

November 26, 2012

Mr. Scott Gessler  
Secretary of State  
Colorado Department of State  
1700 Broadway  
Denver, Colorado 80290

Re: Noncertification of the Boulder County 2012 General Election.

Dear Secretary Gessler:

The undersigned have been appointed by the county chairpersons of our respective political parties and represent a majority of the members of the Boulder County Canvass Board for the 2012 General Election. After many days of intense work and serious consideration, we find that without access to additional verifiable documentation, we are unable to certify the Abstract of Votes Cast or reconcile the numbers of ballots and voters in good faith, as per Secretary of State's Rule 41.8.3.

In summary, thousands of ballots have been cast and counted without proper eligibility verification. Hundreds of others have been rejected without proper verification. If the lack of reasonable verification has allowed a meaningful number of ballots to be rejected or counted improperly, local contests in particular may be impacted. For example, we believe that

- At least 18,500 ballots were not subjected to reasonable signature checks. Without further work we cannot estimate whether a material number of ballots were improperly rejected or accepted.
- 3,255 provisional ballots need considerably more review for both rejection and acceptance and partial acceptance. Some contest outcomes could be impacted by a high error rate.
- 130,000 ballots were recorded in the pollbook by the uncertified, trouble-prone Bell & Howell equipment. The impact on the accuracy of the pollbook and Official Abstract is unknown.

Our report below is the culmination of 15 public meetings and roughly a few thousand man hours of our work related to this canvass activity.

Our report is categorized by topic with supporting information. Although we have not certified the Official Abstract at this time, we have not reached any conclusion

that it would be impossible to reach a decision to certify if we were to be provided with additional information. Accordingly, we have proposed certain follow-on actions at the end of this letter.

## **Canvass Board Duties**

Among other numerous assigned canvass board duties in statute, C.R.S. 1-10-101.5 requires that we, as a Canvass Board,

- (a) Reconcile the ballots cast in an election to confirm that the number of ballots counted in that election does not exceed the number of ballots cast in that election,
- (b) Reconcile the ballots cast in each precinct in the county to confirm that the number of ballots cast does not exceed the number of registered electors in the precinct; and
- (c) Certify the abstract of votes cast in any election and transmit the certification to the secretary of state. A majority of Canvass Board members signatures shall be sufficient to certify the abstract of votes cast in any election. When unable to certify the abstract of votes by the majority of the Board for any reason, the Canvass Board shall transmit the noncertified abstract of votes to the secretary of state along with a written report detailing the reason for noncertification.

Certification of the Official Abstract under C.R.S. 1-10-101.5 is the critical exercise in finalizing the election process and requires far more than the subtraction of ballots counted from ballots cast and ballots cast from registered electors in each precinct. Such a trivial arithmetic exercise does not require thinking individuals for verification, and the Board's certification would be meaningless if it were limited to this exercise. There are, in fact, over 40 significant references to required activities of the Canvass Board in 18 sections of C.R.S. Title 1. One particularly instructive statute, 1-8-308, references the Canvass Board's Abstract as a separate document from the Official Abstract. Obviously, the Board is expected to build its own Abstract, and at some point it is expected that the Board's Abstract would be compared to the Official Abstract and any differences reconciled.

We have reviewed the oath we took as Canvass Board members and the numerous duties and responsibilities of the Canvass Board as detailed in Title 1. For the past several weeks we have been working toward the goal of certifying the recent general election. Our decision not to certify at this time without additional verifiable data is based upon our understanding of our legal and ethical obligations.

## **Basis for Noncertification**

Below, we have included for reference the requirements of the Official Abstract.

## **1. Official Abstract of Votes Cast**

The following are descriptions of the Official Abstract of Votes Cast (Official Abstract). The descriptions are taken from **C.R.S. Title 1** and the **Secretary of State's Election Rule 41**. In the quotations from statute and rules below, **boldface** is used to emphasize terms of interest.

### **Title 1-10-105(5)(c, d, and e) Official abstract of votes cast *[includes:]***

- (c) The reconciled total number of **active, registered voters** in each county on election day;
- (d) Based on the total number of **registered voters**, the percent of voter turnout in each county; and
- (e) Any other information that the secretary of state determines would be interesting or useful to the electorate or other elected officials.

### **41.3 Duties of the Canvass Board**

#### **41.3.2 The Canvass Board's duties are:**

- (a) Conduct the canvass in accordance with section 1-10.5-101, C.R.S., including:
  - i. **Account and balance the election and certify the official abstract of votes;**
  - ii. Reconcile the **number of ballots counted** to the **number of ballots cast;** and
  - iii. Reconcile the **number of ballots cast** to the **number of voters who voted** by reviewing the reconciled detailed ballot logs and Statement of Ballots; ... .

### **41.8 Official Abstract**

#### **41.8.2 The Canvass Board must use the official abstract in a format approved by the Secretary of State.**

#### **41.8.3 The official abstract must include, by precinct/ballot style or vote center, where applicable:**

- (a) The **statement of votes** counted by race and ballot question or issue;
- (b) The **total active registered electors** in the precinct and the total for the jurisdiction holding the election;
- (c) The **total number of electors voting** in each precinct and the total for the jurisdiction holding the election;
- (d) The **number of voters who voted early;**
- (e) The **number of emergency registrations;**
- (f) The **number of mail-in or mail ballots counted and the number rejected;**
- (g) The **number of provisional ballots counted and the number rejected listed by each rejection code;** and
- (h) **The number of damaged and spoiled ballots.**

The Official Abstract provided by Clerk Hall is noncompliant by definition for the following reasons:

1. The Clerk's Official Abstract does not account for the **number of provisional ballots by rejection code** as required by Rule 41.8.3(g). [This information is available and *was* provided on Disk\_@ in the file BPO12C-Provisionals\_11\_20\_12.pdf.]
2. The Clerk's Official Abstract does not account for the **number of spoiled and damaged ballots** as required by Rule 41.8.3 (h).
3. The Clerk's Official Abstract provides results at **only the precinct level**, not the ballot-style level required in Rule 41.8.3. [It should be noted that this issue can be resolved if the Secretary interprets the rule in conformity with C.R.S. 1-10-101.5(b), which requires only precinct-level reporting.]
4. The Clerk's Official Abstract uses the total of **all registered voters, both active and inactive**. Rule 41.8.3(b) requires that calculations be based on just the active registered voters. [It should be noted that if the "active voter" status is conferred when the inactive voter presents himself or herself at the polls, the calculations will be meaningful.]
5. The Clerk's Election\_Reconciliation\_PublicVersion\_2012.11.23.xlsx file shows there were voting problems in six precincts: 647, 905, 832, 865, 603, and 915. These six precincts all recorded  $\geq 101\%$  "Total Votes Counted" (Col M) than "Total Ballots Cast" (Col H).

Their variances ranged from 101.0% to 111.9%. For Precinct 603, the highest, the variance was 118 votes.

In all, there were 41 precincts in which "Total Votes Counted" (Col M) were more than "Total Ballots Cast" (Col H), in other words,  $>100\%$ .

An edited version of the Clerk's .xlsx file is available:

20121123\_Election\_Reconciliation.xls. It contains only those 41 precincts where "Total Votes Counted" (Col M) were more than "Total Ballots Cast" (Col H) - in other words,  $>100\%$

Therefore, the Clerk's Official Abstract does not conform to the format and content required by the Secretary of State pursuant to Rules 41.8.2 and 41.8.3.

## **2. Signature Verification**

Signatures are the only validation of a mail voter's eligibility. Without a meaningful (i.e., effective) signature verification process, ineligible ballots will be accepted and eligible voters' ballots will be rejected. ["The one offsets the other" is not an acceptable palliative.].

More than seventy percent (130,000) of the (178,000+) ballots counted in Boulder County during the November election were cast by mail ballot. Confirmation of the voter's identity for these mail ballots is required to be based on a comparison of signatures. Election workers, who are not experts in handwriting analysis, made these comparisons, and failed to take the care required of them to diligently verify the signature.

Several parties and ballot issue groups had Watchers that spent time watching the election processes and making formal public and published reports on what they saw. Several made these reports at public meetings of the Canvass Board. The Watchers presented first-hand evidence that supports their concerns that the signature verification process was not handled in a diligent manner that would meet a reasonable interpretation of "substantial compliance" with the election code. Specifically, a number of signature verification Election Judges were carelessly approving signatures far too rapidly to apply the Secretary's seven criteria for signature verification (Rule 29.2). The watchers were prevented from pointing out the discrepancies or assisting in their correction. It should also be noted that bipartisan teams nominated by the parties were not assigned to this important eligibility check.

### ***A. Signature Verification Did Not Use Codes in Rule 29.2***

For about an hour, two of the Clerk's Staff who have several years of experience working on the signature verification process told us what they did. This interaction between the Board and the Staff was done at the recommendation of the Deputy Clerk in charge of the election, Molly Tayer. The two Staff members gave a lengthy and detailed description of the signature verification process, and they demonstrated it with a randomly chosen sample batch of Ballot Return Envelopes. They emphasized that on some days the team of Election Judges verified as many as 10,000 signatures and they "got the job done and they were proud of their work." They never referenced any of the Secretary of State's seven criteria (Rule 29.2) as being things they looked for in authorizing a signature.

Rule 29.2 is shown below for reference.

## 29. Rules Concerning Procedures for the Verification of Signatures

29.2 In accordance with section 1-8-114.5, C.R.S., for mail-in ballots and section 1-7.5-107.3, C.R.S., for mail ballots, **the election judges shall compare the signature on the self-affirmation on each respective “Return Envelope” with the signature stored in the statewide voter registration system. Signatures shall require further research if any of the following discrepancies are discovered:**

- Code 1 – An obvious change in the slant of the signature
- Code 2 – A printed signature on one document and a cursive signature on the other document
- Code 3 – Differences in the size or scale of the signature
- Code 4 – Differences in the individual characteristics of the signatures, such as how the “t’s” are crossed, “I’s” are dotted, loops are made on “Y’s” or “J’s”
- Code 5 – Differences in the voter’s signature style, such as how the letters are connected at the top and bottom
- Code 6 – Ballots or envelopes from the same household have been switched
- Code 7 – ‘Other,’ including misspelled names & description of discrepancy

Instead, the two Staff members referred to using “parts” of a signature to accept it. They referred to a hypothetical case in which a ballot signature showed the first name “Judith” but a different last name than the signature on file. The Staff member said (we are paraphrasing here) that if “Judith” was obviously—to herself as the verifier—written by the same person as the person whose signature was on file, the verifier would assume that the voter had changed her last name (because of marriage or divorce) and would accept the signature. This approach is in direct conflict with Code 7 in Rule 29.2.

### ***B. Signature Verification Speed vs. Training and Rule 29.2***

The excessive speed of verification is our most serious concern. Dan Gould, Boulder Democratic Party Chairman, and Jim August, Watcher for the Republican Party, spent time watching the verification process. Dan timed all 12 stations for five minutes each and counted the number of screens of four signatures each that were processed by each group. This method presents four pairs of signatures, meaning that eight graphics of signatures are simultaneously on the screen. The fastest team processed 41 screens in five minutes, and the slowest team processed seven screens. The Watcher Report was submitted by Jim August on 10/26/12. Some calculations and comparisons drawn from the Watcher Report are provided below.

Signature Certification Statistics						
	Screens	Seconds	Signatures	Seconds per Signature	Total Screens	% of Work Done
<b>Slowest Team</b>	<b>7</b>	<b>300</b>	<b>4</b>	<b>10.7</b>	7	2%
Avg Team—10 stations (calc.)	24	300	4	3.1	240	83%
<b>Fastest Team</b>	<b>41</b>	<b>300</b>	<b>4</b>	<b>1.8</b>	41	14%
					288	100%
<b>Over Whole Course of Election:</b>	<b>Signatures Verified</b>	<b>% of Work Done</b>				
	130,252	—				
<b>Slowest Team</b>	3,166	2%				
Avg Team (6.91% each)	108,543	83%				
<b>Fastest Team Unacceptable</b>	<b>18,543</b>	<b>14%</b>				
		100%				

The assumption that all other teams, ten of the twelve (named Avg. Team above), operated at the average of the fastest and slowest teams minimizes the impact of the fastest team. The statement that the work of the fastest team is “Unacceptable” is based on the fact that one member would not even be able to ask the other person on the two-person team if they agreed the signature was valid or invalid in the 1.8 seconds of viewing time, let alone perform any analysis approaching the Secretary’s seven-code requirement, enter the response with the mouse, or allow for screen refresh time.

If the one fastest team is the only one working at this speed, they would compromise all credibility of the validity of about 18,543 ballots. This is not to say the signatures are all invalid, but it does say the Secretary’s criteria for valid signatures was largely or totally ignored and the impact on election contests is unknown. If additional teams were working this fast, the number of ballots potentially affected increases. In fact, the two Staff members the canvass board talked with estimated that they look at a four-signature screen for about ten seconds, or about 2.5 seconds per signature. This statement validates the concept that fast verification is typical and indicates that even more signatures were verified without regard for the Secretary of State’s Rule 29.2.

The Clerk declined to present requested additional data that would permit further analysis of the signature verification process to

address our concerns. The request was denied by the Clerk as not being a valid request by the Canvass Board. The Board repeated its request for this data on 11/21/12, but the request was dismissed for the second time.

The Board believes it is impossible to certify the quality of signature verification work that produced the Official Abstract when so many election officials including the Canvass Board have knowledge of specific facts regarding

- Continuing failure to employ bipartisan teams of Election Judges nominated by the parties during significant times of signature verification,
- failure of Election Judges to adhere to the Secretary of State's signature verification guidelines,
- the reckless speed at which the process was executed,
- The absence of signature-station log files showing maximum, minimum, and average metrics for signature-approval teams,
- the absence of any statement of an acceptable error rate for the process,
- the lack of proficiency tests for signature verifiers, and
- Watchers' lack of full access for verification and correction of errors.

Therefore, the lack of proper signature verification by some Election Judges may have resulted in an overly high error rate for acceptance or rejection of the approximately 130,000 mail-in ballot envelopes. Note that the HAVA and Federal Election Commission error rate standard for voting system components is 1 in 10,000,000 ballot positions. That would seem to imply that any election process, whether human or machine driven, would be required to have a low error rate.



### **3. Bell & Howell Equipment for Mail-In Ballots**

The impact of the status and poor reliability of the Bell & Howell equipment on the Board's certification is confusing, and the confusion is compounded by statements made by the Clerk. In summary, the equipment captures incoming mail-in ballot data, acting as a mail-in ballot pollbook, recording the signature, and making a recommendation on its match to the Secretary's signature database (SCORE). The equipment has not been tested or certified by the Secretary as a component of the voting system. The signature verification function in use for "recommending" a decision has not been tested in accordance with the Secretary's Rules, and the pollbook entry function remains untested. The uncertified machine was frequently down for repair and not operating properly during the election processing.

In a PowerPoint presentation made by Elin Larson, member of the Clerk's Staff, the Bell & Howell appears in a diagram of the Mail Ballot process entitled "Sort, Verify Signatures" and "Verify Signatures" on pages 2 and 10 of 11 in the file **Process Drawings Nov 12 2012.pdf**.

When asked to verify where in the Mail In Ballot process the ballot is considered "cast," the Clerk clarified the definition of the Bell & Howell process. Here we paraphrase her words: The process block should have three vertical lines dividing it to represent the three passes made by each Ballot Return Envelope (BRE) through the Bell & Howell equipment. The passes were described as follows:

- First Pass – the Bell & Howell equipment records the receipt of the BRE, the contained ballot is considered to be cast, the signature is scanned for verification, and information is sent to SCORE to give "vote credit" to the voter.
- Second Pass – the Bell & Howell equipment sorts out envelopes with rejected signatures. Note: R.W. Boehm specifically asked whether a ballot could be uncounted if it had been cast. The

Clerk verified that this is the only process that has the potential to not count a ballot that has been cast.

- Third Pass – Sorting of the ballots with accepted signatures into subsets. Based on previous explanations by the Deputy Clerk, Molly Tayer, these are precinct-level sorts.

The Board's concern lies in **C.R.S. Title 1-1 104 Definitions, specifically (50.7) and (50.8)** that read as follows:

*(50) “Vote recorder” or “voting device” means any apparatus that the elector uses to record votes by marking a ballot card and that subsequently counts the votes by electronic tabulating equipment or records the votes electronically on a paper tape within the apparatus and simultaneously on an electronic tabulation device.*

*(50.7) “Voting equipment” means electronic or electromechanical voting systems, electronic voting devices, and electronic vote-tabulating equipment, as well as materials, parts, or other equipment necessary for the operation and maintenance of such systems, devices, and equipment.*

*(50.8) “Voting system” means a process of casting, recording, and tabulating votes using electromechanical or electronic devices or ballot cards and includes, but is not limited to, the procedures for casting and processing votes and the operating manuals, hardware, firmware, printouts, and software necessary to operate the voting system. [underlining emphasis added]*

As defined by the Clerk in **Process Drawings Nov 12 2012.pdf**, as noted above, the Bell & Howell is passing “vote credit” to SCORE and indicating that a ballot has been cast. Thus the Bell & Howell appears to meet the criteria defined in definitions 50.7 and 50.8. Specifically, the Bell & Howell equipment is used in the **casting of ballots** and the rejecting of ballots based on signature verification. Although the Clerk insists that the Bell & Howell is not a “voting device” and therefore complaints about its failures and breakdowns are outside the scope of the work of the Canvass Board, the apparent, random malfunctions of this piece of equipment used as an integral part of mail-in ballot processing cannot be overlooked because the equipment fits in definition 50.8.

Additional questions arise from a formal 11/4/12 Election Complaint filed by James August with the Clerk's office and copied to the Secretary of State's office regarding malfunctions of the Bell & Howell

equipment. Mr. August's complaint (items 3a–3i) indicate that B&H technicians and engineer(s) were making changes to the equipment and possibly rewiring it.

Further issues regarding the Board's responsibility are added by a voter, Mr. A. Kolwicz, in his **HAVA complaint to the Secretary of State dated Oct. 1, 2012**, regarding this equipment. Mr. Kolwicz, also filed a complaint with the Canvass Board and requested a response in accordance with C.R.S. Title 1-7-514(2)(b) and (c), which reads as follows:

*(b) Upon receiving any written complaint from a registered elector from within the county containing credible evidence concerning a problem with a voting device, the canvass board along with the county clerk and recorder shall investigate the complaint and take such remedial action as necessary in accordance with its powers under this title.*

*(c) The canvass board and the county clerk and recorder shall promptly report to the secretary of state a description of the audit process undertaken, including any initial, interim, and final results of any completed audit or investigation conducted pursuant to paragraph (a) or (b) of this subsection (2).*

The Canvass Board questioned the signing of the Random Audit conducted in accordance with the same statute (1-7-514) because the status of the several complaints was presumably unknown to the signing Canvass Board members. The Canvass Board voted 4–3 not to sign the Random Audit until we received a clarification from the Department of State on the status of Mr. Kolwicz's complaint about the Bell & Howell equipment or that it was not our responsibility to respond to him. The Canvass Board has not yet received a response. The letter (Audit Report) dated November 21, 2012 (November 23 by the Clerk), was inappropriately sent to the Secretary of State because it was not approved by a majority of the board.

#### **4. Required Oversight Prohibited in Key Activities**

The Canvass Board and authorized Watchers and bipartisan Election Judges were prohibited from oversight activities for many important election processes that occurred before the first meeting attended by the Clerk. Some examples follow.

- A. **Ballot Printing and Mailing.** A private vendor printed and another private vendor mailed ballots to voters. We have very little knowledge about the process and how they accomplished their assigned tasks. Yet the opportunity for error is very great during these critical steps in the election process, and mailing vendor errors have been reported with duplicate ballot mailings.
- B. **No Observation.** On Election Day night and throughout the process, authorized Watchers and bipartisan Election Judges have been prohibited from meaningful visual access to most processes:
- a. the Bell & Howell equipment (which does mail ballot envelope sorting, signature capturing, and vote-credit recording)
  - b. opening and separating
  - c. signature verification
  - d. scanning
  - e. tallying
- C. **Voter Intent Resolution.** We were allowed to watch voter intent resolution so that we would understand the process, but neither we nor authorized Watchers were allowed to observe closely enough to be effective in making judgments on the quality of the work.
- D. **Early Voting.** Neither we nor authorized Watchers were allowed access to data input concerning Early Voting, a process of special concern to Canvass Boards because of C.R.S 1-8-308(2). When we attempted to observe this process, the computer station was turned to face the wall, and we were not allowed to view the documents.
- E. **Provisional Ballots.** Even more worrying, we and authorized Watchers and party officials have been kept from observing the complex process of verifying provisional ballots, whose numbers are at an all-time high in this election. They are the ballots at highest risk for error and fraud in the election, and Watchers have been prevented from correcting discrepancies or challenging provisional ballots.
- F. **UOCAVA Ballots.** Along the same vein, we have received Watcher Reports that indicate a lack of transparency and verifiability and the possibility of mistakes or worse concerning the reception of UOCAVA ballots via email. Again, this kind of ballot has been used in much greater numbers than ever before.

## **5. Proposed Mitigation Alternatives Requiring Secretary's Guidance**

For the above reasons, we are unable to certify.

In some cases it may be possible to mitigate our concerns if full access to the data requested is provided. In other cases, we believe that additional audit work must be performed to attempt to test the original noncompliant processes and determine if the resulting error rates are acceptable for purposes of certification.

## **6. Some Examples of Data and Processes That Must Be Addressed**

- A. The reconciliation file for the Official Abstract needs to be in a readable and understandable form with accurate headings and data inputs.
- B. Raw data in the file  
**Election\_Reconciliation\_PublicVersion\_2012.11.23.xlsx** is contaminated with reconciliation information (the "Adjusted" parts).
- C. Check sums ("Differences") should all be zero.
- D. Signature verification—potential of high error rate.
- E. Provisional ballot verification—potential of high error rate.
- F. Bell & Howell—generated records—likelihood of high error rate.
- G. UOCAVA ballots—potential of high error rate.
- H. Precincts reporting more ballots than registered voters—indication of inaccurate reporting or unauthorized voting.
- I. Should Official Abstract report by ballot style?

## **7. References on Canvass Board website**

**([http://www.dansher.com/BC\\_CB/2012\\_BC\\_CB.html](http://www.dansher.com/BC_CB/2012_BC_CB.html))**

- A. Watcher Reports
- B. Election Complaints
- C. Canvass Board minutes (as audio files)

Respectfully submitted,

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Hillary Hall  
Boulder County Clerk and Recorder

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Date

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R. W. Boehm  
Republican Party

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Date

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Mary C. Eberle  
American Constitution Party

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Date

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Patricia R. Feezer  
Democratic Party

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Date

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Paul H. Geissler  
Democratic Party

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Date

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Daniel R. Martin  
Republican Party

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Date

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James E. Remmert  
American Constitution Party

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Date