



June 13, 2019

Mr. John Schmitt, President
 Five Cedars Group, Inc.
 1500 NW Bethany Blvd., Suite 200
 Beaverton, OR 97006

Dear Mr. Schmitt:

On Tuesday, February 5, 2019, the California Secretary of State Office of Voting Systems Technology Assessment (OVSTA) received a request for Administrative Approval, pursuant to California Elections Code section 19291, to apply updates to the certified Five Cedars Alternate Format Ballot (AFB) v4.3 Remote Accessible Vote by Mail system. Our office reviewed the request and determined the changes as submitted would warrant a completely new certification. Subsequently, Five Cedars revised and submitted a new application on Monday, March 25, 2019, to apply updates to the certified Five Cedars Alternate Format Ballot (AFB) v4.3 Remote Accessible Vote by Mail system. The following updates were applied:

Description of Symptom/Problem	Description of Fix/Modification/Enhancement	Test Result
Bug Fix - If a voter selected the write-in but did not enter a name an error was not immediately flagged. Mac OS error messages using VoiceOver needed to be improved.	Recoded the write-in functions to give immediate error messages if a name was not entered before tabbing to another field. Created separate error message code for MAC and iOS devices.	Successfully tested without further mitigation.
Bug Fix - Due to additions of newer error messages in the XLF translation files, some error text was not being translated to other languages. Mac VoiceOver sometime failing to speak error messages.	Improved the translation keys in the JavaScript for error messages to be translated into other languages. Added a longer timeout for Mac error messages. Caught during QA and did not affect any live ballots.	Successfully tested without further mitigation.
Bug Fix - Over-votes were allowed on the main ballot page but noted in error messages and on the Summary page.	Changed the over-vote logic to not allow the voter to over-vote in the first place - gives an error message to unselect previously selected choice before making a new choice.	Successfully tested without further mitigation.
Cosmetic – Bar code display HTML code was in a table.	Changed a table to use CSS	Successfully tested without further mitigation.
Cosmetic – Voters using a screen-reader have not	Added hidden text telling blind voter the number of races and	Successfully tested without further mitigation.

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indication of the number of races and measures to expect on the ballot.	measures on their ballot.	
Cosmetic – Voters using screen readers have no indication of the number of candidates in a race.	Added hidden text and logic to announce the number of candidates in a particular race.	Successfully tested without further mitigation.
Cosmetic- Race and Proposition heading should be highlighted for ease of location for sighted voters.	Added a light blue background color to the race/proposition/measure title blocks to make it easier for sighted voters to jump to the next race/proposition/measure title.	Successfully tested without further mitigation.

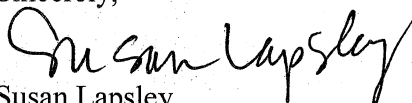
California Elections Code section 19291 precludes a remote accessible vote by mail system that has been approved by the Secretary of State from being changed or modified until the Secretary of State has determined the change “does not impair its accuracy and efficiency....”

If the Secretary of State determines the change or modification does not impair the accuracy or efficiency of the voting system, the Secretary of State may administratively approve the proposed change or modification.

The analysis of documentation and testing took place between March 26, 2019 and June 12, 2019, as the OVSTA has an unprecedented workload. The functional testing of the Alternate Format Ballot (AFB) version 5.2.1, was completed in two operating system environments (Windows and iOS) using the respective internet browsers of each system, additionally Google Chrome, screen reader technology (Narrator and VoiceOver). The OVSTA staff determined the fixes applied mitigated the symptom found and does not impair the system’s accuracy and efficiency.

The system has been modified, and thus warrants a version number change. As such, the Five Cedars Alternate Format Ballot (AFB) system certified on October 11, 2017, with the above described modifications, the version number is v5.2.1. Based on the testing conducted by the Secretary of State staff, the Administrative Approval is granted for Alternate Format Ballot (AFB) v5.2.1. All other conditions of the Five Cedars Alternate Format Ballot (AFB) v4.3 certification, dated October 11, 2017, remain in effect.

Sincerely,



Susan Lapsley
Deputy Secretary of State, HAVA and Counsel