

State of California

PROCEDURES

Required for Use of the Diebold Election Systems

AccuVote-TSx Electronic Ballot Station

These procedures are proposed for adoption by the Secretary of State pursuant to Elections Code sections 19200 and 19205 and shall regulate and govern the use of Diebold Election Systems AccuVote-TSx (Touch Screen) Model R7 at all elections governed by the California Elections Code.

These procedures shall be effective upon approval by the Secretary of State and shall be used in conjunction with all other statutory and regulatory requirements. Insofar as feasible, all procedures prescribed herein shall be carried out in full view of the public.

These procedures constitute a minimum standard of performance. They are not intended to preclude additional steps being taken by individual election officials to enhance security and reliability of the electoral process.

**Submitted
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DIEBOLD AccuVote-TSx Electronic Ballot Station

1. AccuVote-TSx Overview

1.1 System Overview

The AccuVote-TSx (touch screen) is part of a comprehensive voting system provided by Diebold Election Systems. The AccuVote-TSx is a Direct Recording Electronic (DRE) device. The AccuVote-TSx includes the AccuView-Printer Module (AVPM) to accomplish Voter Verified Paper Audit Trail (VVPAT) functionality. The AccuVote-TSx and AVPM work in conjunction with Diebold's GEMS (Global Election Management System) software application. Each AccuVote-TSx and AVPM is a stand-alone device that does not require networking or any connections with an external device in order to allow ballots to be cast on Election Day.

The AccuVote-TSx provides electronic ballot display, storage, and ballot station reporting functions. The AVPM printer provides the voter with a paper review of their ballot selections. The GEMS application software provides the election set-up, automatic ballot layout, results accumulation, and election reporting functions.

Diebold's AccuVote-OS (optical scan) and the AccuVote-TSx may be operated independently or as part of a single integrated system used in conjunction with the GEMS software application. These products are each certified by an Independent Testing Authority (ITA) pursuant to FEC voting system standards.

The AccuVote-TSx is designed to meet the administrative, logistical, user and voting requirements and needs of election administrators, poll workers, and voters. The AccuVote-TSx and the AVPM have the flexibility and capacity to operate in a polling place that contains one or more ballot styles and/or in an early voting environment where it stores all ballot styles for the entire jurisdiction. The voter operates the AccuVote-TSx ballot station by inserting a voter access card and, once the voter's ballot appears, by touching the unit's LCD/Touch Panel display. The touch screen interface allows the voter to:

- Choose a language preference (if applicable);
- Select measure and candidate choices;
- View these choices on a summary screen (making changes if desired);
- Print a verifiable ballot receipt that is securely stored in the touch screen unit; and
- Cast a ballot.

Voters may choose to view and vote their ballot on screen in the normal font size or in a magnified, larger on-screen font. Finally, voters may also view their electronic ballot using default color schemes which highlight ballot information areas, or the voter may select to view the ballot using an optional high contrast black and white mode.

At the finish of candidate and choice selection, the voter has the ability to review their selections at the Summary Screen. After they are satisfied, the voter will press the "Print Ballot" button

and the AVPM unit will begin printing the voter's selection for verification. The voter has the ability to review and modify their ballot selections from the summary screen presentation as many times as the voter desires. However, the voter may only reject the paper audit trail two times, then changing their selections. After the second rejection of the paper ballot, the voter must print and cast the third ballot.

Every AccuVote-TSx is capable of providing the voter with an audio ballot. To access the audio ballot, the poll worker attaches a headset and keypad to the touch screen unit and issues the voter an access card that has been programmed for audio voting. Used in this manner, the AccuVote-TSx is referred to as a Visually Impaired Ballot Station (VIBS). The audio ballot can be presented with either the touch screen blank, or with a displayed electronic ballot screen showing a large print font. Blind voters generally use the audio with the blank screen, while low vision or mobility impaired voters use the audio with the electronic voting screen displayed. The AVPM also operates with the AccuVote-TSx in VIBS mode, with the keypad controlling the printer. The AVPM has a VIBS privacy cover which can be put in place to make their paper audit trail completely private.

1.2 GEMS and AccuVote-TSx

GEMS software functionality includes election definition, ballot layout, imbedded security features, programming of voting device memory cards and election media, audio ballot recording, election results reporting, election results archiving, and auditing. AccuVote-TSx-related customization is performed in GEMS, and includes:

- Header, footer and vote box sizing
- Defining the number of ballot columns
- Defining scaling percentage
- Defining the control button height, position and type
- Defining voting flags
- Defining instruction options
- Defining AVPM options
- Defining VIBS audio options
- Defining log options
- Defining coloring options

All audio text information pertaining to the election is recorded in the GEMS database. All VIBS operational instructions are stored in the GEMS TSText folders on the server. For more information on defining AccuVote-TSx options in GEMS, refer to section 3.8 *AccuVote-TSx Options* in the *GEMS 1.18 Reference Guide*.

The AccuVote-TSx ballot station includes the following components:

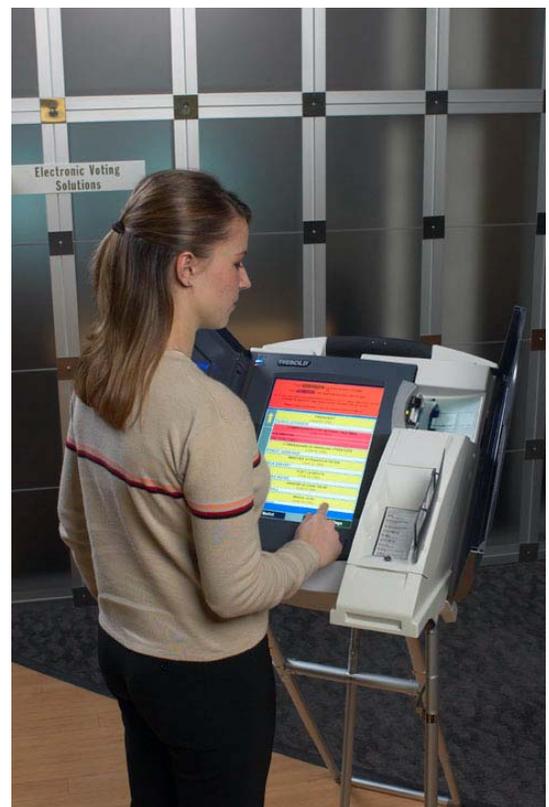
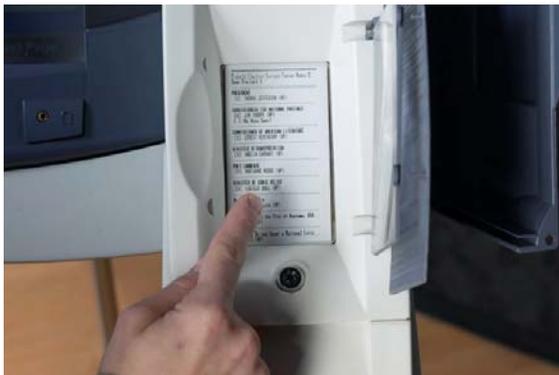
- 15" LCD touch screen display
- Smart card reader
- RS232 serial connector
- 2 PCMCIA ports: 1 for flash memory, 1 for general use

- Real time clock
- Internal Printer
- Battery backup
- Internal modem
- Headphone connector
- Self-contained voting booth

The AVPM provides the voter with a printed version of the voters ballot choices presented under a plexiglass viewing area. This viewing area is located on the right side of the AccuVote-TSx. (see picture below).

The AVPM allows the voter to reject a hardcopy ballot and make modifications to another ballot. A voter will receive a maximum of three ballot opportunities. The AVPM includes the following components:

- Printer housing
- AVPM viewing area magnifier to increase viewing font size on printed ballot
- Privacy screen to block AVPM ballot viewing area when used by non-sighted voters
- Paper roll
- Sealable security canister



Election media for the AccuVote-TSx are programmed with election and ballot information and are stored in one of the touch screen unit's two PCMCIA slots.

The power switch, two PCMCIA slots, internal modem and internal printer are secured in locked compartments.

The AccuVote-TSx's self-contained booth may be raised or lowered for voting and/or to reduce glare.

Each AccuVote-TSx is equipped with an internal printer that is used to print zero reports, election results, and audit reports. The AVPM is used to provide voters with a verifiable paper audit trail.

Each AccuVote-TSx is equipped with an internal modem. Unofficial results may be transferred to GEMS via modem and secure connection.

Voter access cards are inserted into the smart card reader to access the voter's ballot.



This card contains no personal information about the voter. The voter access card is programmed only with precinct and ballot style information. In a primary election, the voter card is programmed to access the appropriate political party ballot.

A separate access card is designated as Supervisor Card for the Precinct Captain or Precinct Inspector use and is utilized at designated points in the AccuVote-TSx operation as necessary for control purposes.





Another access card is designated as an Administrator Card and is utilized at designated points in the AccuVote-TSx operation as necessary for control purposes. This card is used only by administrative personnel, and is not part of the Election Day activity at the polling locations.

A final card is designated as a Security Key Card and is used for programming unique election security keys for all devices in the election that activate or read voter cards in the polling location.

The serial connector on the AccuVote-TSx is used to connect the touch screen unit to a numeric keypad, which is an input mechanism for voting with the audio ballot. Headphones are plugged into the headphone connector for Visually Impaired Ballot Station AccuVote-TSx units. Speakers may also be plugged into this connector for convenient testing of audio ballots.



1.3 Election Process

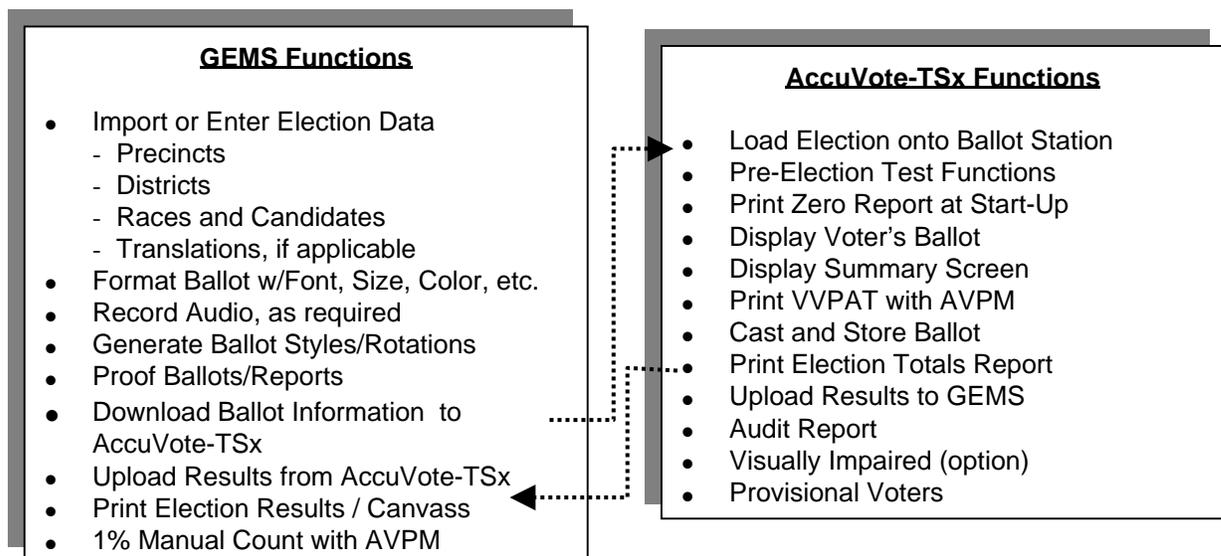
Local election officials gather election information which is entered into the GEMS application software. The election information may be entered directly into the GEMS system via an MS-Windows graphical user interface or may be accomplished via an import of data from the jurisdiction's voter registration and election management system.

Once all the election specific information is entered or imported into GEMS, the data is formatted using the GEMS desktop publishing capabilities. This allows the electronic ballot presentation to be enhanced with desktop publishing features such as adjustment to font size, font type, bold, italics, color, bordering, shading, and spacing. The visual presentation of the ballot is under the control of the election administrator.

Once the ballot information has been finalized and formatted, electronic ballots are generated and proofed for accuracy by the jurisdiction. Upon verification that the ballot information is correct, the files may be transferred to the AccuVote-TSx removable storage media (PCMCIA card) via:

- (1) Election Media Processor (EMP)
- (2) Local Area Network connection to one or more AVTSx unit

The PCMCIA storage media hold both the ballot information (visual and audio) and the voted ballot election result as voting progresses. Voted ballots are stored redundantly on the AccuVote-TSx removable storage media (PCMCIA card) and the "flash" system memory. Results may then be directly uploaded to the GEMS host from each unit, or accumulated in the precinct or regional return center, and then uploaded to GEMS via secure connection.



Prior to each election, every AccuVote-TSx unit and PCMCIA card to be used in the election is tested in conjunction with the GEMS system according to the prescribed procedures as described in this procedure manual. These tests incorporate physical hardware and software diagnostics tests, as well as election-specific system testing to ensure that all phases of the election have been tested.

Testing includes the following components:

- AccuVote-TSx hardware
- AccuVote-TSx software
- AVPM printer module as applicable
- Election-specific automated testing
- Audio testing for visually Impaired voters
- System testing with GEMS
- Printing of test reports

Voting is initiated when the voter inserts a voter access card into the ballot station card reader. The card reader identifies the voter's precinct and party (if the election is a primary), and presents the appropriate ballot to the voter. Prior to viewing the ballot, the voter is presented with voter instructions, font size selection, contrast selection, and language options as appropriate to the jurisdiction. The voter access card may also determine whether a voter receives a visually impaired (audio) ballot with the ballot screen showing or hidden.

When the AccuVote-TSx displays the electronic ballot to the voter, candidates and race responses are selected by touching the corresponding voting marks on the LCD. Once all selections are complete, the voter is presented with a summary screen of voted races allowing a review of the ballot. Races that are blank are highlighted for the voter. The voter may go to any race and modify the voter's prior selection from this summary screen. This may be done as many times as the voter chooses. When the voter has reviewed their electronic ballot, they may then proceed by pressing the PRINT BALLOT button on the summary screen.

This function reformats the summary screen so that the visual electronic display now will correspond to the AVPM printer window. The AVPM will print the voter's ballot and display the ballot on the AVPM window. The AccuVote-TSx will now display the same information on the LCD screen that appears in the printer viewing window, allowing the voter to compare the VVPAT with the on-screen ballot. The voter has the option of canceling the VVPAT and going back to the summary screen or casting the ballot. The voter may cancel their VVPAT printed ballot twice. After the second time, the voter must cast their third printed ballot.

The AccuVote-TSx also provides a Visually Impaired Ballot Station (VIBS) option, whereby the voter may vote by pressing buttons on a numeric, telephone-style keypad in order to select pre-recorded race options.

The results of ballots cast are stored both on an Internal Flash File System, as well as an external PCMCIA memory. At the close of voting, unofficial election results reports are printed. Several options exist for the consolidation of election results to the GEMS host computer.

Results may be transferred directly to the GEMS host computer via a secure connection, or accumulated to another AccuVote-TSx unit's PCMCIA card, then uploaded to the GEMS host computer via a secure connection. Results may be transferred either by modem from the polling location to the host GEMS server or results from memory cards may be uploaded via direct connection to the host GEMS server at the election office. This upload is accomplished via a secure encrypted network connection local to the GEMS host server.

The AccuVote-TSx ballot station software program provides controlled access to its functions, as well as additional security features, including provisions for utilizing the audit process. The software interfaces with the GEMS election database that defines the election, races, and candidates, questions, and issues for a given election. The AccuVote-TSx software provides the voter with a stand-alone, user-friendly interface for casting ballots. It identifies the voter and the appropriate ballot. The software provides for complete integrity and anonymity of the voter data.

1.4 Definitions

This section contains a comprehensive glossary of terms used with the AccuVote-TSx, the AccuVote-TSx firmware, and related functions in GEMS, in alphabetical order.

“Absentee Voter”

A voter who does not vote in their polling place, but does vote using either mail ballot or electronic ballot at a satellite location.

“AccuVote Server”

The console window used in GEMS for programming AccuVote-TSx election media and uploading election results.

“AccuVote-TSx”

This system consists of hardware and software for the electronic ballot station functions, such as proper ballot selection, detecting and recording voter choices, printing of reports, etc.

“Administrator Card”

A special smart card programmed to allow complete access to all functions on the AccuVote-TSx ballot station. It is NOT intended for poll worker use and is NOT needed for closing the polls and initiating the printing of results.

“Administration Screen”

The various functions of the administrative window on the AccuVote-TSx designed only to be accessed at specified points in the election process. Functions on this screen include: Start Election, End Election, Transfer Polling Data, Exit Administrative State, and Shutdown System.

“Archive”

Election and election results files preserved for back-up or election recovery purposes.

“Archiving of Election Data”

Once the transport media results have been entered on the host, the removable disk is archived.

Verification of tabulations can be re-created by comparing records from the fixed storage on the AccuVote-TSx with the results from the transport storage on the disks.

“Audio ballot”

The ballot composed in audio format, containing identical race and candidate content and ordering as the corresponding visual ballot, and including operational instructions for the selection of candidates and ballot measures, traversing the race list, definition of write-in candidates, and printing and casting of ballots.

“Audit Log”

An audit record of all audit transactions on the AccuVote-TSx. The audit log provides the supporting documentation for verifying the correctness of the reported results. The audit function is automatic and encrypted and presents a record of all system activity.

“AVPM”

The AccuView Printer Module that attaches to the AccuVote-TSx unit for printing the Voter Verifiable Paper Audit Trail (VVPAT).

“Backup”

The internal “flash” memory storage location on the AccuVote-TSx, where elections and election results are stored.

“Ballot”:

A ballot refers to a rotated ballot style.

“Ballot Id”

A unique identifier number assigned to the ballot.

“Ballot Serial Number”

A unique serial number identifying a voted AccuVote-TSx ballot.

“Base Precinct”

Any largest area of a jurisdiction not intersected by district boundaries.

“Ballots Cast”

The total number of ballots cast on either an individual AccuVote-TSx or at a polling location, or on the GEMS host accumulation/reporting system.

“Ballot Station Software”

A single integrated software program residing on the AccuVote-TSx motherboard that displays, processes, reports, and transfers electronic ballot information.

“Blank Voted”

A ballot with no voter selections in any race, question, or issue

“Button”:

An object on the GEMS or the AccuVote-TSx user interface which is touched in order to activate a function.

“Candidate”

An individual running for office, which voters have the opportunity to vote for on a ballot.

“Cast Ballot Button”

Button that is touched when the voter wishes to cast their ballot after all desired selections have been made and verified on the AVPM..

“Challenge Board”

The function used to review challenged ballots.

“Challenged or Provisional Ballot:”

A ballot corresponding to a voter whose right to vote at a polling location has been challenged or a voter who insists that they be allowed to vote at the polling place in question. Challenged or provisional ballots are reviewed by jurisdiction administration prior to being released for counting or rejection.

“Copy”

The number of times a memory card or election media has been programmed without ballot layout having changed.

“Count”

A field display on the AccuVote-TSx to indicate either the number of ballots counted in the current election, or the total number of ballots counted since the manufacture of the AccuVote-TSx. The first is an Election Count and the second count is a System Count.

“Current candidate”

The candidate currently selected on either the visual or audio ballot.

“Current race”

The race containing the current candidate or ballot measure.

“Central Tabulating System” also referred to as GEMS

The computer system that reads the votes from the AccuVote-TSx removable media, and tabulates the votes from all AccuVote-TSx ballot stations and all polling places (either satellite, central or precinct locations).

“Closed Primary”

An optional ballot criterion for conducting primary elections in which voters affiliated with a particular party may vote only for that party’s candidates.

“Contest”

The aggregate of candidates who run against each other or among themselves for a particular

office or number of offices, or ballot measures.

“DHCP”

Dynamic Host Configuration Protocol is a network protocol that enables a DHCP server to automatically assign an IP address to an individual computer’s TCP/IP software. DHCP assigns a number dynamically from a defined range of numbers (ie., a scope) configured for DNS servers or WINS servers.

“Download:”

The programming of election and ballot information onto the removable storage media for the AccuVote-TSx. The media will be PCMCIA storage devices.

“Election Name”

The name of the election programmed to election media.

“Electronic Ballot”

The electronic ballot is displayed with the appropriate candidates and issues presented on a touch screen for the voter to make choices and record his/her votes.

“Header”

Text information that appears on the ballot identifying the race title, question and issue description, as well as the number of selections available to the voter for the race.

“Hide Ballot”

The visually impaired ballot station option to hide the visual portion of the ballot as the audio ballot is played. This option is programmed to the voter smart card.

“High Contrast”

Ability to change AccuVote-TSx presentation to black and white for low vision voters.

Host Computer:

The GEMS computer, interfacing with GEMS clients and voting devices.

Host Name:

The name or IP address of the GEMS host computer.

“Key Card”

The ‘Key Card’, created using the Key Card Tool, which may then be used to encode the security key values on the election’s smart card reading equipment.

“Key Card Tool”

The Key Card Tool, a stand-alone application, allows the user to create a smart card encoded with user-defined security codes or keys, and is also used to encode supervisor-type smart cards with the election’s security key. The Key Card Tool is also used to update the card’s supervisor password.

“Keypad”

A telephone-style keypad used to enter commands in the audio ballot.

“Language”

A ballot display selection available on the AccuVote-TSx, which allows the voter to select a ballot in the language of their choice, (e.g. English, Spanish, Chinese, Japanese, Vietnamese, Tagalog, Korean, and French). These are languages that have been used on the AccuVote-TSx. Languages are defined in the GEMS ballot layout software application.

“Large Text”

The ability to increase the size of ballot text for the benefit of visually impaired voters.

“Machine ID”

An AccuVote-TSx unit is given a software tracking number or “machine ID” during the initial start-up of the AccuVote-TSx in order to track election results by machine ID at a polling location. This is not the same as the unit serial number.

“Number to Vote For”

The number of candidates, responses or parties that a voter may select in a race without incurring an overvote.

“One Click Vote”

The ability to make an alternative selection on the ballot without having to click twice in order to disable an existing selection.

“Official Election Mode”

Official Election Mode is the operating mode in which the official election occurs. This application mode differs from “test mode”, where all administrative functions take place such as machine settings, testing, and diagnostics.

“Over vote”

The condition of voting for more candidates or selections than a race allows. The AccuVote-TSx does not allow a voter to vote for more than the “Vote For” limit of selections.

“Party”

The political party affiliation of candidates for federal, state and central committee offices.

“Password”

An authentication of the user’s access to the network.

“PC card”

Short form for PCMCIA card. See below.

“PCMCIA card”

A solid state memory device utilizing industry standards for data storage of election and ballot information. The AccuVote-TSx PCMCIA cards come in various capacity sizes and are

programmed for a precinct, vote center, or entire jurisdiction. The PCMCIA card also is used to accumulate and tally election results. Also "PC Card".

"Phone"

The telephone number used for modem transmission.

"Poll Worker Card"

A special smart card programmed with the ability to put the AccuVote-TSx into voter card creation mode or to close the polls and generate totals reports.

"Power"

Power status indicator; defined as either charging (yellow bar on screen) or AC off line which means the AccuVote-TSx is operating off the battery. The AC off-line indicator is a red bar that shows the remaining percentage of battery charge available.

"Precinct"

The smallest division of the electorate within a county, city, or district identified by geographic boundaries defined by the local election official. The precinct is expressed either as a base precinct, a geographical unit in which voters vote, or a report precinct, to which election results are reported.

"Programming election media"

The act of transferring election and ballot information to election media.

"Protocol"

A set of parameters governing the communication and transfer of information between the host computer and the AccuVote-TSx unit.

"Protection of Results Data"

All results data is protected using standard data encryption methods and by system design functionality. The encryption process makes information indecipherable to protect it from unauthorized viewing, tampering or use..

"Protective Counter"

The protective counter provides a total life span count of all ballots cast on the AccuVote-TSx since the manufacture of the AccuVote-TSx unit. This is also called the System Counter.

"Provisional Voter Ballot"

Pursuant to Elections Code section 14310, a ballot given to a voter claiming to be properly registered, but whose qualification or entitlement to vote cannot be immediately established upon examination of the index of registration for the precinct or upon examination of the records on file with the county elections official, which includes the list of absent voters.

"Public Counter"

The Public Counter is set to zero prior to opening of the election and that records the number of ballots cast during that particular election. This counter is known as the Election Counter.

“Removable Storage Media”

The external media which stores election, audit and ballot information programmed for the AccuVote-TSx, and to which election results are tallied once ballots are counted. Also referred to as the Memory Card, PCMCIA card or PC card.

“Recount”

The configuration of an election for recounting one or more races, involving programming selected memory cards and uploading and reporting results for a recount reporting set.

“Report precinct”

The results of ballots counted in base precincts are tallied to report precincts.

“Rotation”

The candidate rotation rule determines the order candidates are to appear on ballots in a particular geographic area.

“Running State”

In the running, or “Set for Election” state, no modifications are allowed to the election definition. In this state, the removable media is prepared for distribution to the AccuVote-TSx.

“Semi-Official Canvas”

The process of collecting, processing, and tallying ballots and, for statewide elections, reporting results to the Secretary of State on election night. The semi-official canvass may include some or all of the absentee vote totals. The semi-official canvass is contrasted with the official canvass which begins not later than the first Thursday following the election, and for statewide elections must result in final certification 35 days following the election (Elections Code section 15310)

“Serial Number”

The AccuVote-TSx serial number, can be found on a label on the external surface of the AccuVote-TSx. This is different from the Machine ID, which is used by the software application.

“Scale %”

The scaling value applied to the AccuVote-TSx image; programmed in GEMS.

“Scale”

The increasing or decreasing of an image from nominal size.

“Straight Party”

A party selected in a straight party or endorsement race which automatically counts candidates endorsed by the party in all straight party-votable races, subject to the straight party tally rule defined for the election. Straight party voting is not allowed in California.

“System Total”

The number of ballots cast on the AccuVote-TSx unit since the date of the manufacture of the AccuVote-TSx. It is also referred to as the “Protective Counter”.

“Set-up Diagnostics”

A system test of the software and hardware of the AccuVote-TSx prior to entering ballot logic.

“SmartCard Authentication”

The process by which a SmartCard is inserted into the AccuVote-TSx and parameters verified for the functions being requested. These range from access security to election security to administrative security functions.

“Source Code”

The version of a computer program in which the programmer’s original programming statements are expressed in a source language, which must be compiled, assembled and linked into equivalent machine executable object code, thereby resulting in an executable software program.

“TS Text”

Sets of files residing in GEMS, containing multi-language operational instructions which are programmed to the AccuVote-TSx.

“Type or Network Type”

Type refers to the type of network connection used for transmission; for example, ‘Local Area Network’ if the computer is networked to a hub.

“Undervoted Race”

A race with fewer candidates selected than the number to vote for; cannot occur in a vote-for-one race.

“Unit”

The designated machine number in the Vote Center.

“Upload”

The process of transferring election results from AccuVote-TSx units to the GEMS host computer.

“User Name”

The network user Id.

“Version”

The vote center/machine ID download version.

“VIBS”

Visually Impaired Ballot Station, an AccuVote-TSx plug-in feature that allows ballots to be voted and cast in audio format.

“Visual Ballot”

The ballot displayed on the touch screen, either when voting a non-VIBS ballot, or when voting a VIBS ballot without the ballot display hidden.

“Vote Center”

A physical polling location, containing one or more voting devices.

“Voted Ballot”

A ballot which has been marked by the voter.

“Votes Cast”

The number of votes cast in a tally, distinct from the number of ballots cast.

“Voting Device”

A Diebold Election Systems ballot counting device; either an AccuVote-OS or AccuVote-TSx.

“Voting Mark”

The mark on a ballot created by the voter’s selection of preferred candidate or measures.

“Voter Access Card”

Also referred to as a voter “SmartCard”. This card indicates the appropriate ballot to present to the voter and permits an eligible voter to cast a ballot on the AccuVote-TSx. The card will not allow multiple voting or any access to the election management system.

“Voter Exit Screen”

The Voter Exit Screen prompts the voter to remove the card from the card reader. When the card is removed, the system returns to the Open Polling Place State.

“Voter Instruction Screen”

The Voter Instruction screen presents the voter with a simple set of instructions for making voter selections and recording the ballot. It appears after the voter inserts the access card.

“VVPAT”

The Voter Verifiable Paper Audit Trail allows voters to have a paper audit trail that can be verified against their electronic ballot.

“Write-In”

Upon choosing the write-in option, which allows a voter to select a person whose name does not appear on the ballot, the voter is presented a screen that allows him/her to spell out the name of their candidate by touching the appropriate letters. When the voter touches the Record Write-In button, the name written in appears on the screen showing the applicable contest. The name written in will also appear on the Summary Screen and the VVPAT.

1.5 Description of AccuVote-TSx Operation

Each AccuVote-TSx is a self-contained unit with no assembly required. Each unit is a direct entry stand-alone voter station, weighing approximately 26 pounds when enclosed in its self-contained voting booth.

AVPM setup requires attachment to the AccuVote-TSx and insertion of both the paper roll and the security canister. The AVPM adds an additional 3 pounds to the weight of the AccuVote-TSx.

Once the voter's eligibility to vote in the precinct has been established, that voter is issued a voter access card. The voter proceeds to any available ballot station and inserts his/her voter access card into the slot on the top right side of the voting machine.

Upon reading the voter access card, the ballot station will then present a language selection screen, if applicable, and then an instruction page. The instruction page contains a "Large Text" button that will increase the font size of the instructions and ballot. The instruction page also contains a "High Contrast" button that will turn the entire voting experience (instructions, ballot, summary, VVPAT, and confirmation pages) into black and white, preferred by people with low vision.

After reviewing the instruction page, the voter touches the "Start" button to begin voting. Or, if the voter prefers, they can press the "Back" button to return to the language selection page (if applicable).

Based, on the voter access card, which has precinct and ballot style information (and in a primary, party information), the AccuVote-TSx only presents the candidates and issues upon which the voter is entitled to vote. At any time, while viewing the ballot, the voter can go back to the instruction screen by pressing the "Instructions" button. Again at the instruction page, the voter can select large text, high contrast or return to the language selection page (if applicable).

The voter will proceed through the contests by touching the screen containing the candidates or measures of his/her choice. The voter may change their mind by merely touching the choice again and selecting a different candidate. The voter may page through the issues by pressing the "back" or "next" buttons on the bottom of the electronic ballot page. The voter may go back to the instruction page by pressing the "Instruction" button.

After the voter has completed the ballot, the AccuVote-TSx will present the voter with a summary page. At this point, the voter will be offered the opportunity to review the ballot by pressing the "Review" button which will take the voter to the last page of their ballot. The voter can also jump to any race by selecting that race on the summary page. In some instances, there are more races than can be displayed on the summary page. In these instances, a scroll bar with up and down arrows will appear on the left side of the summary screen. The voter also has the ability to continue with the voting process by pressing the "Print Ballot" button.

Pressing the "Print Ballot" button will activate the AVPM and print the voter's ballot and display

the ballot on the AVPM window. The AccuVote-TSx will display the same information, in the same format as the AVPM, on the LCD screen to allow the voter to compare the VVPAT with the on-screen ballot. The voter has the option of canceling the VVPAT and going back to the summary screen or casting the ballot. The voter may cancel their VVPAT twice. After the second cancellation of the ballot, the voter must cast their ballot. A voter may cast a blank ballot. Once the voter "Casts" their ballot, the AccuVote-TSx disables the voter access card and records their votes.

2. General System Specifications

2.1 The AccuVote-TSx shall:

- (1) Provide Facilities for voting for such candidates as may be nominated and upon such questions as may be submitted;
- (2) Permit each voter in a presidential general election to vote by touching one box for electors for a pair of candidates for President and Vice President of the United States;
- (3) Provide a method for write-in voting and shall report the number of votes cast in each contest in the write-in voting position;
- (4) Permit each voter to vote at any election, for any person, for any office, for as many persons for an office, and for or against any question for which the voter is entitled;
- (5) Preclude each voter from voting for more persons for any office than he/she is entitled to vote for and from voting for any candidate for the same office or upon any question more than once;
- (6) Be capable of adjustment by election officers, so as to permit voters in primary elections to vote only for the candidates seeking nomination of the political party with which they are affiliated, or non-partisan candidates only if they are not affiliated with a political party;
- (7) Permit non-partisan voters to vote either a non-partisan ballot or a party ballot for any political party that has chosen to allow non-partisan voters to participate in its primary election;
- (8) Permit each voter to change his or her vote for any candidate or upon any question appearing upon the ballot face, up to the time of the final operation to register his or her vote by touching the "cast ballot" button;
- (9) Permit and require voting in absolute secrecy, and shall be so constructed that no person can see or know for whom or what any other voter has voted or is voting, except voters receiving assistance as prescribed by law;
- (10) Have a "public counter" which is visible from the outside of the machine, and which shall show during any period of voting the total number of voters who have operated the machine during the applicable period of voting;
- (11) Have a "protective counter" which is visible from the outside of the machine, which cannot be reset and which shall record the cumulative total number of activities of the operating mechanism;
- (12) Preclude the voting machine from being re-opened for voting upon closing the polls;
- (13) Be provided with a voting booth which shall conceal the actions of the voter while voting;
- (14) Be constructed of material of good quality, in a neat and workmanlike manner;
- (15) Be constructed so it is easy for a voter to learn and understand the method of operation;
- (16) Be so constructed that during the progress of voting, it shall preclude every person from

- seeing or knowing the number of votes registered for any candidate or ballot measure and from tampering with any of the recorded votes;
- (17) Be safely transportable;
 - (18) Register and record votes correctly and accurately. This shall be done by recording the votes in the audit trail memory on the ballot station, and also in the results sets in redundant storage places--one recount results set recorded as summary totals for each candidate, and the other recorded as individual ballot images of each voter's selections, randomized in order to protect the voter's secrecy. After the voter has cast his/her ballot, the AccuVote-TSx will store the ballot images in a redundant manner. In the event the image is not captured redundantly, the ballot station will so notify the voter by a message on the screen; a poll worker will be notified and a technician will be contacted;
 - (19) Be capable of automatically producing a printed form of machine totals after the polls are closed. The machine shall be capable of printing the same number of results reports as the number of return sheets required by law; and
 - (20) Be capable of consolidating all machine totals from all machines within a precinct and printing the precinct totals, in printed form, after the polls are closed.
 - (21) Be capable of printing out a voter-verifiable paper receipt for the voter to verify and compare his / her race and measure selections on paper with the electronic ballot.
 - (22) Be capable of securing the voter-verifiable paper receipts in a secure canister to prevent tampering with the voter-verifiable paper audit trail.
 - (23) Be constructed in a manner that secures and protects the voter-verifiable paper audit trail from unauthorized access or tampering.

The AccuVote-TSx with the AVPM meets all standards set in the January 21, 2005 State of California Standards for Accessible Voter Verified Paper Audit Trail Systems in Direct Recording Electronic (DRE) Voting Systems

2.2 The Central System shall:

- (1) Be capable of accumulating and reporting by precinct the total votes cast for each candidate and for or against each question;
- (2) Be capable of tabulating and reporting the vote cast for each candidate and for or against each question, by groups of precincts, such as legislative districts, and complete jurisdictions.

3. AccuVote-TSx and AVPM Hardware and Software

3.1 The AccuVote-TSx and AVPM are provided as part of the system, and are stand-alone direct recording electronic voting devices. Using Touch Screen Technology, the voter is required to touch the screen for the candidates/issues of their choice.

Except when otherwise authorized by the Secretary of State, the distribution of the voting machines shall be no less than one per 300 registered voters, and an additional machine for every fractional part of such unit; in the case of special elections, however, the local election official may exercise discretion in determining the number of machines to be furnished to each precinct polling place.

In the instance where one TSx unit is used to meet the ADA requirement for HAVA, procedures will be developed by the jurisdiction to insure voter privacy. One way this may be accomplished is to encourage NON- ADA voters to use the TSx units.

3.2 Voter Access Card Creation

Voter access cards may be created using one of three methods.

3.2.1 Voter Card Encoder

Voter Access Cards may be created using a preprogrammed Voter Card Encoder at the precinct. The Voter Card Encoder is a device designed to encode voter access cards for the purpose of activating the ballots on AccuVote-TSx units used in an election.

Voter Card Encoder units are programmed by voter access cards created from VCProgrammer or the AccuVote-TSx loaded with the election database. Once Voter Card Encoder units have been encoded, poll workers can encode voter access cards appropriate to each voter at the voting location.

The Voter Card Encoder can be programmed with as many as eight different ballots. The Voter Card Encoder can also configure the voter access card for VIBS mode, when inserted into the AccuVote-TSx, the voter access card activates the VIBS functions. If Provisional/Challenged voting is permitted in the election, the Voter Card Encoder can also be used to create Challenge voter access cards.

Note: Voter Card Encoder units must be encoded with the same security keys as the AccuVote-TSx units used in an election.

Security keys are user defined values that can be encoded on all Diebold Election Systems' smart card reading election equipment. Once encoded with security keys, only smart cards with matching security keys can be read by the equipment, thus protecting it from unauthorized use. For more information about implementing security keys, see the *Key Card Tool User's Guide*.

3.2.2 AccuVote-TSx unit in Create Cards Mode

Voter access cards may also be created directly from an AccuVote-TSx unit that has been placed in "Create Cards" Mode by using the Supervisor Card. This is the standard backup method recommended should a Voter Card Encoder fail at a precinct location. This function provides redundancy for creating voter cards. An existing AccuVote-TSx unit at the polls may be taken out of normal voting mode by inserting a "Supervisor Card" and entering the correct PIN number for that election. Once the PIN is accepted, the poll worker presses the "Create Cards" button and enters into Create Cards Mode. In Create Cards Mode, the poll worker may create voter access cards until an additional Voter Card Encoder may be obtained, or the original Voter Card Encoder is returned to service.

3.2.3 VCProgrammer

A Voter Access Card may also be created using the VCProgrammer utility application.

VCPProgrammer is an application that, when used with an external smart card reading device, specifically the ST-100 or the ARC 30S, can be used to create voter access cards for use on an AccuVote-TSx Ballot Station units configured for an election.

The information the application requires to create voter access cards for the election is taken from a file that has been exported from the GEMS election database, after it has been locked down in election mode. The export file is called the GemsVoterCardData.txt.

VCPProgrammer may be installed on a voter registration client workstation and is used to allow that workstation to create Voter Cards for any precinct in the applicable election, generally in an “early voting” environment. The voter registration workstation can look up and verify a voter and create a voter card, automatically configured with the correct precinct information (also party information in a primary) from the voter registration information. Note that this option is only available to GEMS users who have imported or otherwise defined their election database with the same identifiers that are used in voter registration system. More information may be accessed in the *VCPProgrammer User’s Guide*.

When the precinct and party to which a voter belongs has been identified in the application, the user completes the card creation process by specifying any required VIBS (Visually Impaired Ballot Station), Hidden Ballot, Magnify or Provisional/Challenged voter card customization options, inserting a voter access smart card into the external card reader and clicking the Create Card button. The appropriate precinct is then copied onto the voter access card enabling the voter to use the AccuVote-TSx unit.

VCPProgrammer supports the use of user-defined security keys. Security keys are a series of values that may be defined to all DESI smart card reading devices. When properly defined, the security keys are copied to every voter access card that is created, and verified on every voter access card that is inserted into the card reader used by the encoded device. The same keys are defined on all smart card reading equipment to be used in the election. This results in the security of the election being protected. Smart cards encoded with security keys that do not match the keys defined to the software or device cannot be read. Moreover, repeated attempts to authenticate these cards on some devices can cause them to be permanently disabled.

Security keys shall be implemented on VCPProgrammer and all Diebold Election System’s smart card reading devices using a ‘Key Card’. A Key Card is a smart card created using the Key Card Tool application. More information on Key Card Tool can be found in the *Key Card Tool User’s Guide*.

3.2.3.1 Security issues

VCPProgrammer must be operated with direct supervision of the county elections office or by people given the responsibility by the elections office. One person, assigned by the county elections office should be responsible for installing the program, loading the files, and assigning access. The files should promptly be removed at the close of early voting, uninstalled and the access revoked.

Log sheets must be kept to track users as well as reconciliation at end of day to balance the

number of cards issued against the total ballots cast on the Early Voting AccuVote-TSx units. This is the same procedure used to reconcile requests for Absentee Ballots processed against Absentee ballots issued.

3.3 Retention of Ballot Results Sets

Master copies of the ballot results sets shall be retained in secure locations designated by the local election official and separate from the location of working copies from the time of completion of pre-election logic and accuracy testing as detailed in Section 4 of these procedures;

- (1) For as long after the election as required by law; or
- (2) By order of a court or directive of the Secretary of State

After certification of the ballot results sets, any changes to the central tabulating software or the ballot results sets shall be completely documented in the central system internal audit log.

4. Pre-Election Set-Up and Testing Requirements

Complete testing of the AccuVote-TSx shall be conducted before the use of this equipment in an election. This testing is required for equipment to be used in satellite locations, polling places and in the counting center. These tests include Acceptance Testing of new equipment as well as Logic and Accuracy testing prior to each election.

Prior to the election each AccuVote-TSx will undergo hardware diagnostic testing to ensure that all hardware is functioning properly. All central server hardware that is to be used on election night will also be tested. During the Logic and Accuracy phase of testing, all election data will be tested using the AccuVote-TSx ballot station software to verify that votes are being accurately recorded, printed on the AVPM, and uploaded to the GEMS software and that reports are printing accurately.

This Logic and Accuracy Testing process will include testing of each ballot styles to be used in the election and include end-to-end testing of all candidate positions for all ballot style combinations active in the election.

In addition to verifying that all ballot styles are accurately recording and tabulating votes, pre-election testing will verify that election logic from all precincts are correctly mapped to the GEMS database.

In summary, the Pre-Election Testing includes:

1. Hardware Diagnostic testing of all equipment to be used in the election
2. Proofing of all election data for accuracy
3. Verifying mapping of all precinct data to the GEMS database
4. Logic Testing of all ballot styles via automated and manual testing

4.1 AccuVote-TSx Hardware Diagnostics

Each AccuVote-TSx to be used in an election or as a backup or spare device, must pass a standard diagnostic test before placing a removable PC card in the voting machine for verification and testing. This allows the jurisdiction's technician to work on the AccuVote-TSx well in advance of having election specific data and the preparation of the removable election media. By conducting diagnostic tests in advance, any hardware error condition found can be promptly corrected prior to the election logic and accuracy testing cycle.

Diagnostic testing will include verification that all AccuVote-TSx components are operational:

Should an AccuVote-TSx hardware error condition emerge, the county assigned technician tests all major AccuVote-TSx sub-systems and corrects any hardware error conditions. A historical log of hardware error conditions should be kept by the jurisdiction. These logs should be accessible by serial number or by tracking the bar code number of each voting unit.

4.2 Verification of Ballot Station Software Version

During the diagnostic testing phase or prior to distribution of the touch screen units to the precincts, each unit to be used in the election shall be checked to verify that the correct version of ballot station software is installed on the AccuVote-TSx.

4.3 Insertion of Election Data via Removable PC Card

The AccuVote-TSx is set up for testing by the simple installation of the removable media, which contains election-specific data. The removable media is easily installed by unlocking the door on the top left side of the ballot station and inserting the removable PC card.



4.4 Demonstrator Devices

In addition to official AccuVote-TSx, a mock demonstrator device complete with mock electronic ballots and a supply of mock Voter Access Cards may be provided to each voting location. No official electronic ballot may be used for demonstration.

4.5 Procedure for Preliminary Set-Up and Content Proofing

4.5.1 System Proofing

System Proofing is the mandatory in-house review of all election data and the inter-relationships of that data. This does not include the actual Logic and Accuracy tests of the computer hardware and software used to tally votes. System proofing shall include, but is not limited to, verification of the correctness of the following:

- Assignment of jurisdictions participating in the election (districts);
- Linkage of precincts to offices in which the election will be held (precincts);
- Ballot content of each ballot type, including offices, district designations, candidate assignment and rotation, and ballot measures, all in the proper sequence (races and candidates)
- Preparation of instructions, candidates' names, political designations, number to be elected, candidate rotation;
- Verification that all voting precincts have been correctly assigned to a polling location or mail ballot precinct.
- Formatting of headers and footers for each issue and electronic ballot page;
- Print ballots to verify correctness of content;
- Testing of removable PC cards to be used in the election.

Proofing of election content includes the review of:

- hardcopy reports produced by the GEMS administrative reporting system
- ballot facsimiles produced by GEMS
- listening to audio formats that may be presented to the voter.

4.6 Logic and Accuracy Test

The purpose of the Logic and Accuracy Test is to ensure that the coding of the election data is correct and that the votes are being accurately recorded, tabulated, and reported. The hardware diagnostic phase addresses all AccuVote-TSx and GEMS hardware. The Logic and Accuracy testing phase addresses the coding logic and accuracy of all ballot style combinations and mapping of precincts to the GEMS election database.

Prior to Election Day the local election official shall have the election system tested to verify that it is properly recording, tabulating, and reporting the votes cast for all offices and all questions. Successful testing will demonstrate that each candidate and ballot measure receives the proper number of votes, that the system accepts only the proper ballot types, and all tabulations are reported accurately.

The AccuVote-TSx AVPM must also be tested by manually casting ballots to ensure that the audit trail correctly prints the test selections. The input for this testing should provide a known pattern of votes for each race in the ballot style(s) tested, so that the ballot printed on the AVPM can be compared for accuracy against the tabulated results of the manually cast ballots. In the case of offices for which the voter is allowed to vote for more than one candidate, at least one ballot shall be voted with the maximum allowed number of choices. This test should incorporate manual

casting of ballots using a combination of touch screen input and audio keypad input to produce the cast ballot.

4.6.1 Election-Specific Test

The election-specific test is an essential method of testing electronic ballots to be used in that particular election, ensuring that the AccuVote-TSx's perform properly. The purpose of this test is to ensure that the ballot used with a particular election will function properly when run with the ballot tabulation software for that election.

4.6.2 Accuracy Testing

Accuracy testing consists of those procedures necessary to ensure hardware and software to be used in the election is working properly, both as individual units and as a combined system.

4.6.3 Performance of Accuracy Tests

Accuracy testing performs tests to verify that hardware, software, and election specific coding of data has been done correctly and that each component is accurately recording votes, tabulating results, and printing reports. These tests shall be performed prior to Logic and Accuracy Certification to the Secretary of State.

Any hardware failure of a component during testing will necessitate re-testing of that hardware with election specific data prior to placing that hardware back in use for the election.

The tests shall be conducted by using a combination of automated and manual tests that incorporate pre-determined test scripts to verify that the system is correctly and accurately recording, tabulating, and reporting vote results. These scripts include:

1. An automated test script which provides a unique vote value for all candidates within a race, and tests all ballot styles and rotations in the election. This data is uploaded to GEMS. The summary report from the AccuVote-TSx is then compared with the Summary Report of the GEMS server to ensure that tabulation and reporting of candidate votes in all races is occurring accurately on both systems. A Statement of Votes Cast Report is used to verify that the results are identical at the precinct level.

This process tests the reporting functions of GEMS and the AccuVote-TSx as well providing verification that the election logic is mapped correctly between the GEMS server and the AccuVote-TSx ballot styles in the precincts.

2. An automated test process which gives votes to all candidates in all precincts. This test verifies that all precincts and races are correctly mapped between the GEMS database and the AccuVote-TSx ballot station.
3. Use of one of two possible manual vote tests. A manual testing process, which incorporates a pre-determined random script of votes for all races and ballot styles as described below, OR a manual testing process, aided by the testing software, which provides a manual vote for each candidate in each ballot style of the election,

but provides a unique value to all candidates within a race.

In either scenario, the ballots are will be printed on the AVPM during this process so that the AVPM testing occurs for all races and ballot styles in the election. These printouts become part of the audit trail which shows that the AccuVote-TSx hardware and software are accurately recording and printing ballots as voted for all candidate and race combinations.

4. If a voting machine or the central tabulating system does not accurately count the test script or test vote, the cause for the error shall be ascertained and corrected. An errorless count shall be successfully produced before the system is approved for use in counting votes.

4.6.4 Preparation of Accuracy Test

The responsible elections official shall prepare the Accuracy test ballot decks or scripts and make it available for testing. Results reports of accuracy tests must be available for inspection and sign off by the Logic and Accuracy Board.

4.6.5 Accuracy Test with the AccuVote-TSx and AVPM

Accuracy testing for the AccuVote-TSx and AVPM audit trail should include the following considerations to represent and simulate an election environment.

- Use a copy of the actual GEMS election database (saved as "Test" version)
- Testers should vote predetermined test script in election mode to simulate actual conditions
- The election test script should have a random sample of precincts and in a Primary, the parties, including the "crossover" parties, were applicable
- Test script should test for write-ins, undervotes, blank votes and a number of blank ballots
- Accuracy testing must include the printing of the AVPM audit trail to test the accuracy of the audit trail
- AVPM audit trail must be verified against AccuVote-TSx results report and the GEMS results report

The resulting logic vote tallies shall be compared in detail with the predetermined logic vote tallies. Any differences between the two logic vote tallies shall be resolved, and logic testing shall be performed as many times as may be necessary to achieve a logic vote tally identical to the predetermined logic vote tally.

If the report results show any variance in the tabulation of votes, the cause for the error shall be ascertained and corrected and an errorless count shall be made before the system is approved for use in counting votes.

The election administrator enters simulated voter selections, and casts votes in a predetermined voting pattern. The voting pattern must insure each candidate and each ballot measure receives at least one vote, tests under vote (it is not possible to over vote on the AccuVote-TSx) and accepts only the proper ballot types.

4.7 Retention of Test Scripts

The successful Logic and Accuracy tests, conducted at the time of certification (or re-certification) if necessary to the Secretary of State, storage logs or records, if any, and balancing reports, if any, shall be retained as long as the electronic ballots, stored on a PC card, are required to be kept for the election.

4.8 Securing the AccuVote-TSx

After the Logic and Accuracy testing has been successful, the AccuVote-TSx units are ready for delivery to the polling locations. This process includes locking and sealing the ballot station in the closed polling location position, and storing the machine in a satisfactory manner in accordance with vendor specification and state law ensuring its security.

4.9 Certification of Logic Test

Logic test requirements apply to all elections; however, submission of the seven-day certification of logic testing to the Secretary of State is required only prior to statewide elections and elections to fill vacancies in the Legislature or Congress.

4.10 Logic and Accuracy Board

Before each statewide election, or each election to fill a legislative or Congressional vacancy, the Secretary of State must receive a copy of the Logic and Accuracy Board's certification. For local and district elections, the Logic and Accuracy Board members shall submit their copy of the Logic and Accuracy Board's certification to the local elections official who is conducting the election as described in 10.6.

4.11 Ballot Tabulation Programs

Send copies of ballot tally programs to the Secretary of State. These must be received by the Secretary of State no later than seven days before each statewide election as described in 10.5.

4.12 Establish an Election Observer Panel as described in 10.5

5. Election Procedures

5.1 Set-up AccuVote-TSx

To set up the AccuVote-TSx with the AVPM refer to the setup guide and complete the following steps:

5.1.1 Assemble voting booths with AccuVote-TSx

5.1.2 Install AVPM, feed paper and load security canister.

5.1.3 Plug the ballot station into the AC outlet.

5.1.4 Unlock side door and power on

5.1.5 Print an election morning "zero report"

5.1.6 Report any problems to the appropriate election official

5.1.7 Make a demonstrator device available, if applicable

- 5.2 Open the Polls:
 - 5.2.1 Unlock printer cover and side door and turn power switch ON.
 - 5.2.2 (Allow zero report to print; designated election officials should verify zero counts in all races and sign in appropriate space
 - 5.2.3 Use the "Start Takeup" button to roll up report into the security canister.
 - 5.2.4 Lock AVPM printer compartment and side door.
 - 5.2.5 Secure AccuVote-TSx key in envelope or with pollworker while the polls are open.
 - 5.2.6 Before the precinct board allows votes to be cast on any machine, it shall proclaim aloud at the place of election that the polls are open.

- 5.3 While the Polls are Open
 - 5.3.1 During the day, at least every hour, inspect each ballot station to ensure that the cord is connected and screen is displayed properly.
 - 5.3.2 Offer instructions to voters in the proper method of inserting a Voter Access Card into the ballot station. Offer each voter further instruction as required.
 - 5.3.3 Surrender of Absent Voter Ballot: No person to whom an absent voter ballot was issued is permitted to vote at the polling place unless he or she surrenders the ballot. The ballot is to be marked "SURRENDERED" and placed in the container marked for spoiled and unused ballots. The voter is then permitted to vote in the normal method for the precinct.
 - 5.3.4 Voted Ballot Sealed: If a voter returns a voted absent voter 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 absent voter 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.
 - 5.3.5 Activating the AccuVote-TSx
 - 5.3.5.1 After the voter's name is checked off the roster, they will be given a Voter Access Card. As the voter approaches any available ballot station the inspector will allow the voter to enter the voting booth.
 - 5.3.5.2 The system reads the Voter Access Card for the appropriate ballot display.
 - 5.3.5.2.1 The AVPM audit printer will generate a paper facsimile of their ballot selection that can be verified against an on-screen summary of the ballot.
 - 5.3.5.3 Upon casting the vote the results are stored on both the removable media and the flash memory. The AVPM audit trail is automatically taken up into the security canister.
 - 5.3.5.4 Redundancy provides a check and balance where the numerical count of both files must match.
 - 5.3.5.5 The results are stored electronically in a random order

5.3.5.6 After touching the “Cast Ballot” button the public counter and protective counter is incremented.

5.3.5.7 After recording the ballot, the Voter Access Card is disabled

5.3.5.8 Whenever the system is in use the audit log is activated

5.3.5.9 Upon completion of all audit checks the next voter is allowed to proceed with making selections and casting his/her ballot

5.3.5.10 When electronic provisional (challenge) voter ballots are used, they will be identical in form as official electronic ballots. Use of paper provisional ballots may also be allowed.

5.3.5.11 Provisional voter ballots are to be used at all elections by voters who claim to be registered but whose right to vote cannot be immediately established. In this case, the election official uses the Voter Card Encoder to designate the provisional (challenge) voter and load the applicable ballot, and the results will then be automatically isolated by the system for resolution after the election.

5.3.6 Troubleshooting the AVPM

5.3.6.1 If the AVPM does not work properly due to paper jam, or the paper record is unreadable during the course of a voter voting, the poll worker will determine whether the voter has completed casting the voter’s ballot. If the ballot has been cast, the pollworker will close the AccuVote-TSx for voting, until the issue is resolved. If the voter has not completed voting, the pollworker will cancel that existing electronic ballot and create a new voter card for the voter, sending them to another AccuVote-TSx unit to complete voting.

The pollworker will contact the county elections office for assistance and report the problem.

A new security canister and paper roll may be loaded if it is determined that the printer is functioning and the paper was jammed or printer cover was not firmly locked so that the print was visible on the paper. If it is necessary to replace the security canister with a new one, the canister in the AccuVote-TSx at the time of the jam will be placed in the poll worker’s election return supply bag or container and stored by the precinct captain/inspector until the close of polls. The canister will be returned with the election AccuVote-TSx units and supplies to the central location..

If the AccuVote-TSx is the sole unit in the precinct and the voter is an ADA voter, a paper ballot will issued for assisted voting.

5.3.6.2 If the AVPM is running low on paper, the poll worker will wait until the voter has completed voting and change out the paper roll. The poll worker must use a new security canister, take the old security canister and place it in their election return bag.

5.3.6.3 If a paper jam occurs, the poll worker will contact the elections office for assistance. If the jam occurs during voting, the poll worker may be instructed to cancel the ballot and provide the voter with a new voter card. The poll worker may direct the voter to another AccuVote-TSx unit for voting. If the AccuVote-TSx is the sole unit in the precinct and the voter is an ADA voter, a paper ballot will issued for assisted voting.

At no time will the security canister be opened to resolve a paper jam. It may be necessary to use a new security canister to resolve the paper jam. The poll worker will install the new security canister, take the old security canister and place it in their election return bag.

5.3.6.4 If a paper jam occurs during the printing of the zero report, the security canister may be opened to resolve the paper jam. The security canister may not be opened if there are no official election ballot audit trails in the canister.

5.3.7 AccuVote-TSx Privacy

5.3.7.1 The county elections office will endeavor, to arrange the AccuVote-TSx units, whenever possible to provide voters with a private voting environment.

5.3.7.2 In jurisdictions where the main voting method is paper and the AccuVote-TSx is used only for ADA accessibility. The poll workers will allow non-ADA voters to vote on the AccuVote-TSx to provide additional votes and audit trails to the AVPM.

5.3.7.3 When a blind voter is using the Accuvote-TSx, the poll worker or blind voter's assistant shall place the VIBS cover on the AVPM printer housing. The VIBS cover and the blank AccuVote-TSx screen will provide the blind voter privacy when using the AccuVote-TSx in VIBS mode.

5.4 Closing of the Polls

The Following Procedures must be completed in Public View

5.4.1 Promptly at 8 p.m. declare, "The polls are closed"

5.4.2 Any voter in line at the time of closing must be allowed to vote

5.4.3 No voter who arrives after 8 p.m. may vote

5.4.4 On all AccuVote-TSx units, insert the Supervisor card.

5.4.5 At the administration screen, enter the assigned Personal Identification Number to enter the admin screen, and then press "OK."

5.4.6 Press the End Election button.

5.4.7 Open all AVPM units with key and follow county procedures for printing report tapes.

5.4.8 At the report prompts, press the print buttons according to poll worker instructions

5.4.9 At the prompt, use the key to open the side cover on all units (remove transport media if election is ending) and turn the power off.

5.4.10 If necessary, follow county procedures for accumulation.

5.4.11 Seal PC card(s) in envelope for transport.

5.4.12 Count to make sure there is a PC card for each Ballot Station.

5.4.13 Collect absentee voter ballots, if any.

5.4.14 Complete the "Certificate of Roster" showing:

- (1) The names of persons who, after signing the Roster, were assigned provisional voter status or who failed to vote after signing in because of some other reason
- (2) The number of persons who voted; and
- (3) Signatures of all Board Members.

5.5 Packaging for Return

5.5.1 Seal Roster-Index, precinct index, purged voter index, and write-in tally sheets (from paper absentee ballots), if any, as directed.

5.5.2 Package AVPM security canisters as directed.

5.5.3 Package AVPM printer housing and paper roll as directed.

5.5.4 Package or seal all other supplies, as directed.

5.5.5 Unplug the AccuVote-TSx and close the booth.

5.5.6 Complete a Certificate of Packaging and Sealing which verifies that the numbers of voters on the AccuVote-TSx(s), absent voter ballots, and provisional voter ballots have been correctly entered on the Certificate of Packaging and Sealing.

5.5.7 Verify that the required materials have been placed into the appropriate container or containers, listing the materials inserted in each container and indicating that the container or containers were appropriately sealed.

5.5.8 After all entries have been completed, a minimum of two poll workers up to each member of the board shall sign the Certificate.

5.5.9 At the discretion of the County, after the polls close, the original Certificate may be mailed to the elections official by a member of the precinct board other than the members who return the ballot container. If this step is implemented, a self-addressed stamped envelope will be provided for this specific purpose. The copy shall accompany the ballot container to the central counting location.

5.5.10 Return all transport media, paper ballots and supplies as directed by the elections official. At least two precinct board members must accompany all media results and paper ballots until they are in the custody of the elections official and a properly-executed receipt has been provided.

Do not release transport media and supplies to any other person without first obtaining a receipt

6. Tabulation

6.1 Transferring Election Data from AccuVote-TSx

6.1.1 Print an Election Summary Zero Report prior to transferring any results

- 6.1.2 Select AV server from the drop-down menu in GEMS. Start ports
 - 6.1.2.1 Load AccuVote-TSx PCMCIA cards in a AccuVote-TSx unit networked to the GEMS server and transfer results
- 6.1.3 GEMS is the processing and reporting point for all vote totals, whether they come from the ballot station itself or from the scanning system.
- 6.2 Tabulation of write in votes, when appropriate, as follows:
 - 6.2.1 GEMS will indicate the number of votes cast for each write in position, for each contest. GEMS has AccuVote-TSx write-in reports that will also contain the actual write-in candidate's name cast by the voter as recorded on the AccuVote-TSx units.
 - 6.2.2 The local officials will tally and record the write-in votes cast for write-in candidates from this report. In tallying write-in votes in a contest designated as a "Vote for Two" or more, the election official may encounter a name written in that is the name of a ballot qualified candidate. In this instance, the election official shall check the ballot image report to determine whether the ballot qualified name written in is also marked on the list of candidates. If the voter has marked the name on the regular ballot and written it in, the election official shall ensure that the vote is tabulated one time only. If the name is written in only and is not marked on the candidate list, the election official may determine the voter's intent to select the candidate.
 - 6.2.3 The reporting of write-in votes as part of the official returns shall be required by law or by directive of the Secretary of State, or both.
 - 6.2.4 Combine the totals from the paper ballots, polling places and walk-in absentee ballots.
 - 6.2.5 Security of the premises includes the definition by the local election official as to who shall be admitted to the premises while tabulation is taking place. The election official shall ensure the protection of the election tabulation process from intentional and/or fraudulent manipulation, malicious mischief, accidents and errors by securing the premises where the vote tabulation is being conducted.
 - 6.2.6 Certification of unescorted personnel. All unescorted persons present within the security area, including visitors, media representatives and stand-by personnel, shall be clearly identified by a badge or other means and a log of their arrival and departure times. All unescorted personnel shall be subject to restrictions established by the responsible elections official to ensure the efficiency and integrity of the vote tallying process.
- 6.3 Security of Materials following Tabulation

Following tabulation, all printed results and a back-up version of the ballot tabulation shall be organized and stored. The local election official shall provide for retention and storage of these items and of any other data processing materials related to the vote counting in accordance with statutory retention requirements. After tabulation, printed results tapes and a back-up copy of the tabulation shall be placed in locked storage in a secure location, and shall remain there until the expiration of the period for challenging elections and for as long as required by law, unless a court orders their release.
- 6.4 System Security

The local election official has management control over all resources employed during the voting and tallying process until the control is voluntarily relinquished when no longer needed. If it becomes necessary to transport the ballot stations back to the vendors or technicians for repair, operational election activity may not be carried out on the equipment while it is under the vendor's control.

7. Official Canvass and Post-Election Procedures

7.1 Purpose of the official canvass

The official canvass consists of a post-election audit of the polling place returns and the absent voters returns and serves to;

- Validate the outcome of the election by verifying that there were not more ballots cast than the sum of the numbers of voters who signed the precinct Roster/Index and who applied for and were issued absent voter ballots,
- Ensure that all required certificates and oaths were properly executed by the precinct board; and,
- Verify the accuracy of the computer count by manually recounting the voter ballots from at least one percent of the voting precincts and comparing the manually-tallied results to the computer-generated results,
- Each official canvass function must be performed by a minimum of three persons.

7.2 Process provisional ballots as directed by jurisdictional procedures.

7.2.1 Verify eligibility of provisional ballots

7.2.2 Process in the manner prescribed for Ballot Inspection Boards

7.2.3 Identify original or duplicate provisional ballots by precinct and deliver to the designated official for updating computer tallies

7.3 Reconcile Tallies

7.3.1 Compare the number of voters on precinct report to the number in the Roster-Index issued by the elections official. Resolve or explain any discrepancy.

7.3.2 Verify that the number of ballots voted (including provisional), plus absentee mail-in ballots equal the number of ballots received by the precinct. Resolve or explain any discrepancy.

7.3.3 Reconcile Absent Voter Ballots

7.3.4 The elections official is accountable for absent voter ballots to the same extent, as nearly as practicable, as for precinct ballots.

7.3.5 Process any outstanding absentee ballots not counted in the semi-official canvass.

7.3.6 Canvassing Write-ins

- 7.3.7 Examine the write-in candidates on the mail absentee ballot and the write-in candidates from the write-in report generated from the AccuVote-TSx to verify that the names written in are for valid candidates.
- 7.3.8 Prepare “Statement of Write-In Votes” for inclusion in the official “Certified Statement of Election Results.”
- 7.4 Automatic Manual Recount in One Percent of the Precincts
 - 7.4.1 For the purpose of validating the accuracy of the computer count, within 15 days after every election at which the AccuVote-TSx system is used, a public manual tally of the ballots cast in at least one percent of the precincts, chosen at random, shall be conducted as to all candidates and ballot measures voted on in each of the precincts. If the random selection of precincts results in an office or ballot measure not being manually recounted, as many additional precincts as necessary shall be selected and manually recounted to cover any office or ballot measure not recounted in the original sample.
 - 7.4.2 Precincts selected at random pursuant to Elections Code section 15645 shall be chosen by an individual who is designated by the responsible elections official and who is not the same person responsible for programming the electronic ballot. Selected precinct numbers shall not be revealed to the persons responsible for programming the electronic ballot until the semi-official canvass is complete. For the one percent manual tally, the AVPM audit trail ballots tabulated by hand and verified against official tally.
 - 7.4.3 During the canvass process, to ensure the secrecy of the vote (per section 3.1.4.2 of the VVPAT standards) no poll worker may be present or involved in the opening or counting of ballots from security canisters from their own precinct. The board performing the hand tally can consist of poll workers from the election but cannot consist of poll workers who have worked in the specific poll being hand verified.
 - 7.4.4 If a discrepancy is discovered between the automated tally and the automatic manual recount tally, the votes will be tabulated again. Procedures used during the course of a normal tally to investigate discrepancies will be used. These may include review of the roster, re-counting of the manual tally, reprinting of incomplete or unreadable audit trails, as well as interviewing poll workers as necessary to determine possible causes of discrepancies.
 - 7.4.5 If the AVPM audit trail is incomplete or unreadable on a ballot station, the electronic tally is the official tally. Examples of clear evidence of the audit trail being incomplete or unreadable will include verification by more than one canvass official that the audit trail is torn in the middle of a ballot with no matching counterpart “tear” or audit trails where two canvass officials can not read the text on the audit trail. These are some possible examples that would require use of the electronic tally as determined by the canvass official
- 7.5 Retention of Election Materials
 - 7.5.1 Upon certification of the election results, Elections Code sections 17300 through 17306 and 15307 apply to the handling security and disposition of unused materials. The retention of electronic ballots and related election materials is six months for local elections and twenty-two months for federal elections. Retention periods may be extended in the event of a court challenge.

7.5.2 Retention of all AVPM audit trails will be 22 months.

7.6 Adherence to Established Procedures

All operations associated with the official canvass and post-election procedures shall be performed in accordance with applicable control and security provisions.

No operation or activity which results in a revision to voting data produced by the semi-official official canvass shall be performed without the presence of a properly constituted Election Observer Panel, Logic and Accuracy Board, or an equivalent administrative and technical control body authorized to verify the correctness of the operations and to be responsible for maintaining accurate and complete audit records.

7.7 Manual Recount Procedures

7.7.1 Request for Recount

A request for a recount and the conduct of the recount shall be made in accordance with the provisions of the Elections Code at section 15600 and following.

7.8 Observer Panel

Each candidate and each side in the case of a ballot measure shall be allowed not more than two observers for each recount board, who may not touch or handle the transport media. All questions relating to the recount must be directed to the elections official in charge of the recount.

7.9 Hours of Operation

Prior to the beginning of the recount, all parties will be notified of the hours of operation.

7.10 Ballot Supervision

At least two people will attend ballots at all times during the recount, including breaks and lunch periods.

Recount boards will be permitted break periods in the morning and afternoon, in addition to a lunch break. They will not stop for a break or for lunch while in the process of recounting a precinct.

8. Election Security Provisions

8.1 Ballot Counting System Security

The election official shall ensure the protection of the election tally process from intentional and/or fraudulent manipulation, malicious mischief, accidents and errors.

Each jurisdiction using this system shall:

8.2 Establish procedures to identify changes to the ballot logic system, including dates and times that files are created, modified, or accessed, and by whom. These procedures must also include a checklist and sign-off requirement for the system proofing tasks.

8.3 Establish procedures for the physical protection of facilities, and data and communications access control; including intrusion and fire alarms, temperature and humidity sensors, etc. The procedures shall also include provisions for secure facilities for computers that house the Voter Card Encoders, AccuVote-TSx and GEMS software.

8.4 Establish contingency plans for tabulation, including either backup tabulation facilities under the elections official's supervision.

- 8.5 In addition to the ballot counting program sent to the Secretary of State pursuant to Elections Code section 17500, each elections official shall store another copy of the ballot tabulation software in an off-site secure, but readily accessible location. Any changes to the program should automatically be sent to the Secretary of State again and another copy created to be stored in an off-site secure location.(Add reference that any changes to this program or settings after this point should trigger another round of duplication).
- 8.6 Establish procedures for internal security, including the protection of the AccuVote-TSx and tabulation software from fraudulent manipulation by persons within the elections office.

These procedures must provide for:

- Restricted access to GEMS tabulation software
- Regular rotation of security keys
- A complete copy of each elections official'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 elections official may affirm that no change has been made to previously approved procedures, or may submit updates to the procedures on a continuing basis.

Additional Security Provisions

Election Security Plan

8.7 Security of GEMS server

Election Officials shall maintain the GEMS Server is in a controlled, preferably locked area with access limited to authorized staff.

Election Officials shall verify and submit a statement to the Secretary of State that no DAO capable program has been installed or resides on GEMS server. DAO programs include but are not limited to MS EXCEL, MS ACCESS, and other Visual Basic programs designed to work with Direct Access Objects.

The GEMS server shall be set to require user login. Administrative user logins should be limited to only those times user accounts need to be set or changed or software needs to be installed or updated. For routine use, a lesser user account should be used. (An administrative user should also be issued an additional, separate user account for routine use if their duties require routine election use).

A minimum of two people in the county election office shall have administrative access to the server supporting GEMS (the ability to set or change passwords). Additional user accounts may be assigned at less than administrative access but each user shall have and use separate user account with unique usernames and passwords.

The GEMS server should not be connected to any network that is not logically and physically isolated and protected

The GEMS server computer and communications systems may only be used for election purposes.

Workers must not install third-party software in the GEMS server system that is not previously approved for use by authorized personnel. This prohibition is necessary because such software

may contain viruses, worms, Trojan horses, and other software that may damage GEMS information and systems.

Whenever software and/or files are received from any external entity, this material must be tested for unauthorized software on a stand-alone, non-production machine before it is used on the GEMS server system. If a virus, worm, or Trojan horse is present, the damage will be restricted to the involved machine.

Software or firmware shall not be installed on any voting system through the Internet. This provision does not prohibit downloading or installing software or firmware using DESI's Secure Virtual Private Network (VPN), provided there is no direct connection between the VPN and the voting system.

An anti-virus program shall be installed. The virus program shall be updated and a virus scan run prior to each election. Virus checking programs must be continuously enabled on computers supporting the GEMS server system.

Externally supplied floppy disks, CDs or DVD's may not be used on any GEMS server unless these disks have first been checked for viruses and deemed to be free of such viruses.

If modem transmission is to be used to upload unofficial vote center results, the modems attached to the GEMS server should only be enabled when the transmission of unofficial results are expected. Before the transmission of results by modem, a back up of the GEMS election database shall be made and the back up stored in a protected location. Before loading official results, the back up shall be restored and used for the official results. SSL encryption should be enabled for all modem transmission of unofficial election results.

If unofficial summary results from the GEMS server are to be distributed or published, the information should be exported from GEMS to a file on the server and then copied to a virus-free floppy disk. That floppy disk can then be taken to a separate computer system that has external connections to the Internet. A separate blank floppy disk should be used each time the information is copied to the floppy disk.

Back-ups of GEMS databases should be performed using CD-ROMs. Users must ensure that the back-up is labeled with the time and date of the back-up and signed by the person who authorized the back-up.

No voting terminal will have wireless technology installed or have any ability to allow the transmission of vote results through wireless technology without state certification and customer request.

The boot option shall be set to hard drive only with the BIOS secured by a password. The password shall follow the manufacturer's recommendations for a secure password.

8.8 GEMS Passwords

Counties should use discretion in changing passwords on a regular basis. Each user should immediately change the password if the password is suspected of being disclosed, or is known to have been disclosed, to an unauthorized party.

Users are responsible for all activities performed with their personal login-IDs. Login-IDs may not be utilized by anyone but the individuals to whom they have been issued. Users must not allow others to perform any activity with their login-IDs.

The GEMS server, workstation, or terminal must not be left unattended without first logging-out or invoking a password-protected screen saver.

8.9 Security of AccuVote-TSx units

All AccuVote-TSx units shall use software that requires SSL/TLS standards and be documented as such. The SSL/TLS option shall always be activated.

Counties should change, on a regular basis, their encryption keys by using the Key card tool. These key cards will be stored in a secure location with limited access by county election staff.

8.10 Security of Administrator/Supervisor Cards

Addition of Administrator card to improve security and accessibility to TSx functions has been created and is detailed in Ballot Station Users guide

Supervisor card functions are now limited to only those necessary for opening and closing the polls

Administrator and Supervisor /Poll Worker Cards shall be stored in a secure location.

Administrator cards should have unique pin numbers for the jurisdiction that may or may not be changed each election

PIN numbers for official Supervisor/Poll Worker should be a minimum of 4 digits and should not use the same number for all four digits.

Supervisor /Poll Worker Card PINS shall be changed on a regular basis and stored in a secure location.

Tamper-evident seals should be installed on key locks of access panels of the AccuVote-TSx units and initialed so any incidence of disturbance shall be immediately obvious and rectified. Logs shall be kept to record the date, time and identification number of all seals and all incidences.

8.11 Storage at Election Warehouse

If the memory media is to be installed in the voting terminals prior to distribution to the vote centers, the voting terminals should be kept in a secure location after the memory media installation. The location should restrict access to only authorized personnel. Logs shall be kept to track the memory installation and access after the memory is installed.

8.12 Storage at Vote Center

In scouting and conducting polling place surveys, the county elections office will include polling place security as one of the issues investigated at the prospective polling site. After distribution of the voting terminals to the vote centers; the voting terminals should be kept in as physically secure a location as possible at the vote centers.

9. Audit Trails

All ballot tabulation 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.

9.1 System events in the ballot tabulation process include:

- Initiation of the ballot count program
- Clearing totals
- Running logic and accuracy tests
- Repairing hardware (including running accuracy tests after repairs are completed)

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

9.3 Specific audit trails shall include:

9.3.1 Exception Handling/Error Messages during Ballot Tabulation, including:

- Messages generated by the computer’s error routines;
- Identification code and number of hardware and software failures (their source and disposition);
- Recording of the operating system’s data read/write/verify, parity or check sum errors in retries.

9.3.2 System status messages, such as:

- Diagnostic and status messages upon start-up of ballot tabulation
- Starting Audit File
- Zero Totals Check
- Polling Place Open and Close
- Administrator interaction with system
- Operator (voter) interaction with system
- Counter totals at closing of poll
- Election end and archival
- Exceptions i.e., cancelled ballot, aborted ballot, etc.
- The number of ballots read within each precinct by type, including totals for each party in primary election
- The total number of ballots processed
- Separate accumulations and reporting of the quantity of overvotes (not applicable to the AccuVote-TSx), under-votes and write-ins within each precinct for each race or measure.
- Availability of the above information in summary and by precinct.

10. Certification and Reporting Requirements

10.1 Biennial Certification of Hardware

Elections Code section 19220 requires elections officials to inspect and certify the accuracy of their voting equipment at least once every two years. The elections official shall certify the results of this inspection to the Secretary of State.

10.2 Certification

All vote tabulating equipment must be certified for use in elections by the Secretary of State prior to use in any election

Certification Procedures are available upon request from the Secretary of State's Elections Division

10.3 Notification

For each statewide election, the responsible county official shall cause to be prepared a list, including quantities, of all equipment to be used to tabulate votes during the semi-official and official canvass.

10.3.1 Seven days before each statewide 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. This certification shall also affirm the use of the same equipment for pre-election testing and for semi-official and official vote canvass. In the event of a change to the ballot tabulation program occurring after this certification, an amended certificate shall be submitted no later than the day before the election.

10.3.2 In the event any equipment is repaired, altered or replaced following the certification specified, and prior to completion of the official canvass of the vote, an amended certification of logic and accuracy testing and a revised list of equipment used must be submitted to the Secretary of State not later than submission of the official canvass results.

10.4 Election Observer Panel

All procedures prescribed in this Manual shall be carried out in full view of the public insofar as feasible. In addition, the responsible elections official shall devise a plan, subject to the approval of the Secretary of State, whereby all critical procedures of the vote tabulation process described in this Manual are open to observation by an Election Observer Panel. Representatives of the qualified political parties and representatives of the news media shall be among those invited to serve on this Panel and shall be given the opportunity to observe that the correct procedures have been followed in the receiving, processing and tabulation of the voted electronic ballots.

10.5 Logic and Accuracy Certification

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

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

- 10.5.3 Verify the correctness of the logic and accuracy test program. This verification shall also be required for any of said material that must be replaced.
- 10.5.4 Observe the performance and verify results of all required tests.
- 10.5.5 Note any discrepancies and problems and affirm their resolution or correction.
- 10.5.6 Deliver into the custody of the elections official all required test materials and printed output.
- 10.5.7 Certify to the performance of each of the above prescribed duties as well as those otherwise established by the procedures, provided that all members of the Board shall sign the appropriate certificate or certificates.

Final pre-election certification shall be made to the Secretary of State no less than seven days before each statewide election. The responsible election official shall make this certification 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 elections official must immediately re-test and re-certify to the Secretary of State.

10.6 Submit Ballot Tabulation Programs to the Secretary of State

Ballot tabulation programs for statewide elections are to be deposited with the Secretary of State no later than seven days prior to each statewide election. The elections official's certification of testing as well as the list of vote counting equipment used must accompany ballot tabulation programs. Should changes be required following certification and submission to the Secretary of State, re-submission and re-certification is required.

10.7 Election Night and Post Election Reporting

Any delays in the election night's semi-official canvass reporting due to hardware, software, or environmental or human causes which result in failure to report results to the Secretary of State at least every two hours shall be reported immediately to the Secretary of State. The County shall investigate all such occurrences and shall provide a detailed explanation to the Secretary of State by the 28th day following the election. The responsible elections official may also report other delays in the processing of ballots, as he or she deems appropriate.

10.8 Preparation of Specific Written Procedures

Each election official shall prepare specific written procedures for each phase, step and procedure in the preparation, operation of polling places, vote counting and official canvasses of elections. Written procedures must also include instructions to precinct officials regarding proper handling of absent voter and provisional voter ballots, as well as a description of procedures used to manually recount ballots.

These procedures must be prepared and submitted to the Elections Division of the Secretary of State's Office within two years following the adoption of these procedures by the Secretary of State. Upon submission, the elections jurisdiction's procedures shall be reviewed for compliance with state procedures, and the elections official shall be advised of any necessary revisions.

10.9 Posting of Results at Polling Place on Election Night

As soon as possible after the close of polls, election workers shall post in a conspicuous place at each polling location an unofficial summary report of the results for the polling place.

Election Test Schedule and Requirements

<u>Test</u>	<u>Days Before or After the Election</u>	<u>Time Period</u>	<u>Ballot Types Used</u>	<u>Cards or Magnetic Tapes</u>	<u>Vote Count Program</u>
System Proofing	E -40 - E -10	Prior to E -7 Certification	All	Ballot cards or Magnetic tape	Yes
Exception	E -40 - E -10	Prior to E -7 Certification	All	Ballot cards	Yes
Election-Specific	E -40 - E -10	Prior to E -7 Certification	All	Ballot cards	Yes
Logic	E -40 - E -10	Prior to E -7 Certification	All	Ballot cards or Magnetic tape	Yes
Accuracy	E -40 - E -10	Prior to E -7 Certification	N/A	Reusable cards	No
Logic	E -30	For E -7 Certification	All	Ballot cards	Yes
Accuracy	E -30	For E -7 Certification	N/A	Reusable cards	No
Logic	E	Immediately before and after counting any ballots	Recommend all; permit sampling to include all candidates and measures	Ballot cards or Magnetic tape	Yes
Accuracy	Prior to E +28	For official canvass	N/A	Reusable cards	No
Logic	Prior to E +28	For official canvass	N/A	Ballot cards or Magnetic tape	Yes