



## Polling Place (In)accessibility

### Public Comment to the Allegheny County Board of Elections

November 28, 2022

by Juliet Zavon

I and others have repeatedly reported problems with polling place accessibility and failure to comply with the Americans with Disabilities Act (ADA). This past election I saw a polling place whose problems surpassed anything I've seen. I'll describe one problem and detail many others in my submitted comment. I will also propose a solution.

The polling place at 113 N. Pacific Ave. has voting in the basement and on the first floor. The first floor is a half-story above the sidewalk and is reached by an outside lift or by an outside staircase. Both have problems.

The outside lift worked intermittently. Sometimes it didn't respond when the button was pushed. Sometimes it simply stopped—a woman got stuck in it. But the problems didn't end there.

No poll worker was permanently outside to run the elevator. There was no doorbell or button to summon them. People handing out literature very kindly went into the polling place to tell poll workers when someone needed the lift. Without them, there was no way to contact poll workers.

The Elections Division says they only inspect a polling place for ADA compliance before they first accept it for use. Thereafter they rely on the building owner to notify them of problems. Yet numerous problems reported after each election show that this approach doesn't work.

Over 60 million Americans have disabilities. Mobility problems are the largest category, affecting about 19 million people. Problems increase with age. About 35 percent of people at age 70 have mobility issues. Polling places need to be re-inspected regularly to prevent problems.

Here's a possible solution. The County could check facilities by partnering with community organizations who are given a checklist to do an initial screening. They could refer problems to the county. This would leverage the county's limited personnel who have professional qualifications in ADA compliance.

Partnering this way would not only improve access to the polls, it would also give citizens a chance to work with the Elections Division and see for themselves what goes on. It would help build trust.

I have proposed this solution repeatedly and never got a response. I sincerely want to open a dialogue about tackling this problem. Please, please respond to me this time.

#### **Additional Accessibility Problems at the Polling Place at**

BGC Community Activity Center

113 N. Pacific Ave.

Pittsburgh 15224

As stated above, this location had voting in the basement and on the first floor. The basement is reached by a sloping walkway at the rear of the building. The first floor is a half-story up from the sidewalk level and is reached by an outside lift or by an outside staircase.

Problems with the outside lift. In addition to the issues described above, when one summons poll workers to step outside to operate the lift, the poll worker must stop what they are doing to do so. At busy times this disrupts the flow of voters.

At one point Rick Swartz, the head of the Bloomfield Garfield corporation that owns the building, came outside and explained "We haven't used the lift in months." That sums up the problem of relying on building managers to report problems to the ED.

Problems with the outside staircase. If you have limited mobility and walk up the outside stairs, you cannot both hold the rail AND open the door. The railing is too far away from the door. This is also a problem when you exit the polling place. On November 8, 2022 campaign volunteers handing out literature at this polling place kindly helped voters who needed an arm to lean on or someone to open the door. What if these volunteers hadn't been there?

Problems with the sidewalk. At multiple places around the perimeter of the building, squares of the sidewalk are torn out and filled with crushed stone. It makes walking hazardous for people using a cane or walker or unsure on their feet. Again, campaign volunteers helped many elderly and disabled people to navigate through this unstable footing.

Inadequate parking creates hardship. There is only street parking at this polling place. While several parking places were reserved for people with disabilities, these spaces were quickly filled at busy times. That meant that people with disabilities had to park farther away, sometimes blocks away. They had a hard time.

When parking spaces were filled, cars dropped people off into the middle of the street. In these cases, access to the sidewalk was difficult and risky. There was no ramp or curb cut from the street to make it easier to reach the sidewalk. Cars parked close together also blocked the way. Again, the campaign volunteers handing out literature came to the rescue.

Confusing signage increases accessibility problems. This polling place had changed for some precincts but not for others. You had to go up to the front door a half story up from the sidewalk to see all the signage about this. The signage was confusing to everyone, but for people with disabilities it created a real hardship because it required more walking.

- Some had to go around the building to the back entrance to reach the polling place in the basement, an extra distance to walk that required crossing patches of crushed stone where the sidewalk was torn up. Inside the building, you go between the first floor and basement using a spiral staircase. This is inaccessible for people with mobility problems.
- Others had to go to the polling place at West Penn Hospital. For some, this was too far, an insurmountable barrier to voting. They simply gave up.
- Some voters didn't first consult the changes posted on the front door and instead used the back handicapped entrance to reach the the basement where they were accustomed to vote. There they discovered they needed to be on the first floor. They couldn't get to the first floor directly from the basement because inside the building there is only a spiral staircase from the basement up to the first floor. They had to exit the building, walk the distance around the building through the patches of crushed stone and then take their chances going up the stairs or rely on the intermittently functioning lift.

**Voye, David**

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**From:** Blanche McGuire <[REDACTED]>  
**Sent:** Saturday, November 26, 2022 2:46 PM  
**To:** # Board of Elections  
**Subject:** Missing Ballots

Warning! This email was sent from an external source. Please be sure you recognize the sender and use caution when clicking on links and/or opening attachments.

On October 31, 2022 I mailed my ballot at the inside slot in the Parkway Center post office in Green Tree. It never showed up as 'received' on the pavoterservices website.

On Election Day I went to my polling place at Aiken School and cast a provisional ballot. Today pavoterservices still shows this ballot as 'not received.'

I realize that my voter choices will not impact any races. However, I am concerned that neither of my ballots was counted. I don't know if this issue is unique to me or if others have also been disenfranchised. Either way, the situation is concerning.

I'd appreciate knowing what happened to my ballots. I'd also like reassurance that this problem is not widespread.

Sincerely,

Blanche McGuire  
Green Tree

[REDACTED]

[Sent from the all new AOL app for iOS](#)

**Voye, David**

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**From:** [REDACTED]  
**Sent:** Saturday, November 26, 2022 5:46 PM  
**To:** # Board of Elections  
**Subject:** Meeting

Warning! This email was sent from an external source. Please be sure you recognize the sender and use caution when clicking on links and/or opening attachments.

I want you to have my comments but I know I will be ignored! Leave Josh Shapiro alone he will be a good governor. If there is crookness in voting why don't you look at your election board? Why don't you look at NURSING HOMES and who really votes? I believe that anyone qualified to do so should vote! But there are a lot that don't know their own name let alone who is on an election form! And questions well. you don't need to know. If there is cheating going on? As for what you are if you are a county or city worker your democratic or else! I AM AN INDEPENDENT and vote for individuals! And this last election? Well I did one vote in my eyes no one else was worth being my voice!

**Voye, David**

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**From:** [REDACTED]  
**Sent:** Saturday, November 26, 2022 10:42 PM  
**To:** # Board of Elections  
**Subject:** Comment regarding verifications and reconciliations

Warning! This email was sent from an external source. Please be sure you recognize the sender and use caution when clicking on links and/or opening attachments.

Comment to Allegheny County Board of Elections,

Reference: BOE Meeting 28 November 2022:

In the interest of building public confidence, I am requesting the Elections Division share and explain to the public how the vote tabulations are verified, and the precinct reconciliations are completed prior to certification as required by the election code.

For example, what was the result of Allegheny County's reconciliation of all balloting materials? Share the number of ballots printed and the disposition and use of the ballots compared to the number of voters casting votes. For example, what was the result of Allegheny County's reconciliation of reported results to a tally of voter sign-ins by precinct and mail-in ballots returned by precinct.

Sharing this information at the certification meeting or on-line or both would illustrate the good work being done by Allegheny County to confirm that the results of the election represent the votes of eligible voters casting votes in the November 8<sup>th</sup> election.

Bob Howard  
Marshall Township  
[REDACTED] Wexford, PA 15090

Voye, David

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**From:** Diane Schmitt <[REDACTED]>  
**Sent:** Sunday, November 27, 2022 3:40 AM  
**To:** # Board of Elections  
**Subject:** Written Comments for the November 28, 2022 BoE meeting record

Warning! This email was sent from an external source. Please be sure you recognize the sender and use caution when clicking on links and/or opening attachments.

To the Allegheny County Board of Elections-

I am requesting that today's scheduled certification of General Election returns be delayed because the Court of Common Pleas has not addressed the 12 petitions, each requesting a recount of a named Agh Co precinct, filed the week of November 14<sup>th</sup> as noted in the Election Day Updates - November 8, 2022 General Election, specifically the November 18th update.

Article XIV 'Returns of Primaries and Elections', Section 1404 (f) of the Pennsylvania Election Code of 1937, mandates that petitions for recount be addressed before certification occurs. In particular, the second to the last sentence of the section, reads: ***At the expiration of five (5) days after the completion of the computation of votes, in case no petition for a recount or recanvass has been filed in accordance with the provisions of this act, or upon the completion of the recount or recanvass if a petition therefor has been filed within five (5) days after the completion of the computation of votes, the county board shall certify the returns so computed in said county in the manner required by this act, unless upon appeals taken from any decision, the court of common pleas shall have directed any returns to be revised, or unless in case of a recount, errors in the said returns shall have been found, in which case said returns shall be revised, corrected and certified accordingly...***" ((f) amended Oct. 8, 2004, P.L.807, No.97).

In keeping with the PA Election Code, these petitions were filed in a timely manner. It is the government's, in this case the Allegheny County Board of Elections, obligation to delay certification of the returns of the November 8<sup>th</sup> election until these petitions have been addressed. To proceed with certification today violates Article 14 of the the Election Code and ignores the electors' constitutional right to petition the government for a redress of grievances.

It would be prudent to delay the certification until these petitions are addressed.

Thank You-  
Diane L. Schmitt

  
McKees Rocks, PA 15136

## **REFERENCES:**

### **Constitution of the United States**

First Amendment: Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to **petition the Government for a redress of grievances.**

### **Pennsylvania Election Code of 1937**

ARTICLE XIV 'Returns of Primaries and Elections', Section 1404 (f): As the returns from each election district are read, computed and found to be correct or corrected as aforesaid, they shall be recorded on the blanks prepared for the purpose until all the returns from the various election districts which are entitled to be counted shall have been duly recorded, when they shall be added together, announced and attested by the clerks who made and computed the entries respectively and signed by the members of the county board. Returns under this subsection shall be considered unofficial for five (5) days. The county board shall submit the unofficial returns to the Secretary of the Commonwealth by five o'clock P. M. on the Tuesday following the election. The submission shall be as directed by the secretary for public office which appears on the ballot in every election district in this Commonwealth or for a ballot question which appears on the ballot in every election district in this Commonwealth. **At the expiration of five (5) days after the completion of the computation of votes, in case no petition for a recount or recanvass has been filed in accordance with the**

**provisions of this act, or upon the completion of the recount or recanvass if a petition therefor has been filed within five (5) days after the completion of the computation of votes, the county board shall certify the returns so computed in said county in the manner required by this act, unless upon appeals taken from any decision, the court of common pleas shall have directed any returns to be revised, or unless in case of a recount, errors in the said returns shall have been found, in which case said returns shall be revised, corrected and certified accordingly.** The county board shall thereupon, in the case of elections, issue certificates of election to the successful candidates for all county, city, borough, township, ward, school district, poor district and election offices, and local party offices to be filled by the votes of the electors of said county, or of any part thereof. ((f amended Oct. 8, 2004, P.L.807, No.97).

## **Allegheny County Election Day Updates - November 8, 2022 General Election**

### **November 18 Update:**

The Return Board reconvened today at 9 AM.

The research of provisional ballots continues, but it is expected that it may be completed on Monday. The board has begun to canvas the full count provisional ballots.

There were no watchers or members of the public or media at the warehouse today for Return Board.

The board recessed at 4 PM and will reconvene on Monday at 9 AM.

Two final notes: (1) The Board of Elections will meet on Monday, November 28, 2022 at 10 AM in the Gold Room of the Courthouse to certify elections results. The advertisement for it will appear in next Thursday's edition of the Post-Gazette.

**(2) There were petitions filed today in Common Pleas Court requesting that the Elections Division hand count the ballots from 12 precincts located in the municipalities of Mt. Lebanon, North Fayette, South Fayette, Bethel Park, Robinson and Monroeville.** We will advise of any decision when the hearing takes place.



**Voyé, David**

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**From:** Michele Feingold <[REDACTED]>  
**Sent:** Sunday, November 27, 2022 11:45 AM  
**To:** # Board of Elections  
**Subject:** Re: comments for November 28 BOE meeting

I noticed a very important typo which I've corrected below by using capitals. Please use the edited version.

Thank you.

Sent from Yahoo Mail on Android

On Sun, Nov 27, 2022 at 8:48 AM, Michele Feingold

<[REDACTED]> wrote:

I am very sorry to be out of town and unable to attend this important meeting in person. I can't believe that we reality-based citizens are at the mercy of people who refuse to accept that their crackpot conspiracy theories and desire to subvert elections are not shared by the majority of us.

It's painful to have one's preferred candidates lose an election. We've all been there, and it feels awful. However, the mature response is to accept and hopefully learn from it. Unfortunately, petitioners from Mt. Lebanon, laughably declaring themselves to be "adult individuals" as required by law, are taking cynical advantage of laws meant for sincere concerns about significant irregularities in the administration of elections. They are petitioning to open the ballot box to perform a recount. This is a now well-known GOP strategy to subvert the will of the electorate, initiated in 2020 to impose Trump for a second term and known colloquially as the "Big Lie." There can therefore be no credible claim of sincerity or basis in actual fact. These sore losers who DO NOT support democracy where citizens get to choose their representatives are currently flooding courts across Pennsylvania and the rest of our beleaguered country. They claim fraud and substantial error with no evidence and demand audits at taxpayer expense.

The Big Lie about the 2020 presidential election failed in the courts *and* in the court of public opinion. None of its proponents can produce a single reasonable argument to counter this failure. Confederate army standard bearer Doug Mastriano never once questioned his own victory in 2020 on the same ballots that showed Joe Biden to have won a majority of votes in Pennsylvania, so no reasonable person should have ever taken his bogus claims about the presidential election seriously. It is shameful that government time and public funds must now be spent catering to disingenuous claims of fraud and error by supposedly adult individuals who simply hate democracy – unless, of course, their democracy-hating candidates win.

Michele Feingold  
[REDACTED]  
Pittsburgh, PA 15217  
[REDACTED]

(I would be grateful if someone could read my comments for me.)

**Voye, David**

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**From:** janice marks <[REDACTED]>  
**Sent:** Sunday, November 27, 2022 9:11 AM  
**To:** # Board of Elections  
**Subject:** Fwd: Election result recount request

Warning! This email was sent from an external source. Please be sure you recognize the sender and use caution when clicking on links and/or opening attachments.

**Subject: Election result recount request**

To whom it may concern,

I am a recently elected committeewoman in my home precinct. As a result, I plan to work for the people of my district.

I am also a poll worker in the precinct where the elections of both mine and my neighboring precinct vote.

I recently filed to hold a recount of my precinct as well as the precinct I worked at in the recent election. This was done when I reviewed the tapes from the precinct I worked and compared them to the recorded and published counts that the Allegheny county posted on their website. I saw these postings 5 days after the election.

Within each race, the republican candidates each had between 237 and 271 LESS votes than we recorded on Election night, and the democrat candidates had between 196 and 225 MORE votes than we recorded. This was alarming to me. This prompted me to request a hand vote as the numbers were way off. I can provide documentation as needed.

Thank you,  
Janice Marks

Sent from my iPhone

Honorable Board of Election Members,

I write to you about actions of high-ranking elected officials and their actions on Election Day, November 8<sup>th</sup>, 2022. I have been trained as a poll watcher and know that only voters are to only be admitted to their own polling locations and are not to loiter in the election area. In addition, it is my understanding, there should not be any photography in the polling areas.

On Election Day, Pittsburgh Mayor Ed Gainey and Congressional candidate, Summer Lee violated all the previously mentioned Election Laws. Candidate Lee posted a photo of herself holding a ballot presumably inside her polling location on her verified Twitter account, @SummerforPa time stamped 12:27PM 08 Nov 22. That post was retweeted by Mayor Gainey from his verified account, @gainey\_ed.

Mayor Gainey Tweeted on the same date and account at 11:08AM a photo of him and Candidate Lee once again inside a polling location, most likely 7601 Hamilton Ave 15208. Lee Retweeted the photo from her account. The two can also be seen in posted photos on both accounts from an unknown location at 10:36AM.

Mayor Gainey has a post surrounded by poll staff with identifiable name stickers on them at the Teamster's Temple on Butler St in Lawrenceville at 9:12AM. Ironically, a flier about Election Complaints is hidden behind a curtain in the photo. Another post at 8:50 was at Lawrenceville Branch of the Carnegie Library with a Judge of Elections. Also 3:22 PM at Brookline Rec Center is also with poll workers with their name tags on however, the photo is outside of the polling area. Again, at 4:56PM from an unknow location, Mayor Gainey can be seen in a photo with poll workers wearing their tags.

The Mayor has posts of himself inside a polling location at Natoli Field in the Morningside neighborhood posted at 10:04. In the photo, he can be seen talking to poll workers at their table. Finally, a post with at 12:33PM inside a Squirrel Hill Location with City Councilwoman Erika Strassberger and State Representative, Dan Frankel. Councilwoman Strassburger retweeting the photo from her account, @erikastrassbrgr.

I am asking this board to investigate this matter for any potential violations and reprimand any elected officials as needed. Also, reprimand or censure any Election Officials who allowed these violations to occur. All involved know or should know better and poll workers should have the appearance of impartiality. In a time where election integrity continuously has come into question, at minimum it gives the appearance of bias and worse a blatant disregard for the rule of law. This same complaint has been filed with the Pa Department of State.

Todd McCollum

Chairman

City of Pittsburgh Republican Committee

26<sup>th</sup> Ward 15<sup>th</sup> District



# Steel Elephant Newsletter

November 2022

## Happy Thanksgiving!

by T. J. Harris



I have always felt it was important to be consciously grateful of my many blessings. Thanksgiving, the uniquely American Holiday, is a perfect annual reminder to maintain the "attitude of gratitude." This year it seems more difficult, but I am descended from a long line of the stubborn and determined, so here goes...

First, I am thankful that our nation's state of affairs are not worse. Things can always be worse. In my personal life, I have seen a few bad times that did, in fact, get worse before getting better. It is

never as bad as it could, or might, become.

Second, I am thankful that I am not alone in wanting to righten America's course. This year I had the honor of meeting, and working alongside, some very fine citizens on The City of Pittsburgh Republican Committee. There is strength in numbers, and we continue to grow. Despite our challenges, just knowing the Committeemen, and Committeewomen makes for a brighter now, than those dark days of late 2020 and early 2021.

Finally, I am thankful for the young people I have encountered in our movement. After so much being said about the decadence, and fecklessness, of America's youth I am thrilled to have seen that there are some people, besides seniors, who believe in Freedom and hold traditional American values. I have hope for the future.

# From the City Chairman

by Todd McCollum

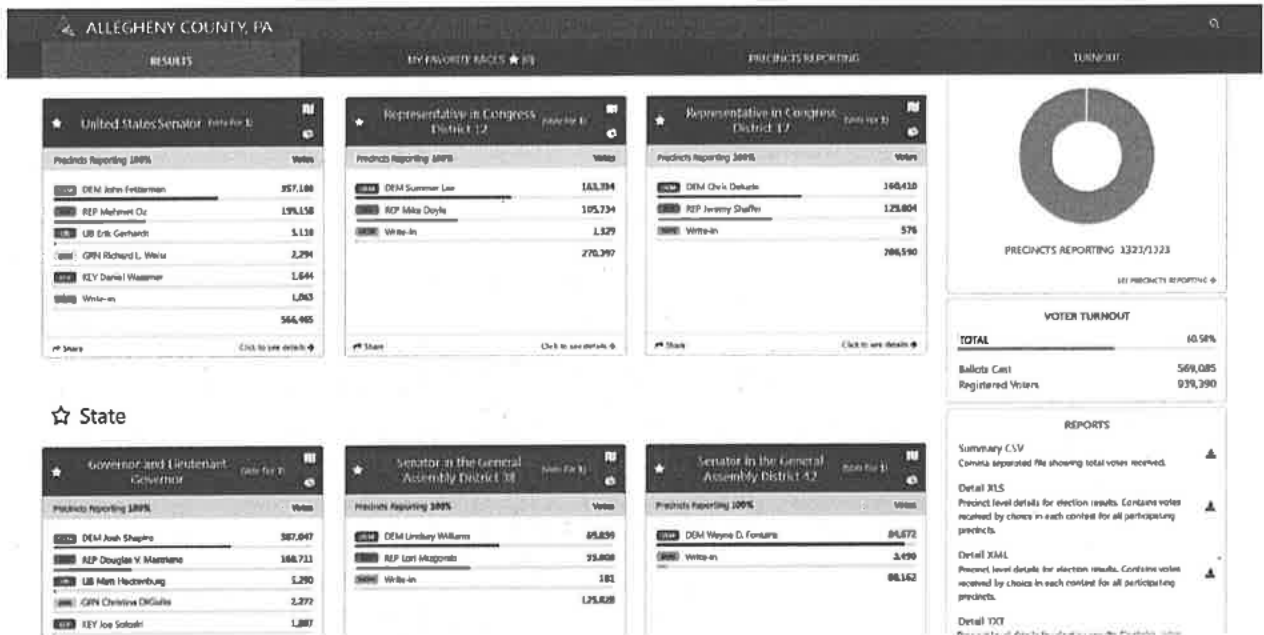
Like many of you, I am still in shock over the events that transpired on Election Day. I cannot believe that the GOP was swept in our Allegheny County and City races. Despite the disappointment, I am still very proud of the hard work that this committee did leading up to the election. There is nothing more that we could have done that changes the results. I believe that we turned heads.

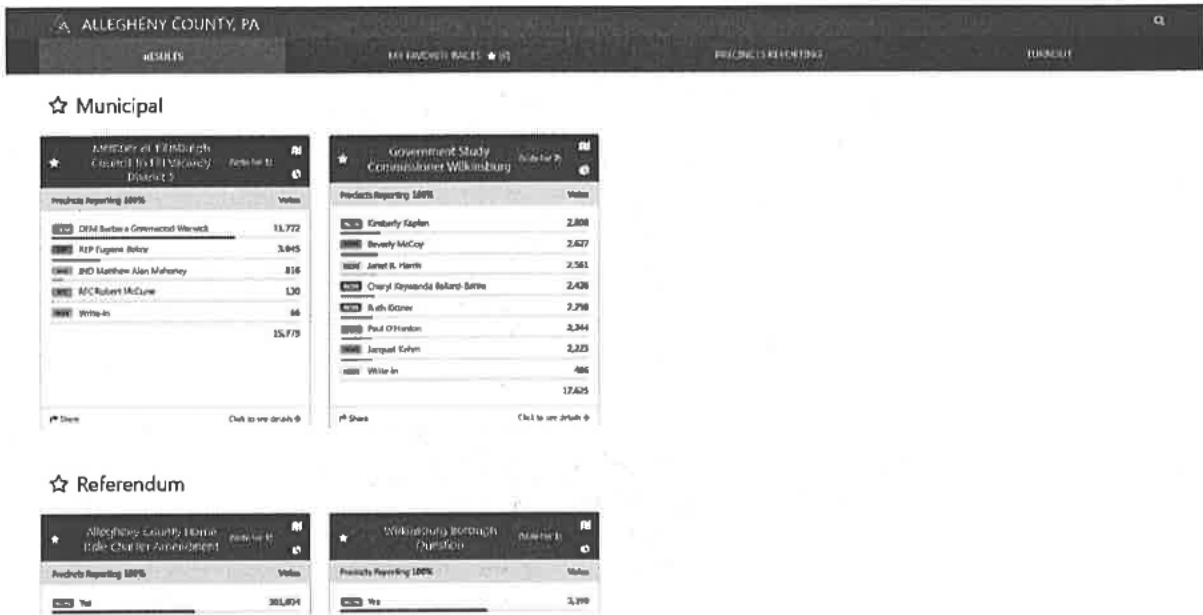
With all that said, we need to look forward to 2023. Our battles together have just begun. We have several City and County elections. Elections that we need to find candidates for and support. There is also our committee that we need to continue to build. That includes recruiting more members and getting others more involved. That all begins at our next meeting on Dec 5<sup>th</sup>. Hopefully everyone can attend. There is much to discuss.

Until we meet on the 5<sup>th</sup>, I hope all of you catch your breath and enjoy Thanksgiving with family and friends.

# The Bad News

by T. J. Harris





As you know, the November 8, 2022 election was really bad news for Republicans in The City of Pittsburgh, and Allegheny County. I am sure there are lessons to be learned, but I'm hard pressed to say exactly what conclusions to make. Theories abound. Those who should know appear clueless, yet provide "explanations," nonetheless. Everyone has an opinion.

There are basically 3 arguments posited for the November 8 disaster. Republican candidates were not good enough and/or the issues were against us. Republicans should have focused on mail-in ballot strategies rather than in-person voting on election day. Election Fraud made 2022 a redux of 2020.

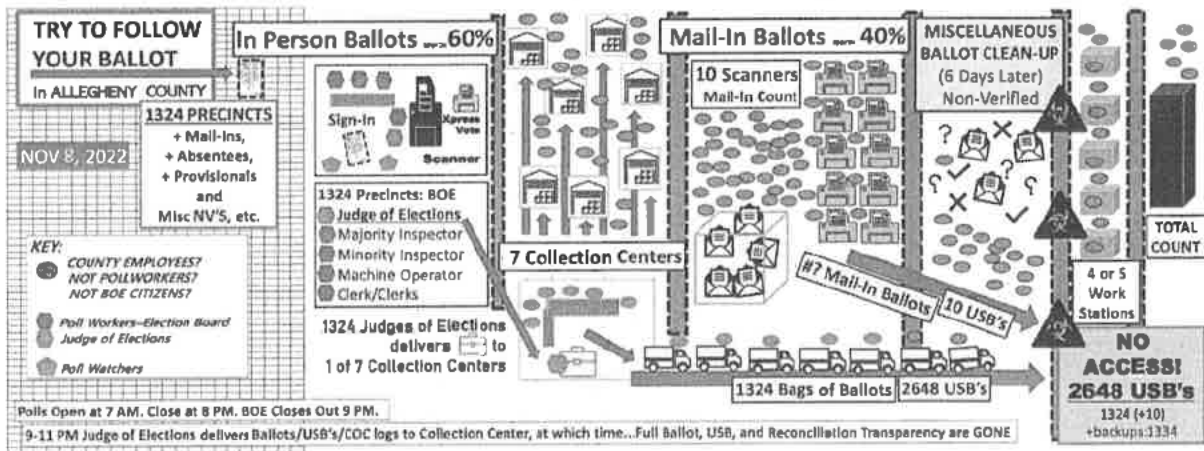
I'll add a 4th argument, my personal fav, to the mix. Democrats have had, and maintain, dominant narrative control.

What you believe, about the above, and/or any additional factors will determine your views on how to best move forward. With unlimited human, and money, resources it would make sense to relentlessly pursue everything! Realistically, we need an honest assessment of our limitations, and a willingness to let something go in order to concentrate focus on an achievable goal. Feel free to email me your thoughts for the next Newsletter.

# Transparency Choke-Out

Our Election Process loses transparency after the Election Day ballots and USB drives leave the polling place and move to the Collections Centers (please refer to diagram). Mail-In Ballots are counted without observation, so no transparency there either.

graphic provided courtesy of Jeff Depp



Furthermore, it has been alleged that the machine algorithm can flip votes from one candidate to another. The PA Supreme Court ruled in March of 2022 that independent third party auditors can NOT examine the voting machines and inspect the software coding. The mystery of the machine code flipping is thereby permanently enshrined, eliminating any possibility of voter confidence in any election using machines.

In addition to the process, and machine issues, bloated voter rolls raise the possibility of phantom ballots being inserted via drop box, or mail.

Registered voters, who are confirmed to have moved by the USPS change of address database, and have re-registered in their new location, can be challenged. Committeeman Jeff Depp spearheaded such an effort in the final days before November 8.

Apartment buildings and rental properties are notorious for having excess registered voters, due to the high turnover of tenants. Furthermore, a ballot mailed to an apartment building address without a specific unit number is likely to be returned as undeliverable. That ballot then becomes susceptible to being a "floater" that can be stolen.

An on-the-ground effort to check rental properties in each precinct for excess registrations, and subsequent challenge may be needed to clean voter roles for 2024, and can be conducted over a period of time.

**Voye, David**

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**From:** M J Costello <[REDACTED]>  
**Sent:** Sunday, November 27, 2022 9:17 AM  
**To:** # Board of Elections  
**Subject:** Comments for Submission to the Board of Elections for the November 28, 2022 meeting  
**Attachments:** Steel Elephant Newsletter November 2022.pdf

Warning! This email was sent from an external source. Please be sure you recognize the sender and use caution when clicking on links and/or opening attachments.

To the Allegheny County Board of Elections,

Below is your link to the journaling of the event timeline for our November 8th, 2022 election, starting when the polls open on November 8th, up through November 23rd (so far):

<https://www.alleghenycounty.us/elections/election-day-updates---november-8,-2022-general-election.aspx>

This is a request for an explanation from the BOE on these questions:

1) Who is the RETURN BOARD?

What exactly is the 'RETURN BOARD', who is sworn in on November 11th, and working on ballots through November 23rd?

Who appoints them, and what are they doing for 15 days if the machines and USB's have immediate totals? Are they County employees verses a non-government civilian election board?

2) How can you certify the election on November 28th with at least 12 outstanding paid petitions for recounts?

Here is the quote from your site:

**"November 23 Update:** The Return Board reconvened this morning at 9 AM. There were not watchers or members of the public or media in attendance today.

All 7,192 provisional ballots, full and partial counts, have now been added to the results page and have also been submitted to the state.

These preliminary results will become official on Monday, November 28, 2022, **unless a petition for recanvass or recount has been filed with the required fee to the appropriate Court awaiting disposition.**

The Return Board has completed its work for the November 2022 General Election and will adjourn today at 2:30 PM. The Elections Division staff will begin adding the results of all provisional ballots to the SURE system. Because of the volume of provisionals, that process will take several days. The Board of Elections meets at 10 AM on Monday, November 28 to certify the results. "



Below are the 12 Docket Numbers for some petitions awaiting disposition:

GD- 22-014148  
GD- 22-014146  
GD- 22-014143  
GD- 22-014136  
GD- 22-014139  
GD- 22-014137  
GD- 22-014140  
GD- 22-014144  
GD- 22-014135  
GD- 22-014142  
GD- 22-014138  
GD- 22-014098

And this quote from your site indicates that the petitions have been acknowledged as received, and are awaiting necessary action:

**"November 18 Update:** The Return Board reconvened today at 9 AM.

The research of provisional ballots continues, but it is expected that it may be completed on Monday. The board has begun to canvas the full count provisional ballots

There were no watchers or members of the public or media at the warehouse today for Return Board.

The board recessed at 4 PM and will reconvene on Monday at 9 AM.

Two final notes: (1) The Board of Elections will meet on Monday, November 28, 2022, at 10 AM in the Gold Room of the Courthouse to certify elections results. The advertisement for it will appear in next Thursday's edition of the Post-Gazette. **(2) There were petitions filed today in Common Pleas Court requesting that the Elections Division hand count the ballots from 12 precincts located in the municipalities of Mt. Lebanon, North Fayette, South Fayette, Bethel Park, Robinson and Monroeville. We will advise of any decision when the hearing takes place.**

3.

How was the election called by 11 PM on election night before any supplies (all in-person USB's and in-person ballots) went back to the tabulation headquarters warehouse, which started at midnight? Also, please see quote below from the election timeline... a "small handful" is 11 USB's (that is 2 handfuls plus one finger) not returned ?

**"Midnight Update:**

Operations at the warehouse ended this evening/morning at 12 AM.

All mail-in and absentee ballots were scanned, and results uploaded to the results page. There are a small handful of precincts that are not reporting.

**Materials from the regional reporting centers are coming back to the warehouse now, but no further updates will be made."**

In summary, attached is an infographic depicting the Allegheny election process. There is no transparency to a logical mind.

So much of the public confusion surrounding our elections and lack of trust could be easily resolved if our legislators, from both sides of the aisle, would agree to be transparent with our votes.

Thank you,

Mary Jo Costello  
Allegheny County Resident

## Comments to the Board of Elections for the Nov. 28, 2022 meeting

*From William Towne*

Greetings! I come before you today to object to certification of election results which include the tabulation of hundreds of thousands of ballots which the County holds are not official ballots. Only official ballots should count in the certified election results! My core requests are emphasized below:

### **Pass a motion making postal ballots official before certifying election results set by non-official ballots**

According to appeals filed by the County in Court of Common Pleas cases SA-22-{342, 343, & 612}, **none** of the mail-in or absentee ballots counted in past elections constitute official ballots – only sample ballots or unvoted ballots as of the time they are mailed out to voters constitute official ballots. Once an eligible voter has voted and returned the ballot in accordance with instructions, the County claims these ballots cease to be official ballots, but they are still counted toward the totals you are asked to certify. 25 P.S. § 3150.17(a) states that “All official mail-in ballots, ...are designated and declared to be public records and shall be safely kept for a period of two years.” 25 P.S. § 3146.9 says the same about absentee ballots. The County’s categorization of all counted postal ballots as not official ballots is openly an attempt to evade this important transparency law, but **only official ballots should be counted in the vote totals**. It would be very easy for those who are unsatisfied with election outcomes to point to this counting of hundreds of thousands of ballots which are NOT official ballots, which are enough to flip some races in favor of the declared winner, as a basis for justifying violent responses. The Jan. 6, 2021 Capitol riot shows just the beginning of what is possible when enough people have even much less of an official source than the County’s own court filings and testimony to support their conclusion about a large number of other-than-official ballots being counted against them.

Fortunately, there is an easy way to fix this issue, with a motion passed by the Board of Elections, as the only citizen oversight of elections accountable to voters. You can override the Election Division’s determination by passing a motion (a) declaring that all mail-in and absentee ballots included in the vote totals to be certified are official ballots, and (b) ordering withdrawal of the County-filed appeals to the contrary in the above-cited cases (and any others in which the County may be taking a similar position). This would also better serve citizens financially than spending a lot of money fighting to hold this position in court and ultimately losing.

The Board can and should do this prior to the certification of these election results, OR not certify election results which have been determined by votes tabulated from ballots that **the Elections Division claims are not official ballots**. The latter would disenfranchise hundreds of thousands of voters who followed County instructions in good faith, so I think the strategy of passing a motion overriding the Division and declaring those to be official ballots is a better way of resolving the discrepancy.

### **Pass a motion protecting voters’ privacy from the Elections Division uniquely numbering ballots**

Because the Board has repeatedly declined requests (which I hereby repeat again here) to schedule regular monthly meetings, it appears likely that this will be the last meeting of the Board which can affect procedures for sending out postal ballots in the 2023 primary and upcoming special elections. In earlier public comments (e.g. see 9/20/22), which were completely ignored and not even summarized at the meeting as promised on the Board’s website nor responded to as is often promised by the Elections

Division upon the Board's request, I sought a motion from the Board against the County's practice of uniquely numbering postal ballots. This motion should apply to **all future elections** and require that:

1. Ballots in the same municipality, ward, precinct, precinct split (if applicable), party (in a primary), and method (e.g. mail-in vs. absentee) must **not** be otherwise distinguishable before being marked by voters,
2. No voter-specific or voter-identifying markings shall be added to ballots by anyone other than the voter at any time (and though out of the County's control, the voter shouldn't either),
3. Privacy envelopes (with the hash markings inside, commonly used in personal and business correspondence) shall be used for ballot secrecy envelopes, and
4. The County should have and follow written procedures requiring ballot-containing secrecy envelopes to be mixed up in large batches before being opened, after they have been removed from declaration envelopes and inspected for any voter-specific markings.

This motion should be passed regardless of what claims or assurances of voluntary compliance you might receive from the Division regarding this next election, because of how often you have received lies from the Division in response to your direct questions. It is distressing to see the Board repeatedly refuse to pass such a motion even when its failure to do so leads to violation of voters' constitutional right to ballot privacy (Article 7 § 4) and violations of the Election Code, for examples 25 P. S. § 2963(g) ("ballots shall vary in form only as the names of districts, offices, candidates or the provisions of this act may require."), 25 P. S. § 2964 ("All ballots for use in the same election district at any primary or election shall be alike."), or 25 P. S. § 3063(a) ("No ballot which is so marked as to be capable of identification shall be counted.") Please pass this motion!

#### **Pass a motion requiring quality, documented, observable procedures for remaking ballots**

In this past November election, the direction of the screens used to remake ballots (e.g. from military/civilian overseas write-in ballots) was helpfully changed, but it was still too far away from observers to be able to see if the remaking was being completed accurately. Further, there are no documented procedures that observers could check practice against. Such procedures should be documented, published, followed, and subject to improvements, such as being able to have multiple people with opposing interests at least observe the full details of the process instead of just having sole County employees working by themselves inventing *ad hoc* procedures each election.

#### **Ensure backup for ePollbooks**

The County noted at election worker trainings that electronic pollbooks are planned for next year, though there has been little to no discussion of this in a way that would allow for public awareness and input into system selection or the design of surrounding procedures so as to satisfy legitimate concerns. Collective experience from other jurisdictions shows that these systems sometimes go down, which can severely reduce trust in elections administration. The County should maintain a backup paper-based option and adequately train pollworkers on when and how to use that backup, in addition to the primary system, even if this requires increasing the length of pollworker training. The apparent lack of plans for a backup is especially concerning given the recent elimination of any faster-queue option for judges of election to call the Elections Division for resolution of election day problems, leading to more bounces from full call queues and long hold times mixed in with what other members of the public experience when trying to reach the Elections Division by phone on election day.

Thank you for your time and attention to these matters.

From: [REDACTED]  
To: [# Board of Elections](#)  
Subject: Scytl and the trapdoor BOE submission for 11/28/2022  
Date: Sunday, November 27, 2022 12:32:45 AM  
Attachments: [UniversalVerifiabilitySwissPost scytl trap door.pdf](#)

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Dear Allegheny County BOE:

The more that I learn about voting machines, scanners, tabulators, etc., the more determined I become to make sure that they do not have a future in our elections. As the attached paper, "*Ceci n'est pas une preuve The use of trapdoor commitments in Bayer-Groth proofs and the implications for the verifiability of the Scytl-SwissPost Internet voting system*" demonstrates, they are neither secure, nor transparent.

Following are some quotes from the attached:

"...Scytl...uses a trapdoor commitment scheme, which allows an authority who knows the trapdoor values to generate a shuffle proof transcript **that passes verification but actually alters votes.**" (Page 1 emphasis mine)

"We show that the...-Scytl mixnet specification and code recently made available for analysis does not meet the assumptions of a sound shuffle proof and hence **does not provide universal or complete verifiability.**" (Page 2 emphasis mine)

"We will show how this can be used to produce a proof of a shuffle **that passes verification but actually manipulates votes.**" (Page 4 emphasis mine)

"**This produces a proof that passes verification, though the election outcome has been changed.**" (Page 6 emphasis mine)

"How can there be a trapdoor when the system has been formally proven secure?  
Any formal proof of correctness for any system makes some assumptions that become axioms in the formal proof. Scytl's formal proof of security [Scy18] simply models the mixnet as sound, based on an informal interpretation of Bayer and Groth's security proof. It does not model the proper generation of commitment parameters. We do not see any reason to believe there is an error in Scytl's proof, **but when the axioms are mistaken the conclusions are not valid.**

This does not mean that formal proofs are not valuable—at an absolute minimum, they clarify assumptions and explain the reasons for trust—**but it does mean that they are not a substitute for broad and open public scrutiny.** It is quite possible that there are errors in the implementations of other cryptographic primitives, that their details may not be modelled in the formal proofs, and **that they may affect either privacy or verifiability.**" (pages 8 & 9 emphasis mine)

"This mixnet has a trapdoor—a malicious administrator or software provider for the mix **could manipulate votes but produce a proof transcript that passes verification. Thus complete verifiability fails.**

Even if this particular issue is corrected, we do not know whether there might be other ways of manipulating votes while still producing an apparently-verifiable election outcome, or **other manipulations that would lead to vote privacy violations.**" (Page 9 emphasis mine)

Is there reasonable doubt about the security of this machine? Yes. The machines have made our elections, and therefore our votes, less transparent and less verifiable.

If I cannot be certain that my vote was cast and counted with my intention verified (not manipulated)-then I am being disenfranchised. I am no longer a free citizen of this republic, but have become a subject to those who have been “selected” by the machines.

No More Machines

No more (S)elections

Hand counted Paper Ballots

Same day voting

...a return to: “ A Government of the people, by the people, and for the people.”

Thank you.

Brenda Forman

Pittsburgh 15232

# Ceci n'est pas une preuve

## The use of trapdoor commitments in Bayer-Groth proofs and the implications for the verifiability of the Scytl-SwissPost Internet voting system\*

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March 12, 2019

The implementation of the commitment scheme in the SwissPost-Scytl mixnet uses a trapdoor commitment scheme, which allows an authority who knows the trapdoor values to generate a shuffle proof transcript that passes verification but actually alters votes. We give two examples of details of how this could be used. The first example allows the first mix to use the trapdoors to substitute votes for which it knows the randomness used to generate the encrypted vote. The second example does not even require knowledge of the random factors used to generate the votes, and could be used by the last mix in the sequence.

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\*Since making this work public, we have learned that the same issue was identified independently by Thomas Haines of NTNU, and also by Rolf Haenni of the Bern University of Applied Sciences, <https://e-voting.bfh.ch/publications/2019/>

# 1. Introduction

## 1.1. Universal and Complete Verifiability

Verifiability is a critical part of the trustworthiness of e-voting systems. Universal verifiability means that a proof of proper election conduct should be verifiable by any member of the public. The authorities who conduct the election produce a mathematical proof transcript as evidence that they have conducted the election properly, then any member of the public can download and inspect the verification software (or write their own) to check that the election outcome is correct.

The Swiss sVote voting system claims to offer a form of verifiability, called “complete verifiability”, which aims at offering the same guarantees as universal verifiability under the extra assumption that at least one of the components on the server-side, i.e., the people running the voting system, behaves honestly [Scy18]. (Universal verifiability offers guarantees even if all server-side components are malicious.)

In order to achieve complete verifiability, the sVote system produces audit data. One component of those audit data, which is used to demonstrate that the votes that are received are actually counted, is a sequence of proofs of shuffle—each mix server is supposed to prove that the set of input votes it received correspond exactly to the differently-encrypted votes it output.

These proofs can be complicated because they need to protect voter privacy. However, their trust assumptions are simple: it should not be possible for any collusion of authorities, whether those who hold the decryption keys, those who write the software, or those who mix the votes, to provide a proof transcript that passes verification but alters votes.

## 1.2. Summary of our Contribution

We show that the SwissPost-Scytl mixnet specification and code recently made available for analysis does not meet the assumptions of a sound shuffle proof and hence does not provide universal or complete verifiability.

The problem derives from the use of a trapdoor commitment scheme in the shuffle proof—if a malicious authority knows the trapdoors for the cryptographic commitments, it can provide an apparently-valid proof, which passes verification, while actually having manipulated votes. There is no modification of the audit process that would make it possible to detect if a manipulation happened. Instead, the key generation process for the commitment scheme should be modified in such a way that it offers evidence that no trapdoor has been produced, and the audit process should include the verification of this new evidence.

We give two examples of how knowledge of the commitment trapdoors could be used to provide a perfectly-verifying transcript while actually manipulating votes.

The first example allows the first mix to use the trapdoors to substitute votes for which it knows the randomness used to generate the encrypted vote. While this requires some violation of privacy, it is consistent with the requirements of the system, which



state that an attacker shall not be able to change a vote even if voting clients are compromised [Scy18], and such a compromise could violate privacy. (We believe that the assumption that voting clients may be compromised is sound too: the voting system cannot do anything to guarantee that the computer of the voter does not contain any malware.)

The second example allows the last mix to use the same trapdoors to modify votes and does not require any violation of privacy, but has some constraints on the candidates for which votes could be added or removed. If, for some reason, these constraints are not satisfied, then the same strategy can still be used to render some chosen votes invalid.

We have attached example cheating transcripts to this report and encourage the public to verify them.

## 2. The soundness of the shuffle proof

The Scytl-Swisspost mixnet uses a provable shuffle due to Bayer and Groth [BG12]. We describe here an important implementation detail that allows the forging of apparently-verifying Bayer-Groth proofs. It is *not* a fault in the B-G proof mechanism, but rather in this specific implementation of it.

The issue concerns the soundness of the commitments. A core security requirement of commitment schemes is that they be *binding*, meaning that once someone has committed to a particular value, they can open the commitment only to that value.

The Bayer-Groth proof uses a generalisation of Pedersen commitments with multiple generators  $H, G_1, G_2, \dots, G_n$ . They describe the scheme as “computationally binding under the discrete logarithm assumption,” (p.5). This phrasing is slightly confusing to the naive reader—it would be clearer to say that the scheme is a *trapdoor commitment scheme*. Trapdoor commitment schemes have various uses in cryptography (see [Fis01] for an excellent survey), because they are binding only on the assumption that certain secrets (the “trapdoors”) are not known to the committer.

The crucial point for the shuffle proof is then to guarantee that no one can learn the discrete logarithm of any generator  $H$  or  $G_i$  to base  $G_j$  (or of any non-trivial product of other generators). If someone knows the discrete log of  $G_i$  wrt  $G_j$ , they can create a commitment that they can open in multiple ways.

The system should prove, and the verifiers should check, that these generators are selected properly, that is, without the possibility for anyone to learn a trapdoor except by computing discrete logs.

In the Scytl-Swisspost code, the commitment parameters are just randomly generated without a proof of how they arose. Indeed, each mixer generates its own commitment parameters as follows:

```
public CommitmentParams(final ZpSubgroup group, final int n) {
    this.group = group;
    this.h = GroupTools.getRandomElement(group);
    this.commitmentlength = n;
}
```

```

    this.g = GroupTools.getVectorRandomElement(group, this.commitmentlength);
}

```

The implementation of `getVectorRandomElement` gathers random group elements without proving where they came from. Even more worryingly, `getVectorRandomElement` calls `getRandomElement`, which proceeds as follows:

```

Exponent randomExponent = ExponentTools.getRandomExponent(group.getQ());
return group.getGenerator().exponentiate(randomExponent);

```

This `randomExponent`, which is used to generate the random group element, is precisely the trapdoor that is needed to break the binding property of the commitment scheme. As a result, the binding property completely relies on the expectation that this `randomExponent` variable is properly erased from the memory.

These commitment parameters are eventually used in `ShuffleProofGenerator.java` to build the shuffle proof.

In summary: the implementation does not provide a proof, and the verifier cannot check, that the important assumption of discrete log hardness made by Bayer and Groth is valid here. It is possible for a malicious authority to generate the perfectly random  $G_1, G_2, \dots$  in a way that, at the same time, gives it a trapdoor that falsifies an assumption that is central to the security of the Bayer-Groth mixnet construction.

We will show how this can be used to produce a proof of a shuffle that passes verification but actually manipulates votes.

## 2.1. Details about the commitment scheme

The commitment scheme works over a group  $\mathbb{G}$  of prime order  $q$ . The authority is supposed to choose  $n + 1$  commitment parameters  $ck = H, G_1, G_2, \dots, G_n$  at random from  $\mathbb{G}$ . To commit to  $n$  values  $a_1, a_2, \dots, a_n$ , it chooses a random exponent  $r$  and computes

$$\text{com}_{ck}(\vec{a}; r) = H^r \prod_{i=1}^n G_i^{a_i}.$$

Commitment opening consists simply of reporting  $\vec{a}$  and  $r$ .

Bayer and Groth say clearly that the commitment parameters should be generated at random and that the soundness of the commitment scheme depends on the hardness of computing discrete logs in the group. It's quite obvious that this assumption is necessary. For example, suppose that a cheating authority generates commitment parameters  $ck = H, H^{e_1}, H^{e_2}, \dots, H^{e_n}$  for some  $H$ . That is,  $G_i = H^{e_i}$  for  $i = 1..n$ . Then it can open commitments arbitrarily. A commitment  $\text{com}_{ck}(\vec{a}; r)$  can be opened as  $\text{com}_{ck}(\vec{b}; r')$  by setting

$$r' = r + \sum_{i=1}^n e_i(a_i - b_i) \tag{1}$$

because

$$\begin{aligned}
\text{com}_{ck}(\vec{a}; r) &= H^r \prod_{i=1}^n G_i^{a_i} \\
&= H^r \prod_{i=1}^n H^{a_i e_i} \\
&= H^{r + \sum_{i=1}^n (a_i - b_i) e_i} \prod_{i=1}^n H^{b_i e_i} \\
&= H^{r'} \prod_{i=1}^n G_i^{b_i} \\
&= \text{com}_{ck}(b; r').
\end{aligned}$$

## 2.2. Details about the shuffle proof

Now consider how an ability to open commitments arbitrarily could be used to produce a shuffle proof that verifies but is false.

### 2.2.1. Faking a proof of ciphertexts with known randomness

Our demonstration shows how an attacker who knows the trapdoor can manipulate any votes for which it learns the randomness used to generate the vote ciphertext. This would allow the first mixer, in collusion with voting clients, to manipulate votes undetectably. A working demonstration transcript is submitted together with this report. Here we explain how it was generated.

The group  $\mathbb{G}$  is defined as the subgroup of quadratic residues modulo a large prime, and each message is a (small quadratic residue) prime, (or the product of such primes, mod  $p$ , but let's leave out that case for now). We write the primes used to encode the messages as  $q_1, q_2, \dots$ . The prover commits to applying permutation (shuffle)  $\pi$ .

Suppose we have three input ciphertexts  $C_1 = \mathcal{E}_{pk}(M_1, \rho'_1)$ ,  $C_2 = \mathcal{E}_{pk}(M_2, \rho'_2)$ ,  $C_3 = \mathcal{E}_{pk}(M_3, \rho'_3)$  with known messages  $M_1, M_2, M_3$  and randomness  $\rho'_1, \rho'_2, \rho'_3$ , and one input ciphertext  $C_4$  whose contents and randomness are unknown.

The idea of the cheat is, for each prime  $q_k$ , to accumulate all the votes for  $q_k$ , for which the attacker knows the contents and randomness, into one  $\pi(i)$ . The attacker can then substitute all the other votes (for which it know the randomness) with arbitrary votes of its own choice.

This attack succeeds with arbitrarily many known and unknown votes, as long as the number of known votes is larger than the number of candidates that received at least one vote—the attacker can substitute the votes for which it knows the randomness, and must honestly shuffle those for which it does not know the randomness.

We illustrate with a small example. Suppose  $M_1 = M_2 = q_1$  and  $M_3 = q_2$ .  $M_4$  is unknown. The cheating prover will apply the identity permutation (just for clarity here, this has no impact on the attack) and set

$$\begin{aligned}
C'_1 &= \mathcal{E}_{pk}(1; \rho_1) C_1 = \mathcal{E}_{pk}(M_1, \rho_1 + \rho'_1) \\
C'_2 &= \mathcal{E}_{pk}(1; \rho_2) C_3 = \mathcal{E}_{pk}(M_3, \rho_2 + \rho'_3) \\
C'_3 &= \mathcal{E}_{pk}(1; \rho_3) C_3 = \mathcal{E}_{pk}(M_3, \rho_3 + \rho'_3) \\
\text{and } C'_4 &= \mathcal{E}_{pk}(1; \rho_4) C_4 = \mathcal{E}_{pk}(M_4, \rho_4 + \rho'_4)
\end{aligned}$$

If  $C_4$  is an encryption of  $q_4$  (neither  $q_1$  nor  $q_2$ ), the substitution of  $M_3$  for  $M_2$  in the second vote changes the winner: it used to be  $q_1$ ; now it's  $q_2$ . The cheating prover knows  $M_1, M_2, M_3$  but not  $M_4$ . It also knows  $\rho'_i$  for  $i = 1, 2, 3$  but not  $\rho'_4$ .

The high-level protocol is described in Bayer & Groth p.8.

Input:  $m = 2, n = 2, N = 4, \vec{C} = \{C_1, C_2, C_3, C_4\}, \vec{C}'$  as above; permutation  $\pi$ . We will compute  $\rho$  carefully later.

Suppose the mix has generated the trapdoored commitment key as in Section 2.1. The cheating shuffler's initial message  $\vec{c}_A$  is a (truthful) commitment to  $\pi$ . That is,

$$\vec{c}_A = \text{com}_{ck}(\vec{A}_1; r_1), \text{com}_{ck}(\vec{A}_2, r_2) \text{ where } \vec{A}_1 = (\pi(1), \pi(2)) \text{ and } \vec{A}_2 = (\pi(3), \pi(4))$$

It then commits honestly to  $\vec{B}$  as

$$\vec{c}_B = \text{com}_{ck}(\vec{B}_1; s_1), \text{com}_{ck}(\vec{B}_2, s_2) \text{ where } \vec{B}_1 = (x^{\pi(1)}, x^{\pi(2)}) \text{ and } \vec{B}_2 = (x^{\pi(3)}, x^{\pi(4)})$$

Now consider how the cheating shuffler responds to the second challenge  $y, z$  and generates a convincing answer for both parts. In the first part of the challenge, when it generates answer 1 in response to  $y, z$ , it treats  $\vec{c}_B$  as a commitment to  $x^\pi$  and answers the product argument (Bayer & Groth Section 5) honestly.

**Cheating on the multi-exponentiation argument** In the second part of the challenge, it generates a cheating permutation  $\pi_{cheat}$ , which isn't actually a permutation, as follows:

$$\begin{aligned} \pi_{cheat}(1) &= x + x^2 \\ \pi_{cheat}(2) &= 0 \\ \pi_{cheat}(3) &= x^3 \\ \pi_{cheat}(4) &= x^4 \end{aligned}$$

The attacker then runs the multi-exponentiation argument from Section 4 of BG exactly as given, except for the following changes.

- It sets

$$\rho = -\rho_1 x - (\rho_1 + \rho'_1)x^2 + x^2 \rho'_2 - \rho_3 x^3 - \rho_4 x^4. \quad (2)$$

(See Appendix A.1 for why this works.)

- It treats  $\vec{c}_B = \text{com}_{ck}(\vec{B}_1; s_1), \text{com}_{ck}(\vec{B}_2, s_2)$  as a commitment to  $\pi_{cheat} = ((x + x^2, 0)(x^3, x^4))$ .
- It computes commitment openings  $\vec{s}$  for  $\pi_{cheat}$  using Equation 1 and the random values  $s_1$  and  $s_2$ .

This produces a proof that passes verification, though the election outcome has been changed. An example transcript, which passess verification, is attached with this report.

### 2.2.2. Faking a proof of ciphertexts with unknown randomness

As a second example, we exploit the trapdoor in the commitment scheme to break the soundness of the proof of shuffle, even in a situation in which we do not know the randomness or the content of any vote.

In this case, the malicious party could be the last mixer. This mixer indeed has the advantage of being able to perform the final decryption step, which means that it may know the content of the votes that it mixes before actually mixing them. (It could also be the first mixnet if it has some other way of learning the contents of the votes.)

We make the following assumption (many variants are possible): We know how to express the prime quadratic residue used to encode a candidate as a power of the generator  $G$  used for ElGamal encryption.<sup>1</sup> For instance, the secure 2047-bit subgroup of quadratic residues provided in the sources is generated by 2, which is used as a the ElGamal encryption generator and may very well also be chosen to encode a candidate. In the following example, we use that case for simplicity.

We note that the system specification does not require that at least one of the primes used to represent candidate should coincide with the generator used for ElGamal encryption. This is however permitted and plausible: the candidate encoding mechanism used in the system is more efficient when the prime quadratic residues that are used are as small as possible.

For concreteness, suppose that voters can support as many candidates as they want and that the last mixer receives input ciphertexts  $C_1 = \mathcal{E}_{pk}(M_1, \rho'_1)$ ,  $C_2 = \mathcal{E}_{pk}(M_2, \rho'_2)$ ,  $C_3 = \mathcal{E}_{pk}(M_3, \rho'_3)$ ,  $C_4 = \mathcal{E}_{pk}(M_4, \rho'_4)$  such that the candidate "2" does not win the election.

The last mixer can now perform the final decryption step in order to identify which of these ciphertexts do not contain a vote for "2". It does not learn the randomness  $\rho'_1, \rho'_2, \rho'_3, \rho'_4$ . Again, for simplicity, let us assume that the mixer finds out that nobody voted for "2".

In order to manipulate the outcome, the mixer defines the output ciphertexts as  $C'_i = \mathcal{E}_{pk}(2, \rho_i)C_i$ . By the homomorphic property of ElGamal, We have added a vote for "2" to each ciphertext. (For ease of exposition we use the identity permutation on the list of ciphertexts, but any permutation is possible.)

We play the Bayer-Groth shuffle perfectly honestly, except for the multi-exponentiation argument. Indeed, that argument raises a difficulty because the statement equation  $\vec{C}^{\vec{x}} = \mathcal{E}_{pk}(1; \rho) \vec{C}'^{\vec{b}}$  does not hold. Instead, the equation  $\vec{C}^{\vec{x}} = \mathcal{E}_{pk}(2^{-x-x^2-x^3-x^4}; \rho) \vec{C}'^{\vec{b}}$  holds, for  $\rho = -\rho_1x - \rho_2x^2 - \rho_3x^3 - \rho_4x^4$ , which is known to the mixer. In order to make the proof pass the verification despite this, we will use the trapdoor of the commitments in the multi-exponentiation argument.

We follow the notation in Bayer & Groth, Section 4. In the initial message, we cheat on the commitment  $c_{B_m} = \text{com}_{ck}(b_m, s_m)$ : instead of setting  $b_m = s_m = 0$ , we set

<sup>1</sup>This assumption guarantees that we can actually modify votes in a chosen way. If it is not satisfied, the strategy discussed here would still make it possible for the last mixer to pick ballots that contain votes that it does not like, and completely rerandomize them in order to render them invalid. This targeted modification could also change an election outcome.

$b_m = -x - x^2 - x^3 - x^4$  and use the trapdoors to compute  $s_m$  such that  $\text{com}_{ck}(b_m; s_m) = \text{com}_{ck}(0; 0)$ . This choice makes sure that  $c_{B_m} = \text{com}_{ck}(0; 0)$  and  $E_m = \tilde{C}^x$ , as required in the first two steps of the proof verification steps.

All the other verification steps pass, as we did not break the truthfulness of any of the underlying proofs.

### 3. Discussion

**Ease of exploiting the problem** The first attack requires knowing the randomness used to generate the vote ciphertexts that will be manipulated. There are several ways this could be achieved. For example, an attacker could compromise the clients used for voting. Weak randomness generation (such as that which affected the Norwegian Internet voting system) would allow the attack to be performed without explicit collusion.

The second attack does not require any extra information at all, though it does rely on the election parameters having been set up in a particular way, and on multiple selections being accepted as valid votes.

**Correcting the problem** The issue needs to be corrected by ensuring that the commitment parameters are generated in a way that prevents any entity from knowing the discrete logs.

There are various techniques to do this—they are sometimes called “nothing up my sleeve numbers.” A standard solution is to derive these group elements directly from applying a PRG based on a cryptographic hash function, the outputs of which are then mapped to group elements.<sup>2</sup>

Every verifier then needs to check the generation of the commitment parameters as well as the rest of the proof transcript.

We understand that SwissPost and Scytl have corrected the issue by generating the commitment parameters according to NIST FIPS 186-4, Appendix 2.3. Although we have not seen the implementation, we consider this approach to be appropriate for generating the commitment parameters. However, generating the commitment parameters properly might not completely resolve the problem. The FIPS standard should also be used to generate the group parameters  $p, q$ . This issue and the correction require further public scrutiny.

#### **How can there be a trapdoor when the system has been formally proven secure?**

Any formal proof of correctness for any system makes some assumptions that become axioms in the formal proof. Scytl’s formal proof of security [Scy18] simply models the mixnet as sound, based on an informal interpretation of Bayer and Groth’s security proof. It does not model the proper generation of commitment parameters. We do not

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<sup>2</sup>This technique is used, for example, in the Verificatum mixnet [Wik] (that is, for a different shuffling algorithm).

see any reason to believe there is an error in Scyt1's proof, but when the axioms are mistaken the conclusions are not valid.

This does not mean that formal proofs are not valuable—at an absolute minimum, they clarify assumptions and explain the reasons for trust—but it does mean that they are not a substitute for broad and open public scrutiny. It is quite possible that there are errors in the implementations of other cryptographic primitives, that their details may not be modelled in the formal proofs, and that they may affect either privacy or verifiability.

**Source of the problem** Nothing in our analysis suggests that this problem was introduced deliberately. It is entirely consistent with a naive implementation of a complex cryptographic protocol by well-intentioned people who lacked a full understanding of its security assumptions and other important details. Of course, if someone did want to introduce an opportunity for manipulation, the best method would be one that could be explained away as an accident if it was found. We simply do not see any evidence either way.

## 4. Conclusion

This mixnet has a trapdoor—a malicious administrator or software provider for the mix could manipulate votes but produce a proof transcript that passes verification. Thus complete verifiability fails.

Even if this particular issue is corrected, we do not know whether there might be other ways of manipulating votes while still producing an apparently-verifiable election outcome, or other manipulations that would lead to vote privacy violations.

The issues reported here are the result of the analysis of an isolated, but critical, part of the code. This voting system is highly complex, there are many other critical parts, and we did not look at them. As a result, we have no reason to believe, based on this work, than there are no other critical issues in this implementation.

## 5. Acknowledgements

Many thanks to Andrew Conway for tremendous help with the code, and to Aleks Essex, Matt Green and Hovav Shacham for many valuable discussions.

## 6. A note on code authenticity

We did not officially enrol for the Swiss Post researcher test. We downloaded this codebase from an unofficial repository and received confirmation of its authenticity from researchers with access to the official codebase. We are highly confident that this is a real trapdoor in the current implementation.

## References

- [BG12] Stephanie Bayer and Jens Groth. Efficient zero-knowledge argument for correctness of a shuffle. In *Annual International Conference on the Theory and Applications of Cryptographic Techniques*, pages 263–280. Springer, 2012.
- [Fis01] Marc Fischlin. *Trapdoor commitment schemes and their applications*. PhD thesis, Goethe-University of Frankfurt, 2001.
- [Scy18] Scytl. Scytl svote – complete verifiability security proof report - software version 2.1 - document 1.0. <https://www.post.ch/-/media/post/evoting/dokumente/complete-verifiability-security-proof-report.pdf>, 2018.
- [Wik] Douglas Wikström. Verificatum mixnet. <https://www.verificatum.com/>.

## A. Technical detail on how to generate a fake proof transcript with known randomness

### A.1. Calculating $\rho$

This section shows why we get the expression for  $\rho$  that we use above.

We needed to find  $\rho$  s.t.

$$\vec{C}^{\vec{x}} = \mathcal{E}_{pk}(1; \rho) \vec{C}'^{\vec{b}}$$

where  $\vec{C}$  are the input ciphertexts and  $\vec{C}'$  are the output ciphertexts. (Bayer-Groth p.8)

$$\begin{aligned} LHS &= \vec{C}^{\vec{x}} \\ &= \prod_{j=1}^4 C_j^{x^j} \\ &= \mathcal{E}_{pk}(q_1^{x+x^2} q_2^{x^3} q_4^{x^4}; \sum_{i=1}^4 x^i \rho'_i) \\ RHS &= \mathcal{E}_{pk}(1; \rho) \vec{C}'^{\vec{b}} \\ &= \mathcal{E}_{pk}(q_1^{x+x^2} q_2^{x^3} q_4^{x^4}; \rho + (\rho_1 + \rho'_1)(x + x^2) + (\rho_3 + \rho'_3)x^3 + (\rho_4 + \rho'_4)x^4). \\ \text{So } \rho &= -\rho_1 x - (\rho_1 + \rho'_1)x^2 + x^2 \rho'_2 - \rho_3 x^3 - \rho_4 x^4. \end{aligned}$$

Note  $\rho'_4$  is unknown but  $\rho'_4 x^4$  cancels out.



**Voye, David**

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**From:** ellen mccracken <[REDACTED]>  
**Sent:** Sunday, November 27, 2022 10:01 AM  
**To:** # Board of Elections  
**Subject:** BOE, Monday, NOV. 28, 2022

Warning! This email was sent from an external source. Please be sure you recognize the sender and use caution when clicking on links and/or opening attachments.

I hope to speak at tomorrows BOE. My name is Ellen McCracken, [REDACTED] Monroeville, PA 15146

I see 3 paths. Fix the people, fix the process, fix the philosophy. I ask myself, should I become an evangelist and fix the people, a political activist and fix the process or a Jordan Peterson and fix the philosophy (or some other contemporary version of Socrates and St. Augustine combined, either in podcast or preaching or publishing).

## PEOPLE

Every sin known to mankind is reflected in my email directory. The subject lines read like narrative output of an Examination of Conscience except not for an individual but for the entire population of the nation / world. Everyday I read of cheating, stealing, sexual violations in marriage and out of marriage, new controversies, old controversies, made up controversies. And lately a get out of jail free card for the guilty and prosecution of those reflecting moral high ground. Who can fix it?

## PHILOSOPHY

There is an increasing darkness of the intellect that no longer can figure out how people should live in accord with one another because individuals are at war with their own soul and thus at war with others. We throw out the wisdom of the ages and try to write a new wisdom of a media driven consensus based on expediency and vested interest, because who can factor in common good in a free fall, with disputed moral anchors.

## PROCESS

Remember Peter Drucker, the business guru? Well, we are the feedback loop he championed. But you are not listening? And yet of the 3 paths, PROCESS is probably the easiest to fix. Process can

CONSTRAIN. We have well established best business processes defined. Can the voting process be improved? Can we ask the Board to apply best business practice to the election process. Can we explore this concept further? Can you conjecture?

## Culture

As a species, are we ascending or descending (think Planet of the Apes), i.e., and which way is mankind going. And does anyone care about the species, the "climate change" of the human race. But culture is an ephemeral thing. Only the individual is really identifiable. One COURAGEOUS individual can change the world (think Madame Curie or Mother Theresa), one COURAGEOUS individual on a Board of Elections can champion the truth, right reason, logical thinking. Who can fight against the Beast (the great Deceiver, Liar)? Oh, would that be like the first century Christians saying who can disciple the nations? How did it actually happen, even for one brief shining moment. Can it still?

**Allegheny County Department Of Court Records**

Civil/Family Division Docket Report

Run Date and Time: 11/24/2022 - 22:29:25

GD-22-014098

In Re: Petition to Open Ballot Box Pursult to 25 P

Filing Date:  
11/17/2022

Related Cases:

Consolidated Cases:

Judge:  
No Judge

Amount In Dispute:  
\$0

Case Type:  
Miscellaneous Petition

Court Type:  
General Docket

Current Status:  
Petition Initiating Case

Jury Requested:  
N

--Parties--

| LName   | FName   | MI | Type       | Address                                | Initial Service Completion | Attorney |
|---------|---------|----|------------|--|----------------------------|----------|
| Jarek   | Karl    |    | Petitioner | 1156 Sunrise Drive Pittsburgh PA 15243 | --                         | Pro Se   |
| Olinger | Doris   |    | Petitioner | 1117 Sunrise Drive Pittsburgh PA 15243 | --                         | --       |
| Newman  | Gregory |    | Petitioner | 1140 Sunrise Drive Pittsburgh PA 15243 | --                         | --       |

--Attorney--

| LName  | FName | MI | Type     | Address | Phone |
|--------|-------|----|----------|---------|-------|
| Pro Se |       |    | Attorney |         | --    |

--Non Litigants--

| LName              | FName | MI | Type | Address | Phone |
|--------------------|-------|----|------|---------|-------|
| No Litigants Found |       |    |      |         |       |

--Docket Entries--

|                                  |  |                    |                                   |
|----------------------------------|--|--------------------|-----------------------------------|
| <b>Filing Date</b><br>11/17/2022 | <b>Docket Type</b><br>Petition Initiating Case | <b>Docket Text</b> | <b>Filing Party</b><br>Karl Jarek |
|----------------------------------|--|--------------------|-----------------------------------|

|             |               |  |
|-------------|---------------|--|
| <b>Name</b> | <b>Amount</b> | <b>--Judgments Against--</b><br>Satisfied(Y,N)<br>No Judgments Found |
|-------------|---------------|--|

|                        |                              |   |                              |
|------------------------|------------------------------|---|------------------------------|
| <b>Event Scheduled</b> | <b>Event Date &amp; Time</b> | <b>--Events Schedule--</b><br>Room Number<br>No Information Found | <b>Judge/Hearing Officer</b> |
|------------------------|------------------------------|---|------------------------------|

# Allegheny County Department Of Court Records

Civil/Family Division Docket Report

Run Date and Time: 11/24/2022 - 22:30:54

GD-22-014135

In Re: Petition to Open Ballot Box Pursuit to 25 P

Filing Date:

11/18/2022

Related Cases:

Consolidated Cases:

Judge:

No Judge

Amount in Dispute:

\$0

Case Type:

Miscellaneous Petition

Court Type:

General Docket

Current Status:

Petition Initiating Case

Jury Requested:

N

### --Parties--

| LName     | FName  | MI | Type       | Address                          | Initial Service Completion | Attorney |
|-----------|--------|----|------------|----------------------------------|----------------------------|----------|
| Marks     | Janice | J. | Petitioner | 107 Logan Road Imperial PA 15126 | --                         | Pro Se   |
| Marks     | Hunter |    | Petitioner | 107 Logan Road Imperial PA 15126 | --                         | --       |
| Fullerton | Robert |    | Petitioner | 201 Logan Road Imperial PA 15126 | --                         | --       |

### --Attorney--

| LName  | FName | MI | Type     | Address | Phone |
|--------|-------|----|----------|---------|-------|
| Pro Se |       |    | Attorney |         | --    |

### --Non Litigants--

| LName              | FName | MI | Type | Address | Phone |
|--------------------|-------|----|------|---------|-------|
| No Litigants Found |       |    |      |         |       |

### --Docket Entries--

Filing Date

11/18/2022

Docket Type

Patron Initiating Case

Docket Text

Filing Party

Jamie Marks J

Name

Amount

~~Judgments Against~~

Satisfied(Y/N)

No Judgments Found

Event Scheduled

Event Date & Time

~~Events Schedule~~

Room Number

Judge/Hearing Officer

No Information Found

# Allegheny County Department Of Court Records

Civil/Family Division Docket Report

Run Date and Time: 11/24/2022 - 22:32:0

GD-22-014136

In Re: Petition to Open Ballot Box Pursult to 25 P

Filing Date:

11/18/2022

Related Cases:

Consolidated Cases:

Judge:

No Judge

Amount In Dispute:

\$0

Case Type:

Miscellaneous Petition

Court Type:

General Docket

Current Status:

Petition Initiating Case

Jury Requested:

N

### --Parties--

| LName    | FName   | MI | Type       | Address                               | Initial Service Completion | Attorney |
|----------|---------|----|------------|---------------------------------------|----------------------------|----------|
| Costello | Mary    | Jo | Petitioner | 269 Newburn Drive Pittsburgh PA 15216 | --                         | Pro Se   |
| Kish     | Deborah | L. | Petitioner | 235 Newburn Drive Pittsburgh PA 15216 | --                         | --       |
| King     | Shelley | J. | Petitioner | 230 Newburn Drive Pittsburgh PA 15216 | --                         | --       |

### --Attorney--

| LName  | FName | MI | Type     | Address | Phone |
|--------|-------|----|----------|---------|-------|
| Pro Se |       |    | Attorney |         | --    |

### --Non Litigants--

| LName              | FName | MI | Type | Address | Phone |
|--------------------|-------|----|------|---------|-------|
| No Litigants Found |       |    |      |         |       |

### --Docket Entries--

**Filing Date**

**Docket Type**

**Docket Text**

**Filing Party**

11/18/2022

Petition Initiating Case

Mary Costello Jo

**--Judgments Against--**

**Name**

**Amount**

**Satisfied(Y,N)**

No Judgments Found

**--Events Schedule--**

**Event Scheduled**

**Event Date & Time**

**Room Number**

**Judge/Hearing Officer**

No Information Found



# Allegheny County Department Of Court Records

Civil/Family Division Docket Report

Run Date and Time: 11/24/2022 - 22:37:18

GD-22-014137

In Re: Petition to Open Ballot Box Pursuit to 25 P

Filing Date:

11/18/2022

Related Cases:

Consolidated Cases:

Judge:

No Judge

Amount In Dispute:

\$0

Case Type:

Miscellaneous Petition

Court Type:

General Docket

Current Status:

Petition Initiating Case

Jury Requested:

N

--Parties--

| LName     | FName   | MI | Type       | Address                                     | Initial Service Completion | Attorney |
|-----------|---------|----|------------|---|----------------------------|----------|
| Zwergel   | Cynthia |    | Petitioner | 10-7 Stillwood Drive Moon Township PA 15108 | --                         | Pro Se   |
| Zwergel   | Jeffrey |    | Petitioner | 107 Stillwood Drive Moon Township PA 15108  | --                         | Pro Se   |
| Bourgeois | Maureen |    | Petitioner |   | --                         | Pro Se   |

--Attorney--

| LName  | FName | MI | Type     | Address | Phone |
|--------|-------|----|----------|---------|-------|
| Pro Se |       |    | Attorney |         | --    |

--Non Litigants--

| LName              | FName | MI | Type | Address | Phone |
|--------------------|-------|----|------|---------|-------|
| No Litigants Found |       |    |      |         |       |

--Docket Entries--

|                    |                          |   |                     |
|--------------------|--------------------------|---|---------------------|
| <b>Filing Date</b> | <b>Docket Type</b>       | <b>Docket Text</b>                                      | <b>Filing Party</b> |
| 11/18/2022         | Petition Initiating Case | Petition to open ballot box pursuant to 25 P.S. 3261(a) | Cynthia Zwerger     |

|             |               |   |
|-------------|---------------|---|
| <b>Name</b> | <b>Amount</b> | --Judgments Against--<br>Satisfied(Y,N)<br>No Judgments Found |
|-------------|---------------|---|

|                        |                              |  |                              |
|------------------------|------------------------------|--|------------------------------|
| <b>Event Scheduled</b> | <b>Event Date &amp; Time</b> | --Events Schedule--<br>Room Number<br>No Information Found | <b>Judge/Hearing Officer</b> |
|------------------------|------------------------------|--|------------------------------|

# Allegheny County Department Of Court Records

Civil/Family Division Docket Report

Run Date and Time: 11/24/2022 - 22:34:6

GD-22-014138

In Re: Petition to Open Ballot Box Pursult to 25 P

Filing Date:  
11/18/2022

Related Cases:

Consolidated Cases:

Judge:  
No Judge

Amount In Dispute:  
\$ 0

Case Type:  
Miscellaneous Petition

Court Type:  
General Docket

Current Status:  
Petition Initiating Case

Jury Requested:  
N

--Parties--

| LName      | FName  | MI | Type       | Address                          | Initial Service Completion | Attorney |
|------------|--------|----|------------|----------------------------------|----------------------------|----------|
| Matucheski | Joseph |    | Petitioner | 85 Forest Glen Imperial PA 15126 | --                         | Pro Se   |
| Matucheski | Jeanne |    | Petitioner | 85 Forest Glen Imperial PA 15126 | --                         | --       |
| Matucheski | Julian |    | Petitioner | 85 Foret Glen Imperial PA 15126  | --                         | --       |

--Attorney--

| LName  | FName | MI | Type     | Address | Phone |
|--------|-------|----|----------|---------|-------|
| Pro Se |       |    | Attorney |         | --    |

--Non Utigants--

| LName | FName | MI | Type              | Address | Phone |
|-------|-------|----|-------------------|---------|-------|
|       |       |    | No Utigants Found |         |       |

--Docket Entries--

**Filing Date**  
11/18/2022

**Docket Type**  
Petition Initiating Case

**Docket Text**

**Filing Party**  
Joseph Matucheski

**Name**

**Amount**

--Judgments Against--  
Satisfied(Y,N)

No Judgments Found

**Event Scheduled**

**Event Date & Time**

--Events Schedule--  
Room Number

No Information Found

Judge/Hearing Officer

# Allegheny County Department Of Court Records

Civil/Family Division Docket Report

Run Date and Time: 11/24/2022 - 22:38:42

GD-22-014139

In Re: Petition to Open Ballot Box Pursult to 25 P

Filing Date:  
11/18/2022

Related Cases:

Consolidated Cases:

Judge:  
No Judge

Amount In Dispute:  
\$0

Case Type:  
Miscellaneous Petition

Court Type:  
General Docket

Current Status:  
Petition Initiating Case

Jury Requested:  
N

--Parties--

| LName     | FName | MI | Type       | Address                                | Initial Service Completion | Attorney |
|-----------|-------|----|------------|--|----------------------------|----------|
| McCracken | Ellen |    | Petitioner | 624 Snowball Road Monroeville PA 15146 | --                         | Pro Se   |
| McCracken | Mark  |    | Petitioner | 624 Snowball Road Monroeville PA 15146 | --                         | --       |
| Brown     | Ann   |    | Petitioner | 633 Snowball Road Monroeville PA 15146 | --                         | --       |

--Attorney--

| LName  | FName | MI | Type     | Address | Phone |
|--------|-------|----|----------|---------|-------|
| Pro Se |       |    | Attorney |         | --    |

--Non Litigants--

| LName              | FName | MI | Type | Address | Phone |
|--------------------|-------|----|------|---------|-------|
| No Litigants Found |       |    |      |         |       |

--Docket Entries--

**Filing Date**  
11/18/2022

**Docket Type**  
Petition Initiating Case

**Docket Text**

**Filing Party**  
Ellen McCracken

**Name**

**Amount**

**--Judgments Against--**

**Satisfied(Y,N)**

**No Judgments Found**

**Event Scheduled**

**Event Date & Time**

**--Events Schedule--**

**Room Number**

**Judge/Hearing Officer**

**No Information Found**

**Allegheny County Department Of Court Records**

Civil/Family Division Docket Report

Run Date and Time: 11/24/2022 - 22:40:3

GD-22-014140

In Re: Petition to Open Ballot Box Pursult to 25 P

Filing Date:  
11/18/2022

Related Cases:

Consolidated Cases:

Judge:  
No Judge

Amount In Dispute:  
\$0

Case Type:  
Miscellaneous Petition

Court Type:  
General Docket

Current Status:  
Petition Initiating Case

Jury Requested:  
N

--Parties--

| LName  | FName   | MI  | Type       | Address                                   | Initial Service Completion | Attorney |
|--------|---------|-----|------------|---|----------------------------|----------|
| Craig  | Andrew  |     | Petitioner | 3240 Elderwood Drive Bethel Park PA 15102 | --                         | --       |
| Zeuger | Timothy |     | Petitioner |   | --                         | --       |
| Zeuger | Penny   | Ann | Petitioner |   | --                         | --       |

--Attorney--

| LName  | FName | MI | Type     | Address | Phone |
|--------|-------|----|----------|---------|-------|
| Pro Se |       |    | Attorney |         | --    |

--Non Litigants--

| LName              | FName | MI | Type | Address | Phone |
|--------------------|-------|----|------|---------|-------|
| No Litigants Found |       |    |      |         |       |

--Docket Entries--

| Filing Date | Docket Type              | Docket Text   | Filing Party |
|-------------|--------------------------|---|--------------|
| 11/18/2022  | Petition Initiating Case | Petition to open ballot box pursuant to 25 P.S. 3261 (a). | Andrew Craig |

**--Judgments Against--**

| Name | Amount | Satisfied(Y,N)     |
|------|--------|--------------------|
|      |        | No Judgments Found |

**--Events Schedule--**

| Event Scheduled | Event Date & Time | Room Number          | Judge/Hearing Officer |
|-----------------|-------------------|----------------------|-----------------------|
|                 |                   | No Information Found |                       |



# Allegheny County Department Of Court Records

Civil/Family Division Docket Report

Run Date and Time: 11/24/2022 - 22:42:29

GD-22-014142

In Re: Petition to Open Ballot Box Pursult to 25 P

Filing Date:  
11/18/2022

Related Cases:

Consolidated Cases:

Judge:  
No Judge

Amount In Dispute:  
\$ 0

Case Type:  
Miscellaneous Petition

Court Type:  
General Docket

Current Status:  
Petition Initiating Case

Jury Requested:  
N

--Parties--

| LName   | FName     | MI | Type       | Address                         | Initial Service Completion | Attorney |
|---------|-----------|----|------------|---------------------------------|----------------------------|----------|
| Schultz | Christina |    | Petitioner | 10 Morgan Street Cuddy PA 15031 | --                         | Pro Se   |
| Schultz | Edward    |    | Petitioner | 10 Morgan Street Cuddy PA 15031 | --                         | --       |
| Schultz | Dakotah   |    | Petitioner | 10 Morgan Street Cuddy PA 15031 | --                         | --       |

--Attorney--

| LName  | FName | MI | Type     | Address | Phone |
|--------|-------|----|----------|---------|-------|
| Pro Se |       |    | Attorney |         | --    |

--Non Litigants--

| LName              | FName | MI | Type | Address | Phone |
|--------------------|-------|----|------|---------|-------|
| No Litigants Found |       |    |      |         |       |

--Docket Entries--

|                    |                          |                    |                     |
|--------------------|--------------------------|--------------------|---------------------|
| <b>Filing Date</b> | <b>Docket Type</b>       | <b>Docket Text</b> | <b>Filing Party</b> |
| 11/18/2022         | Petition Initiating Case |                    | Christina Schultz   |

| <b>Name</b> | <b>Amount</b> | <b>--Judgments Against--<br/>Satisfied(Y,N)</b> |
|-------------|---------------|---|
|             |               | No Judgments Found                              |

| <b>Event Scheduled</b> | <b>Event Date &amp; Time</b> | <b>--Events Schedule--<br/>Room Number</b> | <b>Judge/Hearing Officer</b> |
|------------------------|------------------------------|--|------------------------------|
|                        |                              | No Information Found                       |                              |

# Allegheny County Department Of Court Records

Civil/Family Division Docket Report

Run Date and Time: 11/24/2022 - 22:43:7

GD-22-014143

In Re: Petition to Open Ballot Box Pursult to 25 P

Filing Date:  
11/18/2022

Related Cases:

Consolidated Cases:

Judge:  
No Judge

Amount In Dispute:  
\$0

Case Type:  
Miscellaneous Petition

Court Type:  
General Docket

Current Status:  
Petition Initiating Case

Jury Requested:  
N

--Parties--

| LName  | FName    | MI | Type       | Address                                    | Initial Service Completion | Attorney |
|--------|----------|----|------------|--|----------------------------|----------|
| Daily  | Rosalind |    | Petitioner | 209 Garden City Drive Monroeville PA 15146 | --                         | Pro Se   |
| Daily  | David    | M. | Petitioner | 209 Garden City Drive Monroeville PA 15146 | --                         | --       |
| Warzel | Amanda   |    | Petitioner | 304 Rickey Drive Monroeville PA 15146      | --                         | --       |

--Attorney--

| LName  | FName | MI | Type     | Address | Phone |
|--------|-------|----|----------|---------|-------|
| Pro Se |       |    | Attorney |         | --    |

--Non Litigants--

| LName              | FName | MI | Type | Address | Phone |
|--------------------|-------|----|------|---------|-------|
| No Litigants Found |       |    |      |         |       |

--Docket Entries--

|                    |                          |                    |                     |
|--------------------|--------------------------|--------------------|---------------------|
| <b>Filing Date</b> | <b>Docket Type</b>       | <b>Docket Text</b> | <b>Filing Party</b> |
| 11/18/2022         | Petition Initiating Case |                    | Rosalind Dally      |

**--Judgments Against--**

|                           |               |                       |
|---------------------------|---------------|-----------------------|
| <b>Name</b>               | <b>Amount</b> | <b>Satisfied(Y,N)</b> |
| <b>No Judgments Found</b> |               |                       |

**--Events Schedule--**

|                             |                              |                    |                              |
|-----------------------------|------------------------------|--------------------|------------------------------|
| <b>Event Scheduled</b>      | <b>Event Date &amp; Time</b> | <b>Room Number</b> | <b>Judge/Hearing Officer</b> |
| <b>No Information Found</b> |                              |                    |                              |

# Allegheny County Department Of Court Records

Civil/Family Division Docket Report

Run Date and Time: 11/24/2022 - 22:46:17

GD-22-014144

In Re: Petition to Open Ballot Box Pursuit to 25 P

Filing Date:  
11/18/2022

Related Cases:

Consolidated Cases:

Judge:  
No Judge

Amount In Dispute:  
\$0

Case Type:  
Miscellaneous Petition

Court Type:  
General Docket

Current Status:  
Petition Initiating Case

Jury Requested:  
N

--Parties--

| LName  | FName  | MI | Type       | Address                                  | Initial Service Completion | Attorney |
|--------|--------|----|------------|--|----------------------------|----------|
| Marsh  | Mary   | R. | Petitioner | 2985 Greenwald Road Bethel Park PA 15102 | --                         | Pro Se   |
| Marsh  | Alan   | J. | Petitioner |  | --                         | Pro Se   |
| Fraker | Robert | L. | Petitioner |  | --                         | Pro Se   |

--Attorney--

| LName  | FName | MI | Type     | Address | Phone |
|--------|-------|----|----------|---------|-------|
| Pro Se |       |    | Attorney |         | --    |

--Non Litigants--

| LName              | FName | MI | Type | Address | Phone |
|--------------------|-------|----|------|---------|-------|
| No Litigants Found |       |    |      |         |       |

--Docket Entries--

| Filing Date | Docket Type              | Docket Text   | Filing Party  |
|-------------|--------------------------|---|---------------|
| 11/18/2022  | Petition Initiating Case | Petition to open ballot box pursuant to 25 P.S. Section 3261 (a). | Mary Marsh R. |

| Name               | Amount | --Judgments Against-- |  |
|--------------------|--------|-----------------------|--|
|                    |        | Satisfied(Y,N)        |  |
| No Judgments Found |        |                       |  |

| Event Scheduled      | Event Date & Time | --Events Schedule-- |                       |
|----------------------|-------------------|---------------------|-----------------------|
|                      |                   | Room Number         | Judge/Hearing Officer |
| No Information Found |                   |                     |                       |

# Allegheny County Department Of Court Records

Civil/Family Division Docket Report

Run Date and Time: 11/24/2022 - 22:50:28

GD-22-014146

In Re: Petition to Open Ballot Box Pursuit to 25 P

Filing Date:

11/18/2022

Related Cases:

Consolidated Cases:

Judge:

No Judge

Amount In Dispute:

\$0

Case Type:

Miscellaneous Petition

Court Type:

General Docket

Current Status:

Petition Initiating Case

Jury Requested:

N

--Parties--

| LName   | FName   | MI | Type       | Address                                | Initial Service Completion | Attorney |
|---------|---------|----|------------|--|----------------------------|----------|
| Maxwell | Melanle |    | Petitioner | 203 Spartan Drive Bethel Park PA 15102 | --                         | Pro Se   |
| Hope    | Cody    |    | Petitioner | 206 Spartan Drive Bethel Park PA 15102 | --                         | --       |
| Maxwell | Kevin   | W. | Petitioner | 203 Spartan Drive Bethel Park PA 15102 | --                         | --       |

--Attorney--

| LName  | FName | MI | Type     | Address | Phone |
|--------|-------|----|----------|---------|-------|
| Pro Se |       |    | Attorney |         | --    |

--Non Litigants--

| LName              | FName | MI | Type | Address | Phone |
|--------------------|-------|----|------|---------|-------|
| No Litigants Found |       |    |      |         |       |

--Docket Entries--

**Filing Date**  
11/18/2022

**Docket Type**  
Petition Initiating Case

**Docket Text**

**Filing Party**  
Melanie Maxwell

**Name**

**Amount**

--Judgments Against--  
Satisfied(Y,N)

No Judgments Found

**Event Scheduled**

**Event Date & Time**

--Events Schedule--  
Room Number

No Information Found

**Judge/Hearing Officer**



# Allegheny County Department Of Court Records

Civil/Family Division Docket Report

Run Date and Time: 11/24/2022 - 22:47:41

GD-22-014148

In Re: Petition to Open Ballot Box Pursuit to 25 P

Filing Date:

11/18/2022

Related Cases:

Consolidated Cases:

Judge:

No Judge

Amount In Dispute:

\$0

Case Type:

Miscellaneous Petition

Court Type:

General Docket

Current Status:

Petition Initiating Case

Jury Requested:

N

--Parties--

| LName   | FName   | MI | Type       | Address                                    | Initial Service Completion | Attorney |
|---------|---------|----|------------|--|----------------------------|----------|
| Kirk    | Marlene |    | Petitioner | 152 Field Club Drive McKees Rocks PA 15136 | --                         | Pro Se   |
| McNemar | Mathew  |    | Petitioner | 70 Forest Grove Corsopolis PA 15108        | --                         | --       |
| Andoga  | Andrew  |    | Petitioner | 104 Field Club Drive McKees Rocks PA 15136 | --                         | --       |

--Attorney--

| LName  | FName | MI | Type     | Address | Phone |
|--------|-------|----|----------|---------|-------|
| Pro Se |       |    | Attorney |         | --    |

--Non Litigants--

| LName              | FName | MI | Type | Address | Phone |
|--------------------|-------|----|------|---------|-------|
| No Litigants Found |       |    |      |         |       |

--Docket Entries--

**Filing Date**

11/18/2022

**Docket Type**

Petition Initiating Case

**Docket Text**

**Filing Party**

Marlene Kirk

**Name**

**Amount**

--Judgments Against--

Satisfied(Y,N)

No Judgments Found

**Event Scheduled**

**Event Date & Time**

--Events Schedule--

Room Number

No Information Found

**Judge/Hearing Officer**