Minutes State Election Commission Meeting October 8, 2018

The State Election Commission meeting was called to order by Chairman Judy Blackburn at 12:15 p.m., Central Standard Time, October 8, 2018. The following members and staff were present: Commissioners Barrett, McDonald, Wallace, Wheeler and Younce; Coordinator of Elections Mark Goins, Assistant Coordinator of Elections Beth Henry - Robertson and Kathy Summers, Elections Specialist.

Commissioner Wheeler made a motion to adopt the minutes from April 9, 2018, as amended, Commissioner Younce seconded the motion and the minutes were unanimously approved as amended. (Aye votes: Barrett, Blackburn, McDonald, Wallace, Wheeler and Younce; No votes: None; Abstention: None.)

Commissioner Barrett made a motion to move the July 9, 2018, minutes to the next regularly scheduled meeting. Commissioner Wallace seconded the motion to place the minutes on the January 14, 2019, agenda. (Aye votes: Barrett, Blackburn, McDonald, Wallace, Wheeler and Younce; No votes: None; Abstention: None.)

Commissioner Wallace made a motion to adopt the telephonic minutes from July 19, 2018, Commissioner Barrett seconded the motion and the minutes were unanimously approved. (Aye votes: Barrett, Blackburn, McDonald, Wallace, Wheeler and Younce; No votes: None; Abstention: None.)

Commissioner Wallace made a motion to adopt the telephonic minutes from July 31, 2018, Commissioner McDonald seconded the motion and the minutes were unanimously approved. (Aye votes: Barrett, Blackburn, McDonald, Wallace, Wheeler and Younce; No votes: None; Abstention: None.)

Commissioner McDonald made a motion to adopt the telephonic minutes from August 29, 2018, Commissioner Younce seconded the motion and the minutes were unanimously approved. (Aye votes: Barrett, Blackburn, McDonald, Wallace, Wheeler and Younce; No votes: None; Abstention: None.)

No county election commission appointments were made, as there were no vacancies to fill.

Old Business

• Dominion Voting D-Suite 5.0 (Touch Screen Ballot Marking Device) Request for approval.

Beth Henry – Robertson, Assistant Coordinator of Elections, spoke regarding the viewing of the Dominion Voting D-Suite 5.0, on August 7, 2018, in Romulus, Michigan (Wayne County, MI). Both Commissioner Judy Blackburn and Commissioner Tom Wheeler attended the viewing, as well.

Coordinator Goins stated if a county were to choose this machine, they need to have more than one device in each precinct.

Jessica Bowers, Director of Certification for Dominion, spoke before the commission and asked for approval of their voting machine for use in Tennessee.

Commissioner Barrett made a motion to certify the Dominion Voting D-Suite 5.0, Commissioner McDonald seconded the motion and the voting machine was unanimously approved for use in Tennessee. (Aye votes: Barrett, Blackburn, McDonald, Wallace, Wheeler and Younce; No votes: None; Abstention: None.)

• Code of Conduct for County Election Commissioners and Administrators of Elections

Coordinator Goins went over the suggested draft of Code of Conduct, which had been advocated by the State Election Commission after recent show cause hearings. (See attached Code of Conduct draft.)

New Business

• Administrators of Elections Who Passed the Certification Test Given on September 24, 2018.

A motion was made by Commissioner Wallace and seconded by Commissioner Barrett to certify those Administrators of Elections, who passed the certification test given on September 24, 2018. (Aye votes: Barrett, Blackburn, McDonald, Wallace, Wheeler and Younce; No votes: None; Abstention: None.) (See attached memo regarding administrators passing the certification test.)

County	Administrator
Fayette	Josh Tapp
Marion	Kyra Inglis

• Commissioner Wheeler discussed and suggested redacting the name of the individual who made the complaint, in Putnam County, from the April 9, 2018, minutes which are placed on the state website.

Commissioner Wheeler made a motion to redact the name of the complainant from the April 9, 2018, minutes which are placed on the state website. Commissioner Younce seconded the motion and the motion passed unanimously. (Aye votes: Barrett, Blackburn, McDonald, Wallace, Wheeler and Younce; No votes: None; Abstention: None.)

Coordinator Update

- **Handout** Coordinator Goins provided the commissioners with a copy of the election handout for 2018. This handout has voter registration information, election and early voting dates and provides information about the GoVoteTN app. Supplies are available to commission members, if needed.
- Voter Registration Investigation Coordinator Goins discussed an ongoing investigation regarding an organization turning in numerous voter applications for non-citizens, deceased voters and/or submitting multiple voter applications for a voter with various information changed or falsified signatures. This organization was paying people to register voters. This information has been turned over to both Federal and several county District Attorneys. Coordinator Goins is looking at drafting legislation, which will make it illegal to pay per voter registration or fire someone if they do not meet a quota for registering voters in Tennessee.
- Voter Participation Project Coordinator Goins does not believe this organization is intending to hurt anyone, but their mailings have caused confusion for voters. The mailing looks like the mailer is from the Secretary of State, but there is a disclaimer that the mailing is from the nonprofit. These mailings are going to non-citizens, and non-citizens are calling our office to see if they are eligible to vote. Various mailings were also sent to deceased voters. Coordinator Goins stated the Elections Division has been in contact with the organization, and he has suggested they need to get a better list to work from when sending their mailings to voters.
- **Be Registered** Coordinator Goins stated Be Registered is sending voter registration forms to voters who are already registered to vote. The Elections Division and county election offices, are receiving calls from voters inquiring why they are receiving these mailings since they are already registered to vote and asking that their name be removed from the list.
- **Group Calling Voters to Register to Vote over Phone** Coordinator Goins discussed a group calling citizens claiming to register voters over the phone in another state. This group was telling citizens they were with Turbo Vote. Turbo Vote contacted the Elections Division, to make the division aware they were not calling voters to register them over the phone. Turbo Vote advised they would never sponsor this type of activity.

- Non-Citizens Coordinator Goins received a call from a local attorney, who assists non-citizens with naturalization process, about a group trying to register non-citizens in local elections.
- Federal Voter Registration Coordinator Goins discussed voter registration group's use of the federal voter registration form, and the federal form does not specifically ask if an applicant was convicted of a Tennessee's requirements are in the Federal Voter Application booklet, but are not always provided by the group registering voters. Several federal voter applications have been submitted and the individuals have not had their rights restored.
- Amendment 1 Update Coordinator Goins advised the state has won the Amendment 1 court case.

The next regularly scheduled meeting is set for January 14, 2019, and will be held in the William R. Snodgrass - Tennessee Tower, Nashville Room - 3rd floor at 12:00 Noon, Central Standard Time.

The meeting was adjourned at 1:20 p.m. Central Standard Time.

Respectfully submitted,

Tom Wheeler, Secretary

State Election Commission

Vacant Status

08-Oct-18

D R

Total Vacancies: 0

Dominion Voting

Request for approval of the

D-Suite 5.0, Touch Screen Ballot Marking Device and High Speed Tabulator.

Demonstrated on October 9, 2017, and viewed on August 7, 2018, in Wayne County, MI.

Present:

Jessica Bowers, Director of Certification

<u>EAC – Certification Number</u>
 DVS-DemSuite-5.0

Tennessee Secretary of State Tre Hargett





Elections Division
312 Rosa L. Parks Avenue, 7th Floor
Nashville, Tennessee 37243-1102

Mark Goins Coordinator of Elections 615-741-7956 Mark.Goins@tn.gov

November 15, 2018

Jessica Bowers
Director, Certification
Dominion Voting
1201 18th Street, Suite 210
Denver, CO 80202

Dear Ms. Bowers:

This letter is to inform you of the certification of the Dominion Voting Democracy Suite 5.0 (Touchscreen Ballot-Marking Device and High Speed Tabulator) by the State Election Commission on October 8, 2018. Listed below is the certification of the machine bearing EAC Certification Number:

Dominion Voting Democracy Suite 5.0 - DVS-DemSuite-5.0

This voting machine was viewed in Wayne County, Michigan on August 7, 2018. The Dominion Voting Democracy Suite 5.0 equipment was demonstrated before the State Election Commission on October 9, 2017.

As you know, the State Election Commission requires the use of ballot tote bins to be used with optical scanners and Tennessee law requires the use of ballots with serially-numbered stubs.

Thank you for your cooperation in the certification process.

Sincerely,

Mark Do-

Mark Goins

Coordinator of Elections

Attachment: Dominion Voting Democracy Suite 5.0 - DVS-DemSuite-5.0



United States Election Assistance Commission

Certificate of Conformance



Dominion Democracy Suite 5.0

tification Program Manual and the conclusions of the testing laboratory in the test report are consistent with boratory for conformance to the 2005 Voluntary Voting System Guidelines (2005 VVSG). Components evaluhas been verified by the EAC in accordance with the provisions of the EAC Voting System Testing and Cer-The voting system identified on this certificate has been evaluated at an accredited voting system testing lathe evidence adduced. This certificate is not an endorsement of the product by any agency of the U.S. Govated for this certification are detailed in the attached Scope of Certification document. This certificate applies only to the specific version and release of the product in its evaluated configuration. The evaluation ernment and no warranty of the product is either expressed or implied.

Product Name: Democracy Suite

Model or Version: 5.0

Name of VSTL: Pro V&V

EAC Certification Number: DVS-DemSuite-5.0

Date Issued: February 8, 2017

DAG (

Executive Director
U.S. Election Assistance Commission

Scope of Certification Attached

Manufacturer: Dominion

System Name: Democracy Suite 5.0

Certificate: DVS-DemSuite5.0

Laboratory: Pro V&V
Standard: 2005 VVSG

Date: February 8, 2017



Scope of Certification

This document describes the scope of the validation and certification of the system defined above. Any use, configuration changes, revision changes, additions or subtractions from the described system are not included in this evaluation.

Significance of EAC Certification

An EAC certification is an official recognition that a voting system (in a specific configuration or configurations) has been tested to and has met an identified set of Federal voting system standards. An EAC certification is **not**:

- An endorsement of a Manufacturer, voting system, or any of the system's components.
- A Federal warranty of the voting system or any of its components.
- A determination that a voting system, when fielded, will be operated in a manner that meets all HAVA requirements.
- A substitute for State or local certification and testing.
- A determination that the system is ready for use in an election.
- A determination that any particular component of a certified system is itself certified for use outside the certified configuration.

Representation of EAC Certification

Manufacturers may not represent or imply that a voting system is certified unless it has received a Certificate of Conformance for that system. Statements regarding EAC certification in brochures, on Web sites, on displays, and in advertising/sales literature must be made solely in reference to specific systems. Any action by a Manufacturer to suggest EAC endorsement of its product or organization is strictly prohibited and may result in a Manufacturer's suspension or other action pursuant to Federal civil and criminal law.

System Overview:

The D-Suite 5.0 Voting System is a paper-based optical scan voting system with a hybrid paper/DRE option consisting of the following major components: The Election Management System (EMS), the ImageCast Central (ICC), the ImageCast Precinct (ICP), and the ImageCast X (ICX).

Election Management System (EMS): The D-Suite 5.0 EMS consists of various components running as either a front-end/client application or as a back-end/server application. A listing of the applications and a brief description of each is presented below.

Front-end/Client applications:

- EMS Adjudication: Represents the server and client components responsible for adjudication, including reporting and generation of adjudicated result files from ImageCast Central tabulators and adjudication of write-in selections from ImageCast Precinct and ImageCast Central tabulators.
- EMS Audio Studio: A client application that represents an end-user helper application used to record audio files for a given election project. As such, it is utilized during the pre-voting phase of the election cycle.
- EMS Election Data Translator: End-user application used to export election data from election project and import election data into election project.
- EMS Election Event Designer: A client application that integrates election definition functionality together with ballot styling capabilities and represents a main pre-voting phase end-user application. ImageCast Voter Activation: An application, installed on a workstation or laptop at the polling place, which allows the poll workers to program smart cards for voters. The smart cards are used to activate voting sessions on ImageCast X.
- EMS Results Tally and Reporting: A client application that integrates election results acquisition, validation, tabulation, reporting, and publishing capabilities and represents the main post-voting phase end-user application.

Back-end/Server applications:

- EMS Adjudication Services: Represents a server side application which provides ballot information such as contests, candidates and their coordinates from EMS to the Adjudication application.
- EMS Application Server: Represents a server side application responsible for executing long running processes, such as rendering ballots, generating audio files and election files, etc.
- EMS Database Server: Represents a server side RDBMS repository of the election project database which holds all the election project data, including pre-voting and postvoting data.
- EMS Data Center Manager: A server application that represents a system level configuration application used in EMS back-end data center configuration.
- EMS Election Device Management: Application used for production and programming of election files, and other accompanying files, for ImageCast X terminals.
- EMS File System Service: A client application that acts as a stand-alone service that runs on client machines, enabling access to low level operating system API for partitioning CF cards, reading raw partition on ICP CF card, etc.
- EMS NAS Server: Represents a server side file repository of the election project file based artifacts, such as ballots, audio files, reports, log files, election files, etc.
- Smart Card Helper Service: A service that is installed on a workstation or laptop at the polling place, and provides required data format for programming smart cards for ImageCast devices, or, for jurisdiction's voting registration system in case of integration.
- ImageCast Precinct (ICP): The ICP device is a hybrid precinct optical scan paper/DRE ballot counter designed to provide three major functionalities: ballot scanning and tabulation,

accessible voting, and ballot review and second chance voting. Accessible voting allows voters with disabilities to listen to an audio representation of a ballot and use a hand held controller called an Audio Tactile Interface (ATI) to make vote selections, which are then saved directly to the ICP when the voter casts their Accessible Voting ballot. The Ballot Review feature allows a voter to review their vote selections using an audio or visual representation, which displays or presents the voter with a complete listing of all contests contained on the ballot and an indication of the results which will be recorded for each contest once the voter's ballot is cast. Second Chance voting refers to scenarios in which an error has been detected on the voter's ballot (blank ballot, undervoted ballot, overvoted ballot, misread ballot, cross-over voted ballot), and the ICP notifies the voter by displaying a message or providing an audio visual cue, that one of these situations has been detected, and offers the voter an opportunity to reject and fix their ballot, or to cast the ballot as-is. The ICP scans marked paper ballots, interprets voter marks on the paper ballot and stores and tabulates each vote from each paper ballot. The ICP contains a small touch-screen LCD to allow the poll worker to initiate polling place activities, diagnostics and reports.

ImageCast Central (ICC) Count Scanner: The ICC is a high-speed, central ballot scan tabulator based on Commercial off the Shelf (COTS) hardware, coupled with the custom-made ballot processing application software. It is used for high speed scanning and counting of paper ballots.

ImageCast X (ICX) Ballot Marking Device (BMD): The Democracy Suite ImageCast X ballot marking platform is a solution that is used for creation of paper Electronic Mobile Ballots. These ballots can be scanned, reviewed, cast and tabulated at the polling location on an ImageCast Precinct device or later scanned and tabulated by the ImageCast Central optical ballot scanner. The ImageCast X also supports enhanced accessibility voting through optional accessories connected to the ImageCast X unit.

Certified System before Modification: NA

Anomalies and/or Additions addressed in Democracy Suite 5.0:

Testing determined that the system and components used are not fully compliant to VVSG 1.0, Section 7 and RFI 2012-05. The deficiency is a result of the system using COT's software products in which the FIPS Certificates are no longer valid. The DVS 5.0 system shall be modified to bring it into compliance with the requirements of VVSG 1.0, Section 7 and RFI 2012-05. DVS has 30 days from the date of Certification of the DVS 5.0 system to submit a modification to make these changes.

Mark definition:

50% or more of the target area marked consistently provides mark recognition. The manufacturer recommends black ink for marking ballot selections.

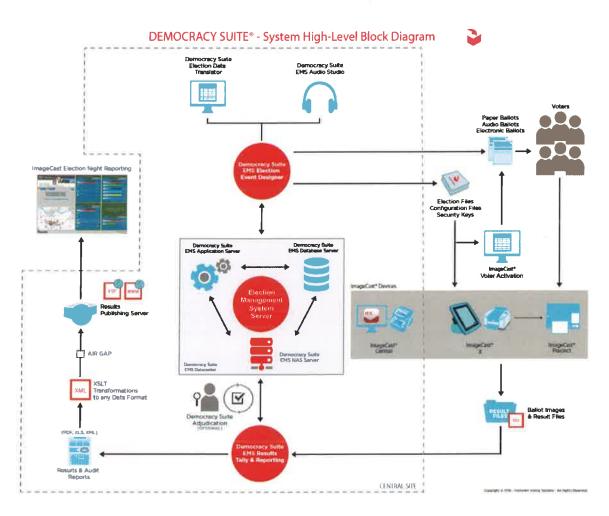
Tested Marking Devices:

Sharpie brand markers, black ink.

Language capability:

System supports Bengali, Chinese, English, French, Hindi, Japanese, Korean, Spanish, Thai.

Democracy Suite 5.0 System Diagram



Components Included:

This section provides information describing the components and revision level of the primary components included in this Certification.

System Component	Software or Firmware Version	Hardware Version	Operating System or COTS	Comments
EMS Election Event	5.0.15.1		Windows 8.1 Pro	EMS
Designer (EED)				

System Component	Software or Firmware Version	Hardware Version	Operating System or COTS	Comments
EMS Results Tally and Reporting (RTR)	5.0.15.1		Windows 8.1 Pro	EMS
EMS Application Server	5.0.15.1		Windows Server 2012 R2 Windows 8.1 Pro	EMS
EMS File System Service (FSS)	5.0.15.1		Window 8.1 Pro	EMS
EMS Audio Studio (AS)	5.0.15.1		Windows 8.1 Pro	EMS
EMS Data Center Manager (DCM)	5.0.15.1		Windows Server 2012 R2 Windows 8.1 Pro	EMS
ImageCast Voter Activation (ICVA)	5.0.15.1		Windows 8.1 Pro	EMS
EMS Adjudication (ADJ)	5.0.0.17002		Windows 8.1 Pro	EMS
EMS Adjudication Services	5.0.0.17002			
EMS Election Device Management (EDM)	5.0.15.1		Windows Server 2012 R2 Windows 8.1 Pro	EMS
Smart Card Helper Service	5.0.15.1		Windows 8.1 Pro	EMS
Election Firmware	5.0.1-US	PCOS-320A PCOS-320C	uClinux	ICP
Firmware Updater	5.0.1-US	PCOS-320A PCOS-320C	uClinux	ICP
Firmware Extractor	5.0.1-US	PCOS-320A PCOS-320C	uClinux	ICP
Kernel (uClinix)	5.0.1-US	PCOS-320A PCOS-320C	Modified COTS	ICP
Boot Loader (COLILO)	20040221	PCOS-320A PCOS-320C	Modified COTS	ICP
ImageCast Central Application	5.0.1-0001	Canon DR-G1130	Windows 8.1 Pro	ICC
ICX Application	5.0.6149.28963		Android 4.4 (Avalue) Android 5.0 (Samsung)	ICX
ICX Security Certificate	N/A			ICX
ICX Security Certificate Password	N/A			ICX
Microsoft Windows Server	2012 R2 Standard		Unmodified COTS	EMS Server SW Components
Microsoft Windows	8.1 Professional		Unmodified COTS	EMS Client/Server SW Components; EMS SW Build
.NET Framework	3.5		Unmodified COTS EMS Client/Se SW Compone EMS SW Bu	
Microsoft Visual J#	2.0		Unmodified COTS	EMS Client/Server SW Components; EMS SW Build

System Component	Software or Firmware Version	Hardware Version	Operating System or COTS	Comments
Microsoft Visual C++ 2013 Redistributable	2013		Unmodified COTS	EMS Client/Server SW Components
Java Runtime Environment	7u76		Unmodified COTS	EMS Client/Server SW Components
Java Runtime Environment	8u77		Unmodified COTS	EMS Client/Server SW Components
Microsoft SQL Server 2012 Standard	2012 Standard		Unmodified COTS	EMS Client/Server Unmodified COTS SW Components
Microsoft SQL Server 2012 Service Pack 2	2012 SP2		Unmodified COTS	EMS Client/Server SW Components
Microsoft SQL Server 2012 SP@ Express with Advanced Services	2012 SP2		Unmodified COTS	EMS Client/Server SW Components
Cepstral Voices	6.2.3.81		Unmodified COTS	EMS Client/Server SW Components
Arial Narrow Fonts	N/A		Unmodified COTS	EMS Client/Server SW Components; EMS SW Build
Maxim iButton Driver	4.04		Unmodified COTS	EMS Client/Server SW Components
Adobe Reader DC	AcrobatDC		Unmodified COTS	EMS Client/Server SW Components; EMS SW Build
Microsoft Acccess Database Engine	2010		Unmodified COTS	EMS Client/Server SW Components
Open XML SDK 2.0 for Microsoft Office	2.0		Unmodified COTS	EMS Client/Server SW Components
Infragistics NetAdvantage Win Forms 2011.1	2011 Vol. 1		Unmodified COTS	EMS SW Platform; EMS SW Build
Infragistics NetAdvantage WPF 2012.1	2012 Vol. 1		Unmodified COTS	EMS SW Platform; EMS SW Build
TX Text Control Library for .NET	16.0		Unmodified COTS	EMS SW Platform; EMS SW Build
SOX	14.3.1		Unmodified COTS	EMS SW Platform; EMS SW Build
Log4net	1.2.10		Unmodified COTS	EMS SW Platform
NLog	1.0.0.505		Unmodified COTS	EMS SW Platform; EMS SW Build
iTextSharp	5.0.5.0		Unmodified COTS	EMS SW Platform; EMS SW Build
OpenSSL	1.2		Unmodified COTS	EMS SW Platform; EMS SW Build
SQLite	1.0.65.0		Unmodified COTS	EMS SW Platform; EMS SW Build
Lame	3.99.4		Unmodified COTS	EMS SW Platform; EMS SW Build

System Component	Software or Firmware Version	Hardware Version	Operating System or COTS	Comments
Speex	1.0.4		Unmodified COTS	EMS SW Platform; EMS SW Build
Ghostscript	9.04		Unmodified COTS	EMS SW Platform; EMS SW Build
PdfToImage.dll	1.2		Unmodified COTS	EMS SW Platform; EMS SW Build
SharpSSh package	1.1.1.13		Unmodified COTS	EMS SW Platform; EMS SW Build
One Wire API for .NET	4.0.2.0		Unmodified COTS	EMS SW Platform; EMS SW Build
Avalon-framework- cvs-20020806	20020806		Unmodified COTS	EMS SW Platform; EMS SW Build
Batik	0.20-5		Unmodified COTS	EMS SW Platform; EMS SW Build
Fop	0.20-5		Unmodified COTS	EMS SW Platform; EMS SW Build
Microsoft Visual J# 2.0 Redistributable Package – Second Edition (x64)	2.0		Unmodified COTS	EMS SW Platform
Entity framework	4.3.1		Unmodified COTS	EMS SW Platform; EMS SW Build
Spreadsheetlight	3.4.3		Unmodified COTS	EMS SW Platform; EMS SW Build
Open XML SDK 2.0 for Microsoft Office	2.0.5022.0		Unmodified COTS	EMS SW Platform; EMS SW Build
Open SSL	1.1.2		Unmodified COTS	ICP
PNG Reference Library	1.2.24		Unmodified COTS	ICP
Zlib	1.2.3		Unmodified COTS	ICP
ASP.NET AJAX Control Toolkit	15.1.4.0		Unmodified COTS	ICX incl. EDM
Entity Framework	6.1.3.net45		Unmodified COTS	ICX incl. EDM
Ionics Zip Library	1.9.1.8		Unmodified COTS	ICX incl. EDM
NLog Library	1.0.0.505		Unmodified COTS	ICX incl. EDM
SQLite Google Text-to-	1.0.98.0 3.8.16		Unmodified COTS Unmodified COTS	ICX incl. EDM ICX incl. EDM
Speech Engine OpenSSL	1.2.3		Unmodified COTS	ICC SW Build Library
1-Wire Driver (x86)	4.04		Unmodified COTS	ICC Runtime SW
1-Wire Driver (x64)	4.04		Unmodified COTS	ICC Runtime SW
Kofax VRS	4.5 Build 269		Unmodified COTS	ICC Runtime SW
Kofax VRS Service Pack 1	4.5.1		Unmodified COTS	ICC Runtime SW
Canon DR-G1130 Driver	1.2 SP4		Unmodified COTS	ICC Runtime SW
Canon DR-G1130 Component Installer	4.50		Unmodified COTS	ICC Runtime SW
Visual C++ 2013	12.0.30501		Unmodified COTS	ICC Runtime SW

System Component	Software or Firmware Version	Hardware Version	Operating System or COTS	Comments
Redistributable (x86)				
Zxing Barcode Scanner	4.7.5		Modified COTS	ICX SW
SoundTouch	1.9.2		Modified COTS	ICX SW
7-Zip	9.20 (64 Bit)		Unmodified COTS	EMS SW Build
Internet Information Server (IIS)	6		Unmodified COTS	EMS SW Build
Visual Studio 2013 Premium	2013.5		Unmodified COTS	EMS SW Build
ImgBurn	2.5.7.0		Unmodified COTS	EMS SW Build
Active Perl	5.20.2		Unmodified COTS	EMS SW Build
Patch	2.5.9-7			EMS SW Build
ISOnewspaper	30.4		Unmodified COTS	EMS SW Build
Ogg Vorbis Encoder	2.88		Unmodified COTS	EMS SW Build
Ogg Vorbis Encoder	1.10.1		Unmodified COTS	EMS SW Build
Prism Mvvm	1.1.1		Unmodified COTS	EMS SW Build
PDF Printing	2.9.5.2		Unmodified COTS	EMS SW Build
WiX	3.10		Unmodified COTS	EMS SW Build
NASM Assembler	2.09.07		Unmodified COTS	ICC SW Build
Open SSL	1.2.3		Unmodified COTS	ICC SW Build
Ajax Control	15.1.4		Unmodified COTS	EDM SW Build
Toolkit				
SQLite	1.0.98.0		Unmodified COTS	EDM SW Build
Ionic	1.9.1.8		Unmodified COTS	EDM SW Build
Google Text-to- Speech Engine – Architecture Arm	3.8.16		Unmodified COTS	EDM SW Build
Google Text-to- Speech Engine – Architecture x86	3.8.16		Unmodified COTS	EDM SW Build
Microsoft Enterprise Library	5.0		Unmodified COTS	Adjudication SW Build
Microsoft Prism	4.0-November 2010		Unmodified COTS	Adjudication SW Build
Microsoft Identity Foundation	4.0		Unmodified COTS	Adjudication SW Build
Toggle Switch Control Library	1.1.1		Unmodified COTS	Adjudication SW Build
Infragistics NetAdvantage 2013.1	2013.1		Unmodified COTS	Adjudication SW Build
iTextSharp	5.5.1		Unmodified COTS	Adjudication SW Build
CLR Security	June 2010		Unmodified COTS	Adjudication SW Build
Open SSL	1.0.2e		Unmodified COTS	Adjudication SW Build
Community MSI	1.4		Unmodified COTS	Adjudication

System Component	Software or Firmware Version	Hardware Version	Operating System or COTS	Comments
Extensions				SW Build
TreeViewEx	3.0.0.0		Unmodified COTS	Adjudication SW Build
SharpZibLib	0.86.0		Unmodified COTS	ICL SW Build
Microsoft Visual	2013		Unmodified COTS	ICL SW Build
Studio 2013 Installer Projects Extension				
Visual Basic Power Packs	12.0		Unmodified COTS	ICL SW Build
G++(GNU C++	gcc3.4.0-20040603		Unmodified COTS	ICP Election
compiler)	gccs.4.0-20040605		Offinodified CO13	Firmware Compiler
Ubuntu 10.04 LTS –	10.04		Unmodified COTS	ICP Firmware Build
Long-term support	10.04		Unmodified CO13	ice riffiware build
Toolchain	NA		Unmodified COTS	ICP Firmware Build
Installation Script	IVA		Offinodified CO15	Tel Tilliware band
M68k uClinix tools base gcc	3.4.0-20040603		Unmodified COTS	ICP Firmware Build
M68k uClinix tools c++ gcc	3.4.0-20040603		Unmodified COTS	ICP Firmware Build
M68k uClinix tools	20040603		Unmodified COTS	ICP Firmware Build
OpenSSL	1.1.2		Unmodified COTS	ICP Firmware Build
Ubuntu	14.04.4		Unmodified COTS	ICP Firmware Build
ImageCast Precinct	5.0.1-US	PCOS-320C		Available from
Optical Scanner				Dominion Voting
ImageCast Precinct	5.0.1-US	PCOS-320A		Available from
Optical Scanner				Dominion Voting
ICP Ballot Box		BOX-330A		Available from Dominion Voting
ICX UPS Inline EMI		1.0		Available from
Filter		1.0		Dominion Voting
ICX Tablet	5.0.6149.28963	Samsung		Available from
				Dominion Voting
ICX Tablet	5.0.6149.28963	Avalue 15" Tablet (SID-15V)	COTS	
ICX Tablet	5.0.6149.28963	Avalue 21" Tablet (SID-21V)	COTS	
Server		Dell PowerEdge R630	Windows Server 2012 R2	
Client HW		Dell Precision T3420 PC	Windows 8.1 Pro	
Client HW		Dell Latitude E7450 Laptop	Windows 8.1 Pro	
Printer		HP LaserJet Pro Printer M402dn	COTS	
ICC Workstation		Dell OptiPlex 7440	Windows 8.1 Pro	
HW		All in One		
ICC Workstation HW		Dell OptiPlex 9030 All In One	Windows 8.1 Pro	
Scanner		Canon	COTS	
- Journal		imageFormula DR-	5515	

System Component	Software or Firmware Version	Hardware Version	Operating System or COTS	Comments
		G1130		
Monitor		Dell Ultrasharp 24" Monitor U2414H	COTS	
Monitor		Dell Monitor KM632	COTS	
Monitor		Dell Monitor P2414Hb	сотѕ	
Ballot Printer		Brother Laser Printer HL-L2300D	COTS	
CD/DVD Reader		Dell DVD Multi Recorder	COTS	
iButton Programmer		Maxim iButton Programmer DS9490P# with DS1402	сотѕ	
UPS		APC Smart-UPS SMT1500	COTS	
Network Switch		Dell X1008 Network Switch	сотѕ	
Network Switch		Dell X1018 Network Switch	сотѕ	
Network Switch		Dell X1026 Network Switch	COTS	
Network Switch		Dell PowerConnect 2808 Network Switch	сотѕ	
Interface Hub		Tecla ShieldDos KDL-02001	COTS	
Sip and Puff		Enabling Devices Sip and Puff	сотѕ	
Headphones		Cyber Acoustics Headphones ACM- 70	COTS	
Joystick		4-way joystick controller S26	COTS	
Paddles		Enablemart #88906 Rocker (Paddle) Switch	COTS	
Footswitches		ABLENET Jelly Bean Twist 10033400	COTS	
CF Card Reader		IOGEAR SDHC/microSDHC 0U51USC410 Card Reader	COTS	
CF Card Reader		Lexar USB 3.0 Dual-Slot reader	COTS	
CF Card Reader		Hoodman Steel USB 3.0 UDMA Reader 102015	COTS	
CF Card Reader		Lexar Professional CF card reader workflow CFR1	COTS	
ATI		ATI handset		Available from

System Component	Software or Firmware Version	Hardware Version	Operating System or COTS	Comments
				Dominion Voting
ATI		ATI-USB handset		Available from
				Dominion Voting
Smart Card Reader		ACS PC-Linked	COTS	
		Smart Card Reader		
		ACR39U		

System Limitations

This table depicts the limits the system has been tested and certified to meet.

Characteristic	Limiting Component	Limit	Comment	
Ballot positions	The ballot	462	Both	
Precincts in an election	EMS	1000; 250	Standard; Express	
Contests in an election	EMS	4000; 250	Standard; Express	
Candidates/Counters in an election	EMS	40000; 2500	Standard; Express	
Candidates/Counters in a precinct	Tabulator	462	Both	
Candidates/Counters in a tabulator	Tabulator	10000; 2500	Standard; Express	
Ballot Styles in an election	Tabulator	4000; 750	Standard; Express	
Ballot IDs in a tabulator	Tabulator	200	Both	
Contests in a ballot style	Tabulator	125	Standard; Express	
Candidates in a contest	EMS	462; 231	Standard; Express	
Ballot styles in a precinct	Tabulator	5	Both	
Number of political parties	Tabulator	30	Both	
"vote for" in a contest	Tabulator	30	Both	
Supported languages in an election	Tabulator	5	Both	
Number of write-ins	The ballot	462	Both	

Functionality

2005 VVSG Supported Functionality Declaration

Feature/Characteristic	Yes/No	Comment
Voter Verified Paper Audit Trails		
VVPAT	N/A	
Accessibility		
Forward Approach	YES	
Parallel (Side) Approach	YES	
Closed Primary		
Primary: Closed	YES	
Open Primary		
Primary: Open Standard (provide definition of how supported)	YES	
Primary: Open Blanket (provide definition of how supported)	YES	
Partisan & Non-Partisan:		
Partisan & Non-Partisan: Vote for 1 of N race	YES	
Partisan & Non-Partisan: Multi-member ("vote for N of M") board races	YES	
Partisan & Non-Partisan: "vote for 1" race with a single candidate and	YES	
write-in voting		

Feature/Characteristic	Yes/No	Comment
Partisan & Non-Partisan "vote for 1" race with no declared candidates and	YES	
write-in voting		
Write-In Voting:		
Write-in Voting: System default is a voting position identified for write-ins.	YES	
Write-in Voting: Without selecting a write in position.	NO	
Write-in: With No Declared Candidates	YES	
Write-in: Identification of write-ins for resolution at central count	YES	
Primary Presidential Delegation Nominations & Slates:		
Primary Presidential Delegation Nominations: Displayed delegate slates for	YES	
each presidential party		
Slate & Group Voting: one selection votes the slate.	YES	
Ballot Rotation:		
Rotation of Names within an Office; define all supported rotation methods	YES	Equal time rotation
for location on the ballot and vote tabulation/reporting		
Straight Party Voting:		
Straight Party: A single selection for partisan races in a general election	YES	
Straight Party: Vote for each candidate individually	YES	
Straight Party: Modify straight party selections with crossover votes	YES	
Straight Party: A race without a candidate for one party	YES	
Straight Party: "N of M race (where "N">1)	YES	
Straight Party: Excludes a partisan contest from the straight party selection	YES	
Cross-Party Endorsement:		
Cross party endorsements, multiple parties endorse one candidate.	YES	
Split Precincts:	123	
Split Precincts: Multiple ballot styles	YES	
Split Precincts: P & M system support splits with correct contests and ballot	YES	
identification of each split	123	
Split Precincts: DRE matches voter to all applicable races.	N/A	
Split Precincts: Reporting of voter counts (# of voters) to the precinct split	YES	
level; Reporting of vote totals is to the precinct level	123	
Vote N of M:		
Vote for N of M: Counts each selected candidate, if the maximum is not	YES	
exceeded.	163	
Vote for N of M: Invalidates all candidates in an overvote (paper)	YES	
Recall Issues, with options:	125	
Recall Issues with Options: Simple Yes/No with separate race/election.	YES	
(Vote Yes or No Question)	163	
Recall Issues with Options: Retain is the first option, Replacement	NO	
candidate for the second or more options (Vote 1 of M)		
Recall Issues with Options: Two contests with access to a second contest	NO	
conditional upon a specific vote in contest one. (Must vote Yes to vote in		
nd		
2 contest.)	NO	
Recall Issues with Options: Two contests with access to a second contest	NO	
conditional upon any vote in contest one. (Must vote Yes to vote in 2		
contest.)		

Feature/Characteristic	Yes/No	Comment
Cumulative Voting		
Cumulative Voting: Voters are permitted to cast, as many votes as there	NO	
are seats to be filled for one or more candidates. Voters are not limited to		
giving only one vote to a candidate. Instead, they can put multiple votes on		
one or more candidate.		
Ranked Order Voting		
Ranked Order Voting: Voters can write in a ranked vote.	NO	
Ranked Order Voting: A ballot stops being counting when all ranked	NO	
choices have been eliminated		
Ranked Order Voting: A ballot with a skipped rank counts the vote for the	NO	
next rank.		
Ranked Order Voting: Voters rank candidates in a contest in order of	NO	
choice. A candidate receiving a majority of the first choice votes wins. If no		
candidate receives a majority of first choice votes, the last place candidate		
is deleted, each ballot cast for the deleted candidate counts for the second		
choice candidate listed on the ballot. The process of eliminating the last		
place candidate and recounting the ballots continues until one candidate		
receives a majority of the vote		
Ranked Order Voting: A ballot with two choices ranked the same, stops	NO	
being counted at the point of two similarly ranked choices.		
Ranked Order Voting: The total number of votes for two or more	NO	
candidates with the least votes is less than the votes of the candidate with		
the next highest number of votes, the candidates with the least votes are		
eliminated simultaneously and their votes transferred to the next-ranked		
continuing candidate.		
Provisional or Challenged Ballots		
Provisional/Challenged Ballots: A voted provisional ballots is identified but	YES	
not included in the tabulation, but can be added in the central count.		
Provisional/Challenged Ballots: A voted provisional ballots is included in the	NO	
tabulation, but is identified and can be subtracted in the central count		
Provisional/Challenged Ballots: Provisional ballots maintain the secrecy of	YES	
the ballot.		
Overvotes (must support for specific type of voting system)		
Overvotes: P & M: Overvote invalidates the vote. Define how overvotes are	YES	Overvotes cause a
counted.		warning to the voter
		and can be configured
		to allow voter to
		override.
Overvotes: DRE: Prevented from or requires correction of overvoting.	N/A	
Overvotes: If a system does not prevent overvotes, it must count them.	YES	If allowed via voter
Define how overvotes are counted.		override, overvotes are
		tallied separately.
Overvotes: DRE systems that provide a method to data enter absentee	N/A	
votes must account for overvotes.		
Undervotes		
Undervotes: System counts undervotes cast for accounting purposes	YES	

Feature/Characteristic	Yes/No	Comment
Blank Ballots		
Totally Blank Ballots: Any blank ballot alert is tested.	YES	Precinct voters receive a warning; both precinct and central scanners will warn on blank ballots.
Totally Blank Ballots: If blank ballots are not immediately processed, there must be a provision to recognize and accept them	YES	Blank ballots are flagged. These ballots can be manually examined and then be scanned and accepted as blank; or precinct voter can override and accept.
Totally Blank Ballots: If operators can access a blank ballot, there must be a provision for resolution.	YES	Operators can examine a blank ballot, re-mark if needed and allowed, and then re-scan it.
Networking	7 7	
Wide Area Network – Use of Modems	NO	
Wide Area Network – Use of Wireless	NO	
Local Area Network – Use of TCP/IP	YES	Client/server only
Local Area Network – Use of Infrared	NO	
Local Area Network – Use of Wireless	NO	
FIPS 140-2 validated cryptographic module	YES	
Used as (if applicable):		
Precinct counting device	YES	ImageCast Precinct
Central counting device		ImageCast Central

Baseline Certification Engineering Change Orders (ECO) Not applicable in new system test campaign.

August 7, 2018 Election

Dominion Voting –D-Suite 5.0 (Touchscreen Ballot-Marking Device), incl. ICX BMD, ICP, ICC & EMS

- Had one Ballot-Marking Device and Optical Scan Reader at each precinct
- Used as ADA machine
- Used a pre-printed ballot with a stub
- Precincts did not have a laptop used to configure ballot cards for voters (task performed by central office) – this caused a lot of delay at the precincts and added pressure on central office

Ballot: Republican, Democratic, Libertarian Parties holding a Primary Offices of Governor, U.S. Senate, U.S. House, State Senator, State Legislator, County Executive, County Commissioner, Delegate to County Convention; County referendum and School referendum

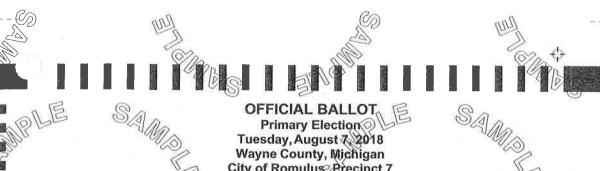
Viewed Dominion voting system in Precincts 1, 4, 5, 7, 10 and 12 in the City of Romulus

City of Romulus has 17,000 registered voters

Notes on Set-up

- Laptops used to configure cards
- Technician card (Used for original set up)
- Poll worker card (Used at precinct)
- Voter card (Used at machine)

Viewed High speed tabulator at county office - 25 ballots loaded onto tabulator at a time



OFFICIAL BALLOT

Primary Election Tuesday, August 7, 2018 Wayne County, Michigan

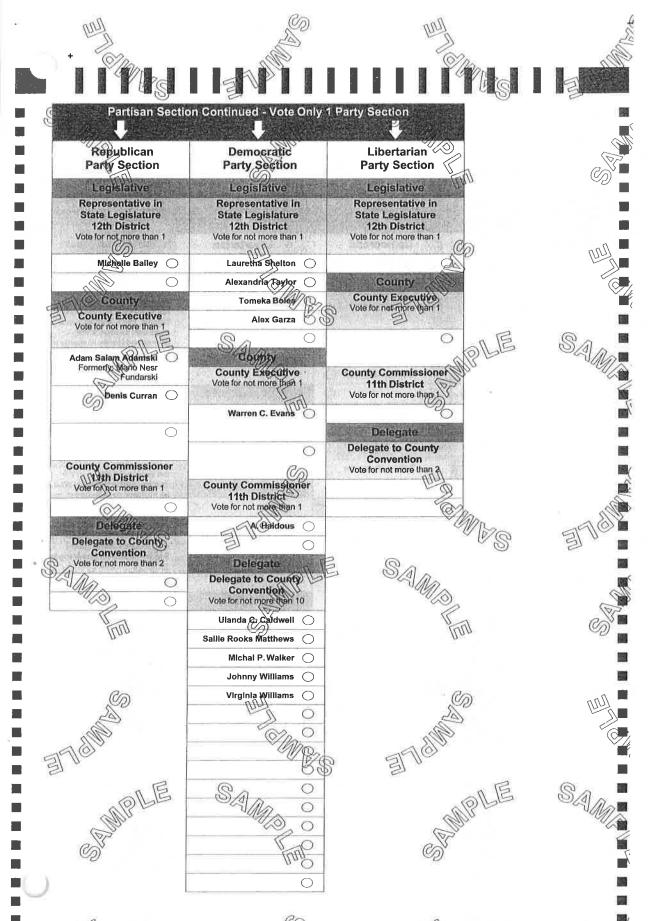


	City of Romu	ilus Precinct 7	Tim
Partis • • • • • • • • • • • • • • • • • • •	san Section - Vote Only 1 Par	rty Section	Proposal Section Authority
Republican Party Section	Democratic Party Section	Libertarian Party Section	Wayne County Public Transportation Millage
State	State	State State	If approved, this proposal will
Governor Vote for not more than	Governor Vote for not more than 1	Vote for no pring than 1	renew the 1.0 mill levied by the Wayne county Transportation Authority for the years 2018 through 2021, and will allow
Patrick Colbeck	Shir Thanedar	John J. Tatar	continued support to the Suburban Mobility Authority for
Jim Hines	Gretchen Whitmer	Bill Gellneau	Regional Transportation (SMART) for a public
Bill Schuette	Abdul El-Sayed (transportation system serving
Brian Calley	0	Congressional	the elderly, disabled and general public obwayne County.
(u	Congressional	United States Senator	For the purpose of providing
Congressional	United States Senator	Vote for not more than 1	funds in support of public transportation serving the
United States Senato	Vote for not more than 1	0	elderly, disabled, and general public, shall 1.0 mill on all
Vote for not more than 1	Debbie Stabenow	Representative in Congress	taxable property located within
Sandy Pensier (Bul.	13th District Vote for not more than 1	the Wayne County Transportation Authority area,
John James (Representative in Congress		be imposed for a period of four (4) years, being years 2018
	13th District	Representative in Congress	through 2021? Based on known taxable values from the
Representative in Congr	ess Bill Wild	13th District Partial Term Ending 1/3/2019	previous year, this millage
13th District	Coleman A. Young II	Vote for not more than 1	\$16,840,052.04 in the first year.
PR ON	lan Conyers (OBE	SAMO Yes
Representative in Congr	7/ h	Legislative	No O
13th District Partial Term Ending 1/3/2	019 Brenda Jones	State Senator	Local School District
Vote for not more than 1	Rashida Tlaib	6th District Vote for not more than 1	Romulus Community Schools
		- Total of Hot Mole Chair 1	Sinking Fund Millage
Legislative State Senator	Representative in Congress 13th District Partial Term Ending 1/3/2019		Proposal Shall the limitation on the amount of taxes which may be
6th District Vote for not more than 1	Vote for not more than 1	Tuni	assessed against (II) poperty in Romulus Community Schools, Wayne County, Michigan, be
Brenda Jones	Rashlda Tlaib	VIII.	increased by and the board of education be authorized to levy
Ma 5171	BIII Wild 🔾	W W	not to exceed 3 mills (\$3.00 on each \$1,000 of taxable
9 5	lan Conyers 🔾	00	valuation) for a period of 10 years, 2018 to 2027, inclusive,
	Brenda Jones	A ARIS	to create a sinking fund for the purchase of real estate for sites for, and the construction or repair of, school buildings, for
)	State Senator 6th District Vote for not more than 1	Trun	school security improvements, for the acquisition or upgrading of technology and all other purposes authorized by law; the estimate of the revenue the
)	Robert L. Kosowski		school district will collect if the
1	Erlka Geiss 🔘		millage is approved and levied in 2018 is approximately
)	nn o		\$2,300,000? Yes
	620		No O

ority inty Public tion Willage

ol District

nunity Schools nd Millage osal



PROCEDURES FOR CERTIFYING VOTING MACHINES BY THE TENNESSEE STATE ELECTION COMMISSION

All voting machines/vendors must receive certification from the state election commission and the coordinator of elections before any voting machines or systems may be sold in the State of Tennessee.

First Step:

Any interested vendor should submit a written request to the coordinator of elections and the state election commission requesting certification of your company together with the EAC certification number, a financial report and a list of all states that have already bought your voting machines or systems. If you would like to demonstrate your product at a meeting of the state election commission, please make that request in your letter. You will be notified of the date, time, and place of the meeting where you may make your presentation.

Second Step:

A. Voting Machine Procedure

Following verification of EAC certification and an initial presentation of your product and/or services, you would need to arrange for at least two (2) State Election Commissioners (of opposite parties) and the coordinator of elections (or designee) to view your machines or system in use in an election of a substantial size in another state. An election of a substantial size involves at the minimum the following characteristics:

- The jurisdiction has a population of at least 10,000 persons;
- The jurisdiction has at least two (2) or more district races on the ballots; and
- There are at least two (2) contested races involving both at large and district races on the ballot.

B. Voting Machine Software or Hardware Upgrade

- EAC Certification;
- Presentation of upgrade before State Election Commission at a meeting; and
- Viewing of upgrade in another state (In lieu of viewing machine in another state, at the discretion of the State Election Commission, letters of recommendation from users in other jurisdiction may be used as support for approval.)

C. De Minimis Voting System Changes

Any De Minimis change to an EAC certified voting system shall be submitted to the state election commission and
coordinator of elections to be approved. For purposes of approval of the de minimis change to the voting system,
all that will be required is a letter from the EAC stating the change is de minimis, unless further information is
requested by the state election commission or coordinator of elections.

Third Step:

The State Election Commission must vote to certify the machine in order for the machines to be used in an election in Tennessee.

You may send any correspondence for both the state election commission and the coordinator of elections to the following address:

312 Rosa L.Parks Avenue, 7th Floor William R. Snodgrass Tower Nashville, Tennessee 37243 (615) 741-7956

If you have any further questions regarding certification of your company, please feel free to contact the office of the state election coordinator at the phone number listed above.

Tennessee Secretary of State Tre Hargett



Elections Division 312 Rosa L. Parks Avenue, 7th Floor Nashville, Tennessee 37243-1102

Mark Goins Coordinator of Elections 615-741-7956 Mark.Goins@tn.gov

MEMORANDUM

To:

State Election Commission Members

From:

Mark Goins Mah Dai

Coordinator of Elections

Date:

October 2, 2018

Subject:

Results of the September 24, 2018 Certification Exam

On September 24, 2018, this office administered a certification exam. The following Administrators of Elections obtained a passing score on that exam:

Josh Tapp (Fayette County)

Kyra Inglis (Marion County)

Code of Conduct for County Election Commission Members and Administrators of Elections

County Election Commission members and Administrators of Elections are expected to faithfully and impartially discharge the duties of their office in order to conduct fair and trustworthy elections. The actions and conduct of the County Election Commission members and the Administrator of Elections impact the integrity of the election process. To further the interest of instilling confidence in the electoral process, while performing election commission duties, specifically during office hours or during election commission meetings, County Election Commission members and Administrators of Elections must observe and follow the Code of Conduct as described below:

- 1. Comply with existing laws governing the conduct of elections in Tennessee;
- 2. Implement the election laws in a fair and impartial manner;
- 3. Demonstrate impartiality and fairness to all voters, political parties, candidates and their representatives and all members of the public;
- 4. Refrain from circulating or signing a petition for any candidate, initiative, or referendum;
- 5. Refrain from making disparaging comments or remarks about candidates or issues on the ballot, including but not limited to writing letters to the editor of a newspaper or posting comments on an internet blog; Facebook, Twitter, Instagram or any other social media in favor of or against any candidate or ballot referendum, identifying your position as a County Election Commission member or Administrator of Elections;
- 6. Avoid wearing, carrying or displaying any sign, symbol or slogan that is connected to a candidate;
- 7. Protect the secrecy of each voter's ballot;
- 8. Refrain from accepting directly or indirectly any monitory gift or any other valuable thing from any candidate, candidate representative or vendor;
- 9. Refrain from providing favors or divulging information which may be advantageous to candidates or political parties, unless such favor or information is provided to all candidates and political parties;
- 10. Refrain from participating in the consideration of any election commission decisions involving immediate family members whose names appear on the ballot; and
- 11. Conduct all duties in a professional manner

Violations of the Code of Conduct may result in disciplinary actions in accordance with the State Election Commission's statutory authority under Tenn. Code Ann. § 2-12-101, including removal of a county election commission member or decertification of a certified Administrator of Elections.