Voting System Certification Evaluation Report

Dominion Voting Systems Corp (DVS)
Democracy Suite 5.17
DVS-DemSuite5.17

Michigan Department of State
Bureau of Elections
Security and Standards Section

Report Presented to Board of State Canvassers on May 19, 2023

Contents

Testing Overview

The Dominion Voting Systems Democracy Suite 5.17 Voting System is an Election Assistance Commission (EAC) certified paper-based optical scan voting system consisting of the major components listed below. Democracy Suite 5.17 is a modification from the previously approved Democracy Suite 5.5-D base system configuration.

The Democracy Suite 5.17 Voting system consists of the following major components: The Election Management System (EMS), the high-speed system (Image Cast Central – ICC), the tabulator (ImageCast Precinct – ICP and ICP2) and the accessible system (ImageCast X – ICX). Each of these major components were tested as part of State Certification Testing.

Democracy Suite 5.17 has many updates and improvements, including multiple security enhancements to address previously reported disclosures of possible deficiencies or vulnerabilities. System enhancements in Democracy Suite 5.17 include the following:

- System and security updates including Windows Server 2019 and SQL Server 2019.
- Enhanced hardening procedure of all Windows-based components.
- Additional encryption of election databases (ICP2 and ICX) and other additional security features.
- Trusted Root Certificates.
- ICX Smart Card Mutual Authentication and Secure Messaging.
- Addition of ICP2 tabulator.
- Added support for ICX Ballot Marking Device (BMD) to produce uniform ballot in addition to representative ballot with selections and QR code.
- Improved pseudo random number algorithm used to safeguard voter privacy.
- ICX Android version updated to 8.1.

See Certificate of Conformance System Modifications or test plan for complete list of system changes.

Introduction

System Information

Manufacturer:	*Dominion Voting Systems (DVS)*	**Name of VSTL:**	*Pro V&V*
System Name:	*Democracy Suite 5.17*	**Standard:**	*VVSG 1.0 (2005)*
Certificate:	*DVS-DemSuite5.17*	**Certification Date:**	*3/15/23*

The Dominion Democracy Suite 5.17 System was evaluated for Certification by the State of Michigan, Bureau of Elections (BOE) on April 26 & 27, 2023. This report summarizes the findings and observations of testing. Testing

was performed at the Richard H. Austin Building with the assistance of Bureau of Elections staff (the Security and Standards Section, as well as the Election Security Specialist) as well as Wayne County election officials and representatives from Brownstown Township and City of Detroit. Dominion sub-contractor, Election Source also had staff present on both days of testing. A Dell PowerEdge R640 Server was used as the EMS Server.

Dominion submitted their application and all required documentation including their Technical Data Package (TDP) along with their system test report. The Democracy Suite 5.17 System was tested to conform to the Voluntary Voting System Guidelines Version 1.0 (VVSG 1.0). Updated guidelines (VVSG 2.0) have been approved by the EAC, but the three major voting systems are not yet being tested under the new guidelines and the previous VVSG is still used to test and certify systems.

Democracy Suite 5.17 supports Spanish (required in some Michigan jurisdictions) and Bengali (required in City of Hamtramck). Only English was tested during State Certification Testing. Additional languages do not affect the system testing performed.

System Description

The test configuration of the Democracy Suite 5.17 Election Management System (EMS) with descriptions is listed below.

- **EMS Election Data Translator (EDT)**

  Application used to export election data from election project and import election data into the project. This application was used to import the EMS Export spreadsheet from the Qualified Voter File (QVF).

  -QVF EMS Export data (contests, proposals, precincts, districts, and candidates) was imported into EDT as part of the database creation using the VR Interface to D-Suite EDT V1.4 format.

- **EMS Election Event Designer (EED)**

  Application used to create election definition database including ballot definition and create equipment media.

  -Demonstration showing how ballot definitions and media were created was provided.

- **EMS Results Tally and Reporting (RTR)**

  Application used to load media, produce election results, and create reports.

  -Demonstration showing how media is read into the system for reporting purposes was provided.

- **EMS Adjudication (ADJ)**

  Software used to adjudicate results files from ICP tabulators and ICC high-speed systems.

  -Demonstration of the adjudication functionality was provided.

The system configuration used for Certification Testing is listed below along with the associated Commercial off the Shelf (COTS) products.

A) Tabulator – ImageCast Precinct (ICP/ICP2)

The ImageCast Precinct (ICP/ICP2) device is a digital precinct optical scan ballot counter that also provides for notification, as required by law, to a voter who has made an error on their ballot that would render a race or the entire ballot uncountable, so that they can cast a different ballot instead (also known as second chance voting).

ICP Firmware version: 5.17.15.3

ICP2 Firmware version: 5.17.15.1

Standard ICP Tabulator (PCOS-320A) - CF Card (ICP) – Image 1 below
ICP2 Tabulator (PCOS-330A) - SDHC Memory Card (ICP2) – Image 2 below

- Stackable Molded Plastic: BOX-330A used with Standard ICP Tabulator
- Collapsible Plastic: ElectionSource IM-COLLAPSIBLE BIN used with ICP2 Tabulator

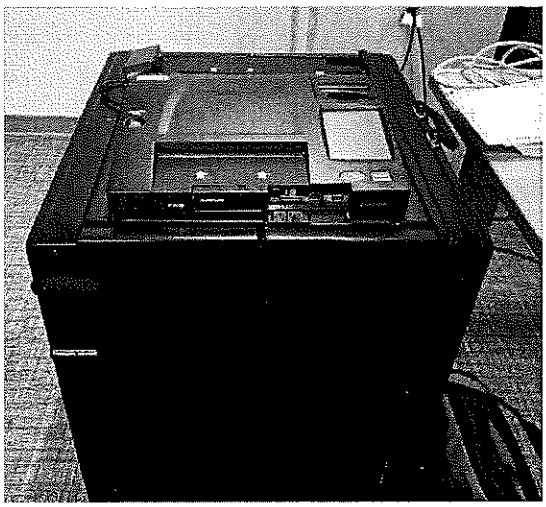


Image 1

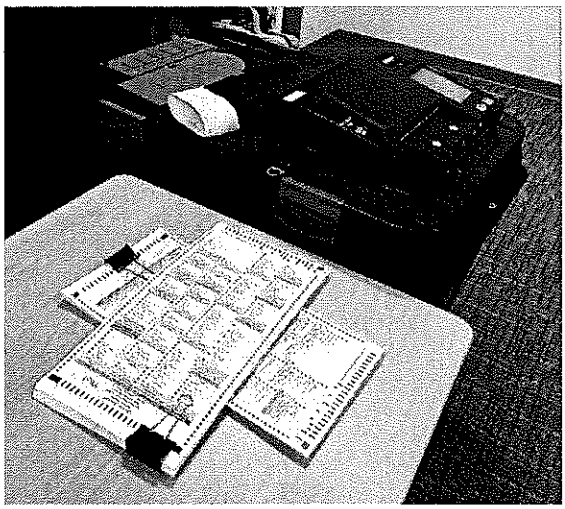


Image 2

B) Voter Assist Terminal (VAT) – ImageCast X (ICX)

The ImageCast X consists of COTS available hardware and operating system along with custom software to create an accessible Ballot Marking Device (BMD) which provides for ballot review and second chance voting.

Firmware version: 5.17.17.1

ICX Tablet (Classic) - aValue 15" Tablet (SID-15V) – Image 4 below
ICX Tablet (Prime) - aValue 21" Tablet (HID-21V) (Steel or Aluminum chassis) – Image 3 below
ICX Printer - HP LaserJet Pro Printer M404dw – uniform ballot – Image 1 below
ICX Printer - HP LaserJet Pro Printer M402dne – QR code ballot – Image 2 below

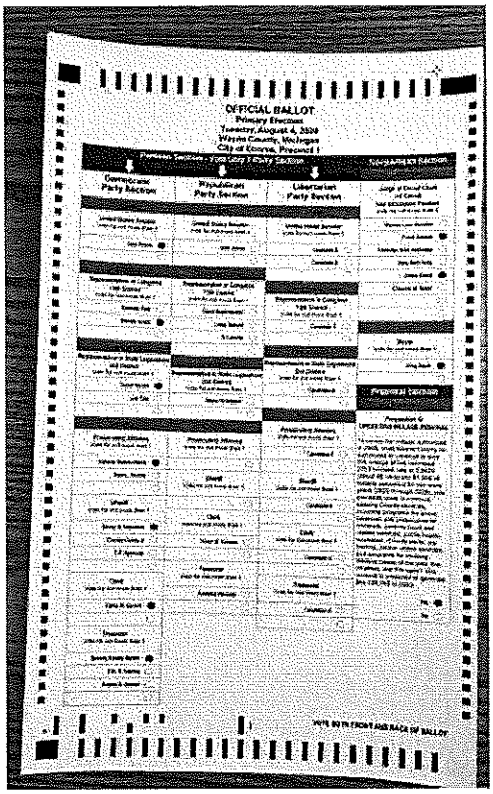


Image 1

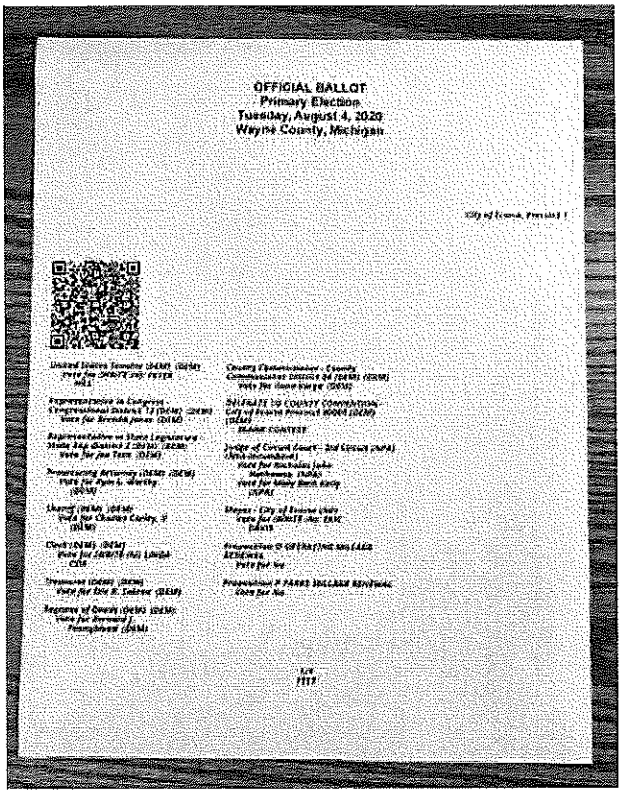


Image 2

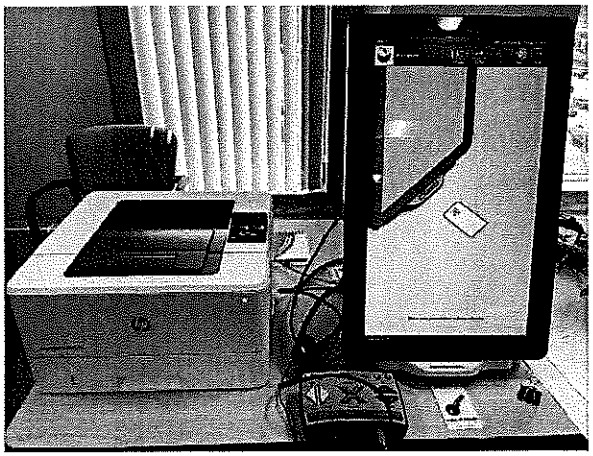


Image 3

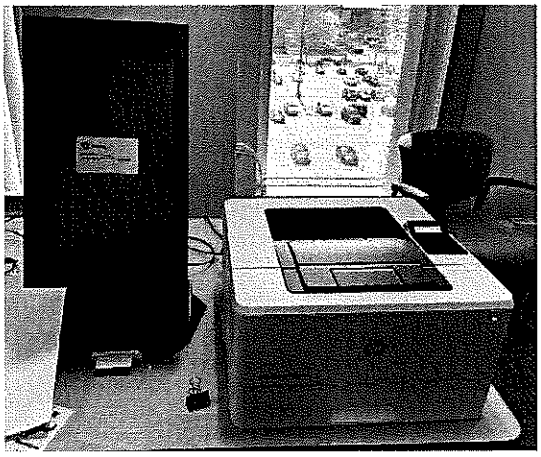


Image 4

As a security measure, only certain approved USB devices can be recognized by the ICX. Additional security also prevents users from "backing out" of the ICX Application to gain access to the underlying Android operating system. BOE requested that Dominion provide a list of accessibility enhancements in the new system. Dominion provided the following response:

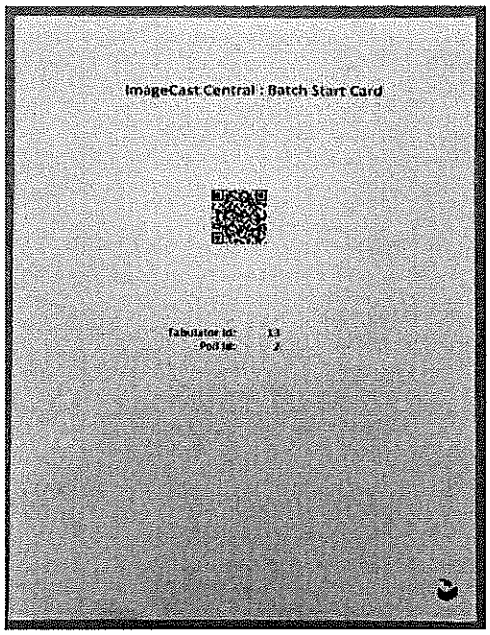
> In D-Suite 5.17 (baselined from D-Suite 5.5), we have added several accessibility changes/features to the ICX, including: allowing voters to activate the privacy screen independently (without Pollworker assistance), allowing voters to skip the ATI instructions, improved the navigation back and forth through

the ballot's contests using the left and right (yellow) arrows regardless of the voter's position on the screen/in a list of choices, improved the information provided to voters by directing the focus automatically to a contest's header once the voter navigates into that contest, improved the information provided to the voter by playing audio information about the total number of contests as well as their position on the ballot (e.g. You are on Contest 7 of 15) as well as contextual information about how many choices a voter has remaining in the contest, improved the audio playback of write-in choices, improved the experience for voters to change their options by allowing the voter to enter into the 'Options' menu using the 'Up' (blue arrow) on the ATI, and improved the terminology throughout the session to better indicate the actions that are being performed.

C) High-Speed System – ImageCast Central (ICC)

The ImageCast Central (ICC) is a high-speed central count tabular based on COTS hardware along with custom software.

Democracy Suite 5.17 introduces a Batch Start Card (shown in image below) which has a QR code with the Poll ID. When scanning ballots, the ID can be obtained from the start sheet when scanning ballots (rather than the ID having to be entered).



ICC software application: version 5.17.15.1

Precision 3460XE (workstation used with Canon Scanner)

ICC Scanner - Canon imageFormula DR-G2140 (shown in image above)

System Overview

Table 1 – Democracy Suite 5.17 Software and Firmware versions

System Component	Equipment	Version
ImageCast Precinct (ICP), ImageCast Precinct 2 (ICP2)	Tabulator	5.17.15.3, 5.17.15.1
ImageCast X BMD (ICX BMD)	Accessible	5.17.17.1
ImageCast Central (ICC)	High-Speed	5.17.15.1
Election Management System (EMS)	EMS	5.17.17.1
ImageCast Voter Activation (ICVA)	Voter Activation	5.17.17.1
Adjudication (ADJ)	Adjudication	5.17.14.1

Table 2 – Election Management System (EMS) Software and versions

System Component	Version
EMS Election Event Designer (EED)	5.17.17.1
EMS Results Tally and Reporting (RTR)	5.17.17.1
EMS Application Server	5.17.17.1
EMS File System Service (FSS)	5.17.17.1
EMS Audio Studio (AS)	5.17.17.1
EMS Data Center Manager (DCM)	5.17.17.1
EMS Election Data Translator (EDT)	5.17.17.1
ImageCast Voter Activation (ICVA)	5.17.17.1
EMS Adjudication (ADJ)	5.17.17.1

The Democracy Suite 5.17 system utilizes the following COTS software and firmware.

-Microsoft Windows 10 Professional
-Microsoft Windows Server 2019
-Microsoft SQL Server 2019 Standard SP2
-Android version 8.1

Certification Test Plan was prepared by Pro V&V, which is an Election Assistance Commission (EAC) accredited Voting System Test Laboratory (VSTL).

System Examination/Observations & Findings

For the purpose of certification testing, data from two precincts from the following types of past elections were used:

- State Primary 14" 4 column ballot – using 2020 QVF Data (Ecorse City precincts 1 & 2)
- State General 17" 4 column ballot – using 2020 QVF Data (Sparta Township precincts 1 & 3)
- Presidential Primary 11" 1 &2 column ballot – using 2020 (Delta Township precinct 1 & 2)

Y = Results matched Chart of Predetermined Results

Election	ICP Report (Tape)	ICP2 Report (Tape)	ICC Report	RTR Report
State Primary	Y	Y	Y	Y
State General	Y	Y	Y	Y
Presidential Primary	Y	Y	Y	Y

System testing of the Dominion Democracy Suite 5.17 started with a demonstration of the EMS programming through the entire process, ending with the creation of media. Pre-marked Test Deck Ballots (manually marked as well as generated ballots) were run through and tabulated using the ICP and ICP2. Four ballots were marked manually using the ICX (Classic and Prime using both QR Summary Ballot and Uniform Full-Faced Ballot) to ensure they tabulated on the ICP and ICP2. The results were validated against the expected results via the chart of predetermined results. All components listed in the System Description were tested to verify that they meet all necessary requirements of Michigan Election Law and Promulgated Rules. The test cases were designed to test the following sections:

- R 168.773, RULE 3 – PREPARATION OF PROGRAM
- R 168.774, RULE 4 – PREPARATION OF BALLOTS AND BALLOT LABELS
- R 168.775, RULE 5 – PREPRATION OF VOTING DEVICE
- R 168.776, RULE 6 – PREPARATION OF OFFICIAL TEST DECK
- R 168.778, RULE 8 – ACCURACY TEST

The State Primary and Presidential Primary system testing used a "test deck" generated by Bureau of Elections staff. The State General testing used a vendor-created Test Deck along with a pre-marked set of test ballots

according to the vendor chart of Predetermined Results. The chart was reviewed by BOE prior to testing to ensure conformity to Michigan Election Law and related Promulgated Rules.

1) Tabulation

Ballots were then tabulated on the ICC (central high-speed) and results were validated against the chart of predetermined results. Substituted ICX ballots (QR code and uniform ballot) were also included in the ICC tabulation. The tabulation reports from the ICP, ICP2 and ICC all matched and were correct. Results were then loaded into RTR (EMS) and reports were generated to show the totals. Images and logs were collected during the load into RTR. The entire results validation process was run on all 3 test elections referenced above. The EMS programming was only demonstrated for the State Primary election.

Spectrum Printing printed all the blank test ballots for certification testing.

Test Outcome: The observed results were matched to the chart of predetermined results created prior to testing. Results matched for all 3 elections tested. The test verified that both kinds of ICX ballots (QR code and uniform ballot) will tabulate on both tabulators (ICP and ICP2) and high-speed (ICC).

2) Ballot Adjudication

Democracy Suite 5.17 includes ballot adjudication software for users with the high-speed system. This is used for correcting voting errors such as pen rests or voter corrections causing overvotes. All changes are documented, and reports can be generated to view when changes were made and who made them. Adjudication must follow existing ballot duplication process done while duplicating ballots in the precinct or Absent Voter Ballot Counting Board. This process is done in public by bipartisan teams of election inspectors.

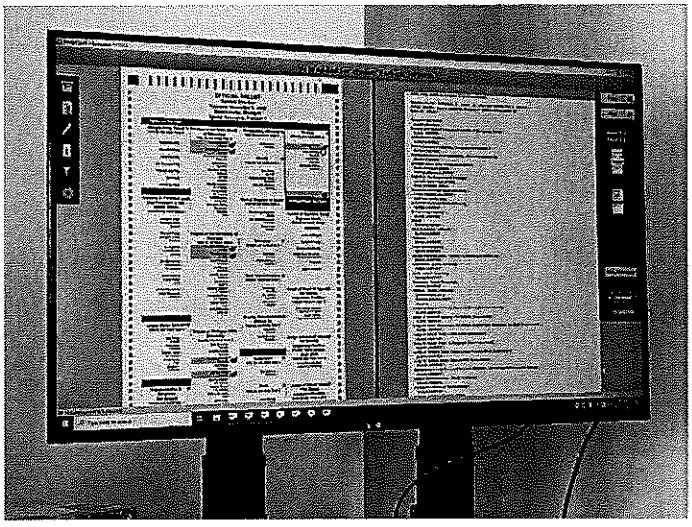


Image showing Adjudication Software

Test Outcome: Adjudication functionality performed as expected. As a safety measure, the software will not allow changes to be made on the ballot for races outside the filter option being adjudicated. For example, when you are reviewing overvotes, you cannot alter a race without an overvote to be adjudicated. In addition, an Activity Log can be printed which shows all the changes made during the adjudication process.

3) Automated Test Deck

As mentioned earlier, Election Source and Spectrum Printing are used to by some jurisdictions to produce a Michigan Test Deck.

Test Outcome: Both Election Source and Spectrum Printing can produce a Test-Deck that meets Michigan's current requirements.

Dominion provided test election databases and various reports in PDF format so additional in-house testing can be done at a later date, if needed. BOE also has blank test ballots and blank ballot stock to perform additional testing after State equipment is updated. BOE will work with Dominion to get EMS and firmware updated on the equipment in preparation for additional testing.

Hash Validation Testing

The Bureau of Elections now conducts hash validation as part of the State Certification process - validating the EAC provided hash values against the values extracted from each piece of test equipment.

Device	Hash Validated
ICP tabulator	Y
ICP2 tabulator	Y
ICX Classic	Y
ICX Prime	Y

EMS Software Testing Procedures

	Legal Requirements	Meets Requirements	Comments
	Application Requirements		
	Data Import Import files and sample ballots (pdf format) for the three election types identified above will be provided to vendors by the Bureau of Elections (BOE) upon receipt of voting system certification application materials. Tests will be performed for 2 precincts from each election type. (Typically, Precincts 1 and 2)		
1.	**Import QVF EMS Export (Dominion) data (Spreadsheet) output file into EMS database (EDT)** (*The data in the EMS Export contains contests, proposals, precincts, districts and*	☒ Yes ☐ No	EMS Export files were provided to Dominion for ballot definition for the State Primary and State General.

	candidates from the QVF and puts the data into the vendor specific data format for import.)		

Ballot Layout

Ballot layout must follow State of Michigan Ballot Production Standards:

BallotProductionStandards_Sept2018 (michigan.gov)

1.	**Layout a closed presidential primary**		
	Democratic ballot with a proposal, including an 'uncommitted' choice that does not rotate.	☒ Yes ☐ No	
	Republican ballot with a proposal, including an 'uncommitted' choice that does not rotate.	☒ Yes ☐ No	
	Nonpartisan ballot (No Party Declaration Ballot).	☒ Yes ☐ No	
	Candidate Rotation.	☒ Yes ☐ No	
2.	**Layout a primary election ballot**		
	Partisan section.	☒ Yes ☐ No	
	Nonpartisan section.	☒ Yes ☐ No	
	Proposal section.	☒ Yes ☐ No	
	Rotation.	☒ Yes ☐ No	
3.	**Layout a general election ballot**		
	Partisan section.	☒ Yes ☐ No	
	Nonpartisan section.	☒ Yes ☐ No	
	Proposal section.	☒ Yes ☐ No	

	Rotation.	☒ Yes ☐ No	
4.	**Produce/Provide PDFs and paper ballots to be used in testing**	☒ Yes ☐ No	Test ballots were provided by Spectrum Printing in correct timeframe. Ballots were stubbed and numbered as requested. Blank ballot stock was also provided in each of the paper sizes.

Tabulator Programming

The test process will include demonstration of all programming steps, including:

1.	Create tabulator program for each ballot produced above.	☒ Yes ☐ No	
	Program for each precinct tabulator (Precincts 1 and 2).	☒ Yes ☐ No	
	Program for a central count (AVCB) tabulator – (combined Precincts 1 and 2).	☒ Yes ☐ No	
2.	Demonstrate/Create programming of device(s).	☒ Yes ☐ No	Compact Flash CF is still used for ICP and ICP2 uses SD Cards.
3.	Demonstrate loading election definition/programming. Is special media required to load programming? (Security)	☒ Yes ☐ No	A security key (ibutton) with passcode is required to load programming on ICP/ICP2.
4.	Insert memory device into tabulators and print zero tapes (Verify firmware version).	☒ Yes ☐ No	
5.	Use pre-produced ballots and programs to conduct standard logic and accuracy test (test deck to be created by BOE using standard rules).	☒ Yes ☐ No	
6.	Demonstrate voting process on precinct tabulator.	☒ Yes ☐ No	
7.	Demonstrate write-in vote and tabulation processes.	☒ Yes ☐ No	

Legal Requirements		Meets Requirements	Comments
Application Requirements			
High-Speed System with Adjudication (Ballot and Write-in)			
NOTE: The test process will include a High-Speed System or a single AVCB tabulator that allows for processing of both Precinct 1 and 2 ballots, including:			
1.	Demonstrate how high-speed system will be programmed.	☒ Yes ☐ No	
2.	Demonstrate tabulation process on High-Speed System.	☒ Yes ☐ No	
3.	Demonstrate Ballot Adjudication capabilities.	☒ Yes ☐ No	
4.	Demonstrate process for obtaining system log information from the device.	☒ Yes ☐ No	
5.	Demonstrate vote accumulation and reports showing:		
	Precinct totals.	☒ Yes ☐ No	
	AVCB totals.	☒ Yes ☐ No	
	Combined totals.	☒ Yes ☐ No	
Accessible Voting Device (VAT) Programming			
1.	Create accessible voting device program in EMS without further data input or manipulation.	☒ Yes ☐ No	
2.	Verify EMS software has synthesized voice available as standard option.	☐ Yes ☒ No	
3.	Demonstrate voting process on accessible component(s).	☒ Yes ☐ No	Touch screen or ATI can be used to vote accessible session.

4.	Verify VAT ballots are accepted and tabulated correctly by the precinct tabulator.	☒ Yes ☐ No	Both uniform ballot and QR code ballots were tested on ICP/ICP2
5.	Demonstrate process for using a phonetic pronunciation in the audio.	☒ Yes ☐ No	
6.	Demonstrate process for obtaining system log information from the device.	☒ Yes ☐ No	

Vote Accumulation/Unofficial Results Transfer

1.	Use the logic and accuracy test totals to transmit into vote accumulation software.		
	Direct download.	☒ Yes ☐ No	ICP/ICP2 media loaded into RTR. Ballot images and log files also loaded.
	Modem transmission (cellular) if part of EAC-certified configuration – vendors must provide network.	☐ Yes ☐ No	NA - No electronic transmission in Democracy Suite 5.17
	Verify totals against numbers from totals tape.	☐ Yes ☐ No	NA - No electronic transmission in Democracy Suite 5.17
2.	Cellular modem with active SIM card (if modem transmission is proposed).	☐ Yes ☐ No	NA - No electronic transmission in Democracy Suite 5.17

Results Reporting

Legal Requirements		Meets Requirements	Comments
	Application Requirements		
1.	**Print reports**		
	Zero report.	☒ Yes ☐ No	
	Precinct report.	☒ Yes ☐ No	
	Canvass report.	☒ Yes	

		☐ No	
	Audit report.	☒ Yes ☐ No	
	% of voter turnout by split.	☒ Yes ☐ No	

Additional Materials to be Provided by the Vendor:

1.	All the necessary EMS software/firmware and hardware with which to conduct the testing.	☒ Yes ☐ No	All necessary hardware was provided for the test.
2.	Update State equipment including EMS workstation and all software/firmware with new version.	☐ Yes ☒ No	Dominion will schedule a day to upgrade State equipment.
3.	Cellular modem with active SIM card (if modem transmission is proposed).	☐ Yes ☐ No	NA - No electronic transmission in Democracy Suite 5.17
	Any other required supplies/equipment required to complete all testing specified above.	☒ Yes ☐ No	
	A minimum of two tabulators to conduct the testing, along with associated AVCB tabulator (if different than precinct tabulator) and accessible component(s), seals, memory devices and any and all other required components necessary to fully demonstrate the proposed system.	☒ Yes ☐ No	

	Legal Requirements	Meets Requirements	Comments
	Application Requirements		
1.	Blank precinct ballots for Precincts 1 and 2 for creation of the test deck (a minimum of one week prior to the scheduled test date. Ballots must be stubbed and numbered).	☒ Yes ☐ No	Ballots were provided on time and were stubbed and numbered. Blank ballots for the ICX were also provided.
2.	Verify maximum number of candidates for a single race.	☒ Yes ☐ No	231 for portrait and 240 for landscape 22" ballot according to VSTL Test Report

Electronic Voting System Requirements

	Legal Requirements	Meets Requirements	Comments
	Application Requirements		
1.	EAC number assigned.	☒ Yes ☐ No	DVS-DemSuite5.17
2.	ITA test report received. MCL 168.795a(1)(a)	☒ Yes ☐ No	Test Report for Democracy Suite 5.17 was provided by vendor along with the system documents in the TDP.
3.	Application fee received - $1500 for new system components, $500 for upgrades of system components. MCL 168.795a(2)(a)	☒ Yes ☐ No	Check was received.
4.	New source code or changes to source code have been escrowed and made available to Bureau of Elections personnel. MCL 168.797c	☒ Yes ☐ No	Dominion is working with NCC group to create a 3-party account. When that is finalized the 5.17 code will be deposited in the account.
5.	File a report listing all states the components are approved for use in, how long the components have been in use, and any reports complied by users on performance. MCL 168.795a(2)(b)	☒ Yes ☐ No	Democracy Suite 5.17 is certified in the State of Ohio (approved 3/28/2023).
6.	**New System**: File copies of all standard contracts and maintenance agreements used in conjunction with the voting system components. MCL 168.795a(2)(c)	☐ Yes ☐ No	NA
7.	**New Components**: State the number of voters each component of the voting system can process per hour in an election with 10 or fewer items to be voted on. MCL 168.795a(2)(e)(i)	☒ Yes ☐ No	Dominion states that for an election in which there are 10 or fewer items to be voted on the ballot by each voter, that the number of voters that the ICP can process is approx. 240 voters per hour and for the ICP2 is approx. 660 voters per hour. The time to perform an accessible voting session depends primarily on the individual voter. However, a decided voter could complete an accessible ballot with 10 or fewer items within a few minutes, with longer ballots taking a proportionally longer amount of time. The voter is able to skip to the end of the ballot and review or cast at any time.
8.	**New Components**: State the number of voters each component of the voting system can process	☒ Yes ☐ No	Dominion states that for an election in which the ballot consists

	per hour in an election in which the ballot consists of the number of items typically voted on at a presidential general election. MCL 168.795a(2)(e)(ii)		of the number of items typically voted on at a presidential general election in this state, that, based on a 17" ballot, the number of voters that the ICP can process is approx. 180 voters per hour and for the ICP2 is approx. 480 voters per hour.
	Legal Requirements	**Meets Requirements**	**Comments**
	BSC Test Requirements		
1.	Provides for secrecy except in the case of voters who receive assistance. MCL 168.795(1)(a)	☒ Yes ☐ No	
2.	Permits voters to vote for all persons, offices and questions entitled. MCL 168.795(1)(b)	☒ Yes ☐ No	
3.	Informs voter if he or she has overvoted an office and offers voter the opportunity to correct error before counting ballot. MCL 168.795(1)(b)	☒ Yes ☐ No	ICP/ICP2 will alert voter in cases of overvoted offices. ICX can notify if not all candidates are viewed.
4.	Permits voters to vote for all candidates of a political party by a single selection or to vote a split or mixed ticket. MCL 168.795c	☒ Yes ☐ No	Straight Party Race along with direct votes for individual candidates.
5.	Permits voter to vote for a party's presidential and vice-presidential candidates with a single vote. MCL 168.795(1)(c)	☒ Yes ☐ No	Straight Party logic was tested.
6.	Informs voter if he or she has cast a crossover vote in a partisan primary and offers voter the opportunity to correct error before counting ballot. MCL 168.795(1)(d)	☒ Yes ☐ No	ICP/ICP2 will alert voters and ICX will prevent crossover voting.
7.	Prevents voter from voting for the same person for the same office more than once. MCL 168.795(1)(7)	☒ Yes ☐ No	
8.	Rejects ballots which do not contain a valid vote. MCL 168.795(1)(f)	☒ Yes ☐ No	Blank Ballots can set to either query or reject. Query will prompt and alert the voter who can then accept to cast a blank ballot.
9.	Suitably designed for purpose used; durably constructed; designed to provide for safety, accuracy, and efficiency. MCL 168.795(1)(g)	☒ Yes ☐ No	
10	Accommodates the needs of the elderly or persons with 1 or more disabilities. MCL 168.795(1)(h)	☒ Yes ☐ No	ICX has ability to assist voters with a range of disabilities.
11.	Accurately records and counts properly cast votes. MCL 168.795(1)(i)	☒ Yes ☐ No	
12.	Provides an audit trail. MCL 168.795(1)(j)	☒ Yes	All equipment has audit logs

		☐ No	available
13.	Provides an acceptable method for casting write-in votes. MCL 168.795(1)(k)	☒ Yes ☐ No	
14.	Allows for the accumulation of vote totals. MCL 168.795(1)(l)	☒ Yes ☐ No	
15.	Provides a method for rendering tabulating equipment inoperable if vote totals are revealed before the close of polls. MCL 168.795(2)	☒ Yes ☐ No	Vote totals cannot be produced until Polls are closed.
16.	Presents a ballot printed or displayed in black type on a white surface. MCL 168.795b(1)	☒ Yes ☐ No	
17.	Allows for display of party symbols; display of titles and candidates' names in vertical columns or in a series of separate pages; and display of the number of candidates to be voted for above or at the side of the names of candidates for each office. MCL 168.795b(1)	☒ Yes ☐ No	
18.	If there are more candidates for an office than can be printed or displayed in one column or on one page, ballot provides instruction that the list of candidates is continued on the following column, page or display. MCL 168.795b(1)	☒ Yes ☐ No	ICX will inform voter of additional candidates above or below the screen.
19.	If system employs a physical ballot, ballot contains an attached, numbered, perforated stub. MCL 168.795b(2)	☒ Yes ☐ No	Allows for stubs on top of ballot.
20.	Distinguishes various parts of the ballot (partisan, nonpartisan, proposals) and different elections. If practicable, presents each part on a separate page, column, or display. MCL 168.795c	☒ Yes ☐ No	Dominion ballot templates use shading gradients to differential different sections of the ballot in accordance with Ballot Production Standards.
21.	Can be tested as prescribed by law and the rules promulgated by the Secretary of State prior to and after an election to determine if the equipment will accurately count votes cast for all candidates and on all questions. MCL 168.798	☒ Yes ☐ No	
22.	Can print a zero tape or by other means provides a method of verifying the proper programming and that no ballots have yet been tabulated. MCL 168.797	☒ Yes ☐ No	Zero Tape on ICP/ICP2 units and Zero Reports for high-speed. EMS can also produce a zero report.
23.	Performs a program of self-diagnostics that allows election workers to verify the proper functioning of the equipment. MCL 168.797	☒ Yes ☐ No	
Field Test (New System Only)			
1.	Has been evaluated under a field test designed to gauge election official reactions. MCL 168.795a(3)	☐ Yes ☐ No	NA – Field test only required for new systems.

2.	Has been evaluated under a field test designed to gauge voter reaction, voter problems, and the number of voting stations required for efficient operation based on the vendor's statement per subsection (2)(e). MCL 168.795a(3)	☐ Yes ☐ No	NA – Field test only required for new systems.
3.	Field test costs reimbursed or paid for by applicant. MCL 168.795a(2)(d)	☐ Yes ☐ No	NA – Field test only required for new systems.

General Requirements

Requirements	Meets Requirements	Comments
The System shall alert voters to any and all voter/ballot errors with clear language describing the error, before accepting the ballot for tabulation. Any notification to the voter during the process of casting a vote must be private and must indicate whether the ballot has been tabulated.	☒ Yes ☐ No	Ballot jam message will indicate if the ballot was tabulated or not.
The system shall provide for tabulation of votes cast in split precincts, where all voters are not voting the same ballot format.	☒ Yes ☐ No	Reporting can report by split as well as combined into precinct total.
The system shall allow for omni-directional feed of the ballot and be fully capable of counting non-oriented ballots.	☒ Yes ☐ No	Ballots were fed in multiple orientations.
The system shall include a visible public counter that displays the number of ballots processed; the display must utilize a font and font size that can be clearly read by voters and precinct inspectors.	☒ Yes ☐ No	Both ICP and ICP have public counter on equipment.
The tabulator shall be capable of retaining a record of each voted ballot in a way that protects each voter's privacy. Proposals shall describe in detail, the storage process and storage capabilities and limitations (e.g., the maximum number of ballot records that may be retained on one device.)	☒ Yes ☐ No	Privacy filter can be added to result reports for ballot splits were the ballots cast amounts would potentially jeopardize voter privacy.
The system shall support ballot layouts that allow for the ballot to be one (1), two (2), three (3) or four (4) columns.	☒ Yes ☐ No	1, 2 and 4 column ballots were tested.
The system shall describe any capabilities for processing additional ballots after the polls have been closed.	☒ Yes ☐ No	Polls can be re-opened after being closed with passcode.
Be designed with several levels of security to detect/resist hacking and unauthorized access and use.	☒ Yes ☐ No	Windows BitLocker can be enabled on EMS workstations.
Securely encrypt election configuration data to be exported to the tabulator and accessible voting system component(s) per the 2005 VVSG recommendations.	☒ Yes ☐ No	CISA Enhanced Security has Trusted Root Certificates for election files.

Be capable of creating and defining ballot styles and contest rules in accordance with Michigan Election Law, Promulgated Rules and Ballot Production Standards	☒ Yes ☐ No	
Be capable of supporting ballot layout and election configuration to multiple languages (in Michigan, Spanish and Bengali are currently required).	☒ Yes ☐ No	Both Spanish and Bengali are supported.
Be capable of exporting election results data in multiple widely used data formats including .mdb, .xls, .pdf, .xml, .html, .csv, .doc, ascii, and.tx.	☒ Yes ☐ No	Multiple standard formats are supported.
EMS shall provide for the accumulation and reporting of votes cast in all elections including multiple precincts, jurisdictions, counties and districts (allow for results to accumulate and report registered voters and results by split).	☒ Yes ☐ No	Results can be reported by split if needed.

Certification

CERTIFICATION OF TESTING

This is to certify that the above-named voting system has successfully met all applicable criteria prescribed under Michigan election law and the Rules promulgated for the administration of electronic voting systems by the Secretary of State. Based on this certification, it is recommended that the above-named voting system be approved for the conduct of elections held in the State of Michigan.

Election Administration, Manager

Security and Standards Section, Analyst

Recommendation for Board of State Canvassers

Based on the testing performed by BOE Staff, the Dominion Democracy Suite 5.17 Voting System is recommended for State Certification.