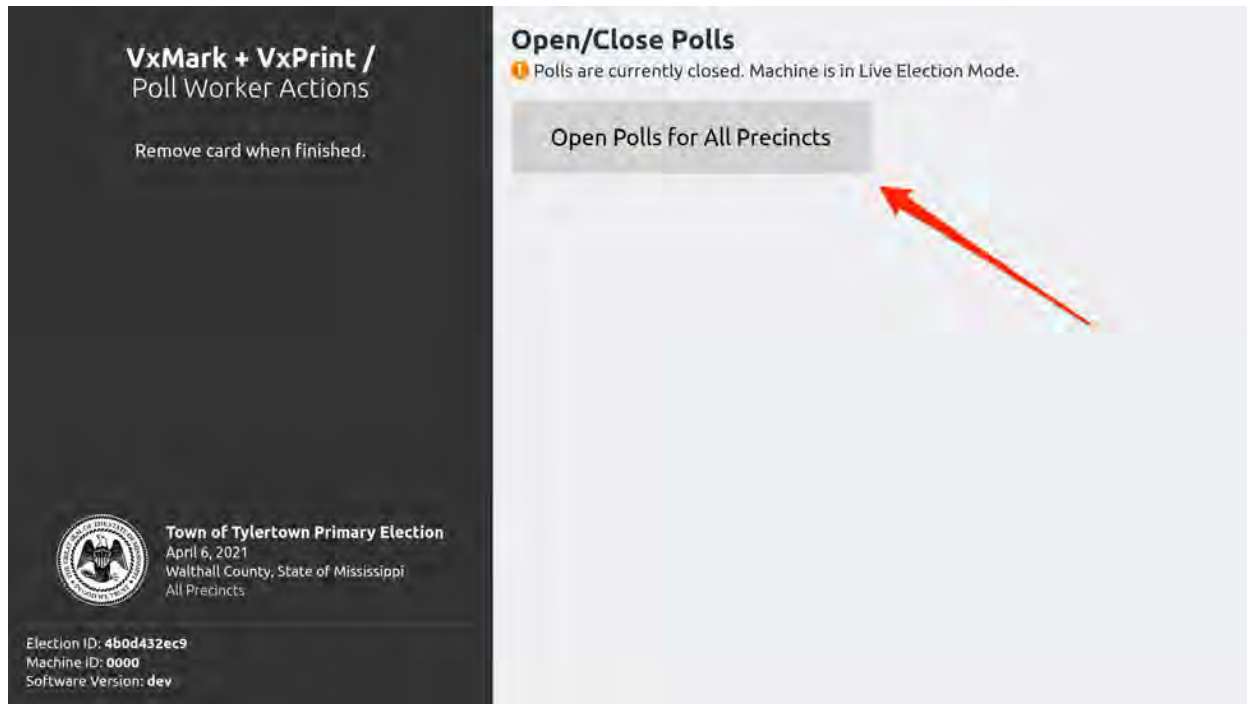
Turned On VxMark

You are done setting up the VxMark and are ready, when necessary, to open the polls and print the polls opened report.

5.3. Opening the polls

To open the polls on VxMark, insert a Poll Worker Card and tap Open Polls for All Precincts.
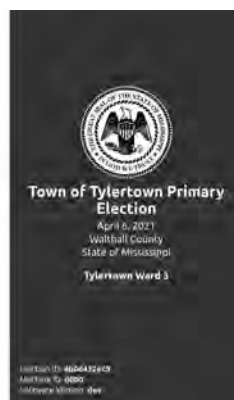
Remove the card when finished and polls are open.
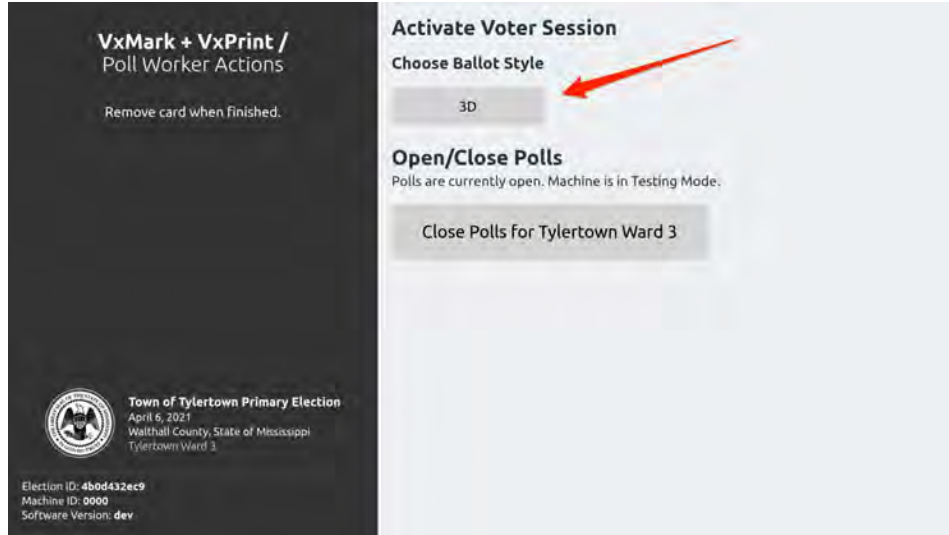
5.4. Polling place procedures

Activating a Ballot Style

If a voter chooses to use VxMark, insert a Poll Worker card to activate the appropriate ballot.

The screen will initially display the following:

Insert the Poll Worker card to open the Poll Worker screen, which will display all available ballot styles for this precinct under the **Choose Ballot Style** heading:

Tap the desired ballot style, and the screen changes to indicate that the VxMark has been activated with that ballot style:

Remove the Poll Worker card and let the voter know they can begin voting by tapping the Start Voting button:

Voting Instructions

The voter will be presented with one contest at a time. They will make a selection by tapping on their choice:
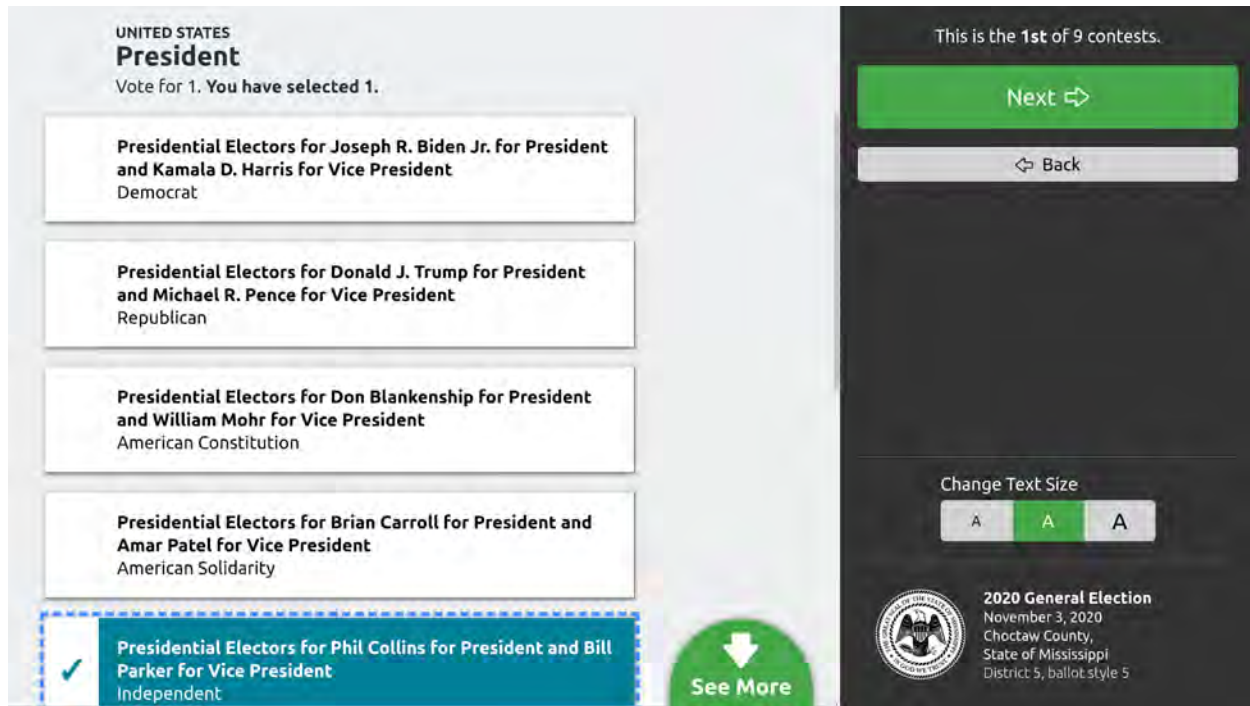
The voter moves to the next contest by tapping the Next button. They can skip a contest by moving to the Next without making a selection. To return to a previous contest, they can tap the Back button.

After working through all contests, a **Review Your Votes** screen appears that allows the voter to change any of their selections:
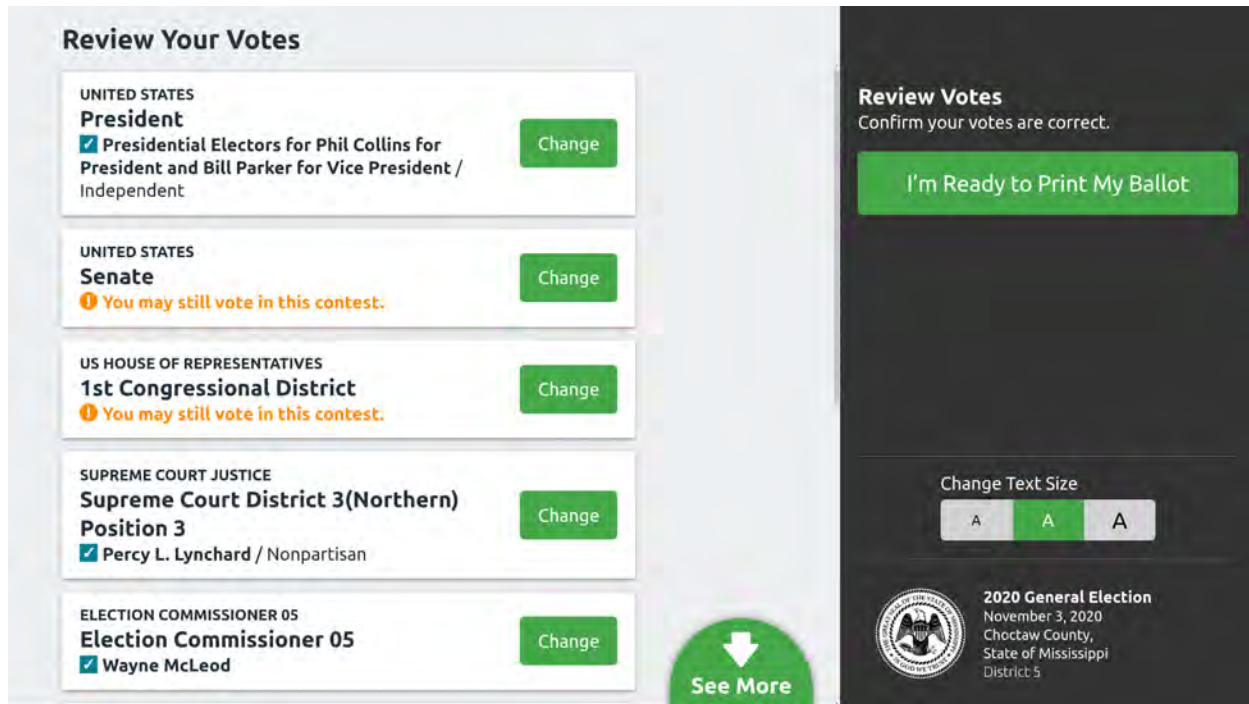
When done reviewing, the voter taps I'm Ready to Print My Ballot . The ballot should then begin printing. Once it's done printing, the screen will display instructions for the voter to cast their ballot:

You're Almost Done
Your official ballot is printing. To finish voting you need to...

1. Review the votes on your printed ballot.   2. Place your ballot in the ballot box.

Need help? Ask a poll worker.

Done

The voter may press the Done button if they wish, but it's not required. The screen will automatically refresh to the starting point after a few seconds.

The voter should take their printed ballot and review it one final time. They should then take it to the ballot box to cast the ballot.

5.5. Special needs voters

Poll workers should communicate to voters with special needs the availability of the attached accessibility controller and headphones that can be used during the marking experience.

Voters with language access needs can be assisted during the ballot activation process where alternative language ballots will be presented as distinct ballot styles.
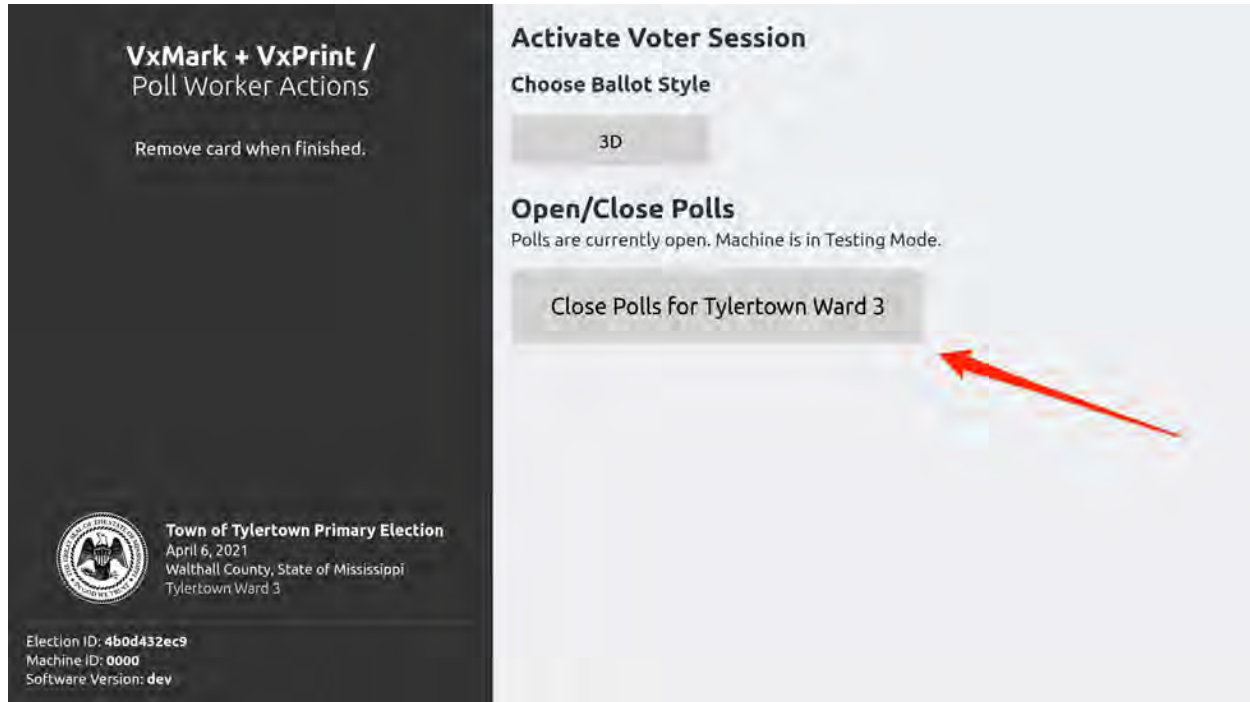
5.6. Provisional voters

Provisional voting will not take place on the VotingWorks system and provisional voters will use San Francisco's Dominion voting system for provisional voting.

5.7. Closing the polls and vote reporting

Close Polls on VxMark

To close polls on VxMark, insert a Poll Worker card and tap Close Polls for All Precincts.

Remove the Poll Worker card and polls will be closed.

Turn Off VxMark

The power button is located in the middle-right compartment next to the printer cable. To find it, run your finger along the side of the screen. Press the power button firmly for 1 second and then release. You should see the screen change as the machine starts to shut down.

Pack Up VxMark

Unplug the headphones from the accessible controller. Place the headphones into the travel pouch.

The privacy shield will be stored back behind the top foam layer. Set the top foam aside. Lift the privacy shield up, fold it, and place it in the top lid. You can then put the top foam back in place, covering the privacy shield.

Pack Cables:
1. Unplug the power block from the outlet and place in the top-left compartment, with prongs facing up.
2. Place the accessible controller in the bottom-left compartment, the buttons facing outward.
3. Unplug the printer cable from the printer and place inside case

Close VxMark

Make sure that:

1. Headphone Pouch is inside the case, on top of the screen
2. All cords are within case and not overflowing

Close and latch the case.

Pack Up Printer

☐ Unplug printer power cord from the outlet and the printer
☐ Place the printer in its case
☐ Place power cord inside the case
☐ Close the case

Copy Ballots to Dominion Format

After polls are closed, VotingWorks ballots will be copied onto Dominion formatted ballots for central tabulation. VotingWorks ballots will also be scanned on VxCentralScan for the purpose of generating results for a partial risk-limiting audit. The following steps define the process of scanning and generating results for use in the partial risk-limiting audit, not for semi-official or official results.

Scan VotingWorks Ballots on VxCentralScan (for risk-limiting audit)

Before scanning the first ballot batch, confirm that VxCentralScan displays No ballots have been scanned and that the scanner display shows no scans. If otherwise, you should select the Delete Ballot Data option under the Advanced menu.

To load a ballot batch, place a stack of ballots into the feeder tray of the scanner connected to VxCentralScan. The ballots need to be in a neat stack, unfolded and lying flat, but ballots can be in any orientation (e.g. upside down or backwards is fine).

Click Scan New Batch in the top right to start scanning. Ballots will feed through the scanner automatically and the number of ballots scanned within each batch will progress onscreen. The batch is finished scanning when a timestamp is presented under the Finished At header for that particular batch.

Once the batch finishes scanning, remove it from the output tray on the scanner and place the next stack of ballots in the feeder tray. Repeat the scanning process for as many batches are necessary to finish scanning all ballots.

Tally Results on VxAdmin (for risk-limiting audit)

When all ballot batches (including any duplicated ballots) have been scanned, you will need to export the CVRs from VxCentralScan to load into VxAdmin for results aggregation.

To export, click Export in the top right.

You'll be prompted to insert a USB stick. Once recognized, click "Export" again:
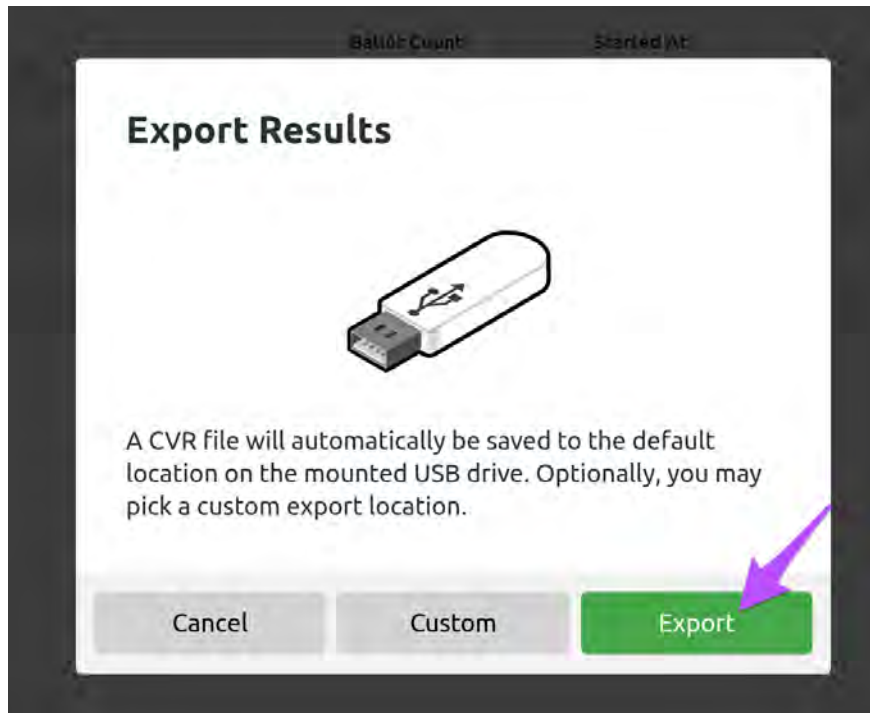
You don't need to worry about filenames. The export process takes care of that.

Once you've clicked "Export", you'll see a confirmation screen, where you can click "Eject USB":
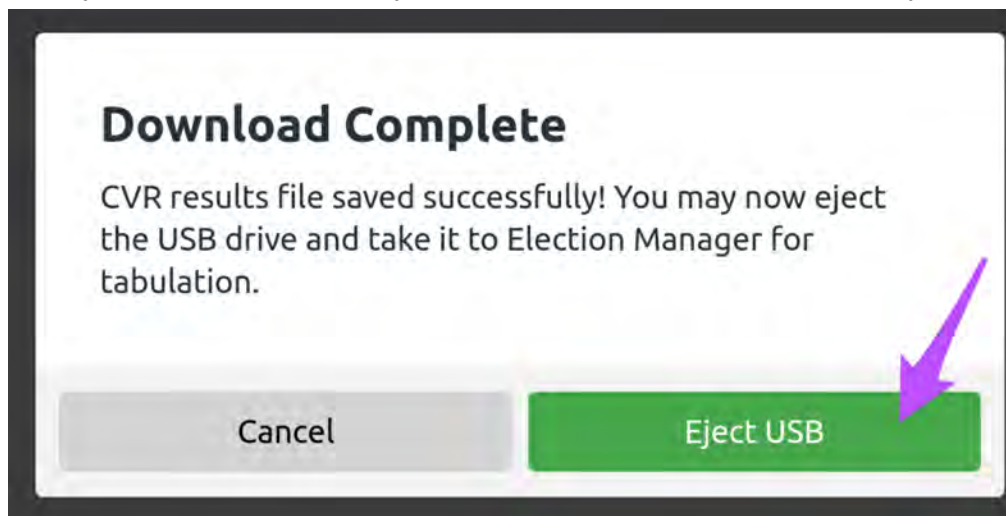
Then, you can physically remove the USB stick that now holds the CVR file.

All tabulation functionality in VxAdmin is available within the Tally tab. Click Tally to access the tally tab and then click Import CVR Files:
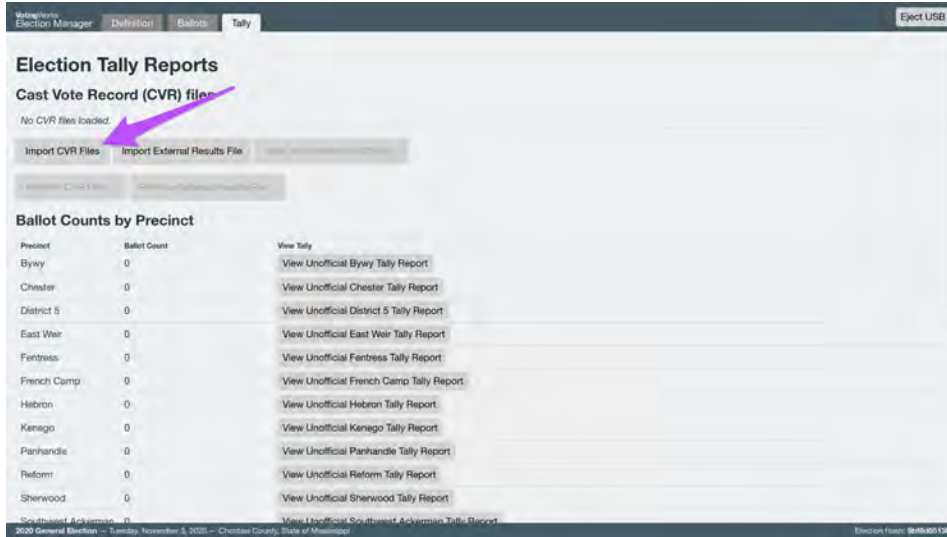
You'll be prompted to insert a USB stick if you haven't already. The dialog will show you all CVR files saved on the USB Drive. Select the right file (live election, correct number of ballots, correct time.)
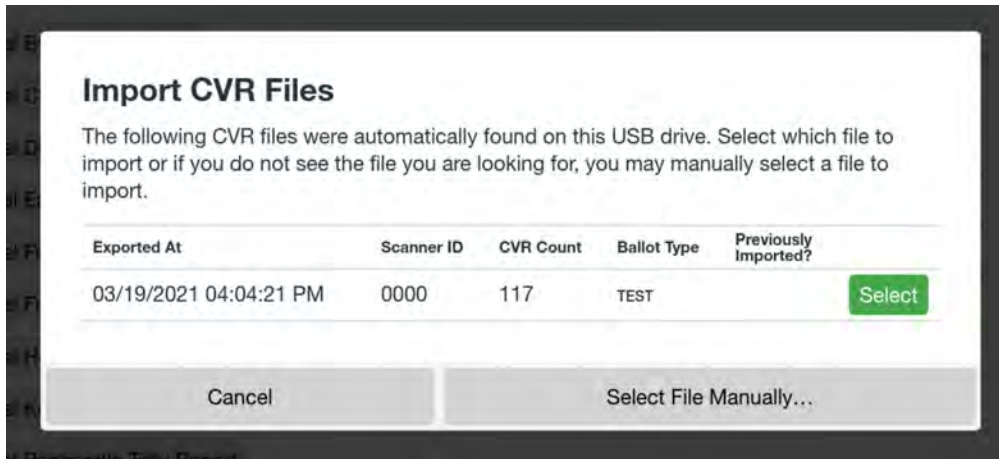
When imported, confirm that the presented file name, CVR count, and precinct(s) are as expected. You may also review the ballot count by precinct and view any unofficial tally reports as desired.

After importing your CVR file(s), scroll to the **Total Ballot Count** and click `View Unofficial Full Election Tally Report`.

Click `Print Report` to print results or `Save Report as PDF` to save the election tally to a USB drive.
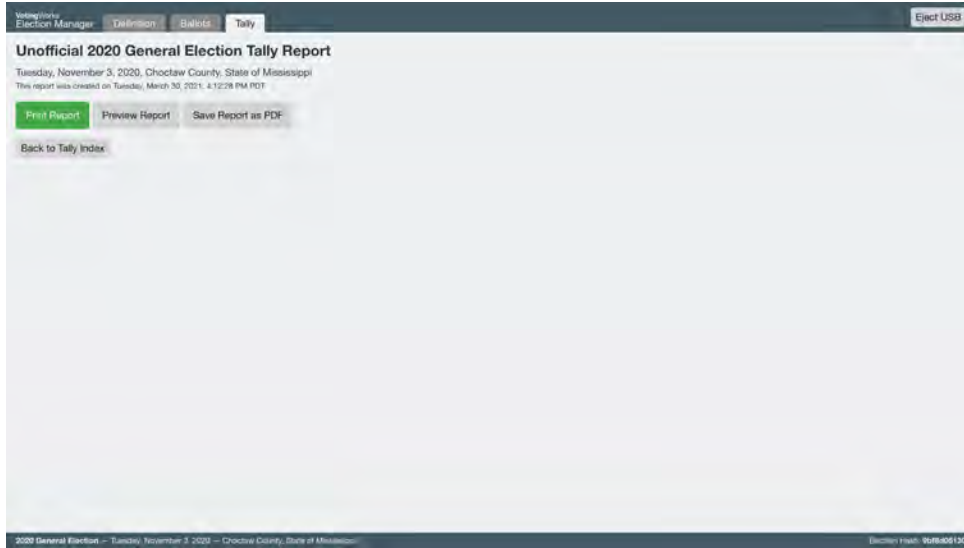
The printed report should look like the image below with the election name and the VotingWorks logo:
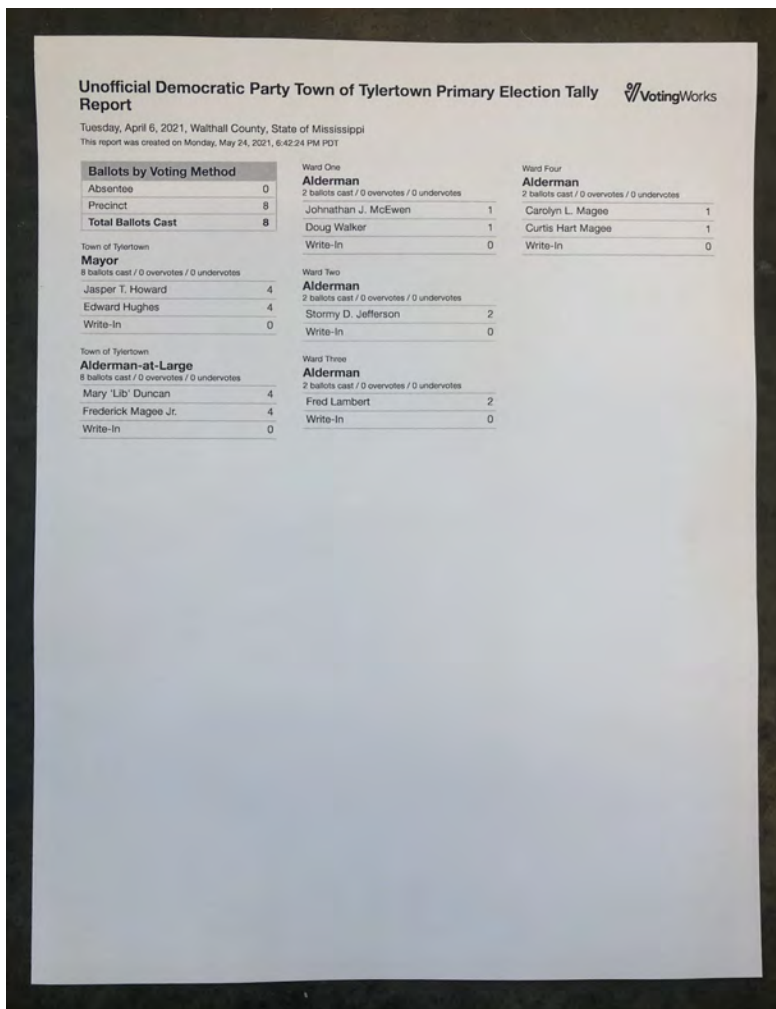
Results can also be exported as a CSV file to USB by clicking the Save Results File button on the Tally screen:
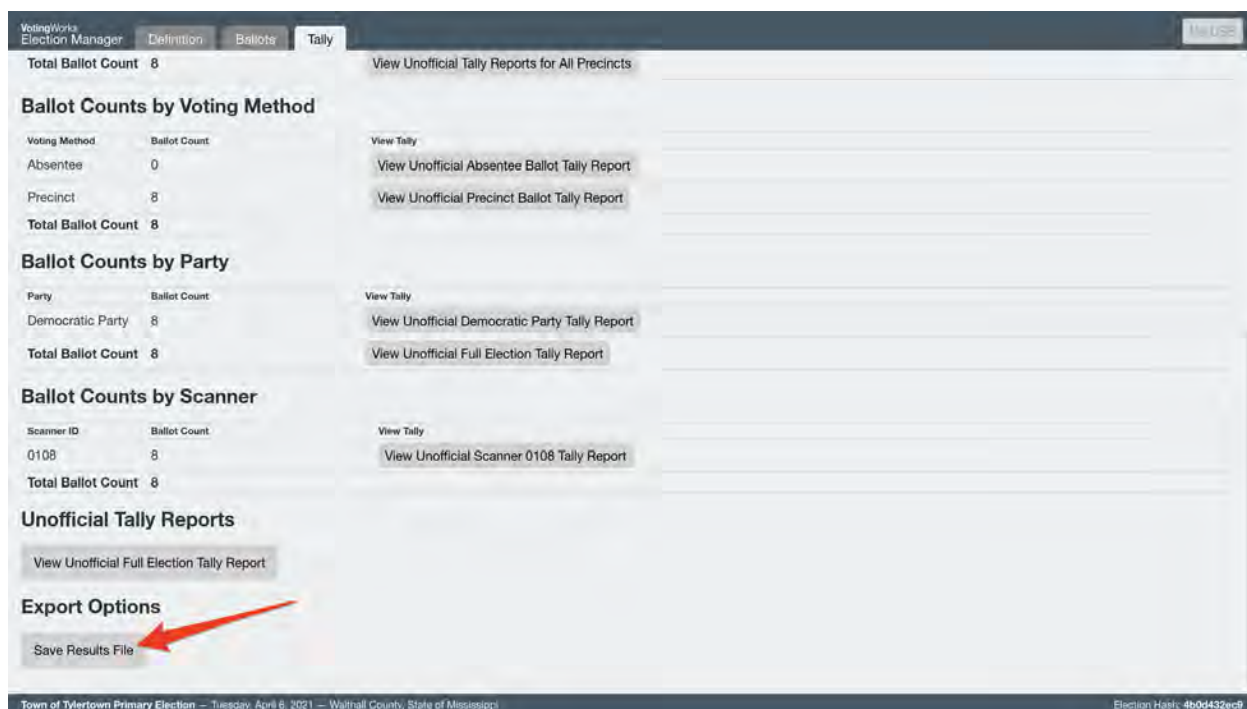
5.8. Securing audit logs and back-up records

All components enable administrators to save audit logs to USB drives for further analysis as desired.

Backup records of scanning data including ballot images can be generated on VxCentralScan. To export a backup, navigate to the Advanced view and then click Export Backup. You will then navigate to the USB drive in the file dialog and save the backup .zip file. The file may take up to a few minutes to save.
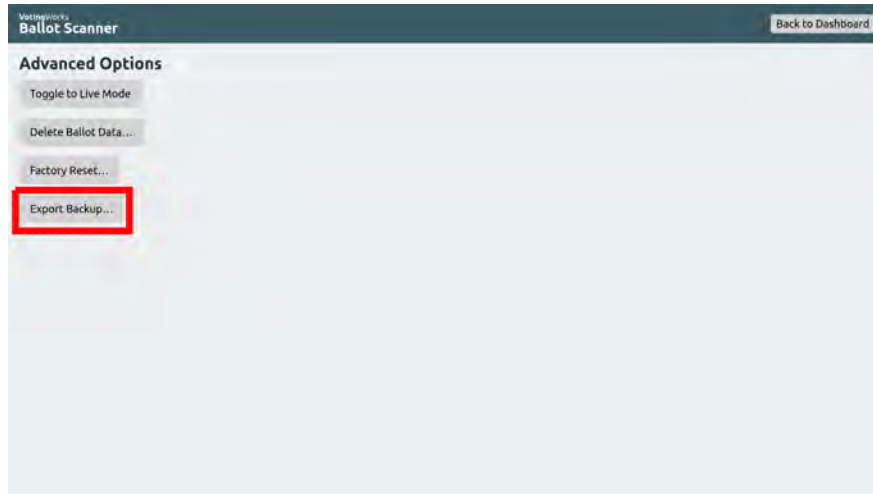
Once saved, click Eject USB and remove the USB drive from VxCentralScan.

5.9. Troubleshooting and problem resolution

6. Absentee/Mail Ballot Procedures (Central Tabulation)

For this pilot election, the system will only be used in person at a single voting location (City Hall Voting Center). There will be no absentee/mail ballots cast as part of the pilot.

7. Semi-Official Canvass Tabulation and Reporting

VotingWorks-tabulated results will not be included in the Official Canvass for this pilot.

VotingWorks ballots are copied onto Dominion-formatted ballots and scanned on Dominion equipment for semi-official results. The cast vote record or results reports can be compared to VotingWorks results reports for these ballots.

8. Official Canvass and Post-Election Procedures

VotingWorks-tabulated results will not be included in the Official Canvass for this pilot.

VotingWorks ballots are copied onto Dominion-formatted ballots and scanned on Dominion equipment for official results. The cast vote record or results reports can be compared to VotingWorks results reports for these ballots.

9. Manual Recount procedures

California Elections Code section 19209 requires that either a partial or full risk-limiting audit depending on whether all ballots for a given contest are cast on the pilot voting system. California Elections Code further specifies that "each contest" conducted either entirely or partially on the pilot voting system needs to be audited.

Ballots marked using a VotingWorks ballot marking device will be duplicated onto Dominion ballots before tabulation. If required, VotingWorks can conduct a partial risk-limiting audit on all VotingWorks marked ballots in the form of a full hand-tally and the full hand-tally results can optionally be compared to the results generated from VxCentralScan tabulation of VotingWorks ballots.

10. Security

10.1. Physical security of system and components

All components should be stored in their respective cases when not in use. These components should be kept in a room for which access is limited to only authorized personnel. For additional physical security, all component cases include two attachment points for any standard padlock and/or tamper-evident seal. VotingWorks recommends that components are stored with seals applied for ease of access monitoring.

10.2. Logical security of system and components

10.2.1. Essential and non-essential services and ports

VotingWorks system software is installed by VotingWorks personnel. All non-essential services and ports are disabled at the point of software installation. Users are unable to override the disabling of non-essential services and ports.

10.2.2. User-level security

VotingWorks systems have two roles: Admin and Poll Worker.

VotingWorks central system components are accessed using an Admin Card and associated 6-digit PIN. VotingWorks provides a pre-encoded Admin Card with the installed software and communicates the PIN to an election administrator through a secure channel. VotingWorks recommends that election administrators update the PIN for the provided Admin Card upon receipt of equipment using VxAdmin. Administrators can program additional Admin Cards using VxAdmin as desired.

VotingWorks precinct system components are accessed using a Poll Worker Card and associated 6-digit PIN. Election administrators program Poll Worker Cards using VxAdmin as desired.

10.2.3. Anti-virus protection

VotingWorks system software is installed by VotingWorks personnel and systems are configured to prevent any access to the internet.

For anti-virus protection, VotingWorks components present election officials a time-based one-time-password (TOTP) known as the *system authentication code* that election administrators can compare at any point in time to establish that no firmware or software has been modified on any components since the point of installation and configuration.

10.2.4. Procedures for verifying, checking, and installing essential updates and changes

No updates will be applied to the system during the course of the pilot.

If updates were to be performed, VotingWorks would perform a system update on behalf of the customer. After updating, the expected VxSuite version would be presented on components and election administrators could utilize the system authentication code to confirm its validity.

10.2.4.1. Audit records for the changes showing what, when, who, and why

No updates will be applied to the system during the course of the pilot.

If updates were to be performed, VotingWorks would provide a log of what software was updated, when it was updated, who performed the update, and why the update was performed.

10.2.4.2. Installation procedures for those updates which would normally be installed using an internet connection

No updates will be applied to the system during the course of the pilot.

If updates were to be performed, VotingWorks would perform the update on behalf of the jurisdiction by authorized VotingWorks personnel. These updates would be applied entirely offline with system images transferred via USB drives.

10.2.4.3. Acceptance testing after the installation.

No updates will be applied to the system during the course of the pilot.

If updates were to be performed, VotingWorks would recommend that acceptance testing be performed as described in section 3.4 Acceptance Testing.

10.3. Security procedures for central processing

When in use, access to VxCentralScan is provided via an Admin Card and associated 6-digit PIN and can only be accessed by authorized administrators. Only authorized administrators should have physical access to ballots and VxCentralScan when used for central scanning.

After scanning ballots, cast vote records from VxCentralScan are exported to a USB drive by an election administrator for import into VxAdmin.

When not in use, VxCentralScan should be stored in its respective case when not in use. This component should be kept in a room for which access is limited to only authorized personnel. For additional physical security, the VxCentralScan case includes two attachment points for any standard padlock and/or tamper-evident seal. VotingWorks recommends that VxCentralScan is stored with seals applied for ease of access monitoring.

10.4. Security procedures for polling places

VotingWorks precinct system components are accessed using a Poll Worker Card and associated 6-digit PIN for polling place functions such as opening or closing polls.

The only polling place equipment used for the pilot will be VxMark, which does not require any application of tamper-evident seals during the course of voting. Poll workers should document the seals removed or applied from VxMark at the point of polls opening and closing if using seals during storage.

10.5. Audit trails

All VotingWorks components enter events into an audit log per the event logging requirements specified in the Voluntary Voting System Guidelines 2.0. An authorized administrator using an Admin Card can save these audit logs to a USB drive for further analysis as desired.

11. Biennial Hardware Certification and Notification

Biennial hardware certification and notification will not apply to the one-time open-source voting system pilot.

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF ELECTIONS

John Arntz, Director

BMD Ballot Remake Procedures

Table of Contents

I. Introduction and Background

Thank you for joining the Ballot Remake Team! The remaking of ballots is a critical process and the Department expects everyone on the team to become thoroughly familiar with the procedures and guidelines described in this document as well as those in the *Ballot Adjudication Guide*. Be sure to ask your lead for help whenever you are unsure how to proceed or if your team disagrees about how to interpret a particular votemark or remake a particular ballot.

State elections law requires a "duplicate" be made of any ballot unscannable by scanning machines such that all valid votes can be counted. The law also requires matching serial numbers be affixed to the original and remade copies of the ballot so they can be compared as necessary.

Ballots that are physically damaged, including those that are torn, bent, folded, dirty, or damp ballots, and ballots on non-standard paper, such as those cast by military and overseas voters and returned by fax, must be remade.

Department staff must also remake ballots containing invalid votes. For example, a voter who is registered in one precinct but who votes in another may cast a provisional ballot (PV) that includes contests in which the voter was not entitled to vote. In such a case, the Department will remake the ballot, so that only those votes the voter was entitled to cast will be counted.

The Department uses a Ballot-Marking device (BMD) to remake ballots.

Prior to remaking live ballots, each remake team will receive specialized training on interpreting voter intent and a copy of the *Ballot Adjudication Guide* as well as this guide.

For the November 2022 election, the Department will be doing a pilot program with the VotingWorks voting system. The Department will offer VotingWorks accessible ballot marking device (VxMark) for voters to mark their ballots. Ballots that are cast on the VxMark will require a remake on the BMD.

II. Remake Process Overview

Every remake team will consist of a "Ballot Marker" and a "Ballot Caller" working together.

After a lead assigns a batch of original ballot to a team, the Ballot Marker will begin marking and printing out each ballot in the batch using a BMD device. The Ballot Caller reads from the ballot the contest names and the corresponding votes, while the Ballot Marker visually verifies this information and marks these votes on the ICX machine.

All valid votes on each remade ballot must match the original ballot exactly, including undervotes and write-ins. The Ballot Marker will also confirm that all overvoted contests have been remade as blank contests (an overvoted contest must be remade as a blank contest because the BMD does not permit a user to overvote a contest and the end result, no valid vote, is the same.)

Once the ballot has been correctly remade, the Ballot Caller will write matching alphanumeric serial numbers on the original ballot and the remake printout in green ink. Such information includes type of ballot, precinct number, initials of the team members, date, and number of remake ballot in incremental order.

If the Ballot Marker made a mistake, the Ballot Marker will write the word "Spoil" across the printout and redo the remake.

For quality control, the supervisor will randomly select remade ballots for review, checking in with teams and reviewing any errors as necessary.

Once a batch of ballots has been successfully remarked, printed, and successfully reviewed, the original ballots will be separated from the remake printouts, the printouts transferred to the tabulation team for processing on ICC scanners, and both originals and remake printouts will be stored in secure rooms in the Department of Elections until certification. After certification the ballots are transferred to the Department's warehouse for record retention.

III. Preparing BMD Device for Remake

To prepare BMD device for remake, the Ballot Marker will:

1. Ask the supervisor for a poll worker key card.
2. Insert the key card into the bottom of a BMD device:
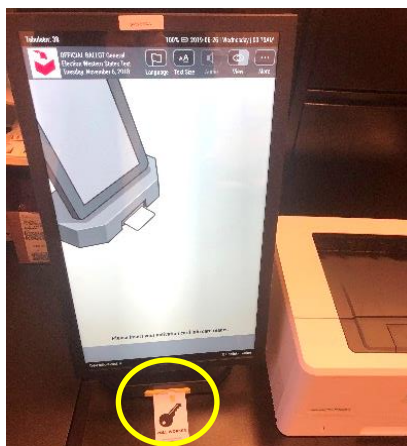
3. Enter the full ballot activation code (precinct number).

4. Tap the "Activate" button.

5. Remove the poll worker key card.
6. Select "English" in the language menu.

IV. Remaking a Ballot on the BMD Device

To remake a ballot, the Ballot Marker will:

1. Review all votemarks(s) for the first contest on the original ballot.
2. Referring to the *Adjudication Guide,* note the applicable rule(s).

3. Copy all valid votes for the first contest onto the BMD ballot.
4. Repeat this process (1-3) for all contests on the original ballot.
5. Tap "Review" and double check all contests and all votes.
6. Tap "Print Ballot" and "Cast Your Ballot," then get the printout.
7. Verify the precinct number on the printout matches the one on the original. (If not, write the word "Spoil' across the printout, place it in the "Spoiled" tray, and ask your lead for assistance.)

DEMONSTRATION BALLOT
City and County of San Francisco

Instructions to Voters
1. If you make a mistake, contact a Poll Worker before casting your ballot. Do not cross out or erase errors.
2. To cast your ballot, deposit it in the tabulator.

1101

FAVORITE LANDSCAPE
Rank 1: Vote for OCEAN
Rank 2: Vote for MOUNTAIN
Rank 3: Vote for GLACIER
Rank 4: Vote for FOREST

8. Write your first and last name initials neatly on the bottom of the remake printout.
9. Paperclip the original ballot to the printout and place the pair in the tray labeled "For Review."

V. Remaking a VotingWorks Ballot

During vote-by-mail processing, ballot processors are instructed to place all non-standard ballots in a review bin. Lead staff will sort through the review bin and gather all VotingWorks ballots for remake. Lead staffs will also record the number of VotingWorks ballots collected each day in a record retention log.

Ballot Marker and Ballot Caller will follow these steps to remake a VotingWorks ballots on the BMD:

1. Obtain VotingWorks ballots from your supervisor.
2. Enter precinct number listed on the VotingWorks ballot on the BMD.
3. Read each contest name and voter selection on the VotingWorks ballot.
4. Mark the corresponding selections onto the BMD device
5. Verify the selection on the review screen and make corrections as necessary.
6. Tab "Print Ballot", then "Cast Your Ballot", then get the printout.
7. Verify the precinct number on the printout matches the original VotingWorks ballot.
   a. If not, spoil the printed BMD ballot by writing "spoiled" across front and back, place it in the "Spoiled" box, and start again.
8. Serialize the original VotingWorks ballot and ballot printout.

VI. Reviewing a Remade Ballot

To review a remade ballot for accuracy, the Ballot Marker will:

1. Review all votemarks(s) for the first contest on the original ballot.
2. Referring to the *Adjudication Guide,* note the applicable rule(s).
3. Confirm all valid votes for the first contest are on the remade ballot printout.
4. Repeat this process (1-3) for all contests on the original ballot.

5a. If there are NO mistakes in ANY of the contests:

   a) Write the serial number on the original and the printout (see Section VI).
   b) Paper clip the original back to the printout, with the printout on top.
   c) Place the successfully reviewed ballot in the tray labeled "Completed".

5b. If there are ANY mistakes in ANY of the contests:

   a) Use a marker to highlight the inaccurate votemark(s).
   b) In large print, write the word "Spoil" across the printout.
   c) Paperclip the spoiled and original ballots back together.
   d) Place the ballot in the Ballot Marker's "For Remake" tray.

VII. Creating Serial Numbers

Mark each pair of successfully reviewed original and remake ballot printouts with a serial number composed of:

1. "VBM" or "PV WBT" or "VW" (vote-by-mail or provisional wrong ballot type or VotingWorks);
2. Ballot precinct number;
3. Initials of the Ballot Verifier;
4. Today's date in dd/mm format; and
5. Daily remake number (i.e., team's fifth remake of the day=5).

VIII.   Quality Control

The quality control (QC) team will randomly select remade ballot printouts from the "Completed" tray and compare them to attached original ballots to ensure valid votemarks, and only valid votemarks, have been copied correctly. Ballots that have in fact been remade correctly will be processed, with remake printouts being transferred for scanning and tabulation and both originals and remakes stored at the Department's warehouse.

If the QC team finds a ballot that has been remade incorrectly, they will review the error(s) with the responsible remake team in detail, referring to applicable rules in the *Adjudication Guide* and explaining how prevent similar mistakes in the future.

California Code of Regulations

Title 2. Administration
Division 7. Secretary of State
Chapter 2. Risk Limiting Audits

20110. General Provisions.

1. The purpose of this chapter is to establish guidelines and procedures for an elections official to conduct a risk-limiting audit in accordance with the requirements of Division 15, Chapter 4, Article 5.5 of the Elections Code.
2. Pursuant to Elections Code section 15367(a)(1), commencing with the statewide general election held on November 3, 2020, the elections official conducting an election may conduct a risk-limiting audit during the official canvass of any election.
3. A participating county may exclude any contest that has been subject to a risk-limiting audit from the one-percent manual tally required by Section 15360.

Note: Authority cited: Section 12172.5, Government Code; Section 15367, Elections Code. Reference: Sections 15150, 15360 and 15367, Elections Code.

20111. Definitions.

As used in this Chapter, the following terms have the following meanings:

1. "Ballot" shall have the meaning set forth in Elections Code section 15366(a). A validly cast ballot is any ballot that is eligible to be counted in the canvass of an election, as specified in Division 15, Chapters 2 through 4 of the Elections Code.
2. "Ballot card" means a card upon which is printed, or identified by reference to the ballot, the names of candidates for nomination or election to one or more offices or the ballot titles of one or more measures. A ballot may be comprised of multiple ballot cards.
3. "Ballot-level comparison audit" shall have the meaning set forth in Elections Code section 15366(b). In performing this type of risk-limiting audit, the elections official shall export a cast vote record from the voting system for every cast ballot card and cast voter verified paper audit trail containing the contest(s) under audit. The cast number of cast vote records must be exported in a way that enables the elections official to determine whether the number of cast vote records matches the number of ballot cards physically accounted for in the ballot manifest and to find the particular physical ballot card or voter-verified paper audit trail associated with each cast vote record.
4. "Ballot manifest" means a detailed description of how the ballot cards are stored and organized, listing at minimum the unique physical location of each and every ballot card cast in the election in such a way that individual ballot cards or batches of ballot cards can be found, retrieved, and examined manually.
5. "Ballot polling audit" shall have the meaning set forth in Elections Code section 15366(c). In examining voter markings, the audit board shall perform a hand-to-eye, human interpretation of voter markings but shall not compare those interpretations to the corresponding cast vote records.

6. "Batch comparison audit" means a type of risk-limiting audit in which the audit board examines voter markings on ballot cards, in randomly selected batches of ballot cards. This type of risk-limiting audit involves the following steps:
    1. The elections official divides the ballot cards cast in the contests under audit into physically identifiable batches, such as the ballot cards cast in different precincts or vote centers.
    2. The elections official exports vote subtotals from the voting system for each such physically identifiable batch of cast ballot cards.
    3. The elections official verifies that the number of ballot cards according to these subtotals does not exceed the number of ballot cards physically accounted for in the ballot manifest.
    4. The elections official compares some or all of those batch-level subtotals to subtotals derived by hand-to-eye, human interpretation of voter markings from the corresponding ballot cards marked by the voter or the voter verified paper audit trail, as defined by Elections Code section 19271.
7. "Cast vote record" shall have the meaning set forth in Elections Code section 15366(d). The cast vote record shall be generated by the voting system.
8. "Elections official" shall have the meaning set forth in Elections Code section 320.
9. "Electoral outcome" shall have the meaning set forth in Elections Code section 15366(e).
10. "Hybrid audit" means a type of risk-limiting audit which involves, at a minimum, the following steps:
    1. The elections official divides the ballot cards cast in the contests under audit into physically identifiable batches, such as the ballot cards cast in different precincts or vote centers or ballot cards processed by different voting equipment.
    2. The elections official exports vote subtotals or cast vote records from the voting system for some of those batches of cast ballot cards from paragraph (1) and exports, at a minimum, aggregate results for the remaining batches of ballot cards.
    3. The elections official verifies that the number of ballot cards according to the subtotals in paragraph (2) does not exceed the number of ballot cards physically accounted for in the ballot manifest.
    4. The audit board compares some or all of the vote subtotals or cast vote records exported in paragraph (2) to a tabulation or interpretation derived by hand-to-eye, human interpretation of voter markings from the corresponding ballot cards marked by the voter, as defined by Elections Code section 19271.
    5. The audit board examines some or all of the ballot cards in the remaining batches from paragraph (2) and performs a hand-to-eye, human interpretation of voter markings from the corresponding ballot cards marked by the voter, as defined by Section 19271.
11. "Public notice" means the release of information to the public through two or more of the following readily available communication channels: a website update, a social media post, an email list mailing, a press release, and a notice posted at an office open to the public.
    1. Elections officials are encouraged to maintain an email mailing list of persons who would like to be notified about risk-limiting audits. If an elections official maintains such a list, public notice for the purposes of this Chapter must include sending an email to all persons on this list.
12. "Random seed" means a randomly generated number consisting of at least 20 digits that is used to generate a random number sequence to select ballot cards or batches of ballot cards for audit.
13. "Risk-limiting audit" or "RLA" shall have the meaning set forth in Elections Code section 15366(f).
14. "Risk-limiting audit software tool" or "RLA software tool" means software that can perform any of the audit types described in Section 20112. Pursuant to Elections Code section 15367(b)(2)(E), the

algorithms and source code of the RLA software tool shall be disclosed to the public. The Secretary of State shall effect this disclosure by posting the source code, or a link to the source code hosted on another publicly available website, on its website.

15. "Voting system" shall have the meaning set forth in Elections Code section 362.

Note: Authority cited: Section 12172.5, Government Code; Section 15367, Elections Code. Reference: Sections 320, 362, 15302, 15366, and 15367, Elections Code.

20112. Audit Types.

The elections official shall use an RLA software tool provided by the Secretary of State to perform one of the following:

1. A ballot-level comparison audit, with a five percent risk limit.
2. A ballot polling audit, with a five percent risk limit.
3. A batch comparison audit, with a five percent risk limit.
4. A hybrid audit, with a five percent risk limit.

Note: Authority cited: Section 12172.5, Government Code; Section 15367, Elections Code. Reference: Section 15367, Elections Code.

20113. Audit Initiation.

1. If the audit commences after all validly cast ballot(s) within the jurisdiction have been tabulated, the audit shall be conducted in a single phase as described in section 20121.
2. If the audit commences before all validly cast ballot(s) within the jurisdiction have been tabulated, it shall be conducted in two phases as described in section 20122.

Note: Authority cited: Section 12172.5, Government Code; Section 15367, Elections Code. Reference: Section 15367, Elections Code.

20114. Contests to be Audited.

Participating counties shall conduct a risk-limiting audit on one or more contests fully contained within the county's borders. Participating counties may conduct opportunistic reviews of contests not subject to audit, including cross-jurisdictional contests, from the same sample of ballot cards by entering voter selections from those contests into the RLA software tool. The results of opportunistic reviews shall not be considered confirmation to any risk limit of the outcomes of these contests.

Note: Authority cited: Section 12172.5, Government Code; Section 15367, Elections Code. Reference: Sections 15150 and 15367, Elections Code.

20115. Audit Board Selection.

1. The elections official shall appoint an audit board(s) to perform the duties specified in section 20123 that meets the following criteria:
    1. Audit boards shall consist of no fewer than three members. At all times, at least one member shall serve as an observer of the audit and may not make determinations of voter choices. At least two members, excluding the observer, shall make determinations of voter choices for each ballot card examined by the audit board. Audit board members may rotate roles.
    2. Audit board members may be comprised of election office full-time or temporary staff, volunteers or a combination of staff and volunteers. When feasible, audit board members involved in adjudicating voter intent during the tabulation shall not be involved in ascertaining voter intent during the audit.
    3. Prior to conducting the audit, each member of an audit board shall complete and sign a declaration of intent to faithfully discharge audit board duties. Each audit board member shall do so in the presence of the elections official on a form provided by the elections official. The elections official shall countersign the declaration. The declaration shall be in the following form:
    4. No fewer than two members of the audit board will be in possession of ballot cards at any time, including during the ballot card retrieval process.
2. If the elections official appoints multiple audit boards, only one audit board shall evaluate each ballot card.

Note: Authority cited: Section 12172.5, Government Code; Section 15367, Elections Code. Reference: Section 15367, Elections Code.

20116. Public Education on Risk-Limiting Audits.

1. Prior to conducting an RLA, the elections official shall provide public notice that includes descriptions of how the process will be conducted, the difference between 1% manual tally and an RLA, and the methods for ensuring ballot security. The elections official shall also provide information regarding the process for selection of their audit boards and procedures used to ascertain voter intent manually.
2. The Secretary of State shall make the same materials described in (a) above available on its website.

Note: Authority cited: Section 12172.5, Government Code; Section 15367, Elections Code. Reference: Section 15367, Elections Code.

20117. Ballot Manifest and Ballot Handling.

1. The elections official shall maintain an accurate ballot manifest, created without reliance on the voting system. The ballot manifest shall uniquely identify the storage container in which each validly cast ballot card is stored after tabulation.

2. The ballot manifest shall be in the format required by the RLA software tool in the California Post-Election Risk-Limiting Audit Ballot Manifest Format document dated October 15, 2019, which is hereby incorporated by reference, and which the Secretary of State shall post on its website.

3. If the audit commences after all validly cast ballot(s) have been tabulated, the elections official shall create only one ballot manifest.

4. If the audit commences before all validly cast ballot(s) have been tabulated, the elections official shall create two ballot manifests, one before each phase of the audit: an initial ballot manifest that includes all ballot cards that have been tabulated before the first phase of the audit starts, followed by the final ballot manifest including all tabulated ballot cards.

5. The content of the initial ballot manifest shall not be changed in the final manifest; accordingly, no ballot cards shall be added to the containers included in the initial manifest. Instead, the tabulated ballot cards that are not included in the initial ballot manifest shall be stored in new containers, and the final ballot manifest shall include all the rows in the initial ballot manifest plus a row for each new container. Example: 1,000,000 ballot cards were cast in the county, of which 900,000 had been tabulated when the elections official decided to start the first phase of a two-phase audit. The initial ballot manifest includes those 900,000 ballot cards. Ultimately, 97,000 of the remaining 100,000 ballot cards are determined to be validly cast. These ballot cards are tabulated and are stored in new containers. The final ballot manifest consists of the initial ballot manifest plus additional rows that describe the new containers in which these 97,000 ballot cards are stored, for a total count of 997,000 ballot cards in the ballot manifest for the second audit phase.

Note: Authority cited: Section 12172.5, Government Code; Section 15367, Elections Code. Reference: Section 15367, Elections Code.

20118. Chain of Custody.

1. The elections official shall maintain and document uninterrupted chain of custody for each ballot card and each ballot storage container. Chain of custody logs should, at a minimum, include an identifying number of each ballot storage container and the number of a tamper-evident seal affixed to each ballot storage container. Chain of custody logs shall be available for public inspection after the canvass of the election pursuant to Division 15, Chapters 2 through 4, of the Elections Code is complete.

2. The elections official shall secure and maintain in sealed ballot containers all tabulated ballot cards.

3. The elections official shall establish written procedures to ensure the security, confidentiality, and integrity of any ballot cards, cast vote records, or any other data collected, stored, or otherwise used pursuant to this section. These procedures shall be published on its website at least five days in advance of the audit.

Note: Authority cited: Section 12172.5, Government Code; Section 15367, Elections Code. Reference: Section 15367, Elections Code.

20119. Data Publication Prior to Audit.

1. When the elections official submits data to the RLA software tool before an audit phase begins they shall also publish the same data on their website before continuing with the audit. The elections official shall also publish any changes made to such data.
2. Subject to Elections Code section 2194(a), cast vote record data shall not be posted to the elections official's website, but shall be made available to the public at the location where the audit is being conducted. The cast vote records made available to the public must include all contests selected for audit, and may also include cast vote records for any other contest in the election not subject to the audit.

Note: Authority cited: Section 12172.5, Government Code; Section 15367, Elections Code. Reference: Sections 2194 and 15367, Elections Code.

20120. Random Seed.

1. The random seed shall be generated in order by sequential rolls of one or more fair 10-sided dice.
2. The random seed shall be generated in a public meeting as follows:
    1. The elections official shall give at least five days public notice of the public meeting before generating the first random seed and public notice at least one hour before generating a second random seed, should a second random seed be needed when conducting a two-phase audit.
    2. The elections official shall randomly select members of the public who attend the meeting to take turns rolling a die. At the election official's discretion, the elections official may designate one or more staff members to take turns rolling a die.
    3. In the event that no members of the public attend the meeting, the elections official may designate someone or themselves to roll the die.
    4. Members of the public attending the public meeting shall be permitted to video record or photograph the random seed generation.
3. After the random seed is generated, the elections official shall provide public notice of the random seed.
4. The random seed shall be entered into the RLA software tool as provided in sections 20121(d) and 20122(e).

Note: Authority cited: Section 12172.5, Government Code; Section 15367, Elections Code. Reference: Section 15367, Elections Code.

20121. Audit Procedures for Single-Phase Audit.

1. The elections official conducting an RLA after all ballot cards cast within the jurisdiction have been tabulated and reported shall enter the following information into the RLA software tool:
    1. The ballot manifest for all ballot card(s);
    2. The results for all ballot card(s) tabulated;
    3. For ballot-level comparison audits, the cast vote records for all ballot card(s) tabulated;

4. For batch comparison audits, vote totals from the voting system for each contest being audited for each batch; and

5. For hybrid audits, all vote subtotals or cast vote records that were exported pursuant to paragraph (2) of subdivision (j) of Section 20111.

2. If the RLA software tool identifies any inconsistencies in the information entered under subdivision (a), the elections official shall, if possible, resolve the inconsistencies before the audit proceeds and note the inconsistencies and their cause(s) in the final audit report in section 20125.

3. After the data have been submitted under subdivisions (a) and (b), the elections official shall generate a random seed pursuant to section 20120.

4. The elections official shall enter the random seed into the RLA software tool. The RLA software tool will generate a list of particular ballot card(s) or batches of ballot card(s) from the ballot manifest to examine manually.

5. The elections official may at any point decide to conduct a full manual tally of any contest(s) whose outcomes have not yet been confirmed by the RLA. In the event that the elections official conducts a full manual tally, the RLA of that contest shall be suspended. Such a manual tally shall follow the procedure specified in Elections Code section 15290.

Note: Authority cited: Section 12172.5, Government Code; Section 15367, Elections Code. Reference: Sections 15290 and 15367, Elections Code.

20122. Audit Procedures for Two-Phase Audit.

1. An elections official conducting a two-phase audit under subdivision (d) of section 20117 shall do so in accordance with this section.

2. In the first phase of the audit, the elections official shall enter the following information into the RLA software tool:
    1. The initial ballot manifest for all ballot card(s) tabulated as described in subdivision (d) of section 20117;
    2. The results for all ballot card(s) tabulated that are included in the initial ballot manifest;
    3. For ballot-level comparison audits, the cast vote records for all ballot card(s) tabulated that are included in the initial ballot manifest;
    4. For batch comparison audits, vote totals from each contest being audited for each batch;
    5. For hybrid audits, all vote subtotals or cast vote records that were exported pursuant to paragraph (2) of subdivision (j) of Section 20111; and
    6. The maximum number of ballot cards that remain to be tabulated.

3. If the RLA software tool identifies any inconsistencies in the information entered under subdivision (b), the elections official shall, if possible, resolve the inconsistencies before the audit proceeds and report the inconsistencies and their cause(s) in the final audit report in section 20125.

4. After the data have been submitted under subdivisions (b) and (c), the elections official shall generate the first random seed pursuant to section 20120.

5. The elections official shall enter the first random seed into the RLA software tool. The RLA software tool will randomly generate a list of particular ballot card(s) or batches of ballot card(s) from the ballot manifest to examine manually.

6. In the second phase of the audit, the elections official shall enter the following information into the RLA software tool:

1. The final ballot manifest for all ballot card(s) tabulated as described in subdivision (d) of section 20117;
2. The results for all ballot card(s) tabulated that are included in the final ballot manifest;
3. For ballot level comparison audits, the cast vote records for all ballot card(s) tabulated;
4. For batch comparison audits, vote totals from each contest being audited for each batch; and
5. For hybrid audits, all vote subtotals or cast vote records that were exported pursuant to paragraph (2) of subdivision (j) of Section 20111.

7. If the RLA software tool identifies any inconsistencies in the information entered under subdivision (f), the elections official shall, if possible, resolve the inconsistencies before the audit proceeds and report the inconsistencies and their cause(s) in the final audit report in section 20125.

8. After the data have been submitted under subdivisions (f) and (g), the elections official shall generate the second random seed pursuant to section 20120.

9. The elections official shall enter the second random seed into the RLA software tool. The RLA software tool will identify whether further auditing is required to meet the risk limit. If further auditing is required, the RLA software tool will randomly select additional particular ballot card(s) from the final ballot manifest to be examined manually.

10. The elections official may at any point decide to conduct a full manual tally of any contest(s) whose outcomes have not yet been confirmed by the RLA. In the event that the elections official conducts a full manual tally, the RLA of that contest shall be suspended. Such a manual tally shall follow the procedure specified in Elections Code section 15290.

Note: Authority cited: Section 12172.5, Government Code; Section 15367, Elections Code. Reference: Sections 15290 and 15367, Elections Code.

20123. Ballot Retrieval and Manual Examination.

1. The audit board shall locate and retrieve, or observe the location of and retrieval by elections official or election staff of, each randomly selected ballot card from the appropriate storage container. The audit board shall verify that the seals on the appropriate storage containers are those recorded on the applicable chain of custody log.

2. The audit board shall examine each randomly selected ballot card. If the selected ballot card was duplicated prior to tabulation, the audit board shall retrieve the original ballot card and report how the original (rather than the duplicate) was marked.

3. The audit board shall interpret voter markings on ballot cards selected for audit in accordance with Elections Code section 15154. If the audit board members cannot unanimously agree on the voter's intent, they shall indicate their disagreement in the final report in section 20125. They shall then notify the elections official of the disagreement, who shall arbitrate the issue. The elections official may:
   1. Instruct the audit board members to replace the ballot card with another ballot card, selected at random, that contains the same contests as the previously selected ballot card;
   2. Instruct the audit board members to submit to the RLA software tool that no consensus can be reached on the voter choices; or
   3. Make a final determination of the voter markings and instruct the audit board to submit the voter markings or choices in all audited contests to the RLA software tool.

4. The audit board shall record the voters' choices in every contest on every ballot card selected for audit. Those choices shall be entered into the RLA tool.

5. The audit shall continue until the risk limit is met for every contest being audited pursuant to section 20114. If the RLA software tool specifies that further auditing is required to meet the risk limit, it will randomly select additional ballot card(s) from the ballot manifest to be examined manually. The elections official shall retrieve those additional ballot card(s) as described in (a), examine those additional ballot card(s) as described in (b) and (c), and record the voters' choices as described in (d).

6. If the elections official chooses to perform a full manual tally of one or more contests, the audits of those contests will be deemed to have met the risk limit and the results of the full manual tally shall be the official results for those contest(s).

7. The RLA shall be completed no later than the canvass deadline, as specified by Section 15372 of the Elections Code.

Note: Authority cited: Section 12172.5, Government Code; Section 15367, Elections Code. Reference: Sections 15154, 15360, and 15367, Elections Code.

20124. Public Observation and Verification of Audit.

1. The elections official shall ensure that the audit process is observable and verifiable by the public. The elections official shall:
    1. Provide at least five days public notice prior to the first phase of the RLA. This notice shall include the time and place of the random seed generation described in section 20120 and the date the ballot cards will be retrieved and manually examined.
    2. Describe in writing the process of manually examining ballot cards and the selection of the ballot cards to be used in the audit.
    3. Provide observers with an oral and/or written explanation of the RLA process, a written code of conduct for observation, and any documentation they will need for informed and effective observation.
        1. The code of conduct for observation shall be determined by the elections official. The code of conduct for observation shall explain the rights and responsibilities of observers.
        2. Documentation needed for informed and effective observation shall include but not be limited to any data the audit relies upon, including:
            1. The ballot manifest;
            2. For ballot-level comparison audits, the cast vote records;
            3. For batch comparison audits, vote totals from each contest being audited for each batch; and
            4. For hybrid audits, all vote subtotals or cast vote records that were exported pursuant to paragraph (2) of subdivision (j) of Section 20111.
    4. Disclose the methods used to select samples and to calculate the risk.
    5. Provide the public the opportunity to observe ballot cards being retrieved and examined during the audit.
    6. Provide the public the opportunity to observe the voters' marks on every audited ballot card during the audit.
2. Observers may ask questions of the audit board provided they do not interfere with the conduct of the audit. The elections official, at their discretion, may designate an alternate person to receive and

respond to observer questions in lieu of the audit board, and this person shall confer with the audit board to obtain answers to questions to which this person does not know the answers.

Note: Authority cited: Section 12172.5, Government Code; Section 15367, Elections Code. Reference: Section 15367, Elections Code.

20125. Certification of Contest Results and Reporting of Audit Results.

1. The elections official conducting an RLA shall report the results of the audit in the certification of the official canvass of the vote specified by Section 15372 of the Elections Code. The report shall contain the following:
    1. The type of RLA conducted (e.g. ballot comparison, ballot polling, batch comparison, or hybrid);
    2. The date and time the RLA commenced and finished, and the number of rounds of sampling;
    3. A list of contests audited, with final reported results for those contests and the final measured risk for each contest;
    4. A link to the website where the ballot manifest can be found;
    5. The random seed(s) the elections official generated for use with the RLA software tool, and when and how the random seed(s) was generated;
    6. Any inconsistencies between the number of ballot cards and the number of cast vote records, or inconsistencies in the data reported by the RLA software tool, and—when possible—the reason(s) for those inconsistencies.
    7. The number of ballot card(s) examined for each contest under audit, noting whether a full manual tally was conducted. If the audit was conducted in stages or continued beyond the first sample, a description of how the sample was drawn and the number of ballot card(s) selected at each stage.
    8. Notes regarding any ballot card(s) for which the audit board could not determine the voter's intent, as described in subdivision (c) of section 20123;
    9. A link to the website where the list of the particular ballot card(s) examined can be found;
    10. For ballot-level comparison audits:
        1. The number of discrepancies between ballot card(s) and the cast vote record, and a description of each discrepancy; and
        2. A link to the website where the cast vote record file only for the ballot card(s) examined in the audit can be found;
    11. For batch comparison audits, discrepancies between batches and batch totals, and a description of each discrepancy;
    12. For opportunistic reviews of contests not subject to audit, as described in Section 20114, a list of contests reviewed and the result of the reviews.
    13. The person-hours required to prepare for the audit, and number of people involved;
    14. The person-hours required to conduct the audit, and number of people involved;
    15. The number of members of the public who observed the audit;
    16. Notes on anything unusual or problematic, or that would be useful to improve the process, or that might be of value to the Secretary of State or other elections officials; and
    17. An attestation from the elections official that the RLA was conducted in accordance with Title 2, Division 7, Chapter 2 of the California Code of Regulations.

2. The certification of the official canvass of the vote shall be conducted in accordance with Section 15372 of the Elections Code.

3. The Secretary of State shall publish any report under this section received from an elections official on its website no later than five days after the date it publishes the certification of the official canvass of the vote in accordance with Section 15372 of the Elections Code. This subdivision shall not prohibit the elections official from publishing the same report on its website.

Note: Authority cited: Section 12172.5, Government Code; Section 15367, Elections Code. Reference: Section 15367, Elections Code.

20126. Redaction of Personally Identifiable Voter Choices.

No later than the third business day following the expiration of the deadline to request a recount under Elections Code sections 15620 or 15621, or the completion of any recount, whichever is later, an elections official who conducted an RLA shall review its cast vote records file that was published and redact from the public record, but not its own files, the voter choices corresponding to any ballot susceptible to being personally identified with an individual voter.

Note: Authority cited: Section 12172.5 Government Code; Section 15367, Elections Code. Reference: Sections 15367, 15620, and 15621 Elections Code.

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF ELECTIONS
John Arntz, Director

Custody Transfer Procedures: Ballot Processing

Table of Contents

Maintaining the integrity of elections requires conscientious attention to every aspect of the elections process. An essential part of safeguarding the legitimacy of elections results is the enforcement of strict chain of custody protocols for all vital election materials. The types of election materials include VBM ballots, faxed ballots, challenged ballots (ballots with no signatures and spoiled ballots), cured ballots, non-citizen voting ballots, conditional voter ballots, and provisional ballots.

I.   Preparing a Custody Transfer Log

When ballots are transferred between Administration Division "AD", Ballot Distribution "BD", Voter Servicers "VS", Voter Data Analysis "VDA, or Warehouse "WH", division leads create a custody transfer log using the following steps:

   A.   Open the ballot custody transfer application.
   B.   Log in using your name and password.
   C.   Click on "Start New Transfer" tab and enter the following information:
   1.   Transfer Division
   2.   Return Source

D. Click on "Add Ballots" tab and enter the following information:
    1. Tray ID
    2. Transfer Reason 1
    3. Transfer Reason 2 (if necessary)
    4. Envelope ID

Transfer Number:	0921BD164
From Division:	BD
To Division:	VDA
Tray ID	
Transfer Reason 1:	No Signature
Transfer Reason 2:	
Envelope :	
Count :	0

Submit

E. Click on "Submit" tab to record the transfer information and click "Return to Transfer Details" tab to review the entered data.
F. After confirming the data is correct, click "Move to Review" tab and then click "Initiate Transfer" tab to record the transferring of ballots to another division.

Add Ballots

Show 10 entries

TrayId	Transfer Rea
12334214	No Signature

Showing 1 to 1 of 1 entries

Cancel Transfer   Move to Review

G. Click "View Summary" tab to printout two copies of the custody transfer log.
H. Sign both copies of the custody transfer logs.
I. Bring the ballots and custody transfer logs to the receiving division lead.
J. The receiver signs both copies of the custody transfer logs.
K. The receiver retains one copy for record retention and the second copy is given to the originator of the document.

II.   Scanning and Sorting of Vote-by-Mail Envelopes

Upon receipt of vote-by mail (VBM) ballots from USPS, the Agilis team uses the Department's ballot envelope sorting system (Agilis) to sort and scan the envelopes. There are two phases to the sorting of VBMs.

A. The first phase involves the Agilis capturing a digital image of the signature on each envelope for signature verification and outstacking spoiled ballots and ballots with no signature (step known as incoming scan).
   1. The Agilis sorts envelopes in batches of 400 that Agilis team members place into trays.
   2. Each tray has a cover sheet with a tray tag, that record which envelopes are sorted into that tray.
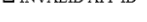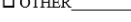
```
No Signature
Tray    60774
Pocket 5

Election:
   Pieces: 0
   Printed: 4/15/2019 12:02 PM

   First: 015005917731
   Last: 015001406661
```

0004060774

Group #: 1

----
*Fold on dotted line and place over open end of envelopes and secure with rubber band or paperclip.

Reconciliation Notes:	Count:

Envelope Extract Form

   3. BD lead transfers outstack ballots to VS or VDA for review using a custody transfer log and a manual review form to indicate the reasons for the transfer.
      a. The procedure for creating a custody transfer log is described in section I.
      b. The manual review form is a cover sheet for the VS/VDA team to identify types of outstacked envelopes.

MANUAL REVIEW

TRAY: 4801

DATE: _____ TOTAL: _____

☐ INCOMING SCAN	☐ AUDIT PASS	☐ EXTRACTION
SOURCE:	☐ CHALLENGES	☐ SPOIL
☐ MAIL		
☐ VOTING CENTER	☐ REJECTS	☐ DECEASED
☐ CURBSIDE		
☐ POLL PLACE	☐ MANUAL	☐ OTHER_____
_____		
☐ SPOIL	☐ PENDING CHALLENGES	
☐ NO SIGNATURE	☐ OTHER_____	
☐ PENDING FOR ADDITIONAL REVIEW		
☐ REJECTS		
☐ INVALID APP ID		
☐ OTHER_____		

B. After VS/VDA complete their review, envelopes are transferred to BD for a second sort using the Agilis. The second sort separates challenged and accepted ballot envelopes (step known as audit scan). A ballot is challenged if the signature on the return envelope does not match the voter's signature history in the Election Information Management System "EIMS".

1. BD lead transfers challenged envelopes to VS/VDA team for further processing using a custody transfer log and a manual review form.
2. Agilis team member assigns the accepted envelopes to a group number and a tray number using the Ballot Tracking Application:
   a. Pick up a tray of accepted envelopes and a tray header sheet as shown below:

GROUP:_____ TRAY: _0001_

Tabulator:		Station #:		
☑ Vote-By-Mail	☐ PROVISIONAL	☐ REMAKE	☐ PCT/AUX	☐ EDGE
BATCH NUMBER	BATCH SIZE (# of cards)		BATCH NUMBER	BATCH SIZE (# of cards)

   b. Log into the Ballot Tracking Application

    i.   Click the drop down menu on the "Manage" tab and click "Tray Assignment"

    ii.   Scan the tray header sheet barcode to fill the "Tray Number" field.

GROUP: _____	TRAY: __0001__
‖‖‖ barcode ‖‖‖	

Tabulator:		Station #:	

☑ Vote-By-Mail   ☐ PROVISIONAL   ☐ REMAKE   ☐ PCT/AUX   ☐ EDGE

BATCH NUMBER	BATCH SIZE (# of cards)		BATCH NUMBER	BATCH SIZE (# of cards)	

    iii.   Enter a Group number in the "Batch" field.

    iv.   Scan the tray tag barcode in the "Tag" field

```
No Signature
Tray    60774
Pocket 5
   Election:
      Pieces: 0
      Printed: 4/16/2019 12:02 PM
   First: 015005917731
   Last: 015001406661
```
‖‖‖ barcode 00040608774 ‖‖‖

Group #: 1

----

*Fold on dotted line and place over open end of envelopes and secure with rubber band or paperclip.

Reconciliation Notes:	Count:

Envelope Extract Form

    v.   Click "Submit"

Tray Assignment

2bii Tray Number : [   ]

2biii Group Number : [   ]

2biv Tag : [   ]

Count : [0]

[Submit]

III. Receiving Transfer of Ballots

Upon receiving the transfer of ballots, the recipient division lead signs the custody transfer log and verifies that the number of envelopes received matches the total recorded on the log. If the number of envelopes does not match, return all of the ballots to the transferring division to resolve the mismatch. If the number matches, the recipient division lead follows the steps below to record the transfer of ballot custody in the ballot custody transfer application.

1. Recipient division lead opens the division's ballot custody transfer application.
2. Under incoming transfers section, click on "Receive" tab.
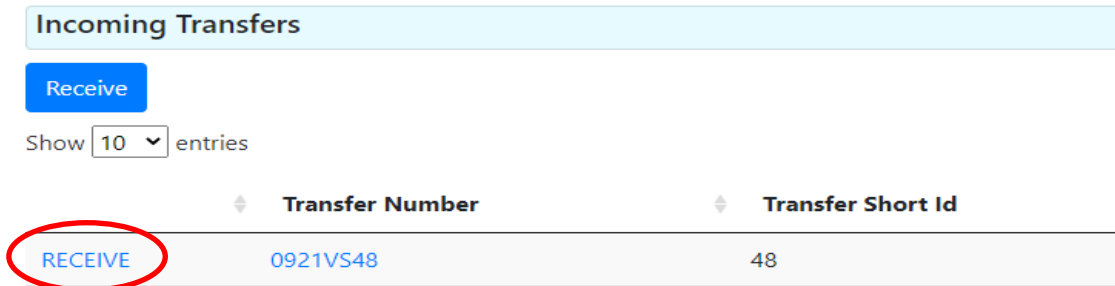
IV. Faxed Ballots

Military and Overseas voters who returned their ballots via fax require different handling and tracking methods than VBM. Below describes the workflow of how the VDA division processes faxed ballots:

A. The first step in the process is for VDA staff to determine if the incoming fax is complete. A fax is complete if it contains both a signed voter oath and ballot. The incomplete faxes get sorted into different categories based on their challenge reasons.
    1. The picture below shows the folder structure of how faxed ballots are organized.
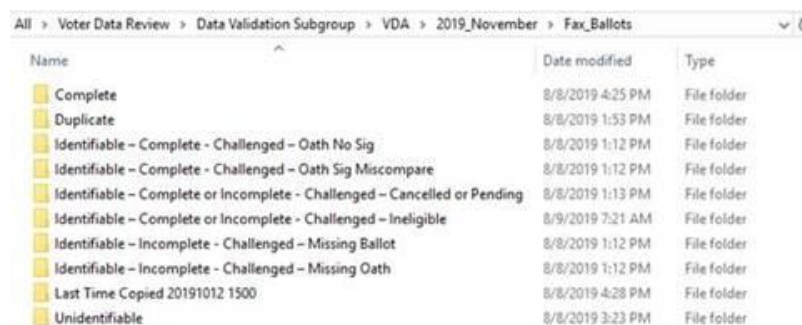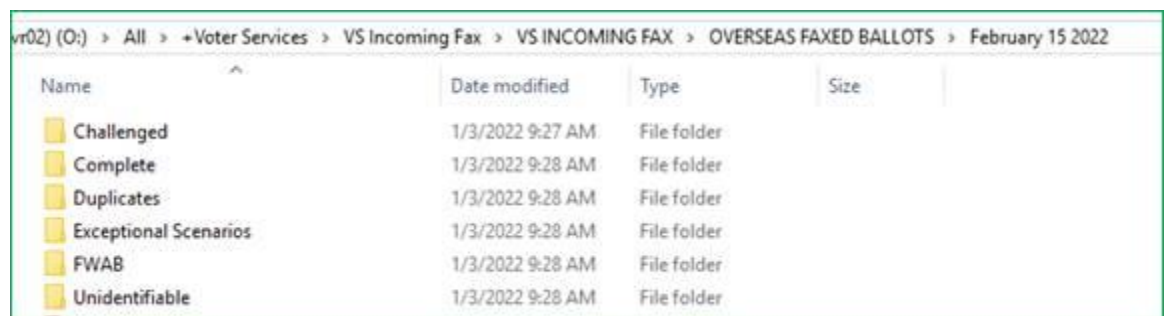
2. After the faxed ballots inside the "Complete" folder are transferred to BD, they are moved to the "Transferred" folder.

ervices ▸ VS Incoming Fax ▸ VS INCOMING FAX ▸ OVERSEAS FAXED BALLOTS ▸ September 14 2021 ▸ Complete

Name	Date modified	Type	Size
📁 Transferred	9/18/2021 1:33 PM	File folder	

All ▸ Voter Data Review ▸ Data Validation Subgroup ▸ VDA ▸ 2019_November ▸ Fax_Ballots ▸ Complete

Name	Date modified	Type	Size
📁 201909061000_Transfer_Amount_45	8/8/2019 2:40 PM	File folder	
📁 201909091000_Transfer_Amount_0	8/8/2019 2:40 PM	File folder	
📁 201909101000_Transfer_Amount_0	8/8/2019 2:40 PM	File folder	

B. The second step is for VDA staff to transfer the faxed ballots to BD using the custody transfer log.

C. After BD receives the transfer of faxed ballots, BD staff verifies the faxed ballots are accepted in the EIMS:

1. Open the faxed ballot remake assignment spreadsheet.
2. Scan the faxed ballots barcode under "Barcode" column.
    a. Faxed ballot that is not accepted in EIMS is flagged with a challenge code and is returned to the VDA for further processing.

Counts:	31 Good, 3 Pull Challenge
Tray Number :	1
Batch :	paper 11/12 from VDA
Barcode:	Challenge code
015124718671	Wrong Signature
015001001111	
015000932991	
015124707121	Late postmark
015106000421	No Signature
015000933841	

D. After verification is completed, BD lead must print out a copy of the faxed ballot remake assignment spreadsheet.

E. The BD lead will assign the faxed ballots to a team for remake using the ICX Ballot-Marking Devices.

1. The original and duplicate ballots will have matching alphanumeric serial numbers, which consist of:
    a. Type of Ballot: "VBM" or " PV WBT" or "PV WPCT" (vote-by-mail or provisional wrong ballot type or provisional wrong precinct)
    b. Ballot precinct number
    c. Initials of both members of the team
    d. Current date in dd/mm format; and

e.   The sequence number (i.e, a team's fifth remake of the day will have be represented with "5."

F.   When the remake is completed, the remake team returns the original ballots and duplicate ballots to the BD lead.

G.   BD lead compares the sequence number on the duplicate ballots to the total number of faxed ballot issued on the faxed ballot remake assignment spreadsheet.

H.   Next, BD lead assigns a tray number to the remade ballots using the following steps:

1.   Obtain a tray header sheet.

2.   Open the ballot tracking application.

3.   Scan the faxed ballot barcodes to the manual tray assignment tab.

    4.   Click "Submit"

V.   Provisional Ballots

After Election Day, the Department begins to process provisional (PV) ballots. PV ballots are organized in trays by precinct and separated by header cards at the Processing Center at the Department's warehouse and delivered to City Hall. There are six phases to the processing of the PV ballots.

    A.   First Phase – PV Imaging

        1.   BD imaging teams photograph the PV envelopes and precinct header sheets.

        2.   BD leads upload PV envelope images on the server, organized in precinct order.

        3.   After imaging is completed, BD lead will transfer precinct header sheets to PV processing teams for review.

    B.   Second Phase – PV Processing Team reviews all imaged ballot envelopes to verify the voter's registration and eligibility to vote in San Francisco.

        1.   PV processing teams retrieve a PV ballot header sheet.

        2.   Search for the voter who cast the PV ballot in EIMS

        3.   Input information from the PV envelope image into EIMS

        4.   Determine if the PV ballot should be counted or partially counted by comparing the Precinct and Ballot Type where the voter cast a ballot with the Precinct and Ballot type of the address that the voter wrote on the envelope.

    C.   Third Phase – PV Labeling

1. BD labeling teams pick up a tray of PV ballots.
2. Scan the PV barcode in the PV module to generate a label.
3. Attaches the label on the right hand corner of the PV envelope.
4. Base on the label, sort the PV envelopes into four categories:
    a. Accepted PV
    b. Wrong ballot type (WBT) PV
    c. Wrong precinct (WPCT) PV
    d. Pending PV

D. Fourth Phase – BD Leads Process Accepted PV
    1. Pick up a tray of accepted PV ballots and obtain a tray header sheet from BD manager.
    2. Assign a batch number to the tray:
        a. Open the Ballot Tracking Application
        b. Click the drop down menu on "Manage" tab and click "Tray Assignment"
        c. Scan the tray header sheet barcode to fill the "Tray Number" field.
        d. Enter a batch number
        e. Scan the barcode on the PV ballots
        f. Click "Submit"
    3. Assign BD staff to extract and prepare PV envelopes for tabulation.

E. Fifth Phase – BD Leads Process Wrong Precinct (WPCT) PV and Wrong Ballot Type (WBT) PV for remake
    1. Create a PV remake custody transfer form.
        a. Pick up a tray of WPCT or WBT PV ballots.
        b. Open PV remake custody transfer form.
        c. Scan in the PV envelopes barcode under "Barcode" column.
        d. Print out a copy of PV remake custody transfer form.
    2. Assign the tray of scanned WPCT or WBT PV ballots to a team for remake using the ICX Ballot-Marking Devices.
    3. After ballots are remade, the remake team returns the empty PV envelopes, original ballots, and remade ICX ballots to a BD lead.

      4.   Compare the sequence number on the remade ballot to the total number of PV ballots issued as written on the PV remake custody transfer form.

      5.   Assign the remade PV envelopes barcode into the Ballot Tracking Application to update the Voter Look Up status tool.

      6.   Assign BD staff to prepare remade ballots for tabulation.

   F.   Sixth Phase – BD Leads Process Pending PV

      1.   Scan envelopes on custody transfer log and transfer envelopes to PV Processing team for further review.

VI. VotingWorks Ballots

To ensure all VotingWorks ballots are remade each day, lead staff members compare the number of VotingWorks ballot listed in the record retention log matches with the number of remade VotingWorks ballots in the remake log. If the number does not match, notify a supervisor.

Then, the original and remade ballots are separated and organize according to the serial numbers written on the bottom of the ballots in the following order:

1. Date that the ballot was remade
2. Team initials
3. Daily remake number

Original ballots are stored in a secured room in the Department. Remade ballots are transferred to the tabulation room for processing. After the remade ballots are tabulated, ballots are placed in storage boxes with a unique box barcode affixed to the box. To secure the boxes, tamper proof seals are placed around the box and box lid.

VII. Ballot Manifest

To validate the total number of ballots scanned in each batch, tabulation teams compare the number written on the tray header sheets with the "Batches Loaded Report" from the tabulation system. All box and cart information is recorded in a spreadsheet for reference. The Ballot Manifest is also use as tool to tog and track the location of counted ballot boxes.

   A.   BD lead opens "Batches Loaded Report".

   B.   Tabulation teams compare the batch number and on the tray header sheet to the batch number and total ballots in Batch Loaded Report.

      1.   If the number does not match, notify a lead.

GROUP: _1_   **TRAY:** _0001_

1119300001

Tabulator: John DOE		Station #: 6	

☑ Vote-By-Mail   ☐ PROVISIONAL   ☐ REMAKE   ☐ PCT/AUX   ☐ EDGE

BATCH NUMBER	BATCH SIZE (# of cards)		BATCH NUMBER	BATCH SIZE (# of cards)	
1	88				
2	94				
3	81				
4	88				
5	94				

Batches Loaded Report

DateTime	Tabulator Number	Tabulator Name	Batch Number	Result File Name	Lead Ballots	Total Ballots	Result State	Adjudication State
7/30/2019 10:43:43 AM	6	ICC01-VBM	1	1_1_6_1_DETAIL.DVD	88	88	Published	Adjudicated
7/30/2019 11:01:41 AM	6	ICC01-VBM	2	1_1_6_2_DETAIL.DVD	94	94	Published	Adjudicated
7/30/2019 11:20:41 AM	6	ICC01-VBM	3	1_1_6_3_DETAIL.DVD	81	81	Published	Adjudicated
7/30/2019 11:23:41 AM	6	ICC01-VBM	4	1_1_6_4_DETAIL.DVD	88	88	Published	Adjudicated
7/31/2019 9:47:51 AM	6	ICC01-VBM	5	1_1_6_5_DETAIL.DVD	94	94	Published	Adjudicated
7/30/2019 11:30:41 AM	6	ICC01-VBM	6	1_1_6_6_DETAIL.DVD	26	26	Published	Adjudicated

C. After the ballot counts are confirmed, BD lead creates a ballot manifest using the tray header sheet number (box number) and cart number.

Ballot Manifest

DateTime	Tabulator Number	Tabulator Name	Batch Number	Result File Name	Lead Ballots	Total Ballots	Result State	Adjudication State	Tray number (tray header sheet)	Cart number
7/30/2019 10:43:43 AM	6	ICC01-VBM	1	1_1_6_1_DETAIL.DVD	88	88	Published	Adjudicated	1	14
7/30/2019 11:01:41 AM	6	ICC01-VBM	2	1_1_6_2_DETAIL.DVD	94	94	Published	Adjudicated	1	14
7/30/2019 11:20:41 AM	6	ICC01-VBM	3	1_1_6_3_DETAIL.DVD	81	81	Published	Adjudicated	1	14
7/30/2019 11:23:41 AM	6	ICC01-VBM	4	1_1_6_4_DETAIL.DVD	88	88	Published	Adjudicated	1	14
7/30/2019 11:30:41 AM	6	ICC01-VBM	6	1_1_6_6_DETAIL.DVD	26	26	Published	Adjudicated	1	14
7/30/2019 11:37:41 AM	6	ICC01-VBM	7	1_1_6_7_DETAIL.DVD	20	20	Published	Adjudicated	1	14
7/30/2019 4:26:43 PM	6	ICC01-VBM	8	1_1_6_8_DETAIL.DVD	5	5	Published	Adjudicated	1	14
7/31/2019 9:47:51 AM	6	ICC01-VBM	5	1_1_6_5_DETAIL.DVD	94	94	Initial	In Adjudication	1	14

VIII. Record Retention

After ballots are tabulated, scanned ballots are placed inside a cardboard box for storage. Each box contains approximately 500 ballot cards, and ballots are separated into different batches using a tally sheet. The boxes are labeled with the election name and date, the contents, the destruction date set by CEC 17301, and a box barcode number. A tamper proof security seal is placed around each box which covers the container and the box lid. Using the asset management system, BD staff members follow the steps below to prepare the boxes for storage at the warehouse.

A. BD staff members put the tabulated boxes of ballots on a two tier carts, with the box label facing one direction.
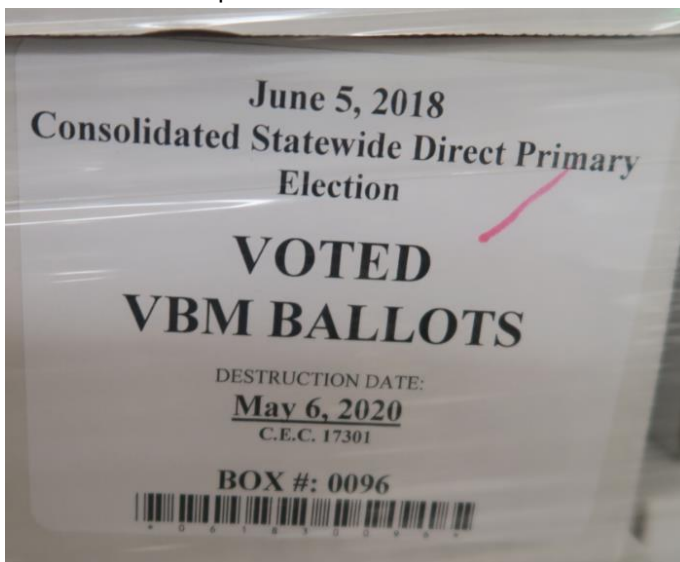
B. BD lead assigns a cart number to the two tier carts.
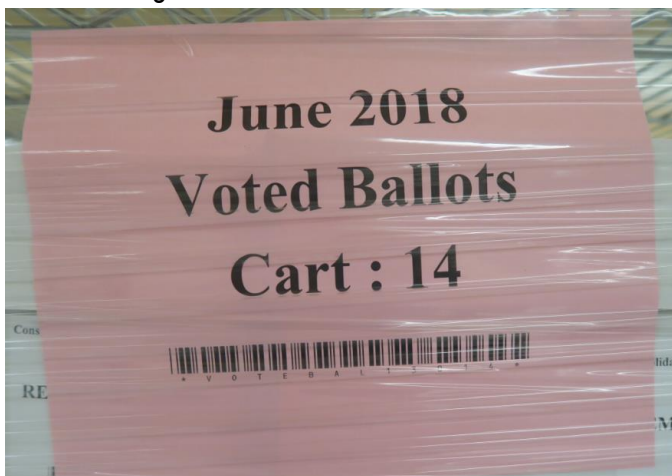
C. BD lead logs into the asset management system:
1. Click "Counted Ballot Box/Cart" under Election Supply.
2. Click "Create Counted Ballot Box/Cart:
3. Enter the cart number in "Enter VBM Cart" field.
4. Click "Enter".
5. Scan all of the box barcode numbers in "Scan VBM Box" field.
6. Click "Save".
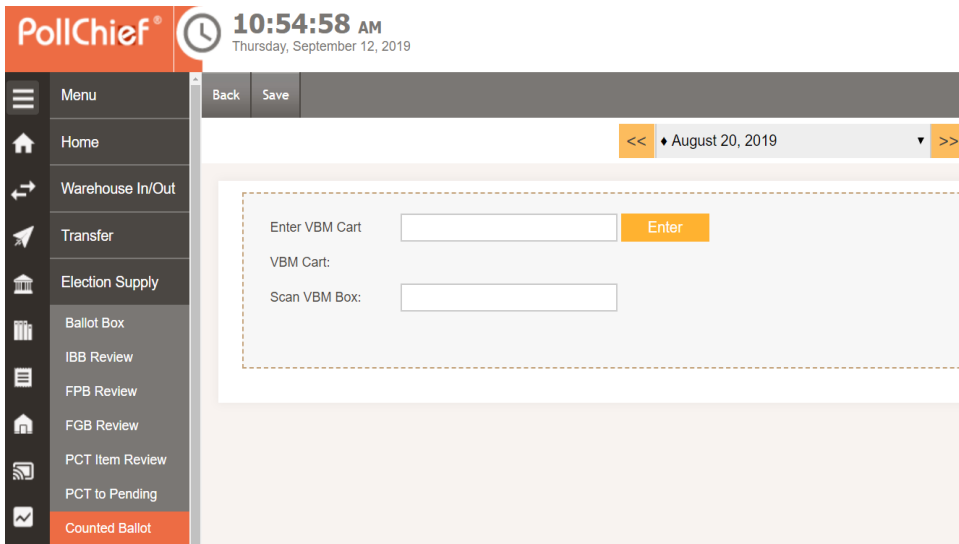
D. BD staff members shrink-wrap the cart and seal with anti-tamper door seal.

E. BD manager fills out a warehouse custody transfer form.

IX.   Security Practices

After tabulation, all ballots are stored in RM 59, secured back room, conference room, and tabulation room. The room is safeguarded with an anti-tamper door seal. In addition to the seal, only authorize personnel are given the passcode to open the secured room. BD and VS staff members follow the steps below as the opening and closing practices.

    A. Opening Procedure

        1. Verify the anti-tamper door seal and confirm that no one has entered the room after the seal was put on.

            a. If the seal is tampered, inform a supervisor.

            b. If the seal is not tampered, move on to step 2.

        2. Remove the tamper-evident seal and place the seal in the Access Log.

        3. Record the date, time, name in the Access Log.

    B. Closing Procedure

        1. Obtain an anti-tamper door seal.

        2. Record the date, time, name, and seal number in the Access Log.

        3. Write down their name and date on the tamper-evident seal.

        4. Seal the room with tamper-evident seal.

City and County of San Francisco
Department of Elections

John Arntz, Director

DRAFT EXAMPLE

November 8, 2022 Consolidated General Election
Canvass Procedures: Random Selection of Precincts for the 1% Manual Tally

A. Materials used:

1. Precinct List: A list of all 588 precincts used in this election in ascending order. Each precinct is listed and is given an item number within a range from 001 to 588.
2. Batch Lists: Lists of the batches of vote-by-mail and provisional ballots stored in assigned boxes and assigned item numbers within a range from XXX to XXX.
3. Three Dice: Each die is 10-sided and numbered 0 to 9. One die is red, another is white, and the third is blue.
4. Lists that include ballot content and ballot types to identify that the selected precincts and batches include every contest voted upon during the election.

B. Explanation of the Process:

1. California Elections Code section 15360 requires a manual tally of ballots cast each election to compare against the results reported by the voting equipment. The Department will randomly select ballots using 10-sided dice from at least 1% of the precincts and manually tally the ballots from the polling places for these precincts. Since the November 2022 Consolidated General Election is comprised of 588 polling places, the Department of Elections (Department) must randomly select a total of six precincts for which the Department will conduct a manual tally covering all contests.
2. The Department will use 10-sided dice to randomly select batches of vote-by-mail ballots to manually tally 1% of all vote-by-mail ballots cast. The Department will compare the totals from the manual tallies of vote-by-mail ballots to the results reports issued by the voting system
3. The Department will also use 10-sided dice to randomly select batches of provisional ballots to manually tally 1% of all provisional ballots cast. The Department will compare the totals from the manual tallies of provisional ballots to the results reports issued by the voting system.
4. California Elections Code section 15360 requires the selection of additional precincts or batches if not all contests were included in the initial group of precincts. The manual tally associated with these additional precincts will apply only to the contests absent from the precincts in the initial group of selections.
5. The color of each die corresponds to its position in a 3-digit number combination. For instance, the red die corresponds to the first digit, the white die corresponds to the second digit, and the blue die corresponds to the third digit. As an example, the number "412", represents a roll of which the "4" appeared on the red die, the "1" on the white die, and the "2" on the blue die.
6. The three-digit numbers will be cross-referenced to the lists of sequentially numbered precincts and batches of ballots that identify which ballot cards will be audited.
7. Department personnel will record the numbers that result from each rolling of the dice.

C. Steps in the drawing of the precincts:

1. A member of the public or a Department representative will place the dice in one or both hands and then roll the dice onto a table.
2. The numbers facing up on each die will be announced by a Department representative or a member of the public according to the color of the dice. The number on the red die will be the first number announced, the number on the white die will be second number announced, and the last number announced will be that from the blue die.

3. Department personnel will type the numbers as they are called and record them onto a screen located near the table on which the dice are rolled.
4. If the number combination falls outside the ranges of precincts or batches, Department personnel will announce aloud that the dice represent a number combination that is outside the range of the sequentially listed precincts.
5. If the number combination falls within the range of precincts or batches, Department personnel will announce the corresponding precinct and record them onto the screen.
6. After the first five precincts have been selected, the Department will determine if all contests from the election are included in this first group of precincts or batches.
7. If there is a contest or contests not included in this initial group of precincts or batches, a Department representative will state which contest or contests require additional rolling of the dice. The Department representative will also state that, for these subsequent precincts or batches, only the contest not yet included in the selected precincts or batches requires a manual tally.
8. After the initial group of precincts or batches is determined, for all subsequent rolls of the dice, a Department representative will announce whether the numbers on the dice match a precinct or batch item number, and, if so, represent a precinct or batch from which contest or contests must be added to the manual tally.
9. When the additional precincts are identified, the Department will announce that the selection of precincts is completed.
10. The Department will issue a press release and post outside the door to its public entrance the list of precincts and batches and their relative contests that the Department will manually tally. The notices will include the time and location of the manual tallies.

D. **Selecting number seed for Risk-Limiting Audit**
1. The Department conducted a pilot program using ballot marking devices from vendor VotingWorks as authorized by the Board of Supervisors in January 2022.
2. State elections law requires all ballots cast during a pilot program be reviewed using a risk-limiting audit.
3. Before conducting the audit, the Department must obtain a 20-digit seed number to enter into the software program that assesses the inputted ballot and vote information during the audit.
4. To obtain the 20-digit seed number, the Department will again roll the three 10-sided dice, and apply the numbers in the same sequence according to the color of the die: red, white, and then blue.
5. The three dice will be rolled a total of six times as a group, which will provide 18 of the 20 digits needed for the seed number. To obtain the remaining two digits for the seed number, the seventh roll of the dice will include the red and white dice, and will omit the blue die. The number on the red die will be recorded first, followed by the white die.
6. After the 20-digit seed number is obtained, the Department will post this this number on its website.

E. **Ballot Content (Example from November 2018 General Election)**
1. Every voter received a four-card ballot for this election:
2. Card 1 contains contests for the Governor, Lt. Governor, Secretary of State, State Controller, State Treasurer, Attorney General, Insurance Commissioner, Board of Equalization-District 2, U.S. Senator, U.S. Representative
   a. District 12, U.S. Representative District 14, State Assembly –District 17, State Assembly –District 19,
   b. Judicial Offices, Superintendent of Public Instructions, and the Community College Board, BART Director – District 8.
3. Card 2 contains the contests for the Board of Education, and the State Propositions 1 to 7.
4. Card 3 contains the contests for State Propositions 8 to 12, and the Local Measures A to E.
5. Card 4 contains the contests for the RCV contest which includes the Assessor Recorder, Public Defender,
6. Board of Supervisor for Districts 2, 4, 6, 8, and 10.

Secretary of State
SHIRLEY N. WEBER, Ph.D.

STATE OF CALIFORNIA

CALIFORNIA APPLICATION FOR APPROVAL
OF A VOTING TECHNOLOGY

APPLICATION INSTRUCTIONS

INTRODUCTION

Pursuant to California Elections Code Sections 19202, 19283 and 2550 and California Code of Regulations Sections 20707, prior to considering any new voting technology for approval, or any modification to a currently approved voting technology, the Secretary of State (SOS) must conduct a thorough examination and review of the proposed system. The examinations typically include:

- Examination of application and technical documentation.
- Development of a detailed system test plan that reflects the scope and complexity of the system.
- Code review for selected software components.
- Witnessing of a system 'build' conducted by the manufacturer to conclusively establish the system version and components being tested.
- Operation and function testing of hardware and software components.
- Security testing that includes a full source code review and penetration (red-team) testing.
- Volume testing of the system and/or all devices with which the end user directly interacts.
- Functional and performance testing of the integrated system, including testing of the full scope of system functionality, performance tests for telecommunications and security; and examination and testing of the system operations and maintenance manual.
- Accessibility examination and testing of the system.

GENERAL INSTRUCTIONS

This document provides detailed instructions for completion and submission of a voting technology application. An application is considered complete only when all appropriate forms and supplemental materials are provided to the SOS. The application forms are composed of the following six parts:

- **Part 1 – Request For Approval & System Identification**
- **Part 2 – Ownership & Control**
- **Part 3 – References**
- **Part 4 – Technical Data Package (TDP)**
- **Part 5 – System Description & Configuration**
- **Part 6 – System Change Log**

The application should be submitted to the SOS electronically. The application should be in the root directory of the submitted electronic media. The technical data package (TDP) file(s) should be in a sub-directory named "Technical_Data_Package". Do not order the documentation into further sub-directories. Identifying photographs may be submitted in .JPG, .BMP, .GIF or .TIF format.

Upon receipt of an application, the submitted documentation will undergo review by the SOS. You will be contacted if any parts of the application are determined to be insufficient. If the submitted documentation is determined to be sufficient, you will be contacted by the SOS to begin arrangements for the subsequent steps of the process. The SOS reserves the right to determine the extent of testing necessary for evaluation and approval of any voting technology.

For additional information regarding the approval process, refer to the Secretary of State's website at: https://www.sos.ca.gov/elections/ovsta/certification-and-approval/ or contact the Office of Voting Systems Technology Assessment at (916) 695-1680 or votingsystems@sos.ca.gov.

SHIRLEY N. WEBER, Ph.D.

CALIFORNIA SECRETARY OF STATE

Office of Voting Systems Technology Assessment | 1500 11th Street, 6th Floor
Sacramento, CA 95814 | **Tel** 916.695.1680 | www.sos.ca.gov

PART **1** OF **6**
REQUEST FOR APPROVAL AND SYSTEM IDENTIFICATION

Part 1 must be completed by all applicants and submitted electronically. In addition, a hard copy of Part 1 must be printed, signed, and submitted with the electronic submission. All information contained on this form is a matter of public record.

1. **VOTING TECHNOLOGY TYPE -** Select a voting technology type from the available options.

   ☐ Remote Accessible Vote by Mail (RAVBM)   ☐ Voting System (VS)

   ☐ Electronic Poll Book (ePB)

2. **APPLICATION DATE** – Date the complete application is submitted to the SOS

3. **SYSTEM NAME AND VERSION -** Official name and version number of the system**.**

4. **APPLICANT(S) –** Provide the following for each entity party to this application. If more than two applicants, provide the required information for the additional applicants on a separate copy of this form.

   ▪ **Name** – Full legal name.
   ▪ **Standing to Present Application** - Explain each applicant's legal standing to present an application for this system (e.g., licensed distributor, licensed user, manufacturer, jurisdiction, etc.). California Elections Code Section 19210 only allows parties with interest in the voting technology to present an application.
   ▪ **Entity Type** - Identify the applicant entity type from one of the following options:
     - Manufacturer   - Distributor   - Jurisdiction   - Other (Elaborate)
   ▪ **Principle Address** - If business entity, provide the legal principal address of the business. If government entity, provide the official address of the entity. This must be a physical address, not a post office box.

   APPLICANT 1
   Name: Standing to Present Application:
   Entity Type: Principle Address:

   APPLICANT 2
   Name: Standing to Present Application:
   Entity Type: Principle Address:

5. **APPLICANT CONTACT -** Person who will serve as official point of contact for this application and the approval process for this system. Please provide all of the following:

   Name: Mailing Address:
   Telephone: Fax: Email:

6. TYPE OF APPLICATION - Indicate the nature of this application.

☐ **Entirely New System -** No version of this system has previously been approved for use in California.

☐ **Pilot Program –** Request to pilot voting technology pursuant to Elections Code Section 19209.

☐ **Amended Application -** This is an updated/amended application for a system currently under review.

☐ **Administrative Approval –** This is limited to minor changes to a voting technology. Pursuant to CCR 20707, the request shall, at minimum, include:
- Documentation supporting the need for each change or modification. (Please provide justification for administrative approval request on a separate and clearly identified document.)
- A list of every system component – hardware, firmware, or software – that interacts directly with the component(s) for which administrative approval is being requested.
- Version numbers of all affected software, hardware, and firmware.
- Classification of each modified component as commercial-off-the-shelf (COTS), third-party or vendor developed.

☐ **Blended System-** This is an approval requested to combine elements of separately approved systems. Requests for blended systems follow the same guidelines as Administrative Approvals above.

7. IDENTIFICATION OF SYSTEM COMPONENTS:

a) Hardware - Identify the following for each hardware component of this system:
- **Name (Model #)** - Provide the official name of the hardware component and, if applicable, the model number assigned to that hardware component.
- **Version** - Provide the exact version number of any firmware that runs on the hardware component. Software applications that actually run on a hardware component should be separately listed in the software section below.
- **Type** - Indicate whether the hardware component is:
  - o New - No version of the component has previously been approved for use in California.
  - o Updated - Other versions of the component have previously been approved for use in California.
  - o No Change - This particular version of the component has already been approved for use in California.
- **Description** - Provide a brief description of the hardware component, such as "precinct- ballot scanner," "high speed ballot scanner," or "ballot marking device." In addition, indicate whether the hardware component is third-party, COTS or vendor developed.

Name (Model #)	Version	Type	Description

b) Software - Identify the following for each software component of this system:
- **Name** - Provide the official name of the software component.
- **Version** - Provide the exact version number of the software component. Software applications that run on a hardware component but are not firmware should be separately listed in this section.
- **Type** - Indicate whether the software component is:
  - New - No version of the component has previously been approved for use in California.
  - Updated - Other versions of the component have previously been approved for use in California.
  - No Change - This particular version of the component has already been approved for use in California.
- **Description** - Provide a brief description of the software component, such as "election definition and ballot formatting application," or "vote tabulation and reporting application." In addition, indicate whether the software component is third-party, COTS or vendor developed.
  - If the software is an election management system with multiple modules or sub-components, list the overall system name and version number, then list each sub-component application in the lines immediately following, indicating each subcomponent in the "Name (Model #)" field.

Name (Model #)	Version	Type	Description

COTS Components - For each Commercial Off The-Shelf (COTS) component of the system (hardware or software), identify:

- **Name** - If a make and version of the component is specified for the system, provide the exact name. Alternatively, if minimal specifications are prescribed for the component, provide a descriptive name.
- **Model/Version** - If a make and version of the component is specified for the system, provide the exact model and/or version. Alternatively, if minimal specifications are prescribed for the component, provide a descriptive name.
- **Manufacturer or Specs; Description** - If a particular make and version of the component is specified for the system, identify the manufacturer. Also include a brief description of the component and its role in the system.

Name (Model #)	Version	Type	Description

8. **FEDERAL QUALIFICATION NUMBER(S) AND DATE QUALIFIED -** Provide all applicable federal qualification numbers for this system and the date qualified.

9. **ACCESSIBILITY**

   Describe the Modalities of Physical Disabilities that are Supported by this System and Detail the Nature of that Support - Be specific with respect to each type of disability, how it is supported and the system component that provides the support.

   Detail the Alternative Languages that are Supported by this System - If a particular make and version of the component is specified for the system, identify the manufacturer. Include a brief description of the component and its role in the system. A separate and clearly identified document providing the aforementioned will suffice.

10. **UPGRADE PLAN FOR EXISTING CUSTOMERS –** Identify all current California customers that will be affected if this system is approved and detail the plan for their upgrade. If approval of this system will require existing customers to upgrade part or all of their current system, identify each of those customers and detail the plan for their upgrade. This plan should be specific as to the components that will be upgraded, the timeframe for that upgrade, who will perform the upgrade and who will be responsible for any costs associated with the upgrade. A separate and clearly identified document providing the aforementioned will suffice.

11. **USERS' GROUP –** Provide detail on the existing users' group or detail the plan for creating a users' group. If a California users' group already exists for this system (or previous versions of the system), provide the details on that users' group, including: how frequently it meets; where it meets; who plans the meetings, sets the agendas and chairs the meetings; and how minutes or information from the meeting are distributed to all California users of the system. If a California users' group does not currently exist, provide the plans to form such a group, providing the detail identified above. A separate and clearly identified document providing the aforementioned will suffice.

12. COMPLIANCE WITH CONDITIONS OF APPROVAL FOR SYSTEMS CURRENTLY USED BY CALIFORNIA CUSTOMERS – Has the applicant and, if applicable, any parent or subsidiary company, fully complied with all conditions set forth in the SOS approval document for all versions of systems manufactured or sold by the applicant or parent or subsidiary company that is currently used by one or more California customers?

☐ YES ☐ NO

If NO, identify every condition with which the applicant, parent or subsidiary company has not fully complied and explain the reason(s) for the lack of full compliance below. An attached document explaining the aforementioned will suffice.

13. EXISTING CUSTOMERS – Identify all current California customers that will be affected by this request.

Customer	Customer	Customer

ATTESTATION AND SIGNATURES - Each organization that is party to the application must have a representative sign the application certifying the information contained in the application is true and accurate. Each signatory must be a person legally authorized to sign and submit the application on behalf of the applicant or organization.

"I hereby certify that the information submitted on this form, as well as all attachments and submitted documentation is true, accurate and complete. I further certify that all hardware and software changes from previously approved versions of system components have been clearly identified in Section 6 – Change Log. Finally, I certify that I am legally authorized to sign and submit this application on behalf of the applicant organization(s)."

_____   _____
Signature   Signature

_____   _____
Name (printed)   Name (printed)

_____   _____
Organization   Organization

_____   _____
Date   Date

SHIRLEY N. WEBER, Ph.D.

CALIFORNIA SECRETARY OF STATE

Office of Voting Systems Technology Assessment | 1500 11th Street, 6th Floor
Sacramento, CA 95814 | **Tel** 916.695.1680 | www.sos.ca.gov

PART **2** OF **6**
OWNERSHIP AND CONTROL

Part 2 must be completed by all applicants and submitted electronically. If there is more than one applicant entity for this application, a separate Part 2 should be completed for each applicant. Each file should be named "Application Part 2 – XXXX.doc" (or .pdf), where XXXX represents the applicant's name. All information contained on this form is a matter of public record.

APPLICATION DATE:

SYSTEM NAME AND VERSION:

1. **APPLICANT INFORMATION –** If the entity is a government jurisdiction, complete only sub-parts "a) Applicant's Full Legal Name" and "e) Principle Address." Otherwise, this section should be completed in its entirety.

    a) **Applicant's Full Legal Name -** Provide the full legal name of the applicant.

    b) **Type of Entity -** Indicate the legal status of the entity. If "Other," explain in the space provided**.**
    ☐ Publicly-held Corporation   ☐ Subchapter S Corporation   ☐ Privately-held Corporation
    ☐ LLC   ☐ Partnership   ☐ Sole Proprietorship
    ☐ Other:

    c) **Date Established -** If applicant is not an individual, indicate the date the entity was legally established**.**

    d) **Primary State of Incorporation (or Registration) -** If the applying entity is a corporation, indicate the US state (or country) in which incorporated. If entity is another form of business entity, indicate the US state or country in which registered.

    e) **Principle Address -** Provide the primary legal address of the entity**.**

    f) **Principle Officers -** For corporations, identify the Chief Executive Officer, the Secretary, the Chief Financial Officer and all Directors. For partnerships, identify each of the partners. For sole proprietorships and Subchapter S corporations, identify the principal. For each individual identified, provide the name, title, telephone number and mailing address**.**

Name	Title	Telephone Number	Mailing Address

g) Agent of Record - Provide the name, telephone number and mailing address of the designated agent for service of process in California.

Name	Telephone Number	Mailing Address

h) Identify Legal Name and Address of all Entities with More Than 10% Ownership Interest in Entity - If the applicant entity is not a sole proprietorship, Subchapter S corporation or partnership, provide the legal name and mailing address of each entity that owns 10% or more interest in the applicant entity.

Name	Mailing Address

i) D-U-N-S® Number - If the applicant entity has been issued a Data Universal Numbering System (D-U-N-S®) number by Dun & Bradstreet, provide this number. If no such number has been issued to this entity, state "None Issued."

j) Gross Annual Sales for the Last Three Fiscal Years - Provide the Gross Annual Sales for the applicant business entity separately for each of the last three fiscal years. For each, provide the fiscal year end date.

2. MANUFACTURING AND SOFTWARE DEVELOPMENT

a) Applicant Addresses for Manufacturing and Development - For each hardware or software component of the system manufactured or developed by the applicant, identify the component and the primary address of manufacture or development.

System Components Not Manufactured or Developed by Applicant - For each hardware or software component of the system that is manufactured or developed by an entity other than the applicant, identify (a) the component, (b) the name of the entity that develops or manufactures the component, (c) the financial relationship between that entity and the applicant, (d) the principal address of that entity and (e) the primary address where that component is manufactured or developed.

(a) Component	(b) Developer / Manufacturer	(c) Relationship	(d) Developer/ Manufacturer Address	(e) Address Component Developed/ Manufactured

b) **Intellectual Property Rights -** For each component of the system for which the applicant does not own full intellectual property rights, identify (a) the component, (b) the name of any entity that owns any intellectual or other rights in the component, (c) the contractual relationship between that entity and the applicant, and (d) the principal address of that entity.

(a) Component	(b) Rights Owner	(c) Relationship	(d) Developer/ Manufacturer Address

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CALIFORNIA SECRETARY OF STATE

PART **3** OF **6**
REFERENCES

Part 3 must be completed by all applicants and submitted electronically. All information disclosed in Part 3 is a matter of public record.

APPLICATION DATE:

SYSTEM NAME AND VERSION:

1. **CERTIFICATION IN OTHER STATES**

   a) **For Each State Where This Exact Version of System is Already Certified or Application Has Been Made -** If necessary, list all additional states in a separate and clearly identified document, providing the following information for each:

      ▪ Any states that have denied approval of this system
      ▪ States that have approved the system
      ▪ States in which application is still pending (under consideration)

      For each state listed, provide the following information:
      (a) The name of the state.
      (b) The date on which the application for approval of this exact system was first submitted to the state.
      (c) Current status of that application -
         o Pending
         o Denied
         o Approved
      (d) Provide the date the system was approved or denied, otherwise, leave the field blank.
      (e) If the status is denied, provide the reason given by the state for that denial.
      (f) Provide the name, mailing address, telephone number and email address of the government employee in that state who is most knowledgeable about the actual testing and evaluation of the system.

(a) State	(b) Date Submitted	(c) Status	(d) Date	(e) Reason for Denial (if applicable)	(f) State Contact Information – Including Mailing Address Telephone Number & E-mail

b) **For Each State Where Other Versions Of This System Are Certified -** Identify other states where another version of this system has been certified. Do not include states listed in table 1.1, above, where the status is identified as "Approved." If ten or less states qualify, list all. If more than ten, give preference to states in which the version has been approved for the longest time.

For each state listed, provide the following information:

(a) The name of the state.
(b) The version certified.
(c) The date on which a version of the system was first approved in that state.
(d) Provide the name, mailing address, telephone number and email address of the government employee in that state who is most knowledgeable about the actual testing and evaluation of the system.

(a) State	(b) Version	(c) Date 1st Approved	(d) Contact Information – Including Mailing Address Telephone Number & E-mail

c) If State Approval/Certification Has Ever Been Revoked On Any Version Of This System - Identify all states in which approval of any version or component of this system has been revoked or denied, including the State of California. If more than one version or component has been revoked or denied by a state, list each instance on a separate line. If necessary, either add additional lines to the table or list all additional instances in a separate and clearly identified document, providing the required information for each.

For each revocation or denial listed, provide the following information:

(a) The name of the state.
(b) The version of the system or component for which approval was revoked or denied.
(c) The date on which that approval was revoked or denied.
(d) The reason given by the state for revoking or denying approval.
(e) Identify the government employee who is most knowledgeable about the circumstances regarding that revocation or denial. For this person, provide the mailing address, telephone number and email address.

(a) State	(b) System Version	(c) Date Revoked	(d) Reason for Revocation	(e) Contact Information – Including Mailing Address Telephone Number & E-mail

JURISDICTIONS USING THE SYSTEM

a) **Jurisdictions Outside California Using This System -** Identify jurisdictions outside California that are using a version of this system, or components of this system. If ten or less, identify all such jurisdictions. If more than ten, list only ten in the following order of preference:

- Any jurisdictions using this exact version of the system, with preference to the largest over the smallest; then
- Jurisdictions using any version of this system, with preference to the most current versions.

For each jurisdiction listed, provide the following information:

(a) The name of the jurisdiction.
(b) The population of the jurisdiction.
(c) Whether the version used in the jurisdiction is the same version for which approval is requested.
(d) The date the jurisdiction first purchased or leased a version of the system.
(e) Identify the chief elections official for the jurisdiction. For this person, provide the mailing address, telephone number and email address.

(a) Jurisdiction	(b) Jurisdiction Population	(c) Version	(d) Date Purchased or leased	(e) Contact Information – Including Mailing Address Telephone Number & E-mail

b) California Jurisdictions Using A Version Of This System - Identify all California jurisdictions using a version of this system. For each such jurisdiction, provide (a) the name of the jurisdiction, (b) the type of jurisdiction (e.g., county, city, etc.), and (c) the version.

(a) Jurisdiction	(b) Jurisdiction Type	(c) Version

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Sacramento, CA 95814 | **Tel** 916.695.1680 | www.sos.ca.gov

PART 4 OF 6
TECHNICAL DATA PACKAGE (TDP)

Applicants must submit a complete TDP with this application. The TDP shall include all of the items listed within this section according to application type. If the TDP is incomplete, or if the Secretary of State cannot clearly identify each of the items listed within this section, the entire application may be rejected or pended until made satisfactory by the applicant.

All documents supplied must be current for the version for which approval is being requested. Documents must be titled and submitted according to the subcategories and order outlined below. All documentation must be submitted in a directory titled "(System Name and Version) - Technical Data Package". Identifying photographs may be submitted in .JPG, .BMP, .GIF or .TIF format.

Information disclosed in Part 4 is a matter of public record. The applicant must clearly mark any documentation it requests to be treated as confidential and proprietary before providing it to the Secretary of State or its representatives for evaluation. Marking the entire package as confidential and/or proprietary is insufficient. All pages of the documentation that contain information the applicant considers confidential and/or proprietary information must be clearly marked as such.

APPLICATION DATE:

SYSTEM NAME AND VERSION:

ELECTRONIC POLL BOOK (EPB)

TDP MAIN PART - The main part of the TDP is relevant for conformity assessment and certification.

☐ **Customer Maintenance Documentation** - Documentation describing any maintenance that the vendor recommends can be performed by a customer with minimal knowledge of the system shall be provided.

☐ **Operations Manual** - Documentation that is normally supplied to the customer for use by the person(s) who will operate the equipment shall be provided.

☐ **Use Procedures** - Specific election administration procedures recommended for use with the system shall be provided. These must be written to conform to the template for such procedures that is available from the Secretary of State's website at: http://votingsystems.cdn.sos.ca.gov/cert-and-approval/vsysapproval/use-procedures-2006.pdf .

☐ **Software System Design** - Documentation describing the logical design of the software shall be provided. This documentation should clearly indicate the various modules of the software, their functions, and their interrelationships with each other. This shall include the data format(s) for which the system is capable of importing and exporting.

☐ **Test Data** - Any available test data that can be used to demonstrate the various functions of the electronic poll book or verify that the version of the applications submitted are identical to the versions that will be certified shall be provided. This includes test reports for certification of the identical system in other jurisdictions.

☐ **Security Procedures** - Documentation of the recommended security procedures and system hardening settings to ensure the optimum security and functionality of the system shall be provided.

☐ **Training Manual** - Documentation for use by the person(s) that will conduct staff and poll worker training.

ANCILARY DOCUMENTATION

- ☐ **Beta Test Results** – Provide all information regarding beta test results for this system, if applicable.
- ☐ **Vendor Proposed Test Plan** – Describe the scope, approach, resources and schedule of intended activities.
- ☐ **Identifying Photos** – Provide identifying photos of the hardware components of the system.
- ☐ **Substantiation of Elections Code Section 2550 -** Identify which document(s) and pages substantiate that the e-poll book system meets the requirements outlined in California Elections Code Section 2550.

REMOTE ACCESSIBLE VOTE BY MAIL (RAVBM) / VOTING SYSTEM (VS)

TDP MAIN PART - The main part of the TDP is relevant for conformity assessment and certification.

- ☐ **Implementation Statement** – Provide declaration of which standard options were implemented in the system.
- ☐ **System Hardware Specification** – Provide detailed specifications of the hardware components of the system, including specifications of hardware used to support telecommunications capabilities of the system.
- ☐ **Application Logic Design and Specification** – Provide detailed specifications of all included non-COTS software, firmware, and hardwired logic. In addition, provide precise identification of all included COTS software, firmware, and hardwired logic. This may include: overview, standards and conventions, the operating environment, functional and programming specifications, system databases, interfaces, etc.
- ☐ **System Security Specification** - Provide detailed descriptions of all system security specifications (design/interface specifications, security architecture, development environment specifications, security threat controls, security testing, vulnerability analysis documentation, etc.).
- ☐ **System Test Specification** – Provide all information regarding development tests, usability test reports, etc.
- ☐ **System Change Notes** - If a revision of a previous system, supply detailed specifications of the changes.
- ☐ **Configuration for Testing** – Provide the configuration actions necessary to obtain conforming behavior.
- ☐ **Quality and Configuration Management Manual** – Detail the manufacturer's quality and configuration management processes and procedures.

TDP USER DOCUMENTATION - The documentation must be produced with end users as the target audience.

- ☐ **System Overview** - Provide information that identifies the functional and physical components of the system, how the components are structured, and the interfaces between them.
- ☐ **System Functionality Description** – Provide the scope of the system's functional capabilities, establishing the performance, design, test, manufacture, and acceptance context for the system.
- ☐ **System Security Manual** – Provide all aspects of system design, development, and proper usage that are relevant to system security. This may include: access controls, system event logging, software installation, setup inspection, communications, voter verifiable paper audit trail (VVPAT), etc.
- ☐ **System Operations Manual** - Provide all information necessary for system use by all personnel who support pre-election and election preparation, polling place activities and central counting activities, as applicable, with regard to all system functions and operations identified. This may include: operational environment and features, system installation and test specification, operating procedures, documentation for poll workers, operations support, transportation and storage, etc.
- ☐ **System Maintenance Manual** – Provide maintenance procedure information in sufficient detail to support election workers, information systems personnel, or maintenance personnel in the

adjustment or removal and replacement of components or modules in the field. Technical documentation needed solely to support repair ordinarily done by the manufacturer or software developer is not required.

☐ **Personnel Deployment and Training Requirements** - Provide information about the staff needed to run the system, as well as the training required for the various roles.

☐ **Use Procedures** - Must be written to conform to the template for such procedures that is available from the Secretary of State's website at: http://votingsystems.cdn.sos.ca.gov/cert-and-approval/vsysapproval/use-procedures-2006.pdf .

ANCILARY DOCUMENTATION

☐ **Beta Test Results** – Provide all information regarding beta test results for this system, if applicable.

☐ **Vendor Proposed Test Plan** – Describe the scope, approach, resources and schedule of intended activities.

☐ **Identifying Photos** – Provide identifying photos of the hardware components of the system.

PART 5 OF 6
SYSTEM DESCRIPTION & CONFIGURATION

System Description & Configuration - Complete each of the following tables where applicable to your system. If a table is not applicable to your system, please simply mark N/A, for not applicable on the first line.

1. **Proprietary Hardware/Software** - List all components of the system that are proprietary. This includes your custom software solution, and hardware not considered commercial off the shelf (COTS).

Component	Hardware Version(s)	Software Version

2. **COTS Hardware/Software** - List all components of the system that are commercial off the shelf products. This list should not include any items listed in Table 1.

Component	Version/Model	Manufacturer

3. **Configurations -** List all possible configurations your system has. For example if the system has multiple devices or servers of varying sizes (Small, Medium, Large), please list each of those configurations separately.

Configuration	Description

4. **Server Hardware Requirements** - List any minimum server hardware components in your system.

Component	Requirement

5. Workstation Hardware Requirements - List any minimum workstation components in your system.

Component	Requirement

6. Lines of Source Code

Software	

Firmware	
Total Lines of Code:	

PART **6** OF **6**
SYSTEM CHANGE LOG

Part 6 must be completed if any components, hardware, firmware, or software of the proposed system have been previously approved in California under another version and have encumbered changes. The intent of this form is to clearly identify all hardware, firmware or software changes made to system components between the previously approved version and the version for which approval is being requested.

A separate and clearly identified log must be submitted for each change to a system component. All changes must be accounted for and clearly identified. For each component, list all changes that have occurred since the last approved version. Each change type must appear on its own row. Changes should be listed in chronological order, starting with the oldest and ending with the most recent.

INSTRUCTIONS

For each change, the following must be provided unless otherwise indicated:

a) **Applicant ID#** (optional) **–** This is the internal tracking number, if any, that the applicant has assigned to this bug or modification.

b) **Version Changed –** Identify the version of the system component in which the change was made.

c) **Type of Change** – Indicate the nature of the change. Valid options are:
   - Cosmetic – Minor changes that affect the appearance of the component that have no impact on the actual functionality or performance of the component. This would include things like minor cabinet changes on hardware, or minor changes to screen layout in software.
   - Minor Bug Fixes – Minor fixes to resolve bugs that did not materially affect the usability, accuracy, security or reliability of the system.
   - Major Bug Fixes – Modification of the component to resolve a bug that materially affected the usability, accuracy, security or reliability of the system.
   - New Feature – Introduction of a new feature for this system component.
   - Performance Enhancement – Modification that substantially improves performance of the system without other functional changes. For example, a modification to make a report run faster, without changing the composition or layout of the report.

d) **Description of Symptom/Problem** – This should be a plain language description of the symptom, bug or problem the modification was meant to address. Be specific. The description should be written to be understood by someone who is not intimately familiar with the system.

e) **Version Discovered** – Identify the version of the component in which the problem or bug originated, or, if that is not known, the version in which the problem or bug was first identified.

f) **Describe the Fix/Modification/Enhancement** – Provide a concise, specific description of the modification made. This should be a plain language description. The description should be written to be understood by someone who is not intimately familiar with the system.

COMPONENT: CURRENT VERSION: LAST VERSION APPROVED:

Applicant ID#	Type of Change	Description of Symptom / Problem	Version Discovered	Describe the Fix / Modification / Enhancement

Applicant ID#	Type of Change	Description of Symptom / Problem	Version Discovered	Describe the Fix / Modification / Enhancement