

STAR-Vote Election Code Gap Analysis Summary

Summary of Notable Discrepancies

⚠ *Non-Material Discrepancy*
 ✖ *Non-Compliant*

| Discrepancy | Status | Explanation of Gap |
|---|--|---|
| Sequential Ballot Numbering | ✖ 51.033 64.007 | 51.033 (e) and 64.007 (d) require that spoiled ballots be deposited into a spoiled ballot box. With STAR-Vote, no ballot is ever considered "spoiled," because any ballot not deposited into a ballot box at a polling location or marked as provisional becomes part of the live parallel testing system used to verify that STAR-Vote terminals are correctly recording votes. A voter may vote a ballot, and rather than casting it, cancel and retain the ballot for testing the system. The contents of the corresponding electronic record may be verified against their retained, cancelled ballot at a later date. |
| Sequential Ballot Numbering | ⚠ 52.062 | Ballots are supposed to be numbered sequentially -- We believe that this is effectively superceded by the permissions from 121.001 and 124.062(b), but this may require clarification. |
| Different sizing of the squares for straight party and standard races | ⚠ 52.071 | The square for indicating a vote for a straight party will be displayed at the same size as the square used next to candidates in races, in contradiction of 52.071(a). Uniform presentation of options in all races is preferred for usability, simplicity of code, and generalizability of the STAR-Vote code base. Further, we believe this may be superceded by 121.001. |
| Partial Results and Precinct Returns | ⚠ 65.014 65.015 66 (B) 127.067 | The system does not make possible tallying within polling locations, and therefore cannot partial returns to be created at the polling location when the polls are closed. For a discussion of how we can meet some of the goals of precinct tallies, see 65.014. |
| No "Original Ballot Register" Created | ⚠ 66.026 | There will not technically be an "original of the ballot register" as the register will be printed on demand. |
| Definition of "Voting System Equipment" | ⚠ 121.003 | The definition of "Voting System Equipment" would require a subtle reinterpretation for STAR-Vote, and for the use of COTS equipment in general. In particular, rather than certifying a specific model of a specific machine, we would need the certified "Voting System Equipment" to be any off the shelf computer conforming to hardware constraints approved by the Secretary of State's office (e.g. screen size, brightness, and contrast, CPU architecture, ports included, availability of a hardware entropy source, etc.). At worst, it would require certification of a certain computer and its future models, provided they stay within a certain hardware range. |
| Legality of purchasing an uncertified voting system | ⚠ 122.031 | 122.031 (c) makes it illegal to "sell, lease, or otherwise provide a voting system or voting system equipment that the person knows has not been approved", without any reference to it being sold, leased, or provided with the intention of deploying it for use in elections. As such, we will need to be very clear that having STAR-Vote written for us is not the purchase or procurement of "a voting system". |
| Hardware and Software Counters | ✖ 122.033 | Requirements for public / protective counters from 122.033 (3) and (4) met through software. 122.033 (1)'s Requirement for a security system preventing operation of the machine met through operating system security measures and a Trusted Platform Module / trusted boot. Requirement for registering counters as per 122.033 (2) not possible -- possible workaround would be to maintain registering counters in software which retain an encrypted count of each candidate, and which can ultimately be decrypted later by the trustees if necessary. |
| What level of modification will require re-approval? | ⚠ 122.061 123.063 | "Modified in design" is ambiguous. Does requiring that a voting system or equipment "modified in design" be approved imply that any change require re-approval? In particular, do bug fixes and other minor software alterations constitute modifications of the design? Do changes in the hardware purchased for use with the system, so long as that hardware still stays within the specified ranges as discussed in 121.003? In computer science "design" refers to the intended behaviors of the system, not the specific implementation. |
| Contents of Report | ⚠ 123.063 | Clarification will be required regarding 123.063 (3) -- this item requires that as part of the county's annual report, it state that the voting system "has not been modified since the date of filing of the authority's previous report, or if modified, that approval of the modified design has been sought [...]". We believe that under the notion of certifying hardware "within certain pre-defined ranges of hardware specification" as discussed in 121.003 above, purchase of additional hardware which was dissimilar from that purchased previously, but remained within those hardware specification ranges would not constitute a "modification" under this section, but the Secretary of State's office will have to ultimately arbitrate its interpretation. |
| Broad Software Certification | ✖ 129.055 | This section stipulates that "only software certified by the secretary of state [...] may be loaded on the equipment." This may be problematic given that the Secretary of State would be required to certify, broadly, the operating system and any newer versions of it that may become available, plus whatever drivers become available and are necessary (say, to support a newer version of the hardware, or an accessibility device), plus whatever updates (including security updates) become available. |

STAR-Vote Election Code Detailed Gap Analysis

✔ *Compliant*
 ⚠ *Non-Material Discrepancy*
 ✘ *Non-Compliant*
 [] *No Requirements*

| Regarding | Section | OK | Explanation of Gap / Notes |
|---|---------------|-----|--|
| Title 1. Introductory Provisions | | | |
| <i>No Applicable Statutes Found</i> | | | |
| Title 2. Voter Qualifications and Registration | | | |
| <i>No Applicable Statutes Found</i> | | | |
| Title 3. Election Officers and Observers | | | |
| <i>No Applicable Statutes Found</i> | | | |
| Title 4. Time and Place of Elections | | | |
| <i>No Applicable Statutes Found</i> | | | |
| Title 5. Election Supplies / Chapter 51. Election Supplies | | | |
| Procuring, Allocating, and Distributing Election Equipment | 51 (A) | | |
| | [...] | n/a | |
| Election Equipment | 51 (B) | | |
| Approval of Ballot and Voting Booths | | n/a | |
| Voting Booths | 51.032 | ✔ | |
| Number and Use of Ballot Boxes | 51.033 | ✘ | 51.033 (e) and 64.007 (d) require that spoiled ballots be deposited into a spoiled ballot box. With STAR-Vote, no ballot is ever considered "spoiled," because any ballot not deposited into a ballot box at a polling location or marked as provisional becomes part of the live parallel testing system used to verify that STAR-Vote terminals are correctly recording votes. A voter may vote a ballot, and rather than casting it, cancel and retain the ballot for testing the system. The contents of the corresponding electronic record may be verified against their retained, cancelled ballot at a later date. |
| Specifications for Ballot Boxes | 51.034 | ✔ | |
| Title 5. Election Supplies / Chapter 52. Ballot Form, Content, and Preparation | | | |
| Preparing the Ballot | 52 (A) | | |
| Official Ballot | 52.001 | n/a | |
| Authority Preparing Ballot | 52.002 | n/a | |
| Placing Candidate's Name on Ballot | 52.003 | n/a | |
| Failure to Place Candidate's Name on Ballot | 52.004 | n/a | |
| Ballot Content Determined Accurately | 52.005 | ✔ | |
| Correcting Ballot | 52.006 | n/a | |
| Notice of Correction by Authority | 52.0061 | n/a | |
| Notice of Correction by Certain Authority | 52.0062 | n/a | |
| Unlawful Preparation of Ballots | 52.0063 | n/a | |
| Destruction of Incorrect Ballots | 52.0064 | n/a | |
| Specimen Ballot | 52.007 | ✔ | |
| Name on Ballot | 52 (B) | | |
| Form of Name on Ballot | 52.031 | ✔ | Note: Supported, but not enforced by system. |
| Candidates with Same or Similar Names | 52.032 | ✔ | Note: Supported, but not enforced by system. |
| Titles Prohibited | 52.033 | ✔ | Note: Supported, but not enforced by system. |
| Name on Ballot More Than Once | 52.034 | ✔ | Note: Supported, but not enforced by system. |
| Form of Ballot | 52 (C) | | |
| Printing of Ballots | 52.061 | n/a | |
| Numbering of Ballots | 52.062 | ⚠ | Ballots are supposed to be numbered sequentially -- We believe that this is effectively superceded by the permissions from 121.001 and 124.062(b), but this may require clarification. |
| Designation of Election and Date | 52.063 | n/a | |
| Designation as Official Ballot | 52.064 | ✔ | |
| Arrangement of Ballot with Particular Candidates | 52.065 | n/a | |
| Arrangement of Ballot With No Candidates | 52.066 | n/a | |
| Non-Aligned Candidate Designation | 52.067 | ✔ | |
| Office Title to Appear on Ballot | 52.068 | ✔ | |
| Unexpired Term | 52.069 | ✔ | Note: Supported, but not enforced by system. |
| Voting Square and Instruction for Straight Party | 52.070 | ✔ | |
| Voting Square and Instruction for Party | 52.071 | ⚠ | The square for indicating a vote for a straight party will be displayed at the same size as the square used next to candidates in races, in contradiction of 52.071(a). Uniform presentation of options in all races is preferred for usability, simplicity of code, and generalizability of the STAR-Vote code base. Further, we believe this may be superceded by 121.001. |
| Propositions | 52.072 | ✔ | Note: 52.072(c) and (d) are supported, but not enforced by system. |
| Voting Square and Instruction for Provisional | 52.073 | ✔ | Note: Supported, but not enforced by system. |
| Provisional Ballot for Certain Voters | 52.074 | ✔ | |
| Order of Parties, Offices, Names, and Numbers | 52 (D) | | |

| | | ✔ Compliant | ⚠ Non-Material Discrepancy | ✘ Non-Compliant | [] No Requirements |
|---|---------------|-------------|--|-----------------|---------------------|
| Regarding | Section | OK | Explanation of Gap / Notes | | |
| Party Columns | 52.091 | ✔ | Note: Fulfilled through the ability to, by default, sort candidates by party, with the party order specified. Default ordering may be overridden during ballot preparation. | | |
| Offices Regularly Filled at Gener... | 52.092 | ✔ | Note: Supported, but not enforced by system. | | |
| Offices of Political Subdivision C ... | 52.093 | n/a | | | |
| Names of Candidates | 52.094 | ✔ | Note: Supported, but not enforced by system. | | |
| Propositions | 52.095 | n/a | | | |
| Title 6. Conduct of Elections / Chapters 61 - 63 | | | | | |
| <i>No Applicable Statutes Found</i> | | | | | |
| Title 6. Conduct of Elections / Chapter 64. Voting Procedures | | | | | |
| Voting Generally | 64 (A) | | | | |
| Voter to Select and Prepare Bal ... | 64.001 | n/a | | | |
| Occupancy of Voting Station | 64.002 | n/a | | | |
| Marking the Ballot for Candidat ... | 64.003 | ✔ | | | |
| Marking the Ballot for Straight F ... | 64.004 | ✔ | | | |
| Marking the Ballot for Write-In ... | 64.005 | ✔ | | | |
| Marking the Ballot for Measure ... | 64.006 | ✔ | | | |
| Spoiled Ballot | 64.007 | ✘ | See 51.033 (e). | | |
| Depositing Ballot | 64.008 | n/a | Note: Superseded by 121.001 | | |
| Voter Unable to Enter Polling Pl ... | 64.009 | ✔ | Curb-side voting is explicitly supported by STAR-Vote. | | |
| Unlawfully Permitting or Prever ... | 64.010 | ✔ | STAR-Vote provides additional protections against depositing of unlawful ballots by verifying the legitimacy of each printed vote record as it is deposited. | | |
| Unlawfully Depositing Ballot | 64.011 | ✔ | | | |
| Illegal Voting | 64.012 | n/a | | | |
| Assisting Voter | 64 (B) | | | | |
| | [...] | n/a | | | |
| Title 6. Conduct of Elections / Chapter 65. Counting Votes and Preparing Returns | | | | | |
| Counting Votes Generally | 65 (A) | | | | |
| Counting Officers | 65.001 | n/a | | | |
| Time for Counting | 65.002 | n/a | | | |
| Rotating Ballot Boxes No. 1 and ... | 65.003 | n/a | | | |
| Tally Lists | 65.004 | n/a | Superseded by 121.001 | | |
| Tallying the Votes | 65.005 | n/a | | | |
| Replacing Member of Counting ... | 65.006 | n/a | | | |
| Tallying Straight-Party Votes | 65.007 | ✔ | | | |
| Tallying Write-In Votes | 65.008 | ✔ | Note: we can't offer the same transparency with write in votes that we can with the rest of the system currently, but we can offer the same statistical guarantees via the risk limiting audit process. | | |
| Counting Irregularly Marked Bal ... | 65.009 | n/a | | | |
| Ballots Not Counted | 65.010 | ✔ | | | |
| Overvoting | 65.011 | n/a | | | |
| Depositing Ballot in Ballot Box N ... | 65.012 | n/a | | | |
| Ballot Register | 65.013 | ✔ | | | |
| Preparing the Precinct Returns ... | 65.014 | ⚠ | The system does not make possible tallying within polling locations, and therefore cannot enable partial returns to be created at the polling location when the polls are closed. We can meet various goals of these lists through secondary means: We can publish a hash of the encrypted vote data which can be verified against what arrives at central tabulation, as well as a hash of the public audit data generated by the polling location which can be verified against the public audit data released for that polling location. Alternatively, we can publish encrypted tallies for every race / measure voted on, which the trustees can then publish proofs that the final polling location tallies match the local encrypted tallies. | | |
| Announcing Partial Results | 65.015 | ⚠ | It is not possible to offer partial results under our existing system. | | |
| Verification and Counting of Provi ... | 65 (B) | | | | |
| Duty of Early Voting Ballot Boar ... | 65.051 | n/a | | | |
| Duty of Voter Registrar | 65.052 | n/a | | | |
| Delivery of Provisional Ballots ... | 65.053 | n/a | | | |
| Accepting Provisional Ballot | 65.054 | n/a | | | |
| Presentation of Identification fc ... | 65.0541 | n/a | | | |
| Disposition of Accepted Provisic ... | 65.055 | n/a | | | |
| Disposition of Rejected Provisio ... | 65.056 | n/a | | | |
| Processing Accepted Provisiona ... | 65.057 | ✔ | | | |
| Preservation of Provisional Voti ... | 65.058 | n/a | | | |
| Notice to Provisional Voter | 65.059 | n/a | | | |
| Disclosure of Social Security, Dri ... | 65.060 | n/a | | | |

| Regarding | Section | OK | Explanation of Gap / Notes |
|-----------|---------|----|----------------------------|
|-----------|---------|----|----------------------------|

Title 6. Conduct of Elections / Chapters 66 - 68

No Applicable Statutes Found

Title 6. Conduct of Elections / Chapter 66. Disposition of Records and Supplies After Election

| General Provisions | 66 (A) | | |
|---------------------------------------|---------|-----|--|
| | [...] | n/a | |
| Assembling Records for Distributi ... | 66 (B) | | |
| Assembling Election Records | 66.021 | n/a | |
| Contents of Envelope No. 1 | 66.022 | ⚠ | Election returns for the precinct will be created at central tabulation, and will not be available for the precinct judge to include as required until central tabulation is complete. See 66.015 for further discussion. |
| Contents of Envelope No. 2 | 66.023 | ⚠ | See 66.022. |
| Contents of Envelope No. 3 | 66.024 | ⚠ | See 66.022. |
| Contents of Envelope No. 4 | 66.0241 | n/a | |
| Contents of Ballot Box No. 3 | 66.025 | ⚠ | See 66.022. |
| Contents of Ballot Box No. 4 | 66.026 | ⚠ | There will not technically be an "original of the ballot register" as the register will be printed on demand. It could be possible to print a register after the fact of the ballot numbers that were printed in the polling location. |
| Disposition of Records and Suppli ... | 66 (C) | | |
| | [...] | n/a | |

Title 6. Conduct of Elections / Chapter 67. Canvassing Elections

| Canvassing Elections | 67 (A) | | |
|---------------------------------------|--------|-----|--|
| Applicability of Chapter | 67.001 | n/a | |
| Canvass of Precinct Returns | 67.002 | n/a | |
| Time for Local Canvass | 67.003 | n/a | |
| Procedure for Local Canvass | 67.004 | ✔ | |
| Determining Official Result of El ... | 67.005 | n/a | |
| Local Election Register | 67.006 | n/a | |
| County Election Returns | 67.007 | ✔ | |
| Separate County Returns for Gc ... | 67.008 | ✔ | |
| Forms and Instructions for Cour ... | 67.009 | n/a | |
| County Returns Canvassed by G ... | 67.010 | n/a | |
| County Returns Canvassed by Lt ... | 67.011 | n/a | |
| Time for Canvass by Governor | 67.012 | n/a | |
| Procedure for Canvass by Gover ... | 67.013 | n/a | |
| Determining Official Result of El ... | 67.014 | n/a | |
| State Election Register | 67.015 | n/a | |
| Certificate of Election | 67.016 | n/a | |
| Reporting Precinct Results to Se ... | 67.017 | ✔ | |

Title 6. Conduct of Elections / Chapter 68. Tabulation of Unofficial Results of Certain Races by Secretary of State

| Conduct of Tabulation | 68 (A) | | |
|---|--------|-----|--|
| | [...] | n/a | |
| Duties of Local Election Officials fr ... | 68 (B) | | |
| Applicability of Subchapter | 68.031 | n/a | |
| Delivery of Returns and Voted E ... | 68.032 | ✔ | |
| Counting of Early Voting Ballots | 68.033 | n/a | |
| Transmission of Results to Secre ... | 68.034 | ✔ | |
| Elections Advisory Committee | 68 (C) | | |
| | [...] | n/a | |

Title 7. Early Voting / Subtitle A. Early Voting / Chapters 81 - 84

No Applicable Statutes Found

Title 7. Early Voting / Subtitle A. Early Voting / Chapter 85. Conduct of Voting by Personal Appearance

| Time and Place for Voting; Electio ... | 85 (A) | | |
|--|---------|-----|---|
| | [...] | n/a | |
| Polling Place Procedure | 85 (B) | | |
| Accepting Voter | 85.031 | n/a | |
| Early Voting Clerk to Sign Ballot ... | 85.0311 | ✔ | Note: Will require some sort of electronic signature. The digital signing of all ballot data may suffice. |
| Security of Early Voting Ballot B ... | 85.032 | ✔ | |
| Security of Voting Machine | 85.033 | ✔ | |
| Voter Unable to Enter Polling Pl ... | 85.034 | n/a | |
| Assisting Voter | 85.035 | n/a | |

| Compliant | | Non-Material Discrepancy | | Non-Compliant | | No Requirements | |
|---|----------------|--------------------------|---|---------------|--|-----------------|--|
| Regarding | Section | OK | Explanation of Gap / Notes | | | | |
| Electioneering Prohibited | 85.036 | n/a | | | | | |
| Bystanders Excluded; Unlawful ... | 85.037 | n/a | | | | | |
| Branch Early Voting Polling Place | 85 (C) | | | | | | |
| | [...] | n/a | | | | | |
| Title 7. Early Voting / Subtitle A. Early Voting / Chapters 86. Conduct of Voting by Mail | | | | | | | |
| <i>No Applicable Statutes Found</i> | | | | | | | |
| Title 7. Early Voting / Subtitle A. Early Voting / Chapter 87. Preprocessing Early Voting Results | | | | | | | |
| Early Voting Ballot Board | 87 (A) | | | | | | |
| | [...] | n/a | | | | | |
| Delivering Materials to Board | 87 (B) | | | | | | |
| | [...] | n/a | | | | | |
| Accepting Early Voting Ballot Vote ... | 87 (C) | | | | | | |
| | [...] | n/a | | | | | |
| Processing Manually Counted Ball ... | 87 (D) | | | | | | |
| | [...] | n/a | | | | | |
| Processing Ballots Counted at Cen ... | 87 (F) | | | | | | |
| Delivery of Ballots to Counting S ... | 87.101 | n/a | | | | | |
| Duplicating Paper Ballots for Au ... | 87.102 | | Clarification: Original paper ballots transmitted by mail are scanned, and corresponding electronic vote records are created for inclusion in tabulation and auditing processes. | | | | |
| Counting Ballots and Preparing ... | 87.103 | | | | | | |
| Disposition of Early Voting Ballo ... | 87.104 | n/a | | | | | |
| Miscellaneous Provisions | 87 (G) | | | | | | |
| Early Voting Rosters | 87.121 | n/a | | | | | |
| Precinct Early Voting List | 87.122 | n/a | | | | | |
| Disposition of Ballot Transmitta ... | 87.1221 | | | | | | |
| Delivering Other Records and Si ... | 87.123 | n/a | | | | | |
| Early Voting Votes Reported By ... | 87.1231 | | | | | | |
| Preservation of Early Voting Ele ... | 87.124 | n/a | | | | | |
| Counting of Certain Late Ballots ... | 87.125 | | Note: Under current plans, the trustees will have to meet a final time after the acceptance of all by-mail and late ballots in order to provide the same transparency to these parts of the overall tally as the rest of the vote. However, without this second meeting, full transparency can still be provided to the tally for in-person voting and early / by-mail votes duplicated electronically at the time of the initial election-day tabulation, and the remaining ballots can simply be added to this tabulation manually -- if additional transparency is desired, it is always possible to have the trustees meet later and provide the proofs that the electronic records match the resulting tally for those votes. This is a procedural question, but seemed important enough to raise. | | | | |
| Electronic Recording of Ballot N ... | 87.126 | n/a | | | | | |
| Title 7. Early Voting / Subtitle B. Special Forms of Early Voting / Chapter 101. Voting by Resident Federal Postcard Applicant | | | | | | | |
| General Provisions | 101 (A) | | | | | | |
| | [...] | n/a | | | | | |
| Submission of Federal Postcard Aj ... | 101 (B) | | | | | | |
| Form and Contents of Application | 101.051 | n/a | | | | | |
| Submitting Application | 101.052 | | | | | | |
| Action by Early Voting Clerk on I ... | 101.053 | n/a | | | | | |
| Applying for More than One Ele ... | 101.054 | n/a | | | | | |
| FPCA Voter Registration | 101.055 | n/a | | | | | |
| Method of Providing Ballot; Rec ... | 101.056 | n/a | | | | | |
| Return of Voted Ballot | 101.057 | n/a | | | | | |
| Official Carrier Envelope | 101.058 | n/a | | | | | |
| E-Mail Transmission of Balloting M ... | 101 (C) | | | | | | |
| Purpose | 101.101 | n/a | | | | | |
| Request for Balloting Materials | 101.102 | | | | | | |
| Confidentiality of E-Mail Address | 101.103 | n/a | | | | | |
| Elections Covered | 101.104 | | | | | | |
| Balloting Materials to be Sent b ... | 101.105 | | | | | | |
| Methods of Transmission to Voter | 101.106 | | | | | | |
| Return of Ballot | 101.107 | | | | | | |
| Tracking of Balloting Materials | 101.108 | n/a | | | | | |
| Rules | 101.109 | n/a | | | | | |
| Title 7. Early Voting / Subtitle B. Special Forms of Early Voting / Chapter 102. Late Voting by Disabled Voter | | | | | | | |
| Eligibility | 102.001 | n/a | | | | | |

| | | ✔ Compliant | ⚠ Non-Material Discrepancy | ✘ Non-Compliant | [] No Requirements |
|--|---------|-------------|----------------------------|-----------------|---------------------|
| Regarding | Section | OK | Explanation of Gap / Notes | | |
| Contents of Application | 102.002 | n/a | | | |
| Submitting Application | 102.003 | n/a | | | |
| Reviewing Application and Prov ... | 102.004 | n/a | | | |
| Marking and Sealing Ballot | 102.005 | ✔ | | | |
| Method of Returning Marked B... | 102.006 | n/a | | | |
| Processing Results | 102.007 | ✔ | | | |
| Entry on Early Voting Roster | 102.008 | n/a | | | |
| Entry on Precinct Early Voting List | 102.009 | n/a | | | |
| Title 7. Early Voting / Subtitle B. Special Forms of Early Voting / Chapter 103. Late Voting Because of Death in Immediate Family | | | | | |
| Eligibility | 103.001 | n/a | | | |
| Form and Contents of Application | 103.002 | n/a | | | |
| Submitting Application | 103.003 | n/a | | | |
| Voting Procedure; Processing R... | 103.004 | ✔ | | | |
| Entry on Early Voting Roster | 103.005 | n/a | | | |
| Entry on Precinct Early Voting List | 103.006 | n/a | | | |
| Title 7. Early Voting / Subtitle B. Special Forms of Early Voting / Chapter 104. Voting on Election Day by Disabled Voter from Voting System Precinct | | | | | |
| Eligibility | 104.001 | n/a | | | |
| Form and Contents of Application | 104.002 | n/a | | | |
| Time and Place for Voting | 104.003 | n/a | | | |
| Voting Procedure | 104.004 | ✔ | | | |
| Processing Results | 104.005 | ✔ | | | |
| Entry on Early Voting Roster | 104.006 | n/a | | | |
| Title 7. Early Voting / Subtitle B. Special Forms of Early Voting / Chapter 105. Voting by Military Personnel or Other Persons Overseas | | | | | |
| Electronic Transmission of Comj ... | 105.001 | ✔ | | | |
| State Write-In Ballot | 105.002 | ✔ | | | |
| Use of Federal Write-In Absente ... | 105.003 | ✔ | | | |
| Title 7. Early Voting / Subtitle B. Special Forms of Early Voting / Chapter 106. Voting on Election Day by Person on Space Flight | | | | | |
| Applicability | 106.001 | n/a | | | |
| Voting Permitted | 106.002 | ✔ | | | |
| Title 7. Early Voting / Subtitle C. Restricted Ballot / Chapter 111. General Provisions | | | | | |
| Restricted Ballot | 111.001 | n/a | | | |
| General Conduct of Voting | 111.002 | ✔ | | | |
| Application Required | 111.003 | n/a | | | |
| Contents of Application | 111.004 | n/a | | | |
| Preparing Restricted Ballot | 111.005 | ✔ | | | |
| Manually Counting Electronic S... | 111.006 | n/a | | | |
| Restricted Ballot Roster | 111.007 | n/a | | | |
| Noting Restricted Ballot Voter o... | 111.008 | n/a | | | |
| Excluding Voter from Precinct E ... | 111.009 | n/a | | | |
| Title 7. Early Voting / Subtitle C. Restricted Ballot / Chapter 112. Voting Limited Ballot after Changing County of Residence | | | | | |
| Limited Ballot | 112.001 | n/a | | | |
| Eligibility | 112.002 | n/a | | | |
| Residence in Precinct Situated i ... | 112.003 | n/a | | | |
| Offices and Measures on which ... | 112.004 | n/a | | | |
| Submitting Application for Mail ... | 112.005 | n/a | | | |
| Place for Voting by Personal Ap... | 112.006 | n/a | | | |
| Verifying Registration Status of ... | 112.007 | n/a | | | |
| Determining Offices and Measu ... | 112.008 | n/a | | | |
| Preparing Voting Machine | 112.009 | ✔ | | | |
| Substituting Mail Ballots for Vot ... | 112.010 | n/a | | | |
| Information on District Compos ... | 112.011 | n/a | | | |
| Notification to Voter Registrar ... | 112.012 | n/a | | | |
| Title 7. Early Voting / Subtitle C. Restricted Ballot / Chapter 113. Voting Presidential Ballot by Former Resident | | | | | |
| Presidential Ballot | 113.001 | n/a | | | |
| Eligibility | 113.002 | n/a | | | |
| Submitting Application for Mail ... | 113.003 | n/a | | | |
| Time and Place for Voting by Pe... | 113.004 | n/a | | | |

| | | ✔ Compliant | ⚠ Non-Material Discrepancy | ✘ Non-Compliant | [] No Requirements |
|---|----------------|-------------|---|-----------------|---------------------|
| Regarding | Section | OK | Explanation of Gap / Notes | | |
| Personal Appearance Voting; Pr ... | 113.005 | ✔ | | | |
| Cancelling Registration | 113.006 | n/a | | | |
| Title 8. Voting Systems / Chapter 121. General Provisions | | | | | |
| Applicability of Other Parts of tl ... | 121.001 | n/a | | | |
| Pecuniary Interest of Secretary | 121.002 | n/a | | | |
| Definitions | 121.003 | ⚠ | The definition of "Voting System Equipment" would require a subtle reinterpretation for STAR-Vote, and for the use of COTS equipment in general. In particular, rather than certifying a specific model of a specific machine, we would need the certified "Voting System Equipment" to be any off the shelf computer conforming to hardware constraints approved by the Secretary of State's office (e.g. screen size, brightness, and contrast, CPU architecture, ports included, availability of a hardware entropy source, etc.). At worst, it would require certification of a certain computer and its future models, provided they stay within a certain hardware range. | | |
| Title 8. Voting Systems / Chapter 122. State Supervision Over Voting Systems | | | | | |
| Voting System Standards | 122 (A) | | | | |
| Voting System Standards | 122.001 | ✔ | | | |
| Inspection of Voting Systems an ... | 122.002 | ✔ | | | |
| Action by Secretary of State | 122.003 | n/a | | | |
| Preparation of Software by Secr ... | 122.004 | ✔ | Note: 122.004 (a) states: "The secretary of state may prepare any type of software for use with an electronic voting system." This statute, as constrained by 122.004 (b) should provide sufficient latitude to enable certification of STAR-Vote, despite its unique nature. | | |
| Venue for Offenses | 122.005 | n/a | | | |
| Approval of Voting System and Eq ... | 122 (B) | | | | |
| Approval of System and Equipm ... | 122.031 | ✘ | 122.031 (c) makes it illegal to "sell, lease, or otherwise provide a voting system or voting system equipment that the person knows has not been approved", without any reference to it being sold, leased, or provided with the intention of deploying it for use in elections. As such, we will need to be very clear that having STAR-Vote written for us is not the purchase or procurement of "a voting system". | | |
| Requirements for Approval Gen ... | 122.032 | ✔ | | | |
| Additional Requirements for Ap ... | 122.033 | ✘ | Requirements for public / protective counters from 122.033 (3) and (4) met through software. 122.033 (1)'s Requirement for a security system preventing operation of the machine met through operating system security measures and a Trusted Platform Module / trusted boot. Requirement for registering counters as per 122.033 (2) not possible -- possible workaround would be to maintain registering counters in software which retain an <i>encrypted</i> count of each candidate, and which can ultimately be decrypted later by the trustees if necessary. | | |
| Additional Requirements for Ele ... | 122.0331 | ✔ | Note: would require the Secretary of State accepting that the operating system / drivers / other COTS software components do not require certification, or at least could be certified "within specified requirements" as discussed in 121.003 above for hardware. | | |
| Application for Approval and Fe ... | 122.034 | n/a | | | |
| Appointment of Examiners | 122.035 | n/a | | | |
| Examination and Report by Exai ... | 122.036 | n/a | | | |
| Compensation of Examiners | 122.037 | n/a | | | |
| Public Hearing Required | 122.0371 | n/a | | | |
| Action by Secretary of State | 122.038 | n/a | | | |
| Report by Secretary of State | 122.039 | n/a | | | |
| Modification in Design of Approv ... | 122 (C) | | | | |
| Approval of Modified Design Re ... | 122.061 | ⚠ | "Modified in design" is ambiguous. Does requiring that a voting system or equipment "modified in design" be approved imply that <i>any</i> change require re-approval? In particular, do bug fixes and other minor software alterations constitute modifications of the design? Do changes in the hardware purchased for use with the system, so long as that hardware still stays within the specified ranges as discussed in 121.003? In computer science "design" refers to the intended behaviors of the system, not the specific implementation. | | |
| | [...] | n/a | | | |
| Reexamination of Voting System | 122 (D) | | | | |
| | [...] | n/a | | | |
| Title 8. Voting Systems / Chapter 123. Adoption and Acquisition of Voting System | | | | | |
| Adoption of Voting System | 123 (A) | | | | |
| Adoption of Voting System Reqi ... | 123.001 | n/a | | | |
| Modification of Adoption Actior ... | 123.002 | n/a | | | |
| Restricting Voting System to Pai ... | 123.003 | n/a | | | |
| Restricting Voting System to Pai ... | 123.004 | ✔ | | | |
| Multiple Methods of Voting at t ... | 123.005 | n/a | | | |
| Adoption of Voting System for E ... | 123.006 | n/a | | | |
| Adoption of More than One Vol ... | 123.007 | n/a | | | |
| Requirements Regarding Manu ... | 123.008 | ✔ | | | |
| Implementation of New Techno ... | 123.009 | n/a | | | |
| Acquisition of Equipment Used in ... | 123 (B) | | | | |

| ✔ Compliant | | ⚠ Non-Material Discrepancy | | ✘ Non-Compliant | | [] No Requirements | |
|--|----------------|----------------------------|---|-----------------|--|---------------------|--|
| Regarding | Section | OK | Explanation of Gap / Notes | | | | |
| Acquisition of Equipment by Co ... | 123.031 | n/a | | | | | |
| Acquisition of Equipment by Po ... | 123.032 | n/a | | | | | |
| Acquisition of Equipment by Po ... | 123.033 | n/a | | | | | |
| Maintenance and Storage of Eq ... | 123.034 | n/a | | | | | |
| Voting System Equipment Contri ... | 123.035 | ✔ | Note: to meet this requirement, the STAR-Vote software will need to be created and deployed on demonstration units, certification pursued and granted by the Secretary of State's office, a contract negotiated to purchase the selected hardware for STAR-Vote, and then that contract submitted by Travis County to the Secretary of State's office for approval before execution. It is unclear if the purchase of test equipment or demonstration equipment which then was used as part of the final STAR-Vote deployment would be a violation of this section, though we do not believe it would violate its intent. | | | | |
| Venue for Offenses | 123.036 | n/a | | | | | |
| Annual Voting System Report | 123 (C) | | | | | | |
| Annual Report Required | 123.061 | n/a | | | | | |
| Filing Period | 123.062 | n/a | | | | | |
| Contents of Report | 123.063 | ⚠ | Clarification will be required regarding 123.063 (3) -- this item requires that as part of the county's annual report, it state that the voting system "has not been modified since the date of filing of the authority's previous report, or if modified, that approval of the modified design has been sought [...]". We believe that under the notion of certifying hardware "within certain pre-defined ranges of hardware specification" as discussed in 121.003 above, purchase of additional hardware which was dissimilar from that purchased previously, but remained within those hardware specification ranges would not constitute a "modification" under this section, but the Secretary of State's office will have to ultimately arbitrate its interpretation. | | | | |
| Review of Report | 123.064 | n/a | | | | | |
| Mandamus by Attorney Genera ... | 123.065 | n/a | | | | | |
| Additional Procedures Prescribe ... | 123.066 | n/a | | | | | |
| Title 8. Voting Systems / Chapter 124. Voting System Ballot | | | | | | | |
| Voting System Ballot Generally | 124 (A) | | | | | | |
| Straight-Party Arrangement | 124.001 | ✔ | | | | | |
| Manner of Indicating Party Aligr ... | 124.002 | ✔ | | | | | |
| Separate Listing of Unopposed I ... | 124.003 | ✔ | | | | | |
| Sample Ballot | 124.004 | n/a | | | | | |
| Specimen Ballot | 124.005 | n/a | | | | | |
| Implementation of Provisional E ... | 124.006 | n/a | | | | | |
| Electronic Voting System Ballot | 124 (C) | | | | | | |
| Form of Electronic System Ballo ... | 124.062 | ✔ | 124.062(b) explicitly allows "electronic system ballots that comprise two or more separate parts." 124.062(c) explicitly allows "one or more printed code markings," enabling our barcodes, serial numbers, etc. | | | | |
| No Write-In Space Provided on I ... | 124.063 | ✔ | Note: Allows us not to have a write-in option on races for which a certified write in is required, but no certified write-ins exist. Something to consider. | | | | |
| Instructions Required on Ballot ... | 124.063 | ✔ | | | | | |
| Separate Ballot Part for Write-Ir ... | 124.064 | n/a | | | | | |
| Paper Ballot for Office of Precin ... | 124.065 | n/a | | | | | |
| Consultation with Programmer ... | 124.066 | n/a | | | | | |
| Title 8. Voting Systems / Chapter 125. Conduct of Voting with Voting System | | | | | | | |
| Voting Systems Generally | 125 (A) | | | | | | |
| Allocation of Equipment Among ... | 125.001 | n/a | | | | | |
| Preparation of Equipment for D ... | 125.002 | n/a | | | | | |
| Delivery of Equipment to Polling ... | 125.003 | n/a | | | | | |
| Installation of Equipment at PoI ... | 125.004 | ✔ | | | | | |
| Maintaining Security of Equipm ... | 125.005 | ✔ | | | | | |
| Malfunction of Equipment at Pc ... | 125.006 | ✔ | | | | | |
| Assisting Voter | 125.007 | n/a | | | | | |
| Depositing the Ballot | 125.008 | ✔ | | | | | |
| Training Polling Place Personnel ... | 125.009 | ✔ | | | | | |
| Presence of Voting System Tech ... | 125.010 | n/a | | | | | |
| Electronic Voting Systems | 125 (C) | | | | | | |
| Inspecting Equipment at Polling ... | 125.061 | ✔ | | | | | |
| Providing Separate Ballot Part f ... | 125.0611 | ✔ | | | | | |
| Alternative Procedure to Rotati ... | 125.062 | n/a | | | | | |
| Securing Equipment on Close of ... | 125.063 | ✔ | | | | | |

| Compliant | | Non-Material Discrepancy | | Non-Compliant | | No Requirements | |
|---|----------------|--------------------------|--|---------------|--|-----------------|--|
| Regarding | Section | OK | Explanation of Gap / Notes | | | | |
| Records Available for Public Insj ... | 125.064 | ⚠ | 125.064 requires that all records created by the electronic voting system be available for public inspection. Under STAR-Vote, certain data connected with electronic vote records are removed before being publicly released. The purpose of this is to minimize the amount of information available that could potentially be used to try to identify with whom each electronic vote record is associated, and to remove useless meta-data. Though even if we released all information it is exceptionally unlikely that an attacker would succeed at violating the anonymity of voters, we still prefer to limit the attack surface by removing information which has no value to a public inspector. This can be altered if deemed necessary. | | | | |
| Title 8. Voting Systems / Chapter 127. Processing Electronic Voting System Results | | | | | | | |
| Establishment and Organization o ... | 127 (A) | | | | | | |
| Establishment of Central Counti ... | 127.001 | n/a | | | | | |
| Counting Station Manager | 127.002 | n/a | | | | | |
| Tabulation Supervisor | 127.003 | n/a | | | | | |
| Assistants to the Tabulation Supr ... | 127.004 | ✔ | Note: For legal purposes, the Election Trustees will be designated as Assistants to the Tabulation Supervisor. | | | | |
| Presiding Judge of Counting Sta ... | 127.005 | n/a | | | | | |
| Counting Station Clerks | 127.006 | n/a | | | | | |
| Plan for Counting Station Opera ... | 127.007 | n/a | | | | | |
| Sealed Ballot Boxes | 127 (C) | | Note: STAR-Vote Smart Ballot Boxes will be designed to support tamper evident seals consistent with Subchapter C. | | | | |
| Sealed Ballot Boxes Required ... | 127.061 | ✔ | | | | | |
| Design of Ballot Box | 127.063 | ✔ | | | | | |
| Seals for Ballot Boxes | 127.064 | ✔ | Note: Intriguingly, as each voting station device acts as a "ballot box" for the electronic vote records (given that both the electronic vote records and printed vote records are considered only evidence of voter intent, rather than "the ballot") it is notable that STAR-Vote actually fulfills ballot box requirements for both physical and electronic ballot boxes by effectively sealing the hash chain at the time that voting stops. We could further ensure complete compliance under this interpretation by having the presiding judge, an election clerk, and two or fewer watchers sign electronically at the end of the voting period, and embed those signatures into the hash chain to "seal" the electronic ballot box, and have the seal by signed. A similar procedure is already designated in STAR-Vote for opening the polls. | | | | |
| Sealing Ballot Box; Delivery to P ... | 127.065 | ✔ | | | | | |
| Sealing Deposit Slot; Delivery of ... | 127.066 | ✔ | | | | | |
| Disposition of Election Records ... | 127.067 | ⚠ | As discussed in 66.022, we will not be able to provide precinct results until after central tabulation is completed. | | | | |
| Receiving Sealed Ballot Box at C ... | 127.068 | ✔ | | | | | |
| Sorting Ballots | 127.069 | ⚠ | STAR-Vote only prescribes opening the ballot boxes for use in the risk-limiting audit. Additionally, write-in votes and damaged ballots need not be treated differently under STAR-Vote, so the sorting process is unnecessary. | | | | |
| Testing Tabulating Equipment | 127 (D) | | | | | | |
| Test of Tabulating Equipment R ... | 127.091 | ✔ | | | | | |
| Testing Authorities | 127.092 | n/a | | | | | |
| Times for Conducting Test | 127.093 | ✔ | Note: Astoundingly, this section jibes nicely with the trustee tabulation concept. By running automated tests of the joint tabulation system 1) before distributing trustee computers (at least 48 hours before the election), 2) immediately before tabulation begins, and 3) immediately after tabulation completes, we meet these requirements and do so without putting undue burden on trustees (to gather at different or inconvenient times) or election officials. | | | | |
| Design of Test | 127.094 | ✔ | | | | | |
| Determining Success of Test | 127.095 | ✔ | | | | | |
| Conduct of First Test | 127.096 | ✔ | | | | | |
| Conduct of Second Test | 127.097 | ✔ | | | | | |
| Conduct of Third Test; Void Ball ... | 127.098 | ✔ | | | | | |
| Security of Test Materials | 127.099 | ✔ | Note: To provide best control of test data, we will provide two things: 1) a way to export the test data, results, and all data produced by the trustees during the test (mathematical proofs, mixed/decrypted plaintext vote list, etc.). 2) A printed report providing a hash of the data on the thumb drive (for later verification) and a summary of data and results. | | | | |
| Custody of Test Materials | 127.100 | n/a | | | | | |
| Processing Results at Central Coui ... | 127 (E) | | | | | | |
| Programmer for Tabulating Equi ... | 127.121 | n/a | | | | | |
| Approval of Program | 127.122 | n/a | | | | | |
| Security of Program | 127.123 | ✔ | | | | | |
| Security of Automatic Tabulatin ... | 127.1231 | ✔ | Surprisingly, having distributed trustee computers held with the trustees prior to the election does not violate this section, so long as the trustees and their trustee computers are at the central counting station during tabulation. | | | | |
| Security of Voted Ballots | 127.1232 | n/a | | | | | |
| Early Processing of Ballots | 127.124 | n/a | | | | | |
| Preparing Ballots | 127.125 | n/a | | | | | |
| Duplicating Ballots | 127.126 | n/a | | | | | |
| Operating Equipment and Hand ... | 127.127 | ✔ | This requirement met by making trustees officially "assistants to the tabulation supervisor". | | | | |
| Ballots Tabulated by Precinct | 127.128 | n/a | | | | | |
| Correction of Results after Equi ... | 127.129 | n/a | | | | | |
| Manual Counting | 127.130 | ✔ | | | | | |

| Compliant | | Non-Material Discrepancy | | Non-Compliant | | No Requirements | |
|--|----------------|--------------------------|--|---------------|--|-----------------|--|
| Regarding | Section | OK | Explanation of Gap / Notes | | | | |
| Tallying, Tabulating, and Report ... | 127.1301 | n/a | | | | | |
| Preparing Returns | 127.131 | ✓ | | | | | |
| Announcing Unofficial Results ... | 127.1311 | ✓ | | | | | |
| Disposition of Ballots, Returns, i ... | 127.132 | n/a | | | | | |
| Processing Results in System With ... | 127 (F) | | | | | | |
| | [...] | n/a | | | | | |
| Additional Count of Electronic Vol ... | 127 (H) | | | | | | |
| Partial Count of Electronic Votir ... | 127.201 | ✓ | This section is easy to fulfill, however its ad-hoc requirement to hand-count a fixed portion of the ballots is made obsolete by the use of risk limiting audits in STAR-Vote, which provide much more reliable and meaningful evidence that the system has functioned correctly. Note that while 127.201(g) excludes DREs from this section's requirements, I am assuming it will be applied to STAR-Vote due to the fact that we have printed vote records. | | | | |
| Count of Electronic Voting Syste ... | 127.202 | n/a | | | | | |
| Title 8. Voting Systems / Chapter 128. Computerized Voting Systems | | | | | | | |
| Computerized Voting System St ... | 128.001 | ✓ | 128.001 (c) is probably the best legal basis for the Secretary of State having the authority to modify existing procedures as needed for STAR-Vote. | | | | |
| Title 8. Voting Systems / Chapter 129. Direct Recording Electronic Voting Machines | | | | | | | |
| General Purpose | 129 (A) | | | | | | |
| Applicability | 129.001 | ✓ | | | | | |
| General Procedures | 129.002 | ✓ | | | | | |
| Pre-Election Acceptance and Testi ... | 129 (B) | | | | | | |
| Acceptance Testing | 129.021 | ✓ | | | | | |
| Hardware Diagnostic Test | 129.022 | ✓ | | | | | |
| Public Test of Logic and Accurac ... | 129.023 | ✓ | | | | | |
| Security of Test Materials | 129.024 | ✓ | | | | | |
| Voting System Security | 129 (C) | | | | | | |
| Pre-Election Security Procedure ... | 129.051 | ✓ | Note: Under this section for STAR-Vote the devices themselves will count as the "electronic information storage medium", and therefore would have this section apply. STAR-Vote isn't incompatible with this, however it adds an additional procedural layer of complexity. | | | | |
| Transport of Voting System Equ ... | 129.052 | n/a | | | | | |
| Access to Voting System Equipn ... | 129.053 | n/a | | | | | |
| Network Connections and Wirel ... | 129.054 | ✓ | Note: This section explicitly disallows any internet connection or use of wireless communication. | | | | |
| Equipment and Software | 129.055 | ✗ | This section stipulates that "only software certified by the secretary of state [...] may be loaded on the equipment." This may be problematic given that the Secretary of State would need to certify, broadly, the operating system and any newer versions of it that may become available, plus whatever drivers become available and are necessary (for new accessibility devices, etc.), plus whatever updates become available. To meet all our goals and comply with this section we would need the Secretary of State to certify "Operating System version X or higher, with such drivers and updates as its vendor regularly provides and which are designed for the hardware in use with STAR-Vote at the time." Alternatively, we may be able to get around this by claiming that the paper records make STAR-Vote "not a DRE for legal purposes," but that will require further investigation. | | | | |
| Plan for Machine Failure | 129.056 | n/a | | | | | |
| Use of Machine in Early Voting ... | 129.057 | n/a | Note: This section disallows the use of the same devices for early voting and election day voting. | | | | |
| Title 9. Candidates | | | | | | | |
| <i>No Applicable Statutes Found</i> | | | | | | | |
| Title 10. Political Parties | | | | | | | |
| <i>No Applicable Statutes Found</i> | | | | | | | |
| Title 11. Presidential Elections | | | | | | | |
| <i>No Applicable Statutes Found</i> | | | | | | | |
| Title 12. Elections to Fill Vacancy in Office | | | | | | | |
| <i>No Applicable Statutes Found</i> | | | | | | | |
| Title 13. Recounts | | | | | | | |
| <i>Compliant with and exceeds goals of all applicable statutes</i> | | | | | | | |
| STAR-Vote supports recounts in accordance with Title 13. In addition, STAR-Vote exceeds those requirements by providing genuine statistical guarantees about the level of confidence in the reported outcome through Risk-Limiting Audits. Furthermore, STAR-Vote provides novel mechanisms for detecting and correcting irregularities through tamper-evident hash chains on electronic data and the creation of substantial supporting audit data for forensic analysis. | | | | | | | |
| Title 14. Election Contests | | | | | | | |
| <i>No Applicable Statutes Found</i> | | | | | | | |
| Title 15. Regulating Political Funds and Campaigns | | | | | | | |
| <i>No Applicable Statutes Found</i> | | | | | | | |
| Title 16. Miscellaneous Provisions | | | | | | | |
| <i>No Applicable Statutes Found</i> | | | | | | | |
| Title 17. Local Option Elections | | | | | | | |
| <i>No Applicable Statutes Found</i> | | | | | | | |