PROCEDURES

Required for the Use

of the

MARK-A-VOTE® Voting System

These procedures have been adopted by the Secretary of State as prescribed by law and shall regulate and govern the use of the MARK-A-VOTE® Vote Recording System at all elections governed by the California Elections Code. These procedures shall be effective upon adoption by the Secretary of State. Insofar as is feasible, all procedures prescribed herein shall be carried out in full view of the public.

These procedures constitute a minimum standard of performance for all MARK-A-VOTE® users. They are not intended to preclude additional steps taken by individual elections jurisdictions to enhance the security and reliability of the electoral process.

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1. THE MARK-A-VOTE® OPTICAL SCAN VOTING SYSTEM

1.1. INTRODUCTION – The MARK-A-VOTE® System consists of:

1.1.1. Marking Device
A marking device, such as a pencil or pen, which a voter uses to record his or her votes for candidates and/or measures by filling in the voting target.

1.1.2. Ballot
MARK-A-Vote® 52 position: A ballot consisting of one or more tabulating cards listing candidates' names, measures, and blank positions for each office to enable the voter to write in the name of a candidate.

MARK-A-Vote® 312 position: A ballot consisting of a single tabulating card with 312 numbered positions for marking choices and a ballot information booklet that contains candidates names and measure response numbers to be used in marking the tabulating card.

1.1.3. Computer Equipment and Programs
Computer equipment and programs capable of reading, interpreting, and summarizing the information marked on the cards.

1.2. DEFINITIONS

1.2.1. Ballot
The components necessary to provide a voter the opportunity to vote for all offices and issues to which he or she is entitled, including:

1.2.1.1. Ballot Card - MARK-A-VOTE® 52 position: A tabulating card or set of cards upon which are printed the names of candidates, the ballot titles of measures, and spaces for write-in candidates. A voter may record his or her votes by marking designated voting targets by use of a marking device. If any voting position is used for more than one candidate or issue at the same election, official ballot cards shall have the ballot identification code printed or punched thereon. Ballot cards shall be printed with distinctive tints and designs as specified by the Secretary of State and produced and distributed as prescribed by law.

MARK-A-VOTE® 312 position: A single tabulating card with 312 number voting positions printed on one side. A voter records his or her choices by filling in the numbered voting target corresponding to the candidate's voting position as determined by the ballot information booklet by use of a marking device. If any voting position is used for more than one candidate or issue at the same election, official ballot cards shall have the ballot identification code printed or punched thereon. Ballot cards shall be printed with distinctive tints and designs as specified by the Secretary of State and produced and distributed as prescribed by law.

1.2.1.2. Write-In Ballot **-** A paper ballot, envelope or ballot card(s) with designated spaces provided for a voter to write in the title of any office for which write-in votes may be cast and/or a name or names of candidate(s) not printed on the ballot. A write-in ballot may be in the form of a third detachable, but un-serialized, stub on the ballot card which the voter shall fold over the voting target portion of the ballot after voting. A write-in envelope or write-in stub shall be designed to preserve the secrecy of both write-in and marked votes.

1.2.1.3. Ballot Information Booklet - A voting booklet listing all the candidates and measures for which a voter is allowed to vote showing the number of the voting target that corresponds to each candidate or measure response position.

1.2.2. Ballot Card Format
Voting position characteristics of a tabulating card ballot such as the number and location of voting target areas and/or printed voting information on the card. Ballot card formats are specifically approved by the Secretary of State.

1.2.3. Ballot Grouping
The various ballot groups are as follows:
  Voting - Contains voters and polling places.

  Declared Absentee - Contains voters who do not use polling places. Includes mail ballot precincts as prescribed by law as well as absentee ballots issued pursuant to individual requests.

  No Voters - Contains no voters or polling places.

1.2.4. Ballot Statement
A comparison of the number of ballots received from the elections official by each precinct board with the sum of all voted, provisional, spoiled, and unused ballot cards at an election.

1.2.5. Ballot Type
A unique combination of contests and/or, rotation of candidates for a specific election. (A.k.a. "ballot group," "ballot district," or "ballot style.")

1.2.6. Destructible Seal
Any type of device used to close a container, room, or area which requires damage to or destruction of the device to be removed.

1.2.7. Header Card
An individual precinct identification card which is read by the computer program and correctly identifies the ballot cards and contests of each precinct.

1.2.8. Object Code

The version of a computer program in which the source code language is converted or translated into the machine language of the computer with which it is to be used. (Contrast with "Source Code.")

1.2.9. Semi-Final Official Canvass

The process of collecting, processing, and tallying ballots, and, for statewide elections, reporting results to the Secretary of State, on election night. The semi-final official canvass may include partial absentee vote totals. The semi-official canvass is contrasted with the official canvass which is conducted as prescribed by law following the election.

1.2.10 Source Code

A data processing term describing the original programming statements prepared by the programmer which can be translated into machine executable form. (Contrast with "Object Code.")

1.2.11. Marking Device

This may be any machine-readable pen or pencil used by the voter to record votes on an optical scan ballot card.

1.2.12. Tests:

Accuracy Tests – used to check hardware, especially card readers, and are probably the most frequent executed test.

Logic Tests – must be run every time before and after processing official ballots for an election. This test has predetermined totals for all contests on the ballot, with every candidate in a contest receiving a different number of votes than every other candidate in a contest. The output of this test is usually in the form of a summary bulletin and signed by the Logic and Accuracy Board before submission of programs and files to the Secretary of State as prescribed by law. Each time a Logic Test is produced a Logic and Accuracy Board member should check and sign the output.

System Proofing – verifies that all materials, files and programs for an election are correctly prepared. System proofing is normally done in a period of 40 days before election day through completion by approximately 10 days before election day. Accuracy and Logic tests are included in the proofing.

2. PRE-ELECTION AND TESTING REQUIREMENTS

2.1. BALLOTS (GENERAL)

2.1.1. Ballot Dimensions – Measure the machine readable portion of the typical ballot cards to determine that the dimensions of the ballot and corner cut are within tolerance.

2.1.2. Ballot Paper – Measure the thickness, stiffness, and grain of the paper to determine that the paper is within tolerance.

2.1.3. Ballot Printing – Check the density of the printing of the clock marks and ballot id marks to determine that the marks are dark enough to meet specifications. Check the density of the dropout color printing to determine that the dropout color will not be read as a vote.

2.2. DEMONSTRATOR BALLOTS

2.2.1. Purpose - A supply of demonstrator ballot cards or demonstration sheets shall be provided in each precinct. No official ballot cards may be used for demonstration.

2.3. TESTING PROCEDURES

2.3.1. Preface - Testing is outlined in these procedures in three stages or components: System Proofing, Accuracy Testing, and Logic Testing.

The test procedures described herein are a required minimum and do not preclude additional testing performed at the option of the elections official. In addition to the following test procedures, those counties which provide election night results online to the Secretary of State must conduct tests required by that office to ensure accurate and timely submission of semi-official canvass results, and must include hardware and telephone lines used for that purpose in all tests required.

For a schedule of all tests required by these procedures, please refer to Table 1 on page 27.

2.3.2. System Proofing

System proofing – the mandatory preliminary, in-house testing of all phases of election preparations except the Accuracy and Logic tests of the computer hardware and software used to count and summarize votes. System proofing shall include the following:
 - Assignment of jurisdictions participating in the election to ballot types.
 - Linkage of precincts in which the election will be held to ballot type.
 - Ballot content of each ballot type, including offices, district designation, questions and propositions, all in the proper sequence.
 - Preparation and Inspection of ballots for instructions; candidates' names, political party, ballot designations; number to be elected; candidate's rotation (where applicable); propositions; voting positions and all column and office headings and designations.
 - Printing, numbering, padding, and verifying ballot dimensions using a card gauge on official ballot cards.
 - Election night summary format.
 - Preparation of header cards and end, cards for every precinct, and successful processing of such cards through the ballot tabulation program.

- Ballot tabulation program's recognition of and response to header cards, end cards and ballots that are damaged, or improperly marked.
- Registration data for jurisdictions participating in the election.

Exception Processing - A part of system proofing includes a test to determine whether the system properly responds to error conditions. At least 10 days before each election a deck shall be prepared which will cause all non-destructive[1] errors for the card reader and the edit or counting programs. This test should contain, but not limited to, the following types of errors, if they apply to the system:
- Upside down header cards.
- Upside down ballots.
- Reversed header cards.
- Reversed ballots.
- Missing header cards.
- Ballots torn in various places.
- Invalid ballot card ids.

Additional errors should be tested, depending on the card readers and edit or counting program. These might include upside down, reversed, and missing cards for ballot definition, end cards, or other data read which are necessary for proper processing of the election.

2.3.3. Accuracy Testing - Consists of those processes and procedures necessary to ensure hardware to be used in the election is working properly as individual units and as a combined system. Emphasis is placed on verifying that ballot card readers can read every possible mark on the ballot card, and that individual components as well as the interface between them function as required. These tests shall be run before Logic testing in order to assist in isolating problems.

Accuracy tests are an integral part of equipment maintenance and may be run as necessary before each election to ensure proper functioning of hardware as well as ballot cards used in the counting process.

Accuracy tests – shall be performed before Logic and Accuracy Certification (including amendments and re-certifications, if necessary) to the Secretary of State and again within seventy-two hours before processing ballots on election day. The accuracy tests may be run more frequently and shall be run after equipment has been maintained. Any failure of the equipment to perform as expected shall be corrected before using that equipment for election processing.

In the event a processor, pre-processor, or card reader fails after official ballot processing has begun, accuracy test must be successfully run on the component after it has been repaired, replaced, or adjusted (in a manner deemed sufficient by the responsible

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[1] As opposed to destructive errors, such as a power failure, which can damage equipment.

elections official to require retesting for accuracy), provided the component is to be returned to service. Diagnostic tests of hardware on election night are permitted.

Preparation of Accuracy Tests - The responsible elections official shall cause the following accuracy test deck to be prepared and tested. Predetermined results of accuracy test must be made available for inspection and sign-off by the Logic and Accuracy Board.

> **Reusable Test Deck** - A generic test deck which shall consist of 400 ballot cards marked as follows:
> - 100 cards shall have card id positions 12-2-6 marked in the first column; and marked in the 1st, 5th, 9th, 13th, and each following fourth voting position to the end of the card.
> - 100 cards shall have card id positions 11-3-7 in the first column, and marked in the 2nd, 6th, 10th, 14th, and each following fourth voting position to the end of the card.
> - 100 cards shall have card id position 0-4-8 in the first column; and, marked in the 3rd, 7th, 11th, 15th, and each following fourth voting position to the end of the card.
> - 100 cards shall have card id positions 1-5-9 in the first column, and marked in the 4th, 8th, 12th, 16th, and each following fourth voting position to the end of the card.
>
> When this deck is processed, it will produce a report showing 100 votes per voting position and card id position and will verify the equipment's ability to read all vote positions and card id positions accurately.
>
> This deck may be composed of special cards that indicate targets for all voting positions and all card id positions. Within 40 days before each election, the Reusable Test Deck shall be run at least twice through each card reader.
>
> If ballots are to be counted at remote sites in addition to a centralized counting location, tests must include hardware used for transmission on the assigned phone lines.
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> **Test Program** - A program, applicable to the card readers or counting device in use, which will cause the marks for each position to be counted and/or compared. If counted, the count is to be displayed. If compared, discrepancies will be displayed.

2.3.4. Logic Testing - Consists of those processes and procedures necessary to ensure that tally programs and hardware correctly interpret, summarize and report voters' marks for a specific election. This is normally a series of tests using cards and/or disk files.

Successful testing will demonstrate that each candidate and measure receives the proper number of votes; the system reports the proper number of over and under votes; the system accepts only the proper ballot types and rejects improper ones; the inactive voting positions are not being tabulated.

Logic tests will be conducted using test materials below in such a manner as to meet these guidelines. All tests shall result in reporting that matches pre-determined results. All reports and test materials must be retained as in §4.8.

Preparation of Logic Test Materials - The responsible elections official shall cause the following test materials to be prepared and tested:

All Ballot Types - A logic test file, in card form and disk file form if desired, will be prepared for all ballot types to be used in the election. Ballot cards used for logic testing must be marked "test."

Logic tests performed during system-proofing, for certification of Logic testing to the Secretary of State, and before production of official canvass results must be run using all ballot types for the election. Logic tests run immediately before and after ballots are counted during the semi-official canvass may include a sampling of ballot types, provided the sample includes all candidates and measures for the election; however the uses of all ballot types for this test is highly recommended.

Logic tests run during system proofing and before production of official canvass results may use ballot cards or disk file. However, logic tests for certification to the Secretary of State shall be run using ballot cards only.

Logic Test Data – The logic test data shall include:

"Voted" Test Ballot Cards or Disk File Data – A group of test ballots voted in such a way that each candidate for any office shall receive a predetermined number of votes, different from the number of votes received by every other candidate for the same office. Also, the "YES" and "NO" responses on any measure shall receive predetermined different numbers of votes. In the case of offices for which the voter is allowed more than one choice, at least one ballot of the group shall be voted the maximum allowed number of choices.

"Over-voted" Test Ballot Card or Disk File Data – One test ballot shall be an "over-voted" test ballot, on which every contested office and measure receives exactly one more vote than is allowed.

"No Votes" Test Ballot Card or Disk File Data – One test ballot called a "no votes" test ballot, which contains no marks other than those needed for precinct or ballot type identification. This test should result in under-votes being cast for each contest in every occurrence in the test.

"Recall Measure and Candidates Contest" Test Ballot Cards or Disk File Data. - In case of recall elections which are conducted in accordance with law and which include two official candidates, a series of at least fifteen test ballots shall be prepared as follows:

(1) Marked "YES" only.
(2) Marked "NO" only.
(3) Marked "YES" and for first candidate.
(4) Marked "NO" and for first candidate.
(5) Marked "YES" and for second candidate.
(6) Marked "YES" and for second candidate.
(7) Marked "NO" and for second candidate.
(8) Marked "YES" and for both first and second candidate.
(9) Marked "NO" and for both first and second candidate.
(10) Marked both "YES" and "NO" and for the first candidate.
(11) Marked both "YES" and "NO" for the second candidate.
(12) Marked "YES" and "NO" only.
(13) Marked for first and second candidate only.
(14) Marked for first candidate only.
(15) Marked for second candidate only.

When the recall election has more than two candidates, additional test ballots shall be marked for each additional candidate with a "YES" vote and a vote for the candidate, in each ballot. The third candidate should get 4 ballots, the fourth should get 5 ballots, etc.

When there is a recall and only one official candidate, test ballot cards, numbered 1, 2, 3, 4, 10, 12 and 14, only shall be prepared.

Performance of Logic Test - The logic test shall be completed and certified at least seven days before each election, or, in the case of a state election, prior to depositing the ballot counting program with the Secretary of State.

The predetermined results for balancing of election processing must be available for inspection and sign off by the Logic and Accuracy Board described in § 2.4. Such certification must be completed, certified, and received by the Secretary of State as prescribed by the voting systems guidelines as adopted by the Secretary of State. It must accompany official copies of the ballot tally programs and files.

The logic test shall also be run and the results balanced to the predetermined results immediately before and after any and all processing of official ballots including official canvass updates.

Ballot tally program(s) and hardware must remain operative and unchanged from the time of the pre-ballot processing logic test, through ballot processing, and post ballot processing logic test. Any failure, such as a power failure, which affects the central processing unit (CPU), or requires the program to be reloaded, shall result in a new logic test.

The logic test ballots or disk file images shall be tabulated, using the logic test program or logic portion of the tally program(s). The resulting vote counts shall be compared in

detail with the predetermined vote count. Any differences shall be resolved, and tests shall be performed as many times as may be necessary to achieve a vote count which is identical to the predetermined count. After balancing, the logic test ballots and documentation shall be sealed and locked in a facility with restricted access. Logs or records shall be maintained, recording each use of the test materials and by whom.

Certification of Logic Test - Logic test requirements apply to all elections; however, submission of the certification of logic testing to the Secretary of State is required only before state elections.

2.3.5. Retention of Test Materials and Results - The test ballot cards, successful logic and accuracy test conducted at the time of certification (or recertification, if necessary) to the Secretary of State, logs or records, if any, and balancing reports, if any, shall be retained as long as the ballots are required by law to be retained (See §4.8). Back up decks and other test decks, if any, need not be retained.

2.4. LOGIC AND ACCURACY BOARD
Establish a Logic and Accuracy Board pursuant to §7.3 to complete certification of testing and send certification to the Secretary of State, as required by the Procedures for Certification as adopted by the Secretary of State. A copy of a sample certificate is attached to these procedures as Appendix A.

2.5. BALLOT COUNT PROGRAMS
For each state election, send ballot count programs to the Secretary of State pursuant to §7.4. These programs must be received by the Secretary of State as required by the Procedures for Certification as adopted by the Secretary of State.

2.6. ELECTION OBSERVER PANEL
Establish an Election Observer Panel pursuant to §7.2.

2.7. HARDWARE MAINTENANCE
Ballot counting equipment must be maintained in a satisfactory manner in accordance with vendor specifications, where available.

2.7.1. Card Reader(s)
  - Thoroughly vacuum and clean each read station.
  - Inspect each rubber capstan roller for ink glaze or pitting and clean or replace as needed.
  - Clean picker mechanisms against actual ballot stock and clean or replace as needed.
  - Check reader mechanisms and adjust as needed.
  - Check voltages on read head, adjust as needed.
  - Verify accuracy of each card reader.
  - If any errors are encountered, repair or replace as needed.
  - Run several test precincts through each card reader to verify that error conditions are properly recognized and handled.

- If any improper error recovery situations are encountered, repair or replace equipment.
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2.7.2. Precinct Ballot Counter (PBC), if applicable.
Verify accuracy of the PBC. If any errors are encountered, repair or replace PBC unit or components as needed.

3. ELECTION PROCEDURES

3.1. INSPECTION AND DELIVERY OF PRECINCT SUPPLIES
Instruct precinct inspectors to make the following checks before election days:

- Check all pads of official ballots to ensure that ballot type identification numbers, serial numbers, and precinct numbers (if used) on the ballots are correct.

- Report any problems to the elections official responsible for the election.

- Delivery of Supplies – In addition to the supplies necessary for the conduct of elections at polling places as prescribed by law, the following supplies shall be provided:
  - Official ballots
  - Secrecy envelopes or sleeves
  - Non-erasable, machine readable marking devices
  - Demonstration ballots
  - General purpose precinct supplies
  - A Certificate of Packaging and Sealing, in duplicate, together with a pre-stamped business reply envelope pre-addressed to the appropriate elections official.
  - For MARK-A-VOTE® 312 position ballots a sufficient supply of Ballot Information Booklets

3.2. PROCESSING ABSENTEE BALLOTS
In addition to those procedures prescribed by law, absentee ballot processing shall include the following:

3.2.1. Distribution of Absentee Ballots and Absentee Booklets, if applicable – Before distribution of absentee ballots to voters who request them, the ballot type numbers of the ballot and the absentee booklet shall be compared to ensure a match.

3.2.2. Envelopes – Sort envelopes for processing.

3.2.3. Open envelopes – Open each envelope and remove the voted ballot.

3.2.4. Voted Ballots – Remove voted ballots from secrecy envelopes.

3.2.5. Empty Identification Envelopes- Place empty Identification Envelopes in a designated storage area.

3.2.6. Examine absentee ballots – Examine absentee ballots for rejection and damage; process in the manner prescribed for Ballot Inspection Boards in §3.5.6

3.2.7. Processed Ballots – Deliver processed ballots to designated official for secure storage until time for computer processing.

3.3. POLLING PLACE PROCEDURES

In addition to procedures prescribed by law, polling place procedures shall consist of the following:

3.3.1. While the Polls are Open:

3.3.1.1. During the day, at least every hour, inspect the voting booths to ensure that they have not been damaged or defaced.

3.3.1.2. Offer to instruct each voter in the proper manner of marking a ballot card. Offer each voter further instruction and practice time, if necessary.

3.3.1.3. Voted Absentee Ballots - If a voter returns a voted absentee ballot, verify that the ballot is sealed and that the signature of the voter is on the identification envelope. Require any person who returns an absentee ballot in person, either to a polling place or to the elections office, to sign a log or record before depositing his or her voted and sealed ballot in the specially marked container.

3.4. CLOSING OF THE POLLS
The following procedures must be completed in public view.

3.4.1. Count Contents of Ballot Box:
- Absentee ballots, if any.
- Provisional ballots.
- Regular voted ballots (Do not separate from write-in ballots, if applicable).

3.4.2. Complete the Ballot Statement, showing:

3.4.2.1. Total number of official ballot cards received from the elections official.

3.4.2.2. Number of spoiled ballot cards.

3.4.2.3. Number of unused ballot cards.

3.4.2.4. Number of provisional ballots.

3.4.2.5. Number of regular voted ballots.

3.4.2.6. The sum of 2, 3, 4 & 5, above, should equal the number entered in Item 1.

3.4.2.7. An explanation of any discrepancy.

3.4.3. Reconcile the number of voted ballots (the sum of Items 4 and 5, above) to the number of signatures in the Roster-Index. Explain any discrepancy.

3.4.4. Complete the "Certificate to Roster" showing:

3.4.4.1. The number of persons who voted in the precinct.

3.4.4.2. A certification to the accuracy of the Ballot Statement.

3.4.4.3. The signatures of all board members.

3.4.5. Process Voted Ballots
3.4.5.1. If voted absentee ballots were placed in the ballot box, leave Identification Envelopes sealed, enter the number of such ballots in the appropriate space on the Certificate of Packaging and Sealing, and place the ballots in the designated container for return to the elections official.

3.4.5.2. Enter the number of provisional ballots removed from the ballot box in the appropriate space on the Certificate of Packaging and Sealing, and place the ballots in the designated container.

3.4.5.3. If a separate write-in ballot is provided, process voted ballots as follows:

3.4.5.3.1. Without separating the ballot card from the ballot, stub or envelope, (hereafter: "write-in ballot") check for write-in votes.

3.4.5.3.2. If there is no write-in vote, separate the ballot card from those with write-ins. Place the ballot cards in one stack, with those having a write-in on top.

3.4.5.3.3. When all ballots have been examined, place in a designated container for delivery to the counting center with ballots containing "write-ins" at front of container (on top of stack).

3.4.5.4. If the validity of any voted ballot is questionable because of unauthorized marks on the ballot or write-ins, the determination will be made at the Central Counting Board, not at the precinct.

3.4.5.5. Count all voted ballots to be accounted for on election night. The count includes ballots with no write-in votes, ballots with write-in votes and questioned ballots. It does not include absentee ballots or provisional ballots.

3.4.5.6. Enter the total in the proper space on the Certificate of Packaging and Sealing and elsewhere as directed.

3.4.6. Certificate of Packaging and Sealing

3.4.6.1. Verify that the numbers of regular voted ballots, absentee ballots and provisional ballots have been correctly entered on the Certificate of Packaging and Sealing.

3.4.6.2. Verify that the required materials have been placed into the appropriate container(s), listing the materials inserted in each container and indicating that the container(s) were appropriately sealed.

3.4.6.3. After all entries have been completed, each member of the board shall sign the Certificate.

3.4.6.4. The original Certificate shall be mailed to the elections official by a member of the precinct board other than the members who return the ballot container(s). The copy shall be enclosed in the ballot container delivered to the central counting location.

3.4.7. Return Containers – Place all voted ballots to be processed on election night in the appropriate return container(s). Voted ballot container(s) must include:

3.4.7.1. Voted ballot cards separated from unvoted envelopes or stubs (if applicable).

3.4.7.2. Un-separated ballots with write-in votes.

3.4.7.3. Un-separated questioned ballots.

3.4.7.4. Duplicate copy of the Certificate of Packaging and Sealing.

3.4.7.5. Sealed container with a tamper-proof seal.

3.4.8. Processing Non-MARK-A-VOTE® Ballots

3.4.8.1. Count the number of any ballots other than MARK-A-VOTE® ballots that might be used in the election in the manner prescribed by the Elections Code.

3.4.8.2. Seal voted ballots as directed.

3.4.9. Packaging Election Materials for Return.

3.4.9.1. Seal voted ballots (regular, absentee, provisional) container(s) as directed.

3.4.9.2. Seal Roster, precinct index, and any other lists or indices as prescribed by law, as directed.

3.4.9.3. Package or seal all other supplies as directed.

3.4.9.4. Dismantle separate voting booths, if directed.

3.4.10. Returning Voted Ballots

3.4.10.1. Return all ballots and supplies as directed by the elections official. At least two precinct board members must accompany all ballots until they are in the custody of the elections official.

3.4.10.2. A receipt must be issued upon release of the custody of the ballots.

3.5. SEMI-FINAL OFFICIAL CANVASS PROCEDURES AT CENTRAL AND REMOTE COUNTING LOCATIONS

3.5.1. Report Absentee Results
Report absentee vote counts compiled pursuant to law to the Secretary of State immediately following the close of the polls. This requirement shall apply to all elections for which election results are reported to the Secretary of State.

3.5.2. Appointment of Boards
The elections official responsible for the conduct of an election shall appoint boards to carry out the following semi-final official canvass functions:

- Absentee and Provisional Ballot Processing (if processed and tabulated on election night)
- Logic and Accuracy Testing
- Seal and Container Inspection
- Ballot Inspection
- Ballot Duplication (if duplicated on election night)
- Ballot Processing
- Write-In Ballot Processing (if processed and tabulated on election night)
- Ballot Storage
- Other Boards deemed necessary by the elections official

Individuals appointed may perform more than one function or serve on more than one board. The semi-final official canvass functions listed above must be performed by a minimum of two persons. Each board member shall be appointed to perform the function designated. Each person who handles ballots at the central or remote counting location shall sign the loyalty oath as prescribed by the California Government Code.

3.5.3. Establish Audit Trails
The elections official shall establish procedures to account for all voted ballots during the semi-final official canvass. Each function listed under §3.5.2 above is designated as a tracking point, and the elections official must track the time and receipt and processing of voted ballots by boards assigned to perform these functions.

3.5.4. Absentee and Provisional Ballot Processing

Provisional ballots and absentee ballots returned to polling places on election day are sealed in envelopes by precinct boards for return to the designated counting location. These envelopes shall be stored in a secure location until such time as they are removed from the precinct supply kits. The condition of the seals shall be inspected, and any defects shall be noted and reported as required by the elections official.

> 3.5.4.1. Absentee and provisional ballots received on election night shall be stored in a secure location accessible only to designated persons under controlled conditions before being processed in accordance with these procedures and the California Elections Code.

3.5.5. Seal and Container Inspection (tracking point)

> 3.5.5.1. Examine each sealed voted ballot container, paying particular attention to the condition of the container and seal.

> 3.5.5.2. Note and initial on a control document the precinct number of ballot containers with broken or improperly secured seals.

> 3.5.5.3. Refer any defects to the appropriate board or to the elections official as directed.

> 3.5.5.4. Break the seal and forward ballot containers for ballot inspection.

3.5.6. Ballot Inspection (tracking point)

> 3.5.6.1. Receive and open the containers.

> 3.5.6.2. Remove the voted ballots.

> 3.5.6.3 A ballot control document shall accompany the ballots of each precinct throughout the ballot processing, tally, and storage process and shall indicate the number of voted ballots reported by the precinct officials.

> 3.5.6.4. Remove any portion of the stub, such as an incompletely detached perforation, that remains attached to a ballot card.

> 3.5.6.5 Ballot cards should be checked to ensure corner cuts are aligned and should also be fanned to check for damaged cards and to remove any debris, which may be lodged in the ballot cards.

> 3.5.6.6 Damaged cards shall be placed in an appropriate container for duplication by the Ballot Duplication Board.

3.5.7. Ballot Duplication (tracking point)
Damaged ballots shall be processed according to the following procedure:

3.5.7.1. Deliver damaged voted ballot cards to the appropriate location for duplication. All ballot cards prepared as duplicates of damaged voted ballots shall be clearly labeled "duplicate," and shall be given a serial number which shall also be recorded on the damaged card.

3.5.7.2. In creating the duplicate ballot, one board member shall duplicate voting positions marked on the damaged ballot. Another member shall verify that the marks on the duplicate ballot exactly match those on the damaged ballot.

3.5.8. Write-in Ballot Processing (tracking point)

3.5.8.1. Examine the voting positions on the ballot card that accompanies a separate write-in ballot. If any of the voting positions are marked and the number of marks plus the number of write-ins for the office exceeds the number of candidates to be elected, an over vote exists and none of the votes for the office may be counted.

3.5.8.2. If an over vote is found, invalidate all votes for the over voted office by writing "VOID" across the write-in name(s) on the separate write-in ballot and duplicating the ballot card without recording votes for any candidates for that office. Follow duplicating procedure recording the serial number on the separate write in ballot, the ballot that has been duplicated and the duplicate ballot.

3.5.8.3. Place the duplicate ballot card with the ballots of the precinct to be counted.

3.5.8.4. If there is no over vote, place the ballot card with the ballots to be counted. Refer to the list of qualified write-in candidates provided by the elections official:

- If the name written in is not on the list, write "VOID" across the name and place the ballot in the designated container.

- If the name is on the list but the office does not appear on the sample ballot for the precinct, write "VOID" across the name and place the ballot in the designated container.

- If the write-in vote is for a qualified candidate in the precinct, leave the ballot in the container.

3.5.9. Processing Ballots with Potentially Identifying Marks (tracking point)

3.5.9.1. Examine any unauthorized marks to determine if they would identify the voter.

3.5.9.2. If the marks identify the voter, write "REJECTED" on the ballot card and place it in the designated container.

3.5.9.3. If the marks do not identify the voter:

3.5.9.3.1. Place voted ballot card with ballots to be counted.

3.5.9.3.2. Forward ballots for processing.

3.5.10. Ballot Processing

3.5.10.1. Shall be done in the presence of at least two people, one of whom will be the system operator who is responsible for managing and monitoring system operation and reporting.

3.5.10.2. One operator shall be assigned to each card reader. Supervision will be provided for card reader operators.

3.5.10.3. An audit trail shall be maintained that links ballots to specific card readers.

3.5.10.4. A record or log shall be maintained of the sequence in which precincts were processed along with a recording of system irregularities in processing.

3.5.10.5. Ballots that cannot be read by card readers shall be identified. These ballots must be identifiable to the precinct from which they are separated and delivered to the proper board for resolution. This includes such items as damaged ballots or ballots in the incorrect precinct.

3.5.10.6. Ballots shall be maintained together by precinct for delivery to the Storage Board.

3.5.10.7. Produce election bulletins as required.

3.5.10.8. Report election results, as specified, to the Secretary of State as required by law.

3.5.11. The Storage Board

3.5.11.1. Shall receive directly from the Ballot Processing Board all ballot cards, accompanied by the appropriate header cards, for each precinct.

3.5.11.2. Shall secure all voted ballots until the final logic and accuracy test is run following the semi-final official canvass.

3.5.11.3. Following the final logic and accuracy test for the semi-final official canvass and during the official canvass, all voted ballots and appropriate header cards must be maintained in a secured room or in locked or sealed containers any time the ballots are unattended.

3.5.11.4. Following certification of election results and the period for recount requests, the ballots may be moved to storage for the ballot retention requirements of the election, provided the ballot containers remain sealed.

3.5.11.5. The elections official shall not open any ballots or permit any ballots to be opened except as permitted by law.

3.5.12. Unescorted Individuals

Unescorted visitors and media representatives shall not be allowed within the secured area. For the purposes of this section "secured area" shall mean any area in which ballots are present.

4. OFFICIAL CANVASS AND POST ELECTION PROCEDURES

4.1. PURPOSE OF THE OFFICIAL CANVASS

The Official Canvass consists of a post election audit of each precinct's returns, and absentee ballot returns, to validate the outcome of the election by verifying that there were not more ballots cast than the number of voters who signed the precinct Roster-Index, or were issued absentee ballots; that all official ballots produced for the election have been accounted for; that all required certificates and oaths were properly executed by the precinct board; and, by verifying the accuracy of the computer count by manually recounting the voted ballots as prescribed by law and comparing the results to the computer counts.

4.2. CANVASSING PRECINCT RETURNS

4.2.1. Process provisional ballots returned by each precinct.

4.2.1.1. Verify eligibility of persons who cast provisional ballots.

4.2.1.2. Open envelopes of eligible voters and remove ballots.

4.2.1.2.1. Examine ballots for write-in votes, cause for rejection and damage.

4.2.1.2.2. Process in the manner prescribed for Ballot Inspection Boards in §3.5.6-11.

4.2.1.2.3. Identify original or duplicate provisional ballots by precinct and deliver to the designated official for updating computer counts.

4.2.1.3. Write the reason for rejection on envelopes of ineligible voters. Place unopened envelopes with election materials to be retained for the period prescribed by law.

4.2.2. Examine the Ballot Statement prepared by each precinct board.

4.2.2.1. Compare the number of official ballots reported "received" by each precinct to the number issued by the elections official. Resolve or explain any discrepancy.

4.2.2.2. Verify that the number of ballots voted (including provisional), plus spoiled and unused ballots, equals the number received by the precinct. Resolve or explain any discrepancy.

4.2.3. Reconcile Tallies

4.2.3.1. Compare the number of signatures in the Roster-Index to the number of provisional and regular voted ballots reported on the ballot statement. Resolve or explain any discrepancy.

4.2.3.2. Compare the number of provisional and regular voted ballots to the precinct computer count. Resolve or explain any discrepancy.

4.2.3.2.1. Locate any ballots not counted on election night because of damage, invalid card ids, improper orientation, or any other reason.

4.2.3.2.2. Search election supplies and equipment, including unused and spoiled ballots, write-in envelopes, ballot containers, etc., for ballots not accounted for.

4.2.3.2.3. Process any found ballots in the manner described in §4.2.3.

4.2.3.2.4. Manually count the number of voted ballots to be added, without tabulating votes. If the additional uncounted ballots added to the original computer count equals the number of regular and provisional voters, you may update the precinct with the uncounted ballots. If the additional uncounted ballots added to the original computer count does not equal the number of regular and provisional voters, you must reprocess the entire precinct through the card reader.

4.3. CANVASSING ABSENTEE BALLOTS
The elections official is accountable for absentee ballots to the same extent, as nearly as practicable, as for precinct ballots.

4.3.1. Ballot Statement – Prepare a Ballot Statement for each ballot type or special absentee "precinct" showing the number of ballots received, any defective ballots received from the vendor, spoiled or damaged ballots, the number of returned ballots that were challenged and the number to be counted.

4.3.2. Reconcile the Statement – Demonstrate that the total of unused, defective, spoiled, issued and replaced ballots equals the number received. Resolve and explain any discrepancy.

4.3.3. Compare – Compare the computer count to the number of ballots to be counted, as shown on the Ballot Statement. Resolve or explain any discrepancy.

4.3.4. Process Outstanding Ballots – Process any outstanding ballots not counted in the semi-final official count in the manner prescribed in §3.5.10.

4.4. CANVASSING WRITE-IN VOTES

4.4.1. Examine Write-ins – Examine any write-ins on ballots that were identified by Ballot Inspection Boards, separate Write-in Processing Boards, Absentee Ballot Processing Boards or Canvassing Boards or the computer (if it has been set to identify write-in votes as the ballot cards are read by the card readers) to verify that the names written in are for certified write-in candidates.

4.4.2. Tally Valid Write-In Votes – Tally all valid write-in votes by precinct, or absentee ballot type, and summarize by jurisdiction.

4.4.3. Prepare "Statement of Write-in Votes" – Prepare a "Statement of Write-in Votes" for inclusion in the official "Certified Statement of Election Results."

4.5. AUTOMATIC MANUAL RECOUNT IN 1% OF PRECINCTS

4.5.1. Purpose – For the purpose of validating the accuracy of the computer count, after every election at which the MARK-A-VOTE® system is used, a public manual tally of the ballots cast shall be conducted as prescribed by law.

4.5.2. Selection of Precincts – Precincts selected for the manual tally at random pursuant to law shall be chosen by an individual who is designated by the elections official and who is not the same person responsible for preparing the computer ballot counting program.

In the event a processor, pre-processor or card reader fails after ballot counting has begun, whether or not the equipment is to be returned to service following repair and successful processing of the accuracy test, ballots from the last precinct counted on the equipment before the failure, shall be included in the manual tally.

4.5.3. Valid Marks – The guidelines set forth in §5.1.1-3., concerning the interpretation and counting of valid marks, shall be followed during the manual tally.

4.6. UPDATE COMPUTER COUNTS
  This may be done as often as the elections official deems necessary during the canvass process.

4.6.1. Logic and Accuracy Tests – Run Logic and Accuracy tests and confirm results.

4.6.2. Verification – Verify that provisional ballots, add-on ballots from election night or found during the canvass, and add-on absentee ballots, have header cards of the appropriate type and for the correct precinct or ballot type.

4.6.3. Processing Ballots – Process ballots, by precinct, or ballot type, through the card reader and ballot counting program. Compare new computer counts to Ballot Statements. Resolve or explain any remaining discrepancies.

4.6.4. Discrepancies – If the original computer count for any precinct has been found to be incorrect, or if there are precincts in which unresolved discrepancies remain, the ballot from such precincts, with appropriate header and end cards, shall be reprocessed through the card

reader and ballot counting program. Compare new computer counts to Ballot Statements. Resolve or explain any remaining discrepancies.

4.7. CHECKING UNUSED BALLOTS

Unused ballot cards will be processed as prescribed by law. Precinct officers will package unused precinct ballot cards as prescribed by law, and elections personnel in the office of the elections official will seal or deface unused absent voter ballot cards and un-issued ballot cards. The elections official may inspect and count unused ballot cards as necessary to reconcile the ballot count during the official canvass.

4.8. RETENTION OF ELECTION MATERIALS

Upon the certification of the election results, appropriate state and federal laws apply to the handling, security, retention and disposition of unused ballot cards, and other election materials.

5. MANUAL RECOUNT PROCEDURES

5.1. REQUEST FOR RECOUNT

A request for a recount and the conduct of the recount shall be made in accordance with law.

5.1.1. Valid Marks

A mark is considered valid when it is obviously the intent of the voter. Such marks shall include but not be limited to properly filled in voting target areas, check marks, x's, circles or any clear indication of the voter's intent such as the word "yes" next to a candidate's name or a voting target area. Conversely, a mark crossed out by the voter, or the word "no" next to a candidate's name or a voting target area shall be considered not to be a valid vote, but an indication that the voter did not intend to cast a vote for that candidate or voting target area. In determining the validity of partially filled in voting target areas, the consistency of a voter's marks shall be taken into consideration. A "hesitation mark" such as a dot in the voting target area shall not be considered a valid mark unless it is demonstrated that the voter consistently marked his or her ballot in such a manner.

5.1.2. Over votes

An over vote is recorded when more valid marks are made than there are candidates to be nominated or elected to office, or more than one valid mark for a measure. No vote is counted for any candidate or measure when an over vote occurs. The number of over votes shall be recorded for each office or measure.

5.1.3. Under votes

An under vote is recorded when a ballot is marked with fewer choices than the voter is permitted. Under votes shall be recorded for each office or measure.

6. ELECTION SECURITY PROVISIONS

6.1. BALLOT COUNTING SYSTEM SECURITY

The elections official must take steps to protect the election system from intentional, fraudulent manipulation and malicious mischief, accidents, and errors.

6.1.1. Ballot Counting Program – The ballot counting program shall be deposited in escrow as provided by law.

6.1.2. Physical Protection – The elections official shall establish procedures for the physical protection of facilities, counted and uncounted ballots, and data and communication access controls. This plan may include provisions for locked facilities for computers as well as counted and uncounted ballots; intrusion and fire alarms, and temperature sensors.

6.1.3. Contingency Plans – Establish contingency plans for ballot counting, including either backup ballot counting facilities under the elections official's supervision, or a reciprocal agreement with a neighboring MARK-A-VOTE® jurisdiction to count ballots in the event of hardware failure.

In addition to the ballot counting programs sent to the Secretary of State pursuant to law, each MARK-A-VOTE® user jurisdiction shall provide an additional copy to be stored in a secure, but readily accessible location off-site.

6.1.4. Internal Security – The elections official shall establish procedures for internal security, i.e., the protection of ballot counting hardware, firmware, and software from fraudulent manipulation.

These procedures must provide for:
- Restricted access to ballot counting hardware, firmware, and software;
- Individual passwords which must be complex and frequently changed;
- Physical protection of ballots by use of logs to chronicle their quantity, use, and access before and after the election.

A copy of each jurisdiction's security procedures shall be submitted to the Secretary of State for review and approval by February 1 of each even-numbered year. In lieu of the annual submission of this plan, the responsible elections official may affirm that no change has been made to previously approved procedures.

6.2. AUDIT TRAILS
All ballot counting operations including mandated pre and post election testing, must be documented in sequential order. An automated and/or manual record or log must be maintained to record the time and date of "system events" related to ballot counting.

"System events" in the ballot counting process include:
- Initiation of the ballot count program.
- Diagnostic and status messages upon start up of ballot counting.
- Clearing totals.
- "Zero total" check.
- Initiation or termination of card readers.

- Running logic and accuracy tests.
- Hardware failures.
- Repairing hardware, including running accuracy tests after repairs are completed.
- System restarts.
- Communication between multiple systems.
- Lost communication to remote sites.
- Time communication is restarted.

6.2.1. Operator interaction with system (time, action taken).
- Ballot-related exception (e.g., ballots not machine readable, ballots requiring special handling, aborted or deleted precincts.)
- Copies of required tests.

This log or record shall be continued until final certification of results, shall be retained for the same time period as ballots for that election, and shall be subject to the same physical security and integrity measures.

6.3. PRESERVATION OF BCWIN® LOG FILES
The BCWin software used for counting Mark-A-Vote ballots maintains several log files that can be used to evaluate the operation of the ballot counting system as well as review certain exception conditions that may occur during ballot processing/

BCWin stores all log file in a directory under the root BCWin directory. The typical path to the log files will be <drive letter>:\BCWin\LogFiles, where <drive letter> is the disk drive that BCWin is installed on such as 'C' or 'D' for example. All log files are stored in this directory regardless of the election being processed

6.3.1. Operator actions that will permanently delete log files
The following actions will permanently delete the BCWin log files and should be used only after a backup of the log files has been created:
- Selecting the "Clear Log Files" entry from the File menu of BCWin
- Selecting the "Clear EVERYTHING!" entry from the File menu of BCWin
- Deleting the files directly from the **BCWin\LogFiles** directory using the Windows Operating System.

6.3.2. Procedure for creating a backup and archive of log files
To create a permanent backup and/or archive of the log files the operator must copy the contents of the BCWin log files director to an appropriate media such as writeable CD and or DVD. This is accomplished by locating the BCWin log files directory. This directory is located under the root BCWin directory as described above.

6.3.3. Format of log files
The log file formats are provided in an appendix to this document and are distributable to the public pursuant to California Secretary of State regulations.

6.4. STATISTICAL BALLOT DATA REQUIRED

The following items are critical to tracking and reporting the ballot counting process, and must be maintained in whatever medium is most practicable:

- For the election definition phase, print and retain one copy of each of the ballot preparation reports including the proof listings of offices and/or measures, page definition reports, ballot type composition report and any other reports necessary to the production of official ballots. For the ballot counting phase, print and retain one copy of the number of ballots read within each precinct, by type, including totals for each party in primary elections if required by law, and the total number of ballots processed.

- Separate accumulations and reporting of the quantity of over votes, under votes, and write-ins within each precinct for each contest.

- Availability of the above information in summary and by precinct.

7. CERTIFICATION AND REPORTING REQUIREMENTS

7.1. CERTIFICATION OF HARDWARE

Hardware shall be inspected and certified pursuant to law.

7.1.1. Certification - All card readers and specialized vote-counting equipment must be certified by the Secretary of State before use in any election.

The elections official shall certify to the Secretary of State the results of the logic tests as well as the accurate functioning of all ballot counting equipment as prescribed by law. This certification shall also affirm the use of the same equipment for pre-election testing and for semi-official vote canvass. In the event of a change to the ballot tally program occurring after this certification, an amended certificate shall be submitted no later than the day before the election.

In the event any equipment is altered or replaced following the certification to the Secretary of State and before completion of the official canvass of the vote, an amended certification of logic and accuracy testing must be submitted to the Secretary of State not later than submission of official canvass results.

7.2. ELECTION OBSERVER PANEL

All procedures prescribed herein shall be carried out in full view of the public insofar as feasible. In addition, the elections official shall devise a plan whereby all critical procedures of the vote tallying process are open to observation by an election observer panel as prescribed by law.

7.3. LOGIC AND ACCURACY CERTIFICATION

A Logic and Accuracy Board shall be appointed by the elections official and, insofar as is practicable, shall be comprised of the same persons before, during, and after the election. The Board shall have the following duties:

7.3.1. Receive from the elections official all required test materials and take steps to ensure the security of the said materials before, during and subsequent to the election, except when said materials are properly in the possession of one of the other boards or elections official as required by these procedures.

7.3.2. Observe the performance of all required tests and verify that the ballot counting program accurately tallies the logic and accuracy test ballot cards.

7.3.3. Note any discrepancies and problems and affirm their resolution or correction.

7.3.4. Certify to the performance of each of the above prescribed duties provided that all members of the Board shall sign the appropriate certificate or certificates. Final certification shall be made to the Secretary of State pursuant to law. This certification shall be made by the elections official based on the Logic and Accuracy Board's certification of successful testing. In the event an amendment to the ballot counting program is required following this certification, the Board must immediately recertify to the Secretary of State.

7.4. SUBMIT BALLOT TALLY PROGRAMS TO THE SECRETARY OF STATE
Ballot tally programs for statewide elections are to be deposited with the Secretary of State as prescribed by law. Ballot tally programs must be accompanied by the elections official's certification of testing as well as the list of vote counting equipment used. Should changes be required following certification and submission to the Secretary of State, resubmission and recertification is required.

7.5. POST-ELECTION REPORTING
Any delays in election night reporting which result in failure to report results to the Secretary of State at least every two hours shall be reported by the 28th day following the election.

7.6. PREPARATION OF SPECIFIC WRITTEN PROCEDURES
Each elections official shall prepare specific written procedures for each phase, step and procedure in the preparation, operation of polling places, vote counting and official canvass of elections. Written procedures must also include instructions to precinct officials regarding proper handling of absentee and provisional ballots, as well as procedures used to conduct a manual tally pursuant to law.

Table 1
Election Test Schedule and Requirements

Test	Days Before or After the Election	Time Period	Ballot Types Used	Cards or Magnetic Tapes	Vote Count Program
System Proofing	E -40 - E -10	Prior to E -7 Certification	All	Ballot cards or Magnetic media	Yes
Exception	E -40 - E -10	Prior to E -7 Certification	Any	Ballot cards	Yes
Election-Specific	E -40 - E -10	Prior to E -7 Certification	All	Ballot cards	Yes
Accuracy	E -40 - E -10	Prior to E -7 Certification	N/A	Reusable cards	No
Logic	E -40 - E -10	Prior to E -7 Certification	All	Ballot cards or Magnetic media	Yes
Accuracy	E -10	For E -7 Certification	N/A	Reusable cards	No
Logic	E -10	For E -7 Certification	All	Ballot cards	Yes
Accuracy	E -10	Immediately before Counting any ballots	N/A	Reusable cards	No
Logic	E	Immediately before and after counting any ballots	All	Ballot cards or Magnetic media	Yes
Accuracy	After E and Prior to E +28	For official canvass immediately before counting any ballots	N/A	Reusable cards	No
Logic	After E and Prior to E +28	For official canvass immediately before and after counting any ballots	All	Ballot cards or Magnetic media	Yes

Certification by Logic and Accuracy Board

We, the undersigned, having been appointed by the elections official in the county named below to verify the logic of the computer vote count program for the election indicated below, as required by the Procedures adopted pursuant to law, do hereby certify through the Elections Official to the Secretary of State:

THAT the pre-vote counting tests, as defined in the above mentioned procedures, have been performed;

THAT the pre-vote counting test results have been compared with the pre-determined correct totals for each office and ballot measure;

THAT the cause of any discrepancy was found and corrected; and,

THAT the logic test programs, test ballot cards, and test printed output which were certified as correct by the Logic Verification Board were delivered into the custody of Elections Official.

ELECTIONS OFFICIAL'S NAME AND TITLE

COUNTY	**ELECTION DATE**
VOTE COUNTING SYSTEM	**ELECTION NAME**

PRINTED NAME OF FIRST BOARD MEMBER

SIGNATURE OF FIRST BOARD MEMBER AND DATE

PRINTED NAME OF SECOND BOARD MEMBER

SIGNATURE OF SECOND BOARD MEMBER AND DATE

PRINTED NAME OF THIRD BOARD MEMBER

SIGNATURE OF THIRD BOARD MEMBER AND DATE

APPENDIX B

Certificate of Biennial Inspection

I, the elections official named below, hereby certify that in the normal course of pre-election hardware maintenance and testing of our voting and vote tabulating equipment, for the election indicated below, that I have found the voting and vote tabulating equipment for the city/county named below to be operating correctly and accurately. This certificate is issued pursuant to Elections Code section 19220.

ELECTIONS OFFICIAL'S NAME AND TITLE

ELECTION DATE

COUNTY

SIGNATURE AND DATE

SEAL

VOTE COUNTING PROCEDURES COUNT/DON'T COUNT GUIDELINES

	VOTING CONDITION	VOTE COUNT CRITERIA			
		WRITE-IN VOTE	**DUPLICATE VOTE or OVERMARK***	**VALID VOTE**	**INVALID VOTE**
V-Valid	**VALID VOTES** **PRECINCT & ABSENTEE BALLOT VOTING**				
	VALID VOTES FOR BALLOT CANDIDATES AND MEASURES				
V 1	Voter clearly marks voting choice by completely filling inside the entire voting position target in blue or black ink ▬.			**X**	
V 2	Voter indicates intended voting choice by partially filling in ½ or more of the voting position target ▬.		**X**	**X**	
V 3	Voter indicates intended voting choice by filling in less than ½ of the voting position target ▭.		**X**	**X**	
V 4	Voter indicates intended voting choice by placing a distinctive mark, such as (**X**) or (√) or punch hole **inside** the associated voting position target for candidate choice OR YES or NO vote for ballot measure.			**X**	

	VOTING CONDITION	VOTE COUNT CRITERIA			
		WRITE-IN VOTE	DUPLICATE VOTE or OVERMARK*	VALID VOTE	INVALID VOTE
V 5	Voter consistently places a distinctive mark, such as **(X)** or **(√)** or punch hole in corresponding space directly **above, below or beside** the associated voting position target for candidate choice OR YES or NO vote for ballot measure and the voter's intent can be clearly determined.		X	X	
V 6	Voter uses a distinctive and consistent voting pattern for marking all voting choices on ballot card or sample ballot such as **(X)** or **(√)** or punch hole OR encircling entire voting position target for candidate choice OR YES or NO vote for ballot measure.		X	X	
V 7	Voter writes in a ballot candidate's name in write-in space and does not fill in voting position (s) for any other ballot candidate running for the same office. (Will count as regular not write-in vote)		X	X	
V 8	Voter writes in a ballot candidate's name OR YES or NO vote for ballot measure in write-in space and also fills in associated voting position target for same candidate or measure vote. (Will count as regular not write-in vote)			X	

	VOTING CONDITION	VOTE COUNT CRITERIA			
		WRITE-IN VOTE	DUPLICATE VOTE or OVERMARK*	VALID VOTE	INVALID VOTE
V 9	Voter clearly indicates voting error correction by using tape, strikeover, white-out or written note and marks another voting choice on the ballot card or Official Sample Ballot.		X	X	
V 10	Voter clearly indicates intended voting choices by writing candidate name(s) or ballot measure vote(s) in a letter or note, and returns in absentee or provisional ballot envelope. (Original signature is required on envelope)		X	X	

	VOTING CONDITION	VOTE COUNT CRITERIA			
		WRITE-IN VOTE	DUPLICATE VOTE or OVERMARK *	VALID VOTE	INVALID VOTE
VW – Valid write-ins	**VALID VOTES FOR WRITE-IN CANDIDATES**				
VW 1	Voter writes in qualified write-in candidate's name & office title in write-in space on secrecy ballot sleeve OR extended ballot stub. (Abbreviations/misspellings are acceptable but Name & Office title must be recognizable/determinable and bear resemblance to candidate information on listing).	X		X	
VW 2	Voter writes in qualified write-in candidate's name & office title in designated write-in space (on write-in envelope or stub) and does not fill in the associated voting position for any ballot candidate running for the same office.	X		X	
VW 3	Voter writes in qualified write-in candidate's name & office title in designated write-in space (on write-in envelope or on stub) and there are no candidates listed on the ballot for the same office.	X		X	

	VOTING CONDITION	VOTE COUNT CRITERIA			
		WRITE-IN VOTE	DUPLICATE VOTE or OVERMARK *	VALID VOTE	INVALID VOTE
VW 4	Voter writes in qualified write-in candidate's name but omits office title in designated write-in space and the office title/voter intent can be determined.	X		X	

	VOTING CONDITION	VOTE COUNT CRITERIA			
		WRITE-IN VOTE	DUPLICATE VOTE or OVERMARK*	VALID VOTE	INVALID VOTE
	INVALID VOTES **PRECINCT & ABSENTEE BALLOT VOTING**				
I - Invalid	**INVALID VOTES FOR BALLOT CANDIDATES AND MEASURES**				
I 1	Voter fills in more voting positions for candidates than the maximum number to be elected for an office. **Over-Vote**				**X**
I 2	Voter fills in both YES and NO voting positions for a ballot measure. **Over-Vote**				**X**
I 3	Voter writes in ballot candidate's name in designated write-in space and also fills in the associated voting position for another ballot candidate. **Over-Vote**				**X**

	VOTING CONDITION	VOTE COUNT CRITERIA			
		WRITE-IN VOTE	DUPLICATE VOTE or OVERMARK*	VALID VOTE	INVALID VOTE
I 4	Voter writes in a ballot candidate's name OR YES or NO vote for ballot measure in write-in space (on the stub or on the write-in envelope), instead of filling in the associated voting position for ballot candidate's name.				X (voter must fill in voting position for ballot to be counted, EC 15342(a)
I 5	Voter writes in a ballot candidate's name OR YES or NO vote for ballot measure in write-in space instead of filling in the associated voting position for ballot candidate's name.				X (voter must fill in voting position for ballot to be counted, EC 15342(a)
I 6	Voter uses identifiable markings or notations on ballot card or sample ballot, such as name/address, initials, Voter ID #, SS # or Drivers License #, etc. that would violate voting privacy. **Questionable Vote**				X

	VOTING CONDITION	VOTE COUNT CRITERIA			
		WRITE-IN VOTE	DUPLICATE VOTE or OVERMARK*	VALID VOTE	INVALID VOTE
I 7	Voter uses random markings, indentations, punctures or impressions, squiggly/dimpled or crimp marks, pinholes or pinpricks on ballot card or sample ballot. There is no distinctive and consistent voting pattern to indicate voter intent. **Undeterminable Vote**				**X**
I 8	Noted **"Void/Spoiled"** ballots by the Precinct Poll Workers/Voter indicating that ballot vote(s) are invalid. (Normally because (2nd or 3rd) (another) ballot was issued).				**X**
I 9	Voter places a mark **above, below or beside**, the associated voting position on ballot card or sample ballot, instead of inside the circle, but voter's intent cannot be clearly determined.				**X** (voter must fill in voting position for ballot to be counted, EC 15342(a)
I 10	Voter transmits voted ballot by facsimile, without an original signature.				**X**

	VOTING CONDITION	VOTE COUNT CRITERIA			
		WRITE-IN VOTE	**DUPLICATE VOTE or OVERMARK***	**VALID VOTE**	**INVALID VOTE**
I W – Invalid write-in	**INVALID VOTES FOR WRITE-IN CANDIDATES**				
I W 1	Voter writes in the name of a person who is not listed on the qualified write-in candidate list.	**X**			**X**
I W 2	Voter writes in unrecognizable/undeterminable write-in candidate's name & office title.	**X**			**X**
I W 3	Voter writes in qualified write-in candidate's name and also fills in voting position(s) for one or more ballot candidates than the number to be elected for an office. **Over-Vote**	**X**			**X**
IW 4	Voter writes in qualified write-in candidate's name & office title in designated write-in space and does not fill in the associated voting position for any ballot candidate running for the same office and voter does not fill in the associated voting position for the write-in candidate.	**X**			**X**

	VOTING CONDITION	VOTE COUNT CRITERIA			
		WRITE-IN VOTE	DUPLICATE VOTE or OVERMARK*	VALID VOTE	INVALID VOTE
IW 5	Voter writes in qualified write-in candidate's name & office title in designated write-in space and there are no candidates listed on the ballot for the same office, and voter does not fill in the associated voting position for the write-in candidate.	X			X

	VOTING CONDITION	VOTE COUNT CRITERIA			
		WRITE-IN VOTE	**DUPLICATE VOTE or OVERMARK***	**VALID VOTE**	**INVALID VOTE**
	MANUAL 1% TALLY & ELECTION RECOUNT				
MV – Manual Valid	**MANUAL TALLY - VALID VOTES**				
V M 1	Voter clearly marks voting choice by completely filling inside entire voting position target ▬. Record as **Valid Vote** on tally sheet.			**X**	
V M 2	Voter indicates intended voting choice by partially filling inside voting position target pursuant to specified valid vote criteria. ▭Record as **Valid Vote** on tally sheet.			**X**	
V M 3	Voter indicates intended voting choice by using an acceptable distinctive & consistent marking pattern on ballot card or sample ballot pursuant to specified valid vote criteria. Record as **Valid Vote** on tally sheet.			**X**	

	VOTING CONDITION	VOTE COUNT CRITERIA			
		WRITE-IN VOTE	**DUPLICATE VOTE or OVERMARK***	**VALID VOTE**	**INVALID VOTE**
V M 4	Voter clearly indicates voting error correction by using tape, strikeover, white-out or written note and marks another voting choice on the ballot card or Official Sample Ballot. Record as **Valid Vote** on tally sheet.			**X**	
V M 5	Voter does not fill in associated voting position for any candidate or measure choice and also does not write in a candidate name OR YES or NO measure vote in the designated write-in space**.** Record as **No Vote** on tally sheet.			**X**	
V M 6	Less voting positions are filled in/marked on ballot card or sample ballot than the maximum number of candidates to be elected. Multiple votes are permitted for contest, such as a "vote for three", and voter only votes for one or two. Record as **Under-Vote** on tally sheet.			**X**	

	VOTING CONDITION	VOTE COUNT CRITERIA			
		WRITE- IN VOTE	**DUPLICATE VOTE or OVERMARK***	**VALID VOTE**	**INVALID VOTE**
MI – Manual Invalid	**MANUAL TALLY- INVALID VOTES**				
M I 1	More voting positions are filled in/marked on ballot card or sample ballot for a candidate office contest than the number of candidates to be elected. Record as **Over-Vote** on tally sheet.	**X**			**X**
M I 2	Both YES and NO voting positions are filled in/marked for a ballot measure. Record as **Over-Vote** on tally sheet.				**X**
M I 3	Ballot contest has identifiable voter markings or notations such as name/address, initials, Voter ID #, SS # or Drivers License #, etc. that would violate voting privacy. Record as **No Vote** on tally sheet.				**X**
M I 4	Ballot contest has random markings, indentations, impressions or punctures, squiggly/dimpled or crimp marks, pinholes or pinpricks. There is no consistent voting pattern to indicate voter intent. Record as **No Vote** on tally sheet.				**X**

BCWin® Log File Definitions

The following formats and definitions are provided to assist in the analysis of the operation of counting Mark-A-Vote ballots using the BCWin ballot tally software.

The following log files are created by BCWin:
- CountEln.log
- Card Reader logs

All log file are ASCII text files. The format of any specific log files entry is dependent on the process that generated it. All log file entries are preceded by the date and time the entry was created based on the date and time as set on the Windows Operating System the software is running on.

CountEln.log Definitions:
The CountEln.log file tracks the operations of the BCWin process that controls the ballot tally tasks. CountEln.log files is named as using the following template:
<system name>_counteln.log where <SYSTEM NAME> is the name given to the computer the card reader is attached to in the Windows Operating System.

The following entries may be found in the CountEln.log file:

```
These Log File Entries are formatted as follows:
MM/DD/YYYY HH:MM:SS              <System Name> <Message text>
Where:
    • <System Name> This is the system name returned by MS Windows
      that the process is running on
    • <Message Text> This is additional information to help the
      operator

ELN ballot counting started by User Name <user name>
    The database <database name> has been opened.
    The database <database name> has been closed.
End Ballot Counting
In sub ClearPrintLog.
    Cleared Print Log.
    Cleared Logic & Accuracy counts/totals from Result File.
    Cleared live precinct counts/totals from Result File.
    Cleared Transaction File.
    Cleared Log Files.
In sub ctdClearRptLog.
    Cleared Report Log.
In sub ctdClearBulletinOptions.
    Cleared Bulletin Options.
In function LoadPassword.
In function SavePassword.
In sub ListLoad.
```

There are <count of elections> items in the Election ID combo box.

No elections found in Elections.csv file for the Election ID combo box.

Elections.csv file not found in Misc directory.

No card readers connected to system -- can only count from disk.

1 card reader connected to system.

<count of card readers> card readers connected to system.

In function GetCurrentPassword.

Entering BCS Options modal dialog box.

Updated Ballot Counting Options.

Exiting BCS Options modal dialog box.

Exiting BCS Options dialog box.

Entering BCS Client Set Start Transaction modal dialog box.

Reset Start Transaction to " & CStr(mstrTransHdrInfo.lStartAtTrans) & ".

Exiting BCS Client Set Start Transaction modal dialog box.

Closing Ballot Definition & Result Files.

Stopping Card Reader <reader number>

Stopping Count From Disk process

Starting Card Reader <reader number>

Starting Count from Disk process for file <file name>.

Count from Disk process has ended for file <file name>.

Card Reader <reader number> process has died.

Closed Ballot Definition & Result files for Election <election id>.

Opened & memory-mapped Ballot Definition & Result files for Election <election id>.

Stopping Client Process

Starting Client Process

Client process has died.

Stopping Server Process

Starting Server Process

Server process has died.

Entering Select Remote Paths modal dialog box.

Entering BCS Registry Editor modal dialog box.

Updated BCS Registry entries.

Exiting BCS Registry Editor modal dialog box.

Exiting ELN Print Reports form.

Entering BCS Print Reports form

There are <count> precincts in the Voting Pct combo box.

There are <count> precincts in the L&A Voting Pct combo box.

No voting precincts found in Result File for the Voting Precinct combo boxes.

Printing Summary Bulletin.

Printing Precinct <precinct number> Bulletin.

Printing All-precinct Itemized Bulletin.

Printing Key-precinct Bulletin.

Printing Card Type Summary.

Printing Statement of Votes.

Printing All-precinct Status List.

Printing Incomplete Precinct List.

```
     Printing Completed Precinct List.
ERROR - Remote Bulletin Site Path <path> not found on network.
In sub LoadTableBulletinOptions.
In sub WriteToPrintLogTable.
In function GetRunNumber.
In sub IncrementRunNumber.
SYSTEM ERROR - <description of error> from common dialog box.
An I/O error has occurred. <description of error> <error number>
```

Card Reader Logs Definitions:
Each card reader that is attached to a system has its own process that creates a unique log file. The log file for any card reader process is named using the following template: <SYSTEM NAME>_cardreader<CARD READER NUMBER>.log where <SYSTEM NAME> is the name given to the computer the card reader is attached to in the Windows Operating System and <CARD READER NUMBER> is a number assigned by BCWin to card readers in the order they are recognized by the software starting with 1.

The card reader log file tracks the operations of the BCWin process that reads ballot cards, determines the ballot card type and counts the votes on the ballot card. This log file also reflects the processing of precinct header and end cards by the card reader process.

The following entries may be found in the card reader log file:

```
These Log File Entries are formatted as follows:

MM/DD/YYYY HH:MM:SS Pct <voting precinct number> <System Name>
<Device Name> <Severity Level> <Message text>

Where:
   • <voting precinct number> This is a seven digit number that
     is the voting precinct the program is currently processing.
     If no voting precinct number is being processed the string
     "???????" is used as a place holder.
   • <System Name> This is the system name returned by MS Windows
     that the process is running on
   • <Device Name> This is one of the following:
        o Rdr<number> where number is 1 or greater and uniquely
          identifies the card reader attached to the computer
          that the program is controlling
        o "Client" indicating that the program is the BCWin
          Client Process
        o "Server" indicating that the program is the BCWin
          Server Process
        o "Disk" indicating that the program is reading ballot
          data from disk
   • <Severity Level> This is one of the following:
        o "PAUSE"
        o "STATUS"
        o "WARNING"
```

o "MANUAL"
o "REJECT"
o "ABORT"
- <Message Text> This is additional information to help the operator

CardRdr Log Messages:
STATUS   End counting session, closing log file
STATUS   Opening Reader/File: <device name>
STATUS   Opened card-image i/p file: <file name>
ABORTCard Reader <device number> could not be opened -- <error message>
ABORTCard-image i/p file <file name> could not be opened --
<error message>
ABORTTransmittal File <file name> could not be opened, error
<error message>
ABORTResult File <file name> could not be memory-mapped
ABORTResult File <file name> could not be opened, error <error message>
ABORTBallot Def File <file name> could not be memory-mapped
ABORTBallot Def File <file name> could not be opened, error
<error message>
REJECT   Pct rejected by operator
REJECT   Invalid control card, code <code>
REJECT   Invalid update code <code>
MANUAL   Invalid card type <code>
STATUS   Counting L & A pct {(Add), (Update), (Replace)}
STATUS   Counting Absentee pct {(Add), (Update), (Replace)}
STATUS   Counting pct {(Add), (Update), (Replace)}
STATUS   End of L & A pct {(Add), (Update), (Replace)}
STATUS   End of Absentee pct {(Add), (Update), (Replace)}
STATUS   End of pct {(Add), (Update), (Replace)}
STATUS   End of file -- <file name>
ABORTEnd of file
ABORTCard reader error -- <error message>
REJECT   Hdr/end card pct mismatch; Hdr pct <pct number>, End
pct <pct number>
REJECT   Hdr/end card Elec ID mismatch; Hdr <elec id>, End <elec
id>
REJECT   Invalid hdr/end card type <code>
REJECT   No end card for previous pct
REJECT   Too many manual ballot errors for pct
REJECT   Missing header card
REJECT   Invalid header card
WARNING   Pct complete, cannot add
WARNING   Pct not counted, cannot update
WARNING   Pct not counted, cannot replace
WARNING   Unknown error code <code>
REJECT   Invalid header card Election ID <elec id>
STATUS   Invalid Contest ID <contest id>
PAUSEBlank card <card number>
PAUSEWrite-ins on ballot card <card number>

```
PAUSEOvervotes on ballot card <card number>
MANUAL    Invalid ballot card ID <card id>
REJECT    Invalid card length <length>
WARNING   Unknown error code <code>
WARNING   System registry error <registry key value> -- <message>
```

Server Process Logs Definitions:
Some BCWin installations include the use of multiple computers to more efficiently
distribute workloads. In those cases, there may be one or more instances of log files for the
BCWin server process. The server process receives transactions from one of more client
computers configured to communicate with the server. Server process log files are named
using the following template:

The following entries may be found in the card reader log file:
<system name>_elnserver.log where <SYSTEM NAME> is the name given to the computer
the card reader is attached to in the Windows Operating System.

The following entries may be found in the card reader log file:

```
These Log File Entries are formatted as follows:

MM/DD/YYYY HH:MM:SS Pct <voting precinct number> <System Name>
<Device Name> <Severity Level> <Message text>

Where:
```
- <voting precinct number> This is a seven digit number that
  is the voting precinct the program is currently processing.
  If no voting precinct number is being processed the string
  "???????" is used as a place holder.
- <System Name> This is the system name returned by MS Windows
  that the process is running on
- <Device Name> This is one of the following:
  o Rdr<number> where number is 1 or greater and uniquely
    identifies the card reader attached to the computer
    that the program is controlling
  o "Client" indicating that the program is the BCWin
    Client Process
  o "Server" indicating that the program is the BCWin
    Server Process
  o "Disk" indicating that the program is reading ballot
    data from disk
- <Severity Level> This is one of the following:
  o "PAUSE"
  o "STATUS"
  o "WARNING"
  o "MANUAL"
  o "REJECT"
  o "ABORT"

- <Message Text> This is additional information to help the operator

```
STATUS      All clients have disconnected
ABORTCreateThread failed for initial client thread
ABORTResults work data could not be loaded.
ABORTBallot Definition work data could not be loaded.
ABORTBallot Def File <file name> could not be opened, error
<error message>
ABORTResults File <file name> could not be opened, error <error
message>
WARNING    CreateThread failed for client <client system name>
STATUS     Client <client system name> connected
ABORTResult File <file name> could not be memory-mapped
ABORTResult File <file name> could not be opened, error <error
message>
WARNING    Transmittal file <file name> could not be opened, error
<error message>
WARNING    Named Pipe <file name> could not be opened, error
<error message>
STATUS     Disconnected Client <client system name>
STATUS     Client <client system name> has disconnected
WARNING    Named Pipe transaction error <error message>
WARNING    Invalid trans length <length> from client <client
system name>
STATUS     Received Add transaction from client <client system
name>
STATUS     Received Update transaction from client <client system
name>
STATUS     Received Replace transaction from client <client system
name>
STATUS     Received transaction type <code> from client <client
system name>
WARNING    Precinct complete, cannot add
WARNING    Precinct not counted, cannot update
WARNING    Precinct not counted, cannot replace
REJECT     Invalid transaction type <code>
```

Client Process Logs Definitions:
Some BCWin installations include the use of multiple computers to more efficiently distribute workloads. In those cases, there may be one or more instances of log files for the BCWin client process. The client process sends transactions to one server computer configured to communicate with the client. Client process log files are named using the following template:

The following entries may be found in the card reader log file:
<system name>_elnclient.log where <SYSTEM NAME> is the name given to the computer the card reader is attached to in the Windows Operating System.

The following entries may be found in the card reader log file:

These Log File Entries are formatted as follows:

MM/DD/YYYY HH:MM:SS Pct <voting precinct number> <System Name> <Device Name> <Severity Level> <Message text>

Where:
- <voting precinct number> This is a seven digit number that is the voting precinct the program is currently processing. If no voting precinct number is being processed the string "???????" is used as a place holder.
- <System Name> This is the system name returned by MS Windows that the process is running on
- <Device Name> This is one of the following:
    - Rdr<number> where number is 1 or greater and uniquely identifies the card reader attached to the computer that the program is controlling
    - "Client" indicating that the program is the BCWin Client Process
    - "Server" indicating that the program is the BCWin Server Process
    - "Disk" indicating that the program is reading ballot data from disk
- <Severity Level> This is one of the following:
    - "PAUSE"
    - "STATUS"
    - "WARNING"
    - "MANUAL"
    - "REJECT"
    - "ABORT"
- <Message Text> This is additional information to help the operator

STATUS   Connected to server <server system name>
STATUS   Disconnected from server <server system name>
ABORTNamed Pipe <file name> could not be opened, error <error message>
ABORTTransmittal File <file name> could not be opened, error <error message>
STATUS   Add transaction sent to server <server name>
STATUS   Update transaction sent to server <server name>
STATUS   Replace transaction sent to server <server name>
STATUS   <code> transaction sent to server <server name>
STATUS   Server <server name> has disconnected
ABORTNamed Pipe transaction error <error message>