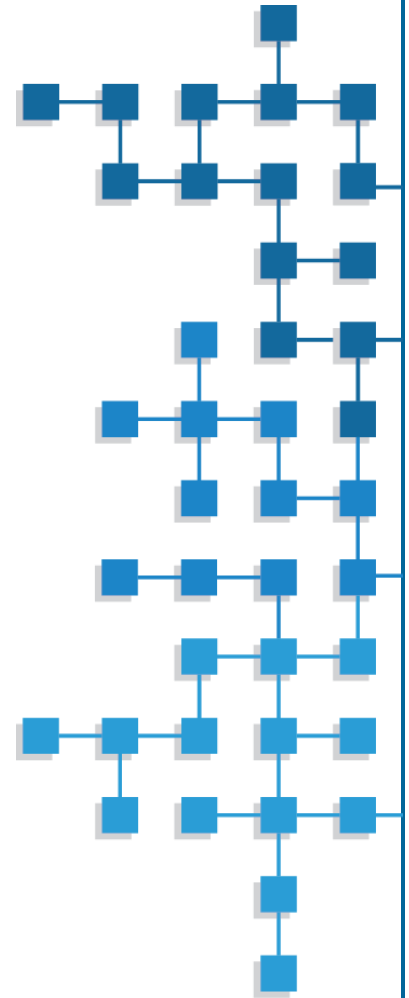


Vote by Mail Feasibility Study

Kenai Peninsula Borough

April 29, 2020



Developed by Dennis Wheeler and Kami Fitch

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1.0 Background and Purpose

The Kenai Peninsula Borough (KPB) currently holds poll-based elections (except for 6 small precincts that are done as vote by mail). KPB is looking at changing to an all vote by mail format for future elections. This feasibility study is intended to assess KPB's ability to transition to vote by mail, what tasks would be required, and to provide high-level estimates of costs.

1.1. Key Differences Between Poll-based Elections and Vote by Mail Elections

The primary differences between poll-based elections and vote by mail elections are two-fold: the transactions of ballot delivery to the voter and ballot return by the voter.

In a poll-based election, these transactions occur predominantly at the voter's polling location and happen largely on a single day: Election Day. The unmarked ballots are sent out to the polls, the voters appear at the polls and vote, and the ballots are scanned at the polls. The scanner results are delivered to the Election Center in a variety of ways. These days, they mostly arrive on the memory cards pulled from the scanners.

In a vote by mail hybrid, ballots are delivered to the voter's mailing address, the voter can vote at home, and then deliver the ballot back by mail or by dropping it off in a secure drop box or at designated vote centers. The voter typically has a few weeks to vote and return the ballot. Returned ballots are processed and scanned at a central location. This process is not a new concept, including for KPB, as it is just a more streamlined and wide-spread form of absentee voting by mail, which has been around for a very long time.

While the differences between poll-based elections and vote by mail elections come down to these two main aspects, these create a number of points where processes need to change to support vote by mail on a large scale. This study focuses on these aspects.

1.2. Out of Scope

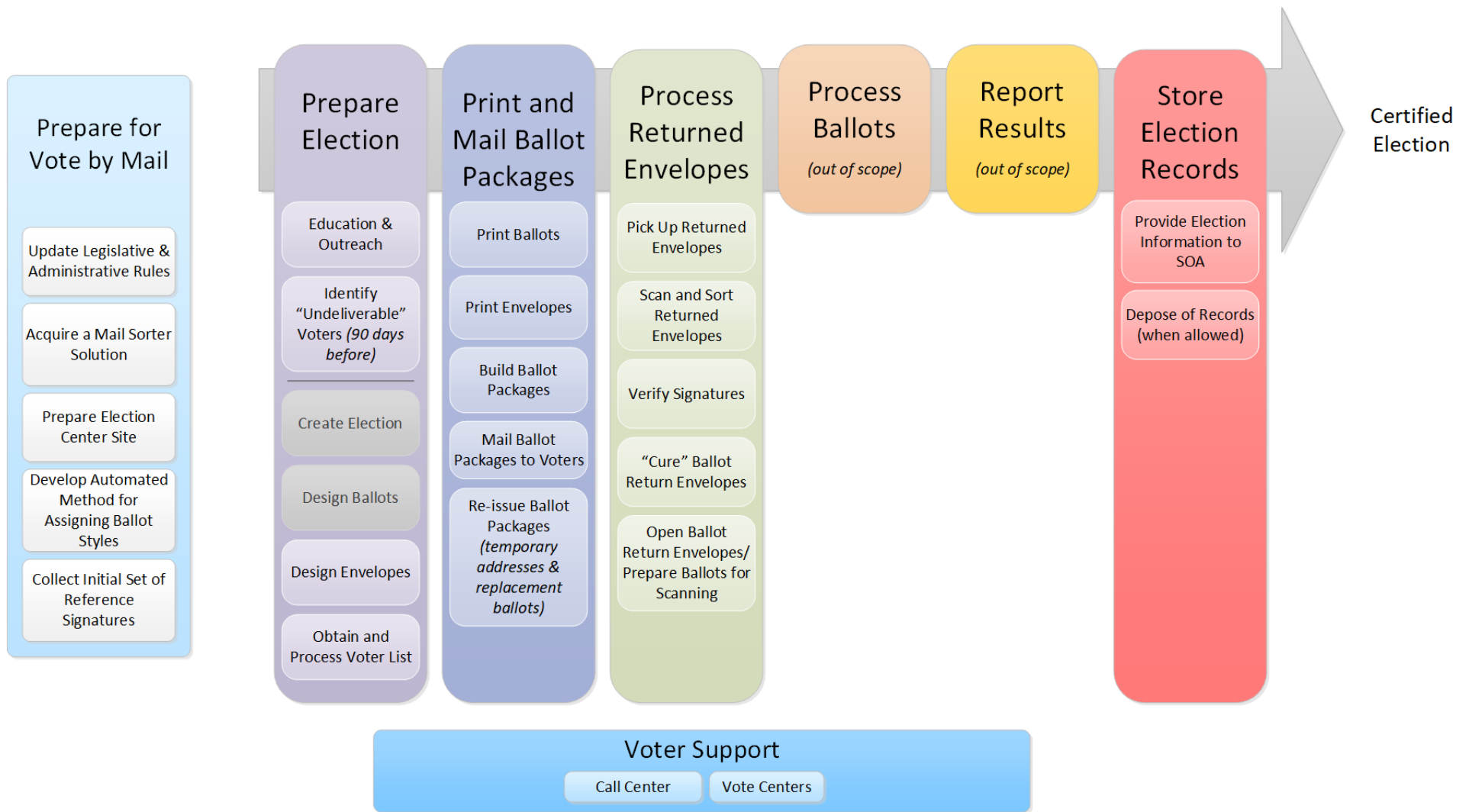
The following items are considered out of scope for this study:

- Tasks completed using KPB's existing Election Management System (e.g., ballot creation, scanning, and tabulation), except for recommendations related to preparing the ballots to be scanned and the timing of scanning ballots as these aspects are different with vote by mail.

- Detailed and definitive cost estimates. While we have provided estimates, which are based on general assumptions and include some sampling of known vendors, more precise estimates would require that KPB make a number of business decisions.

2.0 Assessment and Recommendations

This section discusses various aspects of a vote by mail election in greater detail, describing various aspects that KPB will need to consider or prepare for and making recommendations. We have organized the information around the general workflow of a vote by mail election, as illustrated by the diagram on the following page.



2.1. Overall Assessment

Based on our review, we believe that KPB will be able to successfully transition to area-wide vote by mail elections. However, to be successful, KPB should complete a number of significant tasks before making this change, as identified in Section 2.2: Prepare for Vote by Mail. In addition, in the lead-up to its first vote by mail election, KPB will have many decisions to make, a variety of equipment to purchase, and procedures to define or change.

The transition to vote by mail will also require a significant amount of initial investment to acquire the equipment and other materials needed to support vote by mail. Within this study, we have provided estimates (either in dollars or hours as appropriate) to give KPB a rough idea of costs. In most cases, we've estimated towards the high end to allow for a discussion of what a maximum cost might look like. But we would expect KPB and its cities will be able to leverage current resources to bring these costs down as they navigate and implement voting by mail. Keep in mind these estimates are a rough order of magnitude and are based on many assumptions. **Actual costs may vary greatly depending on choices KPB makes and market rates at the time.**

Given the amount of work required to transition to vote by mail elections, we believe that KPB can only make this change in time for the October 2020 election if they use manual processes for mail sorting and a simplified signature verification process or leverage the election equipment owned by the Municipality of Anchorage (MOA). Both of these options will introduce some complexity into the election process, with a net effect of slightly delaying final election results. This is manageable, especially if certain KPB Code changes are made, as recommended.

2.2. Prepare for Vote by Mail

Before completing its first vote by mail election, KPB will need to complete several one-time tasks in preparation.

2.2.1. Update Legislative and Administrative Rules to Support Vote by Mail

KPB is a second-class borough under State statutes, with 6 incorporated cities within its boundaries (Homer¹, Kachemak City, Kenai, Soldotna, Seldovia, and Seward).

Most borough and city codes will need to be modified to allow voting by mail. Although borough and city codes already include absentee by mail voting as an option, absentee voting as currently structured is too cumbersome for broad, area-wide use as it requires a voluntary,

¹ We understand Homer, Kachemak City, and Seldovia run their elections largely separately, but for purposes of this study, we will assume that they would choose to be included.

annual application process by each voter. Keeping this requirement would be very costly and unnecessary with a full vote by mail program. In addition, some codes may restrict when a voter can vote absentee by mail. For example, under current KPB code, a voter can only vote absentee if the voter is either in a precinct approved for voting by mail (KPB 4.50.015) or cannot reach the polls on election day (KPB 4.80.030).

Other election attributes of the current voting process should also either be changed (e.g., deadline dates) or eliminated (e.g., code sections that speak to voting at a polling location). With respect to deadlines, most current deadlines need to be reviewed with an eye towards ensuring there is sufficient time to complete all the steps needed² early enough that ballot packages can be sent 2-3 weeks before Election Day.

KPB should consider the following areas for code changes:

- Requirements of the ballot return envelope (overall design and appearance, flap/no flap, identifiers, signatures, etc.)—refer to Section 2.3.3: Design Envelopes for additional discussion
- Deadlines and other dates (e.g., notice of election, candidate declaration, candidate withdraw, opening of Vote Centers, and similar dates that might be affected by the longer process involved in preparing a vote by mail election)—refer to Section 2.2.1.1: Changes to Deadlines for additional discussion

Note: The preparation process for vote by mail is approximately 1-2 weeks longer than in a poll-based election.

- Date of runoff elections. Runoffs are often right on the heels of the regular election. This very short window should be increased by a week to accommodate creating and mailing the ballot packages. See AS 29.26.060(c)
- Exclusion of “undeliverable” addresses from the mailing list of voters—refer to Section 2.3.2: Identify “Undeliverable” Voters Before the Election for additional discussion.
- Drop box locations as an allowable method of receiving voted ballots—refer to Section 2.6.1.2: Drop Boxes for additional discussion
- Vote Centers to help voters (some aspects of this are already performed by locations used for absentee voting in person)—refer to Section 2.5.2: Vote Centers for additional discussion
- Rules for how a voter might correct their vote on the face of the ballot
- Rules for how a voter might cure their returned envelope and the deadline for doing so (e.g., if the voter forgot to sign their return envelope, can they cure it, and if so, how and when)—refer to Section 2.6.4: “Cure” Ballot Return Envelopes for additional discussion

² For example, designing and printing ballots, assigning ballot styles to the State voter list, and preparing ballot packages for each voter.

- Rules for accepting ballot return envelopes (matching signatures, voiding envelopes, etc.)—refer to Section 2.6.2: Scan and Sort Returned Envelopes for additional discussion
- Rules for when KPB can begin scanning (but not tabulating) ballots³
- Any new or modified procedures that by law must be approved by the Assembly or city councils

Ideally, KPB and the cities within it will adopt mirrored code provisions as much as possible to support streamlined and consistent rules on voting by mail.

2.2.1.1. Changes to Deadlines

A key decision KPB will need to make is the target time between mailing the ballots to voters and Election Day. Typically, this voting period (i.e., the time between mailing and close of the election) is about 3 weeks⁴. Once this time period is decided, KPB will need to work backwards to set other deadlines, making sure sufficient time is allowed for completing all the preparation tasks (refer to Section 2.3: Prepare Election for more details). Typically, the preparation process in a vote by mail election is approximately 1-2 weeks longer than a poll-based election. Because of the additional printing and processing required of KPB's printing/mailing vendor in a vote by mail election, KPB will need to work with this vendor to understand what is feasible for them when determining what deadlines/dates to update in the Code.

2.2.2. Acquire a Mail Sorter Solution

When doing a vote by mail election, a key decision is how to process returned ballot envelopes, which includes tasks such as the following:

- Identifying the ballot return envelopes in order to determine whether they are valid for the current election and to track which voters have returned ballot envelopes, ensuring that only one ballot is accepted from each voter
- Sorting ballot return envelopes into groups (e.g., by status, by precinct) based on KPB's chosen requirements
- Verifying the voter's identity by validating the voter's signature on the ballot return envelope

³ Most jurisdictions using vote by mail begin scanning returned ballots before 8:00 PM on Election Day—but then tabulate results **only after** that deadline. By allowing scanning in advance, an initial set of results can be made available shortly after “polls close” on Election Day.

⁴ Currently, KPB 4.50.015A.1 (which discusses permanent absentee locations) states that “ballots shall be sent to each registered voter in the precinct on or before the 15th day prior to the election.”

- Tracking the “cure” process when there is a problem with the voter’s ballot return envelope (i.e., allowing the voter an opportunity to resolve the problem so the ballot can be accepted)

Typically, government entities purchase a specialized election sorter to support this processing. In addition to doing basic sorting, these machines also include software for the tracking, reporting, and other functions necessary to support elections.

We made some preliminary inquiries with vendors about options that would be approximately the right size for KPB.⁵ Because these sorters are specially designed for elections, pricing for sorters that include signature verification software is typically well above \$100,000. While KPB may be able to get reduced pricing through a competitive bid process, KPB should expect to pay more than \$100,000 for a sorter (plus ongoing annual support and maintenance). In addition, sorters often require multiple months lead time before being ready for delivery. Therefore, if KPB wants vote by mail in October 2020, it needs to immediately engage in the procurement process, and it may be difficult to find a vendor who can deliver a sorter within that timeframe.

KPB could choose to purchase its own sorting equipment, but does have other options available, which would have lower up-front costs and quicker initial implementation:

1. **Process ballot return envelopes manually:** With this solution, the ballot return envelopes would not be mechanically sorted. Election workers would need to manually look up each voter to review the signatures, verify whether the voter had already returned a ballot, etc. If this approach were used, KPB would need a method to help with tracking, which might require building a custom software tool.

Manually processing ballot return envelopes is potentially feasible because of the relatively small number of voters in KPB (approximately 50,000). If the number of registered voters or voter turnout increases substantially, manual processing would become increasingly difficult.

2. **Use MOA’s sorter, at least in the first year:** MOA has indicated they are willing to assist other jurisdictions through use of their sorter and Election Center. **MOA is offering its facility and systems at no charge.** Because this sorter can run approximately 18,000 envelopes an hour, KPB could run the bulk of their envelopes and complete signature verification within 2-3 days. However, if KPB ran their envelopes in bulk at the end of the election, this would affect the policies and processes for giving voters an opportunity to cure any problems with their envelopes (e.g., no signature, no reference signature, unmatched signature—refer to Section 2.6.4: “Cure” Ballot Return Envelopes for additional information

⁵ Potential vendors include ES&S, Fluence Automation, Runbeck Election Services, and Pitney Bowes. Based on our tour of the facilities, any sorter KPB is likely to purchase would fit within the identified space. Generally, powers requirements for these sorters are not unusual and likely will not exceed a 50 Amp 220 circuit.

about “curing”). These are solvable issues, which could be partly addressed in appropriate Code changes.

The following table compares some aspects between the three alternatives:

	Purchase Equipment	Process Manually	Use MOA Equipment
Upfront Cost	Highest (> \$100,000)	Low to Medium (depending on tracking solution)	Low
Implementation Time	Longer (2020 unlikely)	Quicker (2020 possible)	Quicker (2020 possible)
Processing Location	KPB	KPB	MOA
Staffing Requirements	Lowest	Highest	Medium (staff in KPB and MOA)
Other Considerations		More time consuming More error prone	Most or all envelopes have to be transported to Anchorage Location of KPB staff

Because it is a better long-term solution, we recommend that KPB select and purchase an election sorter⁶. In the long run, KPB will be able to more easily manage elections by having a sorter located at the KPB Election Center.

In order to select the sorter that best meets their needs, KPB should begin the selection process by defining their requirements for the sorter and the software that comes with it. As part of this process, KPB will need to make decisions about potential system functions, including the following:

- Importing voter data and signatures, including updating voter data⁷
- Exporting voter data for use by the printer⁸ and Vote Centers

⁶ If KPB needs to do a vote by mail election in 2020, the new sorter will likely not be available, and KPB would need to use one of the alternative approaches for 2020.

⁷ Refer to Section 2.3.4: Obtain and Process Voter List for more information. In MOA’s experience, the printing and mailing vendors need initial voter information well in advance of when the State has final timely voter updates entered in the voter registration database. Therefore, KPB will need to process 2-3 versions of the voter list before ballot packages are mailed.

⁸ Because of there may be 2-3 versions of the voter list, the sorter may need include functionality for generating a file that shows just changes in the voter list. In addition, if KPB excludes some voters from being mailed a ballot package initially (e.g., those designated as

- Tracking the need for replacement ballots and/or temporary addresses
- Sorting ballot return envelopes, including conditions under which envelopes should be out-sorted (e.g., invalid ID, potential duplicate, etc.)
- Capturing digital images of envelope signatures and/or the entire envelope
- Verifying voter signatures, using either an automated process and/or a manual review
- When there is a problem with a ballot return envelope, supporting the “cure” process
- Providing voters with information about whether their ballot has been received
- Reporting and exporting information to support and validate ballot return envelope processing
- Exporting digital signature images for accepted envelopes (for loading to the State voter registration database for use as future reference signature images)

In addition, KPB will need to define their technical requirements for the sorter (e.g., processing speed, scalability, physical space, operating system/software, security, number of users who can simultaneously verify signatures/perform other functions on the equipment). During the selection process, KPB should evaluate the possible sorters against the defined requirements. Ideally, KPB will be able to see a demo of each sorter being considered (and its software) before making a final decision.

The sorter KPB selects will affect the details of many other aspects of the election. For example, the sorter may have specific requirements for the ballot return envelopes or the format of the imported voter list. In addition, how the sorter handles signature verification and curing envelopes will affect the specifics of KPB procedures in these areas.

Note: Additional factors and considerations with the sorter are referenced in subsequent sections.

When considering the costs for acquiring a sorter, KPB needs to factor in staff time required for the following activities:

- Defining requirements
- Evaluating and selecting potential solutions
- Working with the vendor to implement the sorter, which will include testing
- Developing policies and procedures for processes involving the sorter

These activities will likely require at least a few hundred hours of staff time.

Based on our tour of KPB facilities and our understanding of election sorters available, KPB’s facilities are adequate, and the requirements KPB is most likely to have are generally features available with sorters currently in the marketplace.

undeliverable), functionality to exclude voters from the output based on a set of criteria may also be needed.

2.2.3. Prepare Election Center Site

KPB has identified that their Election Center will be at the KPB central offices, with ballot tabulation being done in the main offices and envelope processing in the Records Center, which is in a different building. While the spaces identified should be adequate for the election, KPB should make changes to enhance security in these areas.

2.2.3.1. Alarms and Cameras

While KPB will be able to leverage the security features it already has in place, we recommend adding some additional security measures in the form of more cameras and alarms.

KPB should have a few cameras for viewing election processing, including in the envelope processing area and the ballot tabulation area. Ideally, the cameras will provide a feed to a monitor for public viewing when the public is not allowed to be in close proximity to the activity. The feeds for recording should record upon detecting motion, even in very low lighting, and have sufficient storage on a secure drive. In addition, the recording drive should have appropriate, separated backup.

We also recommend that both areas used for elections have door and window alarms that, if breached, provide appropriate instant notification. If not already available, the alarm system should log activation and deactivation by authorized personnel and provide the same instant notification. Notification should go to an authorized alarm company that can provide the appropriate response, as well as to the cell phones of appropriate KPB officials.

We estimate alarms and cameras will cost approximately \$10,000, although this estimate could change depending on how much existing KPB security equipment can be used.

2.2.3.2. Secure Storage

The Records Center should have one locking cage or special room in which ballot return envelopes that have been received but are not ready for opening can be stored. We estimate a cage of sufficient size would cost approximately \$3,000.

The main offices already have secure storage, which would be suitable for storing ballots. We believe no updates are required in that area, with the exception of “re-keying” a conference room or two for use during the election.

2.2.3.3. Onsite Access

One way to build and maintain voter confidence is to allow public access for viewing the process. Many jurisdictions provide access through a combination of video feeds, onsite tours, and public viewing areas within the election processing areas. We recommend KPB provide a reasonable level of access, while maintaining security and efficiency.

Although space is limited in the Records Center, public viewing of the envelope processing area can still be accommodated. However, KPB will probably need to impose a limit of no more than 5 persons at a time, depending on whether candidates and issue groups also have observers in the area. The public should be kept far enough from the computers being used for signature verification that voter information is not readily readable by visitors.

The ballot envelope opening area and ballot tabulation area within KPB's office will be smaller and would be best served with a wide-angle camera with a monitor available in a more public area within the KPB main office. This video could be part of the same feed for security.

Separation and security for public access can generally be well managed by requiring a sign-in and issuing colored lanyards to distinguish visitors, and then employing some simple barriers, such as stanchions with retractable belts.

Refer to Appendix A for sample layout.

2.2.3.4. Air Gapping Systems

Because of the sensitivity of information stored in election systems, we recommend that these systems be "air gapped," meaning that they are not connected to other networks⁹. By physically isolating this equipment and disabling any wireless capabilities, KPB will increase the security on these systems.

The Election Management System (i.e., the equipment for designing, scanning, and tabulating ballots) should always be air gapped and never accessed remotely by anyone. These systems typically complete a rigorous certification process, which also dictates how any updates to these computers are handled.

For the sorter system, KPB could choose to allow the vendor's technicians to access it remotely through a secure firewall, so that they can support KPB on an "as-needed" basis. We recommend that KPB have rules and security in place to prevent unauthorized access to the system. Depending on the sorter selected, this may include the following:

- Physically disconnecting any wired access available to the vendor (and others) at appropriate times (e.g., during an election cycle)
- Having strong password/log in requirements and setting rules for expiring passwords and accounts
- Disabling USB and similar data ports, especially on machines that may have more than one user

⁹ Typically the systems themselves include multiple computers/other pieces of equipment, which are networked together. However, this is a local network only.

- Buying equipment without wireless capabilities or disabling these features (this includes printers or similar accessories that might have wireless features)

KPB will need to bring some data into and out of air gapped systems (e.g., importing the voter list to the sorter, generating a list of voters for the printing/mailing vendor, etc.). Typically, these transfers are done using encrypted USB drives that are kept in secure storage when not in use.

2.2.4. Develop an Automated Method for Assigning Ballot Styles

Being able to efficiently determine which ballot style each voter should receive is a key component of being able to move to vote by mail elections. Unfortunately, in local elections, state-defined precincts often get split between multiple ballot styles because boundaries for assembly districts, service areas, etc. do not always match the precinct boundaries. Therefore, determining the correct ballot style for a voter requires knowing where the voter lives in context to the area covered by each ballot style defined for an election.

The most efficient method for doing this assignment is to use mapping software, placing voters on the map based on the residential address provided in the State's voter list and overlaying the ballot style boundaries to determine which ballot style to assign. While this sounds easy, there are many complicating factors, such as

- Residential addresses in the State file may be structured differently from KPB address data, making it difficult to match them
- Precinct boundaries (which are defined by the State) are imprecise in the State maps and the textual descriptions in Statutes are sometimes vague or incorrect, causing parcels to sometimes be in the wrong precinct
- District or service area boundaries split some parcels

Therefore, any automated process will require manual review and intervention, with the amount required being dependent on the potential data discrepancies. Updates can be made to some datasets feeding an automated process, but in some cases, there are legal limitations to what is possible, meaning that KPB may need to make policy decisions on how to handle certain situations.

2.2.4.1. MOA's Process

To support assigning ballot styles to voters, MOA has developed a custom "GIS process" that uses Esri's ArcGIS software and Python scripts to automate the assignment of ballot styles¹⁰. The process uses the following data:

¹⁰ The computer used to run this process is a fairly basic Windows 10 computer, with the only special installations being Python and ArcGIS.

- **State voter list:** a CSV file provided by the State that lists all registered voters within MOA (or a subset of precincts if for a special election that is for a limited area), with all the data needed during the election, including voter ID, residential address, mailing address, status, and voter identifiers.
- **Address, street, and community data:** various datasets that are used by the process to place a voter on a map based on the residential address provided by the State.
- **Ballot style polygons:** geographic boundaries of where a particular ballot style should be used. These boundaries are created by MOA's GIS department based on the contests included in the election (e.g., which assembly districts and service areas have contests on the ballot). Because MOA wants to report results by precinct, the precinct boundaries must also be considered as there are different ballot styles for each precinct—even if the contests on the ballots are identical. MOA's Municipal Clerk identifies the ballot style ID (which is generated in the Election Management System as part of designing ballots) that should be associated with each ballot style polygon.

MOA's process includes two steps: (1) placing voters on the map (geocoding) using a series of rules and (2) assigning a ballot style to those voters who could be geocoded. The process then outputs a file with the list of voters, including all voter data fields provided by the State, plus the assigned ballot style ID, in the format MOA's sorter system can import.

When geocoding voters, there are always some voters that the GIS process cannot place on the map. These are typically caused by

- Inaccuracies in the State residential addresses (either typos which the State will correct when notified or mistakes made by the voter when completing the voter registration form)
- Differences in how the State formats its addresses vs. how MOA formats them
- Incomplete residential addresses
- Variances between the address the voter uses and the official MOA address for a location

The MOA Municipal Clerk reviews these unmapped voters to determine whether, based on a set of rules, the address can be “overridden” for sake of placing the voter on the map (e.g., if there is a difference in how the State formats an address vs. MOA, an override can be entered to put the address in the MOA's format so the voter can be geocoded). Even with this manual processing, there are some voters whose location cannot be accurately determined; these voters are left “unmapped” and do not have a ballot style assigned, which means they do not have a ballot package sent to them¹¹. For MOA, less than 1% of voters are unmapped and the number of these has decreased each year.

¹¹ These voters can go to a Vote Center to get a ballot or can contact MOA to request a ballot. In both cases, the voter must identify where they live so the appropriate ballot style can be provided.

After voters have been geocoded and ballot styles have been assigned, the Municipal Clerk reviews data about the number of voters assigned each ballot style and the precinct assigned to each of those voters. This process can identify problems with the ballot style boundaries, errors in the ballot style ID assigned to an area, discrepancies with precinct boundaries or assignments, and issues with the geocoding process¹². The Municipal Clerk reviews these issues and makes adjustments as appropriate (e.g., to the ballot style polygons, etc.).

Fixing issues in either step triggers rerunning the process, and this cycle repeats until the Municipal Clerk is confident in the accuracy of the final file produced. While the automated GIS processing does not take long to run, the manual review and resolution of issues can be time consuming, particularly for the first State file processed during an election cycle¹³.

2.2.4.2. Recommendations

We recommend that KPB request a copy of MOA's Python scripts and then modify them to meet KPB's needs. Using MOA's scripts as a starting point should minimize the amount of effort required to create these processes. Changes will be required, particularly with the geocoding processes, because KPB's GIS data will likely be structured/named differently. KPB may also need to modify the format of the file output, based on the sorter solution KPB chooses. In addition, KPB will need to decide whether any changes are needed to which data elements about voters are included in the State file.

Because the output of this process is foundational to an effective vote by mail election, the process will need to be carefully vetted to ensure it is working as expected. Therefore, we recommend that KPB perform a trial run of the GIS processes (at least the geocoding portion), before the first vote by mail election starts, in order to validate the process and identify any data issues.

The first usage of the GIS process will likely identify a number of issues that need to be addressed, either in the GIS datasets, with the script, or in defining rules around manual intervention. Doing this outside of the pressures of election deadlines will make it easier to do the thorough assessment needed.

Without reviewing KPB's datasets, it is difficult to estimate the amount of time required to update the Python scripts. However, we believe it would be in the range of 30-40 hours (of a GIS analyst), plus additional time to carefully review the outputs and make logic or data updates.

¹² Issues with geocoding that are identified at this stage are typically a few odd cases. For example, MOA has a trailer court that is split between two precincts. The geocoding process looks at the street number, but not the specific trailer space. Therefore, the process places all voters at that address in the same location, but some are in a different precinct. This can be adjusted through the override process so the voters receive the correct ballot style.

¹³ The first file takes the longest because it includes ~11 months of voter changes. In addition, any problems with the ballot style polygons will be identified in during this first run.

2.2.5. Collect Initial Set of Reference Signatures

In a vote by mail election, the voter's identity is typically verified by validating the voter's signature on the ballot return envelope against a set of previously verified reference signatures for that voter.

The State of Alaska maintains the voter registration database and has an ongoing and growing repository of verified signatures. Therefore, over time KPB will be able to rely on an ever growing and refreshed set of reference signatures that are gathered by the State and submitted to the State by KPB after an election.

However, it is likely that the State currently has too few signatures of KPB voters to efficiently conduct a vote by mail election. While a vote by mail election could still be done if there are too few signatures, in this scenario KPB would need to manually intervene to verify a high percentage of ballot return envelopes. This intervention will typically require one of the following:

1. Asking the voter to provide identification as part of the "cure" process, which is at best cumbersome and time consuming, and at worst impossible. In addition, this process is contrary to the efficiencies envisioned for vote by mail.
2. Contacting the State of Alaska, which can, almost 100% of the time, find and send a verified signature that is on file (paper or microfiche) but not in its database. The State has cooperatively provided this service for MOA, but a large number of requests to the State during the election could be problematic for the State and would slow down the process for KPB.

Note: Because KPB elections occur in the Fall, within the same timeframe that the State is preparing for and conducting its own elections, there may be limits on what assistance the State is able to provide. KPB will want to discuss this with the State in advance.

Alternatively, we recommend that KPB do a signature gathering project before its first vote by mail election, which will minimize number of voters without reference signatures. To begin, KPB should complete a gap analysis to determine how many reference signatures the State has for KPB voters in its voter registration database. Unless the State has a significant percentage of voter signatures, KPB should then complete a project to scan signatures from old pollbooks and provide them to the State to build up their database of verified signatures.

The project would consist of disassembling and scanning the pollbooks from prior elections, using software to parse out each signature, saving each signature image with a voter ID identifier, and converting the image into a format the State can use. MOA used custom-built software to support this process; if KPB is able to use MOA's software, it would save a good bit of time and money.

To do the signature gathering using MOA's software, KPB will need a scanner in which pages can be fed in bulk as well as a Windows 10 computer with Python (application uses a SQLite database and a small stand-alone .NET application and Python scripts). While there are no minimum specifications for the computer, its specifications can significantly affect the speed at which scanned pollbook pages are processed.

MOA scanned pollbooks from 4 years as well as absentee applications and other forms. This effort took place over approximately 4 months, with extensive hours by election workers plus approximately 80 hours from someone comfortable working with databases, troubleshooting, etc.

Because KPB pollbooks will be smaller than MOA's, the amount of time required should be significantly less than MOA's experience. However, processing will probably take at least 40 hours for each year of pollbooks and potentially more.

2.3. Prepare Election

2.3.1. Education and Outreach

Educating voters about vote by mail before the election and answering questions during the election are important steps in building voter confidence and comfort with what vote by mail is and how they can vote and securely return their ballots. We recommend the following forms of voter engagement, as also recommended by the Election Stakeholders Group.

- **Face-to-face Engagements.** In the age of coronavirus this may be more of a logistical challenge, but a great way to educate voters is by presenting an overview of vote by mail, with Q&A time, at public gatherings such as community council meetings; chamber meetings; and meetings of the League of Women Voters, Rotary, and similar civic groups. KPB should also offer to present at other meetings (if invited), such as Republican or Democratic Party meetings, and to be guests on local radio talk shows. Some of the toughest critics ask the best questions and can become supporters.

Facility tours are another highly recommended way to engage with the voters. They get to see that the actual processing of envelopes and ballots is straightforward, transparent, and secure.

- **Election Website.** KPB should revamp its elections webpage to include vote by mail resources, such as frequently asked questions, forms, instructions, and perhaps a video or two.
- **Pamphlets.** A pamphlet is a nice-to-have option for handing out to voters and others at meetings, but these are expensive. While it might be worthwhile to have them in the first

year, it may make sense to produce an inexpensive two-sided card. Hand these out whenever possible and also have these available at KPB and city hall public counters.

- **Advertising on the Radio.** A limited number of radio stations have reasonably good Borough coverage, so we encourage radio advertising, especially if you can secure these as free public announcements.

TV advertising is not particularly effective because there are just too many options for viewers, and it is very expensive. Therefore, we do not recommend that KPB pursue any TV ads.

- **Social Media.** KPB and the cities should agree on some consistent messaging about voting by mail and provide that content on Facebook pages. In addition, use a single Twitter account to disseminate election messaging leading up to the election. A critical component to effective social media usage is being timely in responding to messaging, especially to comments that contain misinformation or questions.

2.3.2. Identify “Undeliverable” Voters Before the Election

To give voters an extended opportunity to engage in voting, State law provides for a long process and time period before the State Division of Elections can “purge” or remove a voter from the voter registration database. During part of this period, many voters end up in a status of “UN” or “Undeliverable,” which essentially means that the mailing address information in the State’s database may no longer be valid for the voter because the mail has been returned to the State as “undeliverable.” In addition, there are likely many other voters not yet identified as being undeliverable in the voter registration database but for whom the mailing address is no longer valid. Based on MOA’s experience, the number of voters meeting one of these criteria within KPB could be upwards of 20% of registered voters¹⁴.

In a poll-based election, the voter’s status as undeliverable is less important as the voter is still eligible to vote and just shows up at the precinct. However, in a vote by mail election, mailing ballots to these undeliverable voters will increase costs as ballot packages that cannot be delivered are printed and mailed. KPB can reduce their printing and mailing costs by defining policies around who is mailed a ballot package in an election, as discussed in Section 2.2.1: Update Legislative and Administrative Rules to Support Vote by Mail.

IMPORTANT: The voters would still be eligible to vote and may vote by requesting a ballot—these voters just wouldn’t be mailed a ballot package initially as it would likely be returned by the Post Office. After appropriate verifications, KPB can meet a voter’s request for a ballot by

¹⁴ MOA, which has more than 200,000 registered voters, has seen tens of thousands of “undeliverables” each year.

mailing it (to an updated mailing address) or by having the voter come into a Vote Center (refer to Section 2.5.2: Vote Centers).

In combination with that policy, we recommend that KPB use a pre-election mailing to proactively identify voters who are undeliverable so that the State can update that information in the voter registration database before the KPB election cycle begins. With this process, KPB would mail all registered voters a “Notice of Election” postcard approximately 90 days prior to an election.

The postcard provides information about the upcoming election and may include the residence address on file, as well as information about how voters can update their information with the State. Subject to agreement with the State, any postcards returned as “undeliverable” can be provided to the State, and the State updates its records to show these voters as being undeliverable¹⁵.

Sending postcards does incur printing and mailing costs. However, postcards are much cheaper than ballot packages, so the savings from proactively identifying voters who will be undeliverable (and therefore not sending them a ballot package) should more than offset the postcard costs. In addition, since the postcards can be forwarded (unlike the ballot packages), they become a reminder to voters (for whom forwarding is still active) to update their information with the State, before the election.

By taking steps to minimize the ballot packages sent to voters with known bad addresses, KPB will

- Avoid wasting money on ballot packages that can’t be delivered
- Avoid putting ballots into the mail stream that won’t be used (or might be the subject of illegal voting attempts by other persons at the address)
- Avoid the administrative burden of processing, storing, and later destroying these undelivered ballots

2.3.3. Design Envelopes

For a vote by mail election, KPB will need to design 3 envelopes:

1. Outer ballot package envelope
2. Ballot return envelope
3. Secrecy envelope or sleeve

¹⁵ To make it easier for the State, MOA developed a process in which they run returned postcards through the sorter and generate reports that show voter IDs as barcodes so the State can more quickly update their records. KPB will likely want to develop a similar process so that the State can make updates to their records quickly. KPB should coordinate with the State in advance to ensure the State has sufficient resources at the needed time.

KPB's current envelopes may not need significant design changes but should be reviewed. Both the outer ballot package envelope and the ballot return envelope must meet USPS Election Mail standards. The USPS has a group specifically authorized and trained to approve envelope designs. Most print vendors that do election mail are familiar with the standards and can help KPB meet the standards.

The ballot return envelope design is especially important in communicating with the voter as well as in supporting envelope processing by election workers. This envelope should have the following features:

- **Text and color to identify it as KPB election mail.** This helps the voters and the election workers to quickly identify the mail. Strategic placement of the color on the envelope helps election workers sort and properly orientate the mail for feeding into the sorter.
- **Text providing useful information to the voter,** such as the deadline for the election (e.g., "Please return your ballot by 8 p.m. Election Day October 6, 2020") or other reminders.
- **Voter's name,** which is helpful to election workers needing to look up a voter or find a particular envelope.
- **A unique identifier in a location and format that can be read by the sorter.** This identifier is a number assigned to the voter that is specific to the election and is not used with any other voter or subsequent election. The identifier is often referred to as the ballot envelope ID and is typically printed as a barcode on the envelope. This ID number is scanned by the sorter system for use in tracking/verifying which voters have returned a ballot and in determining how to sort the envelopes (e.g., "good" envelopes sort into the appropriate bin; "bad" envelopes are out-sorted for further investigation by election staff).

Note: If KPB wants to include "I voted" stickers in the ballot packages, these can be affixed to the secrecy envelope/sleeve for removal by the voter. Including this sticker will increase printing/mailing costs.

2.3.3.1. Inclusion and Security of Personal Identifiers on Ballot Return Envelopes

A key element of vote by mail is ensuring the ballot returned was voted by the right person. Verifying this typically requires that the voter provide some "proof" of their identity.

Currently, KPB requires the ballot return envelope for mailed ballots to have

- At least one personal identifier, such as birthdate, voter ID, or last 4 of the Social Security Number
- Voter's signature
- The attesting signature of a qualified witness (KPB Code 4.120.010D)

Of these, we recommend that KPB continue requiring the voter's signature, which would be verified against a set of known signatures for that voter. While having an attesting signature

would provide an additional, reasonable assurance of the voter's identity, requiring this could disenfranchise voters who are unable to find a witness.

We strongly discourage having personal identifiers included on the envelope, even if hidden by a flap on the envelope. We believe the risk of this information being stolen/misused outweighs the justification for requiring it¹⁶.

We understand KPB is concerned about signatures being visible on the ballot return envelopes. A flap that covers the signature may be required (depending on the opinion of KPB's legal staff) or may be included to increase voter confidence.

Note: If KPB chooses to continue requiring personal identifiers such as SSN or birthdate, having a flap becomes more critical—if not mandatory—because of the sensitivity of the information.

While some jurisdictions use a flap, many do not¹⁷, and having a flap adds expense that may not be justified. We recommend avoiding it, if possible, for the following reasons:

- **Additional printing costs.** Larger closure flaps can be more expensive because they involve more paper content and, in some designs, more adhesive.
- **Additional costs for processing returned envelopes.** Because mail sorter systems are designed to scan signatures as part of the sorting process, KPB would either have to manually remove the flaps prior to sorting or its sorter would have to have the hardware/software to remove the flap during processing. If doing it manually, KPB would need additional staff to support this effort. If done mechanically, the sorter cost will be higher (as a ballpark, likely more than \$30,000, plus increased ongoing maintenance costs). In addition, requiring this functionality may limit which sorters meet KPB's requirements.

The primary voter concern behind having the flap is that the voter's signature could be stolen while the envelope is in the mail stream and used for identity theft. While this is possible, we are not aware of any circumstance where it has happened, and the risk appears to be very low. For voters concerned about this, the best alternative is to use a secure drop box provided by KPB or to drop the envelope off at a Vote Center (refer to Section 2.6.1.2: Drop Boxes and Section 2.5.2: Vote Centers for more information).

2.3.3.2. Including Prepaid Postage on Ballot Return Envelopes

The Election Stakeholders Group report contains a reference to "prepaid postage" for the ballot return envelopes. Having postage pre-paid is an obvious convenience for voters, some of whom

¹⁶ K&H, a major West Coast ballot package printer (and the vendor for MOA), serves about 20 million vote-by-mail voters. None of the jurisdictions they work with put SSN numbers or birthdate on the envelope.

¹⁷ K&H has less than 10% use a flap to hide signatures.

are in more remote locations where quickly getting postage is not as easy. However, in addition to the added expense to KPB, there may be some additional drawbacks.

KPB currently supplies postage pre-paid envelopes for its 6 vote by mail precincts. We recommend this policy be changed in an area-wide vote by mail model. However, if KPB wants to explore providing pre-paid envelopes for the entire election, it should first have conversations with the USPS to see what its most current offerings are for election mail.

Our current understanding is that not all postage pre-paid mail routinely gets a postmark. If a ballot's timeliness is dependent on a postmark (as it is under current Code), using prepaid postage increases the risk that some ballots will be rejected as untimely as the postmark may not be on some ballot return envelopes.

In addition, we also understand that some types of postage pre-paid mail are not treated by USPS the same as first class priority mail, meaning this form of mail may be slower to go through USPS processes. This may also affect the timeliness of receipt by KPB, causing the rejection of some ballots.

Given that the majority of voters wait until the final days of the election to submit their ballots, we recommend that KPB avoid mailing options that might both delay return and give no indication to election officials as to when the envelope was actually mailed. We recommend that voters provide their own postage or use the other available return options.

2.3.4. Obtain and Process Voter List

Each election, the list of eligible voters is pulled from the State's voter registration database. This information changes frequently as new voters register, existing voters update their information (e.g., name, address, house district, precinct) or status (e.g., move out of state), or the State purges voters who haven't participated in many years.

Under State statutes/regulations, voters can register or change their information up to 30 days before Election Day. Because this deadline is based on when the voter's update was postmarked, the State may receive timely updates for approximately 5 days after the deadline. Therefore, KPB will not have a final list of eligible voters until about 3 weeks before Election Day, right about the time that KPB likely wants to mail ballot packages to voters. This can create timing issues for printing and mailing ballot packages as the vendors will need more lead time. Therefore, KPB will need to work with the printing/mailing vendor to understand their deadlines for the voter list based on KPB's date for mailing ballot packages and the expected volume (and factor these into the deadlines defined in Code—refer to Section 2.2.1: Update Legislative and Administrative Rules to Support Vote by Mail).

We also recommend that KPB coordinate with the State in advance in terms of

- What voter data KPB needs in the file

- The file type
- Timing of the file(s)
- Method for transferring the files (refer to Section 2.3.4.1: Transferring Voter Data)

Note: As long as the format will meet KPB's needs, it will likely be easiest if KPB can use the same voter file definition as MOA.

As an example of how the voter list process could work, the following table describes MOA's procedure at a high level (refer also to Section 2.2.4: Develop an Automated Method for Assigning Ballot Styles for a more detailed description of what is done). To meet the printing/mailing schedules and ensure all voters get ballots, MOA gets the voter list 3 times from the State for each election.

State File	Timing	Process/Output
#1	~2 weeks before printer's deadline for the initial file; typically around the time ballot designs are complete, as ballot styles must be known first	MOA runs the automated process to assign ballot styles to each voter, which produces a list of voters that is loaded to the sorter. The sorter produces a list of eligible voters who will be mailed ballot packages, which is given to the printing vendor so they can begin preparing ballot packages.
#2	~1-2 days before printer's deadline for the final file (often 3-5 business days before mailing)	MOA runs the automated process to assign ballot styles to each voter, which produces a list of voters that is loaded to the sorter. The sorter produces • A list of information for new or changed voters since the original file • A list of "yanks" (i.e., voters in the original list who should no longer be mailed ballot package based on changes to the voter's record in the second State file) These lists are provided to the printing vendor, who finishes preparing ballot packages and mails them.

State File	Timing	Process/Output
#3	~1 day before mailing date (this delivery also includes reference signature files)	MOA runs the automated process to assign ballot styles to each voter, which produces a list of voters that is loaded to the sorter. The sorter produces the list of new/changed voters since the second State file. MOA prepares and mails ballot packages for these voters.

How many State files KPB will need will depend on the printing/mailing vendor's requirements. In addition, KPB may choose to have the vendor do the final mailing instead of processing it internally, depending on the vendor's capacity and how quickly KPB wants those ballots mailed.

If KPB uses a process similar to MOA's, we estimate the following staff time will be required for processing the State file (although this will vary based on number of ballot styles, number of new/changed voters, etc.):

Activity	1 st File	2 nd File	3 rd File
Preparing Ballot Style Polygons (GIS staff and Election staff)	15-30 hours	N/A	N/A
Geocoding and assigning ballot styles (Election staff)	12-16 hours	6-10 hours	4-8 hours

2.3.4.1. Transferring Voter Data

KPB will need a method to obtain the voter files and signature images from the State and to share voter information with the printer. The files will include confidential information—such as voter ID, date of birth—and must be transferred and stored securely. In addition, because timelines are often tight, data transfers largely need to be “same day” so current KPB's method of using a CD may no longer be sufficient. MOA currently has an SFTP site that is used for transferring data with the State, and MOA's printing/mailing vendor hosts an SFTP site used for exchanging data with them.

Note: For MOA, using SFTP for transferring reference signature files is getting more problematic with each election as the number of files increases each year, so it takes many hours to upload and download the .zip file containing them. KPB has about a quarter of the voters that MOA does, so KPB should have fewer difficulties.

2.4. Print and Mail Ballot Packages

KPB already has a vendor for printing ballots and mailing its ballot packages to the absentee voters. However, KPB will need to determine whether it can expand the existing contract to include mailing to all eligible voters or whether it will need to go out to competitive bid. Assuming it can continue with the current contract, KPB will need to determine if the current vendor can meet the requirements, described below. Total estimated costs, at \$42,000, are based on 50,000 packages at known pricing from one vendor¹⁸.

2.4.1. Print Ballots

The vendor needs to be able to print more than 50,000 ballots capable of being scanned on KPB's ballot scanners, all in a short timeframe.

Note: Some Election Management System vendors require that a printer be certified to print ballots for use on their equipment.

Ballots may be two-sided and of varying lengths. In addition, ballots may be serialized and have detachable stubs.

The process is very similar to what is currently being done, but ballots generally need to be ready earlier than in the current poll-based elections. Ballots may cost around \$.30 each.¹⁹

2.4.2. Print Envelopes

The print vendor will need to be able to print both outer envelopes and ballot return envelopes, along with secrecy sleeves and any other inserts. Envelopes may include more than one color and will have both "static" information (e.g., instructions and KPB's return address) and variable information (e.g., voter name and address and the ballot package ID).

The vendor has to print envelopes to minimum standards so that the envelopes are readable, especially the ballot package ID which needs to be read by a scanner on the sorter.

Envelopes can be ordered and printed well before an election, as long as KPB or the printer has sufficient storage space. Estimated printing is approximately \$.07 for each envelope (outer, return, secrecy) and \$.02 for the "I voted" sticker.

2.4.3. Build Ballot Packages (Including Inserts)

The print vendor needs to accurately manage the data provided by KPB and properly assemble the ballot packages so each voter gets exactly the right ballot, with the appropriate inserts. The

¹⁸ Prices will likely vary between vendors and also based on size of orders.

¹⁹ Our estimated total price used 1 ballot per voter. This does not account for the additional costs of ballots for city elections.

types of envelopes used can add other complexities. For example, if a windowed outer envelope is used, voter information is only printed on the ballot return envelope. However, if non-windowed envelopes are used, voter information must be printed on both the outer envelope and the ballot return envelope, meaning that the printer must ensure that the two envelopes within a ballot package are for the same voter.

Because of some of the complexity around building the ballot packages, the print vendor needs to have a high level of quality control. In addition, the vendor must have sufficient on-site security during the entire period that ballots and voter data are at the printer's facilities. Finally, the vendor needs a well thought out and executable disaster recovery plan.

Ballot package assembly is estimated at \$.30 per package.

2.4.4. Mail Ballot Packages to Voters

With a vote by mail election, there is an initial "mail drop" on a day designated by KPB in which ballot packages are put in the mail stream for all eligible voters (who meet any KPB criteria for being set a ballot package in this initial mailing).

Note: "Replacement" ballot packages may be subsequently sent to voters upon request. Refer to Section 2.4.5: Re-issue Ballot Packages (Temporary Addresses and Replacement Ballots) for additional information.

Mailing costs will be depending on factors such as weight of the ballot package and how many are mailed. We estimate costs at approximately \$.41 per piece, or \$20,500 for 50,000 ballot packages.

2.4.5. Re-issue Ballot Packages (Temporary Addresses and Replacement Ballots)

Throughout an election, voters may need

- A ballot package mailed to a different address (e.g., voter is traveling or the voter's mailing address on file with the State is wrong and it's past the deadline for updating)
- A replacement ballot mailed (e.g., previous one was not received, ballot was fouled in some manner, ballot was not mailed because the voter is designated as being "undeliverable" but the voter says the address is good)

KPB will need to have processes in place for documenting and fulfilling these requests. As part of this, KPB will need to make decisions such as

- Will KPB produce and mail the ballot packages or will the printing/mailing vendor do so?
- At what point in time will KPB stop mailing ballot packages (i.e., because the package is unlikely to arrive before Election Day)?

How temporary addresses and replacement ballots are handled will also be affected by the capabilities of the sorter solution that KPB selects.

2.4.6. City Participation

If the cities want to participate with KPB in a vote by mail election, we recommend that KPB require that each voter is sent a single ballot package with appropriate city and Borough ballots for that voter. Having separate ballot packages (one for KPB and one for the city) will significantly increase complexity in managing the election while also increasing printing, mailing, and staffing costs. In addition, a requirement to have multiple ballot packages would likely limit which sorting solutions might work for KPB.

As mentioned above, each ballot return envelope is labeled with a unique ID for the election, which helps ensure that a voter doesn't submit more than one ballot. Issuing multiple ballot packages for a single voter and having the sorter properly identify potential duplicates might not be supported in a feasible way by sorting systems. As an example, the MOA sorting solution only supports a voter having one active ID in an election, and once one ballot return envelope with that ID is received, any subsequent ballot return envelopes with that ID are out sorted as duplicates. With MOA's system, to support multiple ballot packages per voter, KPB would have to create multiple elections and then switch between them during processing (since only one election can be active at a given time). This would have the net result of multiplying the amount of effort required as it's the equivalent of having multiple simultaneous elections.

Other potential problems with having multiple ballot packages per voter include the following:

- Voters will make mistakes and put the wrong ballots in the wrong return envelopes, creating more work for election officials and more opportunity for errors.
- Voters will return all the ballots in one of the two return envelopes, creating more work for election officials and more opportunity for errors.
- Signatures would need to be adjudicated for each ballot return envelope, increasing the amount of time required. In addition, if one envelope is accepted and another gets flagged for a potential issue, it could cause voter anxiety and confusion.
- All processes and systems—from the call center to Vote Centers to issuing replacement ballots—would have to support multiple ballot packages per voter, which is more complex and could ultimately lead to voter confusion.

2.5. Voter Support

2.5.1. Call Center

During an election, voters will have questions about many things, including the process, when they will receive their ballots, how to get a replacement ballot, whether their ballot has been

received by KPB, etc. KPB should have a designated phone number for elections²⁰, which is published in all media and communications. In the first year of vote by mail, plan to have 2 people staffing the Call Center. In subsequent elections, staffing can be reduced to one person or the operations could be absorbed by the Clerk's Office staff.

The Call Center should open about 4 weeks before Election Day and, depending on call volume, remain open for a few days after Election Day. Center staff need to have good training and a readily available script on how to answer most questions, so that the messaging is consistent and accurate.

The Call Center does need not elaborate equipment: desks, computers, and phones should be sufficient. Ideally, the KPB phone system already has calling features that are useful, such as a helpful customizable hold message, call rolling, and the option to leave a message.

While talking with voters, Call Center staff must be able to look up information about the voter and whether that voter's ballot has been received, so they can answer inquiries. Whether ballot receipt information is real time (i.e., Call Center staff are connected to the sorter's database) or point-in-time (e.g., updated once per day with updates from the sorter) will depend on several factors, including physical space limitations, noise levels (sorters can be noisy), and the relative importance of having real-time information available.

Note: Some sorter systems include functionality for allowing voters to look up online whether their ballots have been received. This functionality may have additional costs and require more security measures for the sorter system.

If point-in-time information is sufficient and the Call Center is disconnected from the primary sorter, staff will need a tool for looking up voters²¹. This tool would need to get updated with information about processed ballot return envelopes on a regular basis.

2.5.2. Vote Centers

Vote Centers provide a location for voters to go if they didn't receive a ballot, need a replacement ballot because they fouled their original ballot, need other assistance, or want to drop off a ballot.

When a voter is given a ballot at a Vote Center, the voter is also given a secrecy sleeve and a ballot return envelope—just as the voter would have received with a mailed ballot package. The voter places the voted ballot in the secrecy sleeve and ballot return envelope, and it is processed on the sorter, just like ballots returned in drop boxes or in the mail. In addition, voted

²⁰ There doesn't appear to be an election-specific phone number on the KPB election webpages, unless it is added/activated closer to each election.

²¹ MOA has a stand-alone Access database for use by the Call Center.

ballots printed by ADA-compliant machines available at each Vote Center will be placed in a ballot return envelope for processing, just like all other ballots.

In order to support voters, Vote Centers must be able to

- Verify whether a person is a registered voter in KPB (or whether the voter must vote a questioned ballot)
- Identify the appropriate ballot style for the voter based on the voter's residential address
- Provide the appropriate ballot to voters who request one, along with a secrecy sleeve and a ballot return envelope that includes the ballot envelope ID the sorter solution can read
- Secure voted ballots until they are taken to the central processing location
- Secure election materials

While there is technology available that would allow Vote Centers to have access to real-time data from the centralized system, this increases security requirements and is not vital in Alaska, especially since voters must be registered 30 days in advance of Election Day (so voter information does not change).

However, without real-time access, KPB will need to provide a static copy of the voter information at the Vote Centers. MOA has opted to do this type of offline model and has created a stand-alone Access database that is installed on each laptop used at Vote Centers. This Access database, which is loaded with voter data once at the beginning of the election, allows Vote Center staff to look up a voter, verify the voter's identity using personal identifiers, determine the appropriate ballot style, and print a barcode label that is placed on the ballot return envelope so that the sorter can identify the ballot return envelope as being for a particular voter.

For the ballots, KPB can keep a preprinted stock of ballots (of a variety of styles) at the Vote Centers, with which styles and the number of each being based on the Vote Center location and likely demand for a particular ballot style in that location. In addition, KPB could use "ballot on demand" printers, which allows them to print a ballot of any style at the Vote Center.

We recommend KPB have 5 Vote Centers, in the following locations:

- Borough Office
- Homer
- Kenai
- Seldovia
- Seward

Each Vote Center should have 2 laptops²² and 1 Dymo label printer. In addition, Vote Centers at the Borough Office, Homer, and Kenai should have an Okidata²³ ballot printer.

Note: KPB is planning on having one ADA compliant voting machine at each Vote Center. If these machines can be used by any voter, regardless of need, KPB may not need the Okidata printers for printing ballots on demand. Alternatively, KPB could discuss using MOA's Okidata printers, at least in the first year, to save some money and to see if both the printers and the ADA machines are needed, without actually buying printers outright.

KPB may also want to have printed maps at the Vote Centers to assist in determining the appropriate ballot styles to those voters for whom this couldn't be identified when processing the voter list (refer to Section 2.2.4: Develop an Automated Method for Assigning Ballot Styles).

Assuming KPB purchases new equipment for the Vote Centers, we estimate a total equipment cost of approximately \$20,000, which includes some contingency for additional equipment such as tables, power cords/strips, secure boxes for voted ballots, miscellaneous supplies, etc.

Vote Centers should open about a week prior to Election Day, although it may be useful to have one location (e.g., the Borough Office) open earlier to help voters who have special needs. On Election Day, Vote Centers should stay open until the election ends at 8:00 PM.

Each Vote Center should have 3 staff members present (refer to Section 2.8: Staffing Requirements for estimated staffing costs). It may be possible for city officials to provide staffing for some of the Vote Centers. All staff working at a Vote Center should be trained at the same time to ensure that they have received consistent instructions.

2.6. Process Returned Envelopes

2.6.1. Pick Up Returned Envelopes

2.6.1.1. Mail Pick-up

KPB staff may already be familiar with the process for picking up mail from the Post Office, given its ongoing vote by mail program.

²² We recommend two, in case there is a failure on one. While laptops have the convenience of being more portable, KPB could substitute desktops with monitors, if desired or if it would save money. The computers can be relatively low end, with the exact requirements being determined by what tool KPB uses for workers to look up voters, etc.

²³ There may be other, less expensive ballot-on-demand printers, but the Okidata printers are known to work well and are used by both the State and MOA.

Assuming USPS is not delivering to KPB and that KPB wants the election mail to be separate from other KPB mail, KPB should use a separate address only for election mail. USPS will then segregate this mail from other KPB mail.

If pre-arranged, KPB can send a 2-person team to pick up election mail from USPS on a routine schedule.

Note: KPB must provide the names of authorized individuals to USPS as they allow only named individuals to pick up mail.

Especially if KPB gives voters an opportunity to “cure” their ballot return envelopes, KPB should pick up mail each day of the voting period, starting the day after ballot packages have been mailed and ending when KPB stops accepting ballot return envelopes (i.e., when envelopes are deemed “too late,” even if they had been postmarked in time).

2.6.1.2. Drop Boxes

Outdoor secure drop boxes are an important convenience for voters. If properly designed and located, they provide a great way for voters to easily return their ballots at any hour and, in some cases, without even having to get out of their vehicles.

Locations and Property Owner Approval. Drop boxes should be placed in locations with good lighting, traffic flow that avoids congestion and accommodates persons with disabilities, routine snowplowing, and (when practical) security cameras. In larger jurisdictions, places like government offices, schools, and larger retail often have these features²⁴. High schools work very well because they typically have all the needed features and (with certain exceptions) low traffic volumes over most of the day.

When placing drop boxes, curbside locations are great because they can offer both walk-up and drive-up service, but KPB may want to avoid scenarios where the box is in a right of way it does not control.

We suggest close consideration be given to placing drop boxes in the following locations:

Community	Possible Dropbox Locations
Anchor Point	Anchor Point Senior Center (Mile .25 Milo Fritz Road)
Homer	Homer City Hall (491 E. Pioneer) or Homer High School
Homer (east)	Kachemak Community Center (59906 Bear Creek Drive)
Nikiski	Nikiski Middle/High School or Nikiski Pool

²⁴ Based on MOA’s experience, Post Offices are not willing to have drop boxes.

Ninilchik	Kenai Peninsula Fair Grounds (16200 Sterling Highway) or Ninilchik School (15735 Sterling Hwy)
City of Kenai	Kenai City Hall (210 Fidalgo Ave.) or Kenai High School
Seward	Seward City Hall (5th and Adams) or Seward High School
Soldotna	Borough Offices (144 N. Binkley Street) or Soldotna High School <i>Note: Soldotna should likely have two locations</i>
Sterling	Funny River Community Center (35850 Pioneer Access)

KPB must work with location owners early because the owners will want to have control over where the drop box is placed and will want to work out any liability concerns with KPB (these discussions will need to include the KPB risk manager). Resolving liability concerns is a little harder when dealing with private property owners (e.g., churches, retail locations) but is generally not a significant issue with government/school district locations.

Sizing and Price. Boxes need to be sturdy and tamper proof, preferably anchored to the ground or so heavy as to be an unattractive target for theft. In locations where daily checks are not warranted, larger boxes, such as MOA has, may be a good choice.

Assuming KPB purchases drop boxes from the same vendor and of the same style as MOA, each drop box would cost approximately \$3,000-\$3,500 each, plus shipping (which will be relatively high because of their size and weight).

KPB could also place smaller, tabletop ballot boxes inside the various Borough and City Clerk Offices.

Emptying Drop Boxes. How frequently KPB checks drop boxes will depend on the size of the box and the estimated number of voters who may use it. Most drop boxes should be checked at least once a day²⁵ and have the ballots removed. Removing ballots daily minimizes the risk of damage from vandals and potential issues with ambient moisture.

For security/chain of custody reasons, drop boxes should be checked by a team of 2, not unlike when transporting ballots to and from a polling location. A typical box can be checked, emptied, and re-sealed in approximately 5-10 minutes.

²⁵ On Election Day, more heavily used drop boxes should be checked in the morning as well as at 8:00 PM when the election ends.

Note: Because checking drop boxes doesn't take long (other than travel time), a single team can check multiple drop boxes. However, on Election Day, all drop boxes need to be locked simultaneously at 8:00 PM. Therefore, at that time, KPB will need one team for each drop box.

Where possible, ballots from drop boxes should be delivered to the Election Center for processing on the same day they are picked up. However, for more remote locations, daily delivery to the Election Center may not be practical, and ballots may be stored inside a secure facility, such as in the various city offices (Homer, Seldovia, Seward) until they can be transported to the Election Center.

If KPB institutes a “cure opportunity” (refer to Section 2.6.4: “Cure” Ballot Return Envelopes), how timely envelopes are received at the Election Center becomes very important as KPB will want to identify issues and notify voters as quickly as possible. To support “curing,” KPB may need to get creative, particularly for the locations located further away from the Election Center. For example, KPB could

- Encourage voters to vote early so there is more time to cure.
- Encourage voters to add their phone or email to the ballot return envelope so KPB can call them if there is an issue.

Note: KPB would need to include places for this information when designing the ballot return envelope.

- Contract with commercial services that can provide daily delivery. If this is done, the envelopes should be boxed and locked, with a tamper evident seal that includes a tracking code.

2.6.2. Scan and Sort Returned Envelopes

Most election mail sorting is done in a two-step process.

The first step validates the envelope, separating ineligible from eligible envelopes. Ineligible envelopes include those that

- Are too damaged to be run through the sorter
- Are something other than a return ballot envelope for this election
- Have been voided
- Are for a voter who has already returned a ballot (refer also to Section 2.6.2.1: Which Ballot Counts if a Voter Returns Multiple?)

Note: Some sorters also include functionality that will out-sort envelopes that are too thick or too thin.

The eligible envelopes are those that are ready for signature verification (refer to Section 2.6.3: Verify Signatures for more information).

After signature verification is complete, the second step sorts the verified envelopes based on those that have “good” signatures and those that were flagged as having an issue, such as no signature, no matching signature, or missing any other required information (witness, identifier, etc.).

One option generally available with sorters is to have this second step sort the “good” envelopes by precinct. However, since KPB’s new Election Management System can report results by precinct, sorting the envelopes by precinct is not required. A decision to simply sort to “good” bins would save on cost and configuration of the system as well as administration of the envelopes. Therefore, we recommend that KPB not sort envelopes by precinct.

2.6.2.1. Which Ballot Counts if a Voter Returns Multiple?

Voting more than once in any election is, of course, illegal. However, although rare, it is not uncommon for a few voters in a vote by mail election to return more than one ballot return envelope. Some very small percentage of this number might be a deliberate attempt at fraud, but most instances are voters who sincerely forget they have previously voted. Here are two common occurrences:

- The voter is mailed a ballot but goes to a Vote Center and votes there. The voter also sends back the mailed ballot either before or after voting at the Vote Center.
- The voter is mailed a ballot to their home address, but then travels and asks to be mailed a ballot at the temporary address. Occasionally, if the timing of when they are each location “works out,” and the voter votes and returns both ballots.

Mail sorter systems are designed to catch circumstances where the voter has attempted to vote twice, which is another reason for the unique ballot ID identifier on each ballot return envelope. However, each jurisdiction needs to decide which ballot counts if a voter returns multiple.

We recommend that KPB set its rules to count the voter’s first ballot return envelope received for the following reasons:

- **Timeliness of reporting results:** With “first one counts,” KPB can process envelopes and scan (but not tabulate) ballots prior to all ballot return envelopes being received. With a different rule, KPB would have to hold all envelopes until after the election closes (not knowing if a second one might come in), which would greatly delay results.
- **Discourage attempts to vote twice:** Counting the first ballot received removes the incentive and greatly discourages voters from trying to vote again.
- **Simplifies explanations:** “First one counts” is very easy to explain and for voters to understand.

If a voter returns more than one ballot, subsequent voting attempts should be reported to either the local police or State Troopers for investigation. In addition, we recommend sending a letter to the voter reminding them that they cannot legally vote twice.

2.6.2.2. Notifying External Entities of Who Has Voted

KPB may want to produce a daily report that lists the voters for whom KPB has received a ballot return envelope, based on information from the sorter system.

Note: This only identifies who returned an envelope; it doesn't provide any information about how the person voted.

Candidates and issue groups often appreciate getting this information as they then know to no longer target voters who have already voted—and voters likely also appreciate getting fewer political ads and robocalls.

If KPB provides this information, they will need to include the voter identifier that the State includes on the voter lists it distributes members of the public who request them. This identifier is different from the voter ID.

2.6.2.3. Securing Envelopes

As mentioned in Section 2.2.3.2: Secure Storage, ballot return envelopes will need to be secured in the Records Center when not being actively processed.

2.6.3. Verify Signatures

KPB may choose to verify signatures using

- An automated process where the sorter software compares signatures
- A manual process where election officials verify signatures, typically having 2 officials review each signature
- A combination of the two

Note: A decision on whether to use automated signature verification should be made when selecting a sorter solution to ensure that the sorter meets KPB's requirements.

We recommend at least one signature review step be done by an election official, rather than leaving it entirely to the software. Doing signature verification entirely manually is also a viable alternative and may give voters a greater confidence in the process, knowing that each signature is being reviewed by two individuals. Many jurisdictions, including MOA and King

County (WA)²⁶, use such manual processes, where each signature is reviewed by two different election officials trained in signature verification.

When manual verification is done, officials are trained each year in signature verification before the election. MOA's training is done by the Washington State Patrol (their version of the AK State Troopers), with the trainer coming to Anchorage each year. KPB could potentially participate in that training or bring the WSP official to KPB for training at a reduced cost, if they shared some of the travel expenses with MOA. However, the downside of this is the timing difference between MOA's election and KPB's election.

2.6.4. "Cure" Ballot Return Envelopes

Sometimes there are issues with ballot return envelopes, such as the voter forgets to sign or to provide other required information or KPB cannot determine a signature match. We recommend that KPB implement a process in which voters are notified of these issues and given an opportunity to "cure" the problem, so that their ballots can be counted.

Note: Based on MOA's and King County's experience, after the first election, only about 1% of votes cast require this "cure" process.

The voter could be contacted by form letter, called, or emailed (if phone number or email are included on the ballot return envelope). Regardless of the contact method, KPB would explain the problem and give the voter a chance to fix it, as long as the voter responds before the deadline for curing.

In order to avoid disenfranchising voters, we recommend voters be allowed to cure up to the day of the public session of canvas (currently the Monday following the election, KPB 4.90.020). For example, a voter who drops off a ballot on election night could expect to get a notification within a day or two and be able to respond prior to the deadline.

When voters are allowed to "cure" their envelopes, it becomes increasingly important that KPB pick up and process ballot return envelopes as quickly as possible so that notifications can be given to voters in a timely manner. The faster a voter is notified of an issue, the longer the period of time the voter has to resolve that issue so that the ballot can be counted.

2.6.5. Open Ballot Return Envelopes/Prepare Ballots for Scanning

After ballot return envelopes have been successfully verified (i.e., are a "good" envelope on the second run through the sorter), the envelopes can be opened and the ballots removed. The process will likely be the same as KPB uses for its current vote by mail precincts.

²⁶ A short video of King County's process is here:
<https://www.kingcounty.gov/depts/elections/education-and-outreach/take-a-tour.aspx>

Typically, the envelopes will be run through an envelope opening machine, which slices a thin strip off the envelope so that contents can be easily removed. Ballot return envelopes are then given in batches to 3-member envelope opening teams who

1. While keeping the envelope “face down” to hide the voter’s name, remove the security sleeve (with the ballot inside) from the ballot return envelope, separating the ballot from the return ballot envelope. The return ballot envelopes are then set aside so that the ballot is no longer associated with any information that would identify which voter cast that ballot.
2. Separate the ballot from the security sleeve.
3. Open and flatten the ballot. If there are obvious potential issues with the ballot that would cause it to not be scanned, it can be set aside to be facsimiled.

Envelope opening teams take steps to ensure that all envelopes have been emptied and that all ballots are accounted for. KPB will need to define the procedures that the opening teams will follow.

Once this process is complete, ballots are ready to be scanned. KPB will need to securely store these ballots in their main office. We are anticipating a conference room will be “re-keyed” during the election and used for secure storage.

2.6.5.1. Timing of Scanning Ballots

As mentioned earlier, KPB will need to decide when to scan ballots. Note that this is just scanning them—tabulation of results should never be done until after the election closes at 8:00 PM on Election Day. While KPB could wait to scan ballots until after 8:00 PM on Election Day, this will delay delivery of results as it will take time to scan the ballots. Therefore, we recommend that KPB define how far in advance scanning can begin. This timing varies by jurisdiction, with some allowing it to begin only the day before or on Election Day. We recommend that KPB allow scanning to begin at least a couple days before Election Day to give greater flexibility in staff assignments.

2.7. Store Election Records

2.7.1. Providing Election Information to the State

When an election is complete, KPB will need to provide the State with the following information:

- Which voters returned a ballot
- Signature images from the ballot return envelopes of voters whose signatures were verified

Providing the State with the signature images will help build the reference signature library for KPB voters. For these files, KPB will need to provide the images as TIFF, and the files will need to be named with the voter ID.

2.7.2. Dispose of Records

In a vote by mail election, KPB will have more election records to dispose. These will include the return ballot envelopes as well as the electronic records from the sorter system and other tools used during the election. KPB will need to update their procedures to ensure that all appropriate information is disposed of.

2.8. Staffing Requirements

KPB currently hires approximately 130 people during an election cycle in order to staff all of its polling locations. In a vote by mail election, the number of staff required will be substantially lower.

Peak staffing levels will start about a week before Election Day, around the time Vote Centers open, drop boxes are being checked, envelopes are being processed, and ballots scanned (but not tabulated!). The table below shows what **peak** staffing might look like, with the following caveats:

- Choices KPB makes will affect actual numbers.
- Clerk's Office staff for KPB and the cities are not considered in the counts; various Clerk's Office staff may fill some of these roles, reducing the count.
- The table shows counts by functions, but many people can perform more than one function, flexing from one position to another within a day, depending on the volume of envelopes and ballots to process on that day. Therefore, the table's counts **do not** equate to total number of people required.

As an example of staff flexing, a 2-member team picks up the mail from USPS and checks the drop boxes in the Kenai/Soldotna area, then sorts and runs those envelopes through the sorter. Meanwhile, another 2-member team performs signature verification on the previous day's envelopes and then moves on to an envelope opening team.

Location/Function	Total	Time ²⁷	Cost ²⁸
Vote Centers (5 centers, 3 people each)	15	1 week + 1 hour training	\$8,610
Drop Box Team	2	2 hours/day for 3 weeks	\$840

²⁷ 8 hour days, 5 days a week, unless otherwise specified

²⁸ Based on \$14 per hour

Location/Function	Total	Time ²⁷	Cost ²⁸
Election Center Envelope Sorter Process	2	3 weeks	\$3,360
Signature Verification	3	3 weeks	\$5,040
Review and Resolution	1	3 weeks	\$1,680
Envelope Opening Teams (2 teams, 3 people each)	6	1 week	\$3,360
Call Center	2	4 weeks	\$4,480
Ballot Scanning and Adjudication	2	1 week	\$1,120
Total	33		\$28,490.00

In addition, for at least 3-4 months before the first vote by mail election is started, KPB should have a staff member dedicated to preparing KPB for vote by mail. This individual would preferably be experienced in elections and also have a high proficiency with and lack of fear in using software and computers. This individual would spearhead a lot of the vote by mail implementation and would be doing tasks such as the following:

- Working with vendors
- Learning to be a “super user” on acquired equipment and software
- Being involved in user acceptance testing on the equipment and software
- Creating templates and drafting letters, sheets, and other documentation in Word, Excel, etc. for use by election officials
- Coordinating staffing schedules
- Helping with ordering supplies
- Completing other sundry things that are needed when launching vote by mail

3.0 Summary of Estimated Costs

Below are the estimated costs as described in this Study. **These may not be all costs and actual costs may vary greatly depending on choices KPB makes and market rates at the time.** For example, KPB staff time (Clerk’s office, GIS staff) associated with the election are not included but, especially in the first vote by mail election, the hours will be substantially higher than would be required in a normal election and may require that KPB hire additional staff or contract work out. In addition, these estimates assume that KPB will leverage custom tools that MOA had built and that most of these will not require changes for KPB.

Beyond the general “miscellaneous” costs that will come with setting up a new process, KPB may wish to hire a project manager for the project and be sure to have adequate staffing levels in its own GIS department and Clerk’s Office. These costs would be modified by any use of

current resources, as well as by the results of competitive bidding and decisions about the timing, structure, and requirements adopted to implement vote by mail.

Item	Study Section	Estimate (yr 1)	Recurring
Mail Sorter and First Year Licensing	2.2.2	\$150,000	\$30,000
Alarms/Cameras	2.2.3.1	\$10,000	
Records Center cage	2.2.3.2	\$3,000	
GIS enhancements	2.2.4.2	\$6,000	
Pollbook scanning	2.2.5	\$3,000	
Education and Outreach	2.3.1	\$15,000	\$3,000
Postcard (Undeliverables) – printing & mailing	2.3.2	\$4,000	\$4,000
Ballot package set up, printing, assembly, and Q/A	2.4	\$42,000	\$42,000
"I voted" sticker	2.4.2	\$1,000	\$1,000
Ballot package postage	2.4.4	\$20,500	\$20,500
Vote Center equipment	2.5.2	\$20,000	
Drop Boxes	2.6.1.2	\$35,000	
Temporary Election Workers	2.8	\$28,490	\$28,490
Total		\$337,990	\$128,990

One measure of cost comparison can be the cost per voter, focusing on the number of voters who actually cast ballots. If we assume the KPB approved budget for elections includes all costs (which we acknowledge does not include the cities), then the cost per voter, using 2019 budget and turnout, is \$10.72 per voter (\$113,910/10,622 voters).

If you assume a vote by mail election increases voter participation, using the percent increase in turnout between the last MOA poll-based election and its most recent vote by mail election²⁹, the estimated cost per voter may be determined as follows:

- MOA 2017 - 49,370 ballots cast for a 23.2% turnout
- MOA 2020 - 71,268 ballots cast for a 30.68% turnout
- $(21,898 / 49,370) \times 100 = 44.4\%$ increase
- $10,622 \times 44.4\% = 4,716$ potential "new" KPB voters, for an estimated turnout of 15,338

²⁹ Using unofficial results as of April 15, 2020. These years are an "apples-to-apples" comparison as both years were Assembly election years for MOA. Year with mayoral elections usually have a higher turnout.

Our estimate of \$128,990 in recurring costs divided by the 15,338 voters equals \$8.41 per voter, a potential reduction of \$2.31 per vote cast.

3.1. Assistive Technology Cost Comparison

KPB is currently subject to an agreement with the State of Alaska Commission for Human Rights, which requires KPB to explore and implement options for providing assistive technology to visually impaired voters. One option is to implement voting by mail, along with providing ADA compliant voting machines in Voting Centers. Another option is to buy or lease these ADA voting machines for every polling location. Both options require purchasing a new centralized ballot tabulation system that supports the ADA machines.

The following table compares the estimated costs associated with these two options.

Note: ADA machines\software costs are based on July 2019 vendor quote. Actual costs may be different.

	Vote By Mail	Poll-Based
Estimated 1st year Election Cost	\$337,990 ³⁰	\$113,910 ³¹
Add 5 ADA machines\software for Voting Centers	\$197,804	\$0
Add 30 ADA machines\software for polling locations	\$0	\$337,144
Total	\$535,794	\$451,054³²

3.2. Total Recurring Cost Estimate

Year 2	<u>Vote by Mail</u>	<u>Poll-Based</u>
Recurring	\$128,990	\$113,910
Annual ADA hardware/software licensing and warranty	\$27,580	\$36,640
Totals	\$156,570	\$150,550

³⁰ Estimated “year one” vote by mail cost (see above for breakdown and caveats)

³¹ KPB 2019 election budget

³² Subsequent year costs are approximately \$8,712 higher for poll-based voting for the licensing and warranty on the 24 additional ADA machines.

Appendix A: Sample Layout of Records Center

